

Original Paper

MOOCs in Omani Higher Education Institutions: Use and Popularity

Asma K. Al Hosni^{1*} & Said F. AlAli²

¹ Faculty of Creative Multimedia, Multimedia University, Cyberjaya, Malaysia

² Multimedia and Digital Production Department, Faculty of Engineering and Information Technology, Palestine Ahliya University, Bethlehem, Palestine

* Asma K. Al Hosni, E-mail: asmaxalhosni@gmail.com

Received: January 18, 2022 Accepted: February 15, 2022 Online Published: March 6, 2022

doi:10.22158/elsr.v3n1p1

URL: <http://dx.doi.org/10.22158/elsr.v3n1p1>

Abstract

Due to the rapid influence of technology on the teaching-learning process, both instructors and students alike are expected to keep abreast of the perpetual developments in the field of education. The introduction of Massive Open Online Courses (Henceforth MOOCs), as one form of e-learning, has made skyrocketing changes in the manner and availability of education provided to mass numbers of learners all the world, including Arab countries. The use of MOOCs in Oman is relatively new, and thus it appears to be unbeknown to a large segment of undergraduate students. The study beforehand, therefore, is meant to explore Omani undergraduate students' awareness of MOOCs both locally and globally via the use a self-administered questionnaire targeting three main academic institutions in Oman with a total number of 306 participants. In-depth scrutiny of the obtained data evidently shows that unfamiliarity of MOOCs among Omani undergraduate students is significantly high, a fact reflected in the high percentage of those oblivious of its existence (88.89%) as opposed to those (11.11 %) who are familiar with MOOCs. Lack of publicity of these platforms in the Omani academic institutions and the academic community in general, among several other reasons, stand behind such unawareness of these platforms.

Keywords

MOOCs, e-learning, undergraduate, education, Oman

1. Introduction

The increasing value and importance of education is reflected in the attention availed by governments and educational institutions in allocating high income to improve and develop their teaching policies. The need to diversify teaching methods and styles has been realized by governments and academic institutions worldwide. Countries compete with one another to develop new technologies to foster education and to take advantage of the digital revolution. E-learning is one of the latest powerful technologies that support education, for it creates new methods and insights into the teaching-learning process by making both students and teachers more enthusiastic and interactive in the modern learning style (Gupta, 2017). One major type of e-learning that adds to the amelioration of education and thus merits exploration is the use of MOOCs in the teaching-learning process.

With both traditional education and digital self-education combined, the term 'education through MOOCs' has become widely spread among learners in different majors and spheres around the globe (Tayeb & Sarirete, 2016). Known across nations, the term MOOCs refers to courses that are open to a broad audience over the Internet (Arageek, 2017). These courses are available to all knowledge-seekers who have access to the internet, making learning at their disposal and at their space and pace. The use of MOOCs has recently become so popular among students and users from different occupations as millions of people register in hundreds of courses and various types of platforms worldwide.

It is indeed remarkable given the fact that the history of MOOCs is not very ancient. In the fall of 2011, Stanford professors developed and released some video tutorials through open online platforms supported by free online resources. About 450,000 students participated in three computer science publications delivered through Stanford University that same year, making the reputation of MOOCs spread throughout the world (Vardi & Moshe, 2012). At the same year, Harvard University established Coursera as an independent, non-profit platform by Andrew Ng and Daphne Koller. Subsequently, other platforms were created such as Udacity and Udemy. MIT (Massachusetts Institute of Technology) and Harvard have integrated their MITx platform into edX. European platforms such as Future Learn and Diversity were later created following the footsteps of those in the US.

The use of MOOCs in teaching ensures more advantages than disadvantages. Thanks to the availability and speedy spread of MOOCs platforms around the world, learners, regardless of their proximity, can access online learning materials these days at their own convenience outside the regular classroom. MOOCs content can be easily accessed online, be it from home, university, work, coffee shops or any zone in the globe. MOOCs make the teaching-learning process easier, faster and cost-effective, which triggers an urgent need to change traditional learning methods to ensure interactive participation in the learning environment (Darwish et al., 2017). Undergraduate students can increasingly use MOOCs in a co-educational format for campus-based courses where students are required to follow the MOOC module. Thus, it frees up time for teachers who can then spend less time lecturing and more time to engage in constructive discussion and classroom instruction (Tayeb & Sarirete, 2016). Furthermore, MOOCs can be an effective and meaningful way to distribute research and expertise to undergraduate

students because MOOCs help in establishing students' meaningful relationships with a large number of people who are genuinely interested in core activities and multiple new experiences (Cheung & Hew, 2017).

Most importantly, however, academic institutions and academics together should ensure that MOOCs are familiar to students before they endeavor in using them in the teaching-learning process. Roya (2018) states it clearly that undergraduate students should be made aware of the importance of MOOCs and familiar with their usage so that they can make better use of such platforms in their studies. Unfamiliarity with such courses, therefore, precludes both students and teachers alike several benefits that could develop the educational process.

Likewise, Omani academic institutions are in need to make use of these platforms and to familiarize their students with their use, given the fact that big number of students are enrolled in higher education. Statistics carried out by the Oman Statistics Center in cooperation with the Omani Ministry of Higher Education indicate that more than 100,000 students are enrolled in Omani higher education institutions, distributed among different programs of university diploma, bachelor and specialized higher diploma (Atheer, 2017). The presence of this large number of enrolled students necessitates and foresees the urgent need to develop and renew the educational process via fostering a variety of methods of teaching, MOOCs being one of them (Fry et al., 2018).

Educators from Omani academic institutions highlighted the essentiality of diversifying teaching methods in university classrooms via the use of MOOCs, among other methods, side by side with traditional teaching methods (Kindi & Al-Khanjari, 2017). The use of MOOCs in Oman, however, does not seem to be widely spread in Omani undergraduate institutions as well as among students joining these institutions. As a matter of fact, the use of MOOCs in the Omani context is fairly recent compared to some Arab countries, and has not received due concern and investigation (Darwish et al., 2017). By the same token, as the use of the internet among students has become essential in their daily lives primarily in the sphere of education, exploring Omani undergraduate students' awareness of the use and advantages of MOOCs requires due attention.

That being the case, this study aims at investigating the levels of awareness of such platforms among Omani undergraduate students and highlighting possible ways to benefit from them. It is an attempt to create a useful reference for any educational institution to explain the importance of MOOCs in undergraduate studies. With that goal in mind, the study targeted a representative sample of undergraduate students from three main academic institutions in Oman: Sultan Qaboos University, Scientific College of Design, and Higher Colleges of Technology (HCT). Exploring such area is of great importance in enhancing the teaching-learning process in Oman in various ways. It will create a foreground for the Ministry of Higher Education to develop teaching methods in Omani academic institutions and to incorporate new tools by integrating technology into the educational process. It will be a revelation to academic institutions in Oman to address the awareness of their undergraduates with online learning tools such as MOOCs platforms so that they facilitate their learning path. It will also

spur further research in online learning resources in general and MOOCs in particular in Oman as essential tools that enhance teaching in academic institutions in Oman.

