

# “...All of a sudden, I realized I was not well prepared for the transition”: A Qualitative Exploration of University Students’ Perspectives on the Emergency Distance Education amidst the COVID-19 Crisis in Jordan

**Ala'a B. Al-Tammemi** (✉ [alaa.tammemi@med.unideb.hu](mailto:alaa.tammemi@med.unideb.hu))

University of Debrecen: Debreceni Egyetem <https://orcid.org/0000-0003-0862-0186>

**Rana Nheili**

The University of Sheffield

**Chiamaka H. Jibuaku**

University of Gothenburg: Goteborgs Universitet

**Dua'a Al Tamimi**

Mu'tah University College of Nursing

**Musheer A. Aljaberi**

Universiti Putra Malaysia

**Moawiah Khatatbeh**

Yarmouk University Faculty of Medicine

**Muna Barakat**

Applied Science Private University Faculty of Pharmacy

**Hindya O. Al-Maqableh**

Yarmouk University Faculty of Medicine

**Hussam N. Fakhouri**

The University of Jordan

---

## Research Article

**Keywords:** Digital Preparedness, Jordan, Lived Experiences, Qualitative, Individual interviews

**Posted Date:** January 3rd, 2022

**DOI:** <https://doi.org/10.21203/rs.3.rs-1217733/v1>

**License:**   This work is licensed under a Creative Commons Attribution 4.0 International License.

[Read Full License](#)

# Abstract

Our current study aimed at exploring the university students' perspectives on the emergency distance education strategy that was implemented during the COVID-19 crisis in Jordan, one of the countries in the Eastern Mediterranean Region. Utilizing a qualitative design supported by Moore's theory of transactional distance, a total of 17 semi-structured interviews were conducted with university students of various study levels and disciplines. Data were inductively analyzed using thematic analysis as suggested by Braun and Clarke. Seven themes have emerged, including, (i) psychological response, (ii) digital preparedness and equality, (iii) technical competencies and technostress, (iv) interpersonal communication, (v) learning materials, (vi) non-reliable evaluation methods, and (vii) opportunities. Our findings provide evidence that the sudden transition from traditional on-campus to the online distance education was significantly challenging in many aspects and was not a pleasant experience for many participants. Various factors under the jurisdiction of academic institutions and decision-makers are considered main contributing factors to the students' educational experiences amid the pandemic crisis. Therefore, better planning and more sustainable utilization of educational resources have paramount importance in providing a high-quality education. Additionally, more dedicated efforts in terms of equitable, reliable, and credible evaluation systems should be considered in Jordan's distance education strategy.

## 1. Introduction

It has been over a year and a half since the greatest global disruption of education due to the coronavirus disease-2019 (COVID-19) crisis. Most campuses of various educational institutes were closed and switched to online distance education mode, starting a new era in educational history. Developed countries were more prepared for the unprecedented transition in many terms, such as quality of internet services, technical competencies of instructors, and the experience in online education during the pre-pandemic era. On the other hand, developing countries were less prepared and faced more challenges in implementing the new teaching model due to unreliable technical infrastructure and financial costs (El Said, 2021).

Many studies tried to capture the perspective of students and instructors toward the online experience aiming to improve the learning deliverables and increase the outcomes through comparing distance online education versus face-to-face education in developed countries (El Said, 2021). While the entire world switched to online distance education during the pandemic crisis, few studies tried to capture the impact of this switch on students and teachers in developing nations. The studies mainly focused on the students' attitude towards online learning, especially for students with practical courses. Students' feedback and experience were mixed between positive and negative. Many students commented on the instructors' ability to provide online lessons and use technology to provide the best educational outcome (Hussein et al., 2020; Khalil et al., 2020). Many teachers have limited technological skills resulting in difficulties in providing virtual aids to present the lectures; thus, affecting the teaching quality. Also, some students expressed that they are on-campus learners and online lessons are not a fit for them (Al-Balas et

al., 2020; Hussein et al., 2020; Khalil et al., 2020; Suliman et al., 2021). When it was related to practical courses, such as in engineering, medicine, and nursing, many students reported dissatisfaction as they believed they lost the chance to learn essential skills for their future careers (Ibrahim et al., 2021; Sindiani et al., 2020; Suliman et al., 2021).

Additionally, many studies highlighted a worsening in the psychological wellbeing of students due to lockdown, study load, and concerns about the future and career, which resulted in lower energy and higher distraction while attending virtual courses (Ala'a B Al-Tammemi et al., 2020; Alsoud & Harasis, 2021; Fawaz & Samaha, 2021; Hussein et al., 2020; Suliman et al., 2021). Moreover, many students experienced more homework and assignments than in face-to-face education, assuming that students have more time to study due to the lockdown resulting in fewer achievements and more anxiety (Hussein et al., 2020). The level of satisfaction towards distance online education was found to be related to having previous experience in online learning. In contrast, students without former experience may need some time to adapt to the new learning model (Sindiani et al., 2020). Considering the pandemic crisis, students may perceive that online education is safer than the traditional face-to-face one; however, this can be particularly applicable to pandemic or conflict scenarios, and not for ordinary life (Hussein et al., 2020).

