Research Paper

The Perception of Iranian Teachers on Online Teaching Using Digital Carrier During the COVID-19 Pandemic

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Abstract

Purpose: School closures in Iran during the COVID-19 pandemic have caused a movement wave to hold classes online. Although, there had been some online classes for some courses, online teaching and learning for students and school teachers have been an unprecedented experience; consequently, most teachers and students have a limited experience with it. This paper examines the Perception of Iranian Teachers on Distance Teaching during the COVID-19 pandemic. Method: The research method was descriptive survey.Data was collected through an online questionnaire with 5 questions, involving 214 participants from schools in Iran . Findings: The findings show it has been first experience with online classes for most teachers and Creating content for online classes and low levels of teacher's pedagogical digital competence are of the most significant challenges for teachers. Conclusion: Along with these alternations, it has been felt the need for instructional strategies, technological readiness to implement online learning and teacher training courses with regard to modern technologies, as well as changes in national curricula must be made to increase flexibility, and technological readiness.

Keywords: COVID-19, online classes, distance teaching, teachers' perceptions, Iran

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Introduction:

A huge increase in e-learning with rapid expansion and acceptance of educational technology has occurred; therefore, the general market for virtual education predicted to be $350 billion by 2025. The usage of online tools such as video conferencing, webinar, virtual tutoring, etc. has been in considerable growth (Cathy and farah,2020).

The outbreak of the pandemic (COVID-19) around the world has caused dramatic changes in the process of various activities. One of the most important activities that underwent many changes and faced many challenges has been teaching students and the school education system.

This sudden event and the lack of previous training caused many teachers to be stopped for a while due to different conditions in terms of their work experience, lack of familiarity with technology, use of laptops, mobile phones, Internet, providing online teaching resources, using the required software, teaching and controlling online classes; therefore, the need to pay attention to updating the curriculum and infrastructure required for this type of education in Iran was significantly felt.

Changes in learning systems force schools to implement distance education or online learning, e-learning, distance education, correspondence education, external studies, flexible learning, and massive open online courses (MOOCs) (ziaul Hoq,2020).

Teachers, as pioneers of online learning, should be able to lead all components of online learning. These include teaching methods, media used in online learning, use of educational time which is decreased in online learning and psychological and social factors that significantly affect teachers' motivation when teaching. Teachers have tasks and responsibilities that are not easily transferable, as they must evolve from an in-class learning system to an online system with online learning experiences that have never been practiced before. A teacher must overcome all the difficulties that arise in online learning in order to continue learning to achieve the set goals. Conceptual knowledge and technical skills of the teacher in conveying the concept and attracting the student remotely and being and accompanying him in the process of online education are among the important issues of educational attitude. An attitude in which the flow of learning is liberal and democratic and the student plays a decisive role in it (MacNeil and et.al , 2009).

In the current situation, teachers and educators are involved in hardware and software for virtual education and pay less attention to the educational approach, and even sometimes seen in e-learning, the traditional education system is teacher-centered and based on the transfer of information and data. By changing attitudes, one should consider the teacher as the educational leader, not the one who should shape the student's mind and fill it with processed information and data.

Another challenge that arises today in the discussion of online education for students and teachers is that teachers do not have the necessary skills to play the role of facilitator in the form of video and audio performance. On the other hand, in preparing videos and educational content and for better and more interaction and education, the physical presence and face-to-face of the teacher with the students while creating the necessary emotional sense and communicating with the learner and associating the school and school environment and recalling happy memories. Motivating to learn by secreting the hormone serotonin in the brain makes learning sweeter, more attractive, and more lasting(World bank,2020).

This study examines school teachers' perceptions of online learning during COVID-19 epidemic in Iran.