1.1 Literature Review

1.1.1 Overview of MOOCs

MOOC is an acronym originating from the four words ‘massive’, ‘open’, ‘online’, and ‘courses’ that make up its name (Downes, 2019). The Lexicon website supported by Oxford defines MOOC(/mu:k/) as “A course of study made available over the internet without charge to a huge numbers of people” (Dictionaries, 2019). These courses are massive to the extent that some MOOCs contain thousands of users from different zones in the world (Kaplan & Haenlein, 2016). The word “open” suggests that participants in any course do not need any specific academic qualifications to complete the courses (Dolet & Nakita, 2016). As a matter of fact, even with the large number of people enrolled in courses from all over the world, the completion rate of courses in the MOOCs does not reach even 10% (Albury et al., 2017). However, it is expected that different participants have different goals relative to their enrollment in MOOCs, and thus they succeed through such form of learning in achieving whatever they want to achieve (Downes, 2019).

Since its advent, many MOOCs platforms have been developed by academia around the world. These include the Future Learn project developed by the Open University in the United Kingdom and the EDX platform developed by MIT (Massachusetts Institute of Technology) in the United States of America. Sandeen (2013) emphasizes that MOOCs gained prominence in 2012 as they raised the awareness of many individuals by changing their view about distance education. In addition to opening new trends in the field of learning in higher education, MOOCs also improved the ability to obtain certificates for students who graduated from high school and did not have the opportunity to complete their university studies in traditional universities and courses.

Since that time, many researchers have undertaken studies to clarify and define the difference between MOOCs and other online courses (deWaard et al., 2011). MOOCs are seen as free courses that provide lifelong learning available to everyone with no link to a particular place or time. Accordingly, participants from several zones, educational backgrounds, economic status, and ages can register and participate in these courses. MOOCs enable students to follow the lectures through videos easily, and to use texts and discussion with teachers through the course forum page (deWaard et al., 2011; Hoy & Matthew, 2014). Bartolomé and Steffens (2015) state that MOOCs can be considered a form of new learning with an educational environment enhanced with technologies through the internet, which in turn makes learning active and accessible between participants and teachers in a cooperative and enriching society.

One noteworthy prominent merit of MOOCs is its support of collaborative learning among students and with their teachers. Collaborative learning is viewed as how students in a group system understand and learn terms, apply a product, solve a problem, absorb certain information and exchange experiences among themselves and with their teachers (Sen et al., 2011). MOOCs enable students to solve problems,

explore ideas, and present them together as one interconnected group. Cooperative learning is an integral part of the educational process, and it is an active type of learning that is used and applied online and in traditional classrooms (Kindi & Al-Khanjari, 2017). The establishment of collaborative learning within interactive activities in training courses makes the most of the learning community among students (Azhan et al., 2016).

1.1.2 MOOCs Usability

MOOCs contribute to enhancing and improving not only students' knowledge but also the qualifications of employees through the various courses offered at MOOCs. The fact that they are open without long and complicated registration procedures and without the need to pay enables employees to take part in it on their space and pace (Siemens, 2015). Allen and Mark (2007) note, however, that some employers, like companies that need to train their employees, rarely prepare programs for degrees themselves. They cooperate instead with institutions and universities to offer traditional courses (Allen & Mark, 2007).

Most of the employees who think about participating in MOOCs and open courses, in general, develop their work experiences and raise their performance in their professional and academic lives (Porter & Sarah, 2015). Companies can take advantage of MOOCs through flexibility in course procedures for their employees participating in these courses. Likewise, hiring people with certificates from MOOCs should be included in the corporate goals and objectives of companies. Microsoft, Tenaris, and AT&T companies are adopting their MOOCs for several types of participants. Several institutions, like Bank of America for instance, use MOOCs to develop employee skills and competencies through the use of education and marketing, which have become important in the field of work.

MOOCs can also provide different companies and institutions with global experience, for these courses give them a significant role in the field of education since companies provide courses for talented employees to hone and develop their skills (future workplace, 2017). Steel University is one of the universities that initiated the development of the skills of their employees and professionals through the Global League initiative, which provided materials, youth events and competitions by MOOCs (Kumbhakar et al., 2014). It designs many courses of MOOCs and involves a large number of participants in these courses. It also encourages them to exchange information and experiences in order to implement training activities in the course, which makes the best ways for professional development.

1.1.3 Strengths and Weaknesses of MOOCs

MOOCs platforms made an easy access to high-quality educational contents for everyone without exception for free or with minimal fees without the need to obtain a visa to enter or reside in a particular country or the need to attend traditional classes (Chengjie, 2015). Therefore it provides an excellent opportunity to reduce the significant expenses and costs that educational institutions from universities and colleges allocate to expensive courses and tools used in traditional classrooms (Bates, 2018). MOOCs have made continuous learning for lifelong learning and without need for strict and sophisticated conditions to obtain a scientific degree in any field or the need to enroll in universities in

other countries (Chengjie, 2015). MOOCs enable the creation of vast communities that include extensive experiences, good educational content and people from all educational fields who have tremendous experience (Dalipi et al., 2016).

MOOCs platforms, however, has some weaknesses and challenges that cannot be avoided. First and foremost, the development of MOOCs platforms is very costly, even with the existence of particular institutions in the field of development of MOOCs (Massey, 2018). Also, some MOOCs platforms depend on grabbing the attention of a specific group of learning society, individuals with higher education for instance, and does not address other groups like school students or craftsmen (Bates, 2018). Another challenge facing MOOCs is the low completion rates of the offered courses. Although the number of participants in MOOCs is much higher than the number of participants in traditional courses, it is not possible to control all participants to complete the MOOC course thoroughly (Bates, 2018). With a large number of MOOCs reaching thousands of participants, those who complete the courses do not reach more than 10% of the total participants (Ejreaw & Drus, 2017).

Moreover, the content of MOOCs is obligated by copyright or obligated to be online for a certain period only so participants may not be able to retrieve the content and educational materials at any time they want. Some universities and educational institutions around the world still do not recognize MOOCs and do not give credit to their employees as recognized official certificates (Massey, 2018).

Due to the lack of clear and consistent criteria for MOOCs, there is no fixed structure that can be followed by the participants, and among these non-fixed criteria is that MOOCs do not apply educational goals that are compatible with all participants. Each participant can create their criteria, or they will not be present at all. It calls for the originators of MOOCs to set specific standards that are followed by all, and it must be considered that they are not the standards followed in the traditional classrooms (Gruber, 2013).