Even with the global race in digitalization and distance education within the past decades, many developing countries of limited resources seem struggling to keep up with the global pace. Arab countries were not an exception to be severely afflicted by the pandemic and its consequences on education, health, economy, and social life (Akour, AlMuhaissen, et al., 2021; Al Nsour et al., 2020; Khatatbeh, Al-Maqableh, et al., 2021; UNDP, 2021). In light of the previously described challenges and considering that most studies about online distance education in the Arab region were of a quantitative nature, our current study aimed at exploring the university students' perspectives on the emergency remote education that started in response to the COVID-19 crisis using a qualitative approach to gain an in-depth understanding of the lived experiences amongst students.

## **2. Materials And Methods**

### **2.1 Study Setting and Population**

Our study was conducted in Jordan, one of the Arab states located in the WHO Eastern Mediterranean Region (EMR) with a total population of 10.8 million (Department of Statistics - Jordan, 2020). Jordan is classified as a middle-income country according to the World Bank. The official spoken language in the country is Arabic. Our study population comprised students who were officially enrolled in a study program at any of the public or private universities in the academic year 2019/2020 or 2020/2021 (the academic year usually starts in September and ends in June with some minor variations between public and private universities in the country). The implementation of emergency distance education in Jordan has started in the middle of March 2020.

### **2.2 Study design and Theoretical Framework**

An exploratory qualitative design with a framework based on Moore's Theory of transactional distance was employed in the current study. Utilizing a qualitative approach was agreed on to get an in-depth understanding of the university students' lived experiences and opinions during the unprecedented transition from traditional face-to-face education to distance education during the nationwide lockdown in Jordan. Additionally, we adopted the theory of transactional distance as a theoretical model to facilitate a more systematic exploration of the students' experiences. This theory was originated in the 1970s by Micheal G. Moore (Moore, 2018). Transactional distance is defined as "the physical distance that leads to a communications gap, a psychological space of potential misunderstandings between the behaviors of instructors and those of the learners" (Chen, 2001; Moore & Kearsley, 1996). In 1989, Moore pointed to three domains of interactions that present in distance learning, including *learner-instructor interaction*, *learner-learner interaction*, and *learner-content interaction* (Moore, 1989). Later in the 1990s, Hillman, Wills, and Gunawardena had taken Moore's theory into a more advanced step by adding a fourth domain of interaction that is, *learner-interface interaction*, considering the interaction that occurs between students and technology in the telecommunication era (Chen, 2001). Accordingly, we adopted the four domains for a more systematic approach in addressing our study objectives. Figure 1 illustrates more details about the four domains of the above-mentioned interactions.

(INSERT FIGURE 1 HERE)

## 2.3 Sampling

Students were purposively recruited with maximum variation sampling to capture a diverse and wide spectrum of views and lived experiences relating to online distance education. A web-based advertisement that described the nature and objectives of our study along with eligibility criteria was disseminated to student groups on Facebook®. University students in Jordan created these groups as a tool for general and academic communication. Students aged 18 years and above, and who experienced the COVID-19 enforced distance education from various Jordanian universities, study programs, and study levels were encouraged to enroll in our study. Students who declared their interest to participate were asked to fill out a brief online questionnaire that collected basic sociodemographic data (age, gender, residence region, contact details) and educational profile (public or private university, study program, study level). Additionally, the online questionnaire included a written informed consent regarding voluntary participation and interviews recording.

## 2.4 Data Collection: Semi-Structured Interviews

A total of 17 semi-structured individual interviews were conducted with students in the period of September - December 2020. To facilitate data collection, an interview guide that is based on Moore's theory of transactional distance was utilized (**Additional file 1**). Given the unfolding situation of the COVID-19 pandemic and the associated control measures, to limit physical contact with students due to the pandemic, and to eliminate any geographical boundaries aiming to reach participants from different Jordanian governorates, the interviews were conducted using voice over internet protocol (VoIP) via Zoom® videoconferencing platform. The interviews were conducted at a suitable time that was

determined by each student based on the student’s availability and daily schedule. All interviews were conducted in Arabic (the national language of Jordan), and verbal consent was obtained from all students at the beginning of each interview as a pre-requisite for starting the recording process (along with the written consent provided in the online questionnaire). Various probing techniques were employed to encourage the students to explicitly express their opinions, stories, and experiences. The researchers closed the interview by asking the students whether they wanted to add any further information. The average duration of an interview was around 38 minutes, and the sampling process continued until data saturation was achieved. No incentives or rewards were provided upon participation. The characteristics of participants are presented in Table 1.

Table 1  
Participants’ Characteristics (n=17)

Variable	Category	Frequency Count (n)
Age	Median= 20 years	
Gender	Female	9
	Male	8
Residence Region <sup>†</sup>	Northern Jordan	5
	Central Jordan	8
	Southern Jordan	4
University	Public	10
	Private	7
Study Program / Discipline	Medical	7
	Non-Medical & Sciences	10
Study Level	Bachelor	12
	Master	5
	Doctorate	0

<sup>†</sup> Jordan is administratively divided into three regions: Northern Jordan comprises four governorates including Irbid, Ajloun, Jerash and Mafrq; Central Jordan comprises four governorates including Amman, Zarqa, Balqa’ and Madaba; Southern Jordan comprises four governorates including Karak, Tafieleh, Ma’an and Aqapa.

