Saudi Women and E-learning

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Abstract
Despite cultural and religious barriers to higher education for Saudi women, female enrolment in higher education has risen, with massive investment in the country's higher education system with specific provision for women. There has been a rise from a mere seven universities about a decade ago, to thirty three universities, including nine private, today. However, opportunities are still limited because of the restrictions of access put upon women. Women often do not attend universities due to early marriage, mobility restrictions, the vast distances, or because their family does not support their attendance, but most importantly universities are effectively inaccessible to women as they need to be escorted by a male relative. Saudi Arabia is considered to be one of the developing countries that has made vigorous efforts towards transforming itself in an information society, by investing in information technology and integrating it into various sectors including the education sector. E-learning is one innovation introduced by some Saudi universities along with an E-learning Centre that could assist in expanding educational opportunities for female learners in Higher Education in Saudi Arabia. It should however be realised that access to Higher Education for women as well as the implementation of e-learning in a culturally sensitive environment is challenging but possible. This indicates that the implementation of e-learning is affected by cultural issues in developing countries and not only by financial or technical issues. Our research will therefore seek to investigate how these challenges and possibilities could be explored in order to enhance the higher educational opportunities of Saudi women. To achieve this, a pilot study was made using a semi-structured interview as a method of data collection from Saudi females who live with their related (mahram) male in the United Kingdom and a three stage coding analysis of the grounded theory analysed the data collected from the field to formulate a theory and a mode. A primarily model was presented which described the contributions of e-learning to higher education of Saudi women. The model is presented consisting of three main categories: (a) social and religious barriers, (b) women's use of the internet, and (c) women's use of e-learning, as well as a number of sub-subcategories. In addition, the need to illuminate the ability of Saudi women to convert e-learning into a valuable educational achievement is demonstrated. The next stage of our research will investigate all of the issues indicated by the pilot study in order to improve the success of using e-learning for Saudi women's higher education and eventually to devise a research theory.

1. Introduction
The Saudi government sees education at all levels as key to developing the skills and knowledge of its citizens [10] and expenditure has been considerable with a quarter of the Saudi government budget being spent on improving education [2]. The increase in the number of universities from seven universities ten years ago to twenty four public universities has certainly gone some way to meeting the needs of the female population [15]. However, women in Saudi Arabia are severely restricted by the cultural and religious dictum that a woman must at all times be accompanied by a male guardian whenever they leave their home [ibid], and this seriously limits their opportunities to access higher education [8]. Therefore, further measures are needed to make education accessible to all, but particularly to women, and new technologies such as e-learning could have a significant impact which could revolutionise the way higher education courses are accessed. The purpose of this paper is to introduce the primary stage that has been completed as a foundation of this research by considering several different aspects of research. The discussion will look at Saudi society, education for women, higher education and e-learning, challenging of e-learning, objective, questions, data collection method, data analysis, results and conclusion.

2. Saudi Society
Saudi Arabia is a socially and religiously conservative country [14]. Its has high cultural homogeneity based on tribal and Islamic affiliation and therefore has a unique and complex culture. It is difficult to differentiate between Islamic principles and Arabic customs [1]. Some customs, such as the belief that
women should not drive cars or practise Law or Engineering are not from Islamic law but have become entrenched in the culture [13]. Women’s function in the wider society is limited and Saudi Arabia has one of the lowest participation of women in the workplace, particularly graduates [18] and yet this is needed for the country to achieve progress [8]. Therefore, the government faces great challenges if it is to achieve its goal of development. Fundamental changes in the way society is conducted are needed.

3. Education for Women
Formal education for women began in the 1960s with the establishment of the first authorized primary school for girls in the City of Riyadh, but before this, women’s education was in informal settings concentrating on religious education and the Quran [13]. Higher education for women began in 1962 at King Saud University [2]. In 1970, the Kingdom established the first college for women to provide female teachers [ibid]. Since then further universities and colleges in both the public and private sector have been opened and women’s education has developed [8]. Some universities educate women in separate centres while others are exclusively for women. The Princess Noura Bint Abdul Rahman University, Riyadh, started in 2008 to cater for 40,000 female students [4], was officially opened by King Abdullah on 17 May 2011 with a new university city [9]. Thus the only Higher Education institutes exclusively for women are located in the capital Riyadh and the second city Jeddah which demonstrates the difference between the urban elite and the rural population who have less opportunity [18].

