



Online learning and teaching during COVID-19: A case study from Oman

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Abstract. This paper sheds light on the experience of online learning and teaching in Oman in higher institutions under confinement circumstances. The paper targets three primary objectives. First, it seeks to study the challenges of learning and teaching online in Oman. Second, to identify the opportunities offered by learning and teaching online and third-to recommend solutions for better learning and teaching processes. The paper uses applied and qualitative methods. The applied method lies in the use of an experiment of 8 weeks of online teaching at the International Maritime College Oman. The qualitative approach lies in the use of students' online interviews, academic staff's online meetings' feedback, and a qualitative survey for both academic staff and students. The survey targeted around 100 participants from the International Maritime College Oman, and Majan College and responses were around 64. Findings have revealed that although online learning and teaching is a novel experience in Oman, it is a challenging experience that has reinforced new styles of learning and teaching. A considerable majority enjoyed the experience as they have since developed independent learning skills, problem-solving skills, communication skills and technological communication and IT skills. However, the significant challenges faced were related to network issues as internet connection in Oman is generally weak. Finally, there was also the challenge of students' cooperation, autonomy and dependency, as well as compliance with educational policies and cultural issues. There were also challenges related to the technological infrastructure of the institutions mentioned above and the readiness of both academic staff and students to implement technology for online teaching and learning.

Keywords: *COVID-19, online learning, online teaching, challenges, opportunities, higher education.*

1. Introduction

Under the new conditions dictated by the COVID-19 pandemic, most educational institutions were caught between two choices, closing doors or going for online teaching (Murphy, 2020). Consequently, many institutions have had no choice but to go for online teaching to fulfil their duties and maintain their businesses. Chiefly, this research paper tries to focus on this experience of online teaching and learning in Oman to investigate challenges, opportunities, and possible solutions. Foundationally, the study relied heavily on a personal experience of 8 weeks of online teaching at the International Maritime College Oman, followed by an online qualitative survey on the challenges opportunities and solutions of online learning and teaching. In short, the paper studies the challenges, the opportunities for online learning and recommends solutions for a better online educational system in Oman.

2. Literature Review

Initially, according to Moore et al. (2011), the origin of online learning, distance learning, or E-learning goes back to the 1980s, (Moore et al., 2011). Unquestionably, the definition of E-learning has been a controversial issue. Specifically, some definitions tended to give a materialistic view of the concept. For instance, Nichols (2003) defines e-learning as access via technological tools such as web-based, web distributed or web-cable, which contradicts Ellis' (2004) perception of E-learning (Nicholas, 2003).

Notwithstanding, Ellis (2004) argues that E-learning does not only cover content and industrial methods via CDROM, but it also includes interactive audio, videotapes, and broadcasting (Ellis, 2004).

On the contrary, Triacca et al. (2004), Tavangarian et al., (2004) the constructivist theory. This theory defines e-Learning as not only a procedure, but an individual transformation in knowledge and experience via the construction process (Tavangarian et al., 2004).

After all, according to the Common Wealth of Learning (2020), online learning is a process of learning and teaching based on the separation of the instructor and the learner in time and place under the mediation of technology delivery with the possibility of face to face interaction (Common Wealth of Learning, 2020).

2.1 The challenges of learning and teaching online in Oman

Primarily, according to Al-Shihi et al. (2015), the first challenge facing online teaching is the regulations. Al-Shihi (2015) explained that the Ministry of Education supports distance learning in Oman only in public schools via two alternatives. These two alternatives concern both adults and mature students. The first mode is named free study, where the learner collects the subject materials and studies at home. The second type of distance learning is evening-classes that end up in taking exams like the other formal learners, which is applied in both schools and higher institutions (Al Shihi et al., 2015).

Moreover, comprehensive E-learning services in Oman do-not apply to undergraduate students as they are only for masters and PhD programs. Indeed, the policies of the Ministry of Higher Education are strict in this matter (Ministry of Higher Education, 2020). However, the Omani strategy 2040 aims at establishing quality education systems that guarantee high-quality education aligned with international standards, and the market demand. The latter has helped to overcome the regulations at this challenging time. Furthermore, the Covid-19 pandemic urged most higher education institutions worldwide to shift to online teaching, and Oman was no exception (Sultanate of Oman Educational Council, 2018).

