

An Empirical Study of the Impact of E-Learning on Female Higher Education in Saudi Arabia

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Abstract Some may still regard Saudi Arabia as a conservative country and believe it neglects and discriminates against its female population in the field of education in particular and attitude in general. However, the facts portray quite a different picture and remove the perceived bias, at least in the field of education. The Kingdom of Saudi Arabia is undergoing an education revolution, rapidly transforming it into a learning nation. Female Saudis are equally benefitting from education policies of the state, the main architect of modern education in the country. They are 56% of the total of all higher education students in Saudi Arabia. Riyadh, the capital, houses the largest female-only university in the world, with over 52,000 students in 2010 according to the Saudi Arabian Ministry of Higher Education. There are many other female only universities in different regions of the country. In this article, the authors will present details of the Saudi education system relevant to higher education of the female population. The use of the Internet for learning had a slow start, but has now become very popular. Again, Saudi women benefit the most from it: for many, it is their only access to higher education. In this article, we shall explore ethnic, religious, and social factors that restrict female education and make e-learning becomes a very attractive proposition. We shall also study the extent of proliferation of e-learning in Saudi Arabia.

Keywords: e-learning, empirical study, female, Saudi Arabia.

1 INTRODUCTION

E-learning, also known as distance learning, has attained maturity and stability and is accepted by many as a mainstream method of obtaining higher education and knowledge. The United Nations has provided and periodically revived its policies on e-learning (UNESCO, 2011 and n.d.). Many educational institutions around the world have accepted e-learning and incorporated it into traditional ways of learning and teaching (L&T). Consequently, educational institutions have evolved their own e-learning curricula and methods to provide their courses to students. Proliferation of e-learning has given rise to thousands of exclusive e-learning and educational institutions in the last decade. Students can enroll in courses at numerous virtual universities after finding them by simple Internet search and require no reference. E-learning provides abundant benefits and advantages to both men and women. In this article, we shall study the impacts of e-learning on Saudi society and in particular to women, who by some may be perceived as lacking in education.

Saudi Arabia is well known as an oil-rich country; in fact, it is one the twenty richest countries in the world. In recent years, it has undergone a tremendous change in the area of education, developing extensive opportunities and facilities. In recent years, educational institutions in the Kingdom have significantly improved and have acquired state-of-the-art services, equipment and infrastructure. The female population of the Kingdom now has opportunities it never did before. There are significant, qualitative improvements in the delivery of education (Booklet for the International Exhibition and Conference for Higher Education, n.d.; Educational technology in Saudi Arabia, n.d.; Government Initiative To Endorse eLearning In Saudi Arabia, n.d.; Perceptions about e-Learning in Saudi Arabia; Saudi Women and E-learning; Stracke, 2006; Ten-year 1425-35 education plan, n.d.; The State of Distance Education in Saudi Arabia, n.d.). Thousands of international expert instructors and researchers are imparting education in these universities, which offer lucrative salaries to attract them from around the globe. To cite an extreme example, most students and staff at the newly established King Abdullah University of Science and Technology are overseas. Riding on a very ambitious, aggressive education policy, the Saudi government provides tens of thousands of postgraduate scholarships to both male and female citizens for studying abroad. The female share of these scholarships is about 20% (Yamin, 2013), a low percentage we will try to explain later in this paper. However, by 2010, more than 300 higher education colleges for women existed in the country alongside universities, and women represented more than 56.6% of the total number of Saudi university students (Yamin, 2013).

Saudi Arabia is a highly religious country. It has Makkah (Mecca), an internationally acclaimed city and which houses the Kaaba, which marks the direction of prayers for the faithful (Qibla, n.d.). Every year, an estimated ten to twelve million international pilgrims perform major Hajj and Umrah pilgrimages (Hajj, n.d.). Hajj is performed by millions of people from about 183 countries once in a year and Umrah is performed around

all the year. In the last few years, the Saudi government has improved Hajj facilities vastly. To manage crowding, Saudi authorities train men and a large number of women. Educated women help manage the crucial tasks of security and communication with the female pilgrims. This article examines female education, in particular the extent and effects of e-learning in the society.

