



Research Article

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Exploring the Experiences of Postgraduate Students in the Field of Special Education with Remote Online Teaching Amid COVID-19 Pandemic: A Mixed Methods Study

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Abstract

The spread of COVID-19 has had a significant impact on many parts of life, including education. Instructors, students, and institutions across the world were forced to close their doors and shift to online distance learning in accordance with the World Health Organization (WHO) recommendation for social distancing. This study aims to explore the experience (challenges and benefits) of Saudi postgraduate students in the field of special education relating to the sudden shift to online distance learning during the COVID-19 pandemic. An embedded mixed methods design with a great emphasis placed on the qualitative strand, while the quantitative strand took a secondary role. Online learning readiness was assessed using a scale with (n=37) postgraduate students, then interviews were conducted with (n=9) postgraduate students. Postgraduate students in the Kingdom Saudi Arabia were found to have a high level of readiness and were highly confident and highly motivated for online learning during the pandemic. The most frequently mentioned challenges found in this study included technical difficulties. It was also found that despite the challenges faced by the students, they still preferred virtual classes over traditional face-to-face lectures, as they are flexible and convenient. Study results lead to a better understanding of postgraduate students' adaptation to online learning in emergency situations. Additional improvements including refining the difficulties, strengthening the current advantages, and listening to students' experiences and suggestions would lead to more successful remote teaching in the future.

Keywords: Special Education, Emergency online learning, Teacher education, Education in COVID-19

1. Introduction

Like many other parts of daily life, the spread of COVID-19 has had a significant impact on instructors, students, and educational institutions across the world (Mailizar et al., 2020). Schools, colleges, and universities were forced to close their doors and shift to online distance learning to follow the WHO recommendations for social distancing (Toquero, 2020). Distance and time are no longer an issue with online courses, as they provide opportunities for students in remote areas to receive education from reputable institutions (Cowling et al., 2015). There are many ways to deliver online content to students, including synchronous methods, asynchronous methods, and a mixture of the two. Synchronous delivery involves two or more people simultaneously attending the same

virtual setting. Asynchronous delivery does not require simultaneous availability, and the desired content is provided to students online so they can view it anytime (Anthony, 2013). The synchronous mode of delivery has a variety of benefits to students, including its convenience and compliance with students who must balance their studies with job or family obligations (Buxton, 2014). Asynchronous interaction also allows for equal and spontaneous participation (Huang & Hsiao, 2012). Blackboard Collaborate (BC) is a common tool used in higher education to deliver online courses and augment distance learning (Hamad, 2017). It is a web-based system within the Blackboard learning management system, in which text, voice chat, a digital whiteboard, and videoconferencing sessions can be used interactively (Chen et al., 2020). Instructors at universities around the world were forced to switch to remote teaching when the lockdown was imposed, using whatever learning platform was provided by their universities (Walker & Koralesky, 2021).

The Saudi government has taken preventive and precautionary measures during the pandemic to ensure its population safety. Therefore, a lockdown was imposed, social distancing was implemented, and all social events were called off. This included public spaces such as educational institutions. The Saudi Ministry of Education issued an urgent order to switch to remote teaching for public and higher education institutions to ensure students' safety and ability to learn during the pandemic. Covid-19 caused Saudi universities to close their campuses, canceling on-site conferences and events, public volunteering hours, and international academic visits. Despite this, Saudi universities have successfully continued their mission in educating students during the lockdown period and finished the semester despite all challenges (Alghamdi, 2021). Therefore, it is critical to understand how these universities have urgently and effectively adapted to online learning and to examine what plans were implemented to ensure the smooth transition for their faculty members and students. This smooth shift could be related to higher education having a strong e-learning infrastructure and the fact that e-teaching and learning have been integrated into Saudi universities since 2002 (Al-Asmari & Rabb Khan, 2014).

However, successfully transitioning from a traditional educational context to remote and virtual learning overnight would be impossible without being tied to several obstacles and challenges. Many researchers have highlighted the challenges and benefits of online learning in normal circumstances (Hamid et al., 2015; Wilson et al., 2007). They emphasize the importance of instructor training to facilitate virtual classes [16]. Also, they found that online classes have higher dropout rates compared to traditional face-to-face classes, and students sometimes might feel emotionally separated from their classmates (Boston et al., 2011). However, online classes were found to facilitate communication with classmates and reduce the efforts of students to attend and participate in classes (Hamid et al., 2015).

