

# STRATEGIC SHIFT TO USE E-LEARNING IN HIGHER EDUCATION IN SAUDI ARABIA – A CASE STUDY

**Diala Abi Haidar, Karima Hussein**

*Dar Al-Hekma University (SAUDI ARABIA)*

## **Abstract**

The main aims of this study are to measure, as well as explore, the impact of the opportunities and challenges in the integration of the Online Learning as a strategic shift in higher education in Saudi Arabia. The significance of this case study should come from the modelling of the Online Learning approaches while highlighting neglected and unexplored areas that could constitute a strategic advantage for any institution. All academic institutions worldwide are going towards offering online courses as part of their curriculum to meet the expectations and aspirations of their learners. With the 2030 vision and raise of technology integration in the classrooms, Saudi higher education institutions should adapt to this changing environment by integrating online learning in their curriculum. This cannot be done without facing some challenges, which will be studied in this research. Proposed solutions and guidelines should be given as part of an elaborated study. The readiness of the Saudi institutions for such a shift will be investigated. The case of Dar Al-Hekma University in Jeddah will be studied, as the university is a premier institution offering high standards of curriculum delivered by high caliber of instructors from different nationalities and background. This environment is fertile for adaptation to the change especially with the longitudinal effort from Dar Al-Hekma University to the use of technology in classrooms. Furthermore, the university has undertaken a strategic planning process in which both authors contributed. One of the findings was to invest in online education and design online courses. A focus group at the level of the university was constituted to study the feasibility of offering online courses in the short term. The research will highlight the major findings at the level of DAH University and expand it to other higher education institutions. The research significance comes mainly in the absence of a related study that portrait the use of e-learning in one of the private universities in Jeddah. The final findings should highlight the requirements behind moving towards online education by discussing the current situation and exploring potential opportunities.

Keywords: Online Learning, Higher Education, Learning management system.

## **1 INTRODUCTION**

The Internet is a technological development that has the potential to change the quality of education. With the growth of globalization, the students enrolling in e-learning programs have become increasingly diverse with respect to culture. Australia, Canada, the United Kingdom, and other countries compete with the United States to be the provider of choice for English-language online courses and programs. Volery et al. [1] explained that the major incentives for universities in introducing e-learning courses are the fast expansion of the internet and related technological advancements, in conjunction with limited budgets and social demands for improved access to higher education. The authors considered that universities will be left behind in the pursuit for globalisation if they do not embrace e-learning technology that is readily available.

Most of the universities worldwide are using e-learning as a tool in their learning process [2]. E-learning could be sometimes referred to as distance learning, online learning and networked learning [2]. The Babson Survey Research Group [3] has conducted a national survey of online learning since 2002-2003, that became recognized as a premiere national e-learning survey research effort in the United States. They defined a Blended/Hybrid course as being up to 79% online and an online course as being 80-100% online. They have maintained that distinction in order to ensure longitudinal consistency across survey years. However, most institutions now consider an online course to be 100% online.

E-learning is not only an effective method to raise the quality of education and accelerate traditional education; it is also an interactive presence that allows students and teachers to perform all educational activities at any time, and any place. It is an evolving environment integrated with various elements of the educational process, in order to be enriched from within [4]. In addition to giving the universities a new channel of educational deployment, Fry [5] considers that e-learning initiatives will

also support strategic objectives by assisting asynchronous discussion consortiums and networked communities. E-learning strategies within universities could be oriented around technological capabilities. In [6], the author further advocates that e-learning is a valuable strategic business tool, modernizing the higher education if implemented properly. Nevertheless, it is always very important to consider that e-learning is not a goal by itself, it is rather a means to achieve a goal.

As noted by Edmundson et al. [7], considering the users' cultural characteristics in the design of an e-learning system is one of the features that contribute to its success, motivate participants and accelerate the adoption process.

