

## **AN EMPIRICAL STUDY OF EFFECTIVENESS OF E-LEARNING IN KING ABDULAZIZ UNIVERSITY**

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### **ABSTRACT**

For centuries, students have depended on face-to-face learning. However, the advent of internet coupled with Web 2.0 gave rise to different ways of learning. There is no denial of the virtues of the face-to-face learning but it was never suitable for some people. The difficulties of accessing face-to-face learning ranged from distance, gender, travel modes and timing to mention a few. E-learning is by far the most attractive and popular models of internet based learning. With the proliferation of internet with fast speed at affordable tariffs, even the developing countries joined the race to become proficient with the technology. Indeed the initiatives at the beginning rested with the respective governments to cater for the infrastructure. Then the educational institutions utilized the technology to make way for the e-learning. Efficiency level of e-learning differ from country to country and institution to institution. Our aim in this paper is to assess the effectiveness of the e-learning program offered by the King Abdulaziz University of Saudi Arabia. Our study and conclusions are based on a survey of both male and female students utilizing this e-learning program. These conclusions may also be relevant to other regions of Saudi Arabia or other countries, especially in the Middle East and Northern Africa.

**Keywords:** E-learning, Distance Learning, Face-to-Face Learning, Female Education, Saudi Arabia.

### **INTRODUCTION**

Innovation in education is a continuous process, which has become more relevant in the 21st century because of the remarkable advancements in technology. The aim is always to bring remarkable improvements in the methodology and manner in which education is imparted. Students' feedback is vital for improvements in education. With modern day gadgets and increasing demands for perfection, research looks for all possible solutions to make knowledge and education dissemination even more attractive.

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 beginning to comprehend its viability and benefits. Slow progress of E-learning in those institutions had a lot to do partly with the fear of change and partly with the government policies to regulate the provision of internet. Indeed e-learning is a fruit of internet which is responsible for providing networking for the instructions and materials delivery to the learners. Early years of 21st century not only brought maturity and acceptance to this mode of education but we not only witnessed tremendous growth in provision of e-learning

platform but also mushrooming growth of online educational institutions. Some of these aspects are studied by Dublin (2003), Oblinger and Hawkins (2005), Kim et al. (2019), Francis et al. (2019), Wormington and Hulleman (2019), Al-Harhi (2005). As a result, we now find thousands of online programs through state universities, private institutions and virtual educational institutions. In every society, there are people with constraints of time and money to access mainstream traditional face-to-face learning. These kinds of people in some countries may be a sizable chunk of the society.

There are many Saudi Arabian people who find e-learning as an ideal way of learning because of their cultural, religious and social backgrounds. These kind of people in the Saudi society have an appetite for more and more E-learning programs and institutions. In the first few years of the 21st century, internet had cost, reliability and availability issues, and hence many institutions in the world either did not have access to the internet to begin with or could not 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. These aspects of Saudi e-learning are discussed by a number of researchers including Aldiab et al. (2017), Chowdhury, Kootsookos, and Alam (2017), Abouzahra (2011), Al-Asmari & Khan (2014), and Al-Dosari (2011).

Usually there are many possible measurable attributes in e-education like the system, instructor, course materials, administration and support qualities. However, in this research we shall mainly focus on analysing usefulness, instructions, instructors and infrastructure of the system and try find out benefits and finding obstacles to enlist areas requiring improvements. Our analysis and conclusions are drawn from a survey of past users of e-learning program of the King Abdulaziz University (KAU), which is situated in Jeddah, the most prominent business centre located at the west coast of Saudi Arabia. The KAU e-learning portal is located at Deanship of e-Learning and Distance Education (2019) In particular, we shall study general progress of E-learning and its impact on the education sector and the student population at the King Abdulaziz University, Jeddah, Saudi Arabia. Detailed study of our case is complimented by 31 females and 35 male student feedback responses of a survey questionnaire, which we administered for the purpose. For the reason of social, cultural and religious background of Saudi Arabia, we have been very curious to measure the satisfaction levels among female students. In general, we found an overwhelming support for the e-learning program of KAU and added benefits to the female section of the society. Our findings, although based on the KAU case, may have bearing to other educational institutions in Saudi Arabia, the Middle East and North Africa (MENA) region, especially those from the Gulf Cooperation Council (GCC), which have similar social and cultural environments.

