

An investigation into the attitudes of Iranian EFL instructors and students towards online education: Lessons from the Covid-19 pandemic

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Abstract

The Covid-19 pandemic had a profound effect on the delivery of teaching and learning. Recent studies indicate that Covid-19 interfered with years of educational gains and that university EFL instructors and students faced a variety of problems as they sought to adjust to pandemic requirements. This study explored Iranian university EFL instructors' and students' attitudes towards on-line education. It also examined learning and teaching barriers and challenges they encountered during Covid-19. 60 university EFL instructors and 93 students completed two on-line questionnaires. Following, six university instructors and six students took part in interview sessions. The results showed that students favored various advantages that on-line education offered such as

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convenience, comfort, accessibility, flexibility, and suitability. Students further appreciated the potential of new technology and the opportunities that on-line education brought. However, they identified poor Internet access and excessive screen time as common barriers that could hinder the success and sustainability of high-quality on-line education. The results, moreover, demonstrated university EFL instructors recognized the multiple challenges associated with on-line education. They expressed difficulties in tracking attendance during on-line classes, monitoring students' progress in on-line classes, as well as concerns about security issues and privacy regarding on-line classes. We believe that the experiences of both university instructors and students should be considered when designing new approaches to empower them.

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Introduction

The unexpected spread of COVID-19 had a global impact on various sectors of all societies. Within the education system, schools, training institutes and higher education institutions around the globe were subjected to unprecedented disruption and had to move to emergency online teaching and learning formats in order to maintain instructional continuity. Online teaching and learning formats had to be adopted in order to protect university instructors' and students' educational prospects, health and life (Wang et al., 2022). However, while many university instructors and students considered online education to be a novel learning environment, others found it difficult to adjust to since they were not sufficiently prepared for its different demands (Crawford & Cifuentes-Faura, 2022; Curelaru et al., 2022; Rafiee et al., 2022). Despite the flexibility of online teaching and learning methods which allow access to learning anywhere and anytime (Hodges et al., 2020), the move from traditional face-to-face education practices to emergency remote teaching and learning was a sweeping change for Iranian university instructors and students many of whom lacked tutoring experience with online teaching and learning spaces (Badrkhani, 2021). In addition, university instructors' unfamiliarity with digital communication technologies, as well as students' inadequate resources to follow a new online teaching methodology, posed serious challenges and barriers (Crawford & Cifuentes-Faura, 2022). Moreover, instructor-student relationships were significantly affected because physical classrooms can facilitate interaction before, during, and after the class so that university instructors are able to understand and interpret non-verbal signals such as the body language of students (Ghanbari & Nowroozi, 2022). Thus, university instructors and students could not rely on the usual instructor/student relationship, which develops in face-to-face teaching and learning practices. Instead, students' attention was redirected from effective teaching to the technical barriers and challenges of online education.

Motivated by such concerns, the present study aims to explore Iranian university EFL instructors' and students' attitudes towards online education. It will identify potential learning barriers, and their effects on instructor and/or student motivation, as well as what challenges they faced and may continue to face post-COVID-19 lockdown. Understanding their attitudes may, firstly, assist education authorities and decision-makers in a developing country like Iran to create viable solutions and resources to cope effectively with such barriers and difficulties in pandemic-like situations. Secondly, accessing university instructors' and students' opinions, interpretations, experiences, and evaluations may provide a basis for intervention and counselling for students who experience difficulties in adapting to such crisis situations. Thirdly, it may present ideas for quality online education for all, which can be one of the Sustainable Development Goals. University instructors and students can be considered as key members and drivers towards developing sustainability in higher education institutions. Additionally, the use of online education can be regarded as a source of sustainability in higher education during the pandemic. Finally, it is hoped that the outcomes of this research study will offer an account of the way the instructors and students experienced online education during this crisis, leading to some recommendations for other future crisis situations. Thus, the following research questions are to be addressed in the study.

Research Questions

- 1. What were university EFL students' and instructors' attitudes towards online education during COVID-19?
- 2. What learning and teaching barriers and challenges did university EFL students and instructors encounter during COVID-19 online education?

Related Literature Review

The COVID-19 pandemic caused schools and universities to transfer to online education. This transition was unexpected and gave university instructors, students and staff little time for adequate preparation. At the same time, humanity faced an anthropogenically created crisis in global warming and ecological loss. The COVID-19 pandemic and climate change represent direct threats to the 17 overall aims of the United Nations Sustainable Development Goals, which focus on improving inequality regarding health, education, and the economy. The term sustainability means the conservation of an ecological balance and, when applied to education, an education that is inclusive, equitable, of high quality and promotes lifelong learning for all. Sustainability without social and ecological justice will not happen. Recently, studies have indicated that COVID-19 interfered with years of educational gains and made clear that university EFL instructors and students faced a variety of problems as they sought to adjust to pandemic requirements.

Attitudes

A range of research studies have recently examined the university instructors' and students' attitudes towards English language teaching and learning before, during, and after the COVID-19 pandemic. In general, these research studies can mostly fall into two main strands. One line of studies suggests numerous benefits of online education, while another line demonstrates that it has negatively affected the quality of online education, especially for those who are most in need. By definition, attitude is "an individual's overall evaluations of people, groups, and other objects in their social world, reflecting whether the individual likes or dislikes them" (Haddock & Maio, 2017, p. 1). In the context of this study, attitude towards online education refers to an individual's evaluation or perception of the concept of online education and their emotional response towards it. This includes how positively and negatively they feel about the use of technology in education, their level of comfort with using online platforms, and their overall satisfaction with the experience of online education.