The European University Association conducted a survey [8] between October and December 2013 and received 249 answers from higher education institutions, in their majority universities, from 38 European systems (EU and wider Europe). According to the survey's results, mostly all higher education institutions of the sample have started to embrace e-learning. Most of the surveyed institutions are using blended learning (91%) by integrating e-learning into conventional teaching. Furthermore, 82% of institutions are offering online learning courses. Others, less frequent, but seemingly also on the rise, are having joint inter-institutional collaboration and online degree courses. Online examinations are likely to become more widely used for all students in all or most disciplines, also for conventionally taught courses.

Udemy, Coursera, Khan Academy, Lynda, Alison, Shaw Academy, MITx, HarvardX, along with EdX are just examples of the available online industry for online courses. LinkedIn has even recently launched online courses for business, technology and creative skills. The added value of LinkedIn is that the offered courses are even tied with the professional profiles of learners whereby completing a course will automatically add it to the learner's qualification or skills.

One of the research that emphasized on e-learning in Saudi Arabian Universities [9] scanned the organizations that are a few of many involved directly or indirectly with e-learning in KSA such as the Ministry of Higher Education, National Center of e-learning, and many more. These organizations as stakeholders need to come together to formulate a collective vision for e-learning for the whole country. This vision should give some guidelines with the present realities, considering risks and opportunities, to have common purpose and clear direction to the future.

Based on the research of Alturki [10], many universities in Saudi Arabia uphold the e-Learning in their curriculums such as Umm Al-Qurah University, Al-Imam Muhammad Ibn Saud Islamic University, King Abdul-Aziz University, King Faisal University, Taibah University, Taif University, Gazan University, El-Goof University, Tabuk University and Najran University. He further described the process of the government of the Kingdom of Saudi Arabia that has continued to keep up with new developments in the field of educational technology. The government is also involved in the development of the educational process and the launching of committees such as the committee for e-learning and distance education in the Ministry of Higher Education.

The Ministry of Higher Education is implementing "Afaaq" strategic plan; part of this plan is going towards integrating technology in the curriculum delivery by having distance learning and online education. In 2005, as response to a directive from the Custodian of the Two Holy Mosques, King Abdulla Ibn Abdulaziz – The National Center of E-Learning & Distance Learning known as NCEL planned and urged the adoption of e-learning and distance learning and also unify the efforts of universities and build an e-learning and distance learning systems. Furthermore, in 2010, the Ministry of Higher Education issued regulations and laws governing e-learning programs in Saudi Arabia. The rules governing the issuance of licenses for distance learning programs in higher education institutions were established. Institutions in higher education that use traditional education can use partially distance learning in some courses without exceeding 25% credits out of the totals credits of the bachelor degree.

The National Center for e-Learning and Distance Learning (NCeL) [11] has emerged, under the umbrella of the Ministry of Higher Education, as a leader, supervisor, and supporter of e-Learning at the higher education level. The center seeks to cope with the latest developments in e-learning and learning technologies. It further provides the best technical services including a range of products and solutions that are appropriate for the educational system needs. Furthermore, the center established Saudi MAKNAZ, a digital repository system that stores data in digital files format. It can store a wide range of file types, and multimedia files in the system. MAKNAZ can also be used for the management of content used in the implementation of e-learning. The national center created MASAR for instructional design. It is an authorship tool that helps teachers and course designers to create and develop highly effective and productive e-courses. The National Center offers technical support

services system and SANED is the active link between the National Centre for e-Learning and Distance Learning and the beneficiaries of its services. The National Center allows the beneficiary to benefit from a number of communication and support channels, such as unified phone, e-mail, and e-Tickets in addition to the self-service through the phone, etc.

There are different emerging companies that are bringing solutions for universities to offer online courses. The recent initiative taken by the ministry of labour in collaboration with the ministry of education was translated into the creation of Doroob [12]. The main goal of Doroob was to train the Saudi workforce to be ready for the workplace. Yet, they are building collaborations with universities to develop online content. The advantage of such collaborations is for universities to access worldwide technological skills and expertise at very low costs while for Doroob to ensure good academics content of their offerings. Doroob is a major national initiative that specializes in catering to the needs of jobseekers or anyone eager to develop his/her professional skills towards more advanced levels.