## LITERATURE REVIEW

E-learning usually refers to learning without formal face to face classroom system with the help of internet. As the e-learning can take place at faraway places (often overseas), the concept is also referred to as Distance Learning. Existing definitions according to Dublin (2003) tend to reveal the specialization and interest of the researchers. However, according to Oblinger and Hawkins (2005) and Dublin (2003), there is no common definition for e-learning. The concept and purpose of e-learning may also differ from region to region. Our study is based in Saudi Arabia and it serves a great purpose to the feminine gender, let us look at the educational, social, cultural and religious background of the country.

### **Economical, Socio-cultural and Educational background of Saudi Arabia**

Saudi Arabia, also known as the Kingdom of Saudi Arabia (KSA), as a nation was founded by the King Abdulaziz inn Saud in 1932 by uniting various regions into one nation under the banner of Islam. According to General Authority of Statistics (2019) and Global Media Watch (2019), the KSA has more than 34 million people, which comprises of more than 57 percent male and less than 43% female population. Saudi Arabia is the largest exporter of fossil fuel and is a member of G20 group of nations. Saudi Arabia's state owned oil company Aramco, valued at 1.7 trillion (Martin, 2019), is the biggest listed firm overtaking Microsoft and Apple. The capital Riyadh is the biggest city of the country with over four million and Jeddah is the second largest city just under three million of population. Jeddah is not only the largest port city but also the gateway to Makkah (Mecca), the epicentre of annual pilgrimage known as Hajj.

Saudi Arabia host annual pilgrimage during the last month of Arabic/Islamic month known as Dhulhijja. It attracts about two million foreign pilgrims to this event, which involves very complex rituals for six days. The logistics and travels associated with the event prolong its span to six weeks. Although Hajj is not the largest of the gatherings, which take place in the world but it involves very frequent and rigorous movements within very tight deadlines. For example, all pilgrims (approximately three millions) must travel on 9th Dhulhijja to Arafat (a valley in the mountainous region), and must again travel after the sunset to Muzdalifa (another mountainous region). Since these places are located within few miles of each other which makes it very difficult to expand the crowd into a larger area as the pilgrims must remain within the defined perimeters. These areas have witnessed several disasters (stampedes, fires, building collapses etc.). Details of Hajj are discussed in detail by Yamin (2019), Yamin et al. (2018), Alotaibi et al. (2019), and Yamin (2015a). Apart from Hajj, there is an ongoing pilgrimage known as Umrah, which takes place in all months and seasons. In all about 8 million pilgrims visit Makkah every year. The target for the number of pilgrim visits in Vision 2030 is much higher. The Hajj and Umrah have influenced and contributed to the historical and religious background of Makkah in particular and Saudi Arabia in general.

### **Facilities for Female Folks of Saudi Arabia**

Given the historical and cultural background, Saudi Arabia places some restrictions on its citizens, men and women alike. One of the visible restrictions is the dress code for male and female folks, aimed at preventing exhibition of some body parts. Many Saudi women prefer to cover their faces although it is not a part of dress code. Saudi Vision 2030 is set to bring many changes to many social and cultural aspects of the Saudi life. For example, now Saudi women can drive vehicles, work with men in offices, banks, businesses and airports. Saudi women can also travel without a guardian and take part in concerts and sports, which are now taking place in Saudi Arabia. Yamin (2015b), and Yamin & Aljehani (2016) have studies some aspects of Saudi women.

As for the education, the women in Saudi Arabia are excelling more than the men. They are provided with their separate campuses in all state and private educational institutions. They are have state of art facilities in their campuses including sports, swimming, and horse riding. Despite their considerable lower percentage of population, according to Ministry of Education (2019), there are more female graduates in the country than the male graduates. Saudi Arabia has also established world's largest female only university in Riyadh (Princess Nourah Bint Abdulrahman University (PNU), 2019), which has an enrolment of more than fifty thousand. The government of Saudi Arabia has also provided hundreds of thousands of scholarships for receive higher education in many institutions of Europe, the USA,

Canada, Australia and New Zealand. One can now see an overwhelming majority of Saudi male and female academics and specialist in all universities and educational entities of the country. The quality of the education is often approved by the well-known international accreditation bodies like ABET (2019), AACSB (2019), PRME (2019) and EPAS Accredited (2019).

