Investigating the perceptions of college students towards online learning in Oman during the COVID-19 pandemic

دراسة حول تفحص أراء طلبة مؤسسات التعليم العالي في سلطنة عمان نحو استخدام التعلم الإلكتروني خلال جائحة كورونا

by

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Abstract

The recent outbreak of the COVID-19 pandemic resulted in stopping all face-to-face teaching in higher education institutions (HEIs) all over the world. As a result, online learning was the medium these institutions used to keep the teaching and learning process going on. The Sultanate of Oman was one of the countries that was affected by this pandemic and all its HEIs replaced regular teaching and learning with online learning. This was the first-time bachelor's degree students take their courses fully online. No recorded previous study explored such situation in the Sultanate of Oman. The perceptions of learners who went through this experience provide valuable information about the effectiveness of the system that was followed by the institutions during that time. This study intends to investigate the perceptions of college students during the COVID-19 pandemic in Oman. An online survey was conducted among the students of one private college in the Sultanate of Oman. The data was analyzed, and the results were discussed. Findings give strong indicators that online learning in HEIs in the Sultanate of Oman during the covid-19 pandemic has had some advantages and some disadvantages that need to be addressed and analyzed. More effort is required from everyone to make online learning better and more productive in Oman.

Key words: Online learning, College students' perceptions, COVID-19

الخلاصة

لقد تسبب وباء كورونا ،الذي انتشر مؤخرا، في ايقاف التعليم الحضوري المباشر في جميع مؤسسات التعليم العالي في جميع انحاء العالم. ولقد كانت سلطنة عمان من الدول التي أوقفت التعليم المباشر واستبدلته بالتعليم الإلكتروني. لقد كانت هذه المرة الأولى في تاريخ التعليم في سلطنة عمان التي يتم فيها ايقاف كافة انواع التعليم المباشرة واللجوء للتعليم الإلكتروني كبديل عنها. وتعتبر اراء الطلبة ذات فائدة كبيرة في اعطاء صورة واضحة عن حقيقة هذه التجربة. ولقد هدفت هذه الدراسة الى معرفة اراء الطلبة تجاه التعليم الإلكتروني الذي تم تطبيقه في مؤسسات التعليم العالي خلال جائحة كورونا. وتم استخدام استبانة وتم تطبيقها على طلبة احدى الكليات الخاصة في سلطنة عمان. ولقد تم تجميع البيانات وتحليلها واتضح ان التعليم الالكتروني الذي تم تطبيقه خلال فنرة كورونا اتصف ببعض الأيجابيات والسلبيات التي تستحق التحليل والمتابعة من قبل مسؤولي مؤسسات التعليم العالي في سلطنة عمان.

Dedication

To my dear mother and my dear late father.

Acknowledgement

I express my deep gratitude to all the support I got from all the great people who surrounded me through the journey of writing this dissertation. First, I thank my professor Sufian Forawi whose support I appreciate a lot. I would like also to thank all my colleagues who believed in me and helped me have more time to work on my research. I also thank my great friends whose support I cannot forget. Finally, I would not have been able to finish this work without the constant support from my beloved family. To all of you, thank you.

Table of Contents

List of tables

List of figures

Chapter 1: Introduction

This chapter presents the context of the problem of this study. Besides, it outlines the problem of the study, the research purpose and questions and the significance of the study. Additionally, it provides the key terms of the study .

1.1 Background

The COVID-19 pandemic has had a tremendous impact on the global higher education sector(Thomas & Rogers 2020) . It forced all higher education Institutions (HEIs) to replace face-to-face instruction by online learning instruction. Some HEIs were used to integrating a lot of online instruction in their teaching system prior to COVID-19 pandemic. Others, on the other hand, did not have any previous experience of online learning with their students. Despite this inconvenience, HE in all countries directed its institutions to use fully online learning and teaching with their learners as the only medium of instruction. Many people thought this would just be a temporary situation for two weeks or even five weeks, but the situation continued for one whole semester. No one knows when this pandemic would be over and when normal teaching would return. Some even question if normal teaching would come back soon. Consequently, online learning should be enhanced to meet the needs for this new era in the realm of education and to ensure the continuity of learning despite such inconvenient circumstances. The perceptions of the learners can be used effectively to reveal some of the pros and cons of this unprecedented experience for most colleges and universities and then ensure having a better teaching and learning environment(Muljana & Luo 2019).

1.2 Definition of online learning

The term online learning is a broad term that is used interchangeably with many terms such as distance education, e-learning, virtual learning, web-based learning, and digital learning. Due to this variation in terms, online learning has also a lot of different definitions. (Rapanta et al. 2020) states that online learning is learning that is mediated by the internet. Whereas (Chitra & Raj 2018) define online learning as " all educational activities that are carried out by individuals or groups working online or offline, and synchronously or asynchronously via networked or standalone computers and other electronic devices". Another definition for online learning is given by (Singh & Thurman 2019) which is "Online learning is defined as learning experienced through internet in an asynchronous environment where students engage with instructors and fellow students at a time of their convenience and do not need to be co-present online or in a physical space." The last definition to be reported from literature is for (Rodrigues et al. 2019) which states that online learning is "Innovative web-based system based on digital technologies and other forms of educational materials whose primary goal is to provide students with personalized, learner-centered ,open, enjoyable and interactive learning environment supporting and enhancing the learning process". For the sack of this study, online learning is defined as the process of teaching and learning that takes place over the internet where the teacher and the learners are separated geographically. It can be either synchronous where the teacher and the learners are working at the same time or asynchronous where they are working in different times.

1.3 Statement of the problem

The COVID-19 pandemic hit the world and caused a lot of chaos in most aspects of the daily life of people. Education was one of the most affected sectors in all countries. The pandemic put a lot of pressure on this important sector to change and adapt itself to this totally new situation. All countries put the health and the safety of their people as a priority. Social distancing was number one rule in all places in order to deal with this disease. As a result, face-to-face instruction was stopped and HEIs shifted to online learning in all countries around the world. The Sultanate of Oman was no exception. The Ministry of Higher Education instructed the HEIs, either government or private, to teach online until the pandemic is over(Bensaid & Brahimi 2020). Although wholly online learning was never implemented in the higher education institutions in the Sultanate of Oman, these institutions reacted immediately and changed their whole system to continue the learning process for the learners. This experience happens for the first time in Oman. Anything that is tried for the first time would expect to have a lot of negative points. Studying and analyzing these points is what helps in improving any area in life. So, it is important to study this situation by analyzing the perceptions and opinions of the learners that went through this experience(de Juana-Espinosa & Lujan-Mora 2013). This analysis would provide valuable information for policy makers to help improve the higher education sector in the Sultanate of Oman. Many studies studied the perceptions of HE learners towards online learning. These studies aimed at knowing what the learners thought of the online learning advantages and disadvantages in order to help improve the online learning in HEIs.

1.4 Research Purpose and Questions

This study aims to investigate the perceptions of college students towards online learning in Oman during COVID 19 pandemic. The research questions that guide this study are:

What are the perceptions of college students towards online learning during COVID 19 pandemic in Oman?

Is there any significance difference in the perceptions of college students towards online learning in Oman during COVID 19 pandemic in terms of gender, academic success, year of study and mode of study?

What are the challenges that college students faced with online learning in Oman during COVID 19 pandemic?

1.5 Rationale and significance of the Study

This study is important since it sheds light on a unique topic and new experience in the field of HE in the Sultanate of Oman. This study attempts to explore the perceptions of college students regarding the online learning higher education learners had during the COVID-19 pandemic in Oman. The transition to online learning that occurred in Mid-March in Oman 2020 took everyone by surprise especially HEIs. HEIs faced great challenges due to the spread of the COVID-19 pandemic. They tried their best to restructure their system and not stop the learning process for their learners. All the teaching and learning was done online. This happens for the first time. There

are no studies that cover such incident in Oman. Besides, there are no studies that cover wholly online learning in Oman because this was not implemented prior to COVID-19 pandemic. There is a gap in studies that discuss fully online courses in the Omani HEIs context. No one is sure when this pandemic is going to finish. Learners night continue using online learning for longer than expected. This needs a lot of preparing and planning. So, HE in Oman should build a strong infrastructure that can provide strong education even when face-to-face instruction is not available. The attitudes of the learners who had this experience can show a lot of the sides that would need improvements in this regard. By studying the opinions of the learners, a lot of aspects regarding this experience are going to be highlighted. This can help in the improvement of online learning. This study may reveal a lot of the hidden aspects that educators might use to improve their work in HE.

1.6 Scope of the study

This study addresses the use online learning in higher education institutions in the Sultanate of Oman. It aims to investigate the perceptions of college learners towards the online learning that took place during the COVID-19 pandemic in Oman. It aims to provide a better understanding of the cons and pros of this experience that HEIs went through during the times of COVIED-19 pandemic. This study focuses specifically on the perceptions and experiences of undergraduate students in an introductory English language program. A quantitative -method approach is used which may provide a more detailed and a clear picture of many of the factors experienced by students while learning online.

1.7 Definition of key terminologies:

Online learning: education that takes place over the internet when the teacher and the learners are separated geographically. It can be synchronous (happens at the same time) or asynchronous (does not happen at the same time)(Singh & Thurman 2019).

Covid-19: a disease caused by the new **coronavirus** that emerged in China in December 2019(Suryawanshi & Saidi 2020).

1.8 The structure of the dissertation

This dissertation is divided into five chapters as follows:

Chapter 1 introduces the problem of the study. It presents the context of the problem. It then spots light on the three main questions of this research. After that, it gives the rational for the problem of this study. It concludes with giving definitions of the key terminologies of this study and a summary of the chapter.

Chapter 2 sheds light on the literature review of the study. In the beginning it gives an overview about online learning. Then it shows some of the definitions for online learning. After that it talks about the COVID-19 pandemic and its effect on the sector of HE in the world and in the Sultanate of Oman. Then, it presents six main factors in terms of learner's perceptions and points out to the important points in these factors. Then it summarizes the chapter.

Chapter 3 presents the methodology that is used in this study. It introduces the methodology of the research, the data collection procedures and shows the structure of the questionnaire that is used in this study. Then its summaries the chapter.

Chapter 4 discusses the results and the findings of this study. It presents the statistical results of the data of the current study. It gives answers for the research questions and discusses the main obstacles the learners faced in online learning during the COVID-19 pandemic.

Chapter 5 presents summary of the results of the study. It also presents the implications and the limitations of the study.