2 FEMALE EDUCATION

It is now well known that in the last ten years, Saudi Arabia has established many universities for men and women and improved facilities at existing universities. Since it follows Islamic Sharia laws, some, especially in the West, still think that women are persecuted and are not provided with avenues for education. If so, perceptions need to change in the light of the information available. A number of our references provide information about the improvements of female education in Saudi Arabia. Princess Nora bint Abdulrahman University (PNU) was established in Riyadh in 2004. With over 52,000 students, it is the largest female only university in the world and offers state-of-the-art facilities to its students and staff. Its green campus has 4,000 square meters of solar panels, which provide 16% of heating and 18% of air-conditioning needs. It has many educational programs in partnerships with some of the leading universities in the U.S., Europe, Australia, and New Zealand. The university also offers exclusive monorail services for its students and staff (An environmentally friendly, green campus, n.d.; Princess Nora bint Abdulrahman University, n.d.; and Women in Higher Education, Saudi Initiatives and Achievements, n.d.).

The female population of the Kingdom does not have to receive their education in the female only institutions. A majority of women in Saudi Arabia receive their education along with the men but in a unique system of education. All Saudi universities have separate campuses for women where men are prohibited unless prior arrangements are made. Female students are linked to the class with their male counterparts through a video link. A male instructor, teaching such a class, would see male students face to face, whereas the female section will have a female supervisor. Female students, like their male counterparts, can ask questions and participate in class discussion easily, yet cannot be seen by the male section. This method, refined over several years of experience, is acceptable to major international accreditation bodies like the Association to Advance Collegiate Schools of Business (AACSB).

Some challenges of female education may be perceived to exist because of social obligations. Under Islamic Sharia (jurisprudence), relatives usually arrange marriages by mutual consent. This method is practiced in many major parts of the world, perhaps most. Many have argued that arranged marriages are more successful than love marriages and the family resulting from arranged marriages usually commands more mutual respect in social and business circles (Epstein, Pandit, & Thakar, 2013; Allendorf & Ghimire, n.d.; Applbaum, 1995; and Why an arranged marriage “is more likely to develop into lasting love,” n.d.). Some girls in Saudi Arabia get married after high school or during their university studies. In some of these cases, continuing face-to-face education becomes challenge, especially when these women find themselves in remote areas. For such women, e-learning is a fitting solution as Saudi Arabia has sound electricity and Internet, which do not fail as they do in many countries.

Saudi civic authorities have also provided female-only shopping malls, sporting facilities, and business entities in all cities and town of the Kingdom. Many other similar facilities are designed exclusively for families. Family life enjoys the greatest respect in society and people are very courteous to women.

3 E-LEARNING

E-learning in Saudi Arabia had a slow start, not launching until 2007 (AlMegren, 2013 and Mirza, A.A. and Al-Abdulkareem, 2011), but in recent years it has grown tremendously. Already popular in certain quarters, it is likely to grow even further. As Saudi Arabia has undergone a kind of educational revolution, the emphasis on education is currently very high. Conventional L&T may remain mainstream, but more and more people are likely to opt for e-learning. Conventional L&T can never be sufficient for all sections of the society. There will always be full-time employees, people in remote areas, people with physical and mental disabilities, the aged, and women who require e-learning to enhance their education in convenient and affordable ways.

According to the guidelines provided by the Commonwealth of Learning and sponsored by UNESCO (n.d.),

In the current knowledge-driven global economy, higher education systems play major roles in social development and national economic competitiveness. However, they face immense challenges in meeting rising enrollment demands worldwide. Forecasts suggest that current global enrollments of 165 million will grow by a further 98 million by 2025. However, this growth is unlikely to be accompanied by equivalent increases in the human and financial resources available to the higher education sector. Many institutions are incorporating information and communication technologies (ICT) into their management, administration and educational programs in order to serve their students more cost-effectively and to prepare them for the world into which they will graduate. In many developing countries, however, access to hardware, software and connectivity remain challenges. It is therefore critical to adapt pedagogical approaches and learning materials to this environment while ensuring high quality and relevant educational opportunities.

Successful universities of the 21st century must invest significant resources in e-learning. This involves building, improving, and increasing access to infrastructure. More importantly, effective and successful e-learning requires change in the thinking of the teaching community. One should not be surprised to find university academics unwilling to adapt to e-learning. As Alonso Diaz and Blázquez Entonado (2009) said, "Studies like this may induce online and face-to-face teachers to reflect on their practices, and to become aware of improvements they might make in their role as teachers." According to Manning, Cohen, and DeMichiell (2003; also see Menchaca & Bekele, 2008), education, business, government, and other training facilities require guidance to make this important transition to the online environment. Taking on a new method of teaching with untried and perhaps unrealistic expectations will certainly fail unless a solid framework is established. There are many challenges in developing countries (Andersson, 2008).