Related Work

Turning to E-learning has shown different issues such as time to prepare lessons, textbooks and lack of technical support Bingimals,2009), lack of teacher confidence(Balanskat and Kefala,2006;Bingimals,2009;Rasmitadila and et.al ,2020), teachers' unwillingness to change their practice(Rasmitadila and et.al ,2020;Rhini,2018;Hadijah and Shalawati,2017) , teachers' attitudes and beliefs to ICT (Dixon and Kirmes,2020 ; Hadijah and Shalawati,2017) , teachers' lack of understanding of e-learning advantages (Rhini,2018) ,and teachers' knowledge and experience(Bingimals,2009 ; Rasmitadila and et.al ,2020)], inconformity between students' assessments and e-learning(Hadijah and Shalawati,2017) , unsupported curriculum by technology-based application Hadijah and Shalawati,2017, students' inadequate e-learning skills Hadijah and Shalawati,2017 , student's lack access to technology infrastructure and internet connection(Lemay and Doleck,2020).

The views of Indonesian mathematics teachers of a secondary school on E-learning implementation during the COVID-19 pandemic have been studied on four issues as teacher, school, curriculum, and student. The findings show that student-level barrier had the highest impact on e-learning use which showed a strong positive correlation with the school level barrier and curriculum level barrier (Lemay and Doleck,2020). Using TV and social networks to transmit education for all grades is used in the Kingdom of Saudi Arabia to transmit nationally from a classroom in Riyadh. About 127 administrators and instructors have been teaching in 112 enlightening courses through 19 TV channels(Viner and et.al ,2020) . Four areas of students, instructors, infrastructure and technology, and institutional management are identified as barriers affecting e-learning. This report shows that the most significant barrier is infrastructure and technology while the least significant is students. Limited time to develop e-learning and lack of students' ICT skills are the most and least significant factors in e-learning implementation, respectively(Miguel and abulon,2016).

Learning Management System (LMS) is used for the teachers and pupils to provide content recognize, and measure classified learning objectives at schools. Pupils' actions and performances are also observed and evaluated. The pupils can access materials straight on electronic devices and download the uploaded files by teachers. LMS can perform following activities: Registration (Enroll and manage students online for web-based actions); Scheduling (timetable of various subjects); Delivery (distribute virtual courses); Tracking (identify the advancement of the students); Communication (contact by e-mail, webinars, etc.); and Testing (evaluate competency, student pledge, etc.)(Dhir and et.al , 2017). Lack of time to prepare a lesson using technology was a major challenge that teachers experienced. The other limitations are recognized as lack of adequate professional development concerning technology, limited physical resources, inadequacy of resources, and limited access to technology, lack of technical support, competence, and confidence(Frid,2002). A survey was performed to verify teachers' preference towards diverse features of e-learning. The research results show that the majority of the teachers held positive opinion towards e-learning(Mailizar and et.al ,2020) . Findings reveal that with few exceptions nearly all reporting institutions transitioned to emergency teaching and learning

approaches. Administrators reported that faculty with and without online teaching experience pivoted to online teaching, and nearly all administrators indicated that those who did not have online teaching experience were in the process of learning how to teach online. Regardless of whether faculty had previous experience teaching online or not, many faculties reported that they were using new teaching methods (Huang and et.al,2020).

As mentioned in the literature, both material and non-material issues effect on E-learning or distance teaching. A most challenging issue is internet accessibility and curriculum and assessment tools to effectively evaluate student growth in online classes.

Methodology
Due to the nature of the subject and the purpose of the present study, it is a descriptive survey study, because the researcher seeks a real perception of teachers on distance teaching.

Descriptive research is used in this study. This study assessed school teachers' perceptions of distance learning education and the perceived challenges of distance learning education during the COVID-19 pandemic. Data gathering procedure was done through Google forms, which were sent to the school teachers via email in Tehran.

The content validity of the designed questionnaire was examined by ten experts in the field of information technology, educational sciences, and distance education. Cronbach's alpha coefficient was used to determine the reliability of the questionnaire. The reliability of the questionnaire was 0.88.

The sampling method was multi-stage cluster random sampling. The random sampling technique was utilized to gather responses from teachers regardless of their gender, length of teaching experience, location of school (urban or rural), school type (public or private), and level of affiliated institution (Elementary, Secondary, Senior High School). A total of 214 responses were received in two weeks' time from the different schools' divisions and analyzed in Excel.