Jalilinia (2021) examined Iranian EFL students' attitudes towards online learning during the COVID-19 pandemic. She found that most of the participants held negative views about online education and would not suggest it for future academic years. The majority of students had experienced difficulty interacting effectively and had had negative experiences with the online learning platforms they were required to use. In contrast, Jiang et al. (2022) explored the effects of online learning on Iranian EFL students' motivation, anxiety, and attitudes during the COVID-19 crisis. They found that online education can have a positive influence on EFL students' attitudes, motivation and anxiety levels. They concluded that EFL students' motivation was enhanced and positive attitudes shaped while their anxiety levels were minimised. Iryna Volodymyrivna et al. (2021) also found that Ukrainian EFL students experienced anxiety problems

in the process of learning a foreign language such as low self-esteem, demotivation, frustration, and fear of failure. Their research found that Ukrainian EFL students maintained that online education is inferior compared to in-person classroom teaching. Iryna Volodymyrivna et al. (2021) reported several shortcomings that Ukrainian EFL students expressed, such as insufficient digital opportunities, many individual tasks, a lack of personal contact and communication, limited internet connection at home, and an unfriendly learning environment.

In another study, Chen et al. (2022) investigated instructors' and students' perceptions towards online education during the COVID-19 pandemic in Canada. Their research found that remote learning with effective online devices could recreate the main constituents of content delivery, tasks, evaluations, and virtual proctored examinations, but that university instructors and students wish physical classrooms to continue. They finally reported instructors' and students' willingness to blend learning opportunities in physical classrooms, online, and asynchronous course deliveries according to personal preferences. However, Meirovitz et al. (2022) examined, following a mixed-method approach, EFL teachers' practices and perspectives on their teaching online during the COVID-19 pandemic. They identified the gap between knowledge and usage of digital tools among EFL teachers. Not surprisingly, their research found that EFL teachers whose knowledge of digital tools was lower than their usage encountered technological difficulties that impaired their teaching.

Moreover, Aldaghri and Oraif (2022) explored the impact of online teaching on Saudi university EFL students' engagement with writing skills during the pandemic. Drawing on a mixed-method design, the researchers recruited 148 university EFL female students using convenience sampling to answer the questionnaires. They reported that the university EFL female students showed significant engagement in skills practice, whereas their responses demonstrated a moderate level of engagement in terms of emotional involvement with class material, participation, and interaction with the instructor and peers. They concluded that most participants generally reflected on the online learning experience as being "pleased". Some female students emphasised that online learning and face-to-face learning can be quite similar, and the information is delivered clearly through both modes.

Barriers and Challenges

The unpredictable and rapid move from in-person to online teaching and learning formats created several barriers and challenges that need to be investigated. Recent studies have demonstrated that both teaching and learning during the time of COVID-19 were a tremendous challenge for instructors and students (Almahasees et al., 2021; Crawford & Cifuentes-Faura, 2022; Ghanbari & Nowroozi, 2022; Hassani, 2021; Hodges et al., 2020; Sahito et al., 2022). For example, Khatoony and Nezhadmehr (2020) investigated Iranian EFL teachers' challenges in the implementation of online classes during the COVID-19 outbreak. They adopted an exploratory mixed methods research approach in which 30 EFL teachers were interviewed and were required to answer a questionnaire survey. They found that while the EFL teachers could manage the applications and platforms, they were faced with several challenges, namely, the student's lack of attention and demotivation towards online instruction, a lack of financial aid and support for language institutes, and a lack of suitable materials. On the other hand, EFL teachers held positive views with regard to adopting technology in Iran and stated that technologies can be useful for pandemic-like situations to minimise the distance between students and teachers.

Hassani (2021) also examined the effects of the COVID-19 pandemic on 30 Iranian EFL student-teachers in order to identify the challenges and opportunities they faced. Using a qualitative study, he utilised semi-structured interviews, focus group interviews, teachers 'reflective journals, and a researcher's reflective journal in his study. Hassani concluded that EFL student-teachers considered the pandemic as an opportunity but that they also felt that there was a need to incorporate technology into their educational settings in order to educate instructors and students on how to employ technology in order to keep higher education systems running.

In another study, Azizpour (2021) explored Iranian EFL university instructors' perspectives towards online instruction during the COVID-19 pandemic. Using a qualitative approach, the researcher interviewed 13 university instructors (nine females and four males) in order to identify their perspectives, experiences, and challenges with regard to online instruction during the outbreak of COVID-19. Azizpour found that Iranian EFL university instructors need professional training on the latest technology devices for online classes. A challenge the instructors had recognised was the need to make their online classes more interactive to assist their students in staying focused on the course and minimising the sense of isolation. This research indicated that free internet access and the sufficiency of technology infrastructure could promote online instruction during the COVID-19 pandemic. More recently, Ghanbari and Nowroozi (2022) have also investigated EFL teachers' challenges and coping strategies during the COVID-19 pandemic in Iran. Following a qualitative approach, they interviewed two teachers at various times during the course. The findings of their study demonstrated that the two teachers faced numerous pedagogical, technological, institutional and emotional challenges, albeit the teachers could find strategies to succeed in the new circumstances.

Overall, several criticisms can be levelled at the above-mentioned studies. For instance, while offering informative research findings, numerous studies drew upon a limited number of participants (e.g., Azizpour, 2021; Ghanbari & Nowroozi, 2022; Hassani, 2021; Khatoony & Nezhadmehr, 2020; to name a few). Another criticism can be levelled at the research designs, which were either qualitative (e.g., Ghanbari & Nowroozi, 2022) or quantitative (e.g., Rafiee et al., 2022) which may not present a full picture of the issue. Some other studies also applied mixed methods approaches which could be criticised. For example, such studies did not take into account the perceptions of both genders (e.g., Aldaghri & Oraif, 2022) as a potential category of analysis since it can form research agendas (Cohen et al., 2018). Considering these issues, the present study chose to adopt a mixed-method approach in order to overcome certain limitations that previous research has suffered from. Thus, this research addresses multiple objectives, such as exploring the perspectives of participants of both genders and the experiences of both university instructors and students as key members and drivers. Compared to previous studies, more participants with various educational backgrounds (i.e., BA, MA, and PhD students) were also invited to participate. Finally, in order to obtain more in-depth data, participants were interviewed.

Method

Design of Study

The present study used a mixed-methods research approach. This type of research design synergises the advantages of both quantitative and qualitative approaches and offers a more complete picture of the subject in a single study (Cohen et al., 2018). It also allows researchers to integrate different types of data and methods to generate new insights and knowledge.