Another challenge is the difference in the role of the teacher from one MOOC course to another. Some participants explained that they are unable to establish a relationship with teachers quickly. As far as interaction and feedback are concerned, some students complain that they are unable to interact significantly and easily with the teacher and their classmates (Atiaja & Segundo, 2016). While some of the teachers are facilitators of information in the course, others are like the main pillar of the course, which should be dealt with as a challenge to MOOC course creators so that they clarify the role of the teacher in the course.

Finally, some courses delete all their contents and educational tools by the end of the course, which makes some participants complain about their inability to refer to the contents of some of the courses that they participated in previously. The challenge here lies in making contents always available to participants at any time (Ejreaw & Drus, 2017). Hence, the educational content and tools for any MOOC course should be available at all times for the course participants even after its completion.

1.1.4 Global MOOCs Platforms

Ever since MOOCs appeared in 2011, some of the most prestigious international universities and technological companies around the world have started creating their own MOOCs platforms to keep pace with technological development (Vardi & Moshe, 2012). Most prominent among these platforms is Coursera founded in 2012 by several excellent universities such as Harvard, Stanford, Duke, Pennsylvania, Princeton, Michigan, Beijing, and HEC Paris (Classcentral, 2019). It has 40 million learners worldwide leaning in more than a hundred platforms. Each course includes weekly lectures deliberately made short between 3 to 10 minutes so that users are expected to see lectures every week (Classcentral, 2019). Assignments are usually given as the last task to ensure users' understanding of the topics whereas some are given on a weekly basis. Participants are given certificates of participation upon the completion of the course (Classcentral, 2019).

Another platform is EDX non-profit online courses for undergraduate students from all over the world. This platform is specifically meant to help students learn how to benefit from the offered courses through periodic research (Edx, 2019). EDX features a research center to collect and analyze data from participants by collecting participants' demographic data (Pappano & Laura, 2012). Harvard University and the Massachusetts Institute of Technology are conducting studies on EDX MOOCs. The outcome of their studies that target institutions and universities participating in the EDX platform is aimed to develop and improve learning courses in platforms and to compare learning in traditional university classes and MOOCs (Alumni, 2013).

Udemy is an online MOOC platform that targets employees, staff, and college students (Heussnerapr, 2013). Founded in 2007 by Irene Bali, the main goal of the platform was to create a virtual educational program on the internet and to make it free and available to everyone. The platform includes about 30 million students from all over the world in a variety of specialties in addition to more than fifty thousand teachers. The platform translates lessons in 60 languages other than English (Carr, 2013). Teachers on the Udemy use auxiliary programs to display lessons such as PowerPoint, PDF files, audio and video files, and postal codes in addition to live classes (Lynley, 2010). In addition to the presence of discussion forums meant to collect and exchange information and experiences among participants, the platform offers several different courses on the platform including entrepreneurship, arts, health and fitness, languages, music and technology (Udemy, 2019).

Udacity was established by Stanford University in the United States of America, in 2011 through the university's Department of Computer Science (Dekena, 2012). It was launched in October 2017 in cooperation with technology companies. Its creation is aimed to assist developers in the field of educational technology to improve their skills through building applications (DeSantis, 2012). Then Google collaborated with Udacity by making scholarships for individuals interested in developing applications on the Internet (Forecast, 2013).

Created in 2008 by the American educator and mathematician Salman Khan, Khan Academy is a non-profit educational academy established to educate students and provide a source of continuous

learning through short-term videos (Academy, 2018). The original content of the platform is available in English, but it is also available in other languages including Arabic, Armenian and Bengali in addition to more than 25 other international languages. According to Mixergy (2018), the Academy provides more than 200 experts of content development in several different fields.

Future Learn is a platform that falls under open online courses in Britain. Aimed at digital education, the platform has been established by the Open University and SEEK company in 2012 (Lederman, 2019). Future Learn is a platform that provides students with degrees from universities in the United Kingdom through computers and smartphones (Lederman, 2019). Several universities have joined in to support the use of Future Learn such as the University of Birmingham, University of Leeds, University of Bristol, University of East Anglia, Jeans College London, University of Southampton, Cardiff University, University of Exeter, University of Lancaster, St. Andrews University, and University of Warwick (Andrew, 2012).

1.1.5 Omani Experience in MOOCs Platforms

Oman's experience in MOOCs platforms is relatively new and simple compared to other countries. Established in the threshold of 2016, Edlal platform is the first Omani open, non-profit educational MOOCs platform. Several years later, several platforms followed such as SQU MOOC platform established by Sultan Qaboos University (Roya, 2019).

Created with the support of Oman Telecommunications Company (Omantel) and Point Company, Edlal was officially launched in 2016. The electronic content available in the platform is confirmed by several international institutions specialized in the fields. The platform runs from Oman to all the Arab world, offering courses in various fields and specialties (Roya, 2018).

The platform adopts Arabic as the primary language for offering courses so that all those who do not master the English language can register for and benefit from the courses (Roya, 2018). The platform contains more than 91 thousand users from all over the Arab world. Currently, the platform offers content on eleven different areas: innovation, entrepreneurship, leadership skills, design and digital media, programming, information technology, science, engineering, photography and visual production, arts and culture.

SQU MOOC was inaugurated on November 3, 2019 to become the first open learning MOOCs platform affiliated with one of the Omani universities, namely the College of Education at Sultan Qaboos University. This platform is a research product of two projects funded by Sultan Qaboos University for a Research Team (Roya, 2019). The main project launching this platform is entitled "Developing Distance Learning in Higher Education Institutions in the Sultanate of Oman through E-Courses: Designing and Assessing its Impact, Building a Culturally Compatible Model". It was funded by the Scientific Research Council in Sultan Qaboos University (Council, 2017).

1.1.6 Higher Education in Oman

To keep pace with the rapid development of education in the world, Oman felt the urgent need to have highly qualified cadres capable of keeping abreast with the development in technology. In addition to benefiting from international experiences, one of the Ministry of Higher Education's main goals is to provide national academics, researchers and graduates with high educational levels in order to achieve the goal of development (MOHE, 2017).

The field of higher education in the Sultanate currently contains 69 educational institutions according to statistics monitored in 2018. These institutions include universities, colleges, and vocational institutes geographically distributed in all governorates and cities of Oman. Forty-two of these institutions are governmental including Sultan Qaboos University, six colleges of applied sciences supervised by the Ministry of Higher Education, seven technical colleges supervised by the Ministry of Manpower, College of Forensic Medicine supervised by the Ministry of Higher Education, and seven colleges supervised by the Ministry of Endowments and Religious affairs. The College of Banking and Financial Studies falls under the supervision of the Central Bank of Oman (Court, 2018). There are also about five colleges of higher education affiliated with the military such as the Military Technical College, Air Force Technical College, Command and Staff College, Sultan Qaboos Air Academy and Sultan Qaboos Police Academy. Private institutions, on the other hand, are 27 divided into nine universities and 18 colleges (MOHE, 2017).

