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# Teaching and learning the four English skills before and during the COVID-19 era: perceptions of EFL faculty and students in Saudi higher education

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## Abstract

At the peak of the COVID-19 pandemic in 2020, synchronous online learning replaced physical classes worldwide. However, sustaining the quality of education during this transition was a challenge. Specifically, teaching and learning the four English skills (listening, speaking, reading and writing) among English-as-a-foreign-language (EFL) learners in contexts such as Saudi Arabia required greater adjustments to meet learners' demands during the pandemic. Within this context, this study explored how online teaching and learning helped develop the four English skills among Saudi EFL students. A survey was conducted among EFL faculty and learners in a Saudi Arabian higher-learning institution regarding the diverse aspects of language skills development before and during the pandemic. Data were analyzed using descriptive and inferential statistics. The results showed that e-learning was most beneficial for writing and least beneficial for speaking and that writing was most nurtured and adopted in almost all schoolwork, while speaking was neglected during online courses. Indeed, instructors must be prepared for an effective online learning experience in the future. This study aims to strengthen the field of EFL teaching and learning in Saudi Arabia and related contexts by describing learners' perceptions of their experiences before and during the pandemic.

**Keywords:** COVID-19, e-learning, English language skills, English-as-a-foreign-language, Synchronous, English language teaching

## Introduction

Education is one of the fields that has felt the majority of the effects of the COVID-19 pandemic. When the pandemic peaked in 2020, educational institutions worldwide, from basic to higher levels, were abruptly shut down, forcing many learners to learn from home (UNESCO, 2021). In the higher education sector, lecturers were forced to adjust their teaching by adopting technology to accommodate their learners, among other methods (König et al., 2020). The COVID-19 pandemic has indeed offered the higher education space many insights into teaching and learning in the digital realm (Toquero,

2020), but perhaps one area that remains underexplored involves English-as-a-foreign-language (EFL) teachers and learners, especially in contexts such as Saudi Arabia.

The increased use of online technologies for teaching and learning during the COVID-19 pandemic has brought forth the need to better understand student characteristics that affect learning and the effective design of online instruction (Almaiah et al., 2020). E-learning is a cost-effective and consistent approach through which people can acquire different skills according to their interests; it is also an easy-to-navigate platform that allows learners to obtain knowledge quickly because of easy access to courses. E-learning plays a vital role in developing skills such as listening, speaking, writing, and reading (LSWR), which are integral to communication. The teaching and learning of these four English skills changed tremendously during the pandemic, hence the need to investigate them. The need to shed light on the four English skills before and during COVID-19 was not addressed before and is new to the English teaching/learning literature. Let alone, the setting of the study is in one of the Saudi universities.

This study aimed to explore faculty and student perceptions of the effects of an e-learning program on four English skills (LSWR) in Saudi Arabia before and during the COVID-19 pandemic in 2020. It also sought to identify and understand the relation between e-learning techniques in English language teaching and learners' language learning. The results suggest that an effective e-learning environment can reduce students' anxiety and alleviate stress in the classroom environment even during a pandemic such as COVID-19.

#### **EFL and the Saudi context during the COVID-19 pandemic**

As in other countries, the COVID-19 pandemic affected Saudi Arabia's education and other key sectors. For example, according to Yezli and Khan (2020), to enforce social distancing and other COVID-related protocols, Saudi Arabia had to enforce extremely tough measures. Some of these, according to News Agencies (2021), included the Saudi government's ban on the yearly Hajj (pilgrimage) by the Muslim faithful around the world, an act that was financially costly but necessary in terms of health. The Hajj ban, however, affected international Muslims; those from Saudi Arabia could still attend, albeit with COVID-19 protocols being observed. With regard to education in Saudi Arabia, Alshaikh et al. (2021) observed that the country imposed restrictions and eventual lockdowns on educational institutions, prompting the shift to online teaching and learning.

Therefore, during the COVID-19 pandemic in Saudi Arabia, EFL teaching was conducted within the online context. Notably, e-learning was already being used as a virtual learning environment in Saudi Arabian universities before the outbreak of COVID-19. E-learning involves interactivity and experience via technologies and the Internet, or a medium of computer technology that can be utilized to develop learning and teaching applications (Horton, 2006; Rosenberg, 2001; Waterhouse, 2003). However, the COVID-19 pandemic enforced teaching and learning via e-learning platforms, the use of which was driven by factors such as management support and staff and student awareness of e-learning (Alqahtani & Rajkhan, 2020). A case study by Alshehri et al. (2020) showed that higher-learning institutions in Saudi Arabia transitioned to online teaching and learning during the pandemic with diverse challenges.

Notably, Arab countries are exerting consistent efforts to enable their citizens to become proficient in speaking English, which is a valuable tool that allows access to professional and academic opportunities, literature, sports, movies, television, music, games, and an expanded social life with people from all around the world (Ives, 2016). With the sudden outbreak of COVID-19, e-learning resources in EFL classrooms have assumed a significant and novel role in language learning (Bailey & Lee, 2020). Hence, the specific research questions for this study are as follows:

- Are there statistically significant differences in the teaching of the four skills (LSWR) among EFL teachers before and during the COVID-19 pandemic?
- Are there statistically significant differences in the learning of the four skills (LSWR) among EFL learners before and during the COVID-19 pandemic?

