

Obstructions For Learners In The Use Of Ict In Ksa Institutions

Omran Alharbi

Glasgow University, Glasgow, UK

ABSTRACT

The advancement of digital technology has a great influence on the development of many areas of modern life. Over recent years, e-learning systems have managed to gain a competitive edge over the more traditional methods of learning. The learning and teaching techniques employed by e-learning systems allow more flexibility and provide freedom from the restrictions of time, location, physical presence and other aspects of traditional learning. Nevertheless, e-learning does have its own drawbacks, and research into the barriers to learning will assist in overcoming some of the problems associated with e-learning success. This study attempts to determine the obstacles that can influence the success of ICT within institutions in the Kingdom of Saudi Arabia. This qualitative research examined the obstacles of the use of ICT in the education process from learner's perspectives and the potential solutions that can help to reduce these obstacles. Semi-structured interviews were conducted with seven e-learning students from one Saudi University. Purposive sample techniques were used with participants, and the results revealed that there were many barriers that hindered learners from benefitting from the use of ICT in education. These obstacles included lack of technical support, technical issues, lack of English language, lack of design e-course materials, and lack of motivation. In addition, a number of solutions were considered in this study.

Keywords: Obstructions, Learning Management System, LMS, Learners and Saudi Arabia.

INTRODUCTION

Information and Communications Technology, or ICT, is a collection of technological resources and tools which are utilised in the creation, storage, management and communication of information, as well as supporting learning and teaching (Vajargah, Jahani & Azadmanesh, 2010). The use of ICT and the internet has risen significantly over the years, both locally and worldwide; this is due to the ever-changing dynamics of environment, globalisation, and the higher demand for lifelong learning and the technologies necessary to facilitate it (James, 2008). Higher educational institutions have had to keep up with the rapid change to digitalisation, and have adopted ICT for its social, educational, and economic advantages. Research has consistently demonstrated the educational benefits of ICT in the teaching and learning environment (Pretorius, Steyn & Johnson, 2012), such as language acquisition, motivation, catalysing learning and teaching, enhancing pedagogy, and improving academic performance (Jaffer, Ng'ambi & Czerniewicz, 2007; Oh & Park, 2009). It has been shown that although the advantages of ICT are well-documented, higher education

establishments have held back slightly in terms of implementing ICT systems for learning and teaching, and Saudi Arabian institutions are no exception to this. In the KSA, the education sector has come up against a number of barriers to providing quality education to its citizens. In many Saudi institutions, there is no strategy in place to implement specific components into their systems (Alamri, 2011); for instance, most universities cannot implement online educational services due to poor infrastructure (Abedalla, Pinchot, Samrgandi & Al-Masri, 2014). Academic systems in these universities and colleges are rather outdated, and do not offer a high quality educational experience for students (Abedalla et al., 2014). This study examines learners' perceptions of the barriers to the use of ICT in one Saudi University, and a number of solutions will be provided by the students which might help to overcome or reduce these barriers.

RESEARCH PROBLEM

Universities around the world are currently attempting to gain the most benefit from the technological revolution, and use these advancements to offer teachers and students the best possible experience. However, developing countries with emerging economies face very specific challenges when attempting to implement e-learning systems into their establishments (Naveed, Muhammed, Sanobar, Quresi, & Shah, 2017).

In Saudi Arabia particularly, there are many obstructions preventing both instructors and learners from benefitting from effective ICT technology implementation within the education sector (Al-Harbi, 2011; Al-Jarf, 2007; Alshammari, 2015; Al-Shehri, 2010). According to Al-Shehri (2010), researchers should identify the barriers faced by learners during the use of ICT in their learning. In the past, many studies conducted in Saudi Arabia investigated the obstacles involved in employing ICT in the teaching process from the perspective of instructors; however, few studies have been carried out with a focus on the barriers to using ICT in the learning process – particularly from the perspective of students in Saudi universities (Al-shahrani, 2016), and no studies have been conducted in this University under investigation. Learners' perspectives play an essential part in framing the activities that occur in institutions (Deaney et al., 2003). As a result, this motivated the current study to fill the gap that exists in prior research. This study examined the learner's perceptions of the current barriers they face in the use of technology in their learning in one Saudi University.

Aim of the Paper

The aim was to examine the obstructions and solutions from the perspective of the learner regarding the use of ICT in one Saudi University.

Research Questions

RQ1: What are the obstacles that learners have encountered so far when using the Learning Management System in Saudi Universities?

RQ2: What are the possible solutions from the learner's view point that might address these obstacles?