Many characteristics can predict student success and readiness for online learning, including student enthusiasm to learn, time and self-control, communication skills, and satisfaction with online delivery of classes (Yu & Richardson, 2016). Online learning readiness includes all parties' preparedness for an online mode of learning (Kayaoğlu & Akbaş, 2016). Therefore, online learning readiness is affected by technical skills, course content, and human and financial resources (Kayaoğlu & Akbaş, 2016). Many attempts have been made to measure readiness for online learning, and they found that online readiness is mostly related to assessing self-organization skills and ease and contentment with online learning (McVay, 2000; Smith *, 2005). Hung et al. (2010) developed a scale to measure readiness for online learning, the online learning readiness scale (OLRS), and identified five dimensions for students' readiness for online learning. These are self-directed learning, computer/Internet self-efficacy, learner control, motivation for learning, and online communication self-efficacy (Hung et al, 2010) .

2. Literature Review

Studies in this section are presented in three categories including first review, editorials, and commentaries. Second, studies that explored students' experiences with and readiness for online

learning during the pandemic in general and higher education. Finally, studies conducted in the KSA that explore the impact of the pandemic on students and instructors.

The majority of literature found surrounding the impact of the COVID-19 pandemic on education and learning were review studies, editorials, and commentaries. These highlighted the challenges associated with leaning during the sudden shift to online learning. These included technical difficulties and high network costs (Assunção Flores & Gago, 2020; Toquero, 2020), and delays in lab and field training for some specialties in higher education (Aydemir & Ulusu, 2020; Persky et al., 2020). Benefits of online learning during the pandemic were also presented, including less effort to travel to attend classes and the ability to view course materials at any time (Oyedotun, 2020). The literature also presented the instructional strategies implemented by higher institutions during the pandemic, which could be a guide to future studies on dealing with emergency situations in educational institutions (Elmer & Durocher, 2020; Nabukeera, 2020). Liguori and Winkler (2020) presented the impact of COVID-19 in entrepreneurship education and recommended increasing the online resources available in that field. Nabukeera (2020) article presented strategies including immediate preparation of staff to switch to online platforms and implementing a synchronous mode of online learning (Nabukeera, 2020). Bao (2020) summarized the main teaching strategies implemented by instructors including making emergency plans, emphasizing the use of synchronous virtual classes, and dividing the course contents into smaller units to be given in several lectures. In another commentary by Aydemir and Ulusu (2020), they explained the challenges faced by PhD students during the pandemic, including delays in lab work and experiments. Persky et al. (2020) also indicated that the sudden shift to online learning has caused disruptions to the main components of postgraduate studies, including research projects and in-field training. An article by Toquero (2020) has suggested providing training for instructors, providing online mental health services, and adjusting courses' requirements. Oyedotun (2020) has presented benefits of online learning like the opportunity to view recorded lectures later and attend classes with less effort. Assunção Flores and Gago (2020) highlighted the need to do field practicum in class and collect observation data to use for research projects.

This literature review also presents studies explaining the situation in general education during the pandemic (Basilaia & Kvavadze, 2020; Dwiyantri et al., 2020). It highlights the importance of continuous training for students on the required skills they need to achieve success in an online environment. Bhaumik and Priyadarshini (2020) indicated that 35.2% of their sample were satisfied with online learning, but that they lacked sufficient digital skills. In their mixed methods study, Dwiyantri et al. (2020) found that students were ready and that they felt that communication in an online class was difficult for many students.

This section discusses the literature examining the effect of the pandemic on higher education, including challenges and benefits of online learning and students' readiness for the sudden shift to that mode of learning. The majority of studies explored undergraduate students (Adnan & Anwar, 2020; Jeffery & Bauer, 2020; Mishra et al., 2020), with only some focusing on postgraduate ones (Patricia Aguilera-Hermida, 2020; Widodo et al., 2020). Some studies found that students preferred face-to-face classes over online ones (Adnan & Anwar, 2020; Patricia Aguilera-Hermida, 2020), while others found that online classes were favoured over traditional face-to-face ones (Mishra et al., 2020; Paudel, 2020). The most frequently mentioned challenges faced by students during the online mode of learning were technical difficulties, unstable networks, and time management. However, the benefits of online learning include less effort and more comfort to attend classes, high attendance rates, more focused discussion, and communication between students and instructors.

Patricia Aguilera-Hermida (2020) found that students preferred face-to-face classes over online ones and that technical difficulties were reported to be one challenge experienced by students. A study by Widodo et al. (2020) discovered that the majority of students could not learn properly in the online mode of learning due to technical difficulties, high costs, and lack of training. Adnan and Anwar (2020) discovered that students were mostly dissatisfied with online learning and preferred face-to-face interaction due to the high cost and lack of Internet connection for most people in

Pakistan. Jeffery and Bauer (2020) found a drastic change in laboratory classes during the pandemic compared to regular lectures. Mishra et al. (2020) have found that students preferred the online classes over face-to-face ones and both teachers and students mentioned an unstable network as an obstacle in online classes. Mohammed et al. (2020) assessed the effectiveness of online distance learning and teaching during the pandemic and they found that students whose studies required lab work were more disadvantaged with online distance learning than others and that attendance rates for students were high in their online classes. A study by Paudel (2020) found that most students preferred online classes over face-to-face ones, as online learning reduced the cost and time required to travel to institutions. Naji et al. (2020) found four influencing factors for students' learning, including initial preparedness and motivation for online learning, self-efficacy beliefs, and self-directed learning skills.