Context and Participants

Islamic Azad University (IAU), located in Tehran, Iran, is a non-governmental university with a number of local and international branches. IAU is one of the largest private universities in Iran. EFL instructors and students from this university were the source of the data collected for the present study and were teaching and learning the English language throughout the time of data collection. A convenience sampling method was used, and 60 university EFL instructors (N=40 males and 20 females) and 93 students (N=36 males and 57 females) participated, as shown in Tables 1 & 2. Both genders participated and had experienced four consecutive semesters in the COVID-19-imposed online education. EFL students' age range was 25.53 (SD=6.53), and the average experience of learning English was 9.48 years (SD=4.96) while university EFL instructors' age range was 35.33 (SD=7.521) and average experience of teaching English was 11.82 years (SD=6.74).

As for electronic devices, while 51.6% of students used laptops to access online classes, 37.6% of students used mobile phones for online classes. However, only 7.5 % and 3.2 % of students used desktop computers and tablets, respectively, to take part in online classes. On the other hand, 71.7% of university instructors used laptops to run online classes, whereas 20% of instructors utilised mobile phones to run online classes. However, only 8.3% of instructors used desktop computers as a device for online classes. Moreover, only one percent of students used free sources of the Internet provided by the government, whereas more than three percent of university instructors used free sources of the Internet from the government.

Table 1Demographics of the Student Participants

Educational Level	No of the Participants	G	ender	Years of Learning English Experience
BA students	84	Male	Female	
MA students	7	⁻ 36	57	9.48 (<i>SD=4.96</i>)
PhD students	2			

 Table 2

 Demographics of the Instructor Participants

Educational Level	No of the Participants	G	ender	Years of English Teaching Experience
BA holders	9	Male	Female	
MA holders	23	40	20	11.82 (<i>SD</i> =6.74)
PhD holders	28			

Instruments

In this study, three research instruments, including two English online questionnaires and a semistructured interview were developed and utilised to collect data.

Developing and Piloting Online Questionnaires

In order to develop online questionnaires, various steps and rigorous procedures were followed. Initially, the researchers reviewed the relevant prior studies to pursue the standard criteria for developing a valid and reliable online questionnaire. Having examined the previous research, about 90 potential concepts associated with the issue under investigation were singled out and borrowed. These potential items were predominately extracted from four studies such as Almahasees et al. (2021), Chen et al. (2022), Panda and Mishra (2007), and Sahito et al. (2022). In order to reduce the large list of items in the "item pool" (Dörnyei & Taguchi, 2010) and benefit from the viewpoints of experts, five faculty members were asked to go through them and provide feedback.

Based on the written feedback, suggestions and comments received, some revisions were made and irrelevant and/or vague items were removed. The resulting questionnaires comprised 46 items formatted for students, and the second consisted of 58 items formatted for university instructors. Both questionnaires were then re-examined in terms of clarity, wording, readability, redundancy, and functionality. The questionnaires were then assessed by five experts for face and content validity and were piloted by a sub-sample of 15 university instructors and 23 students similar to the target population in order to obtain additional feedback on the content intelligibility, clarity, and appropriateness. The researchers collected further information regarding the questionnaire items by asking the respondents to explain their responses to check that there were no discrepancies between the intelligibility of questions and the respondents' understanding. The final versions of both questionnaires covered three main areas, including socio-demographic information, the general attitude towards online education (in terms of convenience, satisfaction, control, engagement, interaction, technology acceptance, and adaptability) and potential barriers based on a five-point Likert scale. Rating scale questions ranged from "Strongly Agree (1), Agree (2), Undecided (3), Disagree (4), to Strongly Disagree (5)" and included 11 negatively worded

statements. The internal consistency of the university instructors' online questionnaire was found to be relatively high, with a calculated alpha coefficient of 0.80 for the 71 items. Similarly, the students' online questionnaire demonstrated relatively high internal consistency with an alpha coefficient of 0.81 for the 60 items. These results indicated that the items within each questionnaire were highly correlated, suggesting that the measurements obtained from the questionnaires were reliable and consistent.

Developing and Piloting Interview Questions

In order to obtain more in-depth data from the participants, semi-structured interviews were designed within a thematic framework to explore the participants' thoughts, beliefs, and feelings concerning the topic of interest. This type of interview is used to encourage respondents to expand on the issues discussed in an exploratory manner (Dörnyei, 2007, p. 136). Four semi-structured interview questions were designed for students and five questions for university instructors. The interview questions were mainly adopted from related past research studies (e.g., Almahasees et al., 2021; Hassani, 2021; Sahito et al., 2022). The face and content validity of the interview questions were further validated by five experienced EFL researchers who have practical experience in performing research studies in English language teaching.

Procedure

Two questionnaires were electronically created via a Google Forms platform. The online links of the developed questionnaires, with a brief explanation of the objectives of the study, were shared with both university instructors and students through two popular social media platforms, namely, WhatsApp and Telegram. The estimated completion time for each online questionnaire was approximately 10 minutes.

Participation in this study was voluntary. Both university instructors and students had completed a written consent to take part in the study before they responded to the relevant questionnaires. The participants were given information with regard to the purposes of the study and were notified that their identities would be anonymous and that their responses to any or all questions would remain strictly confidential.

In order to enrich the data, six university instructors (three PhD holders and three MA holders) and six BA students were invited to interview sessions. They consented to be interviewed to provide additional information. Both university instructors and students were given the interview questions prior to the interview sessions to preview them and make any notes if desired, as the English language was not their mother tongue. Every participant was met in person by the first author of the study following a safety protocol (e.g. wearing face masks, maintaining physical distance and using hand disinfectant). All interview sessions generally began with a brief description of the aims of the study in order to provide some reassurance and set the tone of the interview (Dörnyei, 2007). General questions were asked first, which led to more specific ones. Interviews were performed in English and lasted for around 25 minutes on average. Special attention was given to allow time for respondents to vocalise their feelings, ideas and opinions freely without being unnecessarily interrupted. The interview sessions were audio-recorded for further analysis.

