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Jordanian University Students' Attitudes toward Online Learning during the COVID-19 Pandemic and Lockdowns: Obstacles and Solutions

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Abstract. This study aimed to investigate Jordanian university students' attitudes toward online learning during the COVID-19 pandemic and lockdowns, shed light on the obstacles students encounter in online learning, and suggest possible solutions. A questionnaire designed by the researchers was used to elicit responses from a study sample consisting of 195 students from the Department of English Language and Literature at the University of Jordan – Aqaba. As this is an attitudinal study, the survey questionnaire was designed to elicit student responses on the following domains: gender, seniority level, socioeconomic status, training and orientation for using eLearning platforms, and their attitudes, whether positive or negative, toward online learning. Results of this quantitative research showed that student attitudes toward online learning are generally negative. The majority of the respondents reported that they prefer face-to-face classroom instruction over online learning because it gives them direct contact with the instructors. Furthermore, results revealed statistically significant differences amongst students attributed to their gender, whereas no differences were found with regards to their seniority of study, socioeconomic status, and the eLearning platform they prefer to use. The study concludes by proposing some pedagogical recommendations.

Keywords: attitudes; online learning; COVID-19 pandemic; University of Jordan – Aqaba

1. Introduction

Before the COVID-19 pandemic started in mid-March 2020, Jordanian university students were not accustomed to having lectures and assignments online. In response to the pandemic, the Jordanian government through complete and

partial lockdowns in all governorates in the country implemented strict health and safety measures to prevent the disease from spreading widely.

With the outbreak of COVID-19 around the globe, many countries, including Jordan, have shifted education from on-campus face-to-face to online education. This sudden change in the learning/teaching process has garnered positive and negative attitudes from both university students and instructors (Agung, Surtikanti & Quinones, 2020; Febrianto, Mas'udah, & Megasari, 2020). This study therefore explores Jordanian students' attitudes toward online learning in light of the following variables: gender, level of seniority, availability of technological devices, socioeconomic status, and training and orientation for using eLearning platforms.

Whilst blended learning had been encouraged by the University of Jordan even before the COVID-19 pandemic, neither students nor instructors have been provided with enough training on how to use online teaching platforms such as Moodle, Zoom, Microsoft Teams, Google Classroom, and Microsoft Forms. Although beyond the scope of the current study, synchronous interactions during online lectures help students majoring in English and other foreign languages improve their four language skills, speaking, listening, reading, and writing. In online-learning settings, students in all university courses are requested to complete many assignments and to submit them online by meeting certain deadlines. These assignments help the students improve their writing skills, increase their typing speed, become professional in using a grammar checker in Word documents, and above all, get accustomed to submitting assignments on time.

The shift to eLearning is beneficial for shy students who do not take part in classroom discussions (Beauvois & Eledge, 1996). Introverted foreign language learners who fear to take part in face-to-face classroom discussions feel more at ease whilst speaking English with their instructors and peers in online-learning platforms because online learning provides such learners with an anxiety-free environment. Instant messaging (IM) and video chat (VC) through eLearning platforms such as Moodle, Zoom, Microsoft Teams, and many others, in addition to social media websites, provide English Foreign Language (EFL) learners with real-life interactions with their instructors. Thus, eLearning takes the form of private tutoring because it is based on interpersonal interactions between the instructor and students via webcams, microphones, and earphones.

Online learning during the COVID-19 pandemic and lockdowns has received much attention in literature on synchronous and asynchronous computer-mediated communication (Agung et al., 2020; Febrianto et al., 2020). In fact, even prior to the worldwide spread of COVID-19, many studies have proved the pedagogical benefits of computer-assisted language learning (CALL), such as decreasing learner anxiety and providing shy learners with a safe learning environment (Beauvois & Eledge, 1996). Many studies have shown, for instance, that email exchanges in the foreign language can help learners improve their writing competency (Mahfouz, 2010).

Online learning should include all modes of synchronous and asynchronous interactions between instructors and students and between students and their classmates so as to become an effective alternative pedagogical platform to the face-to-face classroom setting. In fact, several studies have investigated the effectiveness of online learning as a bridge to face-to-face, traditional classroom settings (Altenaiji, 2005; Beauvois & Eledge, 1996; Bulut & AbuSeileek, 2007; Warschauer, 1996).