#### **Teaching the four skills to EFL learners**

With respect to teaching LSWR, EFL teachers are expected to exhibit professionalism not only in terms of teaching abilities, characteristics, and skills (Sulistiyo, 2016) but also in classroom management, which is an indicator of better teaching and learning (Marashi & Assgar, 2019; Marzano & Marzano, 2003). Such characteristics must be demonstrated by every preservice EFL teacher who intends to create interesting, enjoyable, and knowledgeable classroom experiences.

EFL teachers' capabilities in managing their classrooms may differ depending on the classroom atmosphere, learners' responses, and preservice teachers' preparation, which affects learners' motivation and performance (Marashi & Assgar, 2019). Generally, the classroom environment influences teaching management, and learners who lack discipline in the classroom prompt teachers to devise specific ways to control them. However, some learners are not enthusiastic in their responses to their EFL teachers and do not follow their instructions, and teachers consider this an obstacle to the effective delivery of classroom instruction. Implementing diverse approaches to teaching and planning for the successful delivery of education enables teachers to manage their classes effectively (Gacs et al., 2020; González-Lloret, 2020; Parker, 2014).

Studies have also observed that the teaching method is the main component of most EFL lessons (Al-Seghayer, 2017). Each preservice EFL teacher has different teaching practices and employs different strategies. However, one problem encountered by most preservice EFL teachers is their lack of awareness of the teaching method that they must apply for a particular skill. This implies that these teachers deliver lessons using methods that they are familiar with (Zein, 2017) and fail to understand that not every skill can be developed through a single teaching method; ideally, each skill requires a specialized approach.

A study conducted in Turkey by Tuncer and Karatas (2022) aimed to find the best recommendations for teaching and learning the four English skills within the Emergency Distance Education (EDE) framework. A total of 118 students were involved in this qualitative study, which was based on the hierarchical thematic framework. Thus, the data were classified into themes, categories and concepts. The study used NVivo 11 Plus software to analyze the data through 5 stages (familiarization, identifying a thematic

framework, indexing, charting, and mapping and interpretation). The results showed that the content for listening, reading and writing was higher than that for implementation. In contrast, speaking skill had more implementation than content.

An Ethiopian study by Gupta and Woldemariam (2011) focused on the use of English as a medium of instruction in both secondary and tertiary education. The findings showed that tertiary students encountered problems with their writing ability, which was crucial to their academic success. As a result, students were engaged in the development of the necessary writing skills that enabled them to compose their thoughts and ideas more clearly and logically, and they were able to engage with the language more effectively. This suggests that the higher the students' motivation to test their writing (through the greater use of writing strategies), the likelier they are to become competent in writing.

A study by Merç and Subaşı (2015) on Turkish EFL preservice teachers investigated classroom management factors that hindered effective teaching and learning processes. It revealed that learners' noises, laziness, lack of interest, unexpected conversations, and lack of respect and attention deterred preservice teachers' classroom management. Meanwhile, Akin and Yildirim (2016) focused on strategies for effective classroom management rather than identifying the reasons underlying the challenges. The researchers found that successful classroom management can be achieved by promoting time management, behavior management, and relationship management, which rely on practical teaching procedures. Interestingly, the study also observed that EFL teachers can minimize their stress or anxiety about the classroom atmosphere through effective planning and proper time management.

### **Technology and EFL teaching during COVID-19**

Technology and data have become integrated into everyone's lives in the twenty-first century and are an indispensable component of contemporary education. One of the 21st-century skills is digital skills, which are not less important than any other skills if they do not surpass them all. A study by Salem et al. (2022) investigated how the self-perception of students in Saudi Arabia higher education was positively and significantly influenced by digital skills before and during the COVID-19 pandemic. The more time spent using digital skills in the everyday education system, the more proficient they became.

Education has transitioned from the traditional classroom and whiteboard style to online learning supplemented by the use of mobile phones. Online learning is not restricted to the classroom; students can attend classes or lectures from anywhere and supplement online learning with mobile learning, as this facilitates quick communication, and both students and teachers can obtain information via the Internet through their smartphones (Hartshorn & McMurry, 2020; König et al., 2020; Yucesoy-Ozkan et al., 2020).

The past decade has seen a shift in higher education, where most higher learning institutions are now offering undergraduate courses online from only a few schools previously (Palvia et al., 2018). Researchers have reported that online learning through synchronous and asynchronous computer-based instruction is expanding in educational institutions in the United States and Britain as well as in many regions worldwide

(Chowdhury, 2019). A study by Al Dosari (Hamad, 2011) in Saudi Arabia found that using e-learning for teaching and learning minimizes costs, reduces time away from study and is more effective, among other advantages. Online learning has the potential to bring new higher-education opportunities for students who cannot attend every lecture because of time constraints.

During the COVID-19 period, technology was highly leveraged for the teaching and learning process in the higher-education sector. Almaiah et al.'s (2020) study in Jordan focused on the use of e-learning during the COVID-19 pandemic and observed that several challenges (e.g., financial, ease of use of the platform, etc.) influenced how the platform was fully utilized. In Indonesia, technology was applied to EFL teaching and learning processes even though lack of planning was cited as a key factor affecting successful learning (Atmojo & Nugroho, 2020).

In Saudi Arabia, Oraif and Elyas (Oraif & Elyas, 2021) investigated EFL learners' level of engagement in online classes during the COVID-19 pandemic. Specifically, it was evident in the survey responses that the learners showed engagement through classroom participation, engagement through interaction with instructors and peers, engagement through skills practice, engagement through their emotional involvement with the class material, and engagement through their performance in class.

This suggests a high level of engagement in online classes among EFL learners in Saudi Arabia during the pandemic. However, specific studies focusing on LSWR in the Saudi context are scarce.