4. Higher Education and E-Learning
Higher education has had to progress quickly to extend its student capacity due to increasing demand. This has partly arisen due to the increasing competitiveness for entry to employment and higher education is seen as important for improving prospects for young people [12]. The Ministry of higher education is working to encourage the use of Information and Communication Technology (ICT) to meet demand. In 2006, the National Centre for E-learning and Distance Learning (NCeDL) was established to carry out research, development and implementation of e-learning [4], and some centres have opened at some universities [7]. However, e-learning in Saudi Arabia is still in the early stage of its development due to the many challenges of e-learning that will still have to be faced.

5. Challenges of E-Learning
The implementation of e-learning in Saudi Arabia faces various barriers, which mainly arise from the educational society of Saudi Arabia [3]. The major barrier to e-learning in Saudi Arabia relates to the cultural beliefs and the nature of the education system. One major feature of this society is the dichotomy that exists between the adoption of modern technology and the preservation of beliefs and religious values. Many authorities believe that numerous social skills are associated with the adoption of the internet and are related to the reluctance to adopt this technology. Cordesman [12] suggests cultural issues are another reason as to why e-learning in developing countries such as Saudi Arabia is challenging, as countries that have distinct cultural traditions often find it hard to embrace change. People who are rigid might not be willing to adopt new technologies [17]. Alebaikan [5] is in agreement with this and argues that blended learning is to a great extent affected by how ready the public is embrace and use technology as a tool for learning. The Saudi government has, in fact, recognised this and is playing a great role in enhancing the acceptance of technology and its diffusion by providing incentives to those who are specialists in Information Technology (IT) as a way of motivating Saudi Arabians to venture into technical fields.

6. Research objective
The research aims to investigate the possibilities offered by e-learning to enhance higher education opportunities for women in Saudi Arabia within the social norms and religious beliefs of society.

7. Research Questions
The research aims to answer the following questions:
- What are the barriers to higher education for Saudi women?
- How might e-learning support higher education opportunities especially for women?
- What might be a successful model of e-learning to improve women’s higher education opportunities in the Kingdom of Saudi Arabia?
8. Data Collection Method
Data was collected on Saudi females who live with their related (mahram) male in the United Kingdom. The participants in this study were selected according to certain criteria, namely their age between 20 and 40, their not having taken up higher education or have dropped out of higher education, and their background from the north and the south regions of the Kingdom. An interview was conducted using a semi-structured interview in order to collect more in-depth data. The interviews were conducted with five women by the researcher or female assistant, using two methods, including face to face and telephone. Interviews were not audiotaped because of the social culture that dictates females do not agree to have their voices recorded.

9. Data Analysis and Result
The data collected was qualitative; so, grounded theory was the appropriate method to carry out data analysis. According to Strauss and Corbin [16] in grounded theory, three phases of coding procedure, open, axial and selective are applied to the collected data to establish categories and subcategories of data which were used in this study. A three stage coding analysis of the grounded theory analyses the data collected from the field to formulate a theory and a model. This model described the contributions of e-learning to higher education of Saudi Arabian women. The model consisted of three main categories: (a) social and religious barriers, (b) women's use of the internet, and (c) women's use of e-learning. These categories include a number of sub-subcategories. The following describes the model categories, theoretical propositions stated, and support of the model based on the collected data (see Figure 1).

10. Conclusion
This stage of research (pilot study) has shown that there may be a role for e-learning as a bridge to enable women in Saudi Arabia to access higher education. However use of e-learning is set in a context and involves not just technical availability but the capability to benefit. Issues include family...
willingness, the cultural use of the internet, the attitude of the woman to convert the opportunity offered by e-learning into a valuable educational achievement through her approach, and her ability to achieve. These issues are the subject of the next stage of our study.

References