This review also examines the research surrounding the experiences of higher education institutions in the Kingdom of Saudi Arabia (KSA) during the pandemic. The majority of the identified studies were surveys (Alqabbani et al., 2020; Balhareth et al., 2020; Hoq, 2020; Mukhtar & Mukhtar, 2020), with fewer qualitative studies (Alghamdi & Dossary, 2021; Khalil et al., 2020). Some studies focused on the experiences of the instructors in these institutions (Alqabbani et al., 2020; Hoq, 2020), while others focused on students' perspectives (Alghamdi & Dossary, 2021; Balhareth et al., 2020). Alqabbani et al. (2020) found a high level of readiness and satisfaction with online learning among instructors. Hoq (2020) results showed that the majority of instructors had positive perceptions of online learning. In their qualitative study, Khalil et al. (2020) found that some of the positive benefits of online learning were time management and better content understanding, while challenges included technical issues and different preferences of learning styles. Balhareth et al. (2020) found that the majority of medical residents reported a reduction in training activities and that a reduction in their exposure to surgical cases was also reported. Alghamdi (2021) found that the experience of distance learning has enhanced their skills of self-reflection, self-motivation, and self-evaluation. Mukhtar and Mukhtar (2020) found that the majority of students had access to reliable Internet services at their homes and that they were satisfied with the transition to online learning. Another study by Alnofaie (2020) found that language students prefer the asynchronous mode of delivering classes versus the synchronous mode due to flexibility.

In summary, the majority of the published work was review studies, commentaries, and editorials (Bao, 2020; Churiyah et al., 2020; Liguori & Winkler, 2020; Persky et al., 2020). This could be due to these articles being published shortly after the sudden shift to online learning in most countries where not enough time has passed for studies to be conducted. Only a few studies have examined the learning situation during the pandemic in general education (Basilaia & Kvavadze, 2020; Bhaumik & Priyadarshini, 2020; Dwiyantri et al., 2020). Schools had to shift to online learning overnight, and it is understandable that they needed some time to adapt to the new situation. The difficulty associated with collecting data from schools could have prevented researchers from performing their tasks. Most of the studies conducted in higher education institutions have collected data from undergraduate students, with only a few studies examining postgraduate students' perspectives (Patricia Aguilera-Hermida, 2020; Widodo et al., 2020). Also, the majority of these studies were surveys, with fewer qualitative or mixed methods studies. With the literature published in the KSA, some studies focused on instructors' experiences, while others focused on undergraduate students. Few studies examined postgraduate students, and most that did were from medical schools. Also, like the literature published in most countries, the majority of studies conducted in the KSA were surveys, with fewer qualitative studies. It was also found that while students usually preferred online classes over face-to-face ones during the pandemic, there were still other students in some countries who preferred the opposite. This was because different countries have different resources for online education.

To the best of the authors' knowledge, no study was identified either in KSA or in the international context that has explored the experiences of postgraduate students in special education with the sudden shift to online learning during the COVID-19 pandemic. Therefore, the main aim of

this study is to explore the experiences and perceptions of postgraduate students in the field of special education with online learning during the sudden shift at the time of the pandemic. This study also aims to explore the level of readiness for online learning among postgraduate students in the field of special education in the KSA. Exploring readiness level for online learning is important as it might affect students' experiences and success. This study is important because while most studies focused on undergraduate students' experiences, it focuses on postgraduate students, and undergraduate education differs significantly from postgraduate education. In undergraduate education, the emphasis usually is on gaining knowledge content and within a broad academic field of study, while in graduate studies the content presented is more advanced with skills development at the center of its attention. Also, in some fields of study, such as medicine and education, graduate programs have extra in-field training for students to master specific skills. Another importance of this study is that it is a mixed methods study, which differs from the majority of the available literature that collected quantitative data only. Qualitative data is considered important when examining people's perspectives, as it provides a clear picture of the lived experiences of the target population (Creswell, 2005). Comprehending these experiences may allow researchers to design online courses that facilitate the use of higher cognitive skills and allow for useful knowledge acquisition for postgraduate students in the field of special education.

3. Research Questions

- Q1: What are the experiences (challenges and benefits) of postgraduate students in the field of special education with the sudden shift to online distance learning during the COVID-19 pandemic?
- Q2: How ready were postgraduate students in the field of special education for online learning during the sudden shift during COVID-19?
- Q3: Do students' perspectives depend on their readiness for online learning?