Chapter2: Literature review

2.1 Introduction

Over the last two decades, the number of online courses in higher education institutions all over the world has increased tremendously. Larger numbers of learners around the world are enrolling in online learning mode in higher education institutions (HEIs) ,either in bachelor's degree programs or master's and PhD level programs. (Allen & Seaman 2017) state that about 6 million students in the USA were enrolled in at least one online course in HEIs in 2015 compared with 1.6 million in 2002. In the same document, they also point out that 15% of higher education's learners in the USA were doing fully online degrees in 2017. It is obvious that more higher education learners starting to register in online mode degrees or programs which puts more responsibility on HE to develop more online programs that are effective and attractive to learners. HE sector also has to put more rules that support the creating of more positive online learning environments which makes online learning courses to be more accessible and affordable for everyone. On the other hand, the sudden outbreak and spread of the corona virus pandemic and the restrictions it put on face-to-face instruction gave HEIs another reason to improve their online services and courses(Bensaid & Brahimi 2020). Policy makers and educators should work together to make online learning in higher education available and accessible for everyone. The perceptions of the learners who went through the online learning experience during the COVID-19 pandemic can provide some valuable feedback to help improve the online learning mode in higher education institutions in the future(Sosial et al. 2020). This study tries to investigate the perceptions of college students towards online learning in Oman during the COVID-19 pandemic. In the beginning the study provides some popular definitions for online learning and outlines the three major phases online learning went through. After that, a short overview about COVID-19 is

introduced. Then it discusses the role of online learning in higher education and how the HEIs in the Sultanate of Oman incorporate online learning in their regular instruction. The it discusses five important factors in the online learning that affect the perceptions of college learners and highlights some important aspects of these factors. Then, the advantages and disadvantages of online learning are discussed.

2.2 Overview of online learning

The term online learning is mostly used as a synonym for distance learning in literature. Distance learning is the place where online learning has emerged from. Distance learning went through three main phases. Phase one was the correspondence phase. It started in the middle of the 19th century(Bozkurt 2019). Many adults at that time wanted to continue their higher education, but the circumstances were not suitable for them. As a result, correspondence courses were introduced in some universities. They were offered through the normal postal services. The learners received the materials and did the assignments and then returned them again through the mail. After that, phase number two of distance learning began in the 1920s(Lee 2017). A kind of visual and audio interaction between the instructors and the students took place in this phase. They used the radio, the TV, and the telephone to interact with the learners. Online learning started to be more well-known in many areas of the world and many people started to study through it due to the flexibility it offers for learners. With the introduction of computers and the internet in the 1990s, stage number three began(Kaplan & Haenlein 2016). The term online learning started to emerge. The popularity of online learning started to increase. More and more HEIs around the world began to launch online courses within their teaching system.

2.3 The impact of COVID-19 Pandemic on Higher Education Institutions

The Corona virus (eventually known as COVID-19 pandemic) began to emerge in China by the end of December 2019. China tried its best to contain the virus as much as it could, but its efforts were futile. On 30th of January 2020, the World Health Organization declared COVID-19 as a global pandemic. Its spread continued to increase rapidly worldwide. Many countries started to set new rules and regulations to stop the spread. By the middle of March 2020, more than forty countries around the world announced the closure of schools and universities(Cheng et al. 2020). Social distancing and self-isolation were the only ways to deal with this situation until the researchers find an effective vaccine or treatment for this deadly virus. The government in the Sultanate of Oman did its best to protect the health of its people during this pandemic. All educational institutions were closed on 15th of March. Face-to-face teaching and learning were suspended, and all students stayed home. The Ministry of Higher Education in Oman announced that online learning should be launched to ensure undistorted education for the learners. As a result, HEIs in Oman started to use online learning with their learners. This unplanned transition to online learning was not easy for either the learners or the teachers(Rahiem 2020). They needed to learn how to adapt to this new unpredicted change.

2.4 Online learning in Higher Education Institutions in the Sultanate of Oman

Before 1970, there were only three official government schools in the Sultanate of Oman which were mainly for teaching male students(Al-Lamki 2002). In 1970, the government in the Sultanate of Oman changed and the educational system started to see a lot of improvement. The new government dreamt of building new generation of people who possess the knowledge and the skills to build their own country to be one of the most successful countries in the world. The

ministry of education was responsible about everything related to schools. More Schools were built in all regions of the country. Both male and female students had equal chances to learn and go to school. Expat teachers were brought from different countries to help teach in the Omani schools. Then the Ministry of Higher Education was founded. It was responsible about higher education institutions in Oman. Colleges and institutions were built in the country and students from all over the country started to enroll in different majors. In 1986 the first government university(Al-Ani 2013), Sultan Qaboos University, was established. This university was and still one of the most important institutions in Oman. Later, more and more government colleges were opened. Private colleges and universities started to emerge due to high demand on higher education form Omani students and residents. All bachelor's degree in Oman higher education institutions require classroom attendance. They have some online formats that support their courses, but the courses are mainly classroom based. During the pandemic, the HEIs were instructed from the ministry of higher education to stop any type face-to-face instruction. They shifted to fully online courses. The learners and the students were not used to it and many students thought that this shift might have had some negative impact on some people, especially the learners.

2.5 Perceptions of college learners towards online learning

In order to measure the success of any learning experience, the perceptions of the learners can be one of the main indicators that can lead to some valuable information for the educators and policy makers (Lowenthal et al. 2015). There are many international studies that investigated wholly online learning in HEIs. However , there are no such studies in the Sultanate of Oman. This study tries to highlight the perceptions of the learners

towards online learning in Oman during the COVID-19 pandemic in terms of the instructor, the interaction, time management, technology, and assessment.

2.5.1 Instructor

Any effective online learning course depends mainly on having effective instructors(Tanis 2020). Good instructors should design and organize courses that have clear aims and objectives(Palmer & Holt 2009). This helps the learners to be ready and prepared for the course in the best way they can. Many Higher education institutions around the world did not teach fully online courses for their students before COVID 19 pandemic, so learners and instructors are not used to this type of learning. They are used to face-to- face interaction with their instructors and colleagues. So, instructors should do their best to provide the learners with the required guidelines to meet the aims and objectives of the course. In addition , online instructors should use interesting ways of teaching(Martin, Budhrani & Wang 2019). This helps the learners to stay focused and engaged in the learning process. Furthermore, providing good support is an important feature of an effective instructor. Instructors should be aware that learners need many different types of support in this kind of environment (Lee 2011), which might be new and daunting for most of the learners. The instructors should be ready to provide many types of support for learners such as emotional support, pedagogical support and technological support.

2.5.2 Interaction

Good interaction is an important feature of a good teaching and learning process(Martin & Bolliger 2018). In the regular classroom, interaction happens spontaneously between the instructor and the learners. They hold discussions, give comments and answer questions. However, interacting with students in online classrooms needs to be purposefully planned and

designed(Bolliger & Halupa 2018). Facilitating discussions should be a priority for the online instructors. There should be adequate opportunities for the learners to have discussions with their instructors and among their colleagues. This helps the learners to feel more connected and motivated to participate in the lesson. The successful virtual classroom would also needs to encourage the learners to collaborate with each other and work successfully within groups(Vlachopoulos & Makri 2019). Group work should be emphasized in online environments and should not be neglected due to the change from the traditional classrooms to the online classrooms. There are a lot of alternatives in technology to help instructors have successful group work experiences. There are some synchronous or asynchronous types of interaction programs and applications that can make up for the face-to-face interaction.

2.5.3 Time management

Time is an important aspect for all learners. Managing time effectively is a skill that makes college life easier. Online learning is preferred by many learners since it helps them save a lot of time(Muljana & Luo 2019). They study from their houses or any convenient place they like. There is no lost time in travelling or going to classes. As a result, students have more time to invest in studying or managing their other life issues. This flexibility in time can be a challenge for some students. The learners are mostly in charge of managing and organizing their time. They need to be more self-disciplined than when learning in face-to-face classroom where the instructor is in control of most of the process. Some students finish a lot of their schoolwork due to the daily face-to-face contact with their instructor and their classmates. The online interaction might not give them the motivation they need to finish the required assignments. On the other hand, some learners might suffer from burning their selves out(Barclay, Donalds & Osei-Bryson 2018). The

contribution to the online class is opened all day. Some learners might spend too much time on their virtual classrooms and get exhausted. Time management is an important skill for any learner who wants to have a successful learning experience. Another issue faced by learners in online learning during covid-19 is learning from home. Almost all Omani higher education students lived in their own houses with their families during the quarantine time. This means that the environment is not always quiet. It might not help these students organize their time.

2.5.4 Technology

In the online learning environment, technology is the main medium for the teaching and learning process. Without the appropriate technological tools or the right technological competencies, the whole learning process would fail. Higher Education institutions should make sure that the learners are competent in using the online platforms and that they own the compatible tools or devices that would make the learning process successful(Al-Samarraie et al. 2018) . They also should make sure that the learners receive the technological support they need. Different institutions use different online platforms such as zoom, teams, meet, blackboard or Moodle. These platforms should be easily accessible to all learners and should be compatible with the devices the learners use in their online learning. The learners also need to have good and strong internet connection which is not always available in some areas.

2.5.5 Assessment

Assessment is an essential part of the teaching and learning process. It is an instrument that is used to measure the success of the teachers and the learners in their roles. Assessment has an important role in education and it has a critical role in the teaching process. Through appropriate

assessment, teachers can classify and grade their students, give feedback and structure their teaching accordingly(Tosuncuoglu 2018). When it comes to online learning context, assessment becomes a challenge to the educators in this setting. They should think deeply and critically about the type of assessment that can be given to learners to create meaningful and productive teaching and learning environment. Educators are always concerned about the credibility of online assessment. Cheating and dishonesty are easily found in such contexts. The implementation of authentic types of assessment that do not rely mainly on memorization is a priority in the online classroom. There should be authentic materials that encourage students to use their personal opinions and critical thinking to minimize the chances for cheating.

2.6 Advantages and disadvantages of online learning

The spread of the outbreak was sudden and fast. It was in the middle of the second semester of most colleges in Oman. No one ever expected that such scenario is even possible in such country. However, it happened. The ministry of Higher Education issued the decision of the closure of all educational institutions throughout the country in the middle of March 2020(Bensaid & Brahimi 2020). As a result, HEIs began to search for solutions. The one and only solution was to continue the learning process with online learning. No one was ready for that step. Such kind of learning is almost new for HEIs in the Sultanate of Oman. There used to be online platforms in colleges before COVID-19 pandemic, but they were only as assistant for the face-to-face learning. It is rare to find a college in HEIs that provides its courses through online learning only. It was a sign of weakness for them!

This section would discuss some of the advantages and disadvantages that students usually face when learning online.

2.7 Advantages of online learning

Online learning offers students in HEIs a lot of advantages. First it provides flexibility for the learners(Naidu 2019). They can study anytime anywhere. Students are in more control of their learning. The learning material is normally recorded and saved on the online platforms of the college for the learners to use whenever it is convenient for them. This helps the students during absence or sickness. They can gain proper understanding of the subject according to their pace. This anytime access to information makes online learning a good option for many learners.