Data Analysis

Quantitative Phase

For the quantitative part of the study, the collected data obtained from online questionnaires were initially entered into Microsoft Excel spreadsheets and then transferred to the Statistical Package of Social Science (SPSS) software, version 26, for analysis based on the objectives of the study. The basic descriptive statistical analysis was used to compute the mean (M), standard deviation (SD), minimum, maximum, and frequency of the respondents' sociodemographic information.

In order to understand the order of importance of items, rank order analyses were performed for the attitudes and barriers. It should be noted that the negatively worded statements were also reverse-scored. In order to analyse and interpret attitudes towards online education, we employed the scoring range outlined by Panda and Mishra (2007), as presented in Table 3.

Table 3
Interpretation of Range of Scores

Range of Scores	Interpretation
4.5 and above	Positive
3.5- 4.49	Moderately positive
2.5- 3.49	Neither positive nor negative
1.5- 2.49	Moderately negative
1. 49 and less	Negative

Qualitative Phase

For the qualitative part of the study, university instructors' and students' interviews were initially recorded and then transcribed by the researchers. The written transcripts of interviews were read in their entirety several times to gain a deep insight into the content of the datasets. After that, the interview transcripts were sent to interviewees to "member check" the synopses of their interviews in order to validate and judge the accuracy of information before finalisation (Cohen et al., 2018, p. 253). Another validation strategy applied was to document and record all research activities in a spreadsheet functioning as an audit trail (Cohen et al., 2018).

In order to analyse the interview transcripts, we followed the various stages of a thematic coding analysis suggested by Robson and McCartan (2016). Interview transcripts were thoroughly scrutinised by the researchers in order to become familiar with the entire dataset. We then identified different codes to generate initial themes independently. Having identified themes, we

compared and discussed various themes in a series of discussions and an iterative process before moving on to the next phase. The divergent notions on themes were negotiated and discussed until a clear consensus of opinions emerged. Overall, the interview data were analysed by determining, analysing and reporting themes within datasets.

Results

Quantitative Phase

The first research question investigated university EFL students' and instructors' attitudes towards online education during COVID-19. This section focused on EFL students' attitudes, as presented in Table 4. The results revealed that the mean scores for the first five statements (i.e., 15, 20, 24, 22, and 3) ranged between 3.51 and 3.78, showing moderately positive attitudes. However, the mean scores for the remaining items were between 2.55 and 3.49, indicating students' attitudes are centred on neutralism value. In order to maintain conciseness, the remaining items displaying neutralism values are provided in Appendix A.

Table 4 *EFL Students' Attitudes towards Online Education*

Questionnaire Items	Min	Max	Mean	Std. Deviation
15. Online classes can bring new opportunities for organising learning.	1	5	3.78	1.020
20. Online classes work well with my schedule.	1	5	3.73	1.252
24. Online class experiences cannot be equated with face-to-face teaching.	1	5	3.63	1.040
22. I can do other things in online classes compared to a physical classroom.	1	5	3.61	1.000
3. I like to learn new technology, and I highly recommend online classes.	1	5	3.51	1.109

Regarding university EFL instructors' attitudes towards online education during COVID-19, the findings are presented in Table 5. The results indicated that the mean scores for the first six items (i.e., 21, 6, 8, 25, 20, and 15) ranged between 3.58 and 3.98, showing moderately positive attitudes towards online education. However, the mean scores for the 14 items were between 2.50 and 3.47, indicating that students' attitudes are neither positive nor negative. For the sake of brevity, the presentation of these remaining items with neutralism values has been included in Appendix B. As for the last four statements (i.e., 19, 2, 13, and 23) the lowest mean scores were between 1.93 and 2.27, suggesting that EFL instructors' attitudes are moderately negative.

Table 5University EFL Instructors' Attitudes towards Online Education

Questionnaire Items	Min	Max	Mean	Std. Deviation
21. It is essential that online class material is of high quality.	1	5	3.98	1.000
6. Online classes can bring new opportunities for organising teaching and learning.	1	5	3.93	.989
8. Online classes can offer unlimited possibilities that have not yet even been thought about.	2	5	3.78	.885
25. Online classes are interesting and useful.	1	5	3.72	.993
20. Online class experiences cannot be equated with face-to-face teaching.	1	5	3.68	1.142
15. Online classes can increase the flexibility of teaching and learning.	1	5	3.58	.979
19. Online classes are not effective for student learning.	1	5	2.27	.899
Online classes make me uncomfortable because I often do not understand them.	1	4	2.22	.993
13. Online classes can engage learners more than other forms of learning.	1	4	2.18	.748
23. Online classes require less effort from teachers.	1	5	1.93	.989

The second research question investigated learning and teaching challenges and barriers university EFL instructors and students encountered during COVID-19 in online education. As shown in Table 6, the mean scores for items 1, 13, and 2 were between 3.84 and 4.37, showing that students believed that poor Internet access, lack of technical support, and screen time are among the topmost barriers to online classes. However, the mean scores for the remaining items were between 2.62 and 3.46, showing neutral attitudes towards barriers stated in the questionnaire (Appendix C).

Table 6Barriers and Challenges Students Faced in Online Education

Questionnaire Items	Min	Max	Mean	Std. Deviation
Students often struggle with poor internet access and networking in/at universities/homes.	1	5	4.37	.953
13. Online learning creates more screen time (i.e., time spent using a device such as a computer, television, mobile, or tablet).	1	5	3.87	1.002
2. Students do not have technical support in universities.	1	5	3.84	1.200

On the other hand, Table 7 shows that poor internet access to delivering online classes (i.e., item 3) is perceived as the most agreed-upon item and the topmost barrier by university instructors. In addition, responses to the remaining items were slightly above average - between 3.58 and 4.22 - which demonstrates university instructors' agreement with the majority of barriers stated in the questionnaire. However, the mean scores for nine items were between 2.83 and 3.42, showing neutral attitudes towards the barriers mentioned (Appendix D).