Even conventional L&T now uses electronic means to provide teaching material to their students. Methods, tools, technologies should undergo periodic revision. This not only fine-tunes methods and technology but also captures the latest developments. The aim of this project is to investigate the propagation and success of e-learning among Saudi women. To do so, we have surveyed students, teachers and parents associated with e-learning. We shall analyze the results of this survey in the coming sections of this article, but first, we shall give a brief description of e-learning's evolution and aims.

4 E-LEARNING MODELS

Current technological advancements are so rapid and far-reaching that they have changed the face of distance learning altogether. Recent advancement in Web and multimedia technology are changing the way in which courses are prepared and delivered. Many researchers have contributed to several aspects of distance learning. Menchaca and Bekele (2008) performed a qualitative study on learner and instructor success factors in distance education. They discussed the need for researchers to understand the environments required for online teaching. They noted its significant differences from traditional face-to-face teaching. They suggested five factors of developing a framework for an effective online learning environment: human, course, leadership, technological, and pedagogic. They believed these factors provide an effective and challenging environment that supports the need for interactive teaching in an online environment.

E-learning models have now been refined and attained maturity. European and other consortiums have commissioned several studies in the last decade. The models guide institutions to maintain certain standards in provision, administration, and facilitation of learning. Assurance checks need carrying out and students must provide continuous feedback on all aspects of the e-learning programs they undertake. All learning programs must maintain acceptable quality assurance standards of infrastructure, material, and timely response to needs (European Foundation of Management Development, n.d.; UNESCO, 2011; de Beeck, I. O.; Camilleri, A.; Bijmens, M., 2012; and UNESCO, n.d.).

5 E-LEARNING IN SAUDI ARABIA

Saudi Arabia provided facilities to use Internet for e-learning a decade ago. King Abdulaziz University (KAU) was the first educational institution to start a distance learning program in 2006. KAU is a signatory of the Memorandum of Understanding on E-Learning along with other leading universities of the Kingdom. The university has established a deanship for this purpose. Initially, only two faculties, Economics and Business Administration and Arts and Humanities, offered some of their degree programs through distance learning. The Deanship of Distance Learning has secured in-house course development programs and can support L&T material and services for up to 10,000 students. Recently the e-learning program has introduced Blackboard to provide learning material to students. Many young wives have now enrolled in KAU's Distance Learning

program, along with people with disabilities, older people, and those living far from university campuses. Those who accredit the quality of e-learning in European universities do the same for distance learning programs at KAU.

Our project aims to conduct empirical study of the quality and effectiveness of e-learning and e-teaching for Saudi women. We hope that the proposed report will be appropriate and timely for Saudi Arabia and Gulf State countries in general. The Ministry of Higher Education has initiated comprehensive policies for universities to impart e-learning educations to the citizens of the Kingdom. The ministry is making all efforts to make these programs available to all sections of the society. The ministry is also taking steps to support improvements in distance learning across the Kingdom. For example, it has sponsored the first conference on e-learning and Distance Learning in Riyadh in February 2011. Various government institutions in the Kingdom are supporting other similar conferences and seminars.

5.1 E-Learning and Women in Saudi Arabia

Distance learning provides a unique opportunity for the women in Saudi Arabia. Strictly speaking, there is no minimum age for marriage in the Kingdom, and as a rule, once a person, especially a young girl, attains the age of puberty, she can be married. Due to this and social traditions; many young girls get married before entering a tertiary institution of education. Naturally, many of these women are keen to carry on with their education well beyond their marriage. Of course, they can attend universities and many do, but a large number of them find it very difficult to attend face-to-face classes. Thus, e-learning or distance education becomes crucial. In technology and means, the Kingdom is well ahead of its neighbors and the entire Arab world. It has ensured availability of high-speed Internet through fiber optics. New developments of cloud computing are making it even easier to expand the base of e-learning and many universities and private educational institutions are taking the advantage of this new trend and technology (Yamin, 2013). In particular, the cloud computing platform as a service (PaaS) and infrastructure as a service (IaaS) are very useful to ensure smooth delivery of the distance learning.

Awareness of e-learning in Saudi Arabia is only picking up slowly, which may be connected to the other challenges facing the country's learners. A 2007 nationwide survey with 7,500 respondents and overview of e-learning concluded that much of society remained unfamiliar with e-learning-related advancements and concepts (Almegren, 2013) despite distance learning's long history in Saudi Arabia (Women in Higher Education, Saudi Initiatives and Achievements).