4. Study Objectives

The main objective of this study is to explore the experience (challenges and benefits) of postgraduate students in the field of special education with the sudden shift to online distance learning during the COVID-19 pandemic. The second objective is to examine the readiness of postgraduate students in the field of special education for online learning. The final goal is to assess whether students' perspectives depend on their readiness for online learning.

5. Methods

This study employed an embedded mixed methods design with a great emphasis placed on the qualitative strand, while the quantitative strand took a secondary role to support and complement the qualitative part (Creswell, 2005). The quantitative strand provided baseline information about the participants' level of readiness for online learning, while the qualitative data yielded a description of participants' perspectives toward online learning during the pandemic.

5.1 Participants

A purposeful convenience sampling method was used to recruit participants (Creswell, 2005). The target population was postgraduate students in the field of special education in the KSA studying at the time of the pandemic who had to shift to online learning. Participants of this study included (n=37) postgraduate students, of whom (n=21) were students from the Counseling Psychology Department and (n=16) from the Department of Special Education. The students from Counseling Psychology were included as they were taking an elective course (counseling people with special

needs) in the Special Education Department during the semester where the data was collected, and many of them were graduates with bachelor's degrees in special education. The participation rate was high at 92.5%, as the total number of postgraduate students from the Department of Special Education at the time was 18 and 22 from Counseling Psychology. For the qualitative interviews, participants were chosen based on their scores on the OLRs, as the aim was to have a representative sample with different levels of readiness for online learning. Therefore, nine participants were chosen for the interviews. The three highest were P14, P24, and P27; the three middle were P17, P21, and P30; the lowest three were P1, P5, and P12.

5.2 Data Collection

Quantitative data was collected with an online questionnaire using OLRs by Hung et al. (2010), while qualitative data was gathered by conducting semi-structured interviews. Second, both sets of data were analyzed separately, and interpretation of results from the analysis was used to answer the research questions. Another subset of qualitative data was collected in this study from answers to two open-ended questions added at the end of the questionnaire. The reason for including these open-ended questions was to accomplish data triangulation in which outcomes from both sets of qualitative data collected were compared against each other, ensuring credibility of research findings. The present study was approved by the research ethics committee at the School of Medicine at King Abdulaziz University.

5.2.1 Quantitative strand

Participants were sent a link to an online questionnaire based on the OLRs. The questionnaire was composed of five subscales (Hung et al., 2010). It has been confirmed to be a valid tool in measuring readiness for online learning, and it has been used in many countries, including Egypt and Turkey (Kayaoğlu & Akbaş, 2016). It was translated into Arabic with the forward translation method to be understood by the participating students in this study, and it was sent to a panel of experts to judge the quality of translation and suggest any changes. Minor corrections were suggested related to word choice, and changes were made. Informed consent was displayed on the first page of the online questionnaire. Participants were assured that participating in this study was voluntary and also informed about the anonymity and confidentiality of their data.

5.2.2 Qualitative strand

There were two sets of qualitative data including two open-ended questions that were added at the end of the questionnaire, asking about the challenges and benefits of online learning during the pandemic. After finishing the OLRs data collection, purposeful sampling was used to select students to participate in the qualitative interviews based on their readiness scores on the OLRs. The nine students who were asked to participate in the semi-structured interviews comprised the three highest, three middle, and the three lowest readiness scores. The data were collected through semi-structured interviews with questions asking students about their experiences with online learning during the pandemic, including the challenges and benefits of online learning.

5.3 Data Analysis

For the quantitative data, descriptive statistical analyses were conducted using the Statistical Program for Social Sciences (SPSS) to identify students' overall readiness level and on each dimension of the OLRs. For the qualitative data, interviews were recorded on audiotape and transcribed verbatim. Interviews lasted approximately 35 minutes each. The data were analysed manually using thematic coding (Boyatzis, 1998; Creswell, 2005). Transcripts were read often, and notes were written

in the margins to identify possible themes. These themes were then organized, reviewed, and observed to identify any bonds and redundancies. The transcripts were analysed by two independent researchers, the main researcher of this study and another researcher who holds a PhD in special education. The identified themes by both researchers were compared, and an agreement was achieved. Efforts were made to ensure the trustworthiness and credibility of the findings, including triangulation and member checking (Boyatzis, 1998). First, triangulation of data sources was conducted, including quantitative results of OLRs, qualitative data from open-ended questions in the survey, and qualitative data from interviews with students. Also, investigator triangulation was used where both researchers separately analysed the qualitative data and then the two analyses were compared and consensus on themes was reached through discussion. Second, member checking was achieved by allowing participants to read the transcripts and determine their accuracy.