However, despite the willingness of many institutions to adopt online learning and teaching, it seems to be challenging to maintain this approach for a longer term as vocational training courses as an example would not be able to cope in many cases (The Economist Intelligence Unit, 2020).

Subsequently, students may ask for a reduction in fees, or international students may ask for partially reimbursed admission fees. Smaller institutions may not be able to meet such demands and as a consequence, could get taken over by larger institutions due to financial bankruptcy. Accordingly, institutions have to rethink their instruction methods as students and parents may question the value of higher education instructed online in comparison to having it done on-campus (The Economist Intelligence Unit, 2020).

Respectively, the technological infrastructure is another burden as not all institutions are ready to implement technology properly. There is a lack of up-to-date proper technical support in higher education institutions in Oman. Thus, the majority of institutions are based on campus where the students fully attend their courses. The exception is for some working students who are pursuing professional development by attending evening and weekend classes with a little bit of flexibility for some online sessions (Saini & Al-Mamri, 2019).

Referring to a conference held at Sultan Qaboos University (2020), the most critical risks facing Higher Education Institutions, in both the public and private sectors are risks facing the community. These risks include social networks, electronic security, investment risks, financial risks and job-seeking risks (Sultan Qaboos University, 2020).

Similarly, according to Al-Maskiry (2018), the managing director of Protiviti, in an interview with the Times of Oman, states that Omani educational institutions should adopt technology as a new generation requirement.

Otherwise, Al-Maskiry (2018) added that although technology is in high demand, institutions are facing challenges such as the lack of funding and tightened spending with digitisation not being a cheap task. Al-

Maskiry (2018) added that technology interventions are required to enable educators to use technology properly (Times of Oman, 2018).

Most importantly, the technological infrastructure is linked to internet service providers "Omantel" and "Ooredoo". Both companies were putting restrictions on video calls before the spread of Coronavirus. As a result, before the pandemic crisis took place as an online learner, you were unable to attend an online conference or join an online course face to face due to the limitations put on video calling (Yousuf, 2020).

In short, the challenges related to policies, technological infrastructure is armour-plated by the capabilities of academic staff and students. Indeed, some of the academic staff in higher institutions prefer to use the old method of teaching as it is less challenging and direct, according to Al-Maskiry (2018).

Al-Maskiry (2018) continues by saying that some educators are not keen to embrace technology. She also added that everyone should be tech-savvy as a 21st-century requirement because it is the new measurement for literacy and the need of the market nowadays (Times of Oman, 2018).

In the like manner, Slimi (2019) argues that students also do not want to get out of their comfort zone and prefer to stick to the old fashioned method of learning and teaching. He also thinks that students feel that the teacher supports them more and mainly ensures that they will have better grades compared to the use of technology. Thus assessments on Moodle, Teams or Google and Office 365 Forms are strictly marked by the system. Not only this but also having dependent learners who are irresponsible and are not good at time management, prefer to be guided by lecturers and to be on-campus (Al-Ani, 2017).

Indeed, culturally speaking, female students for conservative reasons prefer not to use cameras for online conferencing. Females fear that students will take photos of them online, which could cause family and social issues. The latter condition may create inequity when it comes to online evaluation of presentations as an example. On the contrary, males turn on cameras and receive assessments on their facial language.

Likewise, geographically speaking, some students who live in remote areas away from the city face network issues related to the weak signal. This challenge raises the issue of equity again, referring to the sustainable development goal number four (United Nations, 2019). The network issue is not all the time restricted to remote areas as it may include cities too, based on the complaint of students raised to management as well as to academic staff in this matter.

In the same manner, the online teaching and learning challenge includes the challenges of assessment online bearing in mind quality maintenance, academic integrity and equal and fair opportunity for all.

Of course, this issue is not only a national matter, but a universal dilemma as the Head of Education and Research and Foresight at UNESCO Mr Sobhi Tawil declared that decisions to assess or not to assess students online are being made in a context of uncertainty. In the same context, Tawil added that the main factors are health and safety to ensure equity and equal opportunity in exams and assessments. "We have been imposed, globally, an experiment in remote learning. We are all managing different ways that we can," he said. Subsequently, Tawil encouraged participants to join the Global Education Coalition (UNESCO, 2020b).