Findings
Question1: Thinking of your school, which statement best describes teachers' experience with online teaching?
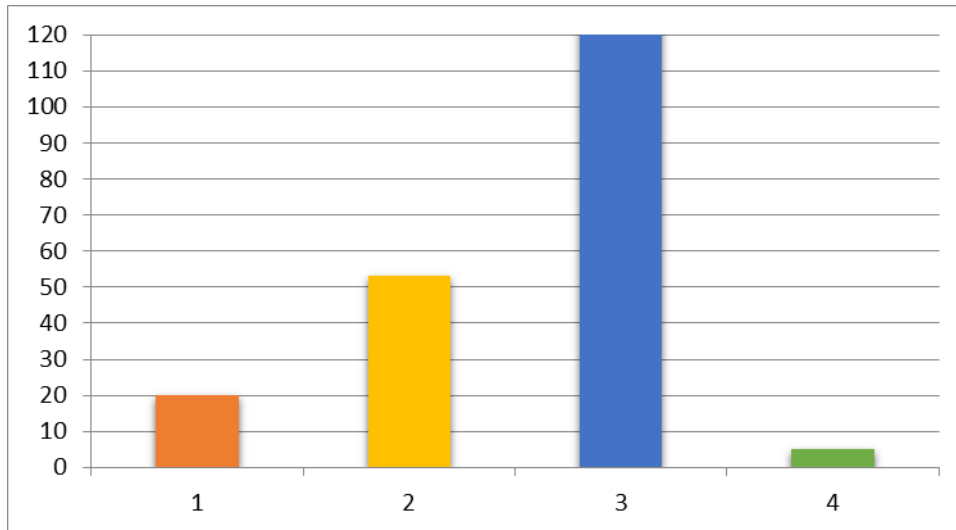

Table1: teachers' experience with online teaching

As it is shown in table 1, since corona virus outbreak it has been the first experience with online classes for 136 (63.55%) teachers. 53 (24.75%) teachers have had previous experience with online/ distance teaching. 20 (9.34%) teachers have had extensive experience with online teaching. The lowest level is related to 5 (2.33%) teachers working in the schools which have not switched to online/ distance learning.

Question 2: As a teacher, what has pleasantly been surprising about online/distance learning?
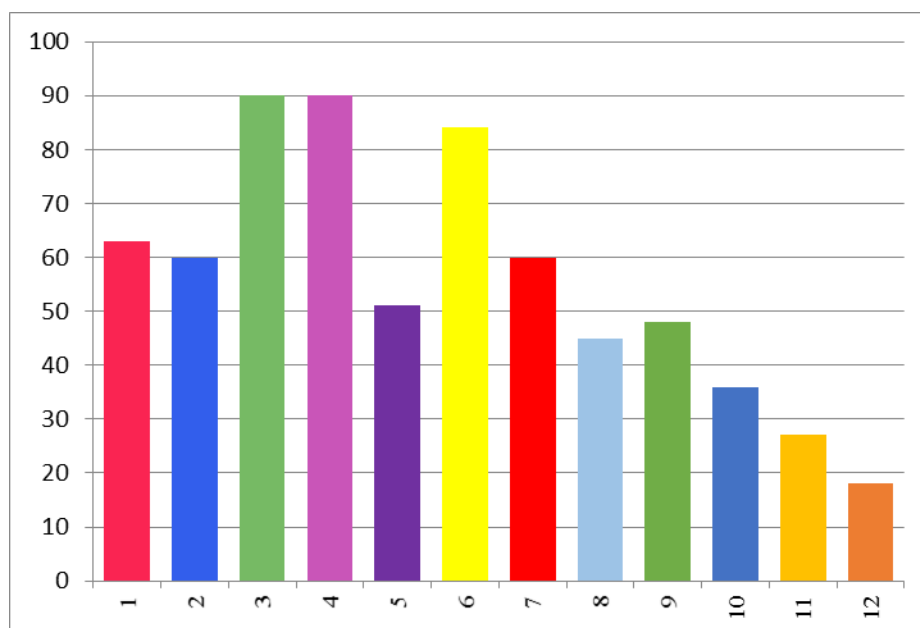