Reliability analysis test results show that the OLRs displayed high reliability with a Cronbach's alpha of 0.93. The correlation metrics show a significant correlation between all the dimensions of the OLRs except for the "Motivation for learning" dimension, which shows a non-significant correlation with the rest of the dimensions except its correlation with online communication self-efficacy.

6. Results

Results in Table 1 show that 54.1% of the sample were 26 to 30 years old. The majority of participants hold an undergraduate degree in special education, and more than half of them live in the city of Jeddah. The majority of students indicated being familiar with virtual classes before the pandemic and that they preferred them over face-to-face ones.

Table 1: Sample characteristics

| | | N | % |
|--|---------------------------|----|-------|
| Age Group | 20-25 | 12 | 32.4% |
| | 26-30 | 20 | 54.1% |
| | 31-40 | 5 | 13.5% |
| Scientific Department | Counseling Psychology | 21 | 56.8% |
| | Special Education | 16 | 43.2% |
| Bachelor's Specialty | Special Education | 26 | 70.3% |
| | Early childhood education | 3 | 8.1% |
| | Psychology | 8 | 21.6% |
| Are you from the city of Jeddah? | Yes | 19 | 51.4% |
| | No | 18 | 48.6% |
| Have you ever attended lectures on Blackboard Virtual Classes? | Yes | 33 | 89.2% |
| | No | 4 | 10.8% |
| Do you prefer virtual classes over face-to-face lectures? | Yes | 22 | 59.5% |
| | No | 15 | 40.5% |

Table 2 indicates that the mean score for each item in the self-directed learning dimension was higher than 4.24. Students stated that they mostly seek assistance when they face learning problems and that they had higher expectations for their learning performances. The lowest mean was on the item related to time management. Table 3 shows the students' computer/Internet self-efficacy. Postgraduate students were more confident in performing the basic functions of Microsoft Office and were less confident when using the Internet to gather information.

Table 2: Self-Directed Learning*

| | Mean | Std. Deviation |
|--|------|----------------|
| I carry out my own study plan | 4.38 | .893 |
| I seek assistance when facing learning problems | 4.49 | .804 |
| I manage time well | 4.24 | 1.038 |
| I set up my learning goals | 4.38 | 1.037 |
| I have higher expectations for my learning performance | 4.49 | .989 |
| Total (N= 37) | | |

Source: All items in the above table are from OLRs (Hung et al, 2010)

Table 3: Computer/Internet Self-Efficacy

| | Mean | Std. Deviation |
|--|------|----------------|
| I feel confident in performing the basic functions of Microsoft Office programs (MS Word, MS Excel, and MS PowerPoint) | 4.54 | .650 |
| I feel confident in my knowledge and skills of how to manage software for online learning | 4.38 | .953 |
| I feel confident in using the Internet (Google, Yahoo) to find or gather information for online learning | 4.24 | 1.256 |
| Total (N= 37) | | |

Source: All items in the above table are from OLRs (Hung et al, 2010)

Table 4 presents the outcomes about students' control in an online learning environment. Students felt they could direct their own learning progress, while they could not deny that they were distracted by other online activities while learning online. Table 5 displayed findings about the motivation for learning. It showed that students were highly motivated to learn on the online environment, while they were less interested in sharing their ideas with others.

Table 4: Learner Control

| | Mean | Std. Deviation |
|--|------|----------------|
| I can direct my own learning progress | 4.22 | 1.058 |
| I am not distracted by other online activities when learning online (instant messages, Internet surfing) | 3.78 | 1.495 |
| I repeated the online instructional materials based on my needs | 4.14 | 1.206 |
| Total (N= 37) | | |

Source: All items in the above table are from OLRs (Hung et al, 2010)

Table 5: Motivation for Learning

| | Mean | Std. Deviation |
|--------------------------------------|------|----------------|
| I am open to new ideas | 4.73 | .450 |
| I have motivation to learn | 4.84 | .374 |
| I improve from my mistakes | 4.65 | .538 |
| I like to share my ideas with others | 4.49 | .731 |
| Total (N= 37) | | |

Source: All items in the above table are from OLRs (Hung et al, 2010)

Table 6 presented findings about the communication self-efficacy of students with the online

learning. It indicated that students were more confident in using online tools to communicate with others, while they were less confident in expressing themselves through texts. Table 7 presents the results for the overall score for OLRS dimension, which shows a high score in both dimensions and overall score with a minimum average score of 4.04 for learner control dimension and a maximum average score of 4.67 for motivation to learn dimension. Other dimensions vary between 4.38 for computer/Internet self-efficacy, 4.39 for self-directed learning, and 4.37 for online communication self-efficacy.