2. Method

A quantitative research approach was used as the research design in this study; a self-administered questionnaire (SAQ) was used as the primary data collection tool distributed to a representative sample of undergraduate students in Oman. A total number of 306 students is the sample for this research from three leading academic institutions in Oman: Sultan Qaboos University, Higher Colleges of Technology and the Scientific College of Design, as they make a good representation of higher institutions in Oman. The following table shows the sample distribution in these three academic institutions.

Table 1. Sample Distribution

Sample Universities	Participating Sample Number
Sultan Qaboos University	135
Scientific College of Design	98
Higher College of Technology	73
Total	306

The majority of the questions provide ticking boxes to indicate the participant's preference. An open question was added at the end of the questionnaire for further comments. Survey Monkey analysis was used in data collection, a website dedicated to creating and disseminating online questionnaires. Such analysis organizes the obtained data neatly and professionally so that the researcher can efficiently scrutinize them. Survey Monkey analysis summary generated visual representations of the obtained results in the form of pie charts and bar graphs. Total percentages for each selected-response were also highlighted. The analysis of the data, however, was done manually by the researcher. Participants were asked to indicate their gender, field of study and academic years because they are pivotal variables in this study and thus important in relation to the findings.

The questionnaire, estimated to take 5 to 7 minutes to fill out, was disseminated via a link sent to all students through their academic institutions. A period of two weeks was specified to fill out the questionnaire to obtain the most substantial possible time to collect the most significant possible number of participants and to give participants enough time to fill out the questionnaire. The following figure exemplifies the research procedures.

Upon completion of the questionnaire, data was stored in the Google account (Gmail and Drive) of the researcher in Survey Monkey. Then data was analysed so that major findings were obtained and recommendations were made accordingly.

3. Result

Underneath is display of the analysis of the obtained data through charts and graphs generated by Survey Monkey website. Details about the results of each single question, and the important points obtained in the analysis of the results are also provided blow.

Question 1: What is your gender?

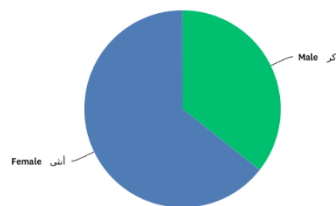


Figure 1. Question 1 Graph

If we consider gender as a factor, we see that female participants taking part in this study surpass their male counterparts as the former represent 64.38% (197 responses) as opposed to male students who represent 35.62% (109 responses). Numerally, 306 subjects answered this question.

Question 2: What is your field of study?

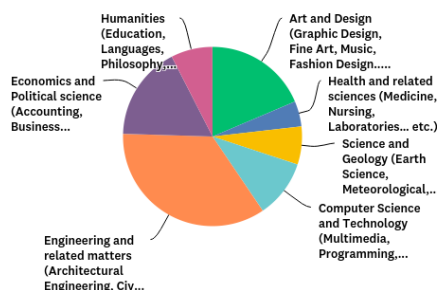


Figure 2. Question 2 Graph

In regard with the areas of studies, seven areas were selected to be under investigation, each encompassing several majors within. These areas are as follows:

Table 2. The Fields of Study of the Participants

Field of Study	No. of Students	Percentage
Engineering and related areas (Architectural Engineering, Civil Engineering, Petrol Engineering, Aircraft Engineering, etc.)	107	34.97%
Arts and Design (Graphic Design, Fine Art, Music, Fashion Design etc.)	57	18.63 %
Economics and Political Science (Accounting, Business Management, etc.)	52	16.99%
Computer Science and Technology (Multimedia, Programming, Information Technology etc.)	32	10.46%
Humanities (Education, Languages, Philosophy, Translation, Law, etc.)	23	7.52%
Science and Geology (Earth Science, Meteorological, Agronomy, etc.)	21	6.86%
Health and related Sciences (Medicine, Nursing, Laboratories, etc.)	14	4.58%

Question 3: How long have you been a student at your college?

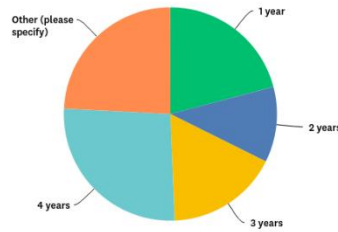


Figure 3. Question 3 Graph

As far as duration of study is concerned, 20.92% (64 responses) of the participants were freshmen, 11.44% (35 responses) were sophomores, 16.99% (52 responses) were in their third year, and 26.47% (64 responses) were doing their last year of study.

24.18% (74 responses) of the subjects were in their fifth, sixth or seventh year of study, for their study plans go beyond a four-year scale program. This category also includes those who were in their preparatory English Language Program that precedes their studies.

Question 4: To what extent do you enjoy the following types of courses? (1) Most enjoyable - (4) Less enjoyable

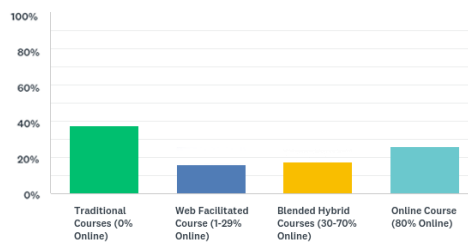


Figure 4. Question 4 Graph

This question addressed students’ degree of enjoyment of four types of courses: traditional courses (0 % online), web facilitated courses (1-29% online), blended hybrid courses (30-70% online) and online courses (80% online). A four-numeral scale was used to assess this question with number 1 representing ‘most enjoyable’ and number 4 representing ‘less enjoyable’.

The result shows that traditional courses are the most enjoyable among the participants taking part in the study with a percentage of 38.24% (117 responses). Online courses come next in line with 25.49% (78 responses). Blended hybrid courses come third with 18.95% (58 responses) and finally come web facilitated courses with a total percentage of 17.32% (53 responses). Such result reflects that fact that despite the availability of cyber courses (i.e., online courses, web facilitated courses etc.), Omani graduate students still have the mindset that prefers traditional courses to any other types of courses.

Question 5: Have you ever heard about MOOCs?

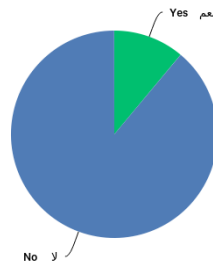


Figure 5. Question 5 Graph

The results show that 88.89% (272 responses) have no acquaintance whatsoever with MOOCs as opposed to 11.11% (34 responses) who are familiar with it. Such huge discrepancy between those who are familiar with MOOCs as opposed to those who have no idea of MOOCs clearly reflects the high level of unawareness among Omani graduate students with MOOCs.