Table2: the most significant and surprising items for teachers about online/distance learning

Table 2 compares the data on the most significant items for teachers about online/distance learning. As can be seen, the most considerable points equally relate to Ease of use 90 (42.05%) and Usefulness 90 (42.05%). Innovation (e.g. freedom to experiment with teaching practice) 84 (39.25%) and Flexibility 63 (28.44%) are ranked as the second and third respectively. Wide range of tools 60 (28.03%) and Accessibility (platforms, materials, resources) 60 (28.03%) equally are in the fourth place. Customization (ability to personalize learning for students) 51(23.83%), an improved relationship with students 48 (22.42%), Engagement and enjoyment of students 45 (21.02%), Increased autonomy, motivation, self-determination, self-regulation among learners 36 (16.82%), are ranked in order from fifth to eighth. 27 (12.61%) teachers declares that online/distance learning has not had special or surprising points for them.Finally,18 (8.41%) teachers have not had any experience with online/ distance learning.

Question 3: In your opinion, what have been the main challenges for teachers in switching to online/distance learning?
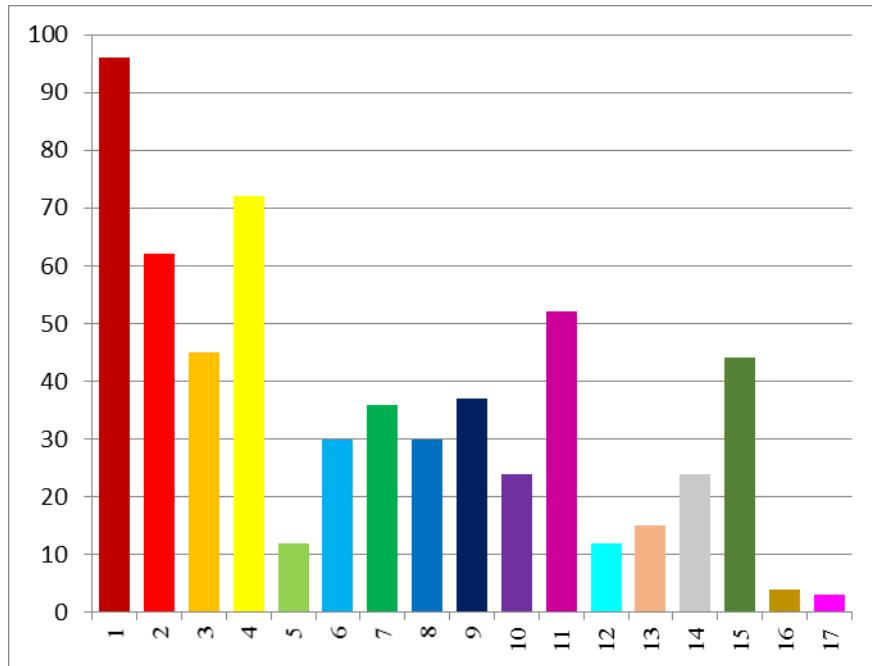

Table3: the main challenges for teachers in switching to online/distance learning

As illustrated in Table 3, the main challenges for teachers in switching to online/distance learning are respectively ranked:

Teachers' access to technology (computers, software, stable Internet connection, etc.) 96(44.85%), Students' access to technology (computers, software, stable Internet connection, etc.) 62(28.97%), Communicating with students 45(21.02%), Communicating with parents 72 (33.64%), Assessing students' progress 52 (24.30%), Time management and organization 44 (20.56%), Supporting students with special needs and disabilities 37(17.28%), Involving students from socially disadvantaged homes 36(16.82%), Involving disaffected students 30(14.02%) and Keeping all students engaged and motivated 30 (14.02%), Increased workload and stress working from home24 (11.21%) and Converting activities and content into online/distance learning 24 (11.21%), Low levels of teacher's pedagogical digital competence 12 (5.60%) and Preparing content for online and distances

learning 12 (5.60%), Little direction or support given by school 15 (7%).