Given the initiatives taken by the ministry of education, the National Center for e-Learning and Distance Learning as well as companies like Doroob, it was noted that there is an obvious strategic shift in the kingdom towards the e-learning integration in education. This motivates the current research in order to study the case of Dar Al-Hekma University, which is a medium-sized private female institution in Jeddah (average 1600 students). Dar Al-Hekma University conducted a strategic planning for five years that recommended, as part of its goals, to establish a mechanism for integrating electronic learning without violating the mission or the image of the university. Furthermore, the widely offered set of courses, internationally or locally, does not include topics such as Hajj and Omra, Arabesque designs, Islamic Sharia... which Dar Al-Hekma has a potential to offer. The environment is offering regulations, tools and support towards the integration of e-learning in the curriculum, nevertheless, there was no study done to evaluate to which extent the current stakeholders, namely the learners and instructors are ready for such a shift.

This paper is structured as follows; the next section is covering the methodology used throughout the research study. It is followed by results section that summarizes and discusses the findings. The final section will conclude the paper and offer potential future areas of research.

## **2 METHODOLOGY**

The aim of this research was to define the challenges and opportunities in the incorporation of e-learning in Higher Education in Saudi Arabia. The case of Dar Al-Hekma University was studied. The research used qualitative research method as it depended on comprehensive literature review, and results of feedback from questionnaires given to learners and instructors to evaluate their willingness to use e-learning in their courses. Two online questionnaires were carried out to reach a wider audience. Each questionnaire was structured (*i.e.* definite) and mixed with open-end and close-end types of questions. One questionnaire was sent to students and alumni, the other was sent to instructors. In addition to that, a focus group and several interviews were conducted with the instructors, at Dar Al-Hekma University, who mainly have experience in creating and delivering online courses. The focus group was created at the level of the university and constituted of top management representatives, teachers, the information technology director, the dean of students, along with the head of the research center. The group's task was to study the feasibility of offering online courses as part of the university programs. The group was studying the aspects of the cost, content delivery along with the underlying technological infrastructure. Finally, instructors from various departments were interviewed to query about the challenges and barriers that could be encountered in their attempt to integrate e-learning components to the current offered courses in their departments, but also to document their recommendations and the potential opportunities within the institution in regards of this shift. Two meetings with an external instructional designer from another university (*i.e.* King Abdulaziz University) took place mainly to explain the hidden process behind moving from traditional teaching to online teaching. That is, the concerned instructional designer was involved in all the recent activities undertaken in his university to move courses online. Such meetings uncovered challenges and enlightened the research about the whole process and opportunities.

## **3 RESULTS**

In order to evaluate the possibility of offering online courses at Dar Al-Hekma University, different aspects should be investigated namely the underlying technological infrastructure, the content availability, the financial impact, as well as the readiness of the stakeholders, *i.e.* learners and

instructors. In the aim of evaluation the readiness of the stakeholders, we prepared a questionnaire that was shared with all the students as well as alumni. Another questionnaire with slight differences in the questions was also sent to the instructors. The questionnaire sample respondents were 66 instructors along with 116 students and 80 alumni. 78% of students and alumni were interested in taking online courses “Fig. 1”, while 85% of instructors were willing to teach such courses “Fig. 2”. This reflected the will of the stakeholders but does not really say a lot about them being ready for such a shift. The surveyed stakeholders were requested to state what would motivate them to take online courses (*i.e.* learners) or teach such online courses (*i.e.* instructors). The answers were quite similar whereby both groups were claiming the convenience, overcoming mobility issues, and enjoyable experience of the online courses. What is important to underline in the answers of the students and alumni was that they were looking to have access to diversified instructors and mindsets as well as being able to take courses that are not part of their curriculum or majors. The recent generation of learners are aspiring to learn new concepts beyond their educational frame, while not being restricted neither in place nor in time by professional of personal commitments. They are looking for mobility, convenience, less expensive education along with diversified resources. These learners expressed some refraining factors in taking online courses that are mainly the lack of face-to-face interactions, technology issues along with fees’ sensitivity. Similar results were recorded at the level of the instructors where the main refraining factors were the absence of real face-to-face interactions along with the technology issues and requirements. Such results showed that both learners and instructors require the conventional interaction and they might not be ready from a technological point of view. A lot of new available technologies could help overcoming the issue of interaction whereas the technological restriction can be dealt with if suitable training is offered for both stakeholders.