Women in Higher Education, Saudi Initiatives and Achievements mentioned a number of issues like Internet problems, lack of support and advertising, cultural, religious and traditional barriers including some discussion on women's education. Over time, most of these issues have dissipated. Currently no woman is prevented from receiving modern education. In fact, they are highly encouraged to attain higher scientific education. Not only does Saudi Arabia have the largest female-only university in the world but it also has thousands of females studying medicine, science, economics, and all other disciplines in all government and private educational institutions. In the field of communication, especially the provision of stable Internet, the Saudi government has not been instrumental in providing broadband Internet connections but has recently provided fiber-optic ones. These high-speed Internet connections are going to revolutionize e-learning (Booklet for the International Exhibition and Conference for Higher Education, n.d.; Educational technology in Saudi Arabia, n.d.; Government Initiative To Endorse eLearning In Saudi Arabia, n.d.; Ten-year 1425-35 education plan, n.d.).

6 A SURVEY ON E-LEARNING IMPACT ON WOMEN EDUCATION

To measure the effectiveness of e-learning programs in Saudi Arabia, we have conducted a simple but very extensive survey in different regions of the country. There were two parts in our questionnaire. The first had general questions about age, sex, marital status, work status, nationality and place of residence. The main questionnaire included questions to measure the impact of e-learning on women's education in the Kingdom. Its questions concerned the level of understanding of e-learning, its usefulness for young married women, its usefulness for women with children, its usefulness for women with transportation difficulties, whether it is more suitable for women than men, whether it is preferred to L&T, its cost-effectiveness, adequacy of facilities in the Kingdom, and ease of access. We received over three hundred submissions from different parts of the Kingdom, many from the desert regions and small townships from men and women, married and unmarried.

Our analysis shows that 90% respondents think that e-learning is a way of solving education problems for young married women, 92% think that it works for women with children, and 95% think that it is a way of

solving education problems of women with transportation difficulties. However, there were mixed results on the level of services provided in the Kingdom. Nevertheless, most respondents were satisfied with the resources, accessibility, and services. Yet an overwhelming 75% of respondents rejected e-learning as a preferred way of learning.

7 CONCLUSIONS

Saudi Arabia is a country taking all possible steps to educate its citizens and investing massively in educational infrastructure and scholarship programs. Tens of thousands of students are receiving state-of-the-art education at home and abroad. The Kingdom has realized the great virtues and benefits of e-learning for citizens, especially female citizens. The level of education in general and among women especially is improving significantly. Many universities are undergoing accreditation by well-known U.S. and European accreditation programs such as AACSB. In particular, there is a big boost in female education in the Kingdom of top educational organizations in the U.S. and Europe. E-learning is creating many opportunities not seen earlier and filling the gender gap in tertiary education. In view of the results of our study in this article, we recommended more emphasis on e-learning and that all universities introduce and articulate e-learning programs along with traditional L&T.

