

## E-learning and Women in Saudi Arabia: An Empirical Study

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**Abstract** –*E-learning has revolutionised the way we acquire knowledge, be it education or business. It has enabled provision of knowledge and education in situations where we had never imagined before. Some countries were quick to realise the opportunity and began experimentation of E-learning at its inception while others took their time to catch up with the paradigm shift. E-learning is a by-product of internet, which became usable in the 1990s. Many governments were quick to realise the great benefits of internet and hence did everything possible to make it available to their citizens and businesses. As usual, internet provision in its inception was costly and had a very slow speed, which hampered its propagation into the developing countries until it became viable. Saudi Arabia, the largest oil exporter of the world, didn't waste too much time to enact policies governing with the internet and soon initiated E-learning, which has been developing at a steady rate and is providing education to a large segment of disadvantaged sections of the society. In this article we study the extent of benefits and impact of E-learning in Saudi Arabia. We draw our conclusions based on a survey that we have conducted of selected groups of people on the west coast of Saudi Arabia. The conclusions are drawn after analysing our survey and these conclusions may also be valid for other societies, especially the West Asian and Gulf countries.*

**Index-Terms** – *E-learning, Face to Face Learning, Distance Learning, education, Saudi Arabia, Gulf Cooperation Council*

### 1.0 INTRODUCTION

In this article, we study general progress of E-learning and its impact on the education sector and the female population at the West coast of Saudi Arabia which is relevant for entire country in general. In particular, we shall study impact of E-learning on education in Saudi Arabia. Detailed study of our case is complimented with an extensive survey of a number selected group of people who are affected by E-learning or have a view about it. Our finding may have bearing to other countries of the region, especially the ones having similar cultures and problems.

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E-learning began in 1990s and slowly got refined in the rest of the last decade of the twentieth century. Like many other technological evolutions, E-learning was received with a lot of scepticism at its evolutionary stages. As the time passed, E-learning made steady and significant progress, especially in the countries of so called developed world. Many educational institutions in some countries of the world, especially those amongst the list of developing countries, struggled in the begging to comprehend its viability and benefits. Slow progress of E-learning in those institutions had a lot to do with the government policies which regulate the provision of internet which is used for networking of the for the instructions and materials delivery to the learners. In the first few years of the 21<sup>st</sup> century, internet had cost, reliability and availability issues, and hence many institutions in the world either didn't have access to the internet to begin with or couldn't afford to avail the internet. The second hurdle in the way of E-learning proliferation was stiff resistance by certain educationists and think tanks. Indeed there still is a certain amount of resistance in the way of online education. Despite certain amount of continued criticism from some sections of education society, E-learning has set its feet firmly and has assumed a position of an alternative way of education.

Early years of 21st century not only brought maturity and acceptance to this mode of education but we saw a growth of online education institutions. As a result we now find thousands of online universities around the globe. Even more significantly, some of the online institutions are not only providing courses in social sciences and arts but also other disciplines of education in natural, biological and other sciences. As a result we now have online degrees in almost all of the disciplines which are taught in the face to face mode, sometimes known as the traditional way or mode of education. Like in many countries, educational institutions in Saudi Arabia were slow in embracing and assimilating the concept of E-learning. However, the reasons were not economic. Saudi Arabia is the twelfth largest country [1] and [2] in the world and second largest country in the region with an area of 2,344,858 sq KM. Most of its terrain consists of arid inhospitable desert or barren landforms. There are many communities living in these areas. Despite a lot of educational, infrastructural and social development and incentives provided by the Saudi government, these communities are disadvantaged in accessing or receiving state education programs at the same levels as in the coastal part of the country. As in Saudi women are neither allowed to drive cars and other vehicles, nor to go out alone, they need a mahram, a member of the family, to take them to the educational institutions and other places of daily activities. There are also a significant number of young wives who find it difficult to make to face to face educational

programs. It is these sections of Saudi society who have greater need more and more E-learning programs and institutions.