Question 6: Have you heard about any of the following global MOOCs platforms? (Tick all that apply)

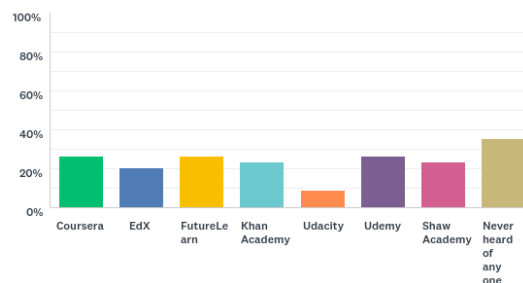


Figure 6. Question 6 Graph

** Note: Question 6 was answered by the participants who answered (Yes) in question five.

Shedding light on students' awareness of the existence of several given global MOOCs platform noticeably aligns and supports the result manifested in question 5 due to the low rate of those who are familiar with these given platforms compared to those who have no acquaintance with them. 26.47% (9 responses) are familiar with Coursera as opposed to 73.53% who never heard of it. 20.59% (7 responses) are familiar with EdX compared to 79.41% who know nothing about it.

26.47% (9 responses) are familiar with Future Learn as opposed to 73.53% who have no idea about its existence. 23.53% (8 responses) are familiar with Khan Academy as opposed 76.47% who do not know it. Udacity has the lowest rate of awareness indeed among all other platforms under investigation as 8.82% (3 responses) of the participants know about its existence as opposed to 91.81% who are oblivious of its existence. Udemy has 26.47% (9 responses) of students familiar with it compared to 73.53% who are ignorant of its existence. 23.53% (8 responses) heard of Shaw Academy as opposed to 76.47% who never heard of it.

In fact, the findings show that there are nearly consistent proportions across six of the investigated platforms regarding students who are familiar with them (roughly one fourth of the participants) compared with those who are unaware of their existence (roughly three fourth of the participants). Udacity is not an exception to such trajectory; it just shows a larger and apparent disproportion in the number of students aware of its existence compared to those who do not know it. In addition to that, 35.29% (12 responses) stated that they are in acquaintance with none of the seven MOOCs platforms, a fact that clearly reflects the very low level of awareness of students of such platforms. It is worth mentioning here that such question received a very low rate of responses indeed. Only 34 participants answered it. Failure to respond to such question can be inferred as lack of familiarity with such platforms.

Question 7: Have you heard about any of the Omani MOOCs platforms?

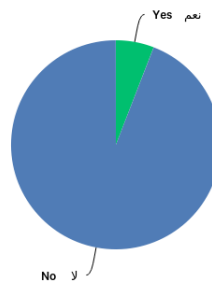


Figure 7. Question 7 Graph

Investigating students' awareness of Omani MOOCs platforms gives more support of their unawareness of such platforms in Oman. About 94.12 % (32 responses) are not aware of them as opposed to 5.88% only (2 responses) who know about them. The same holds true regarding the number of participants responding to this question. Only 34 participants answered this question.

Question 8: Write the name of Omani platforms that you know.

Only two participants out of the 34 who answered question 7 indicated that they are aware of Omani MOOCs platform; they were able to name two Omani MOOCs platforms, namely "Edlal and Al Muwatanah (SQU MOOC)", but failed to name other ones. This gives an insight about their low awareness of local MOOCs platforms, let alone the global ones.

Question 9: Have you participated in any MOOCs before?

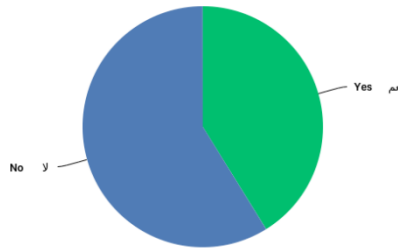


Figure 8. Question 9 Graph

Regarding students’ participation in MOOCs, 41.18% (14 responses) of the 34 participants indicated yes as opposed to 58.82% (20 responses) who stated that they never participated in MOOCs, reflecting the low level of awareness of these courses.

Question 10: Have you ever completed a MOOC?

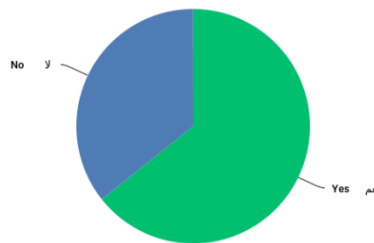


Figure 9. Question 10 Graph

Only 14 out of 34 students who responded to question 9 provided an answer to this question. 64.29% of these 14 students (9 responses) stated that they did complete a MOOC whereas 35.71% (5 responses) did not complete any MOOC.

Question 11: If you had previously participated in MOOCs but did not complete it, what is the reason for not completing the course? (Tick all that apply)

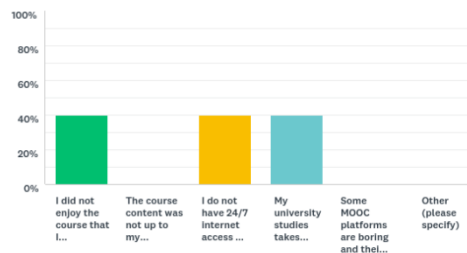


Figure 10. Question 11 Graph

This question was geared to investigate the reasons behind the participants' decision not to complete a MOOC. Only 6 out of 14 students who responded to question 10 provided reasons for not completing the courses. The reasons behind quitting a MOOC varied between the fact that MOOCs do not raise their interest, lack of constant internet access and lack of time to participate in MOOCs due to schoolwork.

Question 12: If you heard of MOOCs, but you did not participate in a MOOC before, what is the reason for not participating? (Tick all that apply)

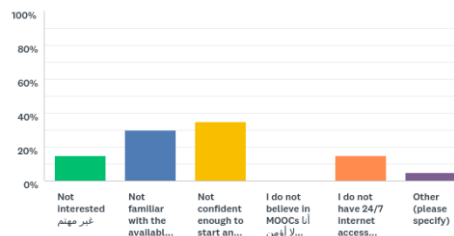


Figure 11. Question 12 Graph

This question investigated lack of participation in MOOCs despite familiarity with such courses. 20 participants responded to this question. 15% (3 responses) of the 20 participants indicated disinterest in these platforms, 30% (6 responses) indicated unfamiliarity with these platforms, 35% (7 responses) showed lack of confidence to engage in an online course, 15% (3 responses) showed lack of constant internet access, and 5% (one response) showed irrelevancy of MOOCs to areas of studies.