LITERATURE REVIEW

Definition of e-learning

The term 'e-learning', originally thought to have been coined by Cross in 1998 (Dublin & Cross, 2002) although it appears to have been used by Mori in 1997 (Clark, 2001), refers to learning that

takes place electronically. A number of definitions of the term describe the use of ICT in training and other educational programmes.

According to Selim (2007), e-learning as a term is defined as the utilisation of modern ICT with the help of computer networks in order to present information, learning materials, or teaching materials to an individual. On other hand, Clark and Mayer (2016, p.7) have defined e-learning as "... instruction delivered on a digital device that is intended to support learning".

E-learning as the use of computer-based technology such as the internet, websites, email, and other applications to assist and enhance the learning and teaching environment. E-learning, therefore, is a modern term used to refer to the wide range of electronic technologies used to enhance and support teaching, learning and assessment. The main benefits of e-learning are that it is customisable and accessible to all regardless of time or location. As a result, as e-learning is deemed a comparatively new phenomenon in Saudi Arabia (Al-Harbi, 2011), there are a number of barriers that come with its implementation.

Advantages of e-learning

There are a variety of advantages in the use of e-learning in an educational context. These advantages, according to several researchers, are listed below. E-learning:

- Provides freedom of access and benefits of learning anytime and anywhere.
- More qualified learners do not need to rely on their colleagues; they can advance their own learning.
- Saves time and effort for students and teachers.
- Reduces the amount of money needed to accommodate large classes of students, as e-learning can accommodate all of them.
- Makes students express their opinion about their learning and communicate with each other, especially shy students.
- Provides opportunities for those who want to continue their study, but may have circumstances which prevent them from attending traditional classes.
- Provides the opportunity to work from home.
- Motivates students to learn – most students nowadays have a mobile phone or tablet.
- Allows interaction between learners and their teachers/peers outside the classroom.
- (Alsalem, 2004; Cox, 2013; Keller & Cernerud, 2002; Kocur & Kosciuszko, 2009; Sun et al., 2008)

Disadvantages of e-learning

Despite the benefits of the use of e-learning tools in education, a variety of disadvantages come with its use. These disadvantages, as listed below, have been mentioned in a number of previous studies (Almosa, 2002; Klein & Ware, 2003; Lewis, 2000; Kattoua, Al-Lozi, & Alrowwad, 2016).

- E-learning requires intensive training for academic staff and students in order to prepare them for use in their education process.
- The role of educators has become less effective compared their role in traditional teaching methods.
- E-learning concentrates on the learning process more than other emotional goals.
- Difficulty in terms of interaction between students and their teachers/other students.
- E-learning is expensive, especially for technical infrastructure.

- Students can feel bored when learning with technology, because there is lack of real interaction compared to traditional learning.
- Lack of human interaction.
- Learners can be easily distracted with other things, particularly social media and YouTube.

Studies Concerning the Obstacles Faced by Learners using e-learning

One of the main responsibilities of researchers in the field of technology is to focus on the perception of e-learning tools, for example internet applications, and to highlight the obstacles faced by learners while utilising these applications (Al Shehri, 2010). Identifying and interpreting the attitudes, skills and knowledge of learners is crucial if implementation of e-learning is to be successful (Ibrahim et al., 2017). According to Al Shehri (2010), the biggest obstacles hindering the successful implementation of an e-learning system are the skills and knowledge of the instructors and learners. He states that e-learning is based primarily on those skills and attitudes to a much greater extent than merely integrating technology or internet applications. Recently, Ngimi (2013) carried out a study aiming to examine the opportunities and barriers for integrating ICTs in education in the Institute of Continuing Education at the Open University of Tanzania. The sample of the study included ten instructors and two hundred students. The researcher used a questionnaire to collect the data. The results of the study revealed that many challenges were determined to limit successful employment of information communication technology in the Institute of Continuing Education at the Open University of Tanzania. These barriers were that the majority of teachers lacked pedagogical competencies, and lack of technical support was found to be another limitation. The result also found that there was insufficient technical infrastructure. In the same line, Edumadze et al. (2015) conducted a study in southern Ghana with a sample of 600 students; a questionnaire was used to collect the data. The study's findings show that the challenges faced by learners included lack of technical skills among students, irregular access to the internet, and lack of feedback from teachers to their students. Finally, the study results revealed that 68.5% of participants did not receive any training on the use of e-learning tools. Similarly, Eldeeb (2014) conducted a study in a medical college. The results revealed that technical problems were the main challenge for students in using LMS, with other barriers being lack of access to the internet and poor broadband service. Moreover, a study by Galanouli & McNair (2001) highlights the three main barriers to successful ICT use during learning: lack of resources, lack of time, and the attitudes of teachers. Another important factor contributing to the inability to use ICT in learning was a lack of appropriate equipment. Research conducted by Keengwe et al. (2008) into students' views on ICT integration in learning. The study results revealed that learners simply do not have the necessary computer skills to effectively support their learning experience. This result suggests that university students may benefit more from technology-specific training by their institution to facilitate their learning. According to Barczyk et al. (2012), when learners face technological obstructions such as lack of access to the system, they are less likely to intend to use LMS in their learning.