Our survey has been administered in Jeddah to about 180 participants, mostly the students of E-learning at the King Abdulaziz University. Our survey mainly asked students about E-learning services offered by the university and the society's awareness of the concept of E-learning, the benefits of E-learning for the society, the Saudi government support for this type of education, and the extent of E-learning to enhance the quality of higher learning. The results of the survey responses show that the majority of E-learning students agree that the university is doing well to provide E-learning service for scientific degrees differently but only in certain colleges. Majority of the participants felt that university should widen its reach of E-learning through other faculties as well. As for the extent of community awareness and satisfaction about E-learning, majority has agreed that the university has worked to achieve this. We also found that E-learning is providing great benefits to the Saudi society. Many respondents feel that the Saudi government should do more through its policies to support this type of education, and make it available to all regions of the country.

## 2.0 E-LEARNING

Distance learning has roots in ancient history. But the advent of internet as an add-on has redefined the distance learning. Thus E-learning has two components namely, distance learning with internet enabled delivery of learning material and program. Distance learning isn't a new concept. In fact distance learning can be traced to early 19th century in different forms to what we have today. The face of distance learning has changed due to the advent of internet, which has termed it as e-learning is the involvement of internet which is used for networking of education providers with those of learners. Remarkable developments in software industry, media equipment and computer industry have tremendously improved the modern day learning known as computer assisted learning. Evolution of internet has revolutionized the way we are taught and the way we learn. Learning with the help of computers by using internet is known as E-learning

A number of researchers have studied and contributed to the E-learning. E-learning which began as an offshoot of internet, took its time to be recognised and accepted as an effective tool of education. In the initial stages, many academics were reluctant to let e-learning take place of the face to face learning partly or fully. However, as the time passed and technology matured an overwhelming majority of academics and educational institutions have come to realise the great benefits using electronic means and internet in learning and teaching. Many institutions have since started courses in E-learning - some as early as in the last century and others a little later in the beginning of this century as the methodology and technology went through refinements and expansion.

E-learning started using internet in late last century. Slowly it spread to public and private sectors of education providers. As in many cases of an emerging technology, it became necessary

to evolve and agree to a framework of e-learning. The United Nations [3] has provided a framework for the E-learning to guide educational providers and academics to the needs, duties and obligations towards this new found method of teaching and learning. A debate goes on the issue of E-learning and Distance Learning as to whether they are same. For details, see [4].

E-learning has now spread into almost all educational institutions and it is being used either in teaching courses remotely or in a blended mode, which is a combination of distance and face to face learning. All standard educational institutions now provide educational material, including audio/video recordings of lectures through dedicated learning management systems. The E-learning is so popular that dozens of quality journals are publishing hundreds of articles on E-learning every month. For a list of E-learning journals, see [5]. Recent advances in E-learning include the concepts of virtual class rooms, ubiquitous learning [6], Role of sensor technology and RFID in E-Learning, Cloud based e-learning, and the list is growing in the proportions to the refinements in the technology. Some discussions and studies on these topics can be found in a number of articles in the journals listed in [5]. Benefits of E-learning include faster delivery of the instructions and material, greater effectiveness in learning, environment friendliness, rich graphics and reach in remote areas.

## 3.0 E-LEARNING IN SAUDI ARABIA

In this section we explore the social and educational background of Saudi Arabia.

### 3.1 The country

Saudi Arabia is an oil rich country of the world. It is the largest exporter of petroleum products and is also a member of the group of twenty known as G-20. This is a grouping of countries with major economies. Saudi Arabia is also the country which houses Kaaba as shown in Fig 1 in Makkah (Mecca), where millions of pilgrims travel to perform pilgrimages known as Hajj and Omrah. Yamin [7, 8, 8, and 10] has conducted extensive studies and have provided detailed description of these pilgrimages and E-learning covering many aspects of the society in Saudi Arabia.

Saudi Arabia is regarded by many as a conservative country. Many people perceive that it doesn't provide adequate facilities to its female population. It is true that Saudi Arabia is a Saudi Arabia is regarded by many as a conservative country. Many people perceive that it doesn't provide adequate facilities to its female population. It is true that Saudi Arabia is a religious country but to say that it treats its female population differently is totally wrong. In fact women in Saudi Arabia have state of art facilities. It is true that many women (and men) get married quite early in the days of their high school or university education. The government of Saudi Arabia has special arrangements for their education and otherwise. In fact some of the facilities provided to females are even better than to their counterpart. E-learning is also a also one of the medium made available to this section of the society. To learn more about these, see [10]. Saudi Arabia has its large areas covered by mountains and deserts. It has traces and tracks of old

civilisations such as those of people of prophet Salah as shown in Fig 2 which are believed to be thousands of years old. This centuries old heritage of this country blends with its cultural, educational and social values.