## 2.5 Data Management and Analysis

The recorded interviews were transcribed verbatim (in Arabic) by three researchers who have prior experience in qualitative research. Then, transcripts were analyzed inductively using thematic analysis as

suggested by Braun and Clarke (Braun & Clarke, 2006). This involved familiarization with the transcribed data, assigning preliminary codes, merging codes into themes, reviewing themes, defining and naming themes, and lastly reporting themes. Data coding and analysis were conducted by the same researchers who conducted the interviews. Discrepancies in coding were discussed by the team and resolved by reaching a consensus. For reporting purposes, selected quotes were translated into English by two bilingual translators using translation and back-translation technique. Moreover, we adhered to the Consolidated Criteria for Reporting Qualitative Research (COREQ).

## **2.6 Ethical Considerations**

The ethical approval for conducting our study was obtained from the institutional review board of the (blinded for the peer review) with a reference number (blinded for the peer review). Also, all study procedures were conducted conforming to the ethical standards of the Declaration of Helsinki. The recorded interviews as well as the transcripts were encrypted with a password and kept securely. Moreover, written, and verbal informed consent was obtained from all participants regarding voluntary participation and recording the interviews.

## **3. Results**

Seven themes have emerged from the transcribed data of the 17 interviews as the following:

### **3.1 Theme One: Psychological Response**

The COVID-19 pandemic has forced the students to be in a new educational experience during the enforcement of emergency online education and the closure of higher academic institutions in Jordan. This unprecedented shift in the educational system has forced most students to have various emotional responses. When students were asked to recall how they felt when receiving the news about the implementation of online distance education, they described various feelings. Their feelings were attributed to many reasons as well.

A pharmacy student said:

I just felt happy when I knew that the university will be closed, and all our classes will be delivered virtually...I no longer need to spend more time and money on public transportation...I will have more time to study too

Also, another student who studies at the faculty of language studies expressed being happy due to shifting to online education. The student perceived this as a precautionary measure against COVID-19 and unnecessary interpersonal interactions:

It was great news when I heard that I will not attend on-campus classes because this will reduce face to face communication; thus, avoiding the exposure to the coronavirus

However, an engineering student expressed mixed feelings when receiving the news about closing universities:

...I had a mixed feeling surrounded by fear, anxiety, and some sort of happiness at the same time...I felt that I will be going through an uncertain academic journey

On the contrary, a group of students expressed more negative feelings towards the emergency transition in the educational process. This was mostly attributed to the affection of the usual learning process, especially regarding practical sessions. A student who studies nursing said:

An unexpected situation ...I was supposed to attend the hospital for my practical training...I felt anxious at that time...

Additionally, a student who attends a medical laboratory sciences program stated:

I thought it was good news at the beginning, but with time and all of a sudden, I realized I was not well prepared for the transition

Moreover, a student who attends medical school said:

It was shocking to hear that! I did not know what will happen to my practical sessions in the hospital...I am about to graduate, and this is a very critical period in my academic journey... I am very stressed

## **3.2 Theme Two: Digital Preparedness and Equality**

The transition to distance education was an unprecedented decision. Students have to prepare and equip themselves with digital equipment to meet the requirements of attending their virtual classes. However, this was not easy for many of them. A student who studies psychology said:

I bought a new headset and camera to facilitate the communication and learning experience during my virtual classes...

Also, another student from the faculty of sciences expressed difficulty in preparation for distance education:

Our family has three students at university, and we have only one laptop. You cannot imagine how it feels when we have an overlapping lecture schedule! Using smartphones for virtual classes is not always friendly...this is not suitable

Having digital equipment, and other required accessories for online education was a challenge for students who suffer from financial constraints. A student who studies economics said:

I used to have my laptop, tablet, and smartphone...same as my other siblings in the family...However, many students cannot afford to have all or some of these...governmental support to vulnerable students was not sufficient...This is unfair

Moreover, students were forced to rely solely on digital communication during distance education, and this has forced them to experience an increase in their usage level of virtual platforms. A medical student expressed the following:

I started to be more committed to using my electronic devices during distance education...checking various learning platforms, my email, and many academic groups on social media to be able of managing the required studying duties and assignments...

### **3.3 Theme Three: Technical Competencies and Technostress**

As the process of transition to distance education was unplanned and enforced due to the pandemic situation, many challenges were expected to be faced. One of these challenges was related to technical aspects. The students have used various online platforms such as Microsoft Teams®, Zoom®, and Moodle® to attend their virtual classes, submit assignments, and set for examinations. Most participants expressed that these online utilities were friendly and easy to use, while other students pointed to various challenges. Some of which were the lack of high-quality internet services in certain geographical areas, some platforms need sufficient digital skills to be used, non-sufficient technological competencies of many teachers, and non-sufficient digital resources/machines (e.g., laptop, desktop...etc), especially when having many members who attend online distance education in the same family.

A biology student said:

I regularly use the online platforms provided by my university...these platforms are easy to use considering having a sufficient level of digital literacy

Also, another student from the faculty of dentistry added the following:

*"I am very comfortable with using online platforms, I can mute my microphone and turnoff my camera when no necessary interaction is needed"*

On the other hand, many students expressed that they experienced unfriendly situations when the internet suddenly disconnects, and this might have severe impacts, especially during online exams. A student who attends an early childhood education program said:

This is not right. How could I maintain smooth progress in my learning while being stressed about internet connectivity issues! I heard about a student who failed the exam due to a sudden interruption in the internet connection ...

