Archive of SID.ir

Journal of Critical Applied Linguistics Studies

ORGINAL RESEARCH
E-ISSN: 2981-1678
Volume 1, Issue 2, pp. 91-106

Gonbad Kavous University

Attitudes, Challenges & Availability Regarding the Use of Emerging Technologies in the Post COVID 19 ERA: Voices from Iranian EFL High School Teachers

Linguistics Society of Iran

[1] *Narges Yahyaee* [2] *Aysheh Mohammadzadeh** [3] *Ogholgol Nazari*

ABSTRACT

The COVID-19 pandemic led to an unprecedented global shift in education, with virtual classrooms rapidly replacing physical ones. This transition redefined the educational landscape worldwide, compelling teachers in both developed and developing countries to leverage technology to maintain continuity in teaching and learning. This study investigates the perspectives of Iranian English as a Foreign Language (EFL) high school teachers on the integration of emerging technologies in the post-COVID-19 era. Specifically, it explores their attitudes toward these technologies, the challenges they face in their implementation, and the extent of their availability. Adopting a qualitative research design, the study utilized a phenomenological approach to conduct thematic analyses of structured interviews with 30 Iranian EFL high school teachers. Findings indicate that while teachers generally express a positive attitude towards the adoption of emerging technologies—citing improvements in teaching quality, heightened student engagement, and increased opportunities for interactive and collaborative learning—they also encounter significant obstacles. These include insufficient technical infrastructure, a lack of comprehensive training, and limited ongoing support. Moreover, the availability of these technologies remains constrained, further complicating their effective integration into the educational system. The study provides crucial insights into both the potential and the challenges of utilizing emerging technologies in the context of Iranian EFL education in the post-pandemic world, highlighting areas for future development and policy

Article History

Received:
2024-02-15
Revised:
2024-03-27
Accepted:
2024-05-05
Published:
2024-07-01

Key Words

COVID-19 Pandemic, EFL Teachers' Attitudes, Online-learning,

[1.] M.A in ELT, Department of English Language Teaching, Gonbad Kavoos Branch, Islamic Azad University, Gonbad Kavoos, Iran - *Email:* n.yahyaee8993@gmail.com ORCID: 0009-0007-8377-1722

[2.] **Corresponding Author:** Assistant Professor, Department of English Language Teaching, Gonbad Kavoos Branch, Islamic Azad University, Gonbad Kavoos, Iran - *Email:* a.mohammadzade97@gmail.com ORCID: 0000-0003-3290-3872

[3.] Assistant Professor, Department of English Language Teaching, Gorgan Branch, Islamic Azad University, Gorgan, Iran - *Email:* golinazari.97@gmail.com ORCID: 0000-0002-2148-1179

[Downloaded from cals.gonbad.ac.ir on 2025-11-30]

[DOI: 10.22034/jcals.1.2.91]

Archive of SID.ir

Archive of SID.ir

1. Introduction

In the post-covid-19 era (Aghaei et al., 2023), Iranian teachers of English as a Foreign Language (EFL) face the question of how to use emerging technologies. EFL teachers play a crucial role in developing powerful curriculum innovations that can help overcome the challenges of English teaching and learning over the past few decades (Jiang et al., 2018). In the light of this concept, English language curricula have increasingly used technology to enhance the teaching / learning environment and address potential challenges. For example, many language classrooms now utilize cutting-edge tools like online presentations and web-based software (Adnan et al., 2019). Despite all the positive feedback and benefits reported in various studies, a few issues need to be addressed. Learners', teachers' and parents' limited awareness of and skill with technology is one of the challenges (Au-Yong- Oliveira et al., 2018). In their opinion, traditional classes are more beneficial than online ones (Che Mus, et al 2012). Moreover, due to different bandwidth and connectivity restrictions across regions of the country and the world, teachers choose to avoid adopting new technologies into their classrooms (Yadov, et al, 2018). The difficulty and time constraints for teachers to conduct and construct online teaching materials can also have a significant impact on whether or not it is appropriate for them to be used in the classroom (Mahmoudzadeh, 2014). Despite the fact that incorporating technology into the classroom has been linked to increased student enthusiasm and engagement (Hoffman & Ramirez, 2018), many teachers still feel unprepared to do so. However, since the capacity to incorporate technology into instruction is essential, educators need to improve their self-efficacy in technology integration, have an optimistic outlook, and be highly motivated.

Researchers might benefit from knowing how teachers feel about the shift to online education at COVID-19. It stands to reason that seasoned technology educators, unlike inexperienced technology consumers, would be able to keep an open mind and strive for improvement. But the vastness of the problems faced by all teachers calls into doubt the capability of even seasoned technology users to meet the requirements of COVID-19. For this reason, it is crucial to examine educators' attitudes and challenges regarding the shift to online education in the different phases of the COVID-19 pandemic.