In Saudi Arabia recently, Abedalla et al. (2014) conducted a study aimed to investigate students' perceptions of online learning. They used a questionnaire as a tool for gathering the data from sample 56 students. The results revealed that more than 80% of the participants preferred to learn by traditional methods instead of online learning. The researchers mention that despite many universities' attempts to diffuse the use of ICT in education, students still prefer to learn by conventional methods. Similarly, Abdul, Al-Zumor, Al Refaai, Bader and Aziz (2013) carried out a

study in King Khalid University. The aim was to investigate students' perceptions of the use of e-learning tools in their learning. The sample consisted of 160 female students studying an English course through an e-learning programme. The tool used to collect the data was a questionnaire. Students were asked about the barriers that they faced and their suggestions to overcome these barriers. The study findings indicated many barriers for learners, including major connectivity problems, technical problems, and social isolation. Students' suggestions for overcoming these challenges were that the university should provide appropriate training for students, solve technical issues, and provide enough computer labs. In addition, Alaofi (2016) found that poor internet connection is one of the most common barriers that students encounter when using Blackboard in Taiba University. He indicated that Taiba University should improve the infrastructure of their internet connection in order to use Blackboard effectively. According to Algahtani (2017), students do not have adequate support in university campuses such as network internet or computer labs in order to use Blackboard effectively. This means that students lack sufficient support to use technology in their teaching and learning. Algahtani (2017) discovered that, in relation to students' issues, students have difficulty logging into Blackboard due to technical issues which also affected teachers' use of LMS. Secondly, students suffer from lack of training which led to their unwillingness to use LMS. Thirdly, students were suffering from lack of institutional support, especially in terms of providing computer labs and technical support. Finally, students lack adequate knowledge in the use of Blackboard. Thus, according to the researcher, students should benefit from institutional support such as training and encouragement in order to be motivated enough to use Blackboard in their learning, which in turn encourages teachers to use LMS in their teaching.

After reviewing the literature, review it appears that there are a number of obstacles and barriers that prevent and hinder the learners' use of ICT in the education process. In addition, most of the above studies used the questionnaire method to collect the data; however, there is a paucity of qualitative research with a specific focus on Saudi Arabia. This study has attempted to probe deep into the research problem by using a semi-structured interview with participants as a tool for collecting the data. And within the limits of the researcher's knowledge, there have been no studies (qualitative or quantitative) conducted in one Saudi University that examines learners' perceptions of the barriers faced when using ICT in their learning, and the possible solutions that might help to remedy these barriers. Hence, this qualitative research was carried out. This research will help teachers and decision makers to overcome these challenges in the future.

ICT in Saudi Universities

The development of higher education in Saudi Arabia initially encountered several obstacles, such as a lack of qualified graduates to lead the institutions, and an underdeveloped infrastructure. Even when it started to improve, higher education in the surrounding countries was better. However, this all changed with the advent of the internet. The internet gave Saudi Arabia the opportunity to equalise the differences between its higher education and that of other Arab countries, but there was still a delay with the introduction of internet services. The first institution to connect to the internet was the King Fahd University of Petroleum & Minerals (KFUPM) in Dhahran, in 1993. Although progress was slow, once the internet was publicly available, the increase in the numbers of internet users was the highest of any Arab nation (Albalawi, 2007). This increase in numbers did not necessarily mean that the teaching and learning system had improved. However, the arrival of the internet meant that universities started to utilise ICT and to introduce e-learning. The National

Centre of e-learning & Distance Learning (NCeDL) was established in 2008 by the Ministry of Higher Education. The role of the Centre was to facilitate the deployment of e-learning across universities in KSA (Alhabeeb & Rowley, 2017; Yamani, 2014), so that it became an integral part of the national education system. It also had the role of ensuring that online courses were of high quality, and that rules and regulations for e-learning were applied. Beyond the boundaries of Saudi Arabia, it sought to learn from institutions from around the world that had employed e-learning, and to make its courses available to students overseas (Alhabeeb & Rowley, 2017; Al-Harbi, 2011; Yamani, 2014). It supports research into e-learning, and facilitates collaboration between researchers in order to advance the field of e-learning.