It should be noted here that after the participants came to know about MOOCs from the introduction of the current questionnaire prepared to familiarize participants with the meaning of MOOCs, the following questions were asked to all participants.

Question 13: Are you planning to enroll in a MOOC in future?

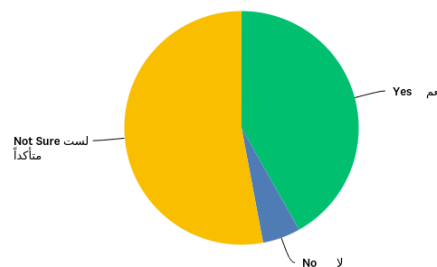


Figure 12. Question 13 Graph

This question, answered by all participants, investigated the possibility of engaging in a MOOC in the future. In fact, the result of this question reflects that the study does spur students' interest in MOOC. 41.83% (128 responses) show their interest in enrolling in a MOOC compared to 5.23% (16 responses)

who showed their disinterest in enrolling in a MOOC. 52.94 % (162 responses) stated that they are not sure about making such decision.

Question 14: Are you interested in studying one of your undergraduate courses in your major through MOOCs?

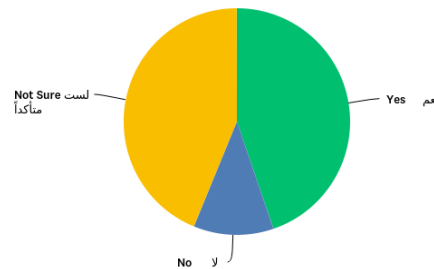


Figure 13. Question 14 Graph

This question addressed participants' interest in studying one of their courses through MOOCs. Similar to the previous question, 306 of the participants answered this question. 44.77% (137 responses) showed interest in taking one of their courses through MOOCs, 11.44% (35 responses) showed disinterest whereas 43.79% (134 responses) indicated reluctance towards such matter.

Question 15: Are you interested in registering for one of the future MOOCs in any field that you are excited about?

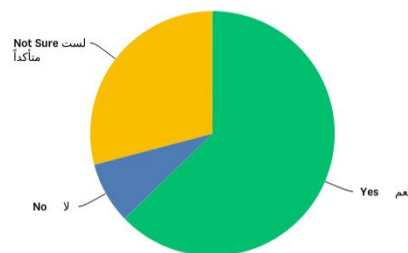


Figure 14. Question 15 Graph

This question explored students' interest in enrolling in MOOCs in any field of their interest. It has 306 responses in total. 62.75% (192 responses) showed interest in enrolling in a future MOOC compared to 18.17% (25 responses) who showed disinterest. 29.08% (89 responses) stated that they are not sure about that.

Question 16: (Optional Question) In your opinion, what are the main reasons for the unpopularity of MOOCs among Omani undergraduate students (if any)?

This question explored the reasons behind the unpopularity of MOOCs among Omani undergraduate students, from the students' point of view. It was answered by 133 and skipped by 173 participants because it is an optional question. Findings show that there is a wide range of reasons behind the unpopularity of MOOCs as presented in the underneath table.

Table 3. The Reasons behind the Unpopularity of MOOCs among Omani Undergraduate Students

No.	The Reasons	No. of Students	Percentage
1.	Unfamiliarity of MOOCs as a source of learning	8	6.01%
2.	Unawareness of their existence	17	12.78%
3.	Lack of interest in MOOCs	2	1.50%
4.	Failure to meet students' expectation.	3	2.25%
5.	Students' Carelessness	6	4.51%
6.	Lack of publicity	23	17.29%
7.	Difficulty of using MOOCs	7	5.26%
8.	Lack of such culture in graduate level institutions	11	8.27%
9.	Lack of constant or reliable internet access	24	18.04%
10.	Lack of accreditation given to these courses.	9	6.76%
11.	Graduate level institutions disinterest in such courses due to financial purposes	1	0.75%
12.	MOOCs are not accredited in the job market.	3	2.25%
13.	Lack of time to enroll in these courses	9	6.76%
14.	Preference of traditional way of learning	5	3.75%
15.	Lack of credibility of these courses.	2	1.50%
16.	Financial issues	3	2.25%

As indicated in the above table, Omani students in undergraduate institutions indicated a set of sixteen different reasons that stand behind the very small number of those who are au fait with MOOCs. Lack of publicity, the unavailability of reliable and constant internet source as well as lack of awareness of their existence are the most prominent reasons behind students' obliviousness of their existence. Such findings show that there is a considerable lack of awareness among undergraduate Omani students of MOOCs platforms as a means of learning. As only two participants were able to name local MOOCs out of 306 participants despite the availability of a couple of local ones, it is obvious that there are no

adequate efforts done to promote such platforms in Oman. Participants believe that there is no promotion of these courses in their higher education institutes and media channels in Oman. Even the participants who are somewhat in acquaintance with MOOCs have not all participated in any of these courses before. Likewise, those who have started a MOOC course have not all continued to the end of the course.

It is worth mentioning that no participant stated that he/she does not believe in the importance of such courses. The 306 students taking part in the study showed interest in participating in a MOOC in the future, especially local ones in Oman. They are willing to engage in and benefit from these platforms once they get the knowledge and training required, as the majority of them expressed that they do not have confidence in starting a MOOC because they are not equipped with the necessary knowledge and skills. Hence, more attention should be shown by Omani academic institutions to these platforms via publicity and training of their students to use these platforms.

4. Discussion

Aiming to be a reference for academic institutions and researchers concerned with the use of MOOCs in Oman, this study shed light on the awareness of Omani undergraduate students about the use of MOOCs as a means of learning. Data was collected via distributing a self-administered questionnaire to a representative sample of undergraduate students from three academic institutions in Oman: Sultan Qaboos University, the Scientific College of Design and the Higher College of Technology. Findings clearly show that the majority of undergraduate students in Omani academic institutions are not aware of MOOCs platforms. Several reasons appear to be the main reasons behind such lack of awareness. The major ones are lack of publicity, lack of constant or reliable internet access, absence of accreditation given to these courses, lack of time to enroll in these courses, and unfamiliarity of MOOCs as a source of learning. Noteworthy is that students' justification for not knowing about MOOCs was not related to MOOCs itself, but rather due to other reasons that could be worked out to make students get involved into MOOCs and thus make use of them in their learning path.