Finally, it is made clear that the implementation of technology is a challenging and crucial matter in providing deeper learning, in engaging the learner and preparing them for their future career. Accordingly, this is an area that requires sustainable development and support to create sufficient infrastructure for all academic staff and students.

2.2 The opportunities offered by learning and teaching online

During the COVID-19 pandemic, the Ministry of Higher Education issued two decisions to regulate study at private higher education institutions and determine regulations for the teaching and evaluation of courses in applied sciences institutions. Decision No 25.2020 states that the second semester at private higher institutions should continue using e-learning (Oman Observer, 2020).

Decision No 26/2020 approves of course completion through the e-learning system at the colleges of applied sciences during the confinement period. The Ministry of Education stressed the importance of developing the e-learning technical infrastructure for all courses to meet quality as well as to readjust internal regulations to include the semester into the academic calendar (Oman Observer, 2020). Thus according to Alvin (2020), a writer from Pulse of Oman, around 40,000 technical college students shifted to online learning in Oman during COVID-19 (Thomas, 2020).

Online learning and teaching during COVID-19 have also offered opportunities for both academic staff and students to test their technical abilities and to cope with the confinement situation (Murphy, 2020). Additionally, it has alerted the Ministry of Higher Education and educational institutions to update their technical infrastructure, to develop staff and students, and to invest more in high-tech as it is the requirement of the century (Oxford Business Group, 2020).

Opportunities offered by the experience of online learning and teaching are also part of the graduate attributes as the learner gets the opportunity to develop technological communication, autonomy, problem-solving, research skills, and their analytical and critical thinking skills (Hart et al., 2019).

Online learning has proved to be working better than offline education even in medical studies as it has advantages to enhance undergraduates' knowledge and skills. Thus, it is a potential method in undergraduate teaching (Pei & Wu, 2019). The learning environment encourages both learners and the instructors to enhance responsibility, self-discipline as well as to develop the most critical factors required for education which are trust, honesty, fairness, respect, responsibility, courage and academic integrity (Harris et al., 2019).

Online learning and referring to an interview with 14 full-time students was a financial inlet for students as they are staying with their families during the pandemic period. Therefore, they have not been paying extra fees for food, transportation and rent, which has enabled them to save money to buy electronic devices for their future studies.

Concerning part-time students, it has been an excellent opportunity to find a balance between work and study without having added pressure from college. On the other hand, they hope that online learning will be implemented permanently in Oman in the future. This information came from an interview with a group of 14 part-time students at the International Maritime College Oman.

Furthermore, there has been a radical, rapid growth and adoption of technology in education with an investment in language apps, virtual tutoring, video conferencing platforms and learning software during COVID-19 (World Economic Forum, 2020).

Finally, although COVID-19 has created a big challenge for higher education institutions, there have been lots of opportunities for these institutions to experience new methods of teaching and learning and to get ready for the fourth revolution requirements and not only to be teaching online. In short, artificial intelligence is another revolution that is going to radicalise the whole world and probably education forever.

2.3 Possible solutions for online learning and teaching

Oman's long-term development programme that includes telecommunications and the IT sector is an adaptive and flexible strategy and has helped in supporting online learning (Oxford Business Group, 2020). For instance, to overcome the issue of Coronavirus, there was an agreement between the Ministry of Higher Education and Omantel that ended up in a partnership to introduce Gsuite for education all over Oman. Additionally, Omantel enabled both students and staff to use online conferences via many apps such as Zoom, GoToMeeting, Teams, WhatsApp, and other platforms (Telecom Review, 2020).

The general manager of sales at Omantel, Aladdin Abdullah Baitfadhil argued that Gsuite is the practical option of teachers and students to perform their duties, share educational content and hold exams online. He added that 95% of countrywide broadband coverage through different technologies would ensure the effectiveness to access to Gsuite for education anywhere in the Sultanate of Oman. G Suite for Education will be provided to over 450,000 students across the Sultanate, and this was

according to Dr Nasser Abdullah Al Abri, Director General of IT at the Ministry of Education (Telecom Review, 2020).

In addition to domestic solutions, UNESCO (2020) provided a list of answers to education worldwide. These solutions included resources for psychological support such as "WHO mental health and psychology guidance during the COVID-19 outbreak and other UNICEF guidance for teachers and parents. The UNESCO solutions also included a list of digital learning systems such as CenutyTech, Moodle, Edmodo, and Nafham. UNESCO also provided systems designed for mobile phones use such as Cell-ED and Eneza Education and massive online learning courses such as Alison, Canvas, Coursera Edx and Future Learn. In addition to these, they designed collaboration platforms such as Hangouts Meet, Lark and DingTalk along with tools for teachers to create digital learning content (UNESCO, 2020b).