Second, online learning gives the learners the chance to study at their own pace(Barclay, Donalds & Osei-Bryson 2018). Some Slow learners might find it not easy to follow all the information they take in the regular classroom. In the online learning they can return to the same information over and over very easily. Third, the online learning environment gives every learner the chance to be involved in the learning process. Shy or reluctant students who do not actively participate in regular classroom discussions or interactions might feel more comfortable to participate in online classroom (Bolliger & Halupa 2018). Fourth, learners can access instructors easily and more frequently as individuals(Tanis 2020). Having emails and chat boards make it easier for learners to contact instructors any time to discuss in depth topics. Fifth, it saves time for learners. It reduces travel and commute and moving from class to class time(Kaplan & Haenlein 2016). Sixth, online learning makes the access and the sharing of information easier for everyone. The instructors can easily share any digital information with the learners. Search engines, digital libraries and social media channels are easily available to be used and enrich the teaching and learning experience for the learners. In face to face learning the speed of the teaching and learning process is fast. The learners do not always have the appropriate time to think, reflect and participate

in classroom discussions. Teaching might be too quick for some learners. They might not always comprehend or digest what they are studying (Ayu 2020). In addition, some verbal learners usually dominate the discussions in the classroom. The shy or hesitant students might feel lost and less motivated to participate in this context. On the other hand, in online classrooms most of the interaction is in writing. Students have a lot of time to interact with a lot of what is posted on their own speed.

2.8 Disadvantages of online learning

Despite the obvious benefits the online learning offers for learners in HEIs, it still has some drawbacks. First, online learning does not provide the social interaction the students have in the regular classrooms(Dumford & Miller 2018). This lack of social interaction between the learners and their instructors and among their colleagues might result in feelings of isolation which can affect their learning process (Skelcher et al. 2020). In addition, online learning depends mainly on technology(Almaiah, Al-Khasawneh & Althunibat 2020). Learners need to have good network connection and compatible devices in order to have good learning environment. Even though technology is everywhere these days, there are still some areas around the world where internet connection is not good or does not exist. Research shows that there are large number of learners around the world who do not have access to the appropriate technology that would make their interaction with their online learning process more productive(Ali 2020). Furthermore, feedback in online learning might not be as satisfying for learners as it is in the regular classroom (Tanis 2020). In the regular classroom the instructor gives the feedback immediately and easily to the learners. The learners can quickly and easily ask about any difficult aspects of the lesson. However, it is not that simple to give the same feedback in online learning. This might make the learners less

motivated and engaged in the online lesson. Additionally, one major disadvantage in online learning is that it requires strong self-motivation and particularly good time management skills from the learners. Many learners reject online learning because they need some external factors to help them meet the required learning outcomes (Sellnow-Richmond, Strawser & Sellnow 2020). Many learners mainly become motivated for learning when having face-to-face communication with their instructors or working on activities with their colleagues which they lack in the online classroom. Keeping up with deadlines and submitting assignments on due dates might not be always easy for some learners who lack some self-discipline skills. Besides, some instructors in HEIs might not find teaching online as an appealing experience to them (Vallade & Kaufmann 2020) as they do in the regular classrooms. Many of them might not be competent in making their online teaching as engaging and as interesting as it is in face-to-face learning. Cheating is one of the biggest drawbacks for online learning. Cheating is extremely easy for learners in online learning (Raines et al. 2011). Despite the measure institutions use, it is not an easy task to make sure that learners do not cheat or let other students take the assessment instead of them. Finally, Online learning is limited to certain disciplines(Banday, Ahmed & Jan 2014). Online learning is usually easier implemented with disciplines that has more theory than practice.

2.9 Conclusion

Online learning in higher education gained a lot of attention over the last decade. More people managed to get higher education certificates due to the flexibility it offers to different people. The current COVID-19 pandemic gave more importance to the online learning and drew greater attention to the advantages it offers to people in times similar to the pandemic times. Through

analyzing the perceptions of the learners who use online learning, higher education institutions would get productive feedback that make the online learning thrive in the coming years.

Chapter 3: Methodology

This chapter shows the methodology that has been implemented to investigate the perceptions of college students in Oman towards online learning during the COVID-19 pandemic. It discusses the research questions that this study claims to explore. It highlights the research questions that this study is intended to examine. The study also addresses the venue where the data has been collected from. The participants of the study are presented. The survey that was used with students is analyzed here. Finally, this chapter shows the relationship between the research questions and the survey items.

3.1 Research Methodology

The objective of this study is to investigate the perceptions of college students in the Sultanate of Oman towards online learning that was conducted by higher education institutions during the COVID-19 pandemic. The results of this study are intended to help develop some of the prospects and features of online learning in HEIs in the Sultanate of Oman. Understanding the perceptions of higher education learners towards this experience of online learning would provide important input for educators to improve and develop this important sector. It would also prepare these institutions for any emergency situations like the COVID-19 pandemic if they happen in the future. The data that the learners would provide is going to help in analyzing the positive and the negative aspects in the online learning experience and as a result contribute in providing

information for the necessary renovations in this sector in order to have a better learning experiences for learners in universities and colleges in the future. The main tool that is used in this study is an online questionnaire. It was implemented on the learners of one private college in the Sultanate of Oman.

3.2 Research Questions

In order to investigate the perceptions of college students in the Sultanate of Oman towards online learning during the COVID-19 pandemic, the following questions are examined:

RQ1: What are the perceptions of college students towards online learning during the COVID 19 pandemic in the Sultanate of Oman?

RQ2: Is there any significance difference in the perceptions of college students towards online learning in the Sultanate of Oman during the COVID 19 pandemic in terms of gender, academic major, year of study and mode of study?

RQ3: What are the challenges and obstacles that college students faced with online learning in the Sultanate of Oman during the COVID 19 pandemic?

3.3 Data Collection

The instrument that is used to collect the data in this study is an online questionnaire. The questionnaire was prepared by google forms. Then an electronic link of the questionnaire was sent to the head of student's affair in the targeted college. After that, it reached all college students via the email. The college has 1,378 students. When the responses reached about 10% of the sample, 164 students, the survey was closed. The data collection happened in the mid of August 2020.

Table 1: demographic information of the participants

1	Gender	• Female • male
2	Year of study	• foundation • year 1 • year 2 • year 3 • year 4
3	Mode of study	• full time • part time
4	department	• foundation • process engineering • marine engineering • logistics and transport management

Table 2: part two of the questionnaire

	Items	Strongly agree	agree	Neutral	Disagree	Strongly disagree
1.	**Guideline are provided by my instructor before starting the online course.** بالقوانين معلمي يعرفني عن التعلم بداية في بالمقرر الخاصة والقواعد بعد					
2.	**It is easy for me to contact my instructor during my online learning.** عن الدراسة خلال بسهولة معلمي مع أتواصل بعد					
3.	**My instructor uses variety of interesting tools and technologies when teaching online.** الطرق من الكثير معلمي يستخدم بعد عن تدريسنا خلال الممتعة والأساليب					
4.	**I receive good support from my instructor when learning online.** خلال معلمي من جيدا دعما اتلقى بعد عن الدراسة					
5.	**My instructor always facilitates online discussions.** بتسهيل معلمي بعديقوم عن الدراسة في لنا النقاشات					
6.	**I am actively communicating in discussions with my instructor when learning online.** مع وفاعلية بنشاط أتواصل و أتفاعل أنا بعد عن الدراسة خلال معلمي					
7.	**I am actively interacting with my colleagues when learning online.** خلال زملائي مع وفاعلية بنشاط أتفاعل أنا بعد عن الدراسة					

8.	**I always collaborate with other students in group work during online learning.** أنا أمارس العمل الجماعي مع زملائي في فترة التعلم عن بعد					
9.	**Online learning saves me time.** التعلم عن بعد يوفر الوقت لي					
10.	**I like the flexibility the online learning offers for me.** أحب المرونة التي يقدمها لي التعلم عن بعد					
11.	**It is easy for me to manage my time during the online learning.** أعرف كيف انظم وقتي بسهولة خلال الدراسة عن بعد					
12.	**Home environment helps me to easily organize my time during online learning.** تساعدني بيئة المنزل في تنظيم أوقات دراستي بسهولة عندما أدرس عن بعد					
13.	**I have enough technological competences to deal with online activities.** امتلك المهارة الإلكترونية الكافية للتعامل مع انشطة التعلم عن بعد					
14.	**The links to the course content are accurate and accessible.** الروابط الإلكترونية للمقررات الدراسية دقيقة وتعمل بشكل جيد					
15.	**I always have good internet connection when I want to study online.** أنا دائما لدي خدمة انترنت جيدة عندما أريد أن أدرس عن بعد					
16.	**The technical support in my college is always available for me.** الدعم الفني في الكلية دائما متواجد لتقديم المساعدة لي					

17.	**The load of assignments in online learning is reasonable.** كمية الواجبات في الدراسة عن بعد يعتبر معقولا					
18.	**I always finish my online assignments on time.** أنا دائما أنهي واجباتي خلال فترة التعلم عن بعد في موعدها					
19.	**I feel confident that I would pass my online courses easily.** أنا أثق بأني سوف أنجح في مقرراتي التي أدرسها بطريقة التعلم عن بعد بسهولة					
20.	**I think that the grades the students get in online learning are fair.** أعتقد أن الدرجات التي يحصل عليها الطلبة في التعلم عن بعد عادلة					
21	**Face-to-face learning requires more study time than online learning.** التعلم العادي يحتاج وقتا أطول للدراسة مقارنة بالتعلم عن بعد والمذاكرة					
22.	**Online learning is more motivating than face-to-face learning.** التعلم عن بعد يثير الدافعية للتعلم لدى الطلبة بشكل أكبر عن التعلم العادي					
23.	**online learning courses are easier to understand than face-to-face learning courses.** المقررات التي تدرس بالتعلم عن بعد أسهل من المقررات التي تدرس بالتعلم العادي					
24.	24. **I prefer online learning over face-to-face learning.** التعلم عن بعد أفضل من التعلم العادي					

3.4 Survey structure

The survey was created by the researcher of the study after long analysis of the literature that is related to learners' perceptions towards online learning. It was conducted among the learners of one Omani private college. They were from foundation year, year one, year two, year three, year four, and year five. The survey was in both Arabic and English language. Some foundation or year one learners might find some terms ambiguous to them and might give inaccurate answers. The translation would ensure that such ambiguity does not occur. The survey has three main parts. Part one is about the demographic information of the participants. The participants are required to identify their gender, year of study, major of study and mode of study. Part two has 24 items on a 5-point Likert scale. The learners specify their level of agreement to the statements in five points: strongly disagree, disagree, neutral, agree and strongly agree. The items of this part discuss six main aspects of the online learning that literature considers to be vital in the online learning experience in the higher education level. The six parts are the instructor, interaction, time management, technology, assessment, and online learning versus face-to-face learning. This question is designed to measure learner's perception towards these aspects in order to have a clearer picture of the process of teaching and learning that took place during the first phase of the pandemic period. Part three of the questionnaire is an open-ended question. It aims to ask students about the challenges and obstacles they faced with online learning. This question would reveal a lot of the problems the learners went through and is expected to help overcome them in the future by the responsible educators and employers in HEIs.