Table 6: Online Communication Self-Efficacy

| | Mean | Std. Deviation |
|---|------|----------------|
| I feel confident in using online tools (email, discussion) to effectively communicate with others | 4.59 | .644 |
| I feel confident in expressing myself (emotions and humor) through text | 4.11 | 1.149 |
| I feel confident in posting questions in online discussions | 4.42 | .806 |
| Total (N= 37) | | |

Source: All items in the above table are from OLRS (Hung et al, 2010)

Table 7: Mean Scores of All Factors in Online Learning Readiness

| All factors in Online Learning Readiness | Mean |
|--|--------|
| Self-Directed Learning | 4.3946 |
| Computer/Internet Self-Efficacy | 4.3874 |
| Learner Control | 4.0495 |
| Motivation for Learning | 4.6757 |
| Online Communication Self-Efficacy | 4.3784 |

Source: All items in the above table are from OLRS (Hung et al, 2010)

6.1 Qualitative Data Findings

This section presents findings from two sets of qualitative data. As displayed in Table 8, data from the interviews yielded four main themes with subthemes under each main theme.

Table 8: Main themes and subthemes from the qualitative interviews

| Main themes | Subthemes |
|--|--|
| Students' satisfaction with remote online learning | <ul style="list-style-type: none"> • Fast and flexible solution • Preference of synchronous over asynchronous online learning |
| Adaptation requirements | <ul style="list-style-type: none"> • Changes to assignment to fit the situation • Incorporating alternative solutions to help students face technical difficulties |
| Challenges of online learning | <ul style="list-style-type: none"> • Inability to do field trips • Time management issues • Technical difficulties |
| Benefits of remote online learning over face-to-face | <ul style="list-style-type: none"> • Less time and efforts • The advantage of recorded sessions • Encouragement of class attendance and participation |

6.1.1 *Students' Satisfaction with Remote Online Learning*

This is the most prominent theme in the data, with two subthemes including “fast and flexible solution” and “preference of synchronous over asynchronous online learning”. Most participants indicated that they were satisfied with the mode of remote online learning during the outbreak of the COVID-19 pandemic. This is because, according to them, it allowed them to continue the semester in the middle of the pandemic without jeopardizing the rules of social distancing. P14 explained how the transformation to remote online learning has “helped in preventing the spread of the virus in society”. All the participants except one explained that they preferred the synchronous mode of online learning, as it helped them to communicate better with their peers and faculty members. P30 was the only participant who indicated dissatisfaction with the remote online mode of teaching. This could be, according to her, due to neither having any experience attending online virtual classes nor any basic knowledge of how to use and access Blackboard.

6.1.2 *Adaptation of Course Requirements*

All the participants indicated that courses' instructors adapted many things in the courses' plans and their ways of teaching and delivering the course materials immediately after the sudden shift to online remote learning. This main theme has two subthemes, including “changes to assignment to fit the current situation” and “incorporating alternative solutions helping students face technical difficulties”. Around six participants indicated that instructors had changed the requirements of many assignments, including the extension of due date, quantity of the required information, and the assignments themselves. “All exercises that required field trips to disability centers and special education classes in schools have been canceled and substituted with other types of homework” (P27). Participants highlighted how instructors were eager to find ways to continue teaching when technical difficulties occurred. “Some instructors did not miss a single class during the shift process to online remote learning as they used Zoom when Blackboard crashed” (P14). During the first week of online learning, lectures were delivered using BC. However, starting from the second week, all lectures were delivered using Blackboard Ultra, which was an efficient and excellent platform with fewer technical difficulties.

6.1.3 *Benefits of Remote Online Learning over Face-to-face Learning*

All the participants indicated that the shift to online learning came with many benefits over face-to-face classes. This main theme has three subthemes, including “less time and effort”, “the advantage of recorded sessions”, and “encouragement of class attendance and participation”. The shift from in-class lectures to online virtual classes has helped students, including reducing the time and effort required to attend university, alleviating the need for babysitting services for mothers, and reducing transportation expenses. As P17 indicated, “online learning benefited students who live in other cities as they do not have to rent flats in Jeddah”. One of the main advantages of online sessions over face-to-face ones, according to participants, was the possibility of viewing the recorded sessions at their own pace. This is because all lectures in BB Ultra were automatically saved for students, which was, according to many students, essential as “many can have weak Internet connections or other technical issues that the session keeps cutting all the time” (P17). According to participants, recorded sessions were useful for mothers with small babies around the house while attending their classes. Last, many participants revealed that they were more encouraged to participate in online classes than face-to-face classes. This was, according to them, due to the possibility of participating by writing in the chat in addition to voice participation. Participants also revealed that they prefer online classes because they allow more students to attend classes with lower rates of absences.