## **Research methodology**

### **Research design**

Educational policies and teaching practices are usually shaped by the findings of case studies (Duff, 2008). Yin (2014) argued that a case study is appropriate when a researcher is interested in examining a specific individual or individuals, groups, or cases. This study focused on King Khalid University (KKU), a higher education institution in Saudi Arabia that offers EFL programs and has shifted to online platforms for its teaching and learning activities during the COVID-19 outbreak in 2020. The quantitative research method was followed. Rashid and Sipahi (2021) state, "quantitative language testing research has shown that the studies are just trying to investigate and assessing communicative skills, skills, goals scored, and so forth" (p. 323). It was pointed out through the research method literature that implementing quantitative methods, especially in language studies and language skills assessment, is valid and has strong alignment with the objectives of research. "Quantitative data is indeed a dominant method of research in the area of language assessment." (Rashid & Sipahi, 2021, p.324).

Responses from KKU participants were collected because the researcher was a faculty member there, which helped increase the response rate (Anseel et al., 2010). Additionally, the researcher was an online instructor who taught some courses, which helped enhance the reliability of inferences regarding the perceptions of both students and faculty members. The present research focused on different e-learning aspects through the Blackboard learning management system during the pandemic and traditional teaching practices before the pandemic.

A detailed questionnaire was self-designed with questions related to both modes of learning (i.e., face-to-face and online). Therefore, the questionnaire aimed to explore faculty and learner perceptions of both learning modes before and during the COVID-19 pandemic, specifically in 2020, when institutions were shut down and learning shifted to online platforms.

### **Data collection**

Data were collected through a Google Forms survey that was first disseminated online to both students and faculty (males and females) enrolled in the English program at various campuses across KKU. Data collection took place in two phases. In the first phase, a pilot survey was conducted in which Google Forms were sent to a small group of students and faculty. The first questionnaire for the pilot study was based on students' and faculty's perceptions of the education crisis due to COVID-19 and how they adapted to the e-learning system.

Based on the analyses of the responses received in the pilot study, the questionnaire was updated, and more specific questions related to teaching and learning LSRW skills before COVID-19 and during COVID-19 were added. The questionnaires that were rolled out in the second phase included four main sections: (a) demographic information, (b) overall experience with e-learning, challenges, and advantages, (c) perceptions of faculty and students about learning LSRW skills before COVID-19, and (d) perceptions of faculty and students about learning LSRW skills during COVID-19.

After approval from the university's English department, the survey was distributed through the system-generated e-mails of faculty and students. Before data collection, the respondents provided consent and were assured that their responses would be treated anonymously. A total of 114 faculty members and 120 students from English departments across KKU provided data for the study. Their responses were collected via random sampling, which is considered the best way to obtain a representative sample of the population (Cohen et al., 2007).

### **Data analysis**

Out of 120 surveys sent to the students, only 38 returned, the majority of whom were female. Survey data were analyzed descriptively and inferentially using analysis of variance (ANOVA), t-tests, and paired t-tests. The study's independent variables were (a) students' gender and (b) the college they were enrolled in. The following statistics were used: ANOVA, t-tests, paired t-tests, means, averages, and frequency.

## **Study findings**

### **First axis**

#### ***Demographic factors***

The respondents' gender data and academic qualifications were collected. Even though the selection was random, more females participated in the study (35) than males (3). Meanwhile, five participants were from Level 2, two were from Level 3, twenty-one were from Level 4, two were from Level 6, one was from Level 7, and seven were from Level 8. Most of the participants were in Level 4.

**Table 1** Students' and Faculty's Level of Effort

Items		Valid					Mean	Std.Dev	Importance
		Poor	Fair	Satisfactory	Very Good	Excellent			
Level of effort (Level of effort you put into the course)	Freq.%	7	1	7	17	6	3.37	1.324	67%
		18.4	2.6	18.4	44.7	15.8			
Level of effort (Level of effort your students put into the course)	Freq.%	6	1	8	12	1.370	3.55	1.370	71%
		15.8	2.6	21.1	31.6	28.9			

**Table 2** Teaching Contributions by E-learning

Items		Valid					Mean	Std.Dev	Importance
		Poor	Fair	Satisfactory	Very Good	Excellent			
Level of skill/ knowledge at the beginning of the course	Freq	13	4	6	11	4	2.71	1.469	54%
	%	34.2	10.5	15.8	28.9	10.5			
Level of skill/knowl- edge at the end of the course	Freq	11	1	4	17	5	3.11	1.485	62%
	%	28.9	2.6	10.5	44.7	13.2			
Level of skill/knowl- edge required to complete the course	Freq	12	1	4	15	6	3.05	1.541	61%
	%	31.6	2.6	10.5	39.5	15.8			
Contribution of the course to your skill development/ knowledge	Freq	14	2	5	10	7	2.84	1.603	51%
	%	36.4	5.3	13.2	26.3	18.4			

Regarding the four skills (LSWR), 22 students studied listening, while 16 did not; 24 studied speaking, while 14 did not; 23 studied writing, while 13 did not; and 25 studied reading, while 13 did not. This indicates that most of the students took the reading course even though its difference is not as wide relative to the other skills.

#### **Faculty perceptions of EFL teaching and learning**

Regarding students' efforts toward educational attainment, 45% of faculty members believed such efforts were excellent, and 16% saw them as very good, with a degree of importance of 67%. The results showed that 16% of the students exerted insufficient efforts toward learning, 21% made sufficient efforts, and 32% made good efforts, with a significance degree of 71%. Table 1 shows the faculty's perceptions of students' level of effort exerted in the course.