According to the Economist Intelligence Unit (2020), there are possibly five innovative ways of delivering higher education in the future. Therefore, online universities would offer flexible education "anytime, anywhere, to anyone" and apply "hybrid' learning for particular students. The second type is the cluster model where multiple institutions fuse into the campus to share services, facilities, economic means and reduce costs (The Economist Intelligence Unit, 2020).

The third method is the experiential institutions where teaching is out of the classroom and is driven by diverse experiences such as hands-on projects and internships. The fourth one is liberal art colleges with a lower teacher-student ratio and provides a highly personalised university experience. The fifth is the partnership model where institutions seek external partnership to secure long-term funding and improve jobs for graduates (The Economist Intelligence Unit, 2020).

The five examples described are made more apparent in the below table.

Open university model	Empower internet technology to offer degrees to anyone worldwide online.
Cluster model	Brings independent institutions to strengthen them and make them more efficient.
Experiential model	Blend hand-on working experience with traditional learning to prepare learners for professional life.
Partnership model	Build relationships with external partners for collaboration and employment chances.
Liberal model	Focus on depth and breadth of learning as interdisciplinary in selective universities.

Table 1. Source: The Economist Intelligent Unit (2020)

3. Methodology

The research method used for this paper initially is an applied research method that aims at finding a solution for a particular issue. It is based mainly on generalisation and formulation of theory in a non-systematic way (Dudovsky, 2019).

The applied method is an experience of around eight weeks of online teaching and learning at the International Maritime College Oman under the circumstances of the COVID-19 pandemic using the regulations of confinement from both the Omani Ministry of Health and the Ministry of Higher Education.

The system used for online education is Moodle, as the academic staff and the majority of students have received basic training on how to use it. The International Maritime College Oman started using Moodle in 2015. Meanwhile, other platforms for online conferencing have been used such as Zoom, GoToMeeting, Teams and WhatsApp groups to reinforce the learning and teaching process and is based on individual experiences and needs.

The paper also used the qualitative method to ensure the validity of the results based on a qualitative survey that was made up of 12 questions and covered three major sections related to challenges, opportunities and possible solutions for the online learning and teaching experience. Moreover, the paper used online interviews with both academic staff and students on both "what" and "why" including feelings, experiences, views and recommendations (Bhat, 2020).

The experiment of online teaching and learning included around 60 academic staff and 1300 college students. The academic staff and students are from around 22 different international, cultural, educational, and social backgrounds. The academic staff includes holders of Bachelor, Masters and PhD degrees in various areas of study such as Marine Engineering, Logistics and Transportation Management, Chemical Engineering, English Language and Scientific Studies.

The qualitative method used data collected from online meetings held by the English language lecturers. These meetings are regular ones, and it includes around 14 teachers serving in the four different departments: Nautical, Marine, Chemical Engineering and Logistics and Transportation Management. The meetings dealt with the challenges, opportunities and solutions for online teaching.

Additionally, the researcher, a lecturer of English language teaching both full time and part-time students, was in direct contact with students and collected information from all students on the online learning experience. The students in focus were around 120 students from two different departments, Chemical Engineering and Logistics and Transportation Management. The researcher was able to assist them well, and this enabled him to share his experiences with his colleagues.

Finally, to ensure the reliability of the data collected, the researcher forwarded a qualitative survey based on the information collected from the online meetings with colleagues and students to the academic staff and students to reflect on the challenges, opportunities of their experiences and to recommend solutions for the future.

The survey targeted 100 participants from academic staff and students both full-time and part-time. Responses reached 67 out of 100 as follows: 24 academic staff 36%, 23 full-time students 34% and 20 part-time students 30%. Forty-three of them were males representing 64% and 24 females representing 36%. The ages are from 20 to 60.