Most online-learning attitudinal studies conducted worldwide during the COVID-19 pandemic have been largely positive (Agung et al., 2020; Febrianto et al., 2020; Coolican, Borras & Strong, 2020; Kalloo, Mitchell & Kamalodeen, 2020; König, Daniela & Glutsch, 2020). Even before the pandemic, students majoring in English Language and Literature in many Arab universities have testified of the multiple benefits of synchronous interaction. Amongst these are that it remarkably improved their receptive and productive language skills (Bulut & AbuSeileek, 2007); boosted their self-confidence in speaking the foreign language (Akbulut, 2008); and increased their motivation to learn the language because it caters to students' learning styles and personality types (Beauvois & Eledge, 1996). In addition, synchronous interaction made the language-learning process pleasurable because it takes place in a stress-free and informal setting outside the rigid classroom environment (Stevens, 1991); improved students' computer literacy as a result of their regular texting with their instructors and classmates (Altenaiji, 2005); and tremendously improved their writing skills and keyboarding speed (Mahfouz, 2010).

2. Problem Statement and Research Questions

Recent research on eLearning during the COVID-19 pandemic worldwide has reported on the benefits of online platforms as an alternative to face-to-face classroom instruction (Agormedah, Henaku, Ayite & Ansah, 2020; Agung et al., 2020; Coolican et al., 2020; Febrianto et al., 2020; Kalloo et al., 2020; König et al., 2020; Shawaqfeh et al., 2020). However, students have reported encountering many obstacles during online lectures, namely internet interruptions and instability, and their inability to buy laptops, mobile phones and internet bundles necessary for their eLearning.

The study attempts to elicit responses to the following research questions:

1) What are the demographic profiles of the respondents in terms of gender, age, socioeconomic status, seniority level, qualification, and preferred eLearning platforms?
2) What are Jordanian students' attitudes toward online learning during the COVID-19 pandemic and lockdowns?
3) What are the obstacles students at the University of Jordan – Aqaba encountered in their online learning during the COVID-19 pandemic and lockdowns?
4) Are there any statistically significant differences between students' attitudes toward online learning during the COVID-19 pandemic and lockdowns that can be attributed to the variables of gender, socioeconomic status, seniority level, and preference of eLearning platforms?

3. Significance of the Study

There is an abundance of studies worldwide examining online learning during the COVID-19 pandemic. However, there is a scarcity of attitudinal studies exploring its effects on the learning process and achievement of Jordanian university students. As such, this singles out this study as a significant contribution to the current literature on online learning.

4. Literature Review

The twenty-first century has witnessed an extraordinary worldwide spread of cyberculture and distance education. Nowadays, students and instructors can use both multimodal synchronous and asynchronous platforms and blended learning to facilitate the learning/teaching process. A few studies have discussed the sudden shift from on-campus face-to-face learning to online learning, emphasizing the pros and cons of this unprecedented shift. In Ghana, Agormedah et al. (2020) designed a survey questionnaire through which they investigated the effect of online teaching on 467 Ghanaian university students. The researchers found that respondents had a positive attitude toward online learning despite having reported several challenges that negatively affected their learning progress. The challenges these Ghanaian students encountered included: the scarcity of laptops, cell phones and tablets resulting from the low socioeconomic status of some needy students; having no or limited access to internet; and their unpreparedness for online learning. Similarly, Agung et al. (2020) conducted research on 225 Indonesian English-major students at Pamane Talino College of Education. They investigated students' attendance of and participation in online lectures, how they receive course syllabi and assignments, and their perceptions of the various eLearning platforms they use. Respondents reported that they encountered many obstacles during their online learning, including internet interruptions in eLearning platforms and inaccessibility of learning materials and assignments in such platforms.

In Indonesia, Febrianto et al. (2020) conducted an attitudinal study to explore the effects of online learning on 274 college students on Madura Island. The students reported having encountered several challenges during online lectures, such as frequent internet interruptions in eLearning platforms, the absence of any governmental financial support for needy students who do not have laptops or mobile phones or cannot buy internet bundles, and the unavailability of facilities such as computer labs. Interestingly, a large number of these Indonesian students had negative perceptions toward online learning.