It was realised that e-learning and distance learning could solve some of the country's problems, such as the segregation caused by gender and the large geographical spread of the students (Alkhalaf et al., 2010; Alshathri & Male, 2016). The improvements were not as widely spread as in universities in other countries. However, there were large differences between universities as some were new and others were still housed in old buildings, with an infrastructure that was not well developed. Nonetheless, the use of ICT in universities was able to increase the efficiency of teaching and learning (Zainally, 2008). ICT has been embraced by the Saudi Arabian government, and the country now boasts the largest IT market of any Gulf country, predicted to be worth US\$6.7bn by 2016. This is due to the fact that there has been serious investment in the IT and communications infrastructure (MOE, 2017).

RESEARCH METHODOLOGY

In order to achieve the research aim and to answer the research questions, semi-structured interviews were conducted with seven students who agreed to take part in this research. Five participants were male, so the interviews were carried out with them face-to-face. On the other hand, the female participants were interviewed by phone, as cultural etiquette in Saudi Arabia dictates that men cannot contact women unless they are related. Purposive sample techniques were used to select the participants. This technique was used because it helps to provide in-depth information about the research problem.

Participants in this study were from different disciplines and had given aliases for ethical reasons, as shown in the table 1 below.

Table1. Study sample Distribution according to unreal name, college, age, gender and the way of conducting the interview.

Participant	College	Age	Gender	Way for conducting the interview
Ali	Law	22	Male	face-to-face
Nasser	Education	22	male	face-to-face
Sami	Law	20	male	face-to-face
Khaled	Arabic Language	23	Male	face-to-face
Omar	Islamic Studies	23	Male	face-to-face
Nora	Education	20	Female	By Phone
Asma	Business management	21	Female	By Phone

Analysis of the Data

The NVivo program was used for analysing the data. NVivo is considered to be the best program for analysing qualitative data, and can help to organise the results from the interview. The results were in Arabic, as this was the participants' first language, and these results were then translated into English for presentation. The results were then coded and categorised into themes according to the aims and objectives of the paper.

RESULTS

As mentioned above in the methodology section, the participants were given false names for ethical reasons. The participants were from different majors.

Problems Encountered by Students when Using ICT

Students were asked about the obstacles that they face in using ICT in their learning within their university. Ali stated: "When I learn using technology in my learning, I feel isolated because there is no interaction with my peers or faculty members in my university". Nasser mentioned that lack of technical support from administration and technical issues made him feel frustrated. He also added that he needs to learn how use new functions in his learning, such as blogs, virtual classes, and e-quizzes. Sami identified these obstacles as lack of instructor's feedback and instructors' lack of skills. He sent his homework to his teachers, but he did not receive any feedback on his work.

For Khalid, these obstacles included lack of training, lack of English language skills, and Blackboard issues. He added that: "I find it difficult to deal with Blackboard 9.1 which was provided by my university", and he said sometimes he had problems opening up the Blackboard system. The obstacles for Omar were lack of computers in his university for students, viruses in the computers, and slow internet speeds. He indicated that: "when we learned in the computer lab, there were some students who did not have computers to use". For female students Nora and Asma, boring content of the e-learning course provided by teachers and a lack of online activities and low motivation were the main obstacles for them. Nora added: "We do not have motivation from our teachers in using technology in our learning, which leads us to have a lack of interest". Asma indicated that the lectures and the presentations provided by academic staff had not been very well organised.

The Table2 below summarises the challenges results from the participants for Question One:

Table2. Participant and his/her results.

Participants	Results
Ali	Isolation Lack of interaction
Nasser	Lack of technical support Technical problems
Sami	Lack of feedback Teachers' lack of technical skills
Khaled	Lack of training Blackboard issues and Viruses Lack of English language
Omar	Lack of computers for students Poor internet speed
Nora	Boring e-courses Lack of motivation
Asma	Lack of interning Lack of well-designed online activities

Solutions to Obstacles

In terms of addressing these challenges, participants proposed a number of solutions to their university which might be of help. Participant Ali indicated that problems could be avoided by providing immediate technical support all the time. Nasser mentioned that the provision of training for students throughout the year may be useful, and that this training should be practical rather than merely verbal. Sami underscored that academic staff should try harder to motivate students to participate in online learning. Khalid stated that training academic staff who do not know how to interact with students through e-learning tools, such as discussion boards and online chat, would be beneficial.