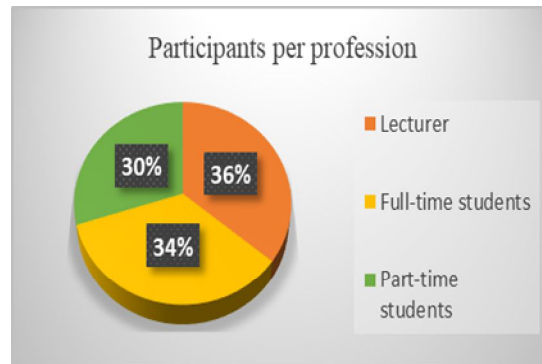


Figure 1. participants per profession

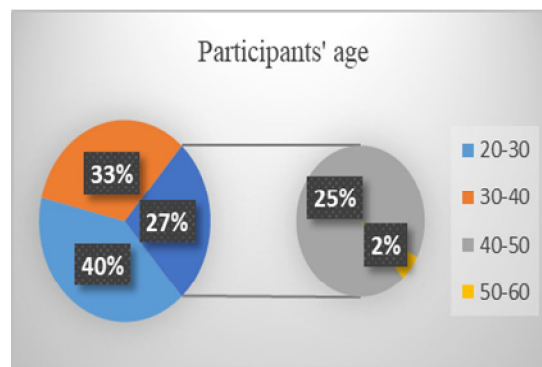


Figure 2. Participants' age

4. Findings/Results

Findings reveal that the overall experience of learning and teaching in Oman was good. For instance, 24 participants believe that it was a good experience, 17 think that it was very good, and 11 think it was excellent as compared to 10 participants who consider it was defective and only one thinks it was feeble.

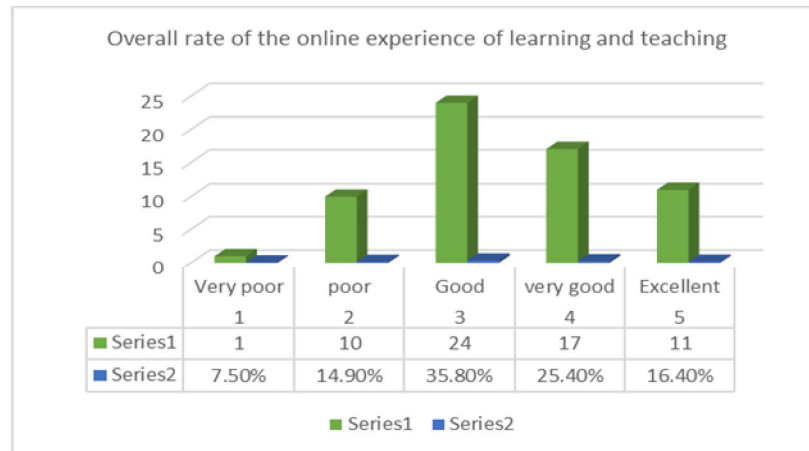


Figure 3. Overall rate of the online experience of learning and teaching

4.1 The challenges of learning and teaching online in Oman

Findings reveal three significant levels of challenges and are divided based on the most important to the least important as below.

For instance, the most crucial challenges are related to the following areas. In the first stage comes network issues, second students' cooperation, third video and audio platforms, fourth lack of time management, and fifth pressure from students, penultimately a lack of online teaching and learning experiences. Finally, depression that both academic staff and students experienced as a consequence of the COVID-19 pandemic.

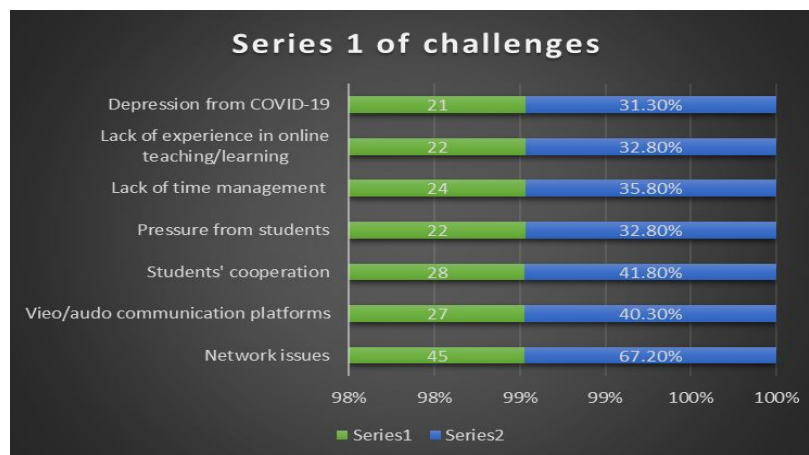


Figure 4. First level of challenges

The second level of challenges is also summed up into three levels. Level one includes pressure from the management, lack of policies related to online learning and teaching, cultural issues such as the non-use of cameras for video conferencing sessions mainly by female students. Besides, the Omani students are dependent learners, unable to work under pressure, and irresponsible. The second level in this phase is linked to an inappropriate homework environment as well as students' complaints while the final level is due to computer issues and the lack of support from their lecturers.