In 12th place, there have been no challenges for 4 (1.86%) teachers and finally not switched schools to online / distance learning for 3(1.40%) teachers is the main challenge in teaching to students.

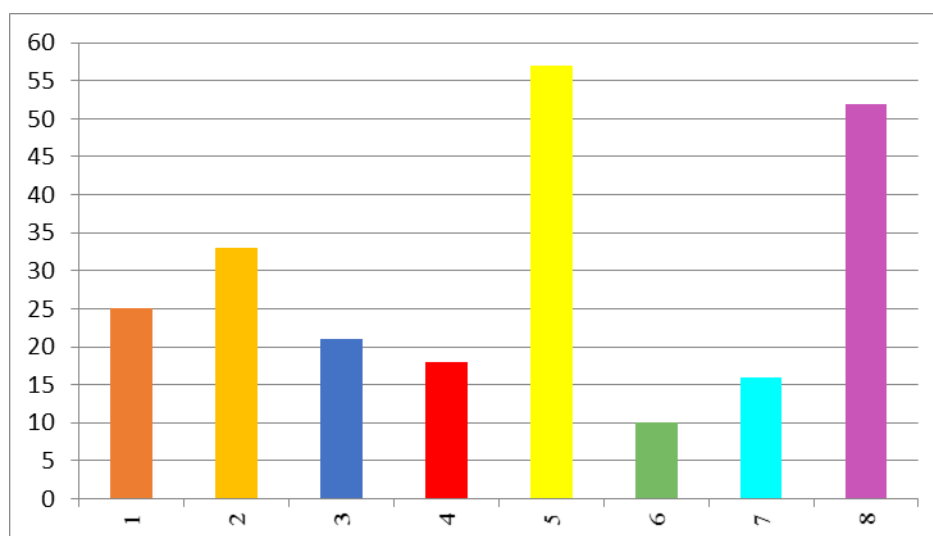**Question 4: What would most help teachers to support online learning during the school closure?**

Table4: helpful items for teachers to support online learning during the school closure

Table 4 demonstrates that there have been some helpful points which help teachers to support online learning during the school closure.

Video clips/lesson plans of good practice 57 (26.63%) component is at the top of the list of helpful materials for teachers.

In addition, Webinars and TechMeets for teachers to share ideas and challenges 52 (24.29%), Professional development: quick courses on online teaching 25 (11.68%), Clear guidance from the ministry of education 21 (9.81%), Websites with lists of useful resources 18 (8.41%), More free resources and tools from Education Technology companies 16 (7.47%), More educational TV programs by the national media organizations 10 (4.67%) are ranked respectively, and the lowest ranked one is Easy contact with experts (e.g. a more

experienced online-learning teachers, an ICT/ technical expert) with 3 (1.40%).

Question 5: In your opinion, due to the current circumstances created by the COVID-19 virus, when schools fully reopen, will online/distance teaching remain part of school practice?
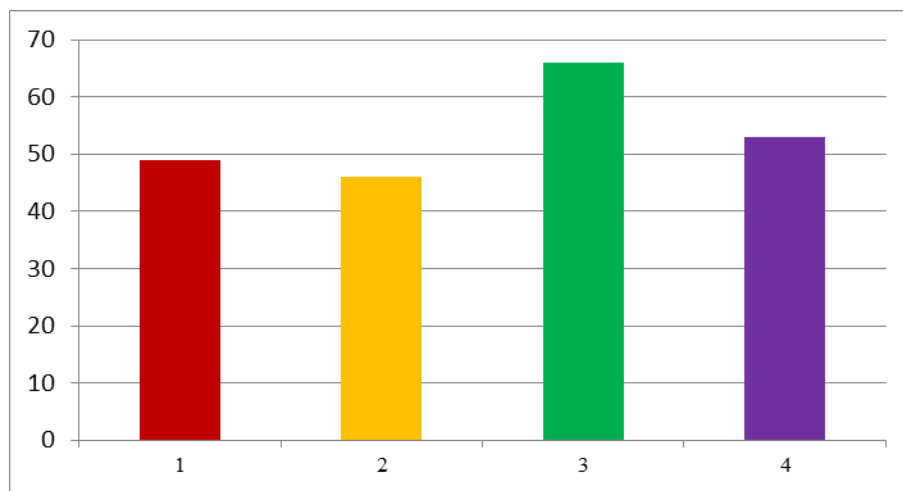