Moreover, a mathematics student expressed difficulty in attending virtual classes. This was partially attributed to the level of digital skills of some teachers:

Some virtual platforms have a non-friendly user interface that needs high digital skills...Also, some teachers do not know how to use these platforms...they need some training to improve their technical

competencies...

Also, many students have faced difficulties in attending their classes due to the heavy burden on the internet services in the country. An engineering student said:

Imagine when hundreds of thousands of students from various universities in Jordan attend virtual classes at the same time during midday... a huge load on the internet service providers and the losing side is us, the students

### **3.4 Theme Four: Interpersonal Communication**

The COVID-19 pandemic has resulted in a paradigm shift concerning interpersonal communication in the entire world. Due to various confinement and control measures, people including students were forced to maintain physical distancing and to limit face-to-face social interaction. University students were not an exception. Students have used virtual platforms to interact with their peers and teachers during the closure of universities in Jordan. However, this was not a smooth transition, and many students reported interpersonal communication challenges. A medical student said:

Oh my God, communicating with teachers is becoming more difficult...I feel lost due to being enrolled in many virtual groups for various classes...On-campus classes are more suitable

Additionally, another student from the biotechnology program has expressed the following:

...Some teachers responded very late to my emails, while in the university campus I was going to the teacher during office hours for most of my inquiries...

Some students have also described major impacts on communication with their colleagues. A psychology student said:

I experienced a better communication with people during on-campus education...at the university, I have more engagement with my colleagues and teachers. Now in distance education...not enough activities or socialization...this is boring...

Most of the interviewed students referred to a problem related to misuse of learning platforms by some students. A student who attends an engineering program shared the following:

...This is not funny at all! While the transition to distance education is a critical stage amidst the pandemic, some students perceive virtual classes as a place for fun and jokes...Some students were intentionally too noisy with their unmuted microphones...students should take distance education more seriously

On the contrary, some students have more positive experiences with virtual communication. A nursing student said:

...I believe that some teachers have provided some sort of support regarding distance education...They tried to make student-teacher communication easier...They created groups on social media platforms to communicate with us regarding our study materials

### **3.5 Theme Five: Learning Materials**

In this theme, students have disclosed various opinions regarding the quality and quantity of the educational materials provided to them during remote online education. A medical student said:

Sometimes I felt overwhelmed with the number of educational materials provided. The professors try to increase the lectures load in terms of content, believing that students have more time to study during the lockdown...this was different compared to what I experienced in the university campus

Also, an engineering student has had trouble in remote experimental sessions:

The presentations and study materials were somehow not sufficient especially for my practical sessions

Additionally, another student in medical laboratory sciences said:

Most lectures were provided as a PowerPoint presentation or PDF with good visualization. However, some study materials were more advanced than what is supposed to be received during on-campus education... I do not understand the reason behind this

On the contrary, some students felt that the study materials provided during remote online education were sufficient. An English literature student said:

In my opinion and experience, I feel that the quantity and quality of the study materials provided to me were the same as during on-campus education...this is good enough to me

### **3.6 Theme Six: Non-Reliable Evaluation Methods**

In this theme, most of the interviewed students described the evaluation methods and examinations in distance education to be non-reliable. A law student said:

Cheating is a remark of distance education in our country...students can cheat in all remotely conducted exams as there is no reliable method to monitor students' activities during distance examinations

Another student from the faculty of medicine said:

Students are calling each other to solve online exams...how is this supposed to be a quality education?!

As cheating in online exams was described as a remark of online distance education in Jordan, some students experienced a high degree of difficulties in other evaluation methods such as assignments. An engineering student said:

Too many lectures and assignments. I must submit many assignments every week...teachers have realized that many students cheat during remotely conducted online exams, thus, they tried to push the students to prepare more assignments as a better and more reliable evaluation method. I believe this is not working well too

Additionally, a nursing student said:

Students are getting high end-semester grades during online distance education compared to on-campus education and examinations. This warns of a severe deficiency in the credibility and reliability of distance examination methods...a big failure in the monitoring system too

### **3.7 Theme Seven: Opportunities**

Despite the tough transition to online distance education, many students have seen various opportunities that positively impacted their academic journey. A medical student said:

I feel that I have a better engagement with my studies. Now, I have more time to study than that when I had to go to the university campus

Another student from the faculty of language studies described online education as a flexible learning opportunity:

Learning during online distance education is more comfortable...even timing of lectures is flexible too

Moreover, it seems that the transition to online education has enhanced the learning skills and abilities of some students. A student from the faculty of sciences said:

Online education has enhanced my searching skills including using scientific websites in preparing my assignments...I feel that this experience has improved my self-learning skills and abilities

Furthermore, a law student expressed the following:

*“During online distance education, I feel more comfortable as I can dress more comfortably compared to university dressing. Also, I realize that my facial skin is becoming healthier as I am currently avoiding hot weather during my supposed on-campus summer classes...no more on-campus attendance during summer...this is perfect for me”*

## **4. Discussion**

The COVID-19 has overwhelmed many countries due to its high contagiousness and rapid spread as well as the control measures that most countries were forced to implement to mitigate or retard the spread of this disease (Ala'a B. Al-Tammemi, 2020; Wendelboe et al., 2020). This global pandemic has not only resulted in biological or psychological harm, but also in dramatic changes that severely afflicted many sectors and industries globally, including healthcare provision, economy, social life, travel, and education