6.1.4 Challenges of Online Learning

According to participants, many uncertainties came along with the sudden shift to online learning. This theme includes three subthemes: “inability to do field trips”, “time management issues” and “technical difficulties”. One of the major issues facing special education postgraduate students, according to their view, was their lack of ability to visit disability centers due to their closure during the pandemic. This has affected students, as they could not practice what they studied and “see actual cases and counseling sessions”, for example, in courses like counseling for people with special needs (P14). Also, some course objectives require students to do in-field observations and view files of children with disabilities, which was impossible during the closure. Therefore, many instructors “had to change courses’ requirements to meet the emergency situation; however, the question is whether we are going to get the full advantage after the change from the planned curriculum” (P24). Moreover, participants signified the difficulties associated with technical issues. These included poor Internet connections, software and hardware damage to devices, and a shortage of devices in the household.

There were no observed major differences among participants regarding their experiences and perspectives with the sudden shift to online learning based on their OLRS scores. However, the only minor differences discovered between the participants were those who scored the highest on OLRS mentioned no challenges with their online learning experience. Participants who scored the lowest on OLRS stated that online assessment was the major challenge for them and requested finding different means of assessment. Finally, participants who scored average on OLRS indicated that their biggest challenge was the changes to scheduled virtual lecture time by some instructors. However, this problem was only present during the first two weeks after the shift to online learning, as the university no longer allowed instructors to change the prescheduled time for virtual classes.

Findings from the two qualitative questions at the end of the questionnaire about the challenges and benefits of online learning yielded analogous results from the ones collected from the interviews. Table 9 displays the findings from the qualitative questions.

Table 9: Results from the qualitative survey questions

| Benefits | Frequency | Challenges | Frequency |
|---|-------------------------------|---|------------------------------|
| Reduction in time and efforts (e.g., less transportation, the comfort of their own homes) | 27 times in 27 participants | Technical difficulties (e.g., difficulties with Internet connection, software or hardware damage) | 19 times in 13 participants |
| Spontaneous participation in class | 5 times in 5 participants | Lack of communication with instructor and peers | 10 times in ten participants |
| Flexibility in viewing recorded sessions | 3 times in three participants | Huge amount of assignments and projects – unable to visit disability centers | 9 times in nine participants |
| | | Distractions from the surrounding environment | 6 times in six participants |
| | | No problem at all | 6 times in six participants |
| | | Dissatisfaction with assessment methods | 4 times in four participants |

It is shown that the most frequent mentioned benefit of online learning during the pandemic was the reduction in time and effort, while the most frequently mentioned challenge was technical difficulties. Viewing the outcomes displayed in Table 8 and Table 9, both the findings of the interview and the qualitative survey questions revealed the same benefits of online learning experienced by students. Regarding challenges mentioned by participants, both sets of qualitative data share the challenges of technical difficulties and dissatisfaction with assessment methods.

7. Discussion

The rules of social distancing and extra precautionary measures against the spread of COVID-19 have necessitated a sudden shift in the delivery mode of lectures in higher education. This study explored the experiences and perceptions of postgraduate students in the field of special education in the KSA regarding online learning during the pandemic. It had three main objectives; the primary one was to explore the experiences (challenges and benefits) of postgraduate students in special education with the sudden shift to online distance learning during the COVID-19 pandemic. The second objective is to assess the readiness of postgraduate students in special education for online learning. Finally, this study aimed to explore whether students' perspectives depend on their readiness for online learning. This study found that postgraduate students in the KSA were ready, highly confident, and highly motivated for online learning during the pandemic. It also found that despite the challenges faced by the students with online learning during the pandemic, they still preferred virtual classes over traditional face-to-face lectures.

Based on their high scores on the OLRs, students in this study were ready for online learning, and they even scored higher than students in other studies (Chiang, 2014; Kayaoğlu & Akbaş, 2016). This follows the findings of Neupane et al. (2020) who also found that 87.1% of students were ready for online learning. The highest mean score in this study was on the motivation to learn, as postgraduate students were usually expected to be open to new ideas and willing to learn and share their ideas, a finding consistent with (Kayaoğlu & Akbaş, 2016). However, the lowest mean score for the sample in this study was for learner control, which was expected as the shift to online learning had to happen suddenly overnight with less preparation and therefore students were anticipated to have less control over their online learning environment. This finding also follows other studies (Chiang, 2014; Kayaoğlu & Akbaş, 2016).