Table 2 shows e-learning's contributions to teaching and the level of skill/knowledge at the beginning of the course, indicating that 54% rated the level of importance of such knowledge as low, while students' level of skill/knowledge at the end of the course improved. The degree of importance here was 62%, the students' level of skill/knowledge required to complete the course was 61%, and the course's contribution to their skill/knowledge was important at 51%.



### Learners' perceptions of EFL teaching and learning

Table 3 presents students' feedback regarding their instructors' skills and their online teaching and learning experiences. The first item indicated that the trainer was a lecturer with an importance level of 72%, with a 56% approval rate and a 5% disapproval rate, while the neutrality characteristic was 40%. The students found that the presentations were clear and organized, with a level of importance of 76%, an approval rate of 74% and a disapproval rate of 5%, while the neutrality factor was 21%. While the level of importance assigned to the teacher's ability to raise students' interest was also 70%, the importance level for whether the trainer effectively used time during the study periods reached 72%.

Training was evaluated as available and useful, with an importance rating of 75%. The results also showed that evaluation and assessment were fast and that the teacher provided the students useful notes, with an importance level of 71%. Meanwhile, the educational materials were deemed sufficient in meeting the expected e-learning outcomes, with an importance level of 72% (NB: SD–Strongly Disagree, D–Disagree, N–Neutral, A–Agree, SA–Strongly Agree).

Table 4 shows the participants' views regarding the course objectives. The results revealed that the importance of this indicator was 71% with a general arithmetic mean of 3.57, which is greater than the theoretical average, meaning that the participants found the objectives clear (NB: SD–Strongly Disagree, D–Disagree, N–Neutral, A–Agree, SA–Strongly Agree).

This study also explored students' major challenges regarding the e-learning platform, presented in Table 5. The importance of this indicator for the main challenges in e-learning was 78%, and its general arithmetic mean was 3.89, higher than the theoretical average of 3.0, with a standard deviation of 1.132. Notably, the second item, which concerns the lack of face-to-face interaction with the trainers, posed the greatest challenge at 78%. This was followed by the first item, that is, "I have poor Internet connectivity at home,"

**Table 3** Students' Skills and Responses in E-learning

Items		Valid					Mean	Std. Dev	Importance
		SD	D	N	A	SA			
The instructor was an effective lecturer	Freq	1	1	15	16	5	3.61	0.855	72%
	%	2.6	2.6	39.5	42.1	13.5			
Presentations were clear and organized	Freq	2	0	8	21	7	3.82	0.926	76%
	%	5.2	0.0	21.1	55.3	18.4			
The instructor could arouse student interest	Freq	2	2	14	15	5	3.50	0.980	70%
	%	5.3	5.3	36.8	39.5	13.2			
The instructor could manage the time effectively during classes	Freq	2	2	14	12	8	3.58	1.056	72%
	%	5.3	5.3	36.8	31.6	21.1			
The instructor was available and helpful	Freq	3	0	8	20	7	3.74	1.032	75%
	%	7.9	0.0	21.1	52.6	1.4			
Grading was prompt and the instructor gave useful feedback	Freq	2	3	11	17	5	3.53	1.006	71%
	%	5.2	7.9	28.9	44.7	13.2			
Adequate teaching materials were available as per the requirements of e-learning	Freq	1	0	18	14	5	3.58	0.826	72%
	%	2.6	0.0	47.6	36.8	13.2			



**Table 4** Course Content

Items	Valid					Mean	Std. Dev	Importance	
	SD	D	N	A	SA				
Learning objectives were clear	Freq	1	1	15	16	3	3.61	0.855	72%
	%	2.6	2.6	39.5	42.1	13.2			
Course content was organized and well-planned	Freq	2	1	11	18	6	3.6	0.966	73%
	%	5.3	2.6	28.9	47.4	15.8			
Course workload was appropriate	Freq	3	2	11	17	5	3.5	1.059	70%
	%	7.9	2.6	28.9	44.7	13.2			
Course organization facilitated full participation of the students	Freq	1	2	18	11	6	3.5	0.923	70%
	%	2.6	5.3	47.4	28.9	15.8			
							3.57	0.951	71%

**Table 5** Major Challenges Regarding E-learning

Items	Valid					Mean	Std. Dev	Importance	
	SD	D	N	A	SA				
I have poor Internet connectivity at home	Freq	3	4	18	8	5	3.86	0.945	77%
	%	7.9	10.5	47.4	21.1	13.2			
I miss face-to-face interaction with instructors	Freq	3	4	15	7	9	3.91	0.898	78%
	%	7.9	10.5	39.5	18.4	23.7			
I don't feel motivated when I study at home	Freq	4	8	17	4	5	2.95	1.138	59%
	%	10.5	21.1	44.7	10.5	13.2			
I miss peer interaction	Freq	4	5	20	4	5	3.76	1.102	75%
	%	10.5	13.2	52.6	10.5	13.2			
I can't understand the content easily through e-learning mode	Freq	7	10	15	4	2	2.58	1.081	52%
	%	18.4	26.3	39.5	10.5	5.3			
E-learning is more passive than face-to-face learning	Freq	6	12	14	2	4	2.63	1.149	53%
	%	15.8	31.6	36.8	5.3	10.5			
I face technical problems while using Blackboard	Freq	3	10	11	9	5	3.78	0.998	76%
	%	7.9	26.3	28.9	23.7	13.2			
Technical problems pertaining to the Blackboard take time to resolve which hampers my learning	Freq	4	5	21	3	5	3.0	1.090	60%
	%	10.5	13.2	55.3	7.9	13.2			
I don't have a good device to attend my online lectures	Freq	12	11	10	1	4	2.32	1.254	46%
	%	31.6	28.9	26.3	2.6	10.5			
Overall Mean							3.89	1.132	78%

with a level of importance of 77%, a mean of 3.86, which is higher than the theoretical mean (3.0), and a standard deviation of 1.069. Other challenges were the technical use of the platform, understanding the e-learning mode, and the lack of appropriate devices to maximize the e-learning platform (NB: SD–Strongly Disagree, D–Disagree, N–Neutral, A–Agree, SA–Strongly Agree).