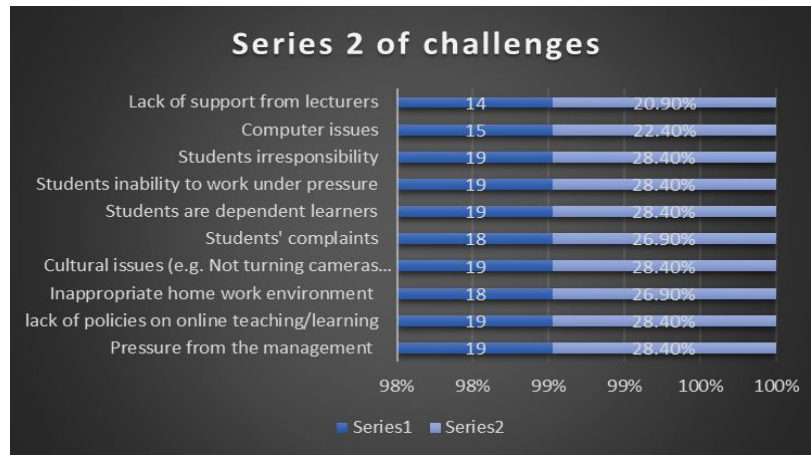


Figure 5. Second level of challenges

The third level of challenges is mainly related to the lack of support from the institution, lack of IT skills, lack of support from the IT department, lecturers' complaints, irresponsibility, and the complexity of the materials provided. Additionally, the misconception of both lecturers and students about the concept of quarantine time as some of them consider it as holiday time and not online study time.

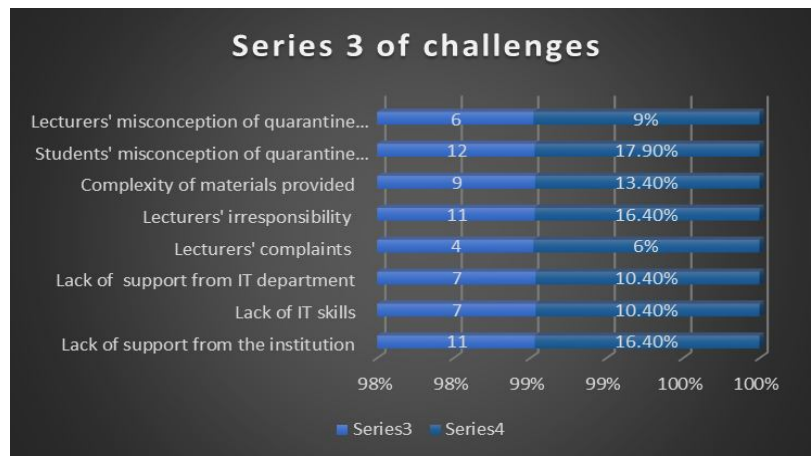


Figure 6. Third level of challenges

4.2 The opportunities offered by learning and teaching online

The results concerning the opportunities offered by online teaching and learning reveal that both students and academic staff have developed many skills. These results show two significant levels, a level that exceeded 50% and another level below 50%. Regarding skills that surpass 50% of development are technological communication skills, IT skills, online learning and teaching abilities, flexibility, life-long learning, working under pressure, and research skills. Concerning the development that is below 50%, the skills developed are autonomy, confidence, problem-solving skills, teamwork spirit, time management, academic integrity, trust and ethical values, empathy as well as leadership skills.

