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Presenting a Profile of Online Teaching Adaptation among the Iranian EFL High School Teachers

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Abstract

The forced transition to online instruction due to covid-19 pandemic brought about many changes and challenges. Therefore, evaluating these changes is of utmost importance. The study aimed to contribute to the existing literature by investigating the online adaptation of Iranian EFL high-school teachers. Purposive sampling was employed to approach the 20 teacher participants of the study. To this end, the researchers used semi-structured interviews to gather qualitative data concerning their perception towards of online instruction. The results of the study were promising. Although they reported many challenges and shortcomings, they believed those weaknesses motivated them to increase their digital literacy and integrate ICT into their approach. Moreover, teachers saw the pandemic as a forced opportunity and believed it was time to harness the power of ICT integration in postpandemic education. Finally, all the study findings and possible implications are discussed, and suggestions are presented to prevent barriers to online instruction.

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Introduction

As stated by Zhou et al. (2020), "The outbreak of COVID-19 in Wuhan, China, at the end of 2019, was a major public health emergency that had the fastest spread, the widest scope of infection, and the most difficult to prevent and control in China since its establishment" (p. 502). The rest of the world could not avoid the virus in any way. Consequently, the infectious virus altered how we live, interact, work, teach and learn; hence, education has not been immune (Flores & Swensen, 2020). From an educational perspective, it can be said that one of the most significant consequences of the Covid-19 outbreak was intensive school closure in many countries worldwide. According to the data issued by UNESCO, "192 countries have implemented nationwide closure of academic institutions, and 5 have implemented local closures, impacting about 99%9% of the world's student population" (Tandon, 2020, p. 1). The education system in Iran was no exception. Many schools in Iran were closed in late February 2020.

To prevent the side-effect of the virus, the Chinese government started a tactical policy called "suspending classes without stopping learning," which gained momentum and was followed by other countries to switch their mode of education to online (Zhang et al., 2020; Tandon, 2020; Zhou et al., 2020). The education system in Iran is based on conventional education, demanding students to turn up in classes. In specific conditions where students have no permission to enter school, teachers had to shift the mode of instruction from traditional teaching to online education while they were not prepared for that.

The approach toward teaching and learning has drastically changed; teachers experienced significant complications in conducting virtual classes and retaining the least contact with students. The significance and implications of the virus on the educational system are yet to be known. Nevertheless, its numerous challenges and opportunities for teachers and learners are obvious. (Liguori & Winkler, 2020; Basilaia & Kvavadze, 2020; Huber & Helm, 2020; O'Brien et al., 2020).

Research intended to study a thorough understanding of the challenges and opportunities of ICT since acquiring the knowledge of these challenges and opportunities would contribute to the efficiency and effectiveness of EFL teacher training programs and curriculum design. It would only happen when teachers are familiar with upcoming opportunities and threats in using technologies. With this in mind, the researchers hoped that the present study could contribute to the existing literature and provide practical insight for English language teacher education programs. Furthermore, being aware of upcoming challenges in online instruction can lead to more productive and efficient time management, class management, interaction, and feedback (La Velle et al., 2020). Moreover, studies of this kind can also shed light on the effectiveness of teacher education programs by considering teachers' points of view.

Literature Review Background of the Study

The new Coronavirus disease 2019 (COVID-19) was spread in China at the end of 2019. The virus spread rapidly all over the globe and placed it in the global spotlight, demanding all

institutions prepare a precautionary plan. Most countries recognized the pandemic as a national emergency in early 2020. In response to the outbreak, different societies adopt varying strategies to tackle the problem. For example, as Zhang et al. (2020) stated, China's government implemented a series of emergency management mechanisms. One of those mechanisms in the educational mainstream was "Suspending Classes Without Stopping Learning," which means switching face-to-face instruction to large-scale online teaching during school closure, gaining momentum and being followed by other countries. Or in India, as mentioned by Tandon (2020), schools during the pandemic followed the guidelines introduced by the government and initiated virtual classes to bridge the gap in instruction.

In Iran, the context of the current study, as in another context (Sahu, 2020; Zhang et al., 2020; Tandon, 2020; Zhou et al., 2020; Flores, 2020; Liguori & Winkler, 2020; Lorenza & Carter, 2021) the Covid-19 was considered as a national disaster which brought about significant impact on all departments of the society, and educational system is by no means an exception. To counter the side-effect of the virus, the Iranian government demands all sectors organize forces or constraints to stop gathering. Iran and many other countries took measures to minimize the spread of the virus, including travel restrictions, social distancing, quarantine, and closure of gyms and movie theaters, including the educational institution (Sahu, 2020; Murphy, 2020; Weeden & Cornwell, 2020). The global closure of schools confronted the educational system, including teachers and students, with unpredicted and unwanted situations. Teachers had to suspend off-line or face-to-face instruction and in order to continue teaching and learning, the only possible way was to adhere to an alternative mode of delivery: online instruction as mandated by the Ministry of Education. Therefore, there was an urgent need for teachers and learners to adapt rapidly to the new context of teaching and learning. Faculty members had to adjust their teaching plans, teaching styles, and assessment styles to the "new normal" (Lapitan Jr et al., 2021).

Attention to online learning and school digitalization can be traced back several years (Shahnama et al., 2021; Konig et al., 2020; Tallent-Runnels et al., 2006; Lorenza & Carter, 2021; Kopp et al., 2019; Leszczyński et al., 2018). From the outset of the pandemic, online teaching and learning, as stated by Tsar (2020), which played a supplementary role in traditional education in the pre-Covid-19 situation, has now become the only way possible to welcome worldwide and dominate global education. Strielkowski (2020) argued that the mandatory use of online instruction brought about by the Covid-19 pandemic led to novelties in the educational system that require years of investigation to fully understand its pros and cons.

This abrupt shift in the educational system led to various expressions defining the new online mode of learning and teaching (Lorenza and Carter, 2021). Different scholars used varying terms to describe online learning, for instance, "distance learning," "distributed learning," "blended learning," "online learning," and "mobile learning," which all often have been used interchangeably during the Covid situation. However, Lorenza and Carter (2021) believe that the term "emergency remote teaching" (ERT), which was proposed by Hodges et al. (2020), can appropriately define the current mode of instruction which acted as a contingency plan to ensure the continuation of education to students.

It is noteworthy that online teaching and learning exercised during the covid crisis carried a stigma of having lower quality compared to traditional face-to-face instruction (Hodges et al., 2020). The online activities offered during the Covid-19 pandemic are not the same as well-planned online experiences (Lorenza & Carter, 2021; Gacs, Goertler, & Spasova, 2020; Paesani, 2020). Empirical studies in online instruction conducted by scholars such as Chapelle, 2010; Hampel & Stickler, 2015; Plonsky & Ziegler 2016 have revealed that the practice of online education or blended teaching could be beneficial as face-to-face instruction regarding students' language achievement and proficiency gains. On the other hand, Joshi et al. (2020) believed that instructional achievement of online learning is arguable as there is no face-to-face interaction between learners and teachers.

A large body of studies investigated the quality of online classes from different viewpoints. They have concluded that decisive matters influence online courses' nature and scope, including time management, teacher-student relationship, assessment, and feedback (Bassoppo-Moyo, 2006; Conaway et al., 2005; Ko & Rossen, 2010; Limperos et al., 2015). Moreover, there have been some studies regarding students' failure rates in online classes before the outset of the pandemic (Luyt, 2013; Morris et al., 2005; Tyler-Smith, 2006).