Table5: teachers' viewpoint about school conditions after fully reopening

Table 5 presents teachers' viewpoint about school conditions after fully reopening. 66 (30.84%) teachers believe that schools will return to its original practice, with minor changes. returning schools to their original practice is ranked the second according to 53 (24.76%) teachers' viewpoints. 49 (22.8%) teachers states that schools will be different and online teaching will become integral to school practices. and at last, schools will be a little different with more online learning than before based on 46(21.49%) teachers' opinions.

Discussion

This study aimed to gather data on the Perception of Iranian Teachers on Distance Teaching of teachers in Iran in the COVID-19 pandemic and the challenges they have faced during the sudden shift from face to face classes to distance learning education.

It has been first experience with online classes for most participants. Iran had announced the need to close schools and

stressed the need to create an online learning environment to educate students due to the COVID-19 pandemic as well as the rules and regulations like the social distancing measures, which were strictly supposed to be implemented in schools and institutions.

The rules and regulations like the social distancing measures implemented based on observational modeling to alleviate school's closure (Tang and Intai,2017).

Following the regulations and rules in schools are difficult to be implemented. There should be a learning course for teachers to develop an approach or program about the updates on COVID-19, public health issues, online education announcement, teacher's preparation, academic research hub, and logistic operation to pursue undisrupted learning; which was launched during the COVID-19 outbreak in China (Hew and Brush,2007). Based on the response made by the respondents, most schools could provide at least a basic education tool, but there is still the need for more equipped with the facility and training for distance learning education during difficult times. To keep abreast of distance learning education trends, the teachers should be equipped with the knowledge and skills in distance learning education (Quadri and et.al,2017).

Creating audio-visual materials is very effective in increasing academic performance(Juliance and et.al,2017;Scrimshaw,2004) . As it was mentioned the most helpful item which can support teachers in online learning during the school closure is Video clips/lesson plans of good practice. Due to different experience and educational background it can be useful to hold some webinars and online workshops for teachers with low skills in teaching online and using technology.

Free materials provided would reduce the burdens on the teacher to create learning materials and reduce costs to parents and students. Besides online educational resources, video conferencing applications, media applications, social media or other social features can help parents cope with the availability of student teaching materials at home(Lapada,2017).

Institutions can do this by providing sets of training and workshops; likewise, schools should invest more in the facilities and equipment for distance learning. It is continuously evolving; it is a must to be updated to cater to a changing learning environment (Bozkurt,2019).

This paper studied the Perception of Iranian Teachers on Distance Teaching amid the COVID-19 pandemic and the differences in teachers' perceptions, according to their backgrounds. The findings show three important points of discussion.

First, this study suggests that the main challenges for teachers in switching to online/distance learning was at Low levels of teacher's pedagogical digital competence level, Regardless of the schools that were not switched to online teaching at the time of this study. This is evidenced by the fact that the majority of participants agreed that teachers did not have sufficient knowledge and skills in using of e-learning applications because it was their first experience with online classes. Furthermore, most participants also agreed that Preparing content for online and distances learning was a significant challenge for e-learning purposes. The findings indicate that students were not well prepared for e-learning use before this pandemic. Therefore, when it comes to this emergency, it is challenging for teachers to get their student ready for learning in an online environment. Existing work has predominantly focused on the e-learning integration barriers during the normal academic term when schools are open and students have been prepared (Assareh and Bidokht, 2011; Wrtmer, 1999; Frid, 2002; Johnson and et.al, 2020; Miguel and Abulon, 2016).

We believe that the current situation is completely different to the normal school term. Furthermore, there is still problems in teaching subjects which focus on conceptual issues such as mathematics where e-learning is challenging due difficulty in explaining mathematical concepts online (Ertmer,1999). However, the participants think that there were not any challenges for them which can be because of their fewer skills in using online applications and technologies for online/distance teaching.