3.5 Summary

This chapter discussed the research questions about the perceptions of college students towards online learning during the COVID-19 pandemic in Oman. The methodology that was followed in this study is introduced in this chapter. The research questions of the study are discussed and explained. The data collection tools are presented and explained. The structure of the questionnaire is discussed and explained.

Chapter 4:   **Results and Discussion**

This chapter sheds light on the findings and results of the collected data. The three main parts of the questionnaire are going to be examined and analyzed. In addition, this chapter would provide answers to the main questions of this research.

Table 3: Cronbach's Alpha test

Construct	Cronbach's Alpha	N of Items
Instructor	0.864	4
Interaction	0.843	4
Time Management	0.901	4
Technology Issues	0.814	4
Assessment	0.769	4
Online vs F face to face	0.893	4
Overall	0.957	24

4.1 Reliability

Cronbach's Alpha test was applied to test the questionnaire's factors' reliability. The results in the table below show satisfactory reliability coefficients since all values ranged between (0.769- 0.957). Table 3 presents Cronbach's Alpha coefficients of the six constructs.

4.2 **Demographical Variables**

The questionnaire is made of three parts of questions. The first part contains questions that consider the background information of the participants. Table 4 below presents the frequencies and percentages of the demographical variables (gender, academic major, year of study and mode

of study). It shows clearly that most respondents are female (51.2%). The highest percentage of respondents are majored in process engineering, whereas the least of them are from marine engineering department. Most students who were part of this study are freshmen who are still in the foundation year. In addition, over 90% of the participants are full time students while only 9.1% of respondents are part time students.

Table 4: Demographic variables frequency

Demographic		Frequency	Percent
Gender	Male	80	48.8
	Female	84	51.2

	Total	**164**	**100.0**
Academic Major	Foundation	36	22.0
	Logistics and Transport Management (LTM)	42	25.6
	Marine Engineering (ME)	29	17.7
	Process Engineering (PE)	57	34.8
	Total	**164**	**100.0**
Year of Study	Foundation	40	24.4
	Year1	38	23.2
	Year2	33	20.1
	Year3	30	18.3
	Year4	23	14.0
	Total	**164**	**100.0**
Mode of Study	Full Time	149	90.9
	Part Time	15	9.1
	Total	**164**	**100.0**

4.2.1 Gender

The pie chart below presents the percentage of each gender of participants. Female students represent a majority in the sample of the survey. 84 out of 164 participants are female compared to only 80 males.
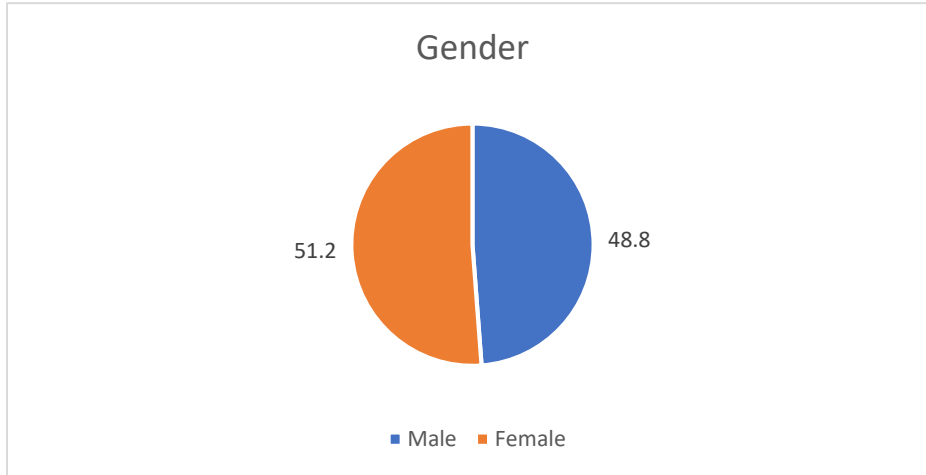
Figure1: Gender percentage

4.2.2 Academic major

The bar chart below shows the frequency of each academic major of participants. It is clear that most respondents come from Process Engineering department (PE), students from logistic and

transport management (LTM) come next. The third place is for foundation students and lastly Marine Engineering (ME) students.
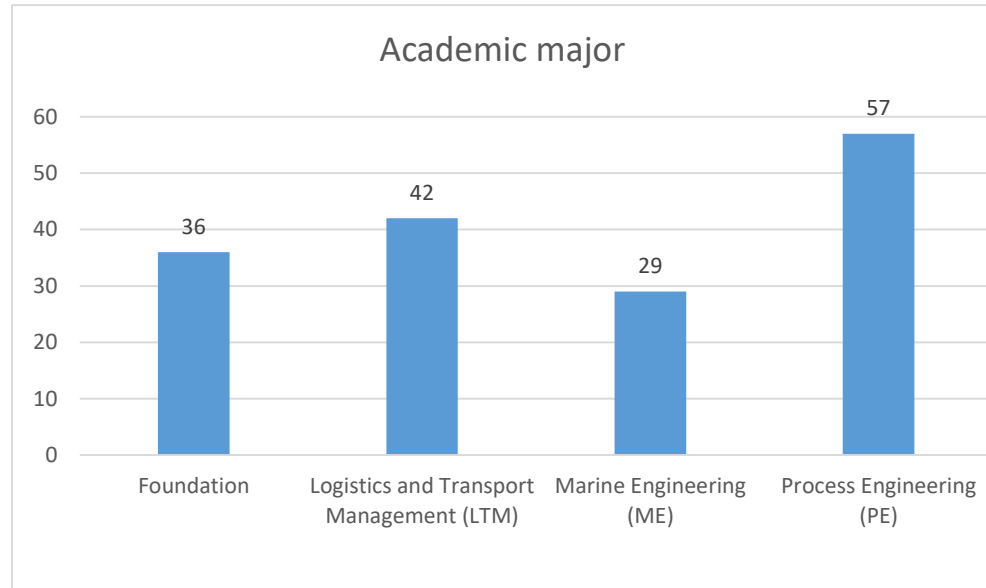
Figure2: Academic major frequency

4.2.3 Year of study

The bar chart below shows the frequency of each year of study of participants. It shows that most respondents are foundation students, first year students come next with a frequency of 38, and finally fourth year students are the least participants with a frequency of only 23.
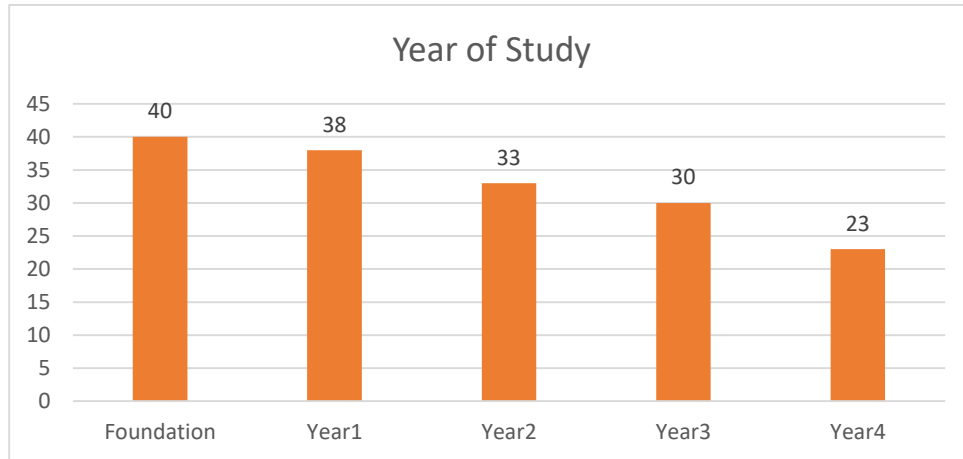
Figure 3: Year of study frequency

4.2.4   Mode of study

The pie chart below presents the percentage of each mode of study of respondents. 90.9% of participants are full time students, while only 9.1% of them are part time students.
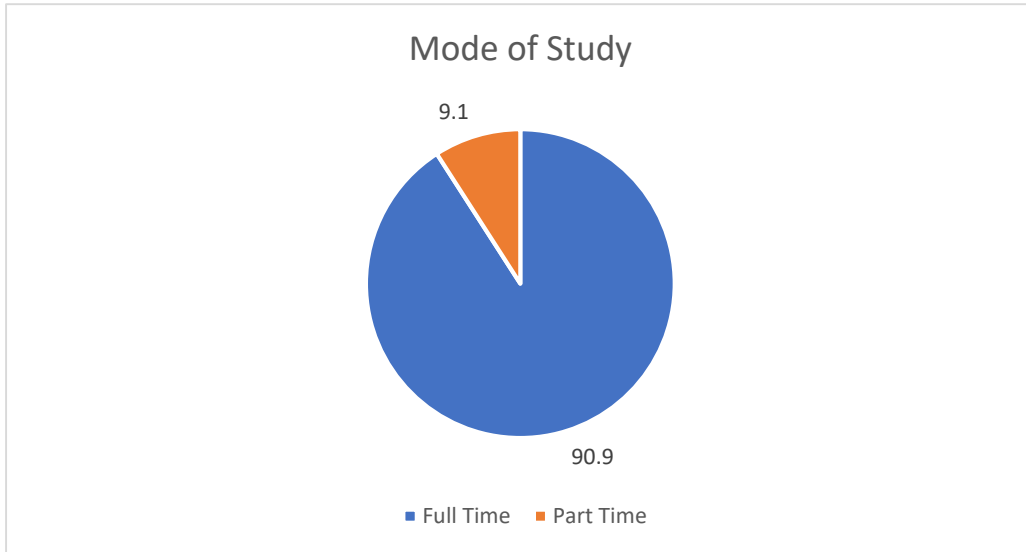
Figure 4: Mode of Study percentage

4.3 Analysis of the three Research Questions:

4.3.1 Research Question 1:

1. What are the perceptions of college students toward online learning in the Sultanate of Oman during the COVID19 pandemic?