It is possible to use online classrooms to teach English during and after crucial crises like the epidemic of the Coronavirus, an experience which has been the subject of many studies in the literature of EFL teaching and learning. Many school officials and teachers were able to minimize the learning interruption and avoid an extended school year by using online classrooms. Literature has shown, however, that teachers and pupils may face various challenges as a result of the introduction of technology. This study aimed to examine the attitudes and challenges of EFL teachers toward challenges in online teaching and to investigate the contribution of technology integration for online classes in Iran to gain some insights on how to continue this implementation in the post-Covid era.

[Downloaded from cals.gonbad.ac.ir on 2025-11-30]

[DOI: 10.22034/jcals.1.2.91]

Archive of SID.ir

Archive of SID.ir

2. Literature Review

Studies have consistently shown that the use of technology can enhance student engagement and motivation, improve learning outcomes, and provide opportunities for collaborative and interactive learning (Chen, 2019; Tondeur et al., 2019). Furthermore, the use of technology has been found to be particularly beneficial in the context of language learning, as it provides opportunities for authentic language use and interaction (Wu & Marek, 2020). The following sections specify how education and particularly EFL were influenced by technology during pandemic.

The Covid-19 and Social Technologies

Coronaviruses disease (Covid-19) caused a global pandemic in 2020, which has altered human behaviour. Societal isolation was a common practice in areas where this contagious disease was prevalent in order to prevent the spread of the disease by the reduction of contact between those who were vulnerable and those who were afflicted (Reluga, 2010). As a result, people were encouraged to carry out their daily activities (e.g. working and studying) from the comfort of their own homes; thanks to the advancements in technology. Due in part to the worldwide pandemic, the Iranian government established public policy to shift traditional classroom instruction done in face-to-face interaction to online instruction, including EFL instruction, so this had some implications. It was a surprise to both teachers and students that online learning overtook face-to-face instruction so quickly (Atmojo & Nugroho, 2020). The use of technology, the creation of online materials, and the evaluation of student work online all needed teachers and student to be adapted to these developments (Yamagata-lynch, 2020, Aghaei,et al. 2022).

The Emergence and Promotion of Online Learning

Online learning refers to a set of lessons in a subject that are made available to students via a digital platform that facilitates communication and data exchange. Specifically, this terminology has been used to suggest a method of education that makes use of the Internet. For students, the online learning environment is useful for accessing information and content and associating and cooperating with participants (Krish, 2008). It often is seen as using the internet to access materials; communicating with content, instructors, and other learners; and obtaining assistance by learning experience in the learning process to acquire information, make sense, and advance (Ally, 2008). One further way to define it is as a form of distant learning wherein electronic gadgets like tablets, smartphones, laptops, and internet-connected computers are used to facilitate the learning process (Gonzalez & Louis, 2018).

Because of the convenience and accessibility of online courses, more and more students are opting to study a foreign language via the internet (Plaisance, 2018). Different forms of web-facilitated, blended, and fully virtual or online learning can all be referred to as online language learning (OLL). Furthermore, during the COVID-19 Pandemic, online language learning in the form

[Downloaded from cals.gonbad.ac.ir on 2025-11-30]

[DOI: 10.22034/jcals.1.2.91]

Archive of SID.ir

Archive of SID.ir

of EFL took place in full online language learning in secondary school settings because students and teachers did not gather in a face-to-face forum.

The provision of self-learning and lifelong learning skills via e-learning is essential for English language learners in the post-Covid 19 era. E-learning, a relatively new trend in EFL instruction, aims to improve just such competence. Teachers of foreign languages are encouraged to make use of e-Learning and other cutting-edge technologies in order to provide their students with a more realistic and natural setting in which to practice the language, (Alias & Hussin, 2002, Aghaei, et al. 2020). Students of EFL can practice real-world communication skills in an online setting by sharing their thoughts and forming connections with other students and teachers (Carmen et al., 2003). Even more so, Samuels and Zaitun (2008) elaborate that both verbal (such as chat) and written (such as chat, discussion, and e-mail) communication tools are helpful in advancing EFL learning. Students are more likely to participate and expand their linguistic and content knowledge when they are given a safe space to voice their opinions and ideas (Aghaei & Gouklani, 2015). Other forms of electronic learning have been shown to be beneficial in TEFL, as Abou Shaaban (2009) outlined that the activities and teaching strategies adopted in E-learning meet learners' needs and individual differences, and e-resources allow learners to develop their knowledge of and about the English language by accessing a lot of free online EFL resources.

Webex, Zoom, Skype, Viber, Google classroom are only some of the words that have been added to the everyday vocabulary of every teacher throughout the world during the last three years, due to the current phenomenon of the Covid-19 pandemic; regardless of their age, sex, experience, and nationality, teachers had to adapt to the new teaching reality, inventing innovative strategies for the transition to the virtual classroom (Neville & Outka, 2020).