Shawaqfeh et al. (2020) conducted an attitudinal study using a survey questionnaire to explore the attitudes of students at King Saud Bin Abdulaziz University for Health Sciences toward online learning, their preparedness for online instruction, and the obstacles they face in online learning. Results showed that students had positive attitudes toward online learning. In addition, they praised the preparedness of both faculty and students for online learning during the Coronavirus pandemic and the financial support given to university faculty and students to facilitate the progress of the online learning/teaching process. Nevertheless, approximately 34% of the respondents reported having

encountered many obstacles negatively influencing their online learning, such as lack of motivation to attend online lectures. Some students who live in remote areas complained of the lack of network coverage in their houses or frequent internet interruptions.

Many of the attitudinal studies discussed in this literature review therefore share similar concerns, such as instructors and students' insufficient or lack of training on how to use the eLearning platforms, unavailability of internet access and interruptions, and lack of governmental financial support and facilities required for the smooth progress of online learning. Conversely, Kawaguchi-Suzuki, Nagai, Akonoghrere and Desborough (2020) reported that to facilitate online learning, the Japanese government offered pharmacy students a tuition reduction or even a complete waiver, and granted them loans for the purchase of laptops and other information and communication technology (ICT) devices for online lectures.

Many global attitudinal studies have explored students' reactions to online learning during the Coronavirus pandemic. However, very few researchers have shifted their focus to educators and university professors and how they manage to deal with online teaching without much training on how to use eLearning platforms for giving lectures and assignments and administering examinations online. König et al. (2020) investigated how teachers in Germany have easily shifted to online teaching. The researchers showed that teachers who frequently maintained social contact with their students and their students' parents during the COVID-19 pandemic and lockdowns showed positive perceptions of online education. Moreover, their results also revealed that teachers with outstanding potential factors, including high computer literacy, excellent pedagogical technological skills, and thorough training on the eLearning platforms, reported positive attitudes toward online teaching.

Coolican et al. (2020) investigated instructors and educators' perceptions of the sudden shift to online learning as a result of the Coronavirus pandemic in four colleges in the San Nicolas District in Buenos Aires Province, Argentina. Through a survey questionnaire and personal interviews with the study participants, the researchers aimed to explore their attitudes toward their adaptation to online teaching and the challenges they encounter in using the eLearning platforms. They found that although teachers and educators were able to adapt to the sudden shift to online teaching, they reported having encountered many challenges, including the inaccessibility to technology necessary for online teaching and the inability to use eLearning platforms to upload and grade assignments. Likewise, Kalloo et al. (2020) investigated the administrative policies of the University of the West Indies in Trinidad and Tobago regarding facilitating the shift to online learning during the COVID-19 pandemic and lockdowns. Through survey questionnaires and personal interviews with education policy makers and faculty teaching-staff members, they discovered the most important factors that helped facilitate the instructors' easy shift and quick adaptation to online instruction during the COVID-19 crisis. These include the instructors' sense of community

and maintaining social contacts online with students, and their technological preparedness, high motivation, and readiness.

Attitudinal studies toward online learning were, in fact, conducted long before the COVID-19 pandemic had occurred. Many studies have reported on the benefits of multimodality in online learning as it entails that students and instructors use all modes of communication in the learning process (Kress, 2000). Altenaiji's (2005) study showed that eLearning platforms enhanced students' sense of community and developed their computer literacy.

It should be noted that many studies have proved that the multimodal nature of eLearning platforms categorized under Synchronous Computer-Mediated Communication (SCMC) makes such pedagogical tools resemble face-to-face communication in almost all aspects. Sotillo (2000) pointed out that SCMC discourse functions seem very ''similar to the types of interactional modifications found in face-to-face conversations'' (p. 82). In addition, several studies have reported that synchronous texting in eLearning platforms improves students' writing skills (O'Connor, 2005) and computer literacy (Simpson, 2005).