Second, this study suggests that there should be some more educational TV programs by the national media organizations as well as the presence of mentors and holding workshops. This strong viewpoint, to some extent, might explain why the levels of teacher's pedagogical digital competence became the top barrier of ICT integration in the classroom as it has been widely known that there was a strong correlation between school culture and students achievement (Lapada, 2020;Viner and et.al,2020). As a result, this finding indicates that, as one of the most important education

stakeholders, schools need to play an important role to overcome students' difficulty in e-learning use in this challenging time.

Third, this study revealed there was not any regard to increased autonomy, motivation, self-determination, self-regulation among learners according to teachers' backgrounds. This finding highlights two important points. First, it proves the need for improving teachers' skills in online teaching as well as training teachers on the psychological behavior beside the skills to make them enable to make proper connection and relationship with students in these situations. It requires holding teacher training courses with the regard of new methods and skills.

Second, it is widely believed that more advanced teaching experience is essential to promote the skills expected for effective teaching which here it is not in line with teachers' perceptions on online teaching in this study because teachers with different levels of teaching experience expressed relatively similar views on the challenges and main issues. Although, most teachers believe that after school closure all the schools activities return back to their original practice with a minor changes; which this is due to the uncertainty of providing full educational conditions for all students and teachers.

Conclusion
The COVID-19 Pandemic has influenced the educational systems of all countries. To confront with this crisis, countries have implemented different methods and practices for dealing with shifts in the learning system. To start, national educational system tried to find proper solutions for students in the middle of the academic year like using online applications, TV, and offline methods including social networks, printed books and pamphlets.

Along with these alternations, it has been felt the need for instructional strategies, technological readiness to implement online learning and teacher training courses with regard to modern technologies, as well as changes in national curricula must be made to increase flexibility, and technological readiness. Lastly, education must be viewed as a collaborative community effort among government, teachers, parents, and schools to increase the efficacy of teaching-and-learning methods that have been adversely affected and ensure that students do not fall behind (Ziaul Hoq, 2020) . In order to improve the current situation in the country, it is necessary to pay

attention to the following three-dimensional model: the first side of educational design, the second side of using numerous media in the learning process, and the third side emphasizing the importance of presenting learning as a learning output by students. Paying attention to the following points has an effect on improving the educational situation and increasing students' satisfaction.

Paying attention to individual differences in learning, creating metacognition, choosing a teaching model, paying attention to pre-knowledge, choosing a good start, determining the purpose of competency, paying attention to participatory, social, and group learning, and paying attention to high levels of learning performance, the importance of application Learned in the new situation, using the integrated approach, passing the presentation and evaluation effect, designing extracurricular activities, reverse class, paying attention to active learning, concept production by the learner are among these characteristics. E-learning never replaces face-to-face training. The school has its own staff and e-learning helps formal education.

Recommendations
It is recommended to restructure a flexible and simple course syllabus in the student's level of limited capacity restricted (Demirtas,2010). There are students in far places with a lack of technology, therefore, flexible learning (Huang, Liu, Tlili, Yang & Wang, 2020) should be considered for those who lack access to the internet connection and other resources .

Printed materials should also be delivered for some students who for any reason do not have the devices and internet. Educational programs on national TV channels can be useful and beneficial.

Teacher training courses should be held in schools and educational centers to improve the teachers' skills in teaching with the new technology and even they can be trained for crisis situations.

It will also be an advantage if there will be parent line communication or a portal for the interest of completion, progress, and mental health monitoring at home (Ziaul Hoq, 2020). The current generation of children is caught in a multimedia "information storm." However, not all students have the same set of technological skills. In addition to the ability to use software, students should have basic knowledge of computer technology and know how to deal with error messages, computer crashes, and other small breakthroughs that may

occur. Therefore, process instructions and guidelines are a prerequisite for ensuring students' technical abilities and must be carefully designed.

Designing a knowledge management system to record teachers' experiences from their educational experience during the corona is necessary to eliminate the shortcomings and develop the quality of distance education. Using the experiences of developed countries can guide our education system.

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