This study found that postgraduate students in special education in the KSA were satisfied with remote online learning during the pandemic and that they experienced challenges and benefits while on that mode of learning based on findings from qualitative data. Students' satisfaction with remote online learning in this study was due to its flexibility and convenience for those who preferred attending from the comfort of their homes, a finding consistent with the findings of many other studies (Buxton, 2014; Oyedotun, 2020; Shim & Lee, 2020). This study also agrees with Paudel (2020), who found that online learning reduced the cost and time required to travel to institutions. Students in this study were discovered to prefer synchronous over asynchronous modes of delivery, a finding similar to that of other studies (Alnofaie, 2020; Bao, 2020; Mishra et al., 2020; Zgheib et al., 2019). The benefit mentioned in this study for this delivery learning mode included reduced virtual isolation for online learners (Akarasriworn & Ku, 2013). However, Patricia Aguilera-Hermida (2020) found that students preferred face-to-face classes over online ones: a contradictory finding to this study, which could be due to the majority of participants being undergraduate students in which classes usually included many students more than postgraduate classes where the number of students is limited in each class (around five to 12 approximately). Also, another study by Adnan and Anwar (2020) has found that students were mostly dissatisfied with online learning and preferred face-to-face interaction in Pakistan. This could be due to the Internet connection in Pakistan being unstable and costly for the majority of students. It could also be related to the limited resources for universities there.

This study found many other benefits to remote online learning during the pandemic, including a high attendance rate and class discussion rate for postgraduate students, like the findings in (Basilaia & Kvavadze, 2020; Huang & Hsiao, 2012; Mohammed et al., 2020). However, a study by Pather and Booi (2020) found that the majority of students were not confident in engaging in online discussions, which could be due to the sample being undergraduate students in which there are usually many students attending lessons, making it difficult to communicate in virtual class. Another benefit included the opportunity to view recorded lectures later (Oyedotun, 2020). Alghamdi and Dossary (2021) also found that students reported that the experience of distance learning enhanced

their skills of self-reflection, self-motivation, and self-evaluation, a finding similar to this study.

The most frequently mentioned challenges found in this study included technical difficulties, a finding recurrent in the literature (Bhaumik & Priyadarshini, 2020; Persky et al., 2020), with Mishra et al. (2020) finding an unstable network for both teacher and students as a main obstacle. Unstable networks or weak connections were one of the most prominent technical problems mentioned in this study and other studies (Mohammed et al., 2020; Paudel, 2020; Shim & Lee, 2020; Wilcox & Vignal, 2020). Pather and Booi (2020) mentioned the high cost of the Internet to prevent many students from attending classes; however, this was not a problem for the students in this study, as according to Mukhtar and Mukhtar (2020) the majority of students in KSA have access to the Internet in their own homes.

Another challenge identified in this study for postgraduate students was difficulty associated with field training and projects requiring in-field observation at disability centers, a finding consistent with (Assunção Flores & Gago, 2020; la Velle et al., 2020; Oyedotun, 2020; Persky et al., 2020). Many fields of study require training or practicum in which students were also affected during the pandemic. Mohammed et al. (2020) found that students whose studies required lab work were more disadvantaged with online distance learning than others. In addition, Balhareth et al. (2020) found that the majority of their participants reported a reduction in surgical training and exposure to surgical cases.

Other difficulties mentioned in this study were the inability to find adequate quiet space to attend classes (Mohammed et al., 2020), time management issues (Paudel, 2020), being overwhelmed with the workload requirements during the pandemic (Mukhtar & Mukhtar, 2020; Toquero, 2020), and being more anxious about exam assessment (Wilcox & Vignal, 2020).

Another finding of this study was that there were no major differences among participants regarding their experiences and perspectives with the sudden shift to online learning based on their OLRs scores. However, those who scored the highest on OLRs mentioned no challenges with their online learning experience, which could be due to their high abilities in using computers, previous training on how to use Blackboard, high motivation to learn, and strong time management skills (Allam et al., 2020). Participants who scored the lowest on OLRs stated that online exam assessment was the major challenge for them and requested finding different means of assessment, which could be due to online exams being structured and timed differently than paper exams, which could have caused problems for some students with low computer skills and unstable or poor networks (Wilcox & Vignal, 2020).

7.1 Limitations

First, the sample size was small, and therefore the findings have limited generalizability. However, the response rate in this study was high (92.5%), and the target population was postgraduate students in special education, where the number of students is limited. Second, this study only reflected students' perspectives on online education, which does not reveal learners' functioning and performance, including their attendance and grades. Future research would be more enlightening if students' performance had been considered. Finally, the investigation was explored in one educational institution in the KSA. Therefore, attention must be considered in the replication of its findings. However, King Abdulaziz University is ranked first among other universities in the region, and it has many students compared to smaller universities in the KSA.

8. Conclusion

There is a continuous need for a better understanding of students' adaptation to online learning in emergency situations. This study suggest that students are highly motivated to learn how to utilize this new mode of learning for their academic success. The study results should enhance understanding of the sudden shift to remote online learning for postgraduate students and lead to

conclusions for better educational practices. The findings of this study also suggest that a further level of preparation is needed to accomplish the learning goals of graduate studies. Additional improvements in refining the difficulties, strengthening the current advantages, and listening to students' experiences and suggestions would lead to more successful remote teaching in the future.

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