References

- AlMegren, A. (2013, June 26). Siti Zuraini Yassin, Learning Object Repositories in e-Learning: Challenges for Learners in Saudi Arabia. *The European Journal of Open, Distance and E-Learning*. Retrieved on 1st October 2014 from <http://distance-educator.com/learning-object-repositories-in-e-learning-challenges-of-learners-in-the-saudi-arabia/>.
- Alonso Díaz, L. & Blázquez Entonado, F. (2009). Are the Functions of Teachers in e-Learning and Face-to-Face Learning Environments Really Different? *Educational Technology & Society*, 12(4), 331–343.
- An environmentally friendly, green campus* (n.d.) Retrieved on 1st October 2014 from http://en.wikipedia.org/wiki/Princess_Nora_bint_Abdul_Rahman_University#An_environmentally_friendly.2C_green_campus.
- Andersson, A. (2008). Seven major challenges for e-learning in developing countries: Case study eBIT, Sri Lanka, *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, 4(3), 45–62, 2008.
- Booklet for the International Exhibition and Conference for Higher Education* (n.d.). Retrieved on 1st October 2014 from <http://www.mohe.gov.sa/-ar/default.aspx>
- Educational technology in Saudi Arabia* (n.d.) Wikipedia. Retrieved on 1st October 2014 from http://en.wikipedia.org/wiki/Education-al_technology_in_Saudi_Arabia.
- Epstein, R., Pandit, M., & Thakar, M. (2013). How Love Emerges in Arranged Marriages: Two Cross-Cultural Studies, *Journal of Comparative Family Studies*, 44(3).
- European Foundation of Management Development* (n.d.) Retrieved on 1st October 2014 from <https://www.efmd.org/>.
- Government Initiative To Endorse eLearning In Saudi Arabia* (n.d.) Accessed on 1st October 2014 from <http://www.upsidelearning.com/blog/index.php/2012/02/09/-go-vernment-initiative-to-endorse-elearning-in-saudi-arabia/>.
- UNESCO (2011). Guidelines for Open Educational Resources (OER) in *Higher Education, Commonwealth of Learning*, ISBN 978-1-894975-42-1, Retrieved on 1st October 2014 from http://www.col.org/PublicationDocuments/Guidelines_OER_HE.pdf.
- Hajj* (n.d.). Retrieved on 1st October 2014 from http://en.wikipedia.org/wiki/Hajj#Performing_the_Hajj.
- de Beeck, I. O., Camilleri, A., Bijmens, M. (2012). “Research results on European and international e-learning quality, certification and benchmarking schemes and methodologies,” 2012, VISCED Consortium.
- Allendorf, K. & Ghimire, D. (n.d.). *Determinants of Marital Quality in an Arranged Marriage Society*, Population Studies Center Research Report 12-758, Population Studies Centre, University of Michigan, Institute of Social Research, Retrieved on 1st October 2014 from <http://www.psc.isr.umich.edu/pubs/pdf/rr12-758.pdf>.
- Manning, R. D., Cohen, M. S., DeMichiell, R. L. (2003). Distance Learning: Step by Step, *Journal of Information Technology Education*, (2).
- Applbaum, K. D. (1995). Marriage with the Proper Stranger: Arranged Marriage in Metropolitan Japan, *Ethnology*, 34(1), 37–51. Retrieved from <http://links.jstor.org/sici?sici=00141828%28199524%2934%3A1%3C37%3AMWTPSA%3E2.0.CO%3B2-8>.
- Menchaca, M. P. & Bekele, T. A. (2008) Learner and instructor identified success factors in distance education, *Journal of Distance Education*, 29(3).
- Mirza, A.A. & Al-Abdulkareem, M. (2011), Models of e-learning adopted in the Middle East. *Applied Computing and Informatics*, 9(2), 83–136.
- UNESCO (n.d.) *Open and Distance Learning: Policy*, Retrieved on 1st October 2014 from <http://www.unesco.org/new/en/unesco/themes/icts/lifelong-learning/-open-and-distance-learning/>.
- Perceptions about e-Learning in Saudi Arabia* (n.d.). Retrieved on 1st October 2014 from http://www.ccse.kfupm.edu.sa/~sadiq/research/conferences.pdf/Ali_ICAS-E_Apr2003.pdf.
- Princess Nora bint Abdulrahman University* (n.d.) Retrieved on 1st October 2014 from <http://www.mohe.gov.sa/en/studyinside/Government-Universities/Pages/R-UG.aspx>.
- Qibla* (n.d.). Wikipedia, Retrieved on 1st October 2014 from <http://en.wikipedia.org/wiki/Qibla>.
- Saudi Women and E-learning* (n.d.). Retrieved on 1st October 2014 from http://conference.pixel-online.net/foe2013/common/download/Abstract_pdf/142-ELE15-ABS-Alhareth-FOE2013.pdf.
- Stracke, Christian M. (2006), *Interoperability and Quality Development in e-Learning: Overview and Reference Model for e-Learning Standards*, Retrieved on 1st October 2014 from http://www.qedinfo.de/docs/Standards_e-learning_Stracke.pdf
- Ten-year 1425-35 education plan* (n.d.). Retrieved on 1st October 2014.
- The State of Distance Education in Saudi Arabia* (n.d.). Retrieved on 1st October 2014 from <http://elearnmag.acm.org/archive.cfm?aid=1642193m>.

- Why an arranged marriage “is more likely to develop into lasting love”* (n.d.). Retrieved on 1st October 2014 from <http://www.dailymail.co.uk/news/article-1363176/Why-arranged-marriage-likely-develop-lasting-love.html#ixzz3Gd184Cu0>.
- Wikipedia, *Princess Nora bint Abdulrahman University* (n.d.). Retrieved on 1st October 2014 from http://en.wikipedia.org/wiki/Princess_Nora_bint_Abdul_Rah-man_University.
- Women in Higher Education, Saudi Initiatives and Achievements* (n.d.). Retrieved on 1st October 2014 from http://www.mohe.gov.sa/ar/Ministry/Deputy-Ministry-for-Planning-and-Information-affairs/The-General-Administration-of-Plann-ing/Documents/women_in_higher_edu.pdf.
- Yamin, M., Cloud Economy of Developing Countries. *World Journal of Social Sciences*, 3(3), 132–142, May 2013.

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