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Online classes during Covid-19 pandemic: preparedness and readiness of students and teachers in Pakistan with parents' experiences

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Abstract

In an attempt to successfully teach students online during a pandemic, it is imperative to investigate to what extent students and teachers are prepared and ready for the adoption of such an approach, as it is difficult to change the educational scenario in Pakistan. The objective of this paper was to identify the degree of readiness and preparedness of students and teachers for implementation of online classes in a crisis situation together-with the experiences of students, teachers and parents in application of online classes during COVID-19. A self-developed online questionnaire, having three separate segments, one each to collect data from students, parents and teachers of private primary and secondary schools of Punjab was used. A sample of size 262 (students 112 teachers 76 and parents 74) was selected through convenient sampling technique. Statistical data analysis, both descriptive (frequencies and percentages) and inferential (Chi-square), was done. The study indicated lack of availability of smooth and fast Internet access at home. Students were required to learn their roles of self-management, to troubleshoot technological issues online without parental assistance and be able to complete their tasks independently. Majority of the parents agreed on temporary continuation of online sessions by schools. This study provides a comprehensive understanding of students and teachers' role, together-with parents' experience, in online sessions and discusses the possibilities of using technologies in education as it depicts the degree and key traits of online sessions for students and teachers needed for readiness and preparedness by private schools during pandemic.

KEYWORDS: COVID-19, Online Classes, Pakistan, Preparedness, Readiness.

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1. Introduction

Coronavirus disease 2019 (COVID-19) arose from Wuhan (Hubei Province, China) in December 2019 (Li, Liu, Yu, Tang & Tanga, 2020). The World Health Organization declared a pandemic on 21 March 2020 and is spreading rapidly worldwide. Countries in Asia, Europe, the Middle East, and the USA have taken drastic actions to alleviate it (Junus, Santoso, Putra, Gandhi, Siswantining, 2021). The exponential increase in the number of Covid-19 cases has led to lockdowns worldwide and has prompted the immediate school closures of all education sectors worldwide. The impact of (COVID-19) on education in Pakistan has been profound. Velloso (2020) revealed in a report that about 90% of countries have closed schools due to the spread of COVID-19. Such situations give us a glimpse of how education can change for the better or worse in a lockdown. Students began to learn at home in February 2020 in Hong Kong, through open-source interactive tools, whereas 120 million Chinese students obtained access to learning materials through live television transmission (Tam & El-Azar, 2020). The COVID-19 pandemic is provoking many schools to adopt online classes suddenly to preserve and continue educational processes during this crisis. Teachers, parents, and students are working to accommodate this massive

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change. Educational stakeholders are learning how to cope with the challenge of studying at home and to building a productive schedule outside the school environment. At present, 1.2 billion students in 186 countries have been affected by school closures because of COVID-19 (Li & Lalani, 2020). They further stated, in Denmark, children up to 11 years of age are returning to school after they closed on 12 March 2020, but, in South Korea, students are responding to their instructors online. Since the beginning of March 2020, there have been multiple announcements of the closing of all types of educational institutions and moving instead to online and "remote" education. Furthermore, some institutions have opted to cancel examinations and others have delayed school or university admissions. Likewise, the Government of Pakistan has announced vacations due to the COVID-19 pandemic. Hence, the school system and learning methods must change to keep abreast of the changing world. Mahmood (2020) revealed that instructors should come up with diverse teaching strategies and think more creatively to have more control over students' performance such as ask them challenging questions to get their feedback and, therefore, to make them more focused, active, and engaged in online classes. In order to increase the students' interest, motivation and performance in online learning, Sutarto, Sari & Fathurrochman, (2020) asserted that the material should be brief, clear, interesting, and easy to understand to remain active and enthusiastic in learning.