 Table 7

 Barriers and Challenges University Instructors Faced in Online Education

Questionnaire Items	Min	Max	Mean	Std. Deviation
3. Teachers struggle with poor Internet access and networking in/at universities/homes.	3	5	4.60	.588
13. Teachers may have difficulty monitoring students in online classes.	1	5	4.22	.825
10. Teachers have concerns about the quality of online classes.	3	5	4.22	.555
7. Inadequate availability of hardware and software support is a big challenge in universities.	2	5	4.15	.777

Teachers have concerns about access to students.	1	5	3.98	.748
20. Teachers may have problems tracking attendance during online classes.	1	5	3.97	.882
19. Teachers may have insufficient interaction with students.	1	5	3.90	.986
22. Students may not adhere to educational rules.	2	5	3.85	.659
4. Teachers do not have technical support in universities.	1	5	3.85	1.055
5. There is no instructional design support for online classes.	1	5	3.82	.833
6. There is no institutional policy for online classes.	1	5	3.78	.940
8. Increased faculty workload is a main concern.	2	5	3.73	.686
25. Teacher-student rapport is not easy to develop in online classes.	1	5	3.73	.821
2. Teachers do not receive any in-service training on the design and delivery of online classes in teacher education programs.	1	5	3.65	.880
12. There are many concerns about security issues and privacy concerns with regard to online classes.	1	5	3.58	.944
24. Assessing students' progress is difficult in online classes.	2	5	3.58	.944

Qualitative Phase

Main themes taken from the interview datasets of university instructors and students are principally divided into two major categories, namely, positive and negative. In general, three positive themes (e.g., comfort and convenience, self-paced learning and positive psychological effects) and nine negative themes (e.g., poor Internet connection, distraction, negative

psychological effects, low academic performance/achievement, absence of interaction, technical/logistical barriers, digital literacy, socioeconomic issues and health issues) emerged from students' interview data. In contrast, two positive themes (e.g., comfort and convenience and students' style of learning) and six negative themes (poor Internet connection, teaching issues, absence of interaction, low academic performance/achievement, digital literacy and socioeconomic issues) emerged from university instructors' interview data. A synopsis of the most salient themes, along with sample responses, is presented in Appendix E.

Discussion

The present study explored Iranian university EFL instructors' and students' attitudes towards online education. It has also examined learning and teaching barriers and challenges they encountered during COVID-19. The two research questions guiding this study sought to report the attitudes, barriers, and challenges of delivering online education during the COVID-19 pandemic.

What were university EFL students' and instructors' attitudes towards online education during COVID-19?

In response to the first research question, the results indicated students' moderately positive attitudes towards various advantages that online education offers, such as convenience, comfort, accessibility, flexibility, and suitability. These merits may show students' satisfaction with online education and reduce students' concerns about time and place to carry out their assignments (Suwantarathip, 2019). Such research findings can bolster the fact that flexibility and accessibility of technology-supported education empower students of either gender to experience sustainable development and attend online classes anytime or anywhere as self-paced learning (Hodges et al., 2020; Wang et al., 2022). It may also signify that the shift to online education can reduce the carbon footprint of universities and minimise the need for students and university instructors to travel to a university campus. Thus, online education may offer a potential benefit for environmental sustainability. As such, our findings reiterate other recent studies on the advantages of online education (Aldaghri & Oraif, 2022; Almahasees et al., 2021; Hassani, 2021; Wang et al., 2022).

Another domain highlighted in students' responses was their preference for new technology and new opportunities that online education can bring about. These two domains can play vital roles in delivering effective teaching and learning processes and may show male and female students' enthusiasm for modern instructional technology. Nevertheless, students of both genders believed that online classes and face-to-face classes cannot be equated. Such findings appear to be in line with Panda and Mishra (2007) and Al-Nofaie (2020), who reported that online education cannot completely replace traditional face-to-face classes. The other area that refers to students' personal opportunities is multi-tasking. Students favoured online education because being at home allowed them greater freedom and enabled them to multi-task while attending online classes. This supports earlier findings (Curelaru et al., 2022; Khatoony & Nezhadmehr, 2020).

Furthermore, students' attitudes with regard to many questionnaire items were neutral. The state of neutrality and uncertainty in selecting the questionnaire items may be explained by a number of possible reasons. Firstly, the neutral attitudes towards online education could be due to the

newness of educational programs and new methods of teaching in Iran (see Badrkhani, 2021). Consequently, it might be too soon to appraise students' perceptions of online education. Secondly, a large number of Iranian university EFL instructors and students lacked experience with online teaching and learning spaces (Badrkhani, 2021; Hassani, 2021) and online education was a mandatory choice to sustain education in times of crisis. Not surprisingly, they did not have adequate familiarity, motivation, skills and instruments for such a method of teaching and learning (see Wang et al., 2022). For such reasons, both university instructors and students might have felt uncertain.

Regarding EFL instructors' attitudes, the results demonstrated that university EFL instructors agreed that the difficulties of online education are currently multifold. For instance, they believe that it is essential to develop quality online materials supported by technology. This may mean that pedagogically sound course design must be a necessary step for the success of online learning classes and activities (Wang et al., 2022). However, university EFL instructors had favourable attitudes towards other features of online education that assist in instructional processes. For instance, location, time flexibility, accessibility, usefulness, suitability and the extensive possibilities of a gender-neutral online education stood out. This may be in alignment with Huang et al. (2012) who maintained that modern technology can help instructors to hold positive attitudes towards teaching and learning, notwithstanding some problems.

In general, both university instructors and students expressed moderately positive attitudes towards new opportunities for organising teaching and learning through online classes. In addition, both groups maintained that online class experiences cannot be equated with face-to-face teaching. There are some possible explanations for this. Firstly, both groups were faced with conditions that created obstacles and challenges for them to follow a new online teaching and learning methodology (Crawford & Cifuentes-Faura, 2022; Panda & Mishra, 2007). Secondly, since Iranian universities basically follow presence-based teaching practices, both groups agreed that online education cannot be a substitute for face-to-face teaching (Badrkhani, 2021; Rafiee et al., 2022; Sahito et al., 2022). The third reason could be the sudden shift towards online education for which they were not motivated (Crawford & Cifuentes-Faura, 2022; Curelaru et al., 2022; Iryna Volodymyrivna et al., 2021).