Table 6 shows the participants' views about the main advantages of e-learning. The importance of this indicator was 76%, and its general arithmetic mean was 3.81 with a standard deviation of 1.289, indicating a convergence in participants' views with respect to the main advantages of e-learning. Notably, the flexibility of e-learning, which allows students to listen to recorded lectures anytime, had an importance level of 82% and

**Table 6** Major Advantages of E-learning

Items		Valid					Mean	Std. Dev	Importance
		SD	D	N	A	SA			
I can learn at my own pace	Freq	2	3	9	13	11	3.74	1.131	75%
	%	5.3	7.9	23.7	34.2	28.9			
I can listen to the recorded lecture at any time and as many times as I want	Freq	1	1	8	12	16	4.08	0.997	82%
	%	2.6	2.6	21.1	31.6	42.1			
I have easy access to all the study materials	Freq	3	0	14	12	9	3.63	1.101	73%
	%	7.9	0.0	36.8	31.6	23.7			
It saves my time	Freq	4	0	11	11	2	3.71	1.228	74%
	%	10.5	0.0	28.9	28.9	31.6			
My technical skills were upgraded	Freq	1	0	15	9	13	3.87	0.991	77%
	%	2.6	0.0	39.5	23.7	34.2			
Overall Mean							3.81	1.289	76%

**Table 7** ANOVA Results Indicating Major E-learning Challenges and Advantages

	Sum of squares	Degrees of freedom (df)	Mean square	F	Sig.
<i>Major Challenges</i>					
Between groups	390.813	3	130.271	3.726	0.020
Within groups	1188.688	34	34.961		
Total	1579.500	37			
<i>Major Advantages</i>					
Between groups	365.842	3	121.947	4.504	0.009
Within groups	920.500	34	27.074		
Total	1286.342	37			

an arithmetic mean of 4.08, which ranked first, followed by the ability of e-learning to upgrade their technical skills at 77% with an arithmetic average of 3.87. The third advantage was the observation that e-learning platforms allowed learners to study at their own pace (with an importance level of 75% and an arithmetic mean of 3.74).

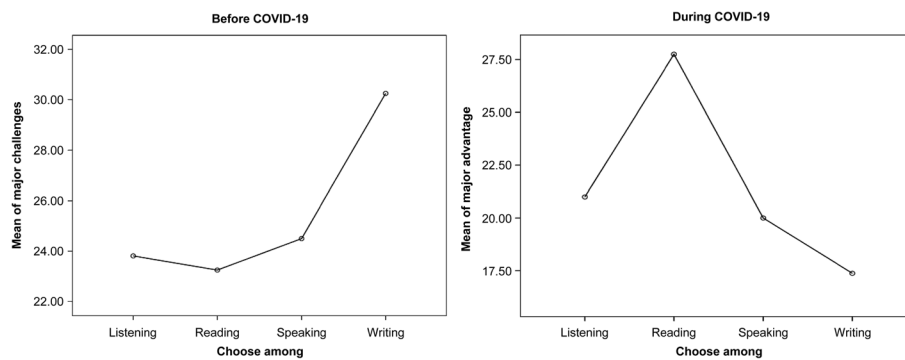
However, Table 6 shows that the lowest SD was 0.991 for the item “My technical skills were upgraded,” indicating a convergence among participants’ opinions, while the largest SD value was 1.228 for the item “It saves me time,” indicating that this was the item in which the participants showed the most differences (NB: SD–Strongly Disagree, D–Disagree, N–Neutral, A–Agree, SA–Strongly Agree).

Table 7 presents the ANOVA results for the main challenges and advantages encountered by students during their e-learning sessions. The results indicate a statistically significant relation at the  $\alpha = 0.05$  level of significance. An F value of 3.726 ( $p = 0.020$ ), significant at the 0.5 level, was obtained for the main challenges. The results revealed statistically significant differences between the four skills and in favor of writing, as shown in Table 7. Regarding the main advantages of e-learning, the results indicated the existence of a non-statistically significant relation at the  $\alpha = 0.05$  level of significance,  $F = 4.504$ ,  $p$ -value = 0.009. Hence, statistically significant differences were observed pertaining to the four skills in favor of reading.

**Table 8** Major E-learning Challenges

Dependent Variable		(I) choose among	(J) choose among	Mean difference (I – J)	Std. error	Sig.
Major challenges	Tukey HSD	Writing	Listening	6.43750*	2.09050	0.020
			Reading	7.00000	3.30536	0.168
			Speaking	5.75000	4.43461	0.571
	Scheffe	Writing	Listening	6.43750*	2.09050	0.037
			Reading	7.00000	3.30536	0.233
			Speaking	5.75000	4.43461	0.645

\*There is a statistical significance in listening skill



**Fig. 1** E-learning Challenges Before and During COVID-19 as Reported by Learners

Table 8 and Fig. 1 present the t-test analysis for the major e-learning challenges according to the learners both before and during the COVID-19 pandemic.