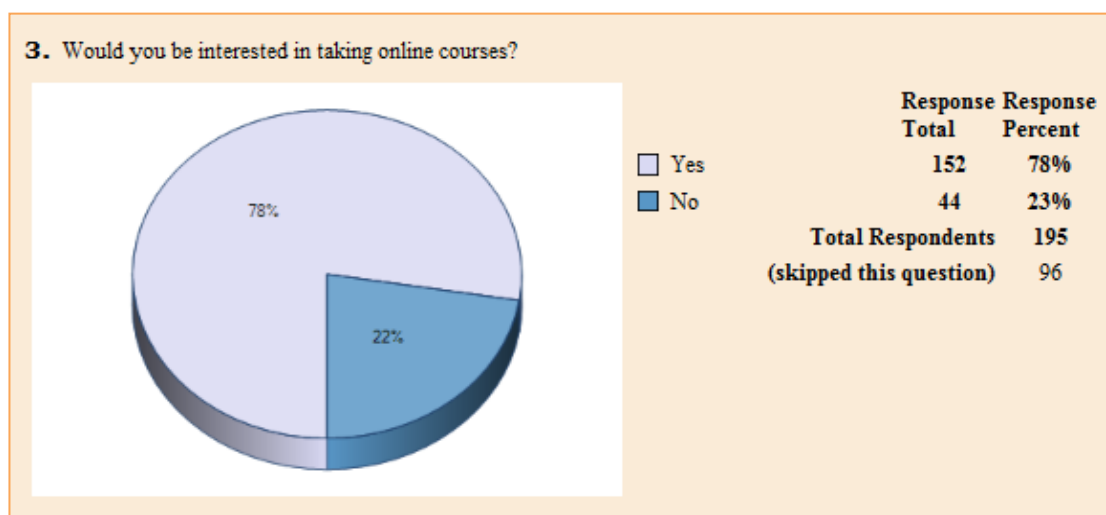


Figure 1. Learners are interested in taking online courses.

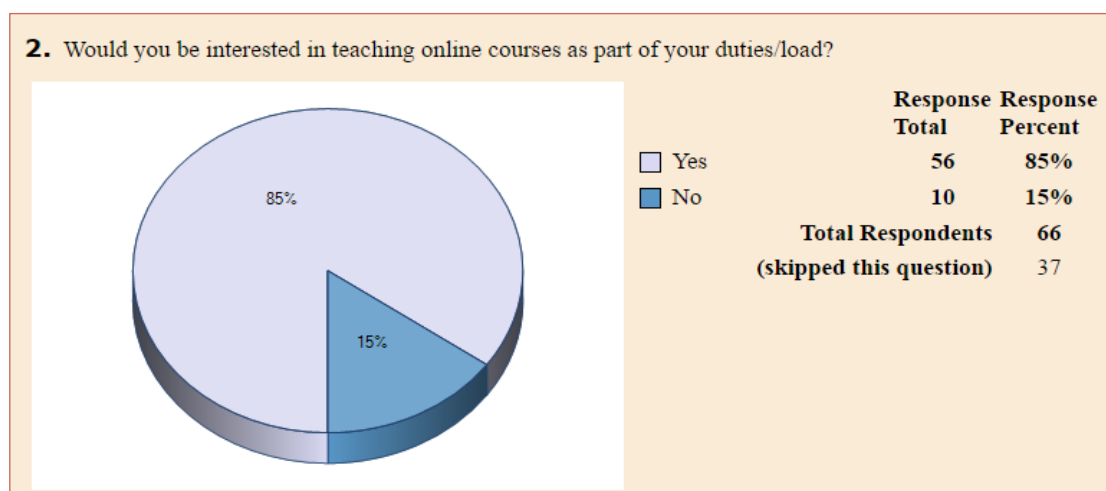


Figure 2. Instructors interested in teaching online courses.