(Akour, AlMuhaissen, et al., 2021; Akour, Elayeh, et al., 2021; Ala'a B. Al-Tammemi, 2020; Aljaberi et al., 2021; Alrawashdeh et al., 2021; Fares et al., 2021; Morenike O Folayan et al., 2021; Morenike Oluwatoyin Folayan et al., 2021; Garbóczy et al., 2021; Khatatbeh, Alhalaiqa, et al., 2021; Khatatbeh, Khasawneh, et al., 2021; Ramadan et al., 2021)

According to the United Nations (UN), the COVID-19 pandemic has created the most prominent global disruption in education. Nearly, 1.6 billion learners in more than 190 countries have been affected by the COVID-19 pandemic. The closures of educational institutes have affected around 94% of the world's student population with more visible impacts in low- and middle-income countries (United Nations, 2020). Jordan was amongst the first countries in the Arab region to implement strict confinement measures in all sectors to control the spread of COVID-19 in the country (Ala'a B. Al-Tammemi, 2020; Ala'a B. Al-Tammemi et al., 2021; Khatatbeh, 2020, 2021). In the middle of March 2020, all universities were closed as a part of the pandemic response strategy in Jordan. Although there was no preparedness plan for the unprecedented transition to online distance education, the Jordanian government has invested extensive efforts through various ministries to make this emergency academic transition effective and efficient.

Nevertheless, the higher education system in Jordan has an unpleasant history regarding online distance education, and even the equivalency process for many external distance/online degrees was and still is a significant challenge (Akour et al., 2020). Prior to the COVID-19 pandemic, the distance education strategy was not one of the priorities of the Jordanian higher education sector with around 25% or less of university courses were delivered remotely. Therefore, the abrupt transition from traditional face-to-face education to distance education in the Jordanian higher education institutions has created a new challenge for the students as well as the teachers. Our study found that the university students in Jordan have faced many impactful experiences while transiting from on-campus education to online distance one. Many of these experiences have negatively impacted the students similar to what was reported in prior quantitative studies in the country (Akour et al., 2020; Al-Balas et al., 2020; Ala'a B Al-Tammemi et al., 2020). Additionally, the literature shows more negative feedback within developing countries and the Arab region. The sudden switch to online distance education highlighted that this part of the world is not yet ready for this switch.

The overall aim of our current study was to get in-depth view about the lived experiences of university students in Jordan during the emergency academic transition to online learning amid the pandemic crisis. Presenting the voices and feelings of the students using their own words is expected to have a major impact on tackling the strengths and weaknesses of the implemented online education strategy in the country. Consequently, tackling various factors that impacted the students' lived experiences has paramount importance to enhance the current education strategy, by implementing improvements and creating opportunities for a more quality education.

As many students in our study stressed the points related to digital preparedness, equity, and technical challenges, their lived experiences were found to be consistent with what has been reported in previous studies. Some studies provided an insight into the additional inequalities introduced by the online

education system. Most of the reported disadvantages included the financial ability to purchase the needed equipment, such as laptops or desktop computers, high-speed internet, or other tools (Al-Balas et al., 2020; Alsoud & Harasis, 2021; Ibrahim et al., 2021). Moreover, the ability to afford a separate and quiet place to study and attend lectures is related to many factors, such as the number of members in the household, home size, and socio-economic status; thus, providing rich students with more privilege (Alsoud & Harasis, 2021; Ibrahim et al., 2021). The former factors also introduce rural-urban inequality as rural areas tend to be more crowded, with smaller houses and with lower access to the needed equipment and technological infrastructures (Alsoud & Harasis, 2021; Ibrahim et al., 2021).

Decision-makers of the education sector in Jordan are advised to consider the previously described crucial factors in future policies and decisions regarding university education during a crisis. More dedicated efforts in terms of fair, reliable, and credible evaluation and monitoring systems should be also considered.

Our current study has many strengths which are shaped in the following facts (i) Implementing a qualitative approach which helped to gain a comprehensive understanding of the students' lived experiences and opinions, (ii) using a previously published theoretical model to support the framework of our qualitative approach, (iii) using various techniques as suggested by Lincoln and Guba (1985) (Lincoln & Guba, 1985; Nowell et al., 2017) to ensure the trustworthiness of qualitative approach, and lastly (vi) following the Consolidated Criteria for Reporting Qualitative Research (COREQ).

Nevertheless, some limitations need to be acknowledged, including that the interview data represent self-reported states, thus, recall bias should be considered, and participants' body language could not be fully observed due to using a videoconferencing platform to conduct the interviews.

## 5. Conclusion

The COVID-19 pandemic has imposed a significant burden on university students in Jordan. The sudden transition to online distance education was challenging for most participants in our study. Although the degree of resilience and coping in crisis is inherently different between students, various entities under the jurisdiction of academic institutions and decision-makers are considered main contributing factors to the students' lived experiences amid the pandemic crisis. The battle against COVID-19 has been already exhaustive in terms of efforts and resources, therefore, better planning and more sustainable utilization of educational resources have paramount importance in contexts with limited resources.