Empirical Studies

Gilakjani and Rahimy (2019) looked into how teachers felt about using on-line learning to teach English pronunciation. The results demonstrated that teachers were interested in using computer technology because it gave them a fun and engaging atmosphere, assisted them in learning the correct pronunciation, and enhanced the effectiveness of their pronunciation education. The results also showed that employing computer technology increased teachers' desire and trust in it because it had a strong potential to alter their teaching methods. The results also showed that teachers believed employing computer technology was not a danger to the conventional ways but instead produced better results and that they had sufficient knowledge of computer technology to assist them to teach pronunciation successfully.

Teachers of English as a foreign language have lately been scrutinized by Atmojo and Nugroho (2020) for their online teaching methods and the difficulties they encountered due to the global pandemic. Invitations were sent to 16 Iranian EFL teachers to participate in the study. They were

[Downloaded from cals.gonbad.ac.ir on 2025-11-30]

[DOI: 10.22034/jcals.1.2.91]

Archive of SID.ir

Archive of SID.ir

invited to write on their teaching methods and the difficulties they encountered when teaching online. The study also included semi-structured interviews, which were used to gain a deeper grasp of the subject matter. The findings showed that teachers used a variety of online tools, including social networking sites, applications, the internet, and online quizzes, during online teaching.

To explore Iranian pre-service EFL teachers' obstacles in technology use in their classes, Fathi and Ebadi (2020) conducted a qualitative study with six pre-service EFL teachers in a teacher education course on computer assisted language learning (CALL). After the course, the participants were asked to teach a class for seven weeks. Given the findings, Fathi and Ebadi categorized the obstacles as (a) facility conditions: their inadequate technical support and equipment access and (b) transfer failure: their incapability to transfer their experience with CALL to their classes due to their insufficient confidence and competence. Given the studies reviewed on challenges of online teaching, the researchers of this study classified the challenges into attitudinal, pedagogical, interactional, supportive, and technical and explored EFL student teachers' views of these challenges. In sum, the COVID-19 situation was the main reason for conducting this study, which investigated possible new beliefs and attitudes and identified more challenges of EFL teachers.

In a study, Gherhes et al. (2021) investigated the educational process's beneficiaries and sought to understand how they felt about face-to-face and online learning, as well as if they would want to return to the traditional method of instruction. A total of 604 Politehnica University of Timisoara students were expected to respond anonymously to an 8-question survey from December 2020 to February 2021, and their responses served as a representation of their perceptions. The findings revealed the respondents' levels of interest in going back to school (particularly for those who have only benefited from online courses) and their level of participation in such courses. The findings also detailed the benefits and drawbacks of the two educational models from the perspectives of first-year students (who benefited only from e-learning) and upper-year learners (beneficiaries of both face-to-face and e-learning).

Rafiee et al., (2022) in a study aimed to investigate the perception of high school EFL teachers toward virtual learning systems' experience after the Covid19 pandemic. Also, probing the perception of high school EFL teachers toward virtual learning systems' opportunities, exploring the perception of high school EFL teachers toward virtual learning systems' challenges and threats, and informing the educational society of the solutions to the barriers of virtual learning systems based on the perception of high school EFL teachers were the other objectives of their study. To this end, the attitudes of 120 EFL teachers (males=67, females=53) with the age range of 30 to 50 who were teaching at different high schools of West Azerbaijan province, Urmia, Iran, were gathered via a researcher-made questionnaire. The results of the study showed that although high school teachers faced some barriers such as low internet access, low interaction, and low concentration by learners, actually they actually

[Downloaded from cals.gonbad.ac.ir on 2025-11-30]

[DOI: 10.22034/jcals.1.2.91]

Archive of SID.ir

Archive of SID.ir

had positive attitudes toward the use of digital learning, particularly in virtual classrooms. Furthermore, the findings showed that data retention power and quick and easy access were favored by most of the teachers, and they believed these two items can be regarded as positive opportunities. In addition, teachers presented some comments such as adding visuals to the virtual classrooms, using chat boxes, and planning interaction hints to resolve the virtual classrooms' existing problems such as poor connection and low concentration.

Taghizadeh and Basirat (2022) investigated pre-service EFL teachers' attitudes and perceived challenges of teaching online language courses. To this end, a questionnaire with three categories on teachers' values and attitudes, beliefs, and communication self-efficacy and one on perceived online teaching challenges with five categories of attitudinal, pedagogical, interactional, supportive, and technical were administered to 100 MA students of Teaching English as a Foreign Language (TEFL) at Iran University of Science and Technology (IUST). Five open-ended questions were also administered to gain more insight into their attitudes and perceived challenges of online teaching. The results indicated that pre-service teachers were interested in online teaching and believed that online teaching could help learners develop their English language knowledge, and that the advances in online information technologies could provide great opportunities for language teaching and learning. Considering perceived challenges of online teaching, internet connection, lack of teacher professional development courses for effective online teaching, and lack of previous online learning experiences were found to be the most frequent challenges. The dimensions of challenges were hierarchically ranked as technical, pedagogical, interactional, supportive, and attitudinal.