5. Related Literature in the Jordanian Context

Whilst there is a lack of studies that have investigated online learning in Jordanian higher education during the COVID-19 pandemic, some researchers have studied its merits and demerits. Alameri, Masadeh, Hamadallah, Ismail and Fakhouri (2020) used a questionnaire to survey University of Jordan students' perceptions of online learning. The majority of the respondents showed positive attitudes toward online learning, stressing the preparedness of the University of Jordan to the sudden shift to eLearning for both students and instructors. The researchers particularly discussed the benefits of using eLearning platforms such as Zoom, Microsoft Teams, and Moodle. These platforms, they maintained, facilitate interactive learning and help students develop self-study skills.

Whilst students' responses have been explored, instructors' responses to the sudden shift to online learning have been almost overlooked. However, Haidar and Al-Salman (2020) conducted a quantitative research analysis gathering university instructors' responses from six public and private universities in Jordan. The study sample included 432 respondents. Results showed that whilst online learning was effective and helped both instructors and students develop new teaching and learning skills, many obstacles were encountered regarding insufficient orientation with eLearning platforms and preparedness for online learning and teaching. Therefore, the researchers recommended that higher education institutions should provide training programs for both instructors and students to facilitate online learning. They also suggested that technological resources such as laptops should be made available for both university instructors and students to help advance and facilitate the online teaching/learning process.

Blended learning is an eLearning modality that combines online teaching with on-campus face-to-face training (Barquero, 2020). The sudden outbreak of COVID-19 in Jordan and the government's subsequent restrictions and lockdowns have put

pressure on Jordanian universities to implement online learning during the pandemic and to use blended learning as it continues and even after it is over. Oweis (2018) examined a group of 34 students studying English at the German Jordanian University. Participants were divided into control and experimental groups. The study concluded that the experimental group had achieved better results and learning outcomes compared to the control group after implementing blended learning.

6. Methodology

6.1 Study sample

The study sample included 195 students from the Department of English Language and Literature at the University of Jordan – Aqaba who volunteered to respond to the survey questionnaire.

6.2 Research instrument

A survey questionnaire consisting of 22 items and designed by the researchers was distributed amongst the study sample. The researchers statistically analyzed the respondents' responses pertaining to a) their personal information, such as gender, seniority of study at university, socioeconomic status, the possession of a laptop or mobile phone, and the online-learning platform they prefer to use; and b) their attitudes toward online learning during the COVID-19 pandemic and lockdowns.

6.3 Validity and reliability of the research instrument

The questionnaire was based on a pilot test administered to a limited number of respondents randomly selected from the study sample. The researchers further checked the content validity and internal reliability of the survey questionnaire items by conducting personal interviews with some students regarding their attitudes toward online learning and the obstacles they encounter. Additionally, to further ensure the instrument's validity and reliability, the questionnaire was sent to three professional referees for proofreading and editing the questions. Moreover, the researchers asked the respondents to respond to the questionnaire items twice with a one-week interval between each attempt. This was done to test and retest the reliability of the questionnaire, measure the internal consistency of items eliciting same factors to check if the same responses were elicited, and to ensure that respondents did not answer the questions arbitrarily.

7. Administration Procedures and the Questionnaire

7.1 Data analysis

The researchers applied the statistics software SPSS-21 to analyze the questionnaire data. The mean score for each item was computed in comparison to a hypothesized neutral mean score of 3 that pinpoints the questions engendering positive or negative attitudes, exceeding chance answers. In addition, the researchers calculated the mean score for all respondents' responses on all items of the questionnaire to reveal whether they expressed general positive or negative attitudes toward online learning. To investigate any statistically significant differences between the respondents' attitudes toward online learning attributed to their gender, seniority of study at university, and socioeconomic status, the

one-way analysis of variance (ANOVA), the Fisher test and t-test for the independent sample were administered.

7.2 Respondents' demographic profiles

To answer the first research question, regarding the respondents' demographic profile, the researchers calculated the mean scores, standard deviations, t-test and one-way ANOVA through a descriptive analysis, with the aim of investigating students' attitudes toward online learning pertaining to all the study variables. Statistical interpretations of the survey questionnaire revealed that the majority of the study respondents were female students, with a participation percentage of 81.5% of the total study sample, whereas the male respondents constituted the remaining percentage (Table 1).