These results should be aligned to the fact that 82% of instructors have never taught online “Fig. 3”, thus they are unaware of the existent underlying technology as well as available interactions tools. From another side, 50% of the learners have never taken online courses “Fig. 4”, while those who had were mainly looking for non-academic courses that constitute additional professional or personal development. This was supported by the fact that all stakeholders were in majority with keeping online courses exclusive for elective courses’ offering rather than being part of the core curriculum. This finding would mainly tell us that the current community is not yet ready for massive online degrees but instead they are more interested in the massive online courses that could be offered by any institution that is not necessarily their main university.

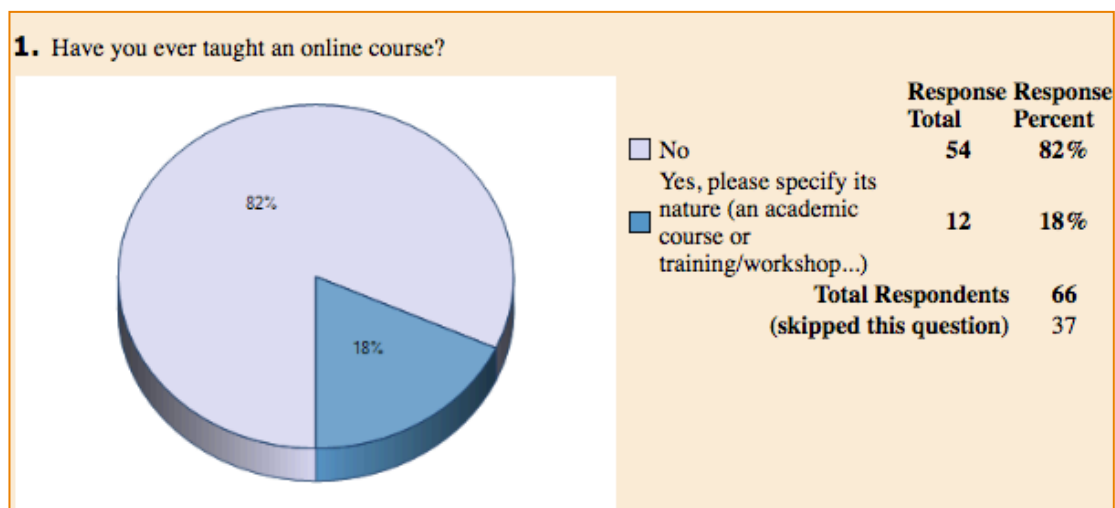


Figure 3. Instructors who have taught online.