Enormous research into online learning is being pushed in light of the findings, which point to both potential benefits and potential drawbacks. In Iranian schools, English as the foreign language has been heavily affected by the COVID-19 and unfortunately still remains underexplored, especially the stakeholders' attitudes and the challenges they face in their online classes. Despite the fact that instructors could use technology to carry out their duties, they still face a number of difficulties, particularly in communicating with pupils and/or parents. As the newest issues and advancements in English Language Teaching (ELT) are of primary concern to educational specialists, pedagogical practitioners, language policymakers, and linguists (Jayanti & Norahmi, 2014), this study was motivated to explore the following research questions:

RQ1. What are the attitudes of Iranian EFL high school teachers regarding the use of emerging technologies for teaching English in post-Covid-19 era?

[Downloaded from cals.gonbad.ac.ir on 2025-11-30]

[DOI: 10.22034/jcals.1.2.91]

Archive of SID.ir

Archive of SID.ir

RQ2. What are the challenges encountered in the use of emerging technologies for teaching in post-Covid-19 era?

RQ3. Are emerging technologies available for Iranian EFL high school teachers in post-Covid-19 era?

Method

Participants

Participants of the study were selected according to convenience sampling. Moreover, purposive sampling was used to select participants who had experience using emerging technologies for teaching English in high schools in the post-Covid-19 era. So, they were chosen among those who had a minimum of three years of teaching experience in the field of English language teaching and were currently teaching English in high schools. In this way, a total of 30 EFL teachers (21 female and 9 male) aged between 27 and 50 years participated in this study. The participants were recruited through personal contacts and professional networks, and their consent was obtained prior to the interviews. The sampling method allowed for a focused and specific sample of participants who were knowledgeable about the use of emerging technologies for teaching English in Iranian EFL high schools in the post-Covid-19 era.

Instruments

Structured interview was used in this study using a protocol which was developed by the researchers. It was designed based on the research questions and included open-ended questions. To check its validity, it was subjected to panel discussions with three experts in applied linguistics. They checked the face and content validity of the questions. The clarity and relevance of the questions were also examined and some items were modified.

Design and Data Analysis

The current study utilized a qualitative research design, specifically a phenomenological approach. Phenomenology seeks to explore the lived experiences of individuals and how they interpret the world around them. In this study, the aim was to understand the attitudes and challenges of Iranian EFL high school teachers towards the use of emerging technologies for teaching English in the post-Covid-19 era. According to Moustakas (1994), phenomenology explores to understand the meaning of human experiences. The approach is particularly suited to seek complex and subjective phenomena, such as attitudes and beliefs. Similarly, Creswell (2013) notes that phenomenology provides a description of a particular phenomenon from the perspective of the participants, allowing researchers to discover the essence of the experience. Overall, using a phenomenological approach in this study allowed for a thorough exploration of the attitudes and challenges experienced by Iranian EFL high school teachers

[Downloaded from cals.gonbad.ac.ir on 2025-11-30]

[DOI: 10.22034/jcals.1.2.91]

Archive of SID.ir

Archive of SID.ir

towards the use of emerging technologies for teaching English in the post-Covid-19 era, from the participants' own perspectives. This method allows for a rich and nuanced understanding of the experiences of the teachers, which can inform future research and practical applications in the field of English language teaching.

The interviews were conducted in Persian, the native language of the participants, and were audio-recorded with their consent. They were transcribed verbatim in Persian and then translated into English by a certified translator. To ensure the trustworthiness of the data, the following measures were taken. First, the participants were provided with a summary of their interview findings and were asked to review and verify the accuracy of the data (member checking) . Second**,** the study findings were reviewed by two researchers who were not involved in the study to provide feedback and enhance the credibility of the findings (peer debriefing) . Moreover, this study adhered to ethical guidelines for research involving human participants. Informed consent was obtained from all participants, and their anonymity and confidentiality were maintained throughout the study.

Data analysis for this study was conducted using thematic analysis. Thematic analysis is a widely used qualitative analysis method that involves identifying patterns, themes, and concepts within the data. The analysis involved several steps. First, the transcripts were read multiple times to become familiar with the data. Then, they were coded by highlighting relevant segments of text related to the research questions. The codes were reviewed to identify common patterns and themes. The themes were reviewed and refined to ensure they accurately reflected the data. Finally, the themes were interpreted to provide insight into the research questions. The data analysis was conducted manually, and the themes were developed iteratively until they accurately reflected the data.