Shahnama et al. (2021) believe that there is no specific classification of early works of researchers on online education issues. For example, Brooks (2003), in an attempt to review the related literature on factors inhibiting faculty members, including teachers and students, from taking part in an online learning environment (OLE), mentioned teachers' attitudes as the chief factor influencing the quality of online classes. In another study, Arbaugh (2005) pinpointed that technology, behavioral characteristics of students, and teachers' teaching styles as the main issues in online instruction. In another study by Yeung (2003), teacher and student support, course development, course structure, and how the institution assesses online learning were the main challenges in classes, while Jacobs (2013) considered assessment as the potential source of problems.

However, more recently, in an attempt to classify the relevant issues of online classes into a more organized framework, researchers such as Kebritchi et al., (2017), Rasheed et al. (2020) believed that students' challenges were mainly of self-regulation type and teachers' challenges were mostly related to the technology infrastructure while administers of institution mainly dealt with providing the required training for their teachers (Shahnama et al., 2021). As stated before, there are a vast number of related studies on online teaching and learning challenges and how online instruction played a supplementary role in education before the Covid-19 crisis (Assareh & Bidokht, 2011; Hadijah & Shalawati, 2017; Quadri et al., 2017; Kebritchi et al., 2017; Rasheed et al., 2020; Brooks, 2003; Arbaugh, 2005; Yeung, 2003; Jacobs; 2013).

Since the advent of the pandemic, different scholars have conducted varying studies to scrutinize and document the impact of COVID-19 in the educational mainstream.

Reported Challenges and Opportunities on Online Instruction

In the USA, Chen et al. (2020) conducted a quantitative study to investigate students' perceptions of remote learning during the pandemic. The study's results indicated that, in general, students' learning has worsened due to the forced transition to e-learning. Moreover, students showed

strong tendencies toward synchronous recorded live lectures and asynchronous pre-recorded lectures with synchronous follow-up sessions compared to non-recorded sessions. Yet, another study finding pinpointed that students believed flipped classrooms and the creative use of technology would benefit their virtual learning (Chen et al., 2020).

Son et al. (2020) examined the effects of quarantine on the psychological well-being of college students in India. The study revealed that students had experienced physical, emotional, and health-related issues. There were also academic-related issues such as lack of technology, bandwidth issues, platform-related issues, etc.

Rajab et al. (2020) also conducted a cross-sectional survey to study the effect of the Covid-19 pandemic on online education at a medical college in Saudi Arabia. The findings of the study indicated that 62.5% preferred flipped classrooms, since their attitude towards online instruction were positive and they favored switching to either online or blended learning.

Bisht et al. (2020) conducted their study during the initial emergence of Covid in India when no well-defined guidelines were prepared for the continuation of instruction. They focused on the acceptability and challenges of online higher education. The data analysis highlighted that; students adapted to online examinations more easily and most students had no difficulty with online instruction. They also found that gender had a prominent role in online adoption by stressing that female student had greater adaptability of online educational modes.

Similarly, Gonzalze et al. (2020) studied the influence of the covid-19 lockdown on the autonomous performance of students in Spain. The study's results pinpointed that; the covid-19 pandemic had positive effects on students' autonomous performance, which implied that students got better scores during confinement and assessment process and learning and teaching styles should change as well.

In another study, Händel et al. (2020) studied the effects of digital readiness on socioemotional perceptions of higher education students in the context of the new Covid crisis. They found that students' readiness for digital learning was satisfactory and students were pleased with the upcoming situation as they were accustomed to digital tools and well connected by social media, which means those who were ready for digital learning felt less tension and worries.

Lorenza and Carter (2021) conducted a small-scale quantitative study on the effect of Emergency Online Teaching (EOT) during the pandemic on undergraduate students in Australia. They aimed to investigate students' motivations to learn before and during the EOT period, review their views about emergency online learning, and understand students' opinions about their future careers. The findings of this case study were presented under the main themes of motivation to learn, course delivery, and a future career. Regarding the first theme, there was a decrease in motivation due to a lack of engagement, short peer interaction, distraction, online workload, loss of teachers' and students' social presence, and learner agency. The finding with respect to the second theme of the study revealed that students were more satisfied with face-to-face instruction. Finally, the last theme of the study was scrutinized through skills and knowledge, confidence, and resilience. Students' responses were divided between positive and unsure. Therefore, those who showed a positive view about their future career recognized

an increase in their skills, knowledge, confidence, and resilience through their studies.

Challenges Faced by Teachers and Students

Ute Kaden (2020) conducted a case study to focus on the changes brought about by Covid-19 to the professional life of secondary school teachers in rural Alaska. The results revealed that one of the side effects of the lockdown in the educational system was an increase and change in teachers' workload. Furthermore, online education can support learning only if it is designed carefully and individualized so as not to result in inequality and social divides.

Konig et al. (2020) conducted a descriptive study in the early phase of the lockdown in Germany to investigate how early teachers adapted to online teaching during the pandemic career. Finding from regression analysis revealed that, contrary to the researchers' hypothesis, early career teachers who belong to the generation of digital natives (Prensky, 2001) do not guarantee their capability to use digital instruments, which indicates the advantage of being familiar with ICT or having software resources at their disposal before Covid crisis did not contribute to successful use of ICT.

A study by Alam (2020) elaborated on the challenges of online instruction for teachers and students during the lockdown in Bangladesh. The result of this qualitative study revealed that such challenges were due to teachers' and students' lack of prior knowledge in online education, technical problems, lack of internet coverage, and time management.

Atmojo and Nugroho (2020) were the other scholars who conducted qualitative research on online language learning and teaching. They categorized the challenges of Indonesian EFL online classes into three groups: student-related, teacher-related, and parent-related. Some obstacles were lack of experience and knowledge in handling online courses, teachers' limited ability to create materials for online instruction, absence of good infrastructure, no preparation and training for online education before the pandemic, difficulty in providing online feedback, inadequate teacher-student interaction, etc.

Studies Conducted in Iran

Khatoony and Nezhadmehr (2020) conducted exploratory mixed-method research to study EFL teachers' challenges in implementing online instruction in Iran. The data analysis revealed that teachers had positive attitudes toward integrating technology and the internet during the pandemic to ensure the continuation of instruction despite all challenges. They also indicated that technology instruction increased students' self-confidence and added to their information.

Hassani (2021) also reported six core themes as a result of Covid-19 pandemic on English language teachers' education. He concluded that teachers can transform the current challenges of the pandemic into opportunities through training, identity reconstruction, formative assessment, and the inclusion of technology in the teaching process.

In a similar vein, Derakhshan (2021) conducted a study on the effect of the emergence of distance education on learning English language skills during the pandemic in Iran. To this end, employing a maximum variation sampling the researcher reported five general themes with their specific sub-themes, including: "1. the advantages/positive aspects of EDE for learning language skills of Iranian EFL learners, 2. the disadvantages/negative aspects of EDE

for learning language skills of Iranian EFL learners, 3. the most positively influenced skill by EDE, 4. the most negatively influenced skill by EDE, and 5. the solutions for solving the challenges of EDE contexts" (Derakhshan, 2021, p. 35).

Shahnama et al. (2021) also tried to uncover an EFL teacher's challenges through an online course. A process-tracing approach was employed in order to follow the dynamic behavior of Covid-19 and its emergent outcomes. According to the teacher's comments, she faced most challenges at the beginning of online instruction. During the middle of the course, she reported challenges like platform imitation, time management, low internet speed, and the slow adaptation of students. Finally, she said low media literacy and technological knowledge, textbook unfamiliarity, and evaluation problems are instances of challenges for the end of the course.

Gap of the Study JOURNAL

By reviewing the literature on online instruction before and during the Covid-19 pandemic, it can be concluded that there are many factors affecting the practice of online education. Some of these factors were: teachers' attitudes, lack of technology, behavioral characteristics of students, teachers' teaching styles, and schools' infrastructures. As stated earlier, there is a scarcity of empirical studies in this regard, and only a few scholars, to the best of the knowledge of the researchers, investigated the practice of online instruction during the pandemic (Shahnama, Elahi Shravan, and Yazdanmehr, 2021; Khatoony and Nezhadmehr, 2020; Hassani, 2021; Derakhshan, 2021). Thus, considering the prominence of adaptation to online instruction during unprecedented situations like the coronavirus pandemic, the present study contributed to the existing literature by investigating high-school teachers' adaptation to online education during the pandemic. Moreover, it is noteworthy that having a broader view of this issue would shed light on beneficial guidelines for future improvement of EFL teacher training programs or curriculum design.

Accordingly, this study serves as the stepping stone for further investigation into this neglected area of inquiry. To fill this gap, the study tries to answer the following questions:

- 1- What adaptations were utilized by EFL high-school teachers in online classes during Covid-19?
- 2- What patterns emerge for teachers' adaptation in Iranian high schools during Covid-19?

Methodology

Research Design

The present study implemented a qualitative design to investigate the understanding and insights of EFL teachers regarding the current status of online adaptation in Iranian high-schools. Due to the study's exploratory nature and uniqueness of the teachers' experiences, the study was conceptualized as a grounded theory approach to unfold factors impacting or impeding adjustment in the teaching and learning process.

Participants

The current investigation involved the participation of EFL teachers from various provinces in Iran, the context of the study, such as Fars, Tehran, Isfahan, Mashhad, etc. Twenty EFL teachers were approached to participate in the study (11 females and 9 males). The sample

consisted of various cycles of study (graduate degree, master's degree, Ph.D.) aged 30 on average. The researcher selected the participants through purposive sampling, as the criteria for choosing the participants were teachers who used the technological application (e.g., adobe connect, sky situation-room, google meet, etc.) in conducting classes during the pandemic. Moreover, the aim and the nature of the study were distinctly spelled out, as was the assurance of confidentiality. To guarantee participants' privacy, the researcher refers to each participant by number in all study segments.

Instrument

The data collection instrument was a semi-structured interview with questions being determined in advance. The teachers were free to discuss their individual experiences in the new Covid-19 situation. During the interview, teachers were asked basic questions regarding their perceived challenges and opportunities in adapting to online teachings, like "How did the Covid-19 pandemic change the educational system in your high-school?" "What are the learning/teaching merits of Covid-19?" "How did the educational system of your high-school react to and deal with the crisis?" and the adaptation they adopted to enhance instruction.

ELTL

Data collection

An interview framework was developed to investigate the types of adaptation teachers utilized in online teaching. After reviewing the related literature on teaching education, twenty-two questions were developed. The questions were checked by three experienced researchers in the area of language teacher education to evaluate the interview questions' face and content validity. Any remarks about the content or wording of the questions were incorporated. Subsequently, the researcher piloted the interview with three volunteer EFL teachers to modify questions if needed. Questions were designed and asked in English language. However, when the interviewees could not state their thoughts and comments, they had the freedom to use their mother tongue (i.e., Persian). Before conducting the interview sessions, the participants' permission to record the interviews was attained. Then, the researcher transcribed and translated Farsi interviews into English.

Regarding the accuracy of the translations, the researchers enjoyed peer feedback, and necessary revisions were made. Based on snowball sampling, a semi-structured interview was carried out via WhatsApp; recorded voice messages were transcribed in written form for further analysis. The interview continued until no new information was forthcoming, and data saturation was reached. In order to guarantee the quality or trustworthiness of the data, peer debriefing was used.

Data analysis

The researcher carried out data analysis. To avoid any bias, the researchers directly transcribed each interview session. After data transcription, the researcher must be immersed in the data. Working within grounded theory framework, the interviews were subject to open, axial, and selective coding. The teachers' phrases and sentences were considered meaningful units of analysis. Finally, the themes or categories obtained in the axial coding underwent selective conceptual analysis to synthesize categories or themes, so an overall figure for factors influencing teacher adaptation in Covid-19 situation was created.

Moreover, an experienced researcher in the qualitative study checked the dependability of data codification. Thus, some of the instances of themes and categorizations were randomly given to him and asked to decide how close our interpretations were. Accordingly, the differences were discussed, and the modified figure was presented.

Results and Discussion

The Identified Strengths during Pandemic

Teacher #1:

First of all was the fact that you could constantly use the internet anything that you wanted to find and should the students would be attended at that moment like if you had a problem teaching a new word you would be able to use photos on the internet or videos even. So, everything was much faster. Or instead of writing on the white board in the class, you could easily type it... and sometimes you would be able to send the file in a pdf format or a word format to your students later so that they didn't have to be coping everything in the class.

Based on this quote, participant 1, there were some strengths identified during the new normal. The pandemic led to creativity and innovation on the parts of both teachers and learners.

Teachers also believed in educational justice since technology and online classes are available in all corners of the country. Participant 12 mentioned:

Teacher #12:

Well, I see we must respect technology. We have to understand its role in our education, right. And now I know that technology can offer us some opportunities, right ... sometimes it can make what that teaching is here, we have some students well coming from far away, well you know sometimes your students are sick, right and on those circumstances, you can teach in actuality in classrooms right. And at the same time, you can be connected to all the students absent because of illness or things like this. So, they can join the class. Well, I said I have this experience. I was in a classroom teaching some of my students present in my class, and at the same time, I had internet access. I was in an online class. There were some other people online so the teaching was being carried out not only in the actual classes but also in an online class.

Moreover, change in the curriculum was another strength brought about by the pandemic as curricula at all levels of instruction was modified to meet the new needs of students and made them familiar with new technology and platforms in the world. Teacher 14 added:

Teacher #14:

It influenced our teaching as we did not, or I did not require to learn to teach online, using the materials and adapt materials or make tests in online situations. So, it affects the whole teaching process, and we had, and I had to define, adapt and redesign all the resources in the classroom using there for the situation, mainly online classroom. I tried to modify my ... books or adapt them so they could be

usable in the teaching process. I had to make some power points, for example. I had to do some assignments to do outside the classroom. I had to do online testing, and I think it was a tough period, and it is. And I think that it made a huge change in me.

The Challenges and the Weaknesses of Online Instruction

At the outset of the Covid-19 pandemic, it was apparent that the educational system would face may problems and deficiencies. Stakeholders in the academic mainstream were confused and didn't know how to react to crises, especially in developing countries like Iran, where educational systems at all levels lag regarding the required knowledge and infrastructure for virtual instruction.

The participants of the current study reported many challenges. They had concerns about their lack of digital literacy, band width and lack of high-speed internet, excessive internet disconnection during classes, learners' demotivation in attending classes, the limited interaction of learners, some parents' inability to afford technological tools, the difficulty in assessment and excessive cheating by learners. Furthermore, they were concerned about the available platforms and their limited implementation knowledge. Some of their comments are evidence of these claims:

Participants 6 and 1, for example, maintained:

Teacher #6:

It had many influences on my teaching because, at first, I wasn't quite familiar with how to teach online, and I was frustrated. I mean, so were the students because they didn't know how to attend online classes, and I didn't know how to handle such classes either. And that was one of my biggest problems at the beginning of the pandemic.

Teacher #1:

I was not very familiar with using technology, so I had to adapt myself... eeee at the beginning it was a bit difficult.... how to use technology how to work with technology especially for those teachers, me included who were not too familiar with technology.

It was prominent that the unavailability of good platforms was their main concern since participants 2 and 5 believed that:

Teacher #2:

Well, at first it was so difficult for our school to continue this situation ummmm I remember that a very new program was made and introduced to all teachers ... teacher society. It was SHAD. SHAD was very, very limited. It offered a limited program to the users. It was not that effective, practical, and eeee efficient and eeee for teachers to continue their teaching through this program. Eeee anyway, we talked to our school principal and asked them to change this program and buy a new one.

Teacher #5:

Another important challenge was that... eeee was a technological problem. Say something like the internet, the platform, and stuff.... A particularly first month may be in the first six or eight months of the pandemic. Because the platforms were not very well prepared in Iran, and the internet was not very... was not very suitable for those classes in which we have like 30 students in one class.

Teachers also comment about the unwillingness of learners to attend classes. They believe that students do not find online courses appealing and compatible. For them, online classes seemed optional, and it wasn't their priority. Teacher 3 held:

Teacher #3:

You know, in the beginning, my students were not comfortable enough. I mean, for example, two years ago and they had guards toward how to use technology and using it or even be present in the class, they made many excuses like for example teacher I didn't access to... you know, strong connection or my internet was like this... was like that, my microphone had a problem, my phone, my cellphone, my laptop, a lot of excuses and I don't know I'm not sure may be some of those excuses were correct? I don't know, but at the beginning, I felt that most of them had guards, and they didn't like to learn about how to use this technology.

Another challenge teachers reported was parents' financial problems in providing digital tools for their children. Teachers 3 mentioned:

Teacher #3:

But we know that the students don't have access to an appropriate connection in some villages. They don't even have their cellphones, which is a big threat to them. ... but I wanna talk about the villages, the students in those schools ummm face more and more problems in this era. Because some of them have to share their cellphones with their brothers and sisters when the schools are online, and it has their problems.

Moreover, all teachers unanimously complained about the lack of access to high-speed internet and band width in all parts of the country. They believed it was their right to access high-speed internet if they wished to continue education properly during the pandemic. But to their dismay, they faced many internet disconnections at the time of teaching, resulting in losing track of teaching and students' absence. Participant 5 said:

Teacher #5:

One of the bad things about online teaching was that... was the technological problems, eee the infrastructures were not well prepared in Iran. I mean in terms of internet connections and platforms such as big blue button and sky room. You know that was not good. In terms of the familiarity of the teachers and students with these platforms There were problems. In terms of the internet connections... the weak internet connections, there were problems. Another big problem in online teaching was lack of involvement on the part of students and also somehow lack

of courage.

There was also limited interaction in online classes as some teachers were not proficient in conducting online courses. They were not familiar with the approaches of online teaching. They didn't know how to motivate students and make them active participants in the class. As participant 6 mentioned:

Teacher #6:

One of the biggest challenges, one of the most important challenges, I believe, is how to keep students motivated and maintain their attention while I'm teaching. It is a tough thing to do. Because we cannot be sure what each student is doing during the class. Eeee.... of course, the presupposition, eee yes, they presuppose that their webcam is off so we cannot see them. And I don't know what you are doing. It is one of the eeee serious... one of the most serious problems in online teaching, so this is one disadvantage or challenge.

Teachers also reported difficulty in assessment. As was mentioned earlier, they were not familiar with the approaches of online classes. They couldn't monitor their learners, and students' lack of participation was a significant cause of difficulty in assessment. They believed that online assessment was demanding compared to face-to-face evaluation since it was easy to cheat in remote assessment, which was in line with the work of (Guangul et al., 2020) that identified academic dishonesty. Teacher 2 reported:

Teacher #2:

You know this pandemic eee... made the teachers' job or responsibility... more difficult than you know face-to-face class. I remember that when I wanted to evaluate my student's performance and ask them some questions ... eeee first I call them and ask them to share their in-fact camera or video with me and eeee with their friends. But some of them eeee resist that, and you know you cannot accept. And eeee they actually ...cannot yeah accepted. They said no, we cannot, because my mom or my dad is here, we are not... I'm not ready... give me enough time to be prepared. And many, many other things or, let's say, excuses. Eeee ... but it is not the end of the story. EeeeI also remember that their parents also convey the answer.

Opportunities Offered by Pandemic

Paradoxically, the data analysis revealed that we should take the opportunities in the face of a disaster like the Covid-19 pandemic. The current pandemic led to many reforms in the Iranian educational system. When there was no face-to-face interaction, all institutional organizations sought all possible ways to find an alternative to continue instruction in the best possible way. Participants believed that the educational system in Iran was not ready for this kind of crisis and required adaptation to new conditions which was in line with the results of study by Hassani (2021). Participant 3 held:

Teacher #3:

So, they found the way to deal with this crisis. For example, they provided their

teachers with workshops on training teachers using these applications, soft wares, and platforms. And the teachers were trained.

Teachers also comment about their increased knowledge of digital tools. They saw the pandemic as an opportunity, forcing them to participate in different workshops and classes to make themselves up-to-date and digital literate for the 21st century. For example, teacher 20 added:

Teacher #20:

Then we realize that now it may happen, it maybe I mean this pandemic may be continued even I don't know more than one year or two years, so I decided to learn much more about it, and I participated in a lot of workshops, online workshops. For example, in Tehran, you know valid institutes, universities, the title of those workshops, for example, were how to use technology in teaching, how to use let me remember.... How to use creativity with applications, how to use this platform, that platform. How to work with adobe connect or sky room. I attended these workshops, practiced a lot, and then applied those techniques in my teaching.

Some teachers mentioned that formative assessment requires more emphasis in our country. Thus, they practiced it during their virtual instruction as they believed that if we limit ourselves to summative assessment, we gave rise to cheating since we couldn't observe our students. Participant 6 added:

Teacher #6:

Well, classroom participation was the most important thing to me. I mean for evaluation and stuff. I didn't take to account the final and midterm exams. They weren't important to me. So, what mattered to me was classroom participation. The more active the student was, the higher score they received. So, this is actually how I evaluate my students during online classes. And this is the case with physical, inperson classes as well. It is classroom participation that matters. See, it is called ongoing assessment. Or formative assessment. Well, I believe that these two are more important than summative assessment, which includes midterm and final exams.

Other advantages of online instruction were having easy access to classes, having equality in learning, saving time and money from staying at home, providing synchronous feedback on learners' achievement, and having more free time to attend other activities.

Threats of Online Classes

Unfortunately, Covid-19 pandemic and forced online teaching led to some misuse of the internet, as teacher 8 commented:

Teacher #8:

Some parents complain about the the students working with computers for other things... besides their learning, I mean studying their lessons. For example, some students doing their homework searched on the net, surfed Instagram, or

chatted with their friends on WhatsApp... And for parents, I think it was a threat rather than some opportunities for their students...During online classes, they are not at home to control their children, which was a problem for them"

A Figure of EFL Teacher Online Adaptation during Covid-19 Pandemic

As mentioned earlier, this figure was induced from the precise analysis and examination of the interview transcript. Additionally, the figure is composed of factors influencing teachers' adaptation during the pandemic. (See Figure 1)

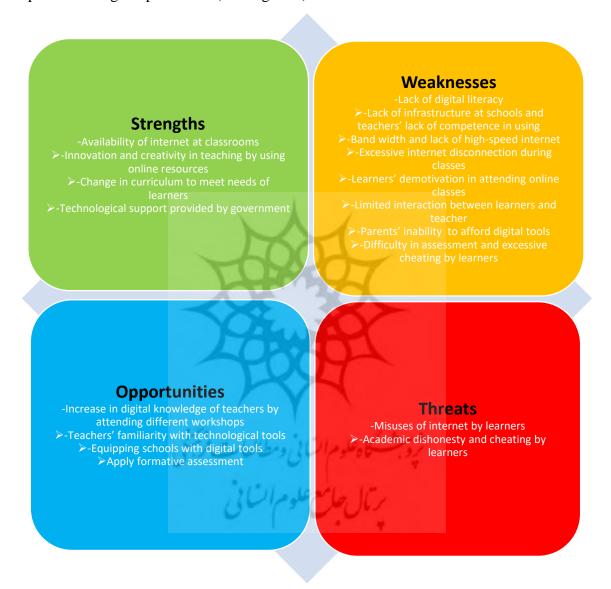


Figure 1: A Figure of EFL Teacher Online Adaptation during Covid-19 Pandemic

Discussion

The coronavirus pandemic has affected all dimensions of our life, and education by no means was not an exception. To continue teaching, varying initiatives have been adopted by educational systems all around the globe. ha lif et al. (2020) believed that "there were disagreements and ambiguities about how to teach, what to teach, the workload for teacher and students, and the teaching and learning environments for both teachers and students." Consequently, educators quickly document the effect of Covid-19 lockdown on the educational

system. This study also attempted to figure out how EFL teachers mastered the challenges or difficulties of online instruction. Moreover, the researchers also aimed to provide insightful solutions to the previously mentioned challenges and threats.

As stated earlier, in the early phase of the pandemic, teachers and students reported many challenges because they did not know how to handle the situation. The inadequacy of online platform, bandwidth issues and poor internet connection, lack of digital knowledge by teachers and students, learners' unwillingness to attend online classes, and difficulty to manage online classes in an interactive way by teachers were some of the challenges brought about by the forced transition. Some of these issues are stressed by earlier studies. For instance, Khalif et al. (2020) believed that "the unplanned and sudden transition to online learning has imposed the use of new technologies that students are unfamiliar with, which has put much pressure on teachers, students, and parents" (p. 2). He also believed that there is an urgent need to decrease the digital gap in online instruction. As he added, "the sudden change of teaching has driven teachers to use different tools and platforms that they were not prepared to use nor trained on" (p. 2).

A recent study by Flores et al. (2020) showed that teachers' difficulty in retaining interaction with students was due to lack of resources and equipment, lack of training on online teaching, lack of support from parents, etc. Besides, Adedoyin and Soykan (2020) emphasized that "stakeholders most feel concerned about abilities to apply ICT in every sphere of life, that educational organization must be up to the task of preparing potential to be able to face challenges and provide solutions" (p. 2). With regard to the lack of knowledge and relevant experience in applying technology and unwillingness of some teachers and students to adapt to new situation scholars such as Huber and Helm (2020); O'Brien et al. (2020), Maggio et al. (2018), Lawrence (2018), and Van der Spoel et al. (2020) stated that teachers and students' unwillingness to experience the new mode of teaching and learning vanished by the passage of time as a result of obtaining more experiences.

Other investigators focus their attention on different aspects of the Covid-19 pandemic. For example, scholars such as Ferdig et al. (2020), Moorhouse (2020), Bao (2020), Zhang et al. (2020) focus on the ways educational organizations and stakeholders adapt to new situations. They also consider experiences, innovations, and strategies implemented by teachers. This study's findings agree with the study done by Hassani (2021), in which he stated that "the crisis is a forced opportunity" (p. 106). In other words, teachers are required "to accept, practice, and adapt to the current status of education in general and language teacher education, in particular, that is online, and their acceptance, practice, and adaptation may point to construction and reconstruction of their identities" (p. 106). Therefore, as stated by Hadar et al. (2020) these challenges and uncertainties are inevitable and it is time to harness the power of online instruction and consider it as an opportunity for growth (Murray et al., 2020).

There are some ways to put an end to the above-mentioned difficulties. According to Floden and Clark (1988), by providing further knowledge and skills for teachers we can reduce these uncertainties to a great extent. Another way is to increase teachers and students' digital literacy by training and familiarizing them with the application of technology in classes which is highlighted by the participants of the current study and investigators of other studies (Basilaia

et al. 2020; Mohammadimehr, 2020; Haghighi et al. 2020; Sahu, 2020).

The findings of this study also highlighted the importance of formative assessment during pandemic as mentioned by the teachers participating in the interview sessions. Hassani (2021) also stated that "It does not make sense to evaluate learners by a single final exam. It is not just and fair, and it is far better to evaluate them in the course of time through ongoing assessment" (p. 106). The existence of poor internet connection during instruction is supported by Alam's (2020) in which the researcher asserted that the problem was present at a national scale and it was unavoidable to prevent.

Overall, the crisis required educational organizations at all levels to switch toward online instruction; which is the point of an agreement reached by not only beneficiaries all around the world but also the teachers in the current study (Hassani, 2021). Because, the practice of online education is accepted and applied by all stakeholders all over the globe.

It is worth to note that, the forced transition to online education presents some other advantages as well (Alves et al., 2017). It can serve students across a wider geographic country, easy access to classes from anywhere, achieving optimal school-life balance through synchronous and asynchronous learning, learning new technical skills, enhancing communication skills to name few.

Conclusion and Implications

With the outset of the Covid-19 pandemic and forced K-12 school closure, many changes were dictated to human life. One of these unpredicted changes to daily life and education was a forced transition from face-to-face classes to online teaching, with many stakeholders still unaccustomed to the new environment.

The present study adopted a qualitative approach to investigate teachers' online adaptation in Iranian high schools during the pandemic. To answer the research questions, we tried to figure out how EFL teachers mastered the barriers of online instruction and how they identified and embraced the offered opportunities. The study's finding regarding the first research question encompasses four core categories: strength, weakness, opportunity, and threat. One of the most raised concerns about adaptation difficulty was the lack of digital literacy. Lawrence (2018) stated, "A teacher with the skill or knowledge of ICT is a better positioned to judge the usefulness of adopting and integrating ICT into teaching and learning activities" (p. 15). The unfamiliarity with online resources and lack of digital literacy can be solved by providing teacher training sessions or workshops. Baran et al. (2011), during the earlier time of the pandemic, highlighted the importance of offering preparation courses for teachers to reduce online instruction's inhibiting factors and help them easily transfer from face-to-face teaching to online mode. The majority of teachers also expressed concerns about the unwillingness of students to join online classes, for which they could do nothing.

The availability of online resources and institutional factors also played a role. Lawrence (2018) highlighted that "Teachers rarely have complete autonomy regarding the adoption and integration of ICT in teaching and learning... the institution's management typically controls access to infrastructure supporting adoption and integration, such as allocating resources, offering training programs, applying ICT to support a wider variety of teaching and learning

tasks, and encouraging experimentation with ICT. They may even control physical access to the hardware and software needed to adopt and integrate ICT innovation" (p. 17).

Schools with adequate financial and technological resources could better resist the Covid-19 crisis. Moreover, as Konig et al. (2020) stated, "those teachers who already had software resources at their disposal and were familiar with their use in teaching were advantaged when school closure began" (p. 617). Overall, the availability of resources such as software and hardware were necessary factors in adaptation during the pandemic.

Almost all teachers reported difficulty in assessment due to excessive cheating. Another survey has shown, "It does not make sense to evaluate learners by a single final exam. It is not just and fair, and it is far better to evaluate them over time through ongoing assessment" (Hassani, 2021, p. 106). Consequently, based on the findings of the current investigation, it is advisable to conduct a formative assessment to diagnose students' needs regarding remote learning and provide appropriate lesson plans in the long run (Konig et al., 2020). And also, to minimize cheating by students. This investigation also shed light on the opportunities offered by this unwanted crisis. Darling-Hammond and Hyler (2020) stated, "And as we walk the road, we will learn still more by committing to sharing what we invent with one another" (p. 463). Therefore, according to the current survey findings, teachers in general, and EFL teachers in particular, should accept and adapt to the status quo and seize the opportunity to reconsider and reinvent preparation and schooling itself. This adaptation also may point to the reconstruction of their identities and a change in attitudes towards implementing technology in class even after lockdown since some teachers prefer to adopt hybrid teaching if they have the right to choose. This finding also was underscored by Ahmady et al. (2020), König et al. (2020), Liguori & Winkler (2020), Liyanagunawardena and Aboshady (2018), Maggio et al. (2018), and WHO (2020), Hassani (2021).

In line with the study's findings, it could also be concluded that the availability of the internet and digital tools led to misuse of the internet on the part of students, especially those whose parents were occupied with their job.

Generally speaking, stakeholders in the educational mainstream should admit that this lockdown brought havoc and disorders to our educational system. Before the Covid-19 strike, the use of blended learning and digital tools as supplementary options were rampant in many countries. While during school closure and a forced transition to online delivery, educational systems all over the globe encountered unwanted predicaments for which they were not prepared.

To put it differently, the online delivery exercised during the pandemic was not an option to increase learning but was the only alternative available. As the study's findings revealed, in developing countries like Iran, it was demanding to adapt to new situations, and unpreparedness regarding school infrastructure and teachers' digital competence can make the transition challenging. Therefore, the crisis necessitated well-planned digital training sessions for teachers and enough infrastructure for schools, so effective learning and teaching occur. Hassani (2021) also supported the finding in which there was a shift from uncertainty and dilemma to a state of certainty and a sense of congruence throughout lockdown. In other words, it is probable to experience some challenges in the early month of the pandemic and adapt to

them, embrace them, and see them as offering opportunities and benefitting them. Thus, it is suggested that the ministry of education and those in charge consider these weaknesses and provide learning opportunities for pre-service and in-service teachers.

It is also worth highlighting that, although teachers benefit from the practice of remote learning and teaching (Krommer et al., 2020), online learning and education should not be considered a substitute for conventional instruction during the post-pandemic. Since schools are an appropriate environment for students' social learning, as stated by Konig et al. (2020).

The study's findings added to the existing literature on the Covid-19 pandemic and its unlimited aspects. Therefore, stakeholders in TEFL have several pedagogical implications and practical points of view. It is self-evident that knowledge of these issues would undoubtedly give a broader perspective to teachers in general- EFL teachers in particular- and prevent them from experiencing the earlier mentioned challenges. Consequently, it is necessary to equip teachers with this knowledge and train them.

Moreover, another implication for the current study could be geared toward teacher training courses. So, the study's next target is administrators or those in charge, as highlighted by participants. They believed that some of the challenges or difficulties were out of their control and that administrators were responsible. Therefore, they should consider these weaknesses and enhance the effectiveness of instruction by providing adequate instruments for schools and knowledge for teachers. Some participants in the current study showed interest in conducting online classes even after the pandemic and are willing to integrate ICT into their teaching. To meet this end, it is suggested that educational organizations offer options to those potential teachers, whether to select in-person classes or blended education.

In addition to all the recommendations mentioned above and concerning the findings, administrators, teacher educators, and stakeholders in the realm of teacher education are advised to consider the results of these kinds of surveys in their designing, revising, and implementing curriculums and programs to meet the new needs of 21st-century instruction.

Limitations of the Study

Regardless of all the promising findings of the current investigation, the limitation should be discussed. A limitation to note is that it was demanding to interview EFL teachers during the pandemic. Second, data gathering was limited to a semi-structured interview. Another issue in the present study is that one month of data gathering is a short time for quantitative research. The limitations mentioned above pave the way for future study in this regard

References

- Ahmady, S.; Shahbazi, S. & Heidari, M. (2020). Letter to the editor: Transition to virtual learning during the Coronavirus disease–2019 crisis in Iran: Opportunity or challenge? *Disaster Medicine and Public Health Preparedness*, 14(3), 1-2.
- Alam, M. A. (2020). Challenges and possibilities of online education during COVID19. *Preprints*. 202.
- Alves, P.; Miranda, L. & Morais, C. (2017). The influence of virtual learning environments in students' performance. Universal *Journal of Educational Research*, 5(3), 517-527. https://doi.org/10.13189/ujer.2017.050325
- Atmojo, E. P. A. & Nugroho, A. (2020). EFL classes must go online! Teaching activities and challenges during COVID-19 pandemic in Indonesia. *Register Journal*, 13(1), 49-76.
- Arbaugh, J. B. (2005). Is there an optimal design for online MBA courses? *Academy of Management Learning & Education*, 4, 135–149.
- Ary, D.; Jacobs, L. C. & Sorensen, C. (2019). Introduction to research in education (10th ed.). Wadsworth.
- Assareh, A. & Bidokht, M. (2011). Barriers to e-teaching and e-learning. *Procedia Computer Science*, 3, 791–795. https://doi.org/10.1016/j.procs. 2010.12.129.
- Bao, W. (2020). COVID-19 and Online Teaching in Higher Education: A Case Study of Peking University. *Human Behavior and Emerging Technologies*, 2(2), 113–115. 10.1002/hbe2.191.
- Baran, E.; Correia, A. P. & Thompson, A. (2011). Transforming online teaching practice: Critical analysis of the literature on the roles and competencies of online teachers. *Distance Education*, 32(3), 421-439.
- Basilaia, G. & Kvavadze, D. (2020). Transition to Online Education in Schools during a SARS-CoV-2 Coronavirus (COVID-19) Pandemic in Georgia. *Pedagogical Research*, 5(4), em0060. https://doi.org/10.29333/pr/7937.
- Bassoppo-Moyo, T. C. (2006). Evaluating e-learning: A font-end, process and posthoc approach. *International Journal of Instructional Media*, 33, 7-22.
- Bisht, R. K.; Jasola, S. & Bisht, I. P. (2020). Acceptability and challenges of online higher education in the era of Covid-19. A study of students' perspective. *Asian Education and Development Studies*. Advance online publication. https://doi.org/10.1108/AEDS-05-2020-0119.
- Brooks, L. (2003). How the attitudes of instructors, students, course administrators, and course designers affects the quality of an online learning environment. *Online Journal of Distance Learning Administration*, 6, 135-149.
- Chapelle, C. (2010). The spread of computer-assisted language learning. Language Teaching, 43, 66-74.
- Chen, E.; Kaczmarek, K. & Ohyama, H. (2020). Student perceptions of distance learning strategies during Covid-19. *Journal of Dental Education*. *Advance online publication*. https://doi.org/10.1002/jdd.12339.
- Conaway, R. N.; Easton, S. S. & Schmidt, W. V. (2005). Strategies for enhancing student interaction and immediacy in online courses. *Business Communication Quarterly*, 68, 23–35.
- Darling-Hammond, L. & Hyler, .. E. (2020). Preparing educators for the time of COVID... and beyond. *European Journal of Teacher Education*, 43(4), 457-465.
- Derakhshan, A. (2021). Emergence distance education (EDE) role in the learning of English language skills during COVID-19 pandemic. *Teaching English as a Second Language (Formerly Journal of Teaching Language Skills)*, 40(3), 41-82.
- Ferdig, R. E.; E. Baumgartner, R.; Hartshorne, R.; Kaplan-Rakowski & C. Mouza (Eds). (2020). Teaching, Technology, and Teacher Education during the COVID-19 Pandemic: Stories from the Field. *Association for the Advancement of Computing in Education (AACE)*. https://www.learntechlib.org/p/216903/

- Floden, R. E. & Clark, C. M. (1988). Preparing teachers for uncertainty. *Teachers College Record*, 89(4), 505-524.
- Flores, M. A.; Barros, A.; Simão, A. M. V.; Pereira, D.; Flores, P.; Fernandes, E.; ... & Ferreira, P. C. (2021). Portuguese higher education students' adaptation to online teaching and learning in times of the COVID-19 pandemic: personal and contextual factors. *Higher Education*, 1-20.
- Gacs, A.; Goertler, S. & Spasova, S. (2020). Planned online language education versus crisis prompted online language teaching: Lessons for the future. *Foreign Language Annals*, 53(2), 380-392.
- Gonzalez, T.; de la Rubia, M. A.; Hincz, K. P.; Comas-Lopez, M.; Subirats, L. & Fort, S. (2020). Influence of Covid-19 confinement on students' performance in higher education. *PLoS One*, 15(10), e0239490. https://doi.org/10.1371/journal.pone.0239490.
- Hadar, L. L.; Ergas, O.; Alpert, B. & Ariav, T. (2020). Rethinking teacher education in a VUCA world: Student teachers' social-emotional competencies during the Covid-19 crisis. *European Journal of Teacher Education*, 43(4), 573-586. https://doi.org/10.1080/02619768.2020.1807513
- Hadijah, S. & Shalawati, S. (2017). Investigating teachers' barriers to ICT (information communication technology) integration in teaching English at senior high schools in Pekanbaru. *In Proceedings of the fifth International Seminar on English Language and Teaching* (ISELT-5), May 9–10, Vol. 5, pp. 302–310, Universitas Negeri Padang.
- Haghighi, M.; Salehi, SH.; Ghasemian, M. & Nouraei, M. (2020). Online Education Strategies Used in Imam Hossein Hospital in Tehran during the COVID-19 Outbreak. *Strides in Development of Medical Education*, 1-5. https://doi.org/22062/sdme.2020.91450
- Hampel, R. & Stickler, U. (Eds.). (2015). *Developing online language teaching: Research-based pedagogies and reflective practices*. Palgrave Macmillan.
- Händel, M.; Stephan, M.; Gläser-Zikuda, M.; Kopp, B.; Bedenlier, S. & Ziegler, A. (2020). Digital readiness and its effects on higher education students' socio-emotional perceptions in the context of the Covid-19 pandemic. *PsyArXiv*. Advance online publication. https://doi.org/10.31234/osf.io/b9pg7.
- Hassani, V. (2021). The Impacts of COVID-19 Pandemic on English Language Teacher Education in Iran: Challenges and Opportunities. *Journal of Teaching Language Skills*, 40(3), 83-116.
- Hodges, C.; Moore, S.; Lockee, B.; Trust, T. & Bond, A. (2020). The difference between emergency remote teaching and online learning. *Educause Reviewe*. Retrieved May 30, https://medicine.hofstra.edu/pdf/faculty/facdev/facdev-article.pdf.
- Huber, S. G. & Helm, C. (2020). COVID-19 and schooling: evaluation, assessment and accountability in times of crises—reacting quickly to explore key issues for policy, practice and research with the school barometer. *Educational Assessment, Evaluation and Accountability*, 32(2), 237-270.
- Jacobs, P. (2013). The Challenges of online courses for the instructor. *Researching Higher Education Journal* 21, 1-18.
- Jäger-Biela, D.; K. Kaspar & J. König. (2020). Lerngelegenheiten Zum Erwerb Von Digitalisierungsbezogenen Medienkompetenzen. [Opportunities to Learn Digital Media Competences.] In Bildung, Schule, Digitalisierung [Education, School, Digitalisation], edited by K. Kaspar, M. Becker-Mrotzek, S. Hofhues, J. König, and D. Schmeinck, 66–72. Münster: Waxmann.
- Joshi, O.; Chapagain, B.; Kharel, G.; Poudyal, N. C.; Murray, B. D. & Mehmood, S. R. (2020). Benefits and challenges of online instruction in agriculture and natural resource education. *Interactive Learning Environments*, 1–12. http://doi.org/10.1080/10494820.2020.1725896.
- Kaden, U. (2020). COVID-19 school closure-related changes to the professional life of a K–12 teacher. *Education sciences*, 10(6), 165.
- Kebritchi, M.; Lipschuetz, A. & Santiague, L. (2017). Issues and challenges for teaching successful online courses

- in higher education: A literature review. Journal of Educational Technology Systems, 46(1), 4-29.
- Khatoony, S. & Nezhadmehr, ... (2020). EFL teachers' challenges in integration of technology for online classrooms during Coronavirus (COVID-19) pandemic in Iran. *AJELP: Asian Journal of English Language and Pedagogy*, 8(2), 89-104. https://doi.org/10.37134/ajelp.vol8.2.7.2020.
- Khattar, A.; Jain, P. & Quadri, S. (2020). Effects of the disastrous pandemic COVID 19 on learning styles, activities and mental health of young Indian students a machine learning approach, CFP20K74-ART (978-1-7281-4876-2), *International Conference on Intelligent Computing and Control Systems*, pp. 1190-1195, 10.1109/ICICCS48265.2020.912095.
- Ko, S. & Rossen, S. (2010). Teaching online: A practical guide. Routledge.
- König, J.; Jäger-Biela, D. J. & Glutsch, N. (2020). Adapting to online teaching during COVID-19 school closure: teacher education and teacher competence effects among early career teachers in Germany. *European Journal of Teacher Education*, 43(4), 608-622.
- Kopp, M.; Gröblinger, O. & Adams, S. (2019). Five common assumptions that prevent digital transformation at higher education institutions. *INTED2019 Proceedings* (pp. 1448–1457). March 11–13. https://doi.org/10.21125/inted.2019.
- Krommer, A.; Wampfler, P. & Klee, W. (2020). Impulse für das Lernen auf Distanz. *Ministry of North-Rhine Westphalia: Düsseldorf, Germany*, 56-78.
- La Velle, L.; Newman, S.; Montgomery, C. & Hyatt, D. (2020). Initial teacher education in England and the Covid-19 pandemic: Challenges and opportunities. *Journal of Education for Teaching*, 46(4), 596-608.
- Lapitan Jr, L. D.; Tiangco, C. E.; Sumalinog, D. A. G.; Sabarillo, N. S. & Diaz, J. M. (2021). An effective blended online teaching and learning strategy during the COVID-19 pandemic. *Education for Chemical Engineers*, 35, 116-131.
- Lawrence, J. E. & Tar, U. A. (2018). Factors that influence teachers' adoption and integration of ICT in teaching/learning process. *Educational Media International*, 55(1), 79-105.
- Liguori, E. & Winkler, C. (2020). From offline to online: Challenges and opportunities for entrepreneurship education following the COVID-19 pandemic. *Entrepreneurship Education and Pedagogy*, 3(4), 346-351.
- Limperos, A. M.; Buckner, M. M.; Kaufmann, R. & Frisby, B. N. (2015). Online teaching and technological affordances: An experimental investigation into the impact of modality and clarity on perceived and actual learning. *Computers & Education*, 83, 1–9.
- Liyanagunawardena, T. R. & Aboshady, O. A. (2018). Massive open online courses: A resource for health education in developing countries. *Global Health Promotion*, 25(3), 74-76. https://doi.org/10.1177/1757975916680970
- Lorenza, L. & Carter, D. (2021). Emergency online teaching during COVID-19: A case study of Australian tertiary students in teacher education and creative arts. *International Journal of Educational Research Open*, 2, 100057.
- Luyt, I. (2013). Bridging spaces: Cross-cultural perspectives on promoting positive online learning experiences. *Journal of Educational Technology Systems*, 42, 3–20.
- Maggio, L. A.; Daley, B. J.; Pratt, D. D. & Torre, D. M. (2018). Honoring thyself in the transition to online teaching. *Academic Medicine*, 93(8), 1129-1134. https://doi.org/10.1097/ACM.000000000000002285
- Maria Assunção, F. & Anja S. (2020) The COVID-19 pandemic and its effects on teacher education, *European Journal of Teacher Education*, 43:4, 453-456, 10.1080/02619768.2020.1824253.
- Mishra, P. & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers' college record*, 108(6), 1017-1054.
- Mohammadimehr, M. (2020). Letter to the editor: E-learning as an educational response to COVID-19 epidemic