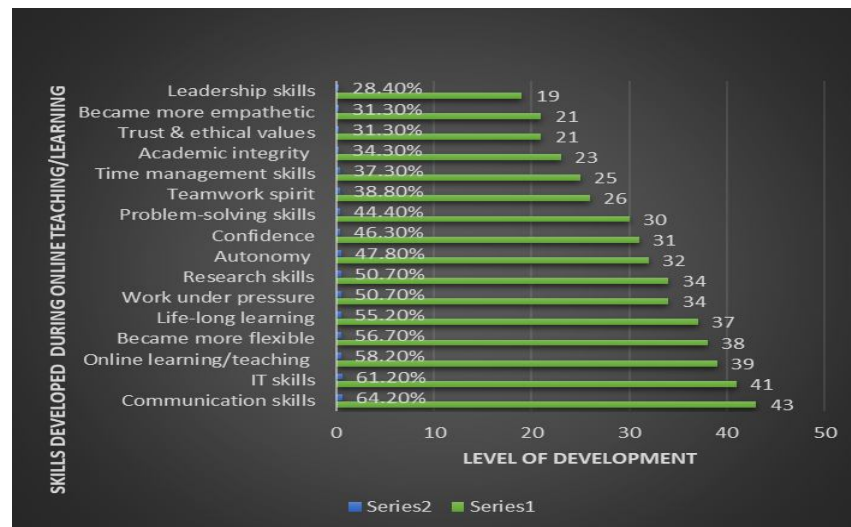


Figure 7. Skills developed during the online learning and teaching experience

4.3 Possible solutions for online learning and teaching

Findings reveal that providing a good network, changing policies, and an excellent technological structure are urgent solutions for online learning and teaching in Oman. Institutions with sustainable support for both instructor and learner in IT is a must in order to overcome technological barriers.

Similarly, creating a culture of blended learning and giving adequate training for both academic staff and students would make the process efficient.

Giving more trust, flexibility, and responsibility to the academic staff and students would also enhance academic integrity and the quality of learning.

5. Discussion

First, regarding the overall experience of learning and teaching in Oman during the confinement time, results reveal that both students and academic staff are more than satisfied by this experience. For instance, around 36% think that it was a good experience, 25% believe it was an outstanding experience, and 16% assume it was excellent. The overall percentage of participants who value the experience is 77% as compared to 23% who are critical of the experience. For instance, 15% think it was a poor experience, and around 8% believe it was deplorable.

5.1 The challenges of learning and teaching online in Oman

The results of the study revealed three different levels of challenges. Therefore, the first level shows that the biggest challenge is related to network issues by a concentration of 67%, in the second level comes the lack of cooperation from students, and the video and audio communication platforms at 41.30% and 40.30% correspondingly. The third level concerns the lack of time management which is 35.8% and then we find pressure experienced by students, the lack of experience in online learning and teaching is at 32.80% and depression caused by COVID-19 is 31.30%.

The second level of challenges also covers three significant phases of challenges. The first phase includes pressure from the management, absence of policies on online learning and teaching, cultural issues such as the non-turning on of cameras by female students in online conferences, as well as having dependent, irresponsible students who are unable to work under pressure and this is 28.40% for all.

Second, comes the issues of the inappropriate homework environment and students' complaints and this is at almost 27%. Finally, the issues related to computers are 22.4%, and the lack of support from lecturers' is around 23%.

The third level of challenges also makes three levels as below: the first level of challenges concerns the lack of support from institutions at around 18%, lack of IT skills and lack of support from the IT department are at 16.4% as well as lecturers' complaints at 13.4%. Secondly, lecturers' irresponsibility and complexity of materials provided to learners are around 10%. Finally, the misconception of quarantine time by both students are 9%, and academic staff are 6% as some of them think it is time to relax and not to perform duty online as it is not a regular working day.

5.2 The opportunities offered by learning and teaching online

The findings regarding the opportunities provided by online learning and teaching in Oman has created three levels of opportunities. The first level concerns the development of technical communication skills by 64.2%, followed by IT skills development by 61.20%. Then the growth of online learning and teaching, flexibility and life-long learning is 58.2%, 56.7%, 55.2 % correspondingly. Finally, academic staff and students developed skills of research and experienced working under pressure by 50.7%.

The second level of opportunities includes the development of autonomy by 47.8%, confidence by 46.3% and problem-solving skills by 44.4%.

The third level of opportunities concerns skills such as teamwork spirit, time management, and academic integrity, and they developed by 38.8%, 37.3% and 34.3% correspondingly. Finally, both academic staff and students developed trust and ethical values by 31.3%, became more empathetic by 31.3% and last but not least developed leadership skills by 28.4%.