What learning and teaching barriers and challenges did university EFL instructors and students encounter during COVID-19 online education?

Both university EFL instructors and students have expressed numerous learning and teaching barriers and challenges either in online questionnaires or interview sessions that can impede the success of and sustainability of quality online education. Chief among all was poor Internet access in/at universities/homes which both groups considered as the first crucial barrier. The primary reason for this might be Iran's current political climate (Ghanbari & Nowroozi, 2022; Hassani, 2021; Rafiee et al., 2022). Secondly, the lack of technical support in universities was another common barrier about which both instructors and students expressed their agreement. This can echo Hodges et al.'s (2020) findings. Generally, poor Internet access may not only disrupt the pace of teaching and learning and impede students' rights to a sustainable education, but it may also create "students' emotional undulation" (Wang et al., 2022) and an unsustainable context for entire education systems. After all, online education is entirely reliant upon modern technology tools, which is a potential challenge for technological sustainability as universities may need to

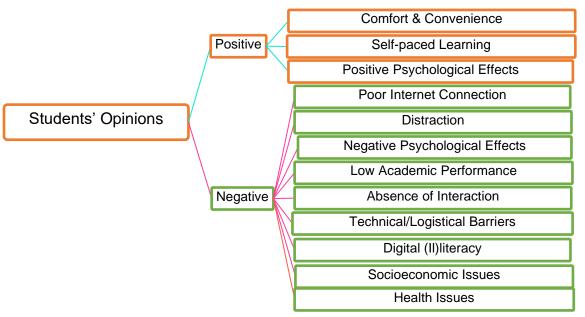
continue to invest in these technologies to maintain online instruction in the long term. Therefore, university instructors and students experiencing connectivity problems are liable to be deprived of a sustainable education. Overall, these findings can resonate with multiple past findings (Azizpour, 2021; Ghanbari & Nowroozi, 2022; Hassani, 2021; Jalilinia, 2021; Khatoony & Nezhadmehr, 2020; Rafiee et al., 2022; Sahito et al., 2022; Wang et al., 2022).

Students further considered screen time (i.e., time spent using a device such as a computer, television, mobile, or tablet) as another barrier. Increased screen time during the COVID-19 period, as indicated in the interview dataset, can negatively affect both physical (e.g. back pain, headache and eye pain) and mental health. This echoes previous research findings (Curelaru et al., 2022; Pandya & Lodha, 2021; Wang et al. 2022). Such findings can also inform public health policymakers and educators to devise mechanisms to prevent it since the COVID-19 pandemic has had complex and multifaceted impacts on mental health and sustainability. It is important for higher education institutions to consider these impacts when developing and implementing policies and programs to support mental health and well-being.

Furthermore, the results of interviews with students revealed some other negative unwanted outcomes such as technical/logistical barriers, digital illiteracy, absence of interaction, distraction, psychological and affective challenges, socioeconomic issues, health issues and low academic performance, as illustrated in Figure 1.

Figure 1

Negative and positive outcomes of online education expressed by students



This may suggest that the quality of sustainable education has been negatively affected by university closures and the rapid transition to online education. Among these barriers, as suggested in students' interviews, socioeconomic issues such as financial burdens, inequality in socioeconomic status, and the inability to afford technology devices appear to be serious problems. As such, some students may feel such socioeconomic issues are, for them, insurmountable and may choose not to enter university at all. It is clear that such issues will need

to be addressed if a sustainable, quality education is to be available to all. The future of equitable quality education systems may well be dependent on whether education systems are adequately prepared to encounter times of crisis, such as the one caused by COVID-19.

In contrast, students did articulate two positive aspects of online education in their interviews. For example, they stated that online education can help them customise their learning pace (i.e. self-paced learning). A further positive psychological effect of online education was to enhance some students' autonomy and self-confidence. This finding concurs with past studies (Almahasees et al., 2021; Khatoony & Nezhadmehr, 2020). However, some students stated that online education may create a sense of isolation (see Azizpour, 2021; Ghanbari & Nowroozi, 2022). Overall, we believe that students' voices should be heard since their experiences can help assist education authorities and decision-makers in a developing country like Iran to work towards viable solutions and resources to cope successfully with barriers and difficulties in post-pandemic pedagogy.

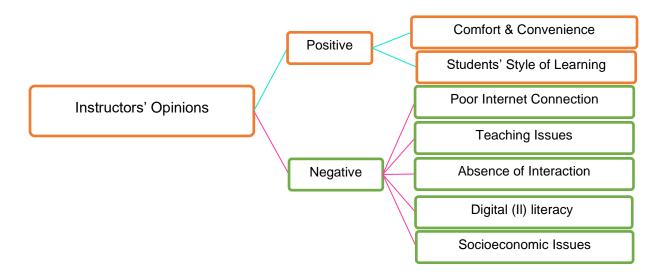
University EFL instructors agreed on 16 barriers and challenges. Some were stated in questionnaires, and others during interview sessions. Some of the barriers and challenges have been reported in earlier studies. However, new contributions that this study made are concerned with some less-known psychological, pedagogical and institutional issues, such as:

- · problems tracking attendance during online classes;
- · no instructional design support for online classes;
- · no institutional policy for online classes;
- concerns about security issues and privacy regarding online classes;
- · difficulty monitoring student's progress in online classes;
- students not adhering to educational rules.

This means that university instructors were confronted with problems with online education which may lead to reducing the practicality of its development. It may also signify that face-to-face teaching can be more quantifiable in comparison to online education since it is directed by university instructors who may play a critical role in shaping student behaviour. Based on the interview dataset, there were both positive and negative aspects in implementing online education, as schematically arranged in Figure 2.