## Declarations

**Ethics approval and consent to participate:** The protocol of this study was reviewed and approved by the institutional review board of the Deanship of Scientific Research at (XXXXX) with a reference number (XXXXX). Informed consent (written and verbal) was obtained from all participants.

**Consent for publication:** Not Applicable

**Availability of data and materials:** The dataset generated and analyzed in the qualitative interviews is not publicly available due to the potential for individual and organizational privacy to be compromised.

**Competing interests:** The authors declare that they have no competing interests.

**Funding:** This research project did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

**Acknowledgments:** We would like to provide our extreme thanks and appreciation to all study participants

## References

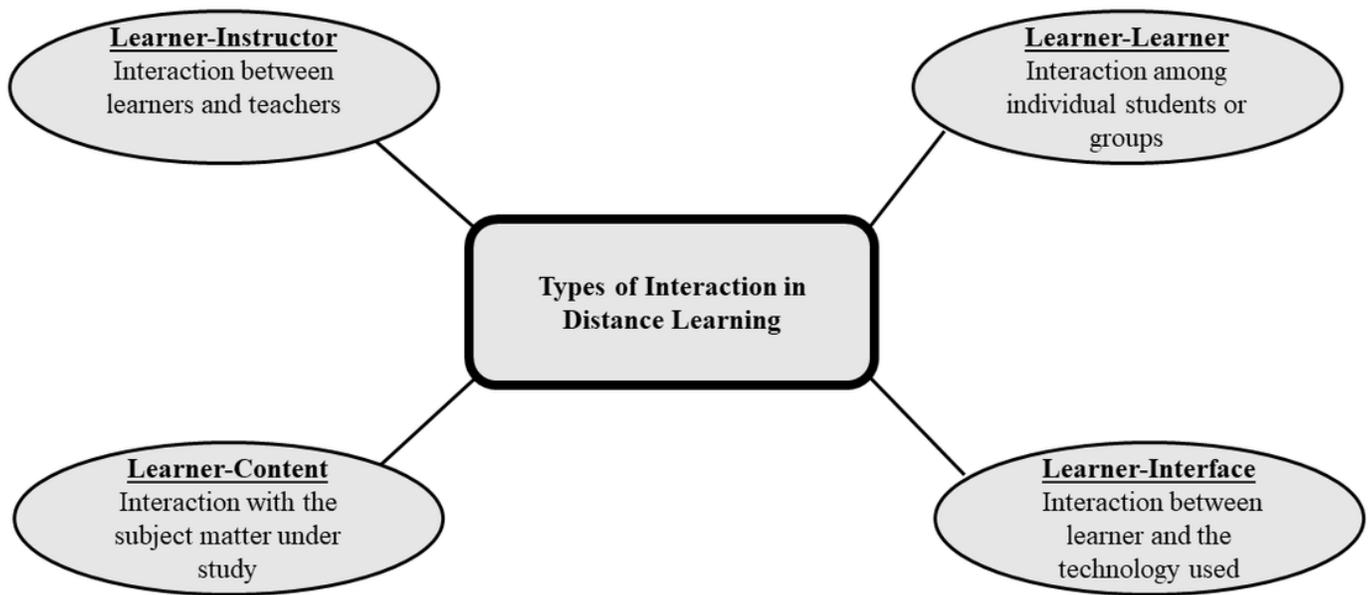
1. Akour, A., Al-Tammemi, A. B., Barakat, M., Kanj, R., Fakhouri, H. N., Malkawi, A., & Musleh, G. (2020). The Impact of the COVID-19 Pandemic and Emergency Distance Teaching on the Psychological Status of University Teachers: A Cross-Sectional Study in Jordan. *The American Journal of Tropical Medicine and Hygiene*, 103(6), 2391–2399. <https://doi.org/10.4269/ajtmh.20-0877>
2. Akour, A., AlMuhaisen, S. A., Nusair, M. B., Al-Tammemi, A. B., Mahmoud, N. N., Jalouqa, S., & Alrawashdeh, M. N. (2021). The untold story of the COVID-19 pandemic: perceptions and views towards social stigma and bullying in the shadow of COVID-19 illness in Jordan. *SN Social Sciences*, 1(9), 240. <https://doi.org/10.1007/s43545-021-00252-0>
3. Akour, A., Elayah, E., Tubeileh, R., Hammad, A., Ya'Acoub, R., & Al-Tammemi, A. B. (2021). Role of community pharmacists in medication management during COVID-19 lockdown. *Pathogens and Global Health*, 1–10. <https://doi.org/10.1080/20477724.2021.1884806>
4. Al-Balas, M., Al-Balas, H. I., Jaber, H. M., Obeidat, K., Al-Balas, H., Aborajoo, E. A. ... Al-Balas, B. (2020). Distance learning in clinical medical education amid COVID-19 pandemic in Jordan: Current situation, challenges, and perspectives. *BMC Medical Education*, 20(1), 1–7. <https://doi.org/10.1186/s12909-020-02257-4>
5. Al-Tammemi, Ala'a, B. (2020). The Battle Against COVID-19 in Jordan: An Early Overview of the Jordanian Experience. *Frontiers in Public Health*, 8, 188. <https://doi.org/10.3389/fpubh.2020.00188>
6. Al-Tammemi, A. B., Tarhini, Z., & Akour, A. (2021). A swaying between successive pandemic waves and pandemic fatigue: Where does Jordan stand? *Annals of Medicine and Surgery*, 65, 102298. <https://doi.org/10.1016/j.amsu.2021.102298>
7. Al-Tammemi, A. B., Akour, A., & Alfalah, L. (2020). Is It Just About Physical Health? An Online Cross-Sectional Study Exploring the Psychological Distress Among University Students in Jordan in the Midst of COVID-19 Pandemic. *Frontiers in Psychology*, 11, 562213. <https://doi.org/10.3389/fpsyg.2020.562213>
8. Al Nsour, M., Bashier, H., Al Serouri, A., Malik, E., Khader, Y., Saeed, K. ... Majeed, Y. (2020). The Role of the Global Health Development/Eastern Mediterranean Public Health Network and the Eastern Mediterranean Field Epidemiology Training Programs in Preparedness for COVID-19. *JMIR Public Health and Surveillance*, 6(1), e18503. <https://doi.org/10.2196/18503>