Figure 1: Kaaba in Makkah

### 3.2 E-learning in Saudi Arabia

Saudi Arabia has taken very prompt decisions and has played an active role for the acceptance, provision and spread of E-learning. For example, the country had acquired fast internet whatever was available at different times. For the last five years, the country has organisations and citizens have access to Ethernet Fibre Optics for internet, which is the fastest internet in the world today. The government has also passed necessary legislations to make E-learning usable. More details on these aspects can be found in [11], [12] and [13].



Figure 2: Dwellings in Madain Saleh

As we are concerned with the E-learning of women in Saudi Arabia, we provide a brief overview of them here. It is not hidden that the women in Saudi Arabia are not allowed to drive cars and other motorised vehicles, most of them wear veil such as in Fig 2, and many of them get married in their teens. But these cultural and religious peculiarities in no way make them inferior to men. The government of Saudi Arabia takes special care for the educational, social, cultural and economic needs of its female section of the society. The women in Saudi Arabia have state of art facilities in all walks of life. For details, read socio-educational aspects of women (e.g. [10]).

Expansion of internet with Web 2.0 [14] has taken E-learning to new heights. Nowadays, with the evolution of Cloud Computing, the learning has attained even greater heights. With the use of computer technology, internet, Web 2.0 and cloud computing, E-learning is providing state of art material and instructions. The development and spread of the use of private Internet through clouds is enabling the delivery and maintenance of E-learning even easier. In particular, clouds

eliminate need for infrastructure and service, which is what, is most beneficial to provide education to distant and remote areas. Saudi Arabia is one of those countries who had legislated use of clouds and cloud computing while many other nations were discussing and debating issues such as security and privacy associated with this technology.



Figure 3: Dwellings in Madain Saleh

A large area of Saudi Arabia is mountainous and desert. But there are many communities living in these areas. So provision of education to these areas is critical. Some localities of people in these areas are either not large enough or are separated with terrain or are situated at significantly apart from each other making it difficult to setup educational institutions exclusively for them. Thus higher education through traditional means is beyond their reach. It is these areas where E-learning is playing very decisive and meaningful role.

### 4.0 OUR RESEARCH METHODOLOGY

We have conducted our study with help of the literature review and an extensive survey of the female recipients of E-learning programs or any other females who may have had knowledge of these programs and hold an opinion about the service levels. Answers to the survey questions were sought on a raster scale of five, 1 signalling as not agreeing and 5 as agreeing.

#### 4.1 The Survey Questionnaire

Table 1 shows the main questions of our survey. These questions are designed mainly to measure the E-learning quality and levels of satisfaction.

Our survey questionnaire had fifteen questions in addition to a few questions of general nature. It is not only hard to find many women willing to participate in a survey, especially for the reasons of privacy and ethical considerations. We took care of these considerations of the women participating in the survey. We received one hundred and seventy five responses to our survey from carefully selected samples of female respondents. The main thrust of our survey was to measure the experiences with the current state of E-learning in the West Coast of Saudi Arabia through the King Abdulaziz University (KAU) [15] and [16]. The KAU is the second largest university in the country with a healthy world raking and which has more than one hundred and fifty thousand students enrolled in it. Many of the faculties of KAU provide E-learning courses for most of their degree courses. Students of E-learning include people from all ages, especially old age people, married and unmarried, male

and females, especially the young married women with children. As our survey was designed to measure satisfaction levels of E-learning amongst the women, we only concentrated on women.