Preparedness and readiness can be perceived as two crucial factors to be taken into account in the development of online classes (Ilgaz, & Gulbahar, 2015) in a time of crisis. Warner, Christie, & Choy considered readiness of students for e-learning in three aspects. Warner, Christie, & Choy as cited in Hukle (2009), defined readiness as the inclination of students' towards e-learning against face-to-face teaching strategy, learning experiences based on ICT tools and techniques and their engagement in independent learning. Arif's work (2001), has led to the idea of preparedness that are the student well prepared and competent enough in using the digital technology within the context of institutions' e-learning environments. Research on the preparedness and readiness of students and teachers for online classes can help schools and stakeholders better understand the situation of their students, teaching staff and schools. Reduction of the negative impact of COVID-19 on learning and schooling is extremely important. According to Prensky (2001), students as digital natives today are all 'native speakers' of the digital language of computers and the Internet, which has led to the idea that those who have grown up with computers and Internet access are innately comfortable with technology and educational institutions have committed considerable efforts to design and execute an online learning approach. We must also, think of how the Pakistani education system can recover with a renewed sense of responsibility for all teachers, parents, students, and all other "digital natives". Hence, there is a need to minimize the gap in opportunities and to ensure that all children have the same chances for quality of education in Pakistan. Pichai (2019) also stated that education would not be enhanced through technology alone, but technology can have influential and dynamic roles in the solution.

2. Statement of the problem

A plethora of computer technologies has made distance learning easy and effective. There are several open-source learning tools and interactive applications: Zoom™ meeting, Edmodo™, Google classrooms™, Skype™, Whats App™, Meet™, Moodle™ Live television broadcasts such as Virtual University of Pakistan and Lahore College for Women University have also made a contribution to distance learning. These learning platforms and tools are highly productive for students, educators, teachers, and professionals because most students have access to digital devices. Learning Management System and Internet is the most significant and influential players. Many educational institutions are opting for online classes using relevant and well-known public platforms for students in lockdown. The Pakistani Government has also launched ICT-enabled learning platforms (e.g. Virtual University, Lahore College for Women University). Most of these tools are augmented with synchronous face-to-face video instruction to help preempt school closures. In this regard, parents are helping their children to navigate and set up online sessions at home. As such, the preparedness and readiness of teachers and students together with technology are the most important aspects of this specific situation. It is too early to judge how COVID-19 will affect the Pakistani education system and cause a lot of inconvenience or convenience for students, teachers and parents. In view of online learning, the readiness of students, trainers, and institutions is crucial for better execution of online learning (Bowles, 2004). Aydin & Tasci (2005) claimed that student readiness is a very important factor. Inability to recognize teachers' preparedness towards online teaching can pose an important barrier to student engagement which may result in unsatisfied students, attrition, loss of revenue and not meeting study objectives (as cited in Hoppe, 2015, p. 4). On a more comprehensive view, Martin, Budhrani & Wang (2019) described the attitude of instructors' towards online teaching and notions of their ability are the main characteristics of teachers' - readiness as a state of preparedness for online teaching. Students and teachers may be reasonably prepared and ready to deal with technology are considered for the

design and delivery processes of online learning. In this way, online classes will make them responsible for pursuing and setting their own goals.

The main objective of this study was to ascertain the degree of readiness and preparedness of students and teachers for the implementation of online classes besides the experiences of students, teachers and parents regarding the online sessions during lockdown. This study encouraged teachers to learn about different technological skills (Ventayen, 2019) such as Google Earth Map Tool, Zoom, Meet, other pedagogical strategies and tools that are needed for online education. The results will be of great interest to the readers of the journal, especially those involved in research of the effect of this unique pandemic upon the educational sector in their home country with respect to technology, teaching methods and social roles.

2.1 Study objectives

The study aimed to:

1. Explore the degree of readiness and preparedness of students and teachers for implementation of online classes by private primary and secondary schools of Punjab province due to the COVID-19 pandemic.
2. Explore the experiences regarding online sessions for students, teachers, and parents by private primary and secondary schools of the Punjab province due to the COVID-19 pandemic.