Figure 2

Negative and positive outcomes of online education expressed by instructors



Just as the students indicated, instructors maintained that the online benefits of comfort and convenience, as well as the ease of adaptation to suit students' style of learning, were two positive aspects of online education. However, they also experienced challenges such as:

- · digital illiteracy;
- · absence of interaction;
- · socioeconomic issues;
- · teaching issues;
- · poor internet connection;

We hope that the findings of this study may be of assistance to those who wish to implement online education in Iran. With the development of improved, sustainable online platforms, a growing number of students will access education in the future. To those who wish to ameliorate the way online education has been implemented in Iran, we recommend focusing on the barriers and challenges that both university instructors and students encountered during the COVID-19 pandemic. We also believe that the experiences of both university instructors and students can be helpful for university instructors working in developing countries that always seek new trends to involve their students in effective online education. These experiences should be further taken into account when designing new approaches to empower them.

Conclusion and Implications

The present study explored Iranian university EFL instructors' and students' attitudes towards online education. It has also examined the teaching and learning barriers and challenges they encountered during COVID-19. The study found that students valued the convenience, comfort,

accessibility, flexibility, and suitability of online education. Students also appreciated the potential of new technology and the opportunities that online education brought. However, they identified poor Internet access and excessive screen time as common barriers that could hinder the success and sustainability of high-quality online education. In addition, university EFL instructors recognised the multiple challenges associated with online education. They emphasised the importance of developing quality online materials supported by technology. Furthermore, they had a positive attitude towards other features of online education that assist in instructional processes.

The findings of this study may be of assistance to those who wish to implement online education in Iran. With the continuous and sustainable development of online platforms, a growing number of students will access education in the future. For educators, stakeholders and policymakers seeking to improve the implementation of online education in Iran, we recommend focusing on the barriers and challenges that both university instructors and students encountered during the COVID-19 pandemic. Additionally, we believe that the experiences of university instructors and students can benefit the instructors in developing countries that are constantly seeking new trends and strategies to engage students effectively in online education. These experiences should be further taken into account when designing new approaches to empower instructors and enhance the learning experience.

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Conflict of Interest

The authors disclose that they have no actual or perceived conflicts of interest. The authors disclose that they have not received any funding for this manuscript beyond resourcing for academic time at their respective university. The authors have produced this manuscript without artificial intelligence support.

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Appendix A

EFL Students' Neutral Attitudes towards Online Education

Questionnaire Items	Min	Max	Mean	Std. Deviation
25. Universities should adopt more and more online classes.	1	5	3.40	1.226
23. Online classes can increase quality of teaching and learning because they are able to integrate all forms of media: print, audio, video, animation, etc.	1	5	3.39	1.084
8. Online classes are interesting and useful.	1	5	3.31	1.021
14. Online classes can solve a lot of our educational problems.	1	5	3.16	1.135
2. I participated in online classes with a great interest as I love online classes.	1	5	3.10	1.252
11. Online classes require less learning efforts from students.	1	5	3.08	1.163
17. I may not adhere to educational rules in online classes.	1	5	3.06	.987
21. It is difficult to contribute to online class discussions.	1	5	3.03	1.108
19. Online classes encourage me to attend classes.	1	5	3.01	1.281
2. I participated in online classes with low interest as I have no any other alternatives to learn my courses.	1	5	2.98	1.225
18. Online classes make it easier for me to communicate and interact with my classmate and instructor effectively.	1	5	2.94	1.284

16. Online classes can engage learners more than other forms of teaching.	1	5	2.85	1.073
9. Online classes are time-consuming and energy-draining.	1	5	2.84	1.236
5. Online classes discourage my interest of learning.	1	5	2.81	1.145
10. Online classes lack professional prestige.	1	5	2.71	1.203
7. Online classes are so boring that I will never recommend them to anyone.	1	5	2.65	1.148
13. Online classes make me uncomfortable because I often do not understand them.	1	5	2.62	1.206
4. Online classes give me great enthusiasm to learn.	1	5	2.56	1.165
12. Online classes are not effective for student learning.	1	5	2.55	1.290

Appendix B

University EFL Instructors' Neutral Attitudes towards Online Education

Questionnaire Items	Min	Max	Mean	Std. Deviation
14. Online classes can increase quality of teaching and learning because they are able to integrate all forms of media: print, audio, video, animation.	1	5	3.47	1.033
22. Universities should adopt more and more of online classes.	1	5	3.45	1.064
10. Online classes can improve autonomous learning skills.	2	5	3.43	.909
3. Online classes do not take into account the affective (emotional) factors in the process of learning.	1	5	3.30	1.109

11. Online classes can increase teacher efficiency in teaching.	1	5	3.20	.935
24. Online classes are time-consuming and energy-draining.	1	5	3.17	1.210
9. Online classes can reduce time and effort of teachers.	1	5	3.07	1.177
4. Online classes can solve a lot of our educational problems.	1	5	2.97	1.008
17. Online classes can enhance the pedagogic value of a course.	1	5	2.95	.964
18. Online classes can cause a sinking feeling.		4	2.82	.770
12. Online classes enable collaborative learning.		5	2.82	.948
5. Online classes can intimidate teachers.		4	2.73	.936
16. Online classes can improve communication and interaction between students and teachers.		5	2.62	1.121
7. Online classes are difficult to handle and therefore frustrating to use.	1	4	2.50	1.033

Appendix C

Barriers and Challenges Students Faced in Online Education (Neutral Values)

Questionnaire Items		Max	Mean	Std. Deviation
Students may have insufficient interaction with teachers.		5	3.46	.891
6. Students are unable to develop close relationships with peers.	1	5	3.44	1.068
5. There are many concerns about security issues and privacy concerns with regard to online classes.	1	5	3.20	1.038
9. Quality of online classes is not satisfactory.		5	3.17	1.185
12. Online classes make me feel isolated from my classmates.		5	3.14	1.340
7. Online classes don't meet my preferred learning style.	1	5	3.06	1.275
3. Students cannot receive adequate or helpful feedback from teachers in online classes.		5	3.02	1.170
8. I cannot clarify points with teachers in online classes.		5	2.97	1.088
11. Online classes may cause problems related to mental health and digital wellbeing (anxiety, depression, stress, worry, etc.)		5	2.82	1.197
10. Online classes create financial problems.	1	5	2.62	1.215