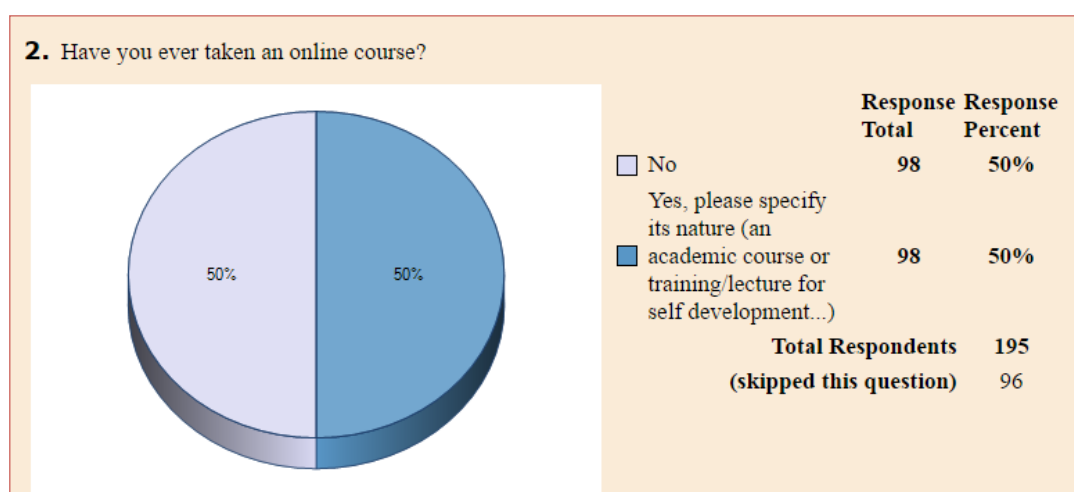


Figure 4. Learners who have taken online courses.

A focus group was created especially to hear from instructors with previous online teaching experience and try to study what were their challenges and what are the technological needs in this regards. The focus group provided honest judgment and showed the hidden learner needs. It discussed the weaknesses, strengthen, the tools and the technological support that will allow Dar A-Hekma University to shift towards the integration of e-learning in the curriculum. The focus group confirmed the findings of the online questionnaires especially in regards of training needs to overcome the absence of face-to-face interactions but also in regards of the assessment tools. The main concern discussed was that a lot of efforts are needed to move from a traditional teaching approach to online; the design of the online courses should be done to integrate more interactivity and students’ engagement through active learning. Accordingly, different techniques should be used to make online lectures cover the intended learning outcomes and assess these properly. There is a need for recorded video lectures with embedded visuals, audio, images, animation as well as interactivity.

There was a clear need to include a professional team to work on such a shift including mainly instructional designers, graphic designers, programmers, as well as audio-visual experts. Instructors are requiring additional technical support especially to handle the interaction part through the chat, discussion boards or even assessment tools. The group met with an external instructional designer who gave an insight of the whole process and explained the role of instructors at each step of the process. An online instructor must prepare the course content in advance, preparing materials, schedules, assessments, and even discussion topics. The instructor should further communicate with the expert team to design the online material. Once the course begins, an effective instructor must give considerable attention to facilitating the course with communication, including email, threaded discussions, and chats, and must work hard to meet the varied needs and demands of the students.

Through this focus group, the researchers came up with a modelling of the e-learning approaches. This model summarizes the most common approaches used in many universities for online course's delivery;

- The first approach relies on locally developed content with local instructors like the model adopted in some universities in Saudi Arabia (e.g. King Abdulaziz University and Umm AlQura University).
- The second approach that is widely used, especially internationally, is based on outsourced content with distant instructors by using available platforms such as Lynda, Khan Academy, Coursera, etc.
- The third approach depends on outsourced content with local instructors where the content of the course is developed outside Saudi Arabia but taught by local instructors. In this case the teaching part covers mainly the assessment and online interactive part of the course's delivery. This configuration requires an agreement between local universities and international ones whereby the content is created and designed by international experts but the local instructors are in charge of all the course delivery, interaction, and support, namely delivery. Implying the instructor in the course development is also an option. This category is not yet fully explored in Saudi Arabia and more should be done in this regard especially with the new flexible ministry laws that are dictating the rules and regulations of the online teaching.
- The last approach was never explored yet but is a very important and potential strategic positioning for Saudi Arabia. It relies on locally developed content delivered by distant instructors with topics that might be exclusive to Saudi Arabia but distributed for international instructors to make use of and deliver accordingly. Saudi Arabia has not yet explored this field although some specific topics could be material to fall under this category e.g. Islamic finance, Hajj and Omra, arabesque design, Sharia, Islamic courses. The non-involvement of Saudi Arabia in this direction might be mainly explained by the non-maturity and absence of advanced skills for content development.