9. Aljaberi, M. A., Alareqe, N. A., Qasem, M. A., Alsalahi, A., Noman, S., Al-Tammemi, A., & Ibrahim, M., M. I (2021). Rasch Modeling and Multilevel Confirmatory Factor Analysis for the Usability of the Impact of Event Scale-Revised (IES-R) During the COVID-19 Pandemic. *SSRN PrePrints*.  
<https://doi.org/10.2139/ssrn.3815681>
10. Alrawashdeh, H. M., Al-Tammemi, A. B., Alzawahreh, M. K., Al-Tamimi, A., Elkholy, M., Al Sarireh, F. ... Ghoul, I. (2021). Occupational Burnout and Job Satisfaction Among Physicians in Times of COVID-19 Crisis: A Convergent Parallel Mixed-Method Study. *BMC Public Health*, 21, 811.  
<https://doi.org/10.1186/s12889-021-10897-4>
11. Alsoud, A. R., & Harasis, A. A. (2021). The impact of covid-19 pandemic on student's e-learning experience in Jordan. *Journal of Theoretical and Applied Electronic Commerce Research*, 16(5), 1404–1414. <https://doi.org/10.3390/jtaer16050079>
12. Braun, V., & Clarke, V. (2006). Qualitative Research in Psychology Using thematic analysis in psychology Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
13. Chen, Y. J. (2001). Dimensions of transactional distance in the world wide web learning environment: a factor analysis. *British Journal of Educational Technology*, 32(4), 459–470.  
<https://doi.org/10.1111/1467-8535.00213>
14. Department of Statistics - Jordan (2020). *Population Count*. [Online]. <http://dosweb.dos.gov.jo/>
15. El Said, G. R. (2021). How Did the COVID-19 Pandemic Affect Higher Education Learning Experience? An Empirical Investigation of Learners' Academic Performance at a University in a Developing Country. *Advances in Human-Computer Interaction*, 2021. <https://doi.org/10.1155/2021/6649524>
16. Fares, Z. E. A., Al-Tammemi, A. B., Gadelrab, F., Lin, H., Aljaberi, C. Y., Alhuwailah, M. A., A., & Roubi, M. L. (2021). Arabic COVID-19 Psychological Distress Scale: development and initial validation. *BMJ Open*, 11(6), e046006. <https://doi.org/10.1136/bmjopen-2020-046006>
17. Fawaz, M., & Samaha, A. (2021). E-learning: Depression, anxiety, and stress symptomatology among Lebanese university students during COVID-19 quarantine. *Nursing Forum*, 56(1), 52–57.  
<https://doi.org/10.1111/nuf.12521>
18. Folayan, M. O., Ibigbami, O., Tantawi, E., Brown, M., Aly, B., Ezechi, N. M. ... Nguyen, J., A. L (2021). Factors Associated with Financial Security, Food Security and Quality of Daily Lives of Residents in Nigeria during the First Wave of the COVID-19 Pandemic.. In *International Journal of Environmental Research and Public Health (Vol, 18(15))*, <https://doi.org/10.3390/ijerph18157925>
19. Folayan, M., Oluwatoyin, Ibigbami, O., Brown, B., El Tantawi, M., Uzochukwu, B., Ezechi, O. C. ... Nguyen, A. L. (2021). Differences in COVID-19 Preventive Behavior and Food Insecurity by HIV Status in Nigeria. *AIDS and Behavior*. <https://doi.org/10.1007/s10461-021-03433-3>
20. Garbóczy, S., Szemán-Nagy, A., Ahmad, M. S., Harsányi, S., Ocsenás, D., Rekenyi, V. ... Kolozsvári, L. R. (2021). Health anxiety, perceived stress, and coping styles in the shadow of the COVID-19. *BMC Psychology*, 9(1), 53. <https://doi.org/10.1186/s40359-021-00560-3>