Table 5: Likert scale

options	Mean Interval	Decision
strongly disagree	1 - 1.8	Very low
disagree	1.81 - 2.6	Low
Neutral	2.61 - 3.4	Medium
agree	3.41 - 4.2	High
Strongly agree	4.21 - 5	Very high

	N	Mean	Std. Deviation	Decision
Instructor	164	2.8034	.98946	Medium
Interaction	164	3.1113	1.04509	Medium

Time Management	164	2.6387	1.25360	Medium
Technology Issues	164	2.7317	1.02071	Medium
Assessment	164	2.9695	1.01249	Medium
Online vs face to face	164	2.5716	1.22624	Low
Overall	164	2.8044	.93375	Medium

Table 6: Descriptive statistic of study factors

Table 6 above represents the overall perceptions of each of the 6 factors in the study (Instructor, Interaction, Time management, Technology issues, Assessment, Online vs face to face) and the overall decision according to the mean.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	St.D	Decision
Instructor								
1	9.8	17.7	25.6	35.4	11.6	3.21	1.161	Medium
2	17.7	27.4	22	22	11	2.81	1.271	Medium
3	29.3	29.3	25.6	9.1	6.7	2.35	1.186	Low
4	13.4	31.1	25	24.4	6.1	2.79	1.139	Medium
Interaction								
5	15.9	24.4	32.9	20.7	6.1	2.77	1.133	Medium
6	10.4	20.7	25.6	30.5	12.8	3.15	1.194	Medium
7	14.6	13.4	21.3	29.3	21.3	3.29	1.338	Medium
8	18.3	11.6	18.3	31.7	20.1	3.24	1.387	Medium
Time Management								
9	31.7	8.5	22.6	19.5	17.7	2.83	1.497	Medium
10	30.5	17.1	23.8	17.1	11.6	2.62	1.376	Medium
11	25.6	24.4	17.7	20.7	11.6	2.68	1.36	Medium
12	41.5	15.2	17.1	12.2	14	2.42	1.474	Low
Technology Issues								
13	20.1	14.6	20.7	26.8	17.7	3.07	1.39	Medium
14	22	22.6	26.2	22	7.3	2.7	1.239	Medium
15	43.9	19.5	13.4	16.5	6.7	2.23	1.34	Low

16	15.2	14	39	26.2	5.5	2.93	1.111	Medium
Assessment								
17	30.5	22.6	20.7	20.7	5.5	2.48	1.27	Low
18	7.3	12.8	18.3	36.6	25	3.59	1.202	High
19	17.7	18.3	24.4	19.5	20.1	3.06	1.378	Medium
20	27.4	18.9	18.9	21.3	13.4	2.74	1.408	Medium
Online VS Face to face								
21	22	22.6	19.5	19.5	16.5	2.86	1.396	Medium
22	32.3	25.6	17.7	13.4	11	2.45	1.353	Low
23	23.8	22.6	25	17.1	11.6	2.7	1.316	Medium
24	51.2	12.2	12.2	6.7	17.7	2.27	1.56	Low

Table 7: Descriptive statistic of study items

It's clear from Tables 6 and 7 that the average of the variable ranges from 2.23 (item 15) to 3.59 (item 18). Therefore, most items have a medium mean, and this indicates that the degree of approval of the respondents is neither large nor low. And that they have chosen neutral mostly. All the items have small standard deviation which reflects that they are close to the variable mean. The charts below present the degree of approval for each of the six factors.
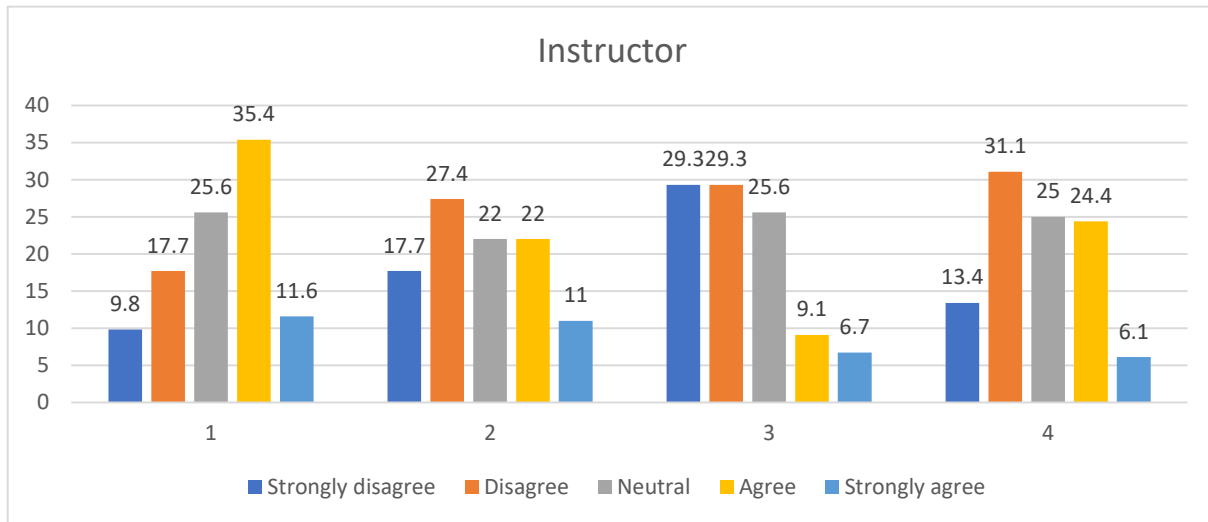
Figure5: percentage distribution for Instructor factor
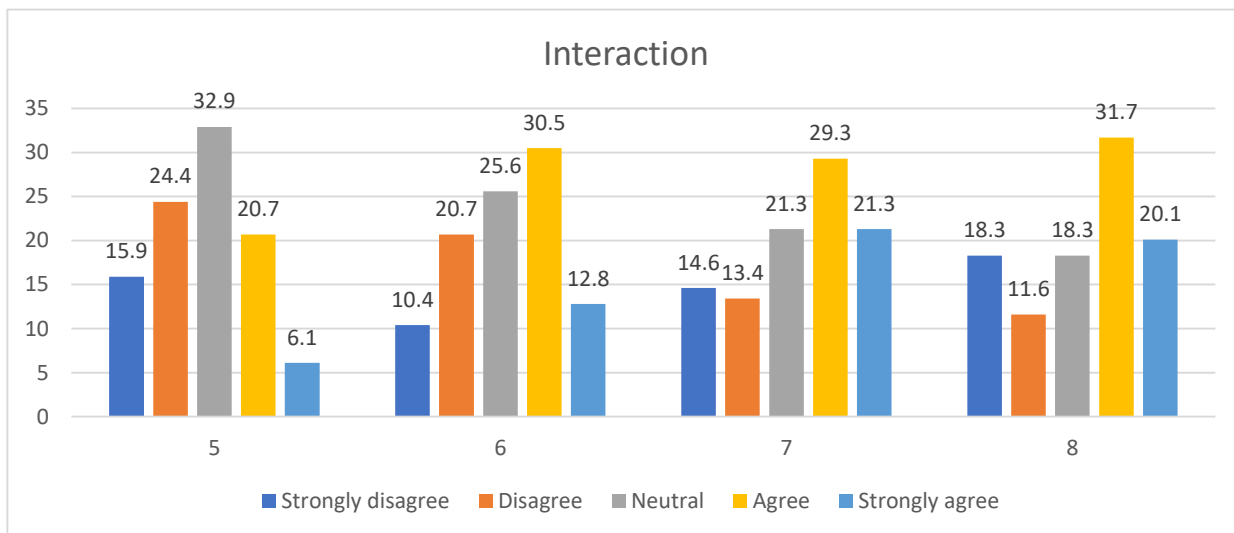
Figure 6: Year of study frequency
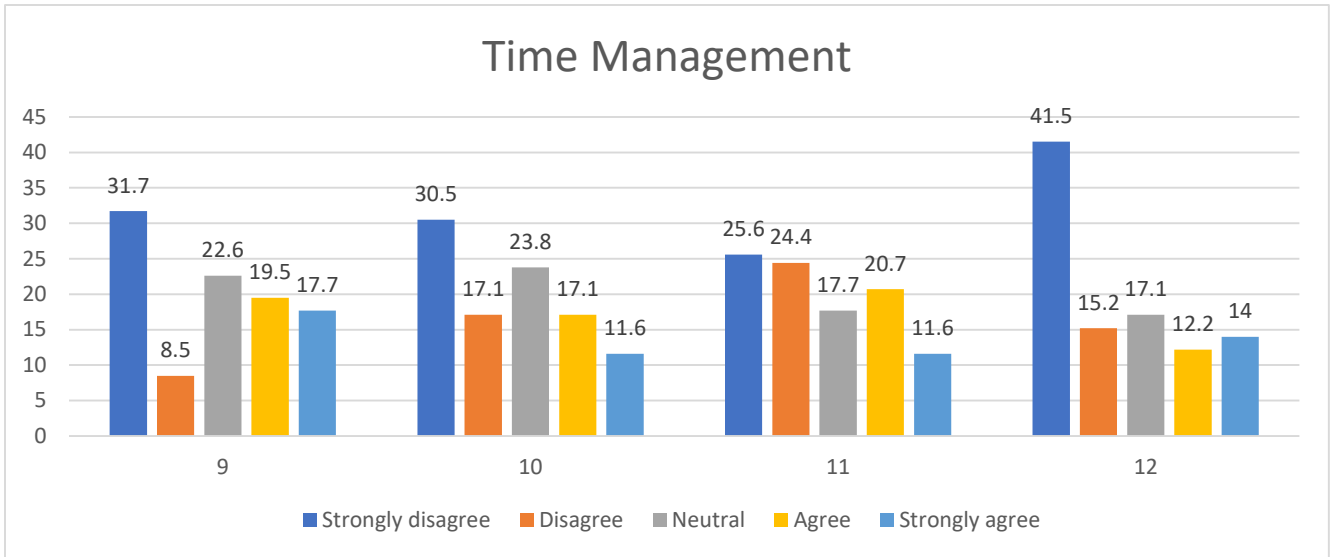
Figure 7: percentage distribution for Time management factor
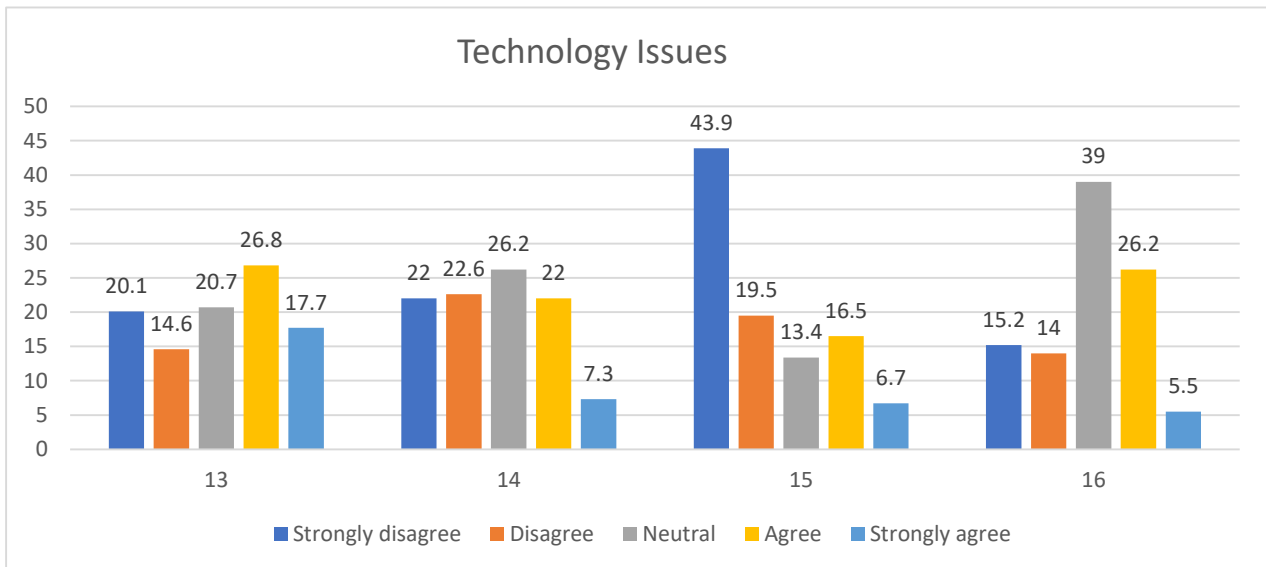
Figure 8: percentage distribution for technology issues factor
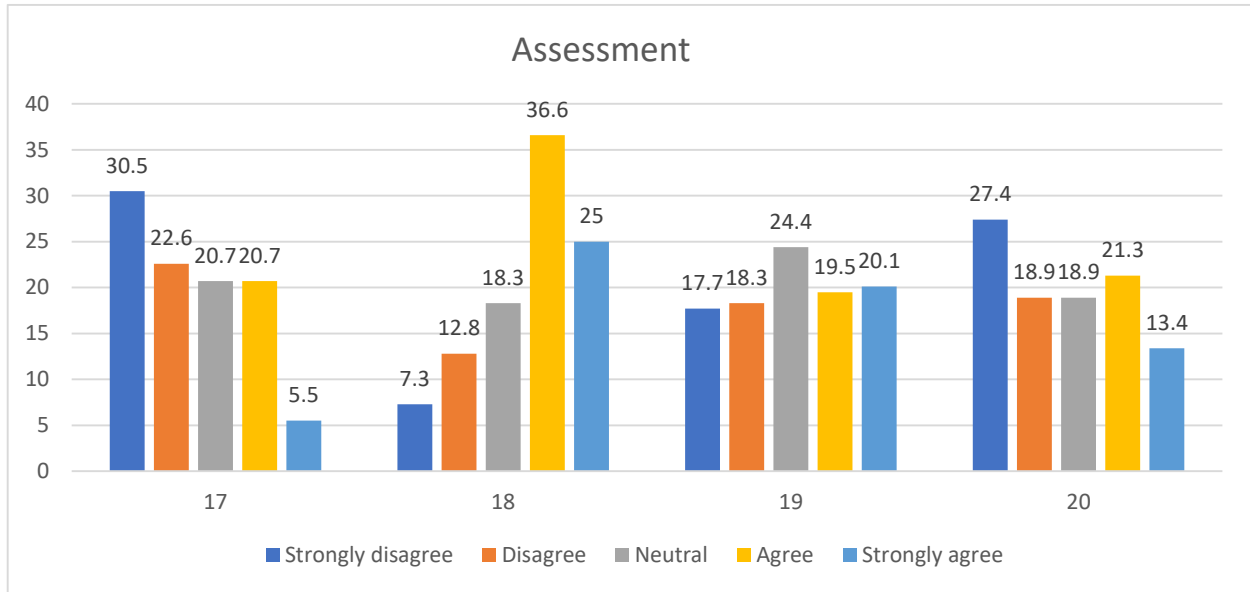
Figure 9: percentage distribution for Assessment factor
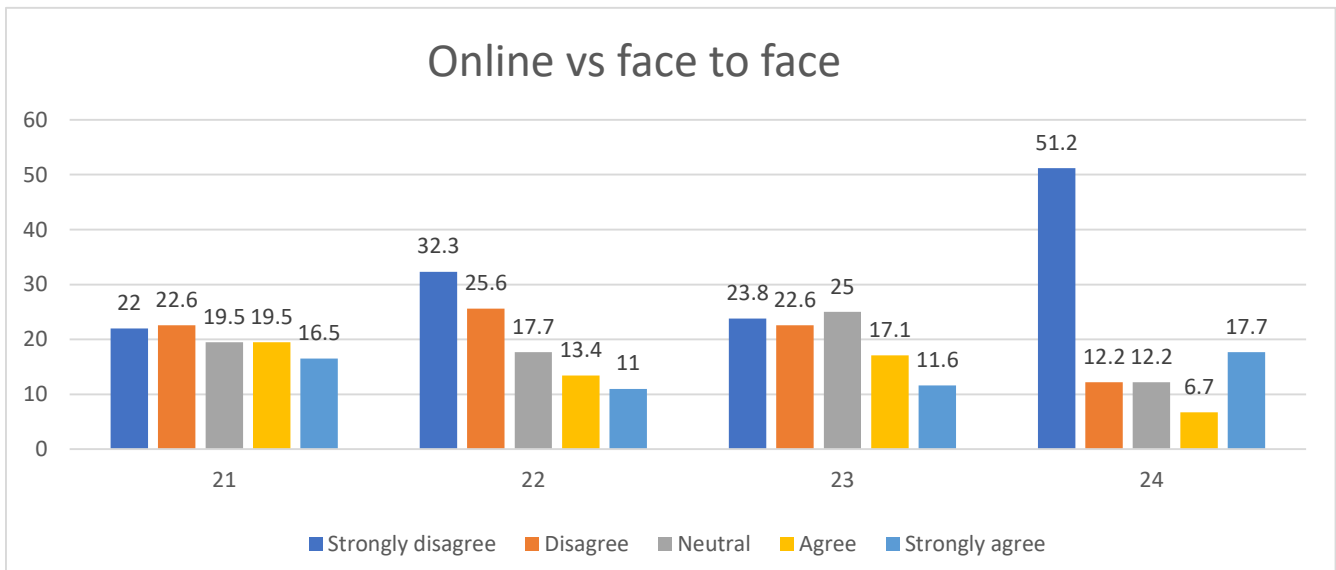
Figure 10: percentage distribution for online vs face to face factor