Results

Research Question 1: Attitudes towards the Use of Emerging Technologies

The thematic analysis of the first research question revealed that Iranian EFL high school teachers had a generally positive attitude towards the use of emerging technologies for teaching English in the post-Covid-19 era. Specifically, four main themes emerged from the data: (1) Enhanced Learning Experience, (2) Increased Motivation, (3) Improved Accessibility, and (4) Effective Communication. Table 1 presents these main themes along with some excerpts from participants' responses in the interview.

Table 1. *The Thematic Analysis of the Attitudes of Iranian EFL High School Teachers Regarding the Use of Emerging Technologies for Teaching English in Post-Covid-19 Era*

[Downloaded from cals.gonbad.ac.ir on 2025-11-30]

[DOI: 10.22034/jcals.1.2.91]

Archive of SID.ir

Archive of SID.ir

Themes	Description	Quote
Enhanced Learning Experience	Using technology can make learning more interactive and interesting for students, leading to better outcomes.	"I believe that using technology can make the learning experience more interactive and interesting for students, which can lead to better learning outcomes.
Increased Motivation	Students are more motivated and engaged when technology is used in the classroom.	"Students are more motivated to participate in class when technology is used. They find it more interesting and engaging than traditional methods."
Improved Accessibility	Technology can improve access to learning materials, particularly for students in remote areas.	"Technology can provide access to learning materials and resources that may not be available in the classroom. This can be especially important for students in remote areas."
Effective Communication	Technology can facilitate communication between teachers and students, as well as between students themselves.	"Technology can make communication more efficient and effective, which can lead to better learning outcomes. For example, students can easily communicate with their peers and teachers online."

Research Question 2: Challenges Encountered in the Use of Emerging Technologies

The thematic analysis of the second research question revealed that Iranian EFL high school teachers encountered several challenges in the use of emerging technologies for teaching English in the post-Covid-19 era. Specifically, four main themes emerged from the data are: (1) Technical Infrastructure, (2) Training and Support, (3) Pedagogical Considerations, and (4) Student Engagement. Table 2 highlights the four main themes that emerged from the data analysis of Iranian EFL high school teachers' views on the challenges they encountered in the use of emerging technologies for teaching English in the post-Covid-19 era.

Table 2. *The Thematic Analysis of the challenges in the Use of Emerging Technologies for Teaching in Post-Covid-19 Era*

[Downloaded from cals.gonbad.ac.ir on 2025-11-30]

[DOI: 10.22034/jcals.1.2.91]

Archive of SID.ir

Archive of SID.ir

Themes	Description	Quotes
Technical Infrastructure	Lack of technical infrastructure as a challenge to effective use of emerging technologies in teaching	"We have limited access to reliable internet connectivity and suitable devices, which makes it difficult to use technology effectively in the classroom."
Training and Support	Inadequate training and support in the use of emerging technologies as a challenge to effective use in teaching	"We need more training and support in the use of technology. Many teachers are not familiar with the latest technologies and how to use them effectively."
Pedagogical Considerations	Careful consideration of pedagogical principles and practices required for effective use of emerging technologies in teaching	"Using technology requires careful consideration of pedagogical principles and practices. It is important to ensure that technology is used in a way that supports learning outcomes and does not detract from them."
Student Engagement	Maintaining student engagement and motivation as a challenge when using emerging technologies for teaching	"Maintaining student engagement and motivation can be a challenge when using technology. Some students may find it difficult to stay focused or may become distracted by other activities online."

Research Question 3: Availability of Emerging Technologies

The thematic analysis of the third research question revealed that emerging technologies were not widely available for Iranian EF high school teachers in the post-Covid-19 era. Specifically, two main themes emerged from the data: (1) Limited Access to Technology, and (2) Inadequate Funding. Table 3 summarizes the major themes that were identified. It highlights the challenges faced by the teachers in accessing and effectively using emerging technologies in their English language teaching, as well as the need for increased investment in technical infrastructure, teacher training and support, and funding for the availability of emerging technologies in Iranian EFL high schools.

Table 3. *The Thematic Analysis of Availability of Emerging Technologies for Iranian EFL High School Teachers in Post-Covid-19 Era*

[Downloaded from cals.gonbad.ac.ir on 2025-11-30]

[DOI: 10.22034/jcals.1.2.91]

Archive of SID.ir

Archive of SID.ir

Themes	Description
Limited Access to Technology	Lack of infrastructure and resources Limited access in remote areas Variation in quality and availability, some require specific hardware/software Limited access to computers or reliable internet connectivity
Inadequate Funding	Lack of funding for schools and educational institutions

Discussion & Conclusion

The present study aimed to investigate Iranian EFL high school teachers' attitudes towards the use of emerging technologies for teaching English in the post-Covid-19 era, the challenges encountered in their use, and the availability of these technologies. The thematic data analysis of the structured interview questions revealed that the participants had a positive attitude towards the use of emerging technologies and recognized their potential to enhance teaching and learning. However, they also encountered several challenges, including the lack of technical infrastructure and inadequate training and support. In addition, the availability of emerging technologies for teachers was found to be limited.