2.2 Research questions

The main research questions were:

1. What is the extent of preparedness and readiness of students and teachers of private primary and secondary schools to participate in online sessions in a time of crisis?
2. What are the experiences of students, teachers, and parents regarding online learning classes during pandemic?

3. Literature review

Himmelsbach (2019) stated that technological innovation is a life skill and a fundamental ability. We live in a computerized world, and from e-books and applications to institutional platforms, there is no shortage of tools that can change the classroom. These innovations in the learning environment could have a lasting impact on the digital world. With a changing world, the mode of teaching and learning is also changing along with new challenges that students and educators faced. Furthermore, technological, and academic developments have helped to define another worldview of online teaching and learning. European Commission (2019) indicated digital technologies affect innovation and their success is associated with how institutions use online platforms and ready-to-use digital tools to reach customers. Teachers and students are the vital elements that are needed to switch to online classes where students can be engaged with wikis, blogs, email (Daniel, 2020), Zoom™ meeting, Edmodo™, Google classrooms™, Skype™, Whats App™, Meet™, Moodle™, You Tube educational channels along with smart pedagogical tools such as Google Earth Map Tool to suit their schedules. Teachers, institutions, and parents have worked hard to keep the process of teaching and learning alive during pandemics as also, Ouma, Awuor & Kyambo (2013) found in their study that readiness for e-learning is a prerequisite for the effective implementation of online classes, which is a platform to integrate technology. Learning with technology is also imperative particularly in COVID-19 and therefore, both teachers and students should be equipped with technical skills to manage the settings of online classes.

Effective online learning by students requires a dynamic teaching method in which opportunities for student involvement can be facilitated and encouraged. There are several other factors that can influence the readiness of online classes in order to expedite the learning procedure during pandemic. Peytcheva-Forsyth, Yovkova & Aleksieva (2018) revealed that perception of course, student's attitude, motivation, computer skills and today's students' demographics contribute to the success or failure of online learning. One of these is the preparedness and readiness of students and teachers towards online sessions for a range of e-learning competencies. However, students need to fully realize the seriousness of the situation and the fact that teachers have had to shift their entire curriculum to e-learning in a short time, which can be nerve-racking for anyone. The traits of students'-readiness such as self-directedness and self-awareness, are likely to be described instead of what students ought to do. Such behaviors are quantifiable and observable; they can be developed, taught and improved. Dray and colleagues (2011) stated that students' traits and technological capabilities are necessary for the overall success of online courses and programs. Student's characteristics involve range of skills such as individual's belief, effectiveness, and time management. More specific characteristics are: the ability to use email and the Internet; access to technology; to use technology successfully online learning. The preparedness of students for a scope of online learning competencies is depicted in behavior-specific terms (Parkes & Reading, 2015). Promoting readiness and preparedness in students and teachers is indispensable for a successful and active teaching-learning environment because both need to be prepared for the changing demands related to online teaching and learning with respect to technology, teaching methods and social roles. Furthermore, self-directed learning affects the readiness, and understanding students'

characteristics, which are crucial to prepare them for online classes.