4.3.2 Research Question 2:

2. Is there any significance difference in the students' perceptions toward online learning in Oman during COVID-19 pandemic in terms of gender, academic major, year of study, and mode of study?

A. Gender

It can be concluded from independent samples t test results that are shown in table 8A below, that gender doesn't have significant effect on students' perceptions toward (Instructor, Interaction, Time Management, Assessment, Online vs Face) in online learning during COVID19. However, gender seems to have the only statistical significant effect on technology issues responses where male have more technical issues(mean=2.9469) than female (male=2.5268).

Table 8A: Independent sample t-test

		N	Mean	Std. Deviation	t	P-value(sig)
Instructor	Male	80	2.9417	1.03808	1.753	.081
	Female	84	2.6716	.92790		
Interaction	Male	80	3.2188	1.06392	1.287	.2
	Female	84	3.0089	1.02267		
Time Management	Male	80	2.7438	1.31566	1.045	.298
	Female	84	2.5387	1.19076		
Technology Issues	Male	80	2.9469	.97004	2.688	.008
	Female	84	2.5268	1.03115		
Assessment	Male	80	3.0375	1.04192	.837	.404
	Female	84	2.9048	.98552		
Online VS Face to face	Male	80	2.5656	1.12280	-.061	.951
	Female	84	2.5774	1.32400		
overall	Male	80	2.9090	0.10602	1.404	0.162
	Female	84	2.7047	0.09974		

B. Academic major

From one-way ANOVA test results that are shown in table 8B, it's obvious that academic major has no significant effect on students' perceptions toward online learning during COVID19 since all p-values are greater than 0.05

Table 8B: ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Instructor	Between Groups	7.637	3	2.546	2.681	**.049**
	Within Groups	151.945	160	.950		
	Total	159.582	163			
Interaction	Between Groups	7.584	3	2.528	2.373	.072
	Within Groups	170.447	160	1.065		
	Total	178.032	163			
Time Management	Between Groups	5.965	3	1.988	1.271	.286
	Within Groups	250.192	160	1.564		
	Total	256.157	163			
Technology Issues	Between Groups	7.063	3	2.354	2.314	.078
	Within Groups	162.757	160	1.017		

	Total	169.820	163			
Assessment	Between Groups	3.944	3	1.315	1.289	.280
	Within Groups	163.154	160	1.020		
	Total	167.098	163			
Online vs face to face	Between Groups	11.609	3	3.870	2.652	**.051**
	Within Groups	233.486	160	1.459		
	Total	245.096	163			
Overall	Between Groups	6.445	3	2.148	2.534	.059
	Within Groups	135.673	160	.848		
	Total	142.118	163			

C. Year of study

From one-way ANOVA test results that are shown in table 8C, year of study appears to have different impact on the 6 factors of students' perceptions toward online learning during COVID19 since all p-values are less than 0.05 and so year of study has significant effect. According to Scheffe test, 3rd year students have greater differences in their responses of the factors than the rest of students

Table 8C: ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Instructor	Between Groups	10.043	4	2.511	2.670	.034
	Within Groups	149.539	159	.940		
	Total	159.582	163			
Interaction	Between Groups	17.025	4	4.256	4.203	.003
	Within Groups	161.007	159	1.013		
	Total	178.032	163			
Time management	Between Groups	25.667	4	6.417	4.427	.002
	Within Groups	230.489	159	1.450		
	Total	256.157	163			
Technology issues	Between Groups	12.496	4	3.124	3.157	.016
	Within Groups	157.325	159	.989		
	Total	169.820	163			
Assessment	Between Groups	18.293	4	4.573	4.887	.001
	Within Groups	148.805	159	.936		
	Total	167.098	163			

Online vs face To Face	Between Groups	33.660	4	8.415	6.328	.000
	Within Groups	211.435	159	1.330		
	Total	245.096	163			
overall	Between Groups	17.544	4	4.386	5.598	0.000
	Within Groups	124.574	159	0.783		
	Total	142.118	163			

Tables 8D – 6J below present the results of Scheffe test, which was applied to year of study variable, where each table shows mean comparisons of each factor.