**Table 1 Survey Questionnaire**

N#	Criteria
1	I am aware that the King Abdulaziz University (KAU) offers courses and degrees through E-learning
2	KAU is only providing E-learning for degrees of only few faculties
3	KAU needs to expand its E-learning base to include courses in other disciplines and faculties
4	KAU is providing E-learning in a satisfaction manner
5	E-learning is a result of proliferation of internet and other technological advances
6	E-learning has redefined the educational process to the benefit of people
7	E-learning is helping Saudi female society to overcome obstacles in education
8	E-learning is very helpful for educating people in the remote areas which have no colleges and universities
9	Saudi government is providing adequate support and infrastructure for the E-learning in the KSA
10	The government KSA needs to do more to make E-learning to all citizens
11	E-learning is an effective method of eradicating illiteracy
12	E-learning is a better than face to face learning
13	E-learning maintains the quality of educational standard
14	The KSA government has ensured fastest internet so to enhance E-learning experience
15	To ensure the efficiency of the quality, the E-learning providers

**4.2 Survey Results**

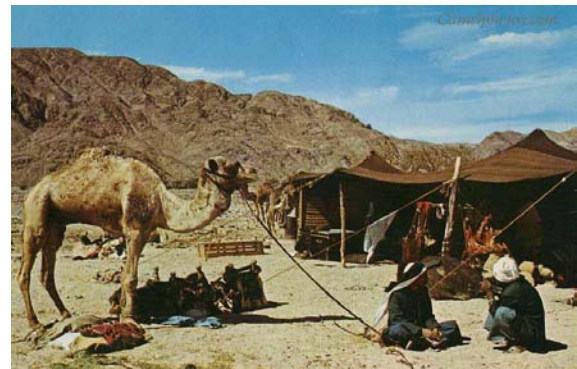
After carefully analysing survey responses and removing outliers, we decided to conduct simple statistical analysis such as averages and means of the responses of the response data. The averages of responses are shown in Table 2. From the Analysis it is clear that the majority of students in E-learning at the King Abdul Aziz University, KSA, agree that the university is working to provide E-learning various scientific degrees of service, but only in some colleges. So many female students desire more E-learning programs covering all disciplines. The extent of community awareness and satisfaction with the majority of E-learning is quite high. But there is unanimity when it comes to choosing between face to face and E-learning – almost all respondents believe that the traditional method of face to face learning and education is better than that of E-learning.

**Table 2: Averages of responses**

Questions	Average	Questions	Average
Question 1	4.2	Question 9	3.7
Question 2	3.6	Question 10	4.7
Question 3	4.6	Question 11	4.21
Question 4	3.35	Question 12	2.5
Question 5	4.7	Question 13	3.4
Question 6	4.29	Question 14	3.3
Question 7	4.5	Question 15	3.6
Question 8	4.6		

The majority of respondents agreed that E-learning presented is of great benefit Saudi society in terms of overcoming the obstacles, especially what the females have been facing. There is also an agreement that the people in remote areas that do not have easy access to universities are also benefiting from E-learning. A significant number of respondents believe that the Government of Saudi Arabia supports this type of learning but needs to do more to provide E-learning for all people in all areas. It was agreed by many that the King Abdulaziz University is working to enhance the quality of E-learning provided for students.

It should be known that the king Abdulaziz University has E-learning students from all over the country, not just the west coast of Saudi Arabia. Therefore our survey and study can be treated as a representative of the entire nation of Saudi Arabia, also known as the Kingdom of Saudi Arabia.



**Figure 4: Bedouins of Saudi Arabia**

**5.0 CONCLUSIONS**

The future of education lies with E-learning, it's here to stay. Younger generations in most of the developed countries and many developing countries have to work to support themselves and hence their studies. These people often find it difficult to make themselves to the classrooms. So, E-learning is a convenient way of learning for them. There has always been and will continue to be many disadvantaged sections of the society everywhere who will would find E-learning as a desirable way of getting educated.

E-learning in Saudi Arabia is playing a significantly additional role of educating certain special classes of people. Young and married women, with children in some cases, who cannot travel

without a mahram (guardian), are benefiting with E-learning tremendously. As discussed earlier, Saudi Arabia has some communities, known as Bedouins as shown in Fig 4 and described in [17], are educationally backward communities in the country. These communities are spread into many areas making it difficult to set up higher educational institutions within their reach. With great efforts from the government of Saudi Arabia and some social organisations, these people are benefitting from E-learning. It is fascinating to study these communities, their social, cultural, linguistic and economical aspects. These people may be compared with like those of red Indians of America and Aborigines of Australia with a difference that these communities are not being ruled by people who took over the country in one way or the other. Indeed this is a much bigger study to conduct and we falls outside the scope of our article. We endeavour to return to this interesting study sometime in the future.

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