This study, in fact, was a revelation to the participants to know about these platforms as it aroused their curiosity to know more about these platforms and use them in their learning. It also aroused academic institutions' attention to spread awareness of both global and local MOOCs among all members of society, specifically among undergraduate students. Findings of this study, hence, show that some recommendations need to be taken into account. Academic institutions need to pay serious attention to raise awareness among their students of the significance of such platforms on the students' learning experience. Further and long-term studies can be done to investigate this topic in depth and to explore the possibilities available to invest in these platforms. Raising student's awareness of the available popular MOOCs platforms and encouraging them to enroll in them can be the first step towards helping Omani undergraduate students to benefit from these platforms. MOOCs researchers in Oman can undertake more extensive research by studying awareness of MOOCs among postgraduate students and

academics. Institutions concerned with teachers' training such as the Specialist Centre for Professional Training of teachers in Oman can do more research in the field of MOOCs in different fields. They can investigate their impact on the educational process of the different segments in the society, especially the newly graduated teachers who require training courses before they get involved in teaching.

References

- Academy, K. (2018). *Khan Academy launches free Official LSAT Prep*. KhanAcademy.org[Online], US. Retrieved from <https://www.khanacademy.org/about/blog/post/174475327240/khan-academy-launches-free-official-lsat-prep>
- Albury, K., Leaver, T., Marwick, A., Rettberg, J. W., & Senft, T. (2017). The selfie course: More than a MOOC. In *Massive Open Online Courses and Higher Education* (pp. 168-182): Routledge. <https://doi.org/10.4324/9781315594248-12>
- Allen, & Mark. (2007). *The next generation of corporate universities: Innovative approaches for developing people and expanding organizational capabilities* (2nd ed.). US: John Wiley & Sons.
- Alumni, H. (2013). *Harvard is: Leading in Learning Stories Harvard Alumni*. UK. Retrieved from https://alumni.harvard.edu/community/stories?field_categories_tid=16&page=1
- Andrew, M. (2012, 14.12.2012). *UK universities to launch free degree-style online courses*. Telegraph. Telegraph.co.uk [Online], UK. Retrieved from <https://www.telegraph.co.uk/education/educationnews/9743703/UK-universities-to-launch-free-degree-style-online-courses.html>
- Aarageek. (2017). *Online Education: How to Support Your Career?* Edraak[Online]. Retrieved from <https://www.arageek.com/edu/online-mooc-courses-support-your-career>
- Atheer. (2017). *Find out the details of the Higher Education Statistics in the Sultanate*. Atheer News[Online], Oman. Retrieved from <https://www.atheer.om/archives/438197/%D8%AA%D8%B9%D8%B1%D9%91%D9%81-%D8%B9%D9%84%D9%89-%D8%AA%D9%81%D8%A7%D8%B5%D9%8A%D9%84-%D8%A5%D8%AD%D8%B5%D8%A7%D8%A6%D9%8A%D8%A9-%D8%A7%D9%84%D8%AA%D8%B9%D9%84%D9%8A%D9%85-%D8%A7%D9%84%D8%B9%D8%A7/>
- Atiaja, L., & Segundo, R. (2016). *MOOCS: PROBLEMS AND CHALLENGES IN HIGHER EDUCATION*. ReserchGate[Online], ReserchGate. Retrieved from https://www.researchgate.net/publication/326291317_MOOCS_PROBLEMS_AND_CHALLENGES_IN_HIGHER_EDUCATION
- Azhan, M. H., Saman, M. D., & B., M. (2016, 22-23. March 2016). *A Framework for Collaborative Multi-Institution MOOC Environment*. ACM Digital Library. <https://doi.org/10.1145/2896387.2896421>

- Bartolomé & Steffens. (2015). Are MOOCs promising learning environments? *Comunicar*, 44 (XXII), 91-99. <https://doi.org/10.3916/C44-2015-10>
- Bates, A. T. (2018). *Teaching in a Digital Age: Guidelines for designing teaching and learning for a digital age*. University of British Columbia: BCcampus.
- Carr, D. F. (2013). *Udemy Comes To Corporate Training*. informationWeek.com[Online], US. Retrieved from <http://www.informationweek.com/software/udemy-comes-to-corporate-training/d/d-id/1109571?>
- Chengjie, Y. (2015). *Challenges and Changes of MOOC to Traditional Classroom Teaching Mode*. Canadian Social Science[Online], Canada. Retrieved from <http://www.cscanada.org/index.php/css/article/view/6023>
- Cheung, W. S., & Hew, K. F. (2017). *Students' and Instructors' Use of Massive Open Online Courses (MOOCs): Motivations and Challenges*. Research Gate[Online]. Retrieved from https://www.researchgate.net/publication/262641471Students'_and_Instructors'_Use_of_Massive_Open_Online_Courses_MOOCs_Motivations_and_Challenges
- Classcentral. (2019). *What is Coursera? Class Central Help Center*. Classcentral. Retrieved from <https://www.classcentral.com/help/what-is-coursera>
- Council, T. R. (2017). *Annual Report. Omani Research Council*[Online]. Retrieved from <https://www.trc.gov.om/trcweb/ar/about/reports>
- Dalipi, F., Yayilgan, S., Imran, A., & Kastrati, Z. (2016). Towards understanding the MOOC trend: pedagogical challenges and business opportunities. *International Conference on Learning and Collaboration Technologies*. Springer[Online]. https://doi.org/10.1007/978-3-319-39483-1_26
- Darwish, Gattoufi, B., & Gulvady, S. (2017). *Introducing MOOCs to Universities in Oman -Policies and Regulations- CAS perspective*. Research Gate[Online]. Retrieved from https://www.researchgate.net/publication/320180892Introducing_MOOCs_to_Universities_in_Oman_-_Policies_and_Regulations-_CAS_perspective
- Dekena, G. (2012). *The Original, Free Online AI Class, now on Udacity!* Uacity.com[Online]. Retrieved from <https://blog.udacity.com/2012/11/ai-class-now-on-udacity.html>
- DeSantis, N. (2012). *Stanford Professor Gives Up Teaching Position, Hopes to Reach 500,000 Students at Online Start-Up*. The Chronicle of Higher Education[Online]. Retrieved from <https://www.chronicle.com/blogs/wiredcampus/stanford-professor-gives-up-teaching-position-hopes-to-reach-500000-students-at-online-start-up/35135>
- deWaard, I., Koutropoulos, A., Keskin, N., Abajian, S. C., Hogue, R., Rodriguez, C. O., & Gallagher, M. S. (2011). *Exploring the MOOC format as a pedagogical approach for mLearning. Proceedings of 10th World Conference on Mobile and Contextual Learning*. the Proceedings of 10th World Conference on Mobile and Contextual Learning. [Online]. Retrieved from https://s3.amazonaws.com/academia.edu.documents/32377703/Conference_Procedings.pdf