Table 1: Distribution frequency of the respondents according to their gender

	Frequency	Percentage
M	36	18.5
F	159	81.5
Total	195	100.0

Regarding respondents' age group, the majority of the study sample were from the young group, with ages ranging between 18 and 29 years, constituting 97.4% of the study sample (Table 2).

Table 2: Distribution frequency of the respondents according to their age

	Frequency	Percentage
18-29	190	97.4
30-39	3	1.5
40-49	2	1.0
Total	195	100.0

With regards to the respondents' source of income necessary for paying tuition fees, the majority of respondents (72.8%) depended largely on various government grants (Table 3). Respondents paying tuitions through parental financial support ranked second (22.1%).

Table 3: Distribution frequency of the respondents according to their source of income

	Frequency	Percentage
Government grant	142	72.8
Student loan	5	2.6
Self-employed	4	2.1
Helped by parents	43	22.1

	Total	194	99.5
Missing	System	1	0.5
Total		195	100.0

Table 4 shows in which groups respondents were classified according to their household income. The largest income group was the group earning 500 USD or less (33.8%), followed by the group earning 800 USD or less (23.6%), followed by the income group earning 1000 USD or more (22.6%).

Table 4: Distribution frequency of respondents according to their household income (per month)

		Frequency	Percentage
	100 USD or less	7	3.6
	200 USD or less	23	11.8
	500 USD or less	66	33.8
	800 USD or less	46	23.6
	More than 1000 USD	44	22.6
	Total	186	95.4
Missing	System	9	4.6
Total		195	100.0

Respondents were also categorized according to their level of seniority (Table 5). Amongst the study respondents, sophomore students constituted the largest percentage (35.4%).

Table 5: Distribution frequency of respondents according to their seniority of study at university

	Frequency	Percentage
Freshman	34	17.4
Junior	48	24.6
Sophomore	69	35.4
Senior	44	22.6
Total	195	100.0

The next demographic category in which respondents were divided was qualification. Table 6 shows that the majority of the respondents (88.2%) were undergraduate students.

Table 6: Distribution frequency of respondents according to their qualification

	Frequency	Percentage
Diploma	10	5.1
B.A.	172	88.2

	M.A.	4	2.1
	Ph.D.	2	1.0
	Total	188	96.4
Missing	System	7	3.6
Total		195	100.0

Table 7 shows that the majority of the respondents (76.9%) reported that they preferred on-campus teaching compared to online teaching (22.6%). This could be due to the high cost of laptops and internet bundles required for eLearning and the fact that students are burdened with too many assignments for each course they study every semester.

Table 7: Distribution frequency of respondents according to the type of teaching they prefer

		Frequency	Percentage
	Online teaching	44	22.6
	On-campus teaching	150	76.9
	Total	194	99.5
Missing	System	1	0.5
Total		195	100.0

Respondents also responded on what electronic devices they use for eLearning (Table 8). The results revealed that 51.8% of the respondents use only mobile phones, whereas 33.8% use laptops and mobile phones.

Table 8: Distribution frequency of respondents according to the electronic devices they use in eLearning

	Frequency	Percentage
Laptop; mobile phone	66	33.8
Laptop; desktop; mobile phone	3	1.5
Desktop; mobile phone	2	1.0
Mobile phone; iPad	2	1.0
Mobile phone	101	51.8
Desktop	2	1.0
Laptop	14	7.2
iPad	3	1.5
Desktop; laptop	1	0.5
Others	1	0.5
Total	195	100.0

Students' excessive dependence on mobile phones in online learning is due to the high cost of laptops and other electronic devices whose prices have drastically increased as a result of the high demand on laptops in the local Jordanian market

during the COVID-19 pandemic. The financial challenges of buying a new or even used laptop or having access to monthly internet bundles are shared by almost all university students regardless of their source of income, gender, and seniority of study. During the COVID-19 pandemic and lockdowns in Jordan, many people, especially those working on a daily wage basis, have lost their sources of income. As a result, they cannot support their university children financially and cannot afford to buy a laptop and internet bundles for each one of them.

Students' preference for traditional on-campus university education over online learning is due to many factors, of which the most important is the unpreparedness of both students and instructors for the sudden shift to online learning. Some students and even university professors lack the proper training on how to use eLearning platforms such as Microsoft Teams, Zoom, Moodle, Facebook Messenger, Skype, and Microsoft Forms used for administering examinations.

In the initial stage of the COVID-19 pandemic, some universities lacked the infrastructure, facilities, and staff needed for effective online learning and some students were financially unable to buy laptops and internet bundles. Some Jordanian families have many children studying at schools and universities, and therefore many users use the same allocated amount of internet bundles to attend lectures online. This causes interruptions in the internet and consequently negatively affects students' learning. Moreover, many universities do not provide any financial support to needy students to buy laptops or to have internet access. The relatively mediocre level of financial support the Ministry of Education provides to needy students in low-income areas can also be considered as an obstacle to the facilitation of online learning. Finally, the pressure on internet-coverage networks at peak hours when students both at school and university levels are having classes online poses another problem for eLearning.

Nevertheless, the situation of online learning in Jordan has improved very fast and is yielding fruitful results. University professors and instructors have been given sufficient training on how to use eLearning platforms, how to upload and grade assignments, and how to administer their examinations online. Many low-income students have been given free laptops and internet access by individual donors, the Ministry of Higher Education and Scientific Research, and the Ministry of Education. By having daily lectures and assignments online, students have also been independently trained to use eLearning platforms. Universities and schools throughout the country have significantly improved their internet-network infrastructure, facilities, and laboratories to cope with the current situation.

8. Jordanian Students' Attitudes toward Online Learning

8.1 Hypothesis test

To answer the second research question, regarding students' attitudes toward online learning, the researchers tested four study hypotheses, discussed next.

8.2 Student's t-test

The independent sample t-test is applied when two independent samples and two groups of individuals are compared.

For the t-test, the first null hypothesis (**H0 1**) was: There are no statistically significant differences in students' attitudes toward online learning during the COVID-19 pandemic that can be attributed to gender.

The first alternative hypothesis (**Ha 1**) was: There are statistically significant differences in students' attitudes toward online learning during the COVID-19 pandemic that can be attributed to gender.

Based on the t-test (Table 9), H0 1 is rejected. This is because t = -2.17, and the exact probability test's p-value (0.03) is lower than 5% (Table 9). However, Ha 1 is accepted, which shows that there are statistically significant differences between students' attitudes toward online learning attributed to gender and in favor of the female students. This could be due to the fact that female university students may understand and use technological devices better than male students. Female students are also more homely and domestic than male students, who opt to have part-time jobs during the COVID-19 pandemic in addition to studying at university.

Table 9: Independent samples test, hypothesis test 1

		Levene's test for equality of variances		**t-Test for equality of means**						
									95% confidence interval of the difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference	Lower	Upper
Average	Equal variances assumed	0.308	0.580	-2.174	193	0.031	-0.22471	0.10334	-0.42854	-0.02088
	Equal variances not assumed			-2.307	55.788	0.025	-0.22471	0.09742	-0.41988	-0.02954

8.3 Fisher test (F)

Null hypothesis 2 (**H0 2**) was: There are no statistically significant differences between students' attitudes toward online learning attributed to their level of seniority at university.

Alternative hypothesis 2 (**Ha 2**) was: There are statistically significant differences between students' attitudes toward online learning attributed to their level of seniority at university.

Based on the Fisher test through the one-way ANOVA, H0 2 is accepted. The value of F was poor statistically at a significance level of 5% (Table 10). This is because the exact probability value of the test, which is equal to 51, is much greater than 5%.

Table 10: Hypothesis test 2

Average	Sum of squares	df	Mean square	F	Sig.
Between groups	0.736	3	0.245	0.765	0.515
Within groups	61.251	191	0.321		
Total	61.987	194			

Null hypothesis 3 (**H0 3**) was: There are no statistically significant differences between students' attitudes toward online learning attributed to their source of income.

Alternative hypothesis 3 (**Ha 3**) was: There are statistically significant differences between students' attitudes toward online learning attributed to their source of income.

Based on the Fisher test, H0 3 cannot be rejected and should be accepted because the exact probability value of the test (F-Sig) is greater than 5%, as it reached 0. 246 (Table 11).

Table 11: Hypothesis test 3

Average	Sum of squares	df	Mean square	F	Sig.
Between Groups	1.312	3	0.437	1.394	0.246
Within Groups	59.604	190	0.314		
Total	60.917	193			

Null hypothesis 4 (**H0 4**) was: There are no statistically significant differences between students' attitudes toward online learning attributed to their household income with regards to the availability of electronic devices.

Alternative hypothesis 4 (**Ha 4**) was: There are statistically significant differences between students' attitudes toward online learning attributed to their household income with regard to the availability of electronic devices.

Based on the Fisher test, H0 4 cannot be rejected but should be accepted because the exact probability value of the test (F-Sig) is much greater than 5%, as it reached 0.991 (Table 12).

Table 12: One-way ANOVA, hypothesis test 4

Average	Sum of squares	df	Mean square	F	Sig.
Between groups	0.089	4	0.022	0.069	0.991
Within groups	58.566	181	0.324		
Total	58.655	185			

9. Discussion of Findings

To answer the third research question, regarding the obstacles students at the University of Jordan – Aqaba encounter in their online learning, the researchers conducted a thorough analysis of the study instrument. The study revealed a few obstacles that hinder, slow down, or affect the online teaching/learning process in Jordan during the COVID-19 pandemic. Both male and female respondents reported many technical problems and lack of training on how to use eLearning platforms. There were statistically significant differences amongst students' attitudes toward online learning attributed to their gender, but there were no differences between them in terms of the other two variables: socioeconomic status and seniority level at university.

Before the effectiveness of online learning can be considered, one should attend to the availability of tools and resources as requirements for online learning. Therefore, it is unfair to ask students how effective online learning is if they do not have the technological devices required for online learning. One reason for some students not being able to have devices for online learning is their low socioeconomic status. Whilst a few may have laptops or iPads, others do not. Thus, one should be aware of the students' household income. In Jordan, people who make 800 USD (550 JD) or less per month are classified by the government as citizens below the poverty line. Statistical analysis of the survey questionnaire showed that out of the sampled 195 respondents, the household income of 113 is lower than 800 USD per month. Out of these 113 respondents, 66 are from families with an income of less than 500 USD per month. The question that arises here is: Can students or their families afford to buy laptops, iPads, or even internet bundles to be able to connect to these electronic devices? Seventy-four (74) respondents did not reveal their household income. This means that the above numbers may be higher than indicated. We can conclude from these numbers that the socioeconomic status of students may substantially affect the quality of their online learning since such learning requires the purchasing of ICT tools and devices.

The availability of electronic devices such as laptops or personal computers is important for achieving maximally effective online learning. As has been discussed before, to arrive at conclusions of whether online learning is effective and beneficial for students or not, we must make sure that they have the required devices. In Jordan, for example, free laptops have been given as donations to students, and many universities have also granted their students internet access. But this only happened after the end of the Spring semester 2020. In addition, the distribution of laptops does not have clear parameters, meaning that many poor students still do not have laptops or internet access. Yet before the Jordanian government's grant of free laptops to some needy students, how were students able to learn online?

The survey questionnaire showed that 174 respondents use mobile phones in their eLearning, whereas only 84 use laptops. Some respondents reported that they use both a laptop and a mobile phone for their online lectures. The huge number of respondents who use mobile phones to participate in online learning is alarming.

It should be noted that mobile phones are less efficient than laptops when it comes to online learning. The difficulty of using mobile phones for typing, their small screens compared to that of laptops, and the limited options on mobile phones negatively affect students' online learning. The huge number of students using mobile phones can be attributed to their socioeconomic status. Whilst mobile phones can be bought at lower prices (poor people can have them), laptops are expensive. This explains why many more students use mobile phones than laptops.

One may draw a conclusion on why many students find online learning less effective when compared to traditional face-to-face learning in a classroom setting on campus. It is not because online learning is less effective; rather, it is because the required technological devices and tools are not available to students. In the survey questionnaire, respondents had to report on the efficacy of online learning and its downsides by selecting from various scales. The first three scales (very poor, poor, and fair) registered 105 responses from respondents who believed that online learning is ineffective or unsuccessful. Eighty-two (82) respondents indicated that online learning is average or less useful, and only eight respondents indicated that online learning is excellent. This low number does not suggest that online learning is less productive when compared to on-campus face-to-face teaching. Rather, external factors such as students' household income and their socioeconomic status play a major role in directing the negative trend in the results of this questionnaire.

10. Findings in Light of the Study Variables

To answer the fourth research question, pertaining to students' attitudes toward online learning in light of the study variables, the researchers conducted a t-test and employed the one-way ANOVA as follows.

10.1 Gender

The t-test showed that there were statistically significant differences between students' attitudes toward online learning during the COVID-19 pandemic that could be attributed to gender in favor of female students. This result diverges from the findings of Akbulut's (2008) study, which showed that students' attitudes toward CALL are not influenced by their gender. This could be due to the fact that Jordanian female students are more proficient in texting on mobile phones than male students. Female students' frequent texting with their classmates significantly improves their writing skills and typing speed.

10.2 Level of seniority at university

The one-way ANOVA was employed to investigate the existence of any statistically significant differences amongst students' attitudes toward online learning attributed to their level of seniority (freshman, junior, sophomore, or senior). Results revealed that there were no statistically significant differences between students' attitudes toward online learning attributed to their seniority level. This result is dissimilar to findings of previous studies, which showed that senior students are more computer literate than freshman, junior, and sophomore students, and they would thus use online learning more than the other groups

either on campus in the university internet laboratory or off campus – or even at home. This result also diverges from the findings of Blake's (2006) study, which showed that senior students have more positive attitudes toward CALL or internet-aided instruction than their freshman counterparts. Furthermore, this study yielded different results from those obtained by Bataineh and Baniabdelrahman's (2006) study, which explored the perceptions of computer literacy amongst Jordanian learners of English as a Foreign Language. They reported that learners' seniority of study positively influenced their perceptions in favor of senior learners.

10.3 Socioeconomic status

With regard to the source of income needed for paying students' tuitions, analyzing the survey questionnaire showed that most students receive government grants, followed by students who are funded by their parents to pay their fees. Nevertheless, the study showed that there were no statistically significant differences between students' attitudes toward online learning attributed to their household income and socioeconomic status. However, results of the study revealed that students who possess laptops and have more access to internet bundles and routers have more positive perceptions of eLearning than students who use mobile phones for the same purpose. This result lends support to the findings of previous studies (Agormedah et al., 2020; Agung et al., 2020; Febrianto et al., 2020), which reported that students' household income influences their online learning. Thus, students' socioeconomic status and household income affect their learning and progress positively or negatively. Not all students can afford to buy laptops or have mobile phones. Many students do not even have internet access; therefore, the University of Jordan has provided them with free data bundles. Most importantly, there are some students who live in remote areas in which there is a lack of network coverage or no internet at all.

11. Conclusions and Recommendations

This study found that students' attitudes toward online learning are generally negative. This is not due to the ineffectiveness of the online-learning medium, but simply because of the many technical and financial problems associated with it. Moreover, the study results also showed statistically significant differences in students' attitudes toward online learning attributed to gender, but not to their socioeconomic status, seniority level, and gadget availability, though such variables significantly influence their online learning. In light of the results of the current study, the researchers suggest a number of recommendations and solutions. As a priority, it is recommended that all needy students, especially those living in remote and poor sections of the Jordanian society, be given free laptops and access to internet. These might be made available through government grants or donations from individuals and private institutions. Finally, since online learning is a two-partner teaching/learning process, it is recommended that both students and instructors have professional training on how to efficiently use all types of eLearning platforms. Moreover, it is strongly recommended that blended learning be incorporated in the Jordanian educational system for its effectiveness and appeal to students.

12. Limitations of the Study

There are two limitations to generalizing the results of the current study. One limitation pertains to the instrument used for data collection. Survey questionnaires are generally used to elicit only quantitative data from respondents. Gathering and analyzing qualitative data would thus add more beneficial information. The other limitation concerns the study sample, which was limited to one department from a public university in Jordan (Department of English Language and Literature at the University of Jordan – Aqaba). Attitudes of students from other Jordanian public and private universities were not surveyed. Thus, the findings of the study should not be generalized broadly.

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