Table 8D: Scheffe[a,b] - Instructor

Year_of_study	N	Subset for alpha = 0.05
		1
4	30	2.3806
1	40	2.7188
2	38	2.8180
5	23	3.0326
3	33	3.1136
Sig.		.066

Table 8E: Scheffe[a,b] - Interaction

Year_of_study	N	Subset for alpha = 0.05	
		1	2
4	30	2.5833	
1	40	2.9313	2.9313
5	23	3.1196	3.1196
2	38		3.4211
3	33		3.4470
Sig.		.349	.390

Table 8F: Scheffe[a,b] - Time_management

Year_of_study	N	Subset for alpha = 0.05	
		1	2
4	30	2.0833	
1	40	2.3875	2.3875
2	38	2.6645	2.6645
5	23	2.8696	2.8696
3	33		3.2576
Sig.		.157	.089

Table 8G: Scheffe[a,b] - Technology_issues

Year_of_study	N	Subset for alpha = 0.05	
		1	2
4	30	2.3000	
1	40	2.5625	2.5625
2	38	2.7961	2.7961
5	23	2.9565	2.9565
3	33		3.0985
Sig.		.148	.337

Table 8H: Scheffe[a,b] - Assessment

Year_of_study	N	Subset for alpha = 0.05	
		1	2
4	30	2.4083	
1	40	2.9000	2.9000
5	23	3.0000	3.0000
2	38	3.0263	3.0263
3	33		3.4773
Sig.		.174	.235

Table 8I: Scheffe[a,b] - Online_vs_faceToFace

Year_of_study	N	Subset for alpha = 0.05	
		1	2
4	30	1.9917	
1	40	2.1375	
5	23	2.7717	2.7717
2	38	2.8289	2.8289
3	33		3.1894
Sig.		.086	.723

Table 8J: Scheffe[a,b] - Overall

Year_of_study	N	Subset for alpha = 0.05	
		1	2
4	30	2.2912	
1	40	2.6062	2.6062
2	38	2.9258	2.9258
5	23	2.9583	2.9583
3	33		3.2639
Sig.		.067	.074

D. Mode of study

From independent samples t test results that are shown in table 8K, Mode of study occurs to have significant effect on the 6 factors of students' perceptions toward online learning during COVID19 since none of the p-values is greater than 0.05. Part time students had more issues with online learning than full time students

		N	Mean	Std. Deviation	t	P-value(sig)
Instructor	Full time	149	2.6795	.92860	-6.852	0
	Part time	15	4.0333	.70626		
Interaction	Full time	149	3.0470	1.04476	-3.032	0.007
	Part time	15	3.7500	.83452		
Time Management	Full time	149	2.5352	1.20844	-3.303	0.004
	Part time	15	3.6667	1.27008		
Technology Issues	Full time	149	2.6728	1.00249	-2.273	0.037

|					
	Part time	15	3.3167	1.04994		
Assessment	Full time	149	2.8826	.98834	-4.048	0.001
	Part time	15	3.8333	.85391		
Online VS Face to face	Full time	149	2.4832	1.19036	-2.822	0.012
	Part time	15	3.4500	1.27195		
overall	Full time	149	2.7167	0.90035	-4.231	0.001
	Part time	15	3.6750	0.82934		

Table 8K: Independent sample t-test

4.3.3 Research Question 3:

3. What are the challenges that college students faced with online learning in the Sultanate of Oman during the COVID19 pandemic?

Table 9 below presents the frequency and percentage of each obstacle faced by students with online learning during COVID19 pandemic. Out of 165 participants in the study, 30 students assured that they faced no challenge at all with their online learning. However, 135 respondents said they had many issues with the online learning system. Most students (Approximately 31%) had network problems. The second most challenge faced by the students (20%) is having difficulties in understanding course materials. Over 12% of students said that communicating with instructors was not easy at all. In the fourth place comes two challenges which are assessment and time management , both with a percentage of 11.85%. 12 participants agreed that appropriate environment for learning was not available, while only 5 participants complained about the unfair methods of grading.

Figure 11: percentage of challenges

percentage of challenges

- Difficulties in communicating with instructors
- Network problems and lack of convenient learning machines
- Huge amount of assessments
- Difficulties in understanding courses material
- Unfair methods of grading
- Time management challenges
- Inappropriate environment for learning
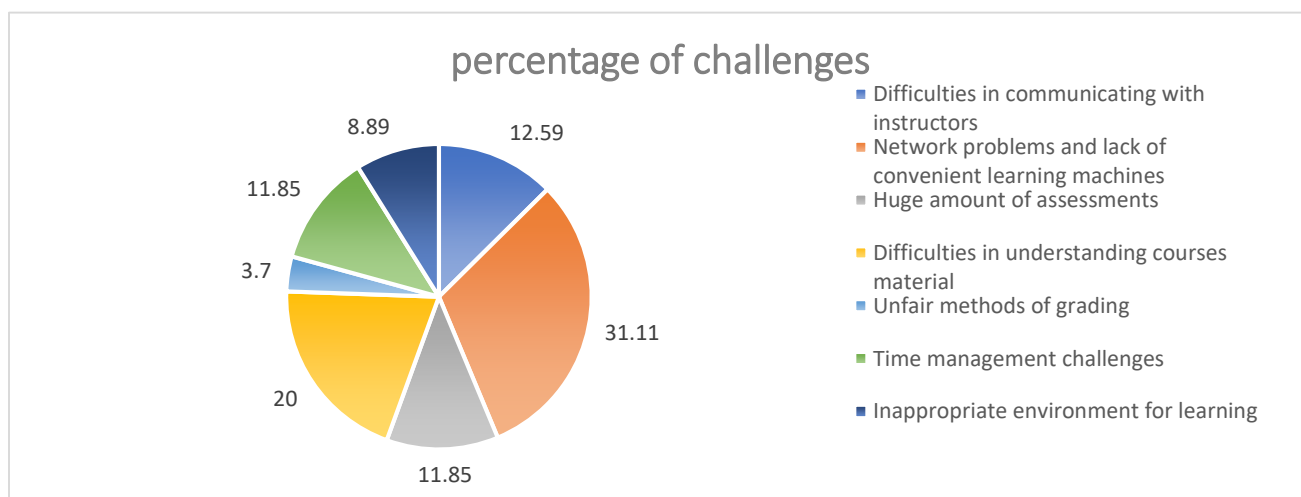
Challenges	Number of students	Percentage
Network problems	42	31.11
Difficulties in understanding course materials	27	20
Difficulties in communicating with instructors	17	12.59
Huge amount of assessment	16	11.85
Time management challenges	16	11.85
Inappropriate environment for learning	12	8.89
Unfair methods of grading	5	3.70

Table 9: percentage of challenges

4.4 Summary of this chapter

This chapter discussed the findings and the results of the study. The main results of the study were discussed in relationship with the three main research questions of the study. The results of the study are presented in tables and figures in this chapter.

Chapter 5: Conclusion and recommendations

5.1 Conclusion

The closure of higher education institutions and the shift to online learning instruction during the COVID-19 pandemic was the reason for conducting this study. For the first time in the history of higher education in the Sultanate of Oman face-to-face instruction was stopped and classes were conducted fully online for all HE learners. This situation resulted in some discomfort among many people in the higher education community. They were not ready for such disruption, especially the learners. The perceptions of the learners towards such events helps a lot in giving some clues that would help in dealing with these situations. However, this difficult situation is not an easy event for most countries to deal with. It is obvious that there are still no large studies about the effect of this pandemic since it is still just something new. In addition, there are no enough research papers that discuss the perceptions of the learners regarding the online learning in higher education institutions in the Sultanate of Oman. This study fills this gap in literature. This study was conducted to investigate the perceptions of college students towards the online learning that took place in Oman during the COVID-19 pandemic. Collecting data was done in August 2020. It was after studying online for about three months. The study was conducted on the students of one Omani private college (bachelor's degree). The sample of the study had 164 students. They were from foundation year, year one, year two, year three, year four and year five. The data was collected through an electronic questionnaire which had two close-ended questions and one open-ended question.

The main results of the study were as follows. The main obstacle the learners state they faced with online during the COVID-19 period was network problems. 31% of the learners complained that they had problems with the internet connection while learning online. Sometimes

the class was interrupted and learners could not complete it due to poor internet connection. (Almaiah, Al-Khasawneh & Althunibat 2020) found out that one of the big obstacles for online learning in some countries was poor internet connection. Another issue is understanding the content of the courses. 20% of the learners complained that they faced some issues in comprehension of the taught material. 12% of the learners stated that communicating with their instructors was not easy all the time.

5.2 Discussion of the main obstacles and the challenges that faced the learners in their online learning during the COVID-19 pandemic in Oman.

The information in the previous section shows that college learners in Oman had many obstacles during their online experience in the time of the COVID-19 pandemic. The first factor that was considered as an obstacle is network problem. (Ali 2020) confirmed that students in many developing countries suffer from poor internet connection which affects their level of satisfaction towards online learning. Many learners in the current study complained from having slow internet signals in their areas. Some of them stated that they even did not have any internet connection in their houses. This situation should be dealt with very seriously from HEIs in the Sultanate of Oman. Having such learners in an institution puts a great responsibility on that institution to do their best to help these learners have good access to the online learning that they are supposed to get in order to have a successful learning experience. One learner in the survey commented: *network signal*

was very weak. I could not access some classes. I was late in handing some assignments. I even was late in attending some exams. Another learner stated: *I did not have internet at home.*

The other one said: *The internet signal was always weak.*

The second factor that learners in this study rated as an obstacle to the success of their online learning was understanding the course content. Many learners mentioned that they were not used to following the teachers explain the topic matter online. This goes in alignment with what (Wei & Chou 2020) stated in their study that many learners have a problem in understanding what they learn in comparison to face-to-face instruction. Many of what was explained was not clear to the learners. The content of the taught lectures was not uploaded for the learners on the college platform to help them refer to it when they faced difficulty understanding the course material. Some learners complained that the frequent disruption of the internet connection was a main reason for not understanding what they were learning. Some complained that the instructors did not cover great deal of what was supposed to be covered of the course content. As a result, some of them felt lost and could not keep track of what they were learning. One learner said: *I could not understand what I was taught.* The other one said: *some instructors did not teach all the syllabus which resulted in not understanding some materials of the course.* Another student said: *I could not understand what I studied online.* Another learner said: *It is not easy to understand the course content when learning online. Face to face learning is easier.*

The third factor that the learners considered to be a challenge during their online learning experience is the difficulty to contact and communicate with their course instructors.(Bolliger & Martin 2018) indicated in their study that many online learners have problems in contacting their instructors. Instructors are the backbone of the whole teaching and learning process(Vallade & Kaufmann 2020). They are the tool that can make the teaching and learning process succeed or

fail. They build the motivation inside their learners to keep working hard and focused towards achieving high levels in their education. When learners have a problem in communication or contact with their instructors that can be an indicator that the teaching and learning process is not going in the right direction that the learners are hoping for. Instructors need to adapt to online learning and put more effort in order to create more interactive meaningful learning experiences for the learners(Allen, Rowan & Singh 2020). One Learner said: *It was not easy to contact instructors.* One wrote: *I could not find someone to answer my questions when I had some difficulties.* Another learner commented: I *could not understand my instructor.* The other one said*: The teacher was late to respond or he would not respond at all.* Another student stated: *Instructors are not qualified to teach online.*

Time management and huge amounts of assessment were rated as being in the fourth place as obstacles in online learning. (Palmer & Holt 2009) indicated in their study that such obstacles are faced by many learners in online learning . Learners in the current study claimed that the instructors gave more assessment and assignments in online learning than they did in face-to-face learning. They said that this put a lot of load on the learners. They complained from the constant amount of assessment the different instructors assigned for them as (Adedoyin & Soykan 2020) mentioned in their study. Time management was also an issue for some learners. In the regular classrooms, instructors are in control of all the teaching and learning process. This gives most learners guidance and makes it easier for them to achieve the required and expected outcomes. However, in online learning environment the learner is in more control of the learning process(Barclay, Donalds & Osei-Bryson 2018). This can cause problems for some learners who are not used to managing their own time outside the continued control of instructors in the regular classrooms.