- in Iran: The role of the learner support system. Future of Medical Education Journal, 10(3), 64-65.
- Moorhouse, B. L. (2020). Adaptations to a Face-to-face Initial Teacher Education Course 'Forced' Online Due to the COVID-19 Pandemic. *Journal of Education for Teaching* 1–3. <u>10.1080/02607476.2020.1755205</u>
- Morris, K. V.; Finnegan, C. & Sz-Shyan, W. (2005). Tracking student behavior, persistence, and achievement in online courses. *Internet and Higher Education*, 8, 221–231.
- Murphy, M. P. (2020). COVID-19 and emergency eLearning: Consequences of the securitization of higher education for post-pandemic pedagogy. *Contemporary Security Policy*, 41(3), 492–505.
- Murray, C.; Heinz, M.; Munday, I.; Keane, E.; Flynn, N.; Connolly, C.; Hall, T. & MacRuairc, G. (2020). Reconceptualizing relatedness in education in 'Distanced' Times. *European Journal of Teacher Education*, 43(4), 488-502. https://doi.org/10.1080/02619768.2020.1806820
- O'Brien, W.; Adamakis, M.; O'Brien, N.; Onofre, M.; Martins, J.; Dania, A.; Makopoulou, K.; Herold, F.; Ng, K. & Costa, J. (2020). Implications for European physical education teacher education during the COVID-19 pandemic: A cross-institutional SWOT analysis. *European Journal of Teacher Education*, 43(4), 503-522. https://doi.org/10.1080/02619768.2020.1823963.
- Olasile Babatunde, A. & Emrah, S. (2020). Covid-19 pandemic and online learning: the challenges and opportunities, *Interactive Learning Environments*, 10.1080/10494820.2020.1813180
- Paesani, K. (2020). Teacher professional development and online instruction: Cultivating coherence and sustainability. *Foreign Language Annals*, 53(2), 292-297.
- Plonsky, L. & Ziegler, N. (2016). The CALL–SLA interface: Insights from a second-order synthesis. *Language Learning & Technology*, 20, 17–37.
- Prensky, M. (2001). Digital Natives, Digital Immigrants. *On the Horizon* 9(5), 1–6. <u>10.1108/</u> 10748120110424816.
- Quadri, N.; Muhammed, A.; Sanober, S.; Qureshi, M. Shah, A. (2017). Barriers effecting successful implementation of e-learning in Saudi Arabian universities. *International Journal of Emerging Technologies* in Learning, 12(6), 94–107.
- Rajab, M. H.; Gazal, A. M. & Alkattan, K. (2020). Challenges to online medical education during the Covid-19 pandemic. *Cureus*, 12(7), e8966. https://doi.org/10.7759/cureus.8966
- Rasheed, R. A.; Kamsin, A. & Abdullah, N. A. (2020). Challenges in the online component of blended learning: A systematic review. *Computers & Education*, 144, 103701.
- Sahu, P. (2020). Closure of universities due to Coronavirus disease 2019 (COVID-19): Impact on education and mental health of students and academic staff. *Cureus*, 12(4), 1-6. https://doi.org/10.7759/cureus.7541.
- Shahnama, M.; Yazdanmehr, E. & Elahi Shirvan, M. (2021). Challenges of Online Language Teaching during the COVID-19 Pandemic: A Process Tracing Approach. *Teaching English as a Second Language (Formerly Journal of Teaching Language Skills)*, 40(3), 159-195.
- Strielkowski, W. (2020). COVID-19 pandemic and the digital revolution in academia and higher education. Preprints, 2020040290.
- Son, C.; Hegde, S.; Smith, A.; Wang, X. & Sasangohar, F. (2020). Effects of Covid-19 on college students' mental health in the United States: Interview survey study. *Journal of Medical Internet Research*, 22(9), e21279. https://doi.org/10.2196/21279
- Tallent-Runnels, M. K.; Thomas, J. A.; Lan, W. Y.; Cooper, S.; Ahern, T. C.; Shaw, S. M. & Liu, X. (2006). Teaching courses online: A review of the research. *Review of Educational Research*, 76(1), 93-135.
- Tandon, U. (2020). Factors influencing adoption of online teaching by school teachers: A study during COVID 19 pandemic. *Journal of Public Affairs*, e2503.
- Tesar, M. (2020). Towards a post-VOVID-19 new normality? Physical and social distancing, the move to online

- and higher education. Policy Futures in Education, 18(5), 556-559.
- Tyler-Smith, K. (2006). Early attrition among first-time e-learners: A review of factors that contribute to dropout, withdrawal and non-completion rates of adult learners undertaking e-learning programmers. *Journal of Online Learning and Teaching*, 2, 73–85.
- Van der Spoel, I.; Noroozi, O.; Schuurink, E. & van Ginkel, S. (2020). Teachers' online teaching expectations and experiences during the Covid19- pandemic in the Netherlands. *European Journal of Teacher Education*, 43(4), 623-638. https://doi.org/10.1080/02619768.2020.1821185
- Weeden, K. A. & Cornwell, B. (2020). The small-world network of college classes: Implications for epidemic spread on a university campus. *Sociological Science*, 7, 222–241.
- WHO. (2020). Key messages and actions for COVID-19 prevention and control in schools. Retrieved from https://www.who.int/docs/defaultsource/coronaviruse/key-messages-and-actions-for-covid-19-prevention-and-control-in-schoolsmarch 2020. pdf? sfvrsn= baf81d 52 4
- Yeung, D. (2003). Toward an effective quality assurance of Web-based learning: The perspective of distance learning students. *Turkish Online Journal of Distance Education*, 4(1).
- Zhang, W.; Wang, Y.; Yang, L. & Wang, C. H. (2020). Suspending classes without stopping learning: China's education emergency management policy in the COVID-10 outbreak.
- Zhou, L.; Wu, S.; Zhou, M. & Li, F. (2020). School's out, but class' on', the largest online education in the world today: Taking China's practical exploration during the COVID-19 epidemic prevention and control as an example. *Best Evidence of Chinese Education*, 4(2), 501–519.
- Zuheir N. Kh.; Soheil S.; Saida A.; Hadi R. & Lotfia A. E. (2020). The Covid-19 epidemic: teachers' responses to school closure in developing countries, Technology, *Pedagogy and Education*, 10.1080/1475939X.2020.1851752