**Second axis before COVID-19**

Table 9 shows how the students viewed their learning of the four skills before COVID-19. The importance of this indicator was 69%, and its general arithmetic mean was 2.76, which is below the theoretical average of 3.0, with a standard deviation of 1.054. Examining the items on this axis, we find that the highest level achieved was from the first item, which describes the frequency with which modern technologies were used in teaching listening. This item had a level of importance of 76%, with an arithmetic mean of 3.08, above the theoretical mean (3.0), and a standard deviation of 0.928. The third item, “How often did the instructor use new technologies in teaching speaking skills before COVID-19?” was next in terms of importance level at 74%.

**Third axis during COVID-19**

Table 10 shows the students’ perspectives on learning the four skills after the COVID-19 period. The importance of this indicator was 81%, and its general arithmetic mean was 3.24, above the theoretical average of 3.0, with a standard deviation of 0.729. For the items that constitute this axis, we found that the highest level of importance was 83% for the first and third items, that is, “How often does the instructor use new technologies in teaching the listening skill after COVID-19?” and “How often does

**Table 9** Teaching LSRW Skills Before COVID-19

Items	Valid					Mean	Std.Dev	Importance
	Often	Always	Neutral	Sometimes	Never			
How often did the instructor use new technologies for development of listening skill before COVID-19?	Freq 14 % 36.8	3 7.9	6 15.8	15 39.5	0 0.0	3.05	0.928	76%
How often did the instructor use new technologies for developing reading skill before COVID-19?	Freq 10 % 26.3	10 26.3	4 10.5	14 36.8	0 0.0	2.63	1.149	67%
How often did the instructor use new technologies for developing speaking skill before COVID-19?	Freq 13 % 34.2	5 13.2	5 13.2	15 39.5	0 0.0	2.95	1.012	74%
How often did the instructor use new technologies for developing writing skill before COVID-19?	Freq 9 % 23.7	10 26.3	3 7.9	16 42.1	0 0.0	2.63	1.125	67%
How often did the Instructor use a variety of digital materials like YouTube, recorded videos, Live sessions, Zoom meetings, etc., in addition to the textbook before COVID-19?	Freq 7 % 18.4	9 23.7	7 18.4	15 39.5	0 0.0	2.53	1.059	63%
Overall Mean						2.56	1.074	69%

the instructor use new technologies in teaching the speaking skill after COVID-19?," respectively, with an arithmetic mean of 3.32, which is above the theoretical mean (3.0).

Table 10 also presents standard deviation values between 0.844 and 0.574, and the lowest standard deviation was for the item "How often does the instructor use new technologies in teaching speaking skills after COVID-19?," indicating significance. For the items on which the participants' opinions diverged, the largest standard deviation value was for the item "How often does the instructor use new technologies in teaching writing skills after COVID-19?," which is where the respondents' opinions differed the most.

Table 10 shows that 50% of students favored the continuation of e-learning after the end of the COVID-19 pandemic, while 37% were against it. Additionally, 13% believed that continuing e-learning was possible, and the relative importance of this indicator was 54%. Hence, most of the respondents advocate the retention of e-learning. In addition, 42% of the participants supported the proposal to integrate e-learning with traditional learning for English language skills, with 21% believing that such integration is possible, while 37% were opposed to this idea. The relative importance of this indicator was 60%, which is higher than 50%, which means that most of

**Table 10** Teaching LSRW Skills During COVID-19

Items	Valid					Mean	Std.Dev	Importance	
	Often	Always	Neutral	Sometimes	Never				
How often does the instructor use new technologies for teaching a lesson aimed at development of listening skill after COVID-19?	Freq	0	4	18	16	0	3.32	6.62	83%
	%	0.0	10.5	47.4	42.1	0.0			
How often does the instructor use new technologies for teaching a lesson aimed at development of the reading skill after COVID-19?	Freq	2	4	17	15	0	3.18	0.834	80%
	%	5.3	10.5	44.7	39.5	0.0			
How often does the instructor use new technologies for teaching a lesson aimed at development of speaking skill after COVID-19?	Freq	0	2	22	14	0	3.32	0.574	83%
	%	0	5.3	57.9	36.8	0.0			
How often does the instructor use new technologies for teaching a lesson aimed at development of writing skill after COVID-19?	Freq	2	5	17	14	0	3.13	0.844	78%
	%	5.3	13.2	44.7	36.8	0.0			
Overall Mean						3.24	0.729	81%	

**Table 11** Continuity of E-learning After the COVID-19 Pandemic

Items	Valid			Mean	Std.Dev	Importance	
	Yes	No	Maybe				
Would you suggest continuing with e-learning for development of skills pertaining to English language after the COVID-19 pandemic is over?	Freq	19	14	5	1.63	0.714	54%
	%	50.0	36.8	13.2			
Would you suggest blending e-learning with traditional learning for learning the English skills (listening, speaking, reading, and writing)?	Freq	16	14	8	1.79	0.777	60%
	%	42.1	36.8	21.1			
Overall Mean					3.24	0.729	81%

the respondents were in favor of the proposal to integrate the two learning modes. Table 11 shows instructors’ perceptions of the continuation of e-learning even after the pandemic is finished. It shows that 54% of instructors support e-learning, while 60% suggest blending both traditional and e-learning to have better results.