The last main obstacle that some learners mentioned is not having the right learning environment. During the quarantine time due to the COVID-19 pandemic, people were not allowed to stay in public places like public libraries or cafes. Almost all people had to stay in their houses. Some learners complained that their houses were not the best places for online learning. Omani families usually have large number of people. The average Omani family would usually have six children. This might make studying, especially online, not an easy task for some learners.

One learner complained: *We had a lot of assignments.* Another one said: *I could not organize my study time.* Another learner commented: *I did not No time due to the heavy load of assignments.*

One learner added: *It was not easy to organize my time due to the freedom I have.*

5.3 Implications of the study

The results of this study have many implications for the learners, instructors, higher education institutions, researchers, parents, internet providers and policy makers. On the level of the instructors, the results show that in order to have a comprehensively successful online learning environment, the instructors need to be competent in dealing with the new online teaching approach. Instructors should realize that change is inevitable and that they should be open to change and trying new ways of approaching teaching and learning in the higher education sector. They should also realize that they play a great role in creating a motivating environment for the learners who are already in shock of the sudden change in the educational system. On the level of the higher education institutions, these institutions should be prepared to develop the required infrastructure for having a solid and strong educational system that would be ready for any crisis in the future. Building a solid online learning system should be a priority. They should also provide

their instructors with the technological skills and competencies that would make them highly qualified personnel that can use the online learning tools very effectively. The HEIs should also provide support for their learners either emotionally or technologically by helping them in owning the required electronic devices. They should provide constant support and psychological consultancy for the learners. Learners, on the other hand, should be patient in this critical era in the history of higher education. Nothing is still clear for anyone. Nobody knows when the normal teaching is going to return. So, learners should develop more skills and habits that would allow them to learn online more effectively despite of the missing in-person connection with their college life as it used to be. They should cooperate electronically with their institutions to make this experiment successful.

On the level of researchers, they should start conducting research to examine the perceptions of the learners about online learning on a larger scale. Researchers play a great role in developing societies and in helping people improve their lives. A good researcher is the one who is updated and tries to examine every new phenomenon that happens in the community around them. They should devote their time and effort to study the effects and the impact of this pandemic on learners, the whole educational sector or even the whole community. On the level of parents and families, they should know that they play great role in the lives of their children especially in countries like Oman where the family is an integral part of the life of most people. Learners mainly live with their families in Oman in the undergraduate level or before getting married, so families are supposed to do their best to provide the students with the suitable environment that would make the online learning goes smoothly and successfully. They also should cooperate with the learners to provide the appropriate devices that they need for the online learning. They also should make

sure that the internet connection that the learners use is fast and would not disturb the flow of the online classes, especially the synchronous ones.

Online learning cannot be accessible without having good internet connection. Every country has many internet providers, either private or government providers. These providers play important role in the flow of the online classes. They should cooperate with the government and with the Ministry of Higher Education to make the internet available for every learner in the higher education sector. Learners who live in remote areas should be given more attention from these providers. They are supposed to strengthen the internet signal there and make sure that the learning process is not affected negatively by the slow of the internet signal.

Quality education is the responsibility of policy makers in every country. The Ministry of Higher education in Oman stated in its document that higher education is a priority for its plans. The policy makers in MHE should ensure that higher education is accessible to all people in the Sultanate of Oman. It should put more rules and regulations that would make the online learning experience easy even in times of emergency or during normal times.

Online learning is seen as the future of education in the whole world. There should be more support given to it especially in such circumstances. It is very important to consider the preferences and perceptions of learners while designing the online courses to make the learning effective and productive.

5.4 Limitations of the study

This study has some limitations that should be taken in consideration. First, the population of the study is 164 students. The number is small and cannot be considered as a representation of the whole number of students in higher education institutions in the Sultanate of Oman in the year 2020. So, generalization of the results cannot be done. In addition, the sample of the study is from the students of one private college in the Sultanate of Oman. It is known that every institution has its unique qualities and characteristics. Every institution has different majors and different systems and rules. As a result, learners in different colleges and universities might have different perceptions or experiences with the online learning experience that took place during the pandemic. In order to make the results more reliable of the whole number of higher education learners, a larger sample that includes students from all higher education institutions in the Sultanate of Oman should be included in the study. Furthermore, this specific college has some practical majors. Teaching some of these majors online might not be as easy as colleges that teach mainly theoretical majors. Overall, generalization of the results of this study is not possible and more research is recommended in this area in order to have a bigger picture about the perceptions of the college learners towards the online learning during the COVID-19 pandemic in the Sultanate of Oman .

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Appendix 1

Student's survey

A survey investigating the perceptions of college students towards online learning in Oman during COVID-19 pandemic

My name is Fatma Al Jabri. I am an Omani Master's degree student. I am honored to ask you to participate in this survey. It is part of my master's degree dissertation. The main aim of this study is to investigate the perceptions of college students towards online learning in Oman during COVID-19 pandemic. Your participation is highly appreciated. You can email me at fatmaljabri@gmail.com for any inquiries. Any information you share here is confidential and is going to be used for academic purposes only.

السلام عليكم ورحمة الله وبركاته. اسمي فاطمة الجابري و أنا طالبة ماجستير عمانية ويشرفني أن أطلب منكم التكرم باكمال الإستبانة هذه. التالية أطروحتي للماجستير وموضوعها هو الرئيسي دراسة اراء طلبة الكلية فيما يخص التعلم أي معلومة يتم مشاركتها الإجابة عن هذه الأسئلة بكل صدق وشفافية. وأتمنى أن يتم الإجابة عن هذه الأسئلة بكل صدق وشفافية. كورونا جائحة خلال الكلية طبقته الذي بعد عن هنا ستكون سرية ولن تستخدم إلا فيما يخص اطروحتي للماجستير. اذا كان لديكم اي استفسار فيمكنكم التواصل على ايميلي التالي fatmaljabri77@gmail.com

Part One :

Demographic information

Kindly answer the following questions. لطفا أجب عن الأسئلة التالية

1. Gender :

أنثىFemale

ذكرMale

67

2. Year of study :

Foundation

Year1

Year 2

Year 3

Year 4

3. Mode of study:

Full time كلي دوام

Part time جزئي دوام

4. Department:

foundation

Process Engineering (PE)

Marine Engineering (ME)

Logistics and Transport Management (LTM)

Part 2

Kindly indicate to what extent you agree or disagree with the following statements.

#	Items	Strongly agree	agree	Neutral	Disagree	Strongly disagree
	1. Guideline are provided by my instructor before starting the online course. يعرفني معلمي بالقوانين الخاصة بالمقرر في بداية التعلم عن بعد والقواعد					
	2. It is easy for me to contact my instructor during my online learning. أتواصل مع معلمي بسهولة خلال الدراسة عن بعد					

3. My instructor uses variety of interesting tools and technologies when teaching online. معلمي يستخدم الكثير من الطرق والأساليب الممتعة خلال تدريسنا عن بعد					
4. I receive good support from my instructor when learning online. اتلقى دعما جيدا من معلمي خلال الدراسة عن بعد					
5. My instructor always facilitates online discussions. معلمي بتسهيل النقاشات في لنا الدراسة عن بعديقوم					
6. I am actively communicating in discussions with my instructor when learning online. أنا أتفاعل و أتواصل بنشاط وفاعلية مع معلمي خلال الدراسة عن بعد					
7. I am actively interacting with my colleagues when learning online. أنا أتفاعل بنشاط وفاعلية مع زملائي خلال الدراسة عن بعد					
8. I always collaborate with other students in group work during online learning. أنا أمارس العمل الجماعي مع زملائي في فترة التعلم عن بعد					
9. Online learning saves me time. التعلم عن بعد يوفر الوقت لي					
10. I like the flexibility the online learning offers for me. أحب المرونة التي يقدمها لي التعلم عن بعد					
11. It is easy for me to manage my time during the online learning. أعرف كيف انظم وقتي بسهولة خلال الدراسة عن بعد					

	12. Home environment helps me to easily organize my time during online learning. بيئة المنزل في تساعدني أدرس عندما بسهولة دراستي أوقات تنظيم عن بعد					
	13. I have enough technological competences to deal with online activities. امتلك المهارة الإلكترونية الكافية للتعامل مع انشطة التعلم عن بعد					
	14. The links to the course content are accurate and accessible. الروابط الإلكترونية للمقررات الدراسية دقيقة وتعمل بشكل جيد					
	15. I always have good internet connection when I want to study online. أنا دائما لدي خدمة انترنت جيدة عندما أريد أن أدرس عن بعد					
	16. The technical support in my college is always available for me. الدعم الفني في الكلية دائما متواجد لتقديم المساعدة لي					
	17. The load of assignments in online learning is reasonable. كمية الواجبات في الدراسة عن بعد يعتبر معقولا					
	18. I always finish my online assignments on time. أنا دائما أنهي واجباتي خلال فترة التعلم عن بعد في موعدها					
	19. I feel confident that I would pass my online courses easily. أنا أثق بأني سوف أنجح في مقرراتي التي أدرسها بطريقة التعلم عن بعد بسهولة					
	20. I think that the grades the students get in online learning are fair. أعتقد أن الدرجات التي يحصل عليها الطلبة في التعلم عن بعد عادلة					

21. Face-to-face learning requires more study time than online learning. للدراسة أطول وقتا يحتاج العادي التعلم بعد عن بالتعلم مقارنة والمذاكرة					
22. Online learning is more motivating than face-to-face learning. للتعلم الدافعية يثير بعد عن التعلم العادي التعلم عن أكبر بشكل الطلبة لدى					
23. online learning courses are easier to understand than face-to-face learning courses. التي المقررات المقررات عن أسهل بعد عن بالتعلم تدرس العادي بالتعلم تدرس التي					
24. I prefer online learning over face-to-face learning. العادي التعلم من أكثر بعد عن التعلم أفضل					

Part three

Kindly answer the following open-ended question. You can use Arabic language رجاءا أجب عن السؤال
التالي . يمكنك استخدام اللغة العربية

1. What challenges did you face with online learning during COVID-19 pandemic ? ما هي الصعوبات
التي واجهتها في دراسة المقررات في فترة التعلم عن بعد خلال جائحة كورونا ؟

Thank you