Hoppe (2015, p. 5) analyzed the key considerations in assessing teacher' readiness is: are extensive teaching experience, teachers' ability to teach confidently, experience of using technology with ease, and communication skills, time management skills, experience of online learning. However, participants will need experience and a positive attitude towards online technologies to interact and collaborate. Hence, the readiness can be interpreted in terms of these factors and can make online collaboration with students effective. The online learning should be free of effort with little or no assistance for learning materials to load in less time, which may improve the quality of the system. Hoppe (2015, p. 6) has also added that the professional development of teachers to create and facilitate online learning successfully, students' training with continuous evaluation and feedback will contribute considerably to preparedness. The best suited measures are learning traits, mental energy for learning, access to the content of courses, access to skills, and access to a computer (Parkes & Reading, 2015). Students should have the ability to utilize online sessions, LMS or learning platforms, Internet and other innovative technologies and they should be ready to take up the responsibility of self-direction and self-awareness of preparing themselves for the purpose. The traits of students must be assessed carefully to improve the quality of online teaching and learning. Teachers could likewise give direction to students and guide in online sessions, which has a bigger effect on learners' readiness. Tang & Lim (2013) asserted that the choices available for online learning, confidence or competence in using the technological platforms, and the ability to learn independently describes readiness for online learning. This is because their knowledge, ability, and confidence to learn online depends on students' attitude on the importance of online learning competencies. Readiness has an important role in encouraging learners to become involved in online learning. Students who have sufficient motivation and responsibility will be involved and engaged with online learning activities. According to Cigdum & Ozturk (2016) readiness can be perceived as a pivotal factor to be considered in the development of online active learning environments as shown in (Figure 2). Responsible students use opportunities to determine the aspects of managing their own learning. They know how to initiate learning, access resources and to manage time productively.

Choucri and colleagues (2003) defined e-readiness as "The ability to pursue value creation opportunities facilitated by the use of the internet". Teachers need to demonstrate and set strategies for effective communication and coordination using educational platforms for their students. Students need to know what, when and how to communicate appropriately. Students' awareness can be improved by self-management, self-direction when searching online resources for information.

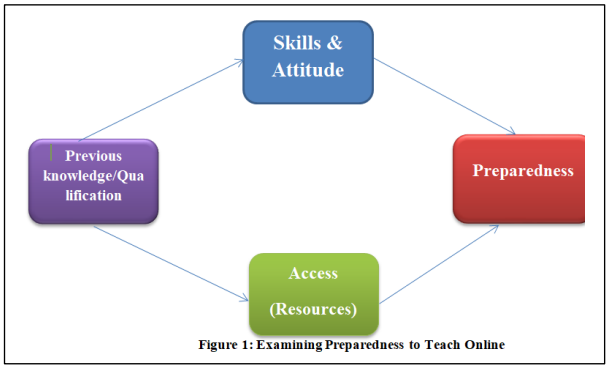

Figure 1: Examining Preparedness to Teach Online

Hoppe (2015, p.4) makes a cautionary observation about the institutions that have not recognized the ideas, experiences, and abilities of their teachers while also are missing a key component in the journey to facilitate online courses and programs. The responsibilities, attitudes and competencies of teachers are required for successful implementation of online classes, and teachers' readiness is based on their preparedness for online teaching. This strategy will help institutions of Pakistan maintain quality education by covering the syllabus and help maintain the flow of study for learners to engage in studies and to complete exams on time. Students and teachers are nonplussed with the current crises; they must look for solutions to these obstacles. Khalid (2020) believed that even if higher educational institutions started remote education practice at the present time, they could improve with time and use it in future emergency situations.

The Pakistan government has put additional efforts to put forth online classes in private schools. According to Pakistan Digital Report (2020), there are 76.38 million users and the number has increased by 35% on Internet access till 2020 in Pakistan. Fortunately, the report on e-learning in schools allows us to keep up to date with new trends and innovations. Due to e-learning's impact on education, Pakistan's government is determined to integrate the technology in private schools countywide and consequently, Pakistan undertook e-learning in private schools.

By shifting the focus to behaviors and a range of online technological competencies, Leaf, Townley-Cochran, Taubman, Cihon, Oppenheim-Leaf., Kassardjian, Leaf, McEachin, & Pentz (2015) revealed that these can also be taught, developed, or improved. Hence, in order to address such distinctions, this paper attempts to explore the degree of readiness and preparedness of students and teachers posed by the transition to online academics by private primary and secondary schools of Punjab Province in Pakistan in the wake of the current pandemic. The paper also explored the experiences of students, teachers, and parents regarding online sessions due to the (COVID-19) pandemic, which is an important and necessary step.

4. Methods

This study used an interpretive quantitative paradigm and was descriptive in nature. