



# Faculty's and Students' Perceptions of Online Learning During COVID-19

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COVID-19 pandemic has disrupted teaching in a variety of institutions. It has tested the readiness of academic institutions to deal with such abrupt crisis. Online learning has become the main method of instruction during the pandemic in Jordan. After 4 months of online education, two online surveys were distributed to investigate faculty's and Students' perception of the learning process that took place over that period of time with no face to face education. In this regard, the study aimed to identify both faculty's and students' perceptions of online learning, utilizing two surveys one distributed to 50 faculty members and another 280 students were selected randomly to explore the effectiveness, challenges, and advantages of online education in Jordan. The analysis showed that the common online platforms in Jordan were Zoom, Microsoft Teams offering online interactive classes, and WhatsApp in communication with students outside the class. The study found that both faculty and students agreed that online education is useful during the current pandemic. At the same time, its efficacy is less effective than face-to-face learning and teaching. Faculty and students indicated that online learning challenges lie in adapting to online education, especially for deaf and hard of hearing students, lack of interaction and motivation, technical and Internet issues, data privacy, and security. They also agreed on the advantages of online learning. The benefits were mainly self-learning, low costs, convenience, and flexibility. Even though online learning works as a temporary alternative due to COVID-19, it could not substitute face-to-face learning. The study recommends that blended learning would help in providing a rigorous learning environment.

**Keywords:** perceptions of online learning, online learning, education during COVID-19, blended learning, online learning in Jordan, benefits and challenges of online learning

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## INTRODUCTION

COVID-19 was declared as a global pandemic in March 2020 (WHO, 2020). It impacted all walks of life including education. It led to the closure of schools and universities. This closure put a considerable burden on the academic institution to cope with the unprecedented shift from traditional to online learning. The outbreak triggered new ways of teaching online. Most countries imposed restrictions, where the medium of education has shifted into either synchronous or asynchronous modes. The world has seen the most extensive educational systems disruption in history in more than 190 countries worldwide. The closure of the academic institutions has impacted up to 99% of the world the student population in the lower lower-middle-income (The Economic Times, 2020). The outbreak of COVID-19 established partial or complete lockdown, where people are forced to stay home. The higher education institutions' closure demands online

learning, where the course material is taught. For instance, Jordan, an Arab country, has replaced face-to-face instruction with online learning platforms to control the outbreak's spread. The government had imposed a national lockdown, which resulted in universities' and schools' closure.

Most global institutions opt to use synchronous and asynchronous online teaching methods: synchronous is where faculty and their students meet in a pre-scheduled time as a part of interactive learning classes, while the asynchronous method refers to the Faculty giving the course without interaction with the students. There is no interaction between the faculty and students. Asynchronous modes of online learning suit students to access online material whenever they like (EasyLMS, 2021). Faculty are the role players in making learning enjoyable, shaping students' attitudes and personalities, and helping students pass. COVID-19 spreads online learning culture across the culture (Beteille et al., 2020). COVID-19 forced the shift to online learning, but some universities in underdeveloped countries are not adequately equipped to teach online efficiently. Moreover, the faculty's training is different globally between high-income, middle, and lower income countries. Another major obstacle is the Internet connectivity for underprivileged students. It is a *de facto* that face-to-face instruction is more efficient than online and the complete shift to online during COVID-19 makes it necessary to investigate the perception of faculty and students on online learning to identify the advantages and disadvantages, and challenges of online learning.

While the whole world is facing much trouble in the last few months, it has been difficult for the world, and the impact of online learning has been significantly observed on faculty members and students in particular. Teaching and learning online has a wide range of advantages, yet poses some challenges. It makes the process of learning for students' comfort due to time flexibility in attending classes. However, online learning acts as a barrier to the engagement of students in real class activities. Moreover, students lack the influence of peer learning. These challenges also leave an impact on student's personalities and prevent them from taking their turns. Additionally, the faculty's role is to teach, monitor, and provide advice for students on both academic and personal levels. The current crisis, COVID-19, highlights the role of the Internet and technology in all walks of life including education. The pandemic has shown the role of online education in coping with abrupt crises, and therefore it is significant to understand both faculty's and student's perceptions concerning online classes.

## Online Learning

There is a considerable development in education, where the mode of instruction has been changed from teacher-centered education to student-centered education. In teacher-centered education, the teacher plays a role as the source of education, and students are recipients of his/her knowledge. In contrast, student-centered education emphasizes the role of students in knowledge production in the class. In a student-centered approach, the teachers' role turns to "helper to students who establish and enforce their own rules. Teachers respond to student assignments and encourage them to provide alternative/additional responses.

Student-centered instruction has currently benefited many new technologies by using the internet and other advanced technological tools to share, transfer, and extend knowledge" (Hancock, 2002). Online learning has become a part of the 21st century as it makes use of online platforms. E-learning is defined as using online platform technologies and the Internet to enhance learning and provide users with access to online services and services (Ehlers and Pawlowski, 2006).

Internet and education have integrated to provide users with the necessary skills in the future (Haider and Al-Salman, 2020). A study by Stec et al., 2020 indicated that online teaching has three main approaches, namely, enhanced, blended learning, and online approach. Enhanced learning uses the intensive use of technology to ensure innovative and interactive instruction. Blended learning mixes both face-to-face and online education. The online approach indicates that the course content is delivered online. Online education is convenient for students, where they can access online materials for 24 h (Stern, 2020). Online education turns education to be student-centered, where students take part in the learning process, and teachers work as supervisors and guides for students (Al-Salman et al., 2021).

Online platforms have different tools to facilitate conducting online interactive classes to reduce students' loss. Online education platforms are designed to share information and coordinate class activities (Martín-Blas and Serrano-Fernández, 2009). There are most famous prominent interactive online tools: DingTalk (interactive online platform designed by Alibaba Group), Hangouts Meet (video calls tool), Teams (chat, interactive meetings, video, and audio calls), Skype (video and audio calls), WeChat Work (video sharing and calls designed for the Chinese), WhatsApp (video and audio calls, chat, and content share), and Zoom (video and audio calls, and collaboration features) (UNESCO, 2020).

## Online Learning Before COVID-19 in the Arab Region

Online learning works as an alternative for face-to-face education during COVID-19. It becomes the 21st efficient tool for online learning. The online learning experience is different globally. Some countries have the required resources to facilitate learning, while many others do not have the equipment available in high and middle-income countries. In the Arab region, some countries such as Jordan, KSA, Qatar, Emirates, Bahrain, and Kuwait are relatively developed compared to other Arab countries. During COVID-19, most Arab higher education institutions shifted to synchronous and asynchronous online learning methods. Jordan, an Arab country, initiated online learning in the Ministry of Education and Ministries of Planning and Information Technology in 2002 (Dirani and Yoon, 2009). They worked to start the online experience by shifting instruction mode from traditional to virtual. In a similar vein, Talal Abu-Ghazaleh University launched the first online platform to facilitate recruiting and enrolling new students and conducting virtual classes in 2012.

Moreover, Jordan's university established synchronous blended learning, where some theoretical courses are conducted online, while practical times are campus oriented. Jordan

was one of the countries to respond to the crisis in creating an online platform, Darsak, to facilitate online learning for schools (Audah et al., 2020). However, online learning was not considered as an education modality in Jordan before this crisis.

## Online Learning During COVID-19

COVID-19 was classified by world health organization (WHO) as a pandemic disease on March 11, 2020. On March 19, emergency state was declared as a response to prevent the spread of COVID-19. It is followed by a curfew, which lasted for 2 months. The mode of education has turned online due to the closure of universities. The closure of universities brings the importance of having good infrastructure and the readiness to conduct online classes. Jordan is considered as one of the leading countries in Internet infrastructure and has a highly developed Middle East region (Jordan Times, 2017). Online learning becomes a tool to prevent the outbreak and ensure social distancing. Online education has useful learning tools and grants 24/7 access to education platforms around the clock at their time preferences. It also offers flexibility, regardless of place and time. It also gives students questions, answers freely, and provides feedback on the assigned courses' content (Rosell, 2020).

## Literature and Research Questions

The Author's literature review has uncovered that the faculty and students shall verify online learning's importance during COVID-19. Therefore, the present study aims to bridge the gap by scrutinizing faculty and students' perceptions of online learning. To be specific, it raises the following questions:

1. What is the opinion and perceptions of the faculty in terms of;
  - a. Online platform used and teaching experience.
  - b. Attitudes of computer literacy and online class preparations.
  - c. Attitude of the effectiveness of online education.
2. What is the student's opinion and perceptions on the Effectiveness of online teaching & learning during covid-19 pandemic?
3. What are the challenges of online teaching & learning during the covid-19 pandemic?
4. What are the advantages, challenges, and disadvantages of online learning?

## LITERATURE REVIEW

Technology has a firm-established role in education experience in the last decade (Almahasees and Jacomard, 2020). Methods, techniques, and strategies of education have been revised to deal with dramatic changes in technology. The technological enterprises have designed several online platforms, which are driven by the integration of technology in all walks of life (Al-Azawei et al., 2017; Englund et al., 2017; Santos et al., 2019). Technology has become part of our social, business, and educational life'. The use of the Internet has a vital role in disseminating knowledge *via* online classes (Silva and Cartwright, 2017).

During COVID-19, education has been shifted into the techno-economic culture. The shift should associate with plans

to reduce this shift's impact on the normal learning process (Gurukkal, 2020). The change to online in higher education entails reshaping our view regarding higher education, including institutions and students' needs. For instance, theoretical courses can be taught online. In contrast, the practical courses should be conducted face to face to ensure best teaching practices in monitoring and guiding students. Therefore, technology can make larger classes flexible and suiting students' needs (Siripongdee et al., 2020).

Research on faculty members' perceptions and attitudes toward online learning emphasized the role of instructors in facilitating communication and earning with students. Instructors acknowledged the content expertise and instructional design as the factors in the success of online learning. Similarly, the call for staff and student training is mandatory for online learning success (Cheng and Chau, 2016).

The mode of education has turned into student-centered education, where students became independent learners. This is considered as an advantage as face-to-face instruction was teacher-centered education, where students receive their education from their instructors. Online learning initiated students' role in using additional resources to discover their abilities as independent learners (Roach and Lemasters, 2006). The comparison between students' attitudes toward teaching the same interactive courses in online and face to face is similar. It is found that students performed equally at the same interactive courses in online and face-to-face instruction. Face-to-face instruction's success depends on regular class attendance, while the interactive classes relied on completing interactive worksheets. Therefore, online and face-to-face success is based on curriculum structure, mode of delivery, and completion rate (Nemetz et al., 2017). The COVID-19 outbreak shifts face-to-face education to online during the lockdown. This shift helps faculty integrate advanced technological skills in their teaching, which benefit students (Isaeva et al., 2020).

Online learning has been considered a useful tool for learning, cost-effectiveness, flexibility, and the possibility of providing world-class education (Jeffcoat Bartley and Golek, 2004; Gratton-Lavoie and Stanley, 2009; De La Varre et al., 2010). A study by Li and Lalani (2020) indicated that COVID-19 had brought change to the status of learning in the 21st century. The instruction mode has been changed at both schools and higher academic from face-to-face instruction to online instruction (Strielkowski, 2020). However, this rapid change tests the capacity of institutions to cope with such crises. Many countries did not expect such a complete shift to be online, and therefore their working staff and students are not trained enough for this dramatic change.

Online learning works as a tool to overcome abrupt crises (Ayebi-Arthur, 2017). Online learning is considered as an entertaining way to learn. It has a positive impact on both students and teachers alike. Both faculty and students have optimistic opinions about online classes (Kulal and Nayak, 2020). Moreover, there is a positive correlation between students and faculty in their perception of teaching and learning (Seok et al., 2010). Faculty and students of engineering specialties incurred that theoretical engineering subjects can be taught online, while teaching practical courses online are less

effective and should be conducted at engineering labs (Kinney et al., 2012). Similarly, students' and faculty perceptions were marginalized differently in teaching laboratory courses online (Beck and Blumer, 2016).

Faculty and students encountered challenges such as technology, workload, digital competence, and compatibility. They concluded that education would become hybrid, face-to-face, and online instructions (Adedoyin and Soykan, 2020). A study to verify the usage of online learning platforms in teaching clinical medical courses was conducted. They found that the rate of student satisfaction is 26% (Al-Balas et al., 2020). There is a slew of advantages and disadvantages of online learning. The benefits include efficiency, cost-effectiveness, and 24 h access, while the disadvantages are technical issues, lack of interaction, and training (Gautam, 2020). Rayan, 2020 proposed ways to overcome the disadvantages of online learning by encouraging shy students to participate and provoke students' online class attendance. Understanding such issues will help to deliver adequate online education. Online encourages shy students to participate and improve students' attendance, while it also triggers a lack of social interaction that affects students.

Online learning has a vital role in learning during the crisis. Moreover, having properly maintained the technical infrastructure is required for its success at schools and universities (Nikdel Teymori and Fardin, 2020). Dhawan, 2020 scrutinizes online learning's strengths, weaknesses, opportunities, and threats (SWOT). He shows that crisis highlights the role of technology competency in dealing with the global crisis and facilitating learning. Therefore, schools should train students with the necessary IT skills. Another study was conducted on male and female students' satisfaction in using E-learning portals in Malaysia. He found that there is a significant relationship between the user's satisfaction and E-learning. The satisfaction rate by both participants depends on E-service quality and the information provided (Shahzad et al., 2020). The advantages of online learning are as follows: flexibility, easy access, and interaction between learners and their professors (Strayer University, 2020). The role and advantages of online learning have accentuated that online learning has challenges as data privacy. Students' private information is at risk since they use their computers and mobile phones to access online portals. Universities should educate their staff and students about cybersecurity and data privacy (Luxatia, 2020).

## METHODOLOGY

### Participants

The population of the study was instructors and students at both undergraduate and postgraduate levels. Fifty faculty members and 280 students were selected randomly from this population, which is deemed significant to provide useful feedback on both faculty's and students' perceptions of online learning.

The study used two online surveys, which is delivered to participants in the period between September 15 and November 15 during the closure of universities in Jordan to control the

spread of COVID-19. The online two surveys were created Google Forms and sent to the faculty and students through emails, Facebook Messenger, WhatsApp messages, and LinkedIn to have social distancing. Thirty-four male and fifteen female members of Faculty participated in the survey.

### Faculty

Thirty-eight participants hold Ph.D. and 11 master's degrees. The mean of faculty ranges from 31 to 50 years old with an standard deviation (SD) of 1.00224. 47 members of the Faculty teach at university, while three members of the Faculty teach at college. Seven of the participants were professors, 11 associate professors, 18 assistant professors, nine lecturers, and four teaching assistants.

### Students

A total of 280 were undergraduate students. Eighty-eight were males, and 192 were females. As for the major, 175 were studying theoretical majors and 105 were studying in practical disciplines, 237 of them live in urban areas, and 43 live in rural areas. Of these, 151 were using mobile to access online classes and 106 were using laptops, while 25 of the students were using a tablet. One-hundred and forty-nine of the study samples indicated that they had received training in using the online classes, while 131 had received no training.

## Data Gathering Instruments

Two online surveys were created by Google Docs. The faculty survey consisted of three parts such as sociodemographic, online education training, and faculty's perceptions of teaching online effectiveness. On the other hand, the students' survey consisted of four parts, namely, sociodemographic, students' perception of online learning's effectiveness, advantages, and challenges of online learning. The survey was designed in a Likert Scale format for rating statements. Two professors reviewed the two surveys, and proper changes were made before disseminating the two surveys of the participants. Participation in the study was voluntary, and personal information was not gathered. Data were imported into Excel to facilitate SPSS analysis using 25 versions.

## Validity and Reliability

Two experts examined the two surveys cross out to validate the survey's design. Their comments are taken into account of omitting some items of the survey due to their irrelevance. As for reliability, Cronbach's alpha was used as a measure of internal consistency to indicate how the items are closely related. The result of the test showed that the items of the two surveys are consistent. For the faculty survey, the alpha coefficient for the 26 items is 0.889 for the faculty's survey and 0.896 for the students' survey, suggesting that the items have relatively high internal consistency. A reliability coefficient of 0.70 or higher is considered "acceptable" in most social science research situations (Mockovak, 2016).

## RESULTS

The findings are structured according to sections of the surveys.

### Faculty's Survey

#### Online Teaching Experience

First, the current study scrutinizes the readiness of instructors to teach online. The analysis showed that most of the faculty had previous experience of teaching online before COVID-19, with a percentage of 60%. In contrast, 40% of the surveyed faculty did not have experience in teaching online before COVID-19. Those who had previous experience showed that they had received training to teach online with a percentage of 66%, while 34% did not have any activity to do online learning sessions.

The faculty showed that they used Zoom and Microsoft Teams in their online teaching with 60% for Microsoft Teams and 40% for Zoom. Finally, most participants uncovered that they used WhatsApp with 70% as a medium of communication between the tutor and his students outside the online class time. The second popular platform is Zoom and Microsoft Teams chat and text options with 28%. Moreover, Facebook pages occupied the third rank with 14%, while phone calls were used by 8% of the participants (see **Table 1**).

#### Faculty's Attitudes of Computer Literacy and Online Class Preparations

The second division of the survey was to identify computer literacy and online class preparation to indicate computer and IT skills as shown in **Table 2**. The majority of the respondents agreed that they have enough IT skills to conduct online classes.

Moreover, online courses require more effort to do online courses in comparison to face-to-face instruction. Online learning becomes a tool to cope with all catalyst times such as COVID-19.

#### Faculty's Attitude Toward the Effectiveness of Online Education

The third part of the survey was on the faculty's attitude toward the effectiveness of online education. The faculty's responses on the possibility of taking online courses without direct contact between the faculty and their students were centered on neutralism value, which was reflected in the mean scores of the instructors' responses ( $M = 3.1224$ ,  $SD = 1.37890$ ,  $p < 0.001$ ). The faculty's perception was also neutral in the second, third, fourth, and fifth items. The remaining items received agreement value except for the seventh item, which was between neutralism and agreement. These values were statistically significant after Bonferroni was corrected ( $p < 0.001$ ) (see **Table 3**).

### Students' Survey

#### The Effectiveness of Online Teaching and Learning During the COVID-19 Pandemic

First, the study examined the effectiveness of online learning during COVID-19 (see **Table 4**). The effectiveness of online learning ranges in delivering online learning during the crisis with an SD of 0.67 and 3.548. This means the study participants found online learning useful due to the following reasons: first, students showed that they were provided with efficient online platforms by their institutions to attend lectures. The majority of the study's respondents showed that they used Microsoft Teams in their online learning process. This is affirmed by

**TABLE 1** | Common online platforms and teaching experiences.

Questions	Classification	Frequency	Percent (%)
Have you had the experience to teach online before COVID-19	Yes	34	68
	No	16	32
Have you received training to teach online	Yes	33	36
	No	17	34
What online platforms are you using?	Zoom	20	40
	Microsoft Teams	30	60
How do you communicate with your students outside online class?	WhatsApp	35	70
	Chat and call options provided by online platforms	15	30

**TABLE 2** | Attitude of IT skills and online class preparations.

Items	Test value = 2					
	M	SD	Df	Sig. (two-tailed)	95% confidence interval of the difference	
					Lower	Upper
I have the IT competency to do online classes.	4.5714	0.61237	48	0.000	2.3955	2.7473
Conducting online classes require more effort in comparison to face-to-face instructions.	4.6327	0.63554	48	0.000	2.4501	2.8152
Tutors have to open their cameras to maximize their live interactions with students.	4.5102	0.58175	48	0.000	2.3431	2.6773
Online platforms have tools to facilitate online classes.	3.24	1.392	48	0.000	0.84	1.64
Traditional classes are more effective than online classes.	3.3469	1.3624	48	0.000	2.9556	3.7383

**TABLE 3** | Faculty's perception of the effectiveness of online teaching.

Items	Test value = 2					
	M	SD	Df	Sig. (two-tailed)	95% confidence interval of the difference	
					Lower	Upper
Theoretical and practical classes could be taught without real interaction between tutors and their students.	3.1224	1.37890	48	0.000	0.7264	1.5185
Lack of interaction between students and their instructors results in low performance.	3.7959	1.18988	48	0.000	1.4541	2.1377
Students have the facility to ask questions clearly during online lectures.	3.7551	0.90210	48	0.000	1.4960	2.0142
Online classes help tutors to achieve the learning outcomes of your courses' syllabi.	3.7959	0.84112	48	0.000	1.5543	2.0375
Students with online learning courses outperform students with face-to-face learning.	2.9388	1.10695	48	0.000	0.6208	1.2567
Students with face-to-face learning outperform students with online learning	3.8367	1.02768	48	0.000	1.5416	2.1319
Students' participation in online courses reflects their knowledge and performance.	3.6122	0.99617	48	0.000	1.3261	1.8984
You provoke your students to do their assignments, and you provide feedback on their assignments.	4.0612	0.77482	48	0.000	1.8387	2.2838
You can assess your students fairly and know the individual difference between them.	3.9184	0.88593	48	0.000	1.6639	2.1728

**TABLE 4** | The perception of online teaching & learning during the covid-19 pandemic.

Question	Mean	Std	Response
You have sufficient equipment and facilities (computer/2/Internet/software) to participate in online lectures	4.0929	0.92668	Agree
You have sufficient computer knowledge and IT skills to manage your online learning	3.9321	0.93845	Agree
Guidelines are provided (e.g., How to use relevant online tools?) before starting online lectures by your lecturer	3.6821	1.00306	Agree
Online tools are easy to use	3.8929	0.99242	Agree
Gained experience of learning in a new online environment	3.6893	1.07091	Agree
Flexibility in participating in online lectures	3.5429	1.157	Agree
Motivation is high in participating in online lectures	3.3036	1.21401	Neither
You are satisfied with the student-teacher interaction during online teaching and learning	3.475	1.13249	Agree
You have the facility to ask questions or clear doubts during online lectures	3.7321	1.02463	Agree
The home environment is suitable for participating in online lectures	3.3857	1.3311	Neither
Possibility of distractions from other family members during online lectures	3.7179	1.1527	Agree

Spataro (2020) that Microsoft Teams, as of the end of October 2020, has increased significantly to reach 115 million daily active users. Second, the study's participants showed that they were trained and had the necessary technological skills to attend online learning. Trained students on online platforms could grasp the learning outcomes of online classes.

Moreover, they also showed that they gained new experiences while attending online classes. Third, students emphasize that online learning platforms are easy to use. This means that students have got training to attend online classes, while the academic institutions may share guideline usage with their students. Furthermore, online learning allows flexible time to participate in courses whether they attend the classes synchronously (the exact time of the lecture) and asynchronously (recording the study). Fourth, students accentuated that they were satisfied with the student-teacher interaction during online teaching and learning.

Similarly, the participants showed their agreement on communications and asked questions to clear their doubts during online lectures. On the other hand, the study's participants responded as neither agree nor disagree (NAND) to the question of whether students' motivation is high in participating in online lectures. In the same vein, the study's analysis indicated that they were not able to decide whether their home is suitable to attend online lectures. This means may the students may have got external distractions from their family members while attending online classes.

The research sample agrees on the effectiveness of learning using online classes with a mean of 3.548 (agree) and a standard deviation of 0.647. Most of these opportunities were: you have sufficient equipment and facilities with a mean of 4.09 and a standard deviation of 0.926, and you have adequate computer knowledge and IT skills to manage your online learning with a mean of 3.9321 and a standard deviation of 0.93845, and online

**TABLE 5 |** The challenges of online teaching and learning during the COVID-19 pandemic.

Question	Mean	Std	Response
Adaptability struggle	3.6893	0.91575	Agree
Technical and internet issues	3.7857	0.99667	Agree
Organization of work processes and time management	3.7036	1.02022	Agree
Lack of interaction	3.6679	0.99841	Agree
Insufficient tools for student assessment	3.6286	1.01135	Agree
Adjusting of online courses to deaf or hard of hearing students and students with disabilities	3.8143	0.99523	Agree
Data privacy and security	3.7071	0.98735	Agree

tools are easy to use with a mean of 3.8929 and a standard deviation of 0.99242.

### The Challenges of Online Teaching and Learning During the COVID-19 Pandemic

The students emphasized that they faced a set of challenges through online learning due to the abrupt shift from face-to-face instruction to online instructions (see **Table 5**). Students' responses showed that they faced the following challenges. First, students faced a challenge in adapting themselves to online learning. They could have such problems due to technical issues such as the lack of IT competency. Second, students faced a challenge in having proper access to the Internet for many reasons, such as the cost of having a fiber network, which is not affordable for some students. The students also reported that they faced challenges in managing their time and organizing their homework to submit their tasks. Moreover, some of the students have shown that the lack of interaction is also considered a challenge for students, reflecting on their progress and personalities.

Moreover, they added that adjusting online classes for students with special needs is a tremendous challenge for deaf, hard of hearing, or disabilities. Furthermore, the study's respondents also indicated that online learning classes lack insufficient tools for student assessment. Moreover, online learning classes do not let instructors identify the individual differences between students quickly. More importantly, the study's analysis showed that students were concerned about their data privacy since using their laptops or mobile phones at home, which exposes their data for breach.

It is obvious from **Table 5** that the research sample agrees with the learning challenges using online classes with a mean of 3.704 (agree) and a standard deviation of 0.600. The most important of these challenges came for adjusting online courses to deaf or hard of hearing five students and students with disabilities with an average of 3.8143 and a standard deviation of 0.995. Moreover, technical and Internet issues occupied the second rank with a mean of 3.7857 and a standard deviation of 0.996, and the organization of work processes and time management with an average of 3.7036 and a standard deviation of 1.020.

**TABLE 6 |** The advantages of online teaching and learning during the COVID-19 pandemic.

Question	Mean	Std	Response
You can learn whatever you want!	3.7786	1.0647	Agree
Comfort	3.7071	1.13905	Agree
Self-paced learning	3.7893	0.9701	Agree
New effective learning tools	3.6571	1.01791	Agree
E-learning is useful for grasping new skills	3.7036	1.07829	Agree
Flexibility in time and communication	3.6357	1.1341	Agree
Low cost	3.4	1.32956	Neither

### The Advantages of Online Teaching and Learning During the COVID-19 Pandemic

Students opined that online learning ensures that the students will have access to the learning materials based on their convenient time if online learning classes are asynchronously recorded at any time in a day. Moreover, online learning encourages students to take part in the learning process since the instruction mode shifted to focus on student learning (self-paced learning). Students also expressed that online learning helped them to acquire new experiences and skills. It also reduced the cost of traveling to universities and related expenses. Use of traveling resources and other charges as shown in **Table 6**.

**Table 3** indicates that the research sample agrees on the advantages of learning using online classes with an average of 3.673 (agree) and a standard deviation of 0.858. The most important of these features were in (self-paced learning) with a mean of 3.789 and a standard deviation of 0.970, and you can learn whatever you want with a mean of 3.778 and a standard deviation of 1.064, and comfort advantage with a mean of 3.707 and a standard deviation of 1.139.

## DISCUSSION

An analysis of the faculty's and students' responses showed their perception of online learning during COVID-19. Faculty were surveyed in terms of online teaching experience, computer literacy, class preparation, and online learning effectiveness. On the other hand, students were studied in terms of online energy, challenges, and advantages. The significant results were interpreted and discussed below.

### Online Teaching Experience

The analysis showed that 68% of the faculty members had undergone training, while 32% did not have. Exercise is part of development programs provided by universities to equip their staff with the necessary skills. This criterion highlights Faculty Academic Development Centers' role to have plans to deal with all abrupt crises such as COVID-19. Training programs should not be limited to faculty; they should also involve students. The study found that Zoom and Microsoft Teams were used by the surveyed faculty more than others in conducting virtual classes. Moreover, WhatsApp is the most popular platform for communication between faculty and their students outside

classrooms. WhatsApp has been used by more than 2 billion users monthly as of October 2020 (Statista, 2020).

### Faculty's Perception of Computer Literacy and Online Class Preparations

The majority of respondents revealed that they had computer competency before the emergence of COVID-19. This competency helped the faculty to do online classes since IT skills are mandatory for the technology learning environment, as indicated by Li and Lee (2016). However, the study showed that faculty preferred traditional teaching, face to face, more than online. Face-to-face instruction allows the ability to discuss and have lively guidance for your students. It encourages students' engagement and reflects positively on the level of students (Cooke, 2020). Therefore, most of the faculty members indicated that online classes' preparation entails more effort to ensure having interactive online courses.

### Faculty's Perception of the Effectiveness of Online Teaching

The study showed that faculty agreed on the point of online learning. To be concise, faculty responses were debatable whether students at online classes can outperform students with face-to-face instruction, as reflected in the item's mean score ( $M = 2.9388$ ). However, the fact is that face-to-face students need the education to excel in online learning results in scores of faculty responses ( $M = 3.8367$ ). Faculty also showed that the lack of interaction between students and their instructors might lead to low performance. The faculty were asked if they were able to assess students fairly. The study's results showed that faculty knew the individual differences between students in online classes. Moreover, online courses helped them to achieve the learning outcomes of their academic syllabi.

### Faculty's Perception of Time and Assignment Management

The analysis revealed that the faculty agreed to make their online sessions short. This finding showed that online classes should not keep the students' attention and ensure their understanding. If the online course is long, the students may get bored and distracted. As for online class preparation, the participants agreed that online classes require more time than traditional classes. Of course, preparation for online courses entails a longer time than regular classes.

Regarding assignments, the faculty agreed that students should do more assignments in online learning than in traditional classes. Remote teaching requires students to do more tasks than conventional courses to ensure students' effective practice. Besides, students' assignments may compensate the students for the lack of direct contact with the tutors.

### Online Learning Effectiveness and Challenges During COVID-19

This study highlights undergraduate students' perceptions, which showed online learning as a flexible and useful learning source during the crisis and some limitations. According to students, online learning is a relaxed and productive source of knowledge.

Most of them agreed that online learning helps students 24 h to have access to learning materials asynchronously at any time in a day. This finding correlates with (Adedoyin and Soykan, 2020; Gautam, 2020) that online learning offers learners the ability to access online materials around the clock. Moreover, it also encouraged self-learning, where the student plays a role in the process of learning. Online learning reduces the cost of education, where students stay at home and do not pay any charge for traveling and other expenses. More importantly, students learned new experiences through learning, such as time management and self-discipline.

### Student Challenges During COVID-19

The analysis revealed that the students faced difficulties when attending online classes. Based on the findings, these challenges lie in students' struggle to adapt to online courses, lack of direct contact with the faculty, lack of motivation to attend classes, and time management. This list of challenges should be considered by course coordinators and program chairs by offering solutions to these challenges. Students viewed the issue of adapting to the transference from face to face to online instructions as a challenge. This is a great challenge since most countries were not prepared enough to cope with abrupt crises that we did not have before. Students also highlighted that online platforms are not easily adjustable to deaf, hard of hearing, or special needs students. The government should help such students by offering courses provided by specialists of students with special needs. Students also complained about the lack of interaction, reflecting on students' achievements and their personalities. Technical Internet connectivity issues also affect learning *via* learning modalities. This challenge can be overcome by improving the speed of the Internet packages provided to students. In this context, governments should offer Internet packages to students at low cost, and the telecommunication companies should help students. Similarly, students were concerned about their data privacy since their information was exposed to breach by external parties, they use their laptops and PCs available at their homes. This requires that universities should educate students about data privacy. They also have to provide students with free firewall programs to protect their data, as also suggested by Luxatia (2020).

### CONCLUSION

The study scrutinized the perception of the faculty and students on online learning. The study showed that online education is less effective than online classes. The students of online learning face several challenges due to the struggle to complete adaptation to online courses and the lack of interaction between students and their tutors. E-learning platforms motivate student-centered learning, and they are easily adjustable during abrupt crises, such as COVID-19. The universities in Jordan should take part in training students on how to protect their data. Moreover, the government should advise telecommunication companies to improve the students' services at an affordable price. It is worth mentioning that students with special needs should



have synchronous classes, where the special needs specialists should have a role to facilitate such students' process.

## DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

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## AUTHOR CONTRIBUTIONS

KM and MA made substantial contributions to the conception, research questions, or design work, or the acquisition, analysis, or interpretation of data for the work, drafted and revised the work, and proofread the final version of the manuscript. All authors contributed to the article and approved the submitted version.

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**Conflict of Interest:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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