21. Hussein, E., Daoud, S., Alrabaiah, H., & Badawi, R. (2020). Exploring undergraduate students' attitudes towards emergency online learning during COVID-19: A case from the UAE. *Children and Youth Services Review*, 119, 105699. <https://doi.org/10.1016/j.chidyouth.2020.105699>
22. Ibrahim, A. F., Attia, A. S., Bataineh, A. M., & Ali, H. H. (2021). Evaluation of the online teaching of architectural design and basic design courses case study: College of Architecture at JUST, Jordan. *Ain Shams Engineering Journal*, 12(2), 2345–2353. <https://doi.org/10.1016/j.asej.2020.10.006>
23. Khalil, R., Mansour, A. E., Fadda, W. A., Almisnid, K., Aldamegh, M., Al-Nafeesah, A. ... Al-Wutayd, O. (2020). The sudden transition to synchronized online learning during the COVID-19 pandemic in Saudi Arabia: A qualitative study exploring medical students' perspectives. *BMC Medical Education*, 20(1), 1–10. <https://doi.org/10.1186/s12909-020-02208-z>
24. Khatatbeh, M. (2020). Efficacy of Nationwide Curfew to Encounter Spread of COVID-19: A Case From Jordan. In *Frontiers in Public Health* (Vol. 8, p. 394). <https://doi.org/10.3389/fpubh.2020.00394>
25. Khatatbeh, M. (2021). The Battle Against COVID-19 in Jordan: From Extreme Victory to Extreme Burden. *Frontiers in Public Health*, 8, 1038. <https://doi.org/10.3389/fpubh.2020.634022>
26. Khatatbeh, M., Al-Maqableh, H. O., Albalas, S., Ajlouni, S., Al, A'aqoulah, A., Khatatbeh, H. ... Al-Tammemi, A. B. (2021). Attitudes and Commitment Towards Precautionary Measures Against COVID-19 amongst the Jordanian Population: A Large-Scale Cross-Sectional Survey. *Frontiers in Public Health*. <https://doi.org/10.3389/fpubh.2021.745149>
27. Khatatbeh, M., Alhalaiqa, F., Khasawneh, A., Al-Tammemi, A. B., Khatatbeh, H., Alhassoun, S., & Omari, A., O (2021). The Experiences of Nurses and Physicians Caring for COVID-19 Patients: Findings from an Exploratory Phenomenological Study in a High Case-Load Country.. In *International Journal of Environmental Research and Public Health* (Vol, 18(17), <https://doi.org/10.3390/ijerph18179002>
28. Khatatbeh, M., Khasawneh, A., Hussein, H., Altahat, O., & Alhalaiqa, F. (2021). Psychological Impact of COVID-19 Pandemic Among the General Population in Jordan. *Frontiers in Psychiatry*, 12, 618993. <https://doi.org/10.3389/fpsy.2021.618993>
29. Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage
30. Moore, M. G. (1989). Three types of interaction. *American Journal of Distance Education*, 3(2), 1–7. <https://doi.org/10.1080/08923648909526659>
31. Moore, M. G. (2018). The Theory of Transactional Distance. *Handbook of Distance Education*. Routledge. <https://doi.org/10.4324/9781315296135-4>
32. Moore, M. G., & Kearsley, G. (1996). *Distance Education: A Systems View of Online Learning*. Wadsworth
33. Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic Analysis: Striving to Meet the Trustworthiness Criteria. *International Journal of Qualitative Methods*, 16(1), <https://doi.org/10.1177/1609406917733847>
34. Ramadan, M., Hasan, Z., Saleh, T., Jaradat, M., Al-hazaimah, M., Hani, B. ... Kheirallah, K. (2021). Beyond knowledge: Evaluating the practices and precautionary measures towards COVID-19

- amongst medical doctors in Jordan. *International Journal of Clinical Practice*, 75(6), e14122. <https://doi.org/10.1111/ijcp.14122>
35. Sindiani, A. M., Obeidat, N., Alshdaifat, E., Elsalem, L., Alwani, M. M., Rawashdeh, H. ... Tawalbeh, L. I. (2020). Distance education during the COVID-19 outbreak: A cross-sectional study among medical students in North of Jordan. *Annals of Medicine and Surgery*, 59, 186–194. <https://doi.org/10.1016/j.amsu.2020.09.036>
36. Suliman, W. A., Abu-Moghli, F. A., Khalaf, I., Zumot, A. F., & Nabolsi, M. (2021). Experiences of nursing students under the unprecedented abrupt online learning format forced by the national curfew due to COVID-19: A qualitative research study. *Nurse Education Today*, 100, 104829. <https://doi.org/10.1016/j.nedt.2021.104829>
37. UNDP (2021). *Arab countries respond to COVID-19: Heightening Preparedness Integrated Multi-sectoral Responses Planning for Rapid Recovery*. [Online]. <https://www.arabstates.undp.org/content/rbas/en/home/coronavirus.html>
38. United Nations (2020). *Policy Brief: Education during COVID-19 and beyond*. [Online]. [https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2020/08/sg\\_policy\\_brief\\_covid-19\\_and\\_education\\_august\\_2020.pdf](https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2020/08/sg_policy_brief_covid-19_and_education_august_2020.pdf)
39. Wendelboe, A. M., Miller, A., Drevets, D., Salinas, L., Miller, E. J., Jackson, D. ... Raines, J. (2020). Tabletop exercise to prepare institutions of higher education for an outbreak of COVID-19. *Journal of Emergency Management*, 18(2), 183–184. <https://doi.org/10.5055/jem.2020.0463>

## Figures



**Figure 1**

The four types of interactions that occur in distance learning. Moore's theory of transactional distance was adopted as a framework in our qualitative approach.

## Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- [Additionalfile1InterviewGuide.pdf](#)