### **E-learning in Saudi Arabia**

Saudi Arabia was one of the first nation in Asia and Africa to institutionalize e-learning. The kingdom has gradually excelled in providing necessary infrastructure to support e-learning through educational and business institutions. Several researchers have studied various aspects of e-learning in Saudi Arabia and elsewhere. Arkorful and Abaidoo (2015) have discussed the role of e-learning, the advantages and disadvantages including the definition and concept itself. Yamin (2015b) has discussed social and cultural aspects of e-learning in Saudi Arabia. Yamin and Aljehani (2016) have studied some aspects of e-learning and their impact on the female population. Basahel and Yamin (2017) have studied the quality of internet for eLearning services in Saudi Arabia. Al-Ismail et al. (2019) have compared learners' characteristics for m-learning in Australia and Saudi Arabia. Unnisa (2014) has analysed technical ability, learning ability, time management ability and preferred mode of study of e-learners. Elsayy and Ahmed (2019) have researched Quality of Education and Cyber security, which make use of Blackboard. Aljaber (2018) has studied and evaluated the role of international partners, particularly the UK and the US, in supporting e-learning financially, socially and technologically. There are many more researchers who have studied many aspects of e-learning globally and in particular regions. As we are focussing our research in Saudi Arabian context, therefor we have only provided some relevant references focusing their studies to the Arabian Peninsula.

**Table 1:  
Personal Information of Participants**

<b>Are you male or female?</b>	
<b>Are you married?</b>	
<b>What is Your age?</b>	
<b>What is your nationality?</b>	
<b>Are you a student?</b>	
<b>Are you employed?</b>	
<b>Have you studied through E-learning provided by KAU</b>	
<b>Which region of Saudi Arabia do you belong to?</b>	
<b>Where do you come belong to?</b>	<b>Town/village</b>

**Table 2:  
Questionnaire for participants**

	Questions	1	2	3	4	5	6	7
1	I have a fast & reliable internet for accessing e-learning material							
2	I found E-Learning to be useful							
3	E-Learning is more appropriate for woman than men							
4	E-Learning is a way of solving education problems of married women with children							
5	E-Learning is a way of solving education problems of women with transportation difficulties							
6	E-learning system quality met my expectation							
7	E-learning instructions from instructors were clear							
8	The quality of course material met my expectation							
9	The ease of accessing E-Learning material met my expectation							
10	E-Learning Resources met my expectation							
11	To me E-Learning is cost effective							
12	I personally prefer E-Learning method for acquiring education							

## METHODOLOGY

Seeking feedback from the recipients of a service, in our case students, and analysing their responses is a familiar way of gauging effectiveness of a system. Revising policies, contents and methods is an essential part of any system improvement, which happens to be e-learning in our case. Such measures are necessary for any progressive distance-learning program. According to Alonso Díaz & Blázquez Entonado (2009), such studies might induce online and face-to-face teachers to reflect on their practices, and to become aware of improvements they might have to make in their role as teachers. According to Manning et al. (2003), education, business, government, and other training facilities require guidance to make this important transition to the online environment.

Our project aims to conduct empirical study into the quality and effectiveness of learning and teaching of the distance learning courses offered by the King Abdulaziz University. In particular, we shall focus our study on the quality of the system, content and instruction. The Ministry of Higher Education of the kingdom has instituted comprehensive policies for the universities to impart E-Learning educations to the citizens of the kingdom, and the ministry is making all efforts to make these programs available to all Sections of the society. The ministry is also taking steps to encourage and support improvements in the distance learning programs across the kingdom.