The positive attitude of Iranian EF high school teachers towards emerging technologies aligns with previous research on the use of technology in education (Gilakjani & Rahimy, 2019; Rafiee, et al., 2022; Taghizadeh & Basirat, 2022). Specifically, teachers believed that emerging technologies could help to improve the quality of teaching, enhance student engagement and motivation, and provide opportunities for interactive and collaborative learning. The study findings are consistent with previous studies that have highlighted the benefits of technology in education, such as increasing student motivation and engagement, facilitating individualized learning, and improving collaboration and communication.

In addition, the challenges encountered by Iranian EFL high school teachers in the use of emerging technologies are also consistent with previous research (Fathi & Ebadi, 2020; Taghizadeh & Basirat, 2022). The findings suggest that while teachers recognize the potential benefits of technology for teaching and learning, there are significant challenges to be addressed, including the lack of technical infrastructure, inadequate training and support and limited access to emerging technologies. To fully realize the potential benefits of emerging technologies, policymakers and educational

[Downloaded from cals.gonbad.ac.ir on 2025-11-30]

[DOI: 10.22034/jcals.1.2.91]

Archive of SID.ir

Archive of SID.ir

institutions need to address these challenges and provide teachers with equitable access to technology and the necessary training and support.

Lack of technical infrastructure and inadequate training and support have been repeatedly identified as significant barriers to the effective use of technology in education (Chen, 2019; Tondeur et al., 2019). Moreover, the COVID-19 pandemic has exacerbated these challenges, as many teachers had to quickly transit to online teaching without sufficient preparation or training (Chen, 2021).

The results of the study also indicated that emerging technologies were not widely available for Iranian EF high school teachers in the post-Covid-19 era. Specifically, access to emerging technologies was limited due to a lack of infrastructure and resources, as well as inadequate funding for schools and educational institutions. The limited availability of emerging technologies for teachers in Iran is a concern, as it may limit the potential benefits of technology for teaching and learning. The findings suggest that there is a need for increased investment in the development of technical infrastructure, training and support for teachers, and funding for the availability of emerging technologies in Iranian EF high schools. This can help to overcome the challenges encountered by teachers and improve the effectiveness of technology in teaching English in the post-Covid-19 era. Warschauer and Matuchniak (2010) warn teachers of disparities in access to technology between different regions and socioeconomic groups. To address this issue, policymakers and educational institutions need to invest in providing equitable access to technology and ensuring that teachers have the necessary training and support to effectively use these technologies in their teaching.

In conclusion, this study provides valuable insights into the challenges and opportunities associated with the use of emerging technologies for teaching English in the post-Covid-19 era in Iran. The findings of the study suggest that while there is a generally positive attitude towards the use of emerging technologies, several challenges must be addressed to ensure their effective use. These challenges include technical infrastructure, training and support, pedagogical considerations, student engagement, and the availability of emerging technologies. Addressing these challenges will require increased investment in the development of technical infrastructure, training and support for teachers, and funding for the availability of emerging technologies in Iranian high schools.

Schools and educational institutions might greatly benefit from learning more about teachers' attitudes and challenges regarding the employment of developing technologies within the post-Covid era. These findings should be useful in the realm of education, and more specifically in English language Teaching (ELT). This study can also be a place for teachers to express their thoughts on online English teaching and to suggest solutions to problems they encounter while teaching online during the post-pandemic era. As for the latter, it is envisaged that students would be able to observe and consider things from the perspective of their instructors, and that they would be more willing to participate actively in online classes and to work in harmony with their instructors going forward. A

[Downloaded from cals.gonbad.ac.ir on 2025-11-30]

[DOI: 10.22034/jcals.1.2.91]

Archive of SID.ir

Archive of SID.ir

variety of linked studies that are always novel, with different research methodologies or instruments or participants is expected to be done in order to provide a wide range of positive contributions to education. A more user-friendly technology can be created and implemented with fewer difficulties if software developers and programmers employ this technique. Technology integration into educational programs and its benefits will be clarified in this way as well. This study's findings would be useful to a wide range of people, including language teachers, students, curriculum developers, educational policy makers, and other researchers.

In addition, this study has several implications, first, policymakers must prioritize the development of technical infrastructure and resources to ensure that emerging technologies are widely available for teachers and students. Second, they must invest in training and support for teachers to ensure that they have the necessary skills and knowledge to use emerging technologies effectively in their teaching. Third, educators must incorporate emerging technologies into their pedagogy to enhance student engagement and motivation, provide opportunities for individualized learning, and facilitate collaboration and communication among students. Fourth, educators and policymakers must address the digital divide and ensure that all students have access to emerging technologies and the internet to avoid exacerbating existing inequities.

Future research should explore the effectiveness of emerging technologies in teaching English in the post-Covid-19 era in Iran and other developing countries. Specifically, future studies should investigate the impact of emerging technologies on student learning outcomes, engagement, and motivation. Additionally, future studies could explore the effectiveness of different emerging technologies, such as virtual and augmented reality, in teaching English in the post-Covid-19 era. An investigation of the impact of socio-cultural factors on the use of emerging technologies for teaching English in different contexts could include an examination of the role of cultural norms and values in shaping attitudes towards emerging technologies, as well as the impact of socioeconomic factors on access to technology resources.

Overall, the effective use of emerging technologies for teaching English in the post-Covid-19 era requires a holistic approach that addresses technical, pedagogical, and equity considerations. The pedagogical implications highlighted in this section can help educators and policymakers to create a learning environment that leverages the potential of emerging technologies to enhance.

Authors' Contributions

All authors contributed significantly to the research process.

Declaration

We declare that this manuscript is original and has not been submitted to any other journal for publication

Transparency Statements

[Downloaded from cals.gonbad.ac.ir on 2025-11-30]

[DOI: 10.22034/jcals.1.2.91]

Archive of SID.ir

Archive of SID.ir

The authors affirm that the data supporting the findings of this study are available within the article. Any additional data can be obtained from the corresponding author upon reasonable request.

Acknowledgements

We would like to express our gratitude to all individuals helped us to do the project.

Declaration of Interest

The authors report no conflict of interest.

Funding

The authors do not have any financial or non-financial competing interests.

Ethical Consideration

This manuscript adheres to the ethical guidelines provided by the Committee on Publication Ethics (COPE) for ensuring integrity and transparency in the research publication process.

References

Abou Shaaban, E. S. (2009). Integrating e-learning into ELT: Guidelines for designing and delivering high-quality online language courses. *English Language Teaching, 2*(4), 167-175.

Adnan, M., Anwar, K., Ali, M., & Khan, S. U. (2019). The role of technology in teaching English language in Pakistan: Opportunities and challenges. *International Journal of Emerging Technologies in Learning, 14*(11), 130-146. https://doi.org/10.17582/journal.pjz/2018.50.4.sc14

Aghaei, K., Ahmadi Mousa Abad, M., & Mohammadi Sarab, M. (2022). Interplay Between Pronunciation-focused Corrective Feedback and Online Educational Synchronic Software in an ESP Course. *Iranian Journal of English for Academic Purposes*, *11*(3), 1-17.

Aghaei, K., Ghoorchaei, B., Rajabi, M., & Ayatollahi, M. A. (2022). Iranian EFL learners' narratives in a pandemic pedagogy: appreciative inquiry-based approach. *Language-related Research, 13*(3), 285-314.

Aghaei, K., & Gouglani, F. (2016). Multimodal pedagogy & L2 vocabulary retention. *International Journal of English Language & Translation Studies*, *4*(3), 142-153.

Aghaei, K., Rajabi, M., Koo, Y. L, & Ajam, F. (2020). Flipped learning as situated practice: A contrastive narrative inquiry in an EFL classroom. *Education and Information Technologies, 25*(3), 1607-1623.

Alias, N., & Hussin, S. (2002). E-learning and its usage in enhancing teaching and learning in higher education institutions in Malaysia. *Paper presented at the Proceedings of the Asia-Pacific Educational Research Association (APERA) Conference*. https://doi.org/10.21694/2378-9026.17008

[Downloaded from cals.gonbad.ac.ir on 2025-11-30]

[DOI: 10.22034/jcals.1.2.91]

Archive of SID.ir

Archive of SID.ir

Ally, M. (2008). Foundations of Educational Theory for Online Learning. In T. Anderson (Ed.), The Theory and Practice of Online Learning (15-44).Toronto: AU Press.

Atmojo, A. E., & Nugroho, L. E. (2020). EFL learners' difficulties in online learning during the COVID-19 pandemic. *Journal of English Language Teaching and Linguistics, 5*(1), 1-10. https://doi.org/10.30762/jeels.v7i2.213

Au-Yong-Oliveira, M., Martins, M., & Gomes, M. J. (2018). The impact of teacher education on the use of ICT by primary school teachers. *Education and Information Technologies, 23*(3), 1213-1230. https://doi.org/10.34190/ejkm.18.3.2020

Carmen, A. S., Laura, H., & Viorica, S. (2003). How to use the Internet to teach a foreign language. *Procedia-Social and Behavioral Sciences,* 78, 1235-1239. https://doi.org/10.1016/j.sbspro.2012.08.236

Che Mus, M. A. M., Koo, Y. L., & Azman, H. (2012). E-Learning for English language teachers: A case study. *TOJET: The Turkish Online Journal of Educational Technology, 11*(2), 12-19. https://doi.org/10.52783/tojqi.v11i2.9994

Chen, B. (2019). Integrating technology into classroom teaching: A systematic review. *Educational Technology & Society, 22*(4), 47-59. https://doi.org/10.47939/es.v3i11(01).05

Chen, N. (2021). Challenges and opportunities for online language teaching during the COVID-19 pandemic. *International Journal of Computer-Assisted Language Learning and Teaching, 11(*1), 1-14. https://doi.org/10.36663/tatefl.v3i1.140

Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). Sage Publications. https://doi.org/10.13187/rjs.2017.1.30

Fathi, J., & Ebadi, S. (2020). Exploring EFL pre-service teachers' adoption of technology in a CALL program: Obstacles, motivators, and maintenance. *Education and Information Technologies, 25*(5), 3897–3917. https://doi. org/ 10. 1007/s10639-020-10146-y

Gherheș, V., Stoian, C. E., Fărcașiu, M. A., & Stanici, M. (2021). E-learning vs. face-to-face learning: Analyzing students' preferences and behaviors. *Sustainability, 13*(8), 43-81.

Gilakjani, A. P., & Rahimy, R. (2019). Factors influencing Iranian teachers' use of computer assisted pronunciation teaching (CAPT). *Education and Information Technologies, 24*(2), 1715–1740.

Gonzalez, A., & Louis, R. (2018). A systematic review of research on the effectiveness of online learning in teaching Spanish as a second language. *Journal of Spanish Language Teaching, 5*(2), 151-172. https://doi.org/10.1525/aa.1972.74.6.02a01410

Hoffman, A. J., & Ramirez, C. (2018). Blended learning and the use of technology in EFL classrooms in Mexico. *TESOL Journal, 9*(4), 1-18.

Jiang, J., Zhang, Y., May, L., & Qin, J. (2018). Curriculum innovation and teaching reform of English major based on the development of Internet technology. *Educational Sciences: Theory & Practice, 18*(2), 297-305.

[Downloaded from cals.gonbad.ac.ir on 2025-11-30]

[DOI: 10.22034/jcals.1.2.91]

Archive of SID.ir

Archive of SID.ir

Krish, P. (2008). E-learning and its potential as a distance learning tool: A review. *Journal of Educational Technology & Society, 11*(1), 16-29.

Mahmoudzadeh, M. (2014). The impact of new technologies on teaching and learning English. *Procedia - Social and Behavioral Sciences,* 136, 345-349.

Moustakas, C. (1994*). Phenomenological research methods*. Sage Publications.

Plaisance, E. (2018). Online language learning: A review of the research and practical applications. *International Journal of Education and Research, 6*(6), 47-62.

Rafiee, S. J., Alavinia, P., & Sarkhosh, M. (2022). Iranian EFL High School Teachers' Perceptions of Virtual Learning System Opportunities: Challenges and Threats. *International Journal of Foreign Language Teaching and Research, 10* (43), 179-192.

Reluga TC (2010) Game Theory of Social Distancing in Response to an Epidemic. *PLoS Comput Biol 6*(5): e1000793. doi:10.1371/journal.pcbi.1000793

Samuels, P., & Zaitun, A. B. (2008). Online discussion forums in EFL contexts. *Malaysian Journal of ELT Research, 4*(1), 60-81.

Taghizadeh M. & Basirat, M. (2022). Investigating pre-service EFL teachers' attitudes and challenges of online teaching. *Computer Assisted Language Learning*, DOI: 10.1080/09588221.2022.2136201.

Tondeur, J., van Braak, J., Sang, G., Voogt, J., Fisser, P., & Ottenbreit-Leftwich, A. (2019). Preparing pre-service teachers to integrate technology in education: A synthesis of qualitative evidence. *Computers & Education,* 142, 103641.

Warschauer, M., & Matuchniak, T. (2010). New technology and digital worlds: Analyzing evidence of equity in access, use, and outcomes. *Review of Research in Education, 34*(1), 179-225.

Wu, Y.-T., & Marek, M. W. (2020). *Technology-enhanced language learning: A review of theoretical and empirical research.* In The Routledge Handbook of Teaching English to Young Learners (167-182). Routledge.

Yadov, V., Gupta, S., & Khetrapal, S. (2018). Technology integration in the classroom: Challenges and possibilities. *International Journal of Education and Management Engineering, 8*(1), 16-22.

Yamagata-Lynch, L. C., Chang, H. -H., Hayakawa, T., Mastrogiovanni, J., Shipley, L., Miller, C., & Terrica, D. (2020). Ahah, I'm a designer?!: Becoming empowered designers through course experiences. In Hokanson et al. (Eds). *Educational Technology Beyond Content: A New Focus for Learning*. (11-26) doi: 10.1007/978-3-030-37254-5

[Downloaded from cals.gonbad.ac.ir on 2025-11-30]

[DOI: 10.22034/jcals.1.2.91]

Archive of SID.ir