The other opportunities that students, researchers, and academicians got during the pandemic are that many institutions and libraries have given free access to use materials, books, articles and attend online Webinars, courses and seminars (Lancaster University, 2020).

Additionally, the former staff of the Academic Development Office and current lecturers' (Zouhaier Slimi and Martin McDaid) at the International Maritime College Oman have conducted workshops to salvage the academic year. Therefore, a valid number of the academic staff received adequate training on how to use Moodle for both teaching and assessment. Furthermore, the team received training sessions on how to use "Google form", "Office 365 Form" for quizzes and surveys. Training also included "Zoom," "Teams" and "Turnitin". The training was not only limited to this but also included creating online rubrics, marking forms, types of secured online assessment.

5.3 Possible solutions for online learning and teaching

The findings revealed that to avoid challenges from now onwards, the concept of virtual university, virtual study, and the protocol of online learning should be well developed and detailed for both students and lecturers. Adopting best practices from recognised international universities that have a well-established history in online distance learning and ensuring equal opportunity, respect, equity justice for all is a requirement (UNESCO, 2020a).

The Ministry of Education should provide one agreed website or application for online teaching or studying. Therefore, each community such as a college, university, or school has a unique code and password and can be joined from one website or application that is used for all Colleges, universities, and schools in Oman. The purpose of this idea is to have an approved and secure learning method.

From now onwards, the concept of virtual university, virtual study, and the protocol of online learning should be well developed and detailed for both students and lecturers. The latter means adopting best practices from recognised international universities that have a well-established history in online distance learning.

Likewise, some participants suggested the allocation of a unified application for each college or speciality, where each student and lecturer can communicate and save files and lessons for reference. Doing so will enable all the features of emailing or chatting, online class, pdfs and the full files needed to be studied and gathered in one dependable mobile or computer application. Additionally, to provide a

strong network with easy to use cutting edge technology which is trusted and effective. Develop an online platform along with flexible management that trusts and supports both staff and students. Moreover, learning and teaching should be part of the curriculum, and policies at the ministerial and institutional levels. Participants added that they need more training sessions on online learning and more support from the institution in addition to specific policies, a better network and a better technological infrastructure.

Additionally, participants added that awareness should be raised among learners, academic staff and decision-makers to reduce challenges and create a culture of online learning and teaching. Furthermore, teaching and learning should be more engaging, less stressful and based on a mutual trust commitment and with accountability from all players, students, parents, academic staff and decision-makers. Students should adhere to online learning regulations as they do for regular study. Furthermore, participants suggested the allocation of a unified application for each college or speciality. The idea is meant to support each student, and lecturers can communicate and save files and lessons for reference and has all the features of emailing or chatting, online class, pdfs and the full files needed to be studied and gathered in one dependable mobile or computer application.

6. Conclusion

To conclude, this paper reveals that the online experience of teaching and learning in Oman was a real challenge for both staff, students and stakeholders. However, it was also an excellent opportunity for them all to learn new skills and change their way of thinking towards online learning and teaching. Additionally, COVID-19 has made the whole world aware of adopting technology and artificial intelligence in the future in educational systems as they have proven their efficiency in many fields such as in medicine, logistics and education. The experience has also helped to reinforce new styles of learning and teaching. Furthermore, a considerable majority enjoyed the experience as they have developed independent learning skills, problem-solving, communication skills, technological communication and IT skills. However, the significant challenges faced are related to network issues as the signal is generally weak. Finally, there were the challenges of students' cooperation, autonomy and dependency, as well as to educational policies and cultural issues. Moreover, there were challenges with the technological infrastructure of the two institutions (International Maritime College Oman and Majan College) and the readiness of both academic staff and students to implement technology for online teaching and learning.

It is recommended that stakeholders in Oman should review their policies towards online learning and teaching to include online learning as part of the educational system. The Omani government should also update the technological infrastructure of educational institutions to adopt the most recent technologies in teaching and learning. The academic staff and learners have to develop themselves and get more familiar with technological updates. It is also recommended that research that addresses a broader scope of learners, academic staff and stakeholder should be conducted to get more accurate results.

The limitation of this research paper lies in that the number of participants is somehow limited and that participants belong to only two major higher institutions in Oman.

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