We have conducted a feedback survey of sixty students, half of them being female. We have chosen a simple questionnaire aimed at gauging the effectiveness of the system, quality of content and the appropriateness of instructions. As usual, we had sought some personal information from the participants as can be seen in table1 with an assurance of protecting the privacy of their data. Our questionnaire can be seen in Table 2. Out of sixty contacts, only 55 of them returned their responses, 27 of them being females.

## **ANALYSIS AND SUMMARY OF THE RESPONSES**

The KAU provided e-learning system of education for only selected programs, and that to in Arabic medium as well. Given the nature of the questionnaire, we decided to analyse the aggregated responses manually. Responses to the first two questions were close to maximum in both cases.

### **Is e-learning more suitable for Saudi Female Students?**

Third, fourth and fifth questions were designed to measure the appropriateness of e-learning to the female section of the society. Responses to third question returned an interesting data. The male section response aggregated 6.5 while that for females was under six. Although both genders returned high end aggregate value but it was the man side who thought more strongly that the e-learning was more appropriate for females than the females themselves. This perhaps was because the male student realised the difficulties in female travel to the campus. Response to fourth question returned near perfect score from both sides. Here it should be noted that some marriages in KSA take place during the mid-teen years of females. Subsequently some of them get children while still in their teen years. By the time these young women enrol in the university course, some of them would have one or more children. Studying and taking care of the family is a daunting task for any society of the world. In such situations e-learning naturally becomes a preferred way of getting education. This scenario emerges quite a lot in Saudi Arabia and the surrounding regions whereas this would be a rare in many developed nations.

Similar responses were received for 5th question as again it asked the same question but in relation to transportation difficulties. Indeed Saudi women can now drive and tens of thousands of them have actually acquired driving licence since 24th June 2018 when the ban on their driving was lifted. However, many of them may still be following the traditional way and so they many of them would take years to follow the suite. Thus transportation of females still remains a major obstacle for receiving campus based face to face education. It does not mean that female campuses are nearly empty. In fact, an overwhelming majority of females does receive campus based face-to-face education with travel assistance from their guardians.

### **Quality and Cost of e-learning**

Questions 6 to 10 were designed to measure the quality and effectiveness of the e-learning services. We received mixed responses for these questions. The aggregate for responses of each of these questions varied between 3 and 4. The female section was more critical than their male counterpart was. This is not surprising. First, even the best of the e-learning systems would receive some critical response from the users. Secondly, the KAU e-learning has been undergoing continual improvements. Fairly recently, Blackboard became usable by e-learning. The internet quality may vary in rural areas. The KAU e-learning does have many students from Bedouin regions, where internet quality may not be consistent all the times. On the infrastructure issue, e-learning has been continuously improving. The issues regarding instructions, we admit that there may be training issues with the instructors. It should be noted that so far e-learning is provided through Arabic medium of instructions

and so many of the instructors are home grown and some of them may not have had exposure of teaching methods of developed countries.

On the question of cost effectiveness, we received an aggregate score of under 6. It should be mentioned here that the education in Saudi Arabia is free of cost. Only specialised postgraduate courses taught to working class are fee based. Even in such cases, studies of most of the students are sponsored by their employer. Responses to question 11 were aggregated to around 5, which meant that some students had used e-learning although their preferred way of education may not necessarily be e-learning. Our question on cost effectiveness refers to the time and cost savings by not travelling to the campus and not buying additional educational material used in face to face environment.

## CONCLUSIONS

In this article, we have studied the effectiveness of e-learning provided by the KAU, especially in the case of female students. Our findings are that e-learning at KAU is progressing well and recipients seem to be satisfied but want improvements in the system quality, learning materials and instructions. Female section of the society does seem to be very reliant on e-learning mainly for the family and transportation reasons. In our view the demand for e-learning course will further grow once more programs are added to e-learning. The progress of e-learning at KAU is steady but some might view it as slow. We didn't find alarming issues with the KAU e-learning program but strongly feel that the program should institute a well-developed training program for instructors.

## ACKNOWLEDGEMENT

Authors would like to thank the Deanship of Scientific Research (DSR) of the King Abdulaziz University, Jeddah, Saudi Arabia, for supporting and sponsoring this project and providing funding to conduct this research.

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