Omar suggested improving the technical infrastructure and providing strong internet connection. Nora and Asma point out that providing enough training for teachers especially in how to design online activates and provide sufficient computers for students in computer labs and encouraging academic staff to use e-learning tools in their teaching can lead to students becoming more motivated to take part in online learning. The Table3 below summarises the solutions results from the participants for Question Two.

Table3. Participant and his/her results.

Participants	Results
Ali	By providing immediate technical support
Nasser	By providing training
Sami	By motivating and encouraging students from their teachers
Khaled	By training teachers who suffer from lack of technical skills
Omar	By improving infrastructure especially for internet connection
Nora	By providing enough computers for students in computer labs
Asma	By encouraging academic staff

DISCUSSION

The students complained that there are several issues that prevent them from using the LMS in their learning at Saudi University. For instance, one student said that “there is a lack of skills among students and teachers” and another participant stated that “some of our academics and students lack knowledge of the benefits of the use of the LMS in the teaching and learning setting”. This finding is supported by previous studies. For example, the studies by Naveed, Muhammed, Sanobar, Oureshi & Shah (2017), Alshammari (2015), Al Shehri (2010), Edumadze et al. (2015) and Keengwe et al. (2008) indicated that a lack of skills and a lack of knowledge among students were the most influential factors that hindered the use of e-learning. This might be because students were not trained before the Blackboard system was implemented at Saudi University. According to Alghtani (2018), students suffer from a lack of training on how to use Blackboard systems in their learning. The participants suggested some solutions for addressing this issue, for example providing adequate and continuing training for both instructors and their students. In the literature review it was indicated that if students are not trained on how to use technology in their learning, the implementation of e-Learning in institutions cannot be achieved (Edumadze et al., 2015; Alghtani, 2018).

One of the other results of this study was that the participants mentioned that there was no interaction between them and their teachers and their fellow students. This was apparent when one participant said that "When I learn to use technology in my learning, I feel isolated because there is no interaction with my peers or faculty members in my university". This result is in agreement with the literature review, as Alshammari (2015), Almuqayteeb (2009), Edumadze et al. (2015) and Abdul, Al-Zumor, Al Refaai, Bader and Aziz (2013) found that a lack of interaction or feedback between teachers and their students can lead to a reduction in students' use of the LMS in their learning. This finding was also supported by Al-Abdullatif (2012) when she stated that "students need a high level of interaction, which resulted in a large number of postings on the discussion board" (p.45). Also, this result is consistent with the findings of Kim (2011) when mentioned that interaction with students and providing immediate feedback to them in the virtual leaning environment is the key element in students' ratification of online learning. The study participants provided a solution that would address this issue by encouraging teachers at the university to interact with their students.

With regard to e-content design, some of the participants in this research claimed that their teachers lacked knowledge of how to design online courses and activities. For example, Nora and Asma indicated that the boring content of the e-learning course provided by the teachers and a lack of online activities were the main obstacles for them. The same findings were found in previous research, for example, Filemban (2008) mentioned that designing clear and easy online activities and providing understandable e-content to students are crucial in an online learning environment. The participants provided a clear solution to addressing this matter when they indicated that giving teachers sufficient training on how to design activities that take place in an online environment would lead to good e-content design.

CONCLUSION

The conclusions were drawn according to the study results, and then presented based on the research aims. From the results of the research, it could be concluded that technical issues, a lack of technical infrastructure, a lack of training, a lack of interactions between students and between students and teachers, a lack of English language skills and low motivation among learners are the main barriers for learners Saudi Universities. The university should develop a strategy to address and remedy these obstacles as these challenges hinder effective learning in an e-learning environment. Additionally, solutions suggested by learners such as providing training for students, the provision of more computers, and greater motivation from their teachers should not be ignored, as the students are considered to be the most important stakeholders in education technology.

Recommendations

Recommendations of this study are made according to the research results and conclusions. Technical issues and poor technical infrastructure were found to be major issues in this research. Accordingly, it is recommended that Saudi Universities should enhance learners' learning process by providing their students immediate technical support in order to help to address and solve technical problems. Moreover, Saudi Universities should provide stronger internet connections, as well as sufficient equipment in its computer labs and improve the technical infrastructure through an allocated fund for e-learning development.

9.2 Further Research

Based on the results from this paper it can be suggested that as the sample of this study is only 7 students, including 2 female students, studies in the future might expand the sample and also include more female students. Also, the scope of this study focused on students, so studies in the future could be conducted with students and teachers. Moreover, this study was limited to the use of only semi-structured interviews with the students, therefore future research might that might be carried out may include a questionnaire. Finally, this study only considered students who are undergraduates; as a result, future research could include postgraduate students.

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