- Dictionaries, L. (2019). *Definition of MOOC by Lexico*. Lexico.com[Online]. Retrieved from <https://www.lexico.com/en/definition/mooc>
- Dolet, & Nakita. (2016). *Disruptive Innovations in Distance Education Instruction*. Society for Information Technology & Teacher Education International Conference. Association for the Advancement of Computing in Education (AACE)[Online]. Retrieved from <https://www.learntechlib.org/p/171960/>
- Downes. (2019). Recognising Achievement with Badges and Blockchain in a Connectivist MOOC. *Journal of Learning for Development*[Online]. Retrieved from <https://jl4d.org/index.php/ejl4d/article/view/348>
- Edlal. (2019, 1.1.2020). *About Edlal. Omantel Company*[Online]. Oman. Retrieved from <https://mena-innovation.com/2019/wp-content/uploads/2019/09/Edlal.pdf>
- Edx. (2019). About Edx. [edx.org](https://www.edx.org/about-us). Retrieved from <https://www.edx.org/about-us>
- Ejreaw, A. M., & Drus, S. M. (2017). *THE CHALLENGES OF MASSIVE OPEN ONLINE COURSES (MOOC)—A PRELIMINARY REVIEW*. ICOCI[Online]. Retrieved from <https://pdfs.semanticscholar.org/5b84/54e4bd754d2799618b3224b533d1f2e159a7.pdf>
- Forecast, T. (2013). *Udacity's Sebastian Thrun, Godfather of Free Online Education, Changes Course*. FastCompany.com[Online]. Retrieved from <https://www.fastcompany.com/3021473/udacity-sebastian-thrun-uphill-climb>
- Fry, Shivers, M., Ann, Phillips, Joy, Campbell, & others. (2018). *User-centered design in and beyond the classroom: Toward an accountable practice*. ScienceDirect[Online]. Retrieved from <https://www.sciencedirect.com/science/article/pii/S8755461518300379>
- futureworkplace. (2017). *Closing the Skills Gap. future Work Place*[Online]. Retrieved from <https://futureworkplace.com/ebooks/closing-the-skills-gap/>
- Gruber, G. (2013). *4 Challenges in Evaluating Massive Open Online Courses (MOOCs)*. explorance.com[Online]. Retrieved from <https://explorance.com/blog/4-challenges-evaluating-massive-open-online-courses-moocs/>
- Gupta, S. (2017). *9 Benefits of E Learning for students*. eLearningIndustry.com[Online]. Retrieved from <https://elearningindustry.com/9-benefits-of-elearning-for-students>
- Heussnerapr, K. M. (2013). *Exclusive: Udemy lands on mobile so students can learn on the go*. GIGAOM[Online]. Retrieved from <https://gigaom.com/2013/04/02/udemy-lands-on-mobile-so-students-can-learn-on-the-go/>
- Kaplan, M, A., & Haenlein. (2016). *Higher education and the digital revolution: About MOOCs, SPOCs, social media, and the Cookie Monster*. ScienceDirect[Online]. <https://doi.org/10.1016/j.bushor.2016.03.008>
- Kindi, A., & Al-Khanjari, Z. A. (2017). *SQU-MOOC: Developing a Platform for Managing the Collaborative Learning using MOOC Concept in Sultan Qaboos University*. 3rd ICOET 2015. ResearchGate[Online], Muscat. Retrieved from

- https://www.researchgate.net/publication/322026555_SQU-MOOC_Developing_a_Platform_for_Managing_the_Collaborative_Learning_using_MOOC_Concept_in_Sultan_Qaboos_University/citations
- Kumbhakar, Subal, Lien, Gudbrand, Hardaker, & Brian. (2014). Technical efficiency in competing panel data models: A study of Norwegian grain farming. *Journal of Productivity Analysis*[Online]. Retrieved from <https://link.springer.com/article/10.1007/s11123-012-0303-1>
- Lederman, D. (2019). *MOOC Platforms' New Model Draws Big Bet From Investors*. InsideHigherED.com[Online]. Retrieved from <https://www.insidehighered.com/digital-learning/article/2019/05/22/investors-bet-big-companies-formerly-known-mooc-providers>
- massey, B. (2018). *The Main Weakness with MOOCs*. hackernoon.com[Online]. Retrieved from <https://hackernoon.com/the-main-weakness-with-moocs-40d85de9fafa>
- mixergy. (2018). *How Khan Academy Is Changing Education With Videos Made In A Closet*. MIXERGY.com[Online], US. Retrieved from <https://mixergy.com/interviews/salman-khan-academy-interview/>
- MOHE. (2017). *Private universities in Oman*. MOHE.gov.om[Online], Ministry of higher Education. Retrieved from <https://mohe.gov.om/InnerPage.aspx?id=30C2284B-7B6D-49C7-BE63-2DCF29E48905>
- Pappano, & Laura. (2012). *Massive open online courses are multiplying at a rapid pace*. New York Times[Online], US. Retrieved from https://www.researchgate.net/publication/263563655_Massive_Open_Online_Courses_Are_Multiplying_at_a_Rapid_Pace
- Porter, & Sarah. (2015). *To MOOC or Not to MOOC: How can online learning help to build the future of higher education?* US: Chandos Publishing.
- Roya, A. (2018). *Omantel Launches Edlal Knowledge Platform for Open Education*. Al Roya. Oman[Online], Oman. Retrieved from <https://www.omantel.om/About%20us/AboutOmantel/initiatives/!ut/p/z1/1ZLdcoIwEIWfxQdws0FE4DJYfkQww1CsetNBtEgrqBW08PS11hux>
- Roya, A. (2019). *Sultan Qaboos University launches SQUMOOC open e-learning platform*. Al Roya Newspaper. Muscat - Oman. Retrieved from <https://www.pressreader.com/oman/muscat-daily/20190904/281621012014983>
- Sandeen. (2013). Assessment's place in the new MOOC world. *Research & Practice in Assessment*, 8(1), 5-12. ERIC[Online]. Retrieved from <https://eric.ed.gov/?id=EJ1062706>
- Sen, Chiranjib, & Bangalore, J. I. (2011). *A framework for analyzing demand and supply of faculty and the quality of higher education*. ResearchGate[Online]. <https://doi.org/10.2139/ssrn.2124907>
- Siemens. (2015). Learning Theories In Plain English. In *Vol. 1 of 2* (p. 27). Retrieved from <https://www.learning-theories.com/connectivism-siemens-downes.html>.

SQUMOOC. (2019). *SQU MOOC Interface*. In OMAN.

Tayeb, & Sarirete, A. (2016). *Learning outside the classroom through MOOCs*. Research Gate[Online]. Retrieved from https://www.researchgate.net/publication/275223565_Learning_outside_the_classroom_through_MOOCs

Udemy. (2019). *about us*. udemy.com[Online], US. Retrieved from <https://about.udemy.com/?locale=en-us>

Vardi, & Moshe. (2012). *Will MOOCs destroy academia? Communications of the ACM*. The ACM Digital Library[Online], US. <https://doi.org/10.1145/2366316.2366317>