Appendix D

Barriers and Challenges University Instructors Faced in Online Education (Neutral Values)

Questionnaire Items	Min	Max	Mean	Std. Deviation
9. Teachers do not have enough time to develop online courses.	1	5	3.42	1.046
18. Teachers cannot provide a wide range of activities in online classes.	1	5	3.38	1.223
15. There are no role models to follow.	1	5	3.37	1.057
14. Teachers may feel personally intimidated by technology.		5	3.35	.971
23. Online classes may cause problems related to mental health (anxiety, depression, stress, worry, etc.)	1	5	3.32	.948
21. Students misbehavior or disrespect during online classes is a big concern.		5	3.32	1.142
11. Teachers have no incentives to use online classes.		5	3.13	1.065
17. Teachers cannot provide adequate or helpful feedback in online classes.	1	5	2.97	1.164
16. Online classes lacks professional prestige.	1	5	2.83	1.137

Appendix E

The most salient themes and examples emerged from analysis of EFL students' interview datasets

Positive Themes		Samples of Students' Responses
	0	There is no need to spend a lot of energy for commuting and physical presence at the university
	0	It saves time and provides an opportunity for self-study
Comfort & Convenience	0	The attractive part of online education is its possibility to participate in a class at any place and time
	0	We didn't waste time in traffic, and we got more free time to use for more important things. And also, I had a chance to have class with one of our professors who didn't live in our city
Self-paced Learning	0	There were times that I missed some points during online classes and I always was trying to do something about it, asking my friends to just give me their notes or even record videos and again listening to them or watching them to take notes.
	0	And other thing is that move at my own pace. It was really important for me especially I sometimes needed to work on some subjects more than others.
Positive Psychological Effects	0	In my online education as a student at university, my strengths were being able to be more brave or be more encouraged to participate in class because of the anonymity it could give me I wasn't physically present somewhere so it made me somehow feel more brave maybe
	O	Presenting in front of others at university always stressed me out, but I could make less mistakes in and feel more confident when I was in online classes and it was easier to stay focused.
Negative Themes	;	Samples of Students' Responses

Poor Internet Connection	 I can mention: weak internet connection, no access to mic, low battery of device, the bugs of the sites
Distraction	I was attending online classes I couldn't concentrate that much because of the distractions at home.
	 Because there were a lot of distractions, there were family members, there were a lot of house chores.
Negative Psychological Effects	 Another thing is that, online learning may create a sense of isolation
Low Academic Performance/Achievement	ohowever, the performance of the students and learners were greatly reduced and let's say the instructions of the professors weren't as effective as offline and face-to-face classes
	oat this juncture I can confess that in the first semester of online courses, I asked someone else to sit for my general religious courses I totally hate these lessons and find them useless so I have asked for a friend of mine to sit for the exam instead of me
	 Although I attended all the classes I had to, I think I didn't grasp that much knowledge I didn't feel that I am a student educating in the field during the classes
Absence of Interaction	 I can mention that lack of proper interaction in online classes due to the problems that we had and the professors couldn't involve all the students
Technical/Logistical Barriers	o I think one of the biggest challenges at that time was a lack of proper internet and also devices to be used to participate in classes.
	o Some of the challenges that I can name here was the lack of skilled and trained human resources For example, whenever we had problems and some errors happened or wanted to have some solutions, the ones who were responsible to answer us weren't available I mean the support team
	o Insufficient digital literacy was another challenge
Digital (II)literacy	ostudent and professors and unfamiliarity with online education software

	obecause the professors didn't seem to know how to run an online class
Socioeconomic Issues	omoving away from the community, or not taking classes seriously and weak academic foundation or weak internet quality, lack of financial resource(s) to purchase a mobile phone are some of the disadvantages
Cociocconomic issues	o We can mention that students unequal access to online classes due to their geographical location or even economic situation was something that a lot of them were dealing with I mean that, for example, there were ones who didn't have laptop.
Health Issues	o So I sometimes had headache, neck and back pain. I couldn't do anything about it
i lealui issues	o I think we will have heath issues which can cause bad effects on students' health issues same as obesity and poor eyesight.

The most salient themes and examples emerged from analysis of university instructors' interview datasets

Positive Themes	Samples of Instructors' Responses
Comfort & Convenience	o I was comfortable because I didn't have to get dressed to go out so
Connort & Convenience 0	o I liked the fact that we don't have to commute I like the fact that we are at ease and comfort of our own home
Students' Style of Learning	I think beneficial for students because you know students with different learning styles specially those who are very slow in learning language they may repeat the videos again and again so it suits with their learning styles and those students who were introverted they liked it I think those who were shy and those who were afraid not to be attacked to their negative faces.
Negative Themes	Samples of Instructors' Responses
Poor Internet Connection	 In my country, most challenges and problems related to online classes had to do with the quality of the Internet connection

	0	it was a little difficult for me to create a good rapport without seeing them
Teaching Issues	0	the shortcomings were that sometimes I could not use facial expressions naturally.
Absence of Interaction	0	I could not see my students and I lost a little bit of the interaction between my students and I.
	0	we consider the loss of interaction as a negative point yeah that's the consequence students cannot socialize very much
Low Academic Performance/Achievement	0	Well, the way I perceptualize in my classes was that maybe the students aren't progressing the way I expect them that was the thing.
Digital (II)literacy	0	Another big challenge was lack of enough techno-literacy on the part of both teachers and students
	0	As online education was not very common in my country before COVID-19, one of the main shortcomings was the lack of familiarity with online platforms.
	0	Some of them have the inability to pay
Socioeconomic Issues	0	the consequence of online classes is that well firstly the students will suffer a lot from the lack of social life right now