A number of interviews took place with instructors to discuss which of the above potential approaches could be implemented in Dar Al-Hekma University. The interview results showed that offering theoretical online courses was widely accepted in the university. The instructors might not be ready for such a shift immediately in regards of the first approach (locally developed and locally taught). This approach requires training, underlying technological infrastructure along with a specialized team to develop the content. The most possible approach, which is already adopted as a way of flipping classrooms, was the use of online content as part of the offered courses (second approach listed above). Dar Al-Hekma University has already taken the initiative to embrace e-learning components in each discipline through the use of Learning Management Systems (LMS), namely BlackBoard Enterprise, for the management of courses' content. This LMS is used mainly to post course content to students, deliver assessment online, upload assignments online, and discussion boards...

After studying the current situation in Dar Al-Hekma University, the main strategic decisions that should be considered are as follows:

- Dar Al-Hekma University has a very specialized team in certain disciplines that might constitute a potential strategic positioning in regards of online courses' offering. This resides in the last approach described above, the locally developed content that is given to international instructors. Furthermore, such courses could be delivered based on the first approach, *i.e.* locally developed and locally delivered but becoming available on international platform. None of the existing online offered courses, on existing platforms, are targeting the Arab world topics such as Islamic, Hajj, Arabesque designs, etc. These courses could be paid courses that could

be considered as diversification of financial resources for Dar Al-Hekma University if delivered also locally for international audience. Furthermore, some of these online courses could be offered for Dar Al-Hekma students in Arabic to complement current English based courses such as those specialized courses offered in Law, Business and Design departments. Dar Al-Hekma University could be the leader in this field and offer online paid unique courses in addition to other courses for free that can be attracting advertisement companies and raise funds. This is not to exclude the possibility of just selling the content to be delivered internationally by other institutions.

- The new regulations from the ministry education are opening the door and facilitating the inclusion of online courses in the curriculum. There is accordingly a global factor that is in favour of moving online. Furthermore, there is not yet a higher education infrastructure and resources at affordable costs and covering the demand on higher education and specialized courses. Most of the current efforts are put on training courses for professional development purposes rather than educational courses. Dar Al-Hekma University should position itself in this area, as a contributor in the development of specialized content for the higher education.
- From a financial point of view, adapting a new technology to offer locally developed courses by local instructors is affordable as it should be leveraging the current expertise existing in the university along with the underlying available technological infrastructure with a minimal additional investment. The main required need could be the hiring of instructional designers to complement the current team of experts. It will further offer a new income opportunity for the university.
- Since the university is a female university, there is a strategic advantage in such a shift to reduce the number of withdrawal and increase the retention rate of students especially by responding to female accessibility and mobility demands and removing many restrictions of gender segregations.
- Instructors at the university are already technology savvy as most of them are using many technological tools; additional training is required in very specialized areas of online course delivery.

#### **4 CONCLUSIONS**

The study undertaken at Dar Al-Hekma University, uncovered some hidden requirements from the learners and instructors in regards of online course delivery. It was obvious that even though both stakeholders were pretending their willingness to move online, this shift is not yet fully prepared. Further training is needed to have both stakeholders overcoming their technological fear. In addition to that, a specialized team should support such as shift as currently instructors are trained to embed e-learning components into their delivered courses but alone they cannot develop complete online courses.

It is clear that there is a very strategic environment to include e-learning in the higher education curriculum in Saudi Arabia. This is mainly supported by the new regulations of the ministry of education that are in favour of the delivery of online courses as part of the academic plan of study. Nevertheless, it appeared so far from the study done at Dar Al-Hekma University that online degrees are not yet accepted. Furthermore, complete online courses as part of the curriculum could be an option that requires additional investment in terms of specialized and expert team. Instead, the community is so far ready for blended learning whereby the learner is offered some online components for the existing traditional courses. This kind of learning was widely implemented at the university supported by training that was offered for the instructors in this regards. Nevertheless, there is a positive move towards initiating e-learning experience for learners through a variety of educational developments. Dar Al-Hekma University has to improve, and eventually master, the digitisation of learning content in repositories that can help the country to keep up with the rapid e-learning transformation. Based on the modelled e-learning approaches, it appears that there is a niche for the university to explore in some of the specialized courses' content that could be offered locally or internationally. The university still need to study the production, execution, administration and maintenance; also study the unique content/subject, target, syllabus, assessment and evaluation activities to an online learning approach. The university should invest the professional development allowance given to instructors in order to better prepare them for this shift. Involving the government and the national center for e-learning and Distance Learning should not be discarded.