Table 12 shows statistically significant differences between male and female respondents in learning the four English language skills. For males,  $M=12.00$ , and a 3.06 increase in the number of females, the t-ratio value was  $-6.698$  ( $p\text{-value}=0.000$ ), indicating statistical significance.

Table 13 shows the descriptive statistics of the extent of teaching LSWR before and during the COVID-19 pandemic in terms of number, arithmetic mean, and standard

**Table 12** T-test for Two Independent Samples

The Hub	Sex	Number	Mean	Standard deviation	T-value	Degree of freedom	Indication statistic	Semantics
The first axis before COVID-19	M	3	15.3333	1.15470	0.655	34	0.539	Not Significant
	F	35	14.7714	3.19085				
Second axis during COVID-19	M	3	12.0000	0.00000	- 6.698	34	0.000	Significant
	F	35	15.0571	2.70014				

**Table 13** One-way analysis of variance (ANOVA)

Hub	Choose among	Number	Mean	Standard deviation
The first axis Before COVID-19	Listening	16	16.6875	2.05649
	Reading	4	12.5000	4.20317
	Speaking	2	15.0000	5.65685
	Writing	16	13.5000	2.52982
Second axis During COVID-19	Listening	16	13.1875	2.10456
	Reading	4	15.0000	2.58199
	Speaking	2	13.5000	3.53553
	Writing	16	16.5625	2.30850

**Table 14** ANOVA Results: Major E-learning Challenges and Advantages

		Sum of Squares	df	Mean Square	F	Indication statistic (Sig)	Semantics
Before	Between Groups	105.273	3	35.091	4.881	0.006	Significant
	Within Groups	244.438	34	7.189			
	Total	349.711	37				
After	Between Groups	94.836	3	31.612	6.009	0.002	Significant
	Within Groups	178.875	34	5.261			
	Total	273.711	37				

deviation for each skill. The arithmetic mean for listening was 16.69, with a standard deviation of 2.056, before the COVID-19 pandemic. The mean for reading was 15.0 with a standard deviation of 2.306, for speaking 14.84 with a standard deviation of 1.246, and a standard deviation of 2.581 was achieved.

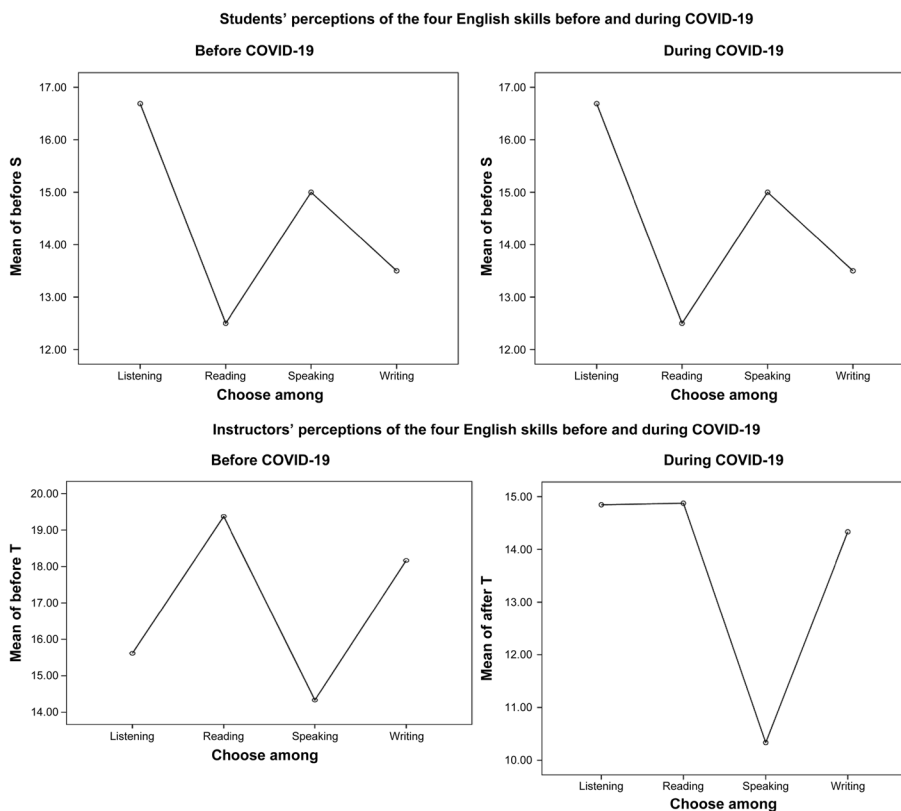
Table 13 shows clear statistically significant differences in learning the four English language skills. Differences were also observed in the statistical significance and judgment of quality of the listening skill, as confirmed by the Tukey test, which indicated a statistically significant relation at the level of significance  $\alpha = 0.05$ ,  $F = 4.881$ , and  $p\text{-value} = 0.006$ , which is significant at the 0.05 level for the four skills before the COVID-19 pandemic. That is, statistically significant differences were found for the four skills and in favor of listening, as shown in Table 14.

For learning these English skills during the COVID-19 pandemic, the results shown in the table indicate a statistically significant relation at the level of significance  $\alpha = 0.05$ ,  $F = 6.009$ , and the level of statistical significance is  $p\text{-value} = 0.002 < 0.05$ , which is confirmed for writing skills.