To sum up, the findings from this study suggest that Dar Al-Hekma University should study the incorporation of Massive Open Online Courses (MOOCs) into higher education. The university should educate online teachers to be able to design and manage the e-learning process before going to fully delivering online courses.

This study should be extended to other local and regional universities to explore their readiness but mainly it should include the universities currently offering online courses to assess their quality and effectiveness. More focus should be given on the assessment strategies that appeared to be neglected so far or superficially considered in the currently offered online courses.

## REFERENCES

- [1] Volery T., Lord, D. Critical success factors in online education. *International Journal of Educational Management*. 2000;14(5):216–223.
- [2] El-Seoud S., Taj-Eddin I., Seddiek N., Ghenghesh P. , El-Khouly M. The Impact of E-Learning on Egyptian Higher Education and its Effect on Learner's Motivation: A Case Study, *Computer Science and Information Technology* 2(3): 179-187, 2014 DOI: 10.13189/csit.2014.020307. Retrieved from: <http://www.hrpub.org>
- [3] College B. Survey of Online Learning | News & Events [Internet]. 2015 Survey of Online Learning | News & Events | Babson College. [cited 2017Apr29]. Available from: <http://www.babson.edu/news-events/babson-news/Pages/2016-babson-releases-2015-survey-of-online-learning.aspx>
- [4] Alshetwi AS. Quality of High-Tech E-learning in Saudi Universities. *International Journal of u- and e-Service, Science and Technology*. 2014;7(6):319–26.
- [5] Fry K. E-learning markets and providers: some issues and prospects. *Education Training*. 2001;43(4/5):233–9.
- [6] Cambridge Scholars; Darling 2002 Mapuva J. *Technology and the pedagogics of learning*. Newcastle: Cambridge Scholars; 2010.
- [7] Edmundson A. *Globalized e-learning cultural challenges*. pp. 273. (USA: Idea Group Inc), Hershey, P.A.: Information Science Pub.; 2007.
- [8] Gaebel Michael, Kupriyanova Veronika, Morais Rita, Colucci Elizabeth. e-learning in European higher education institutions results of a mapping survey [Internet]. [http://www.eua.be/Libraries/publication/e-learning\\_survey](http://www.eua.be/Libraries/publication/e-learning_survey). European University Association; 2014. Available from: [http://www.eua.be/Libraries/publication/e-learning\\_survey](http://www.eua.be/Libraries/publication/e-learning_survey)
- [9] Al-Shehri,. E-learning in Saudi Arabia: 'To E or not to E, that is the question. [Internet]. 2010 Sep-Dec; 17(3): 147–150. doi: 10.4103/1319-1683.74333. [cited 4ADAD]. Retrieved from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3045104/>
- [10] Alturki, The Development of Online Distance Education in Saudi Arabia, 2014 [Internet]. [cited 2017Apr29]. doi>10.1145/2687917.2673861. Available from: <http://dl.acm.org/citation.cfm?id=2673861>
- [11] Ministry of Education [Internet]. The National Center for e-Learning and Distance Learning: Kingdom of Saudi Arabia; 2017 [updated 13 Feb 2017; cited 2017 April 29]. Available from: <https://www.moe.gov.sa/en/TheMinistry/Education/Institutions/Pages/TheNationalCenterfore-LearningandDistanceLearning.aspx>
- [12] Dorooob. E-Learning [Internet]. 2017[ updated 2016; cited 2017 April 29]. Available from: <https://www.dorooob.sa/en/>