**Discussion**

This study investigated faculty and student perceptions of the effects of an e-learning program on LSWR in Saudi Arabia before and during the COVID-19 pandemic in 2020 (see Fig. 2). The first objective focused on determining statistically significant differences in teaching LSWR before and during the pandemic, which were observed between the four skills and in favor of writing. Regarding the advantages of e-learning, the findings showed statistically significant differences pertaining to the four skills in favor of reading. The second objective focused on whether statistically significant differences existed in LSWR learning among EFL learners before and during the COVID-19 pandemic. The findings showed statistically significant differences in learning LSWR and in favor of listening. (Syafiq et al., 2021) showed that students’ skills improved during the pandemic through platforms such as YouTube, implying that online resources are crucial in teaching and learning English language skills.

Face-to-face teaching and online learning produce almost the same outcomes, but with the latter, learners can save on costs such as transportation. Studying from home helps learners attend their classes comfortably without dealing with daily traffic. Thus,



**Fig. 2** Comparison of Acquired Skills Before and During the COVID-19 Pandemic



online learning contributes to punctuality in learning engagement without a financial burden on the students, as they can attend their classes conveniently from home. This can be added to the advantages of online learning mentioned in the literature. Bdair (2021) observed that studying from home during the COVID-19 pandemic was advantageous because learners did not have to travel to the physical location of their classes. Consequently, class attendance was enhanced, which was similar to this study.

This study analyzed the responses of EFL faculty and students regarding the effective development of the four language skills during the COVID-19 pandemic. The data showed similarities and differences in the teaching and learning of those skills. For each skill, more than half of the recommendations provide a vivid perspective on EFL teachers and highlight their crucial role within educational contexts. Marashi and Assgar (2019) observed that to succeed in EFL classrooms, teachers must effectively plan their classes and possess competence in classroom management. Teachers' planning, design, and delivery of online lessons widely affect the quality and success of online practices. Thus, to be effective, EFL teachers are suggested to "have skills in planning and managing collaboration, designing appropriate activities, and choosing the right environment and appropriate tools" [14 p. 190].

The student participants provided feedback for the teachers regarding the content and implementation of online lessons. They specifically revealed that e-learning afforded them an opportunity to revisit the recordings as many times as they wanted, depend more on themselves than on their teachers, learn at their own time and pace, participate more in class, learn from the comfort of their homes, and others. According to Al Dosari (2016), online learning provides many advantages, such as flexibility in accessing learning materials from the comfort of the learners' homes and at affordable costs, which was evident from the learners' feedback in this study. One suggestion concerns the need for more interaction because interaction with a sense of community is the core of learning in virtual settings, as argued by Lomicka (2020).

From the data, it seems clear that the participants felt that better outcomes for speaking skills can be obtained as long as synchronous lessons are conducted and students' active participation is ensured either through encouragement or appropriate student-centered activities. If face-to-face education is not possible, synchronous lessons should be flexible, practical and relatable for learners (Moorhouse, 2020, p. 610). "Variety" emerges as the keyword in the study of the content and teaching of each skill. The participants highlighted the importance of variety in texts and activities for reading and writing, in materials and practice exercises for listening, and in activities for speaking. They wanted variety in their homework as well. By avoiding a one-size-fits-all approach to online language learning, the inclusion of fun, engagement, and authenticity in online activities motivates learners and provides differentiated instruction during e-learning (Bailey & Lee, 2020).

Considering the gloomy and monotonous atmosphere of the COVID-19 pandemic, this recommendation might be easily accepted as an exit strategy. The need for guidance from teachers is not limited to the boundaries of online lessons. In addition to writing skills, the participants proposed that their teachers suggest some reading texts and listening/speaking materials for exploration in their free time. They may be one click away from millions and possibly billions of online sources. However, the main

challenge lies not in the search for resources but rather in the selection of the most relevant ones, for which teachers' support is required (Alqahtani & Rajkhan, 2020).

#### **Limitations of the study**

Although the curriculum emphasizes four language skills, reading and writing were assessed via exams, while listening and speaking were not formally evaluated via online mode during the COVID-19 period. Similarly, although random sampling was conducted in the study, more female than male students provided their responses. The findings may thus apply more to female EFL students than to a balanced or male-dominated class.

#### **Conclusion**

This study aimed to explore the effect of online teaching and learning on the language skills development (LSWR) of Saudi EFL students. The findings revealed that multimedia environments have a positive impact on the language learning of EFL students in Saudi Arabia. Specifically, e-learning was found to benefit the teaching and learning of LSWR both affordably and flexibly. In this regard, the results showed that the participants believed that computer-assisted learning environments provide the best context to learn English.

Based on the results and discussion of the pretest scores, posttest scores, and student-faculty questionnaires, e-learning was beneficial for improving students' LSWR at various language proficiency levels. Students performed well and applied the knowledge they gained from their tutorial classes and from their previous studies to actively and successfully demonstrate the constructive role played by e-learning. Furthermore, most of the students were in favor of implementing e-learning in language classes. They could enthusiastically apply as much knowledge as possible from their previous studies to construct new knowledge. Students also actively explored knowledge instead of passively accepting it.

A key recommendation of this study is that English instructors be more aware of students' psychological needs during the language acquisition process. Online learning is different from face-to-face instruction and requires adjustments both in the teaching approach and presentation of materials to suit the learners' and online contexts. This was noted by the students in this study. Moreover, faculty members should provide proper multimedia instruction in class to help overcome students' anxiety in foreign-language learning. Therefore, faculty believe in implementing more blended learning than pure e-learning.

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The author read and approved the final manuscript.

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#### **Availability of data and materials**

Data are available upon request.

## Declarations

### Ethical approval and consent to participate

Informed consent was obtained from all participants before they could take part in the study. Ethical approval was received from the university.

### Competing interests

The author reports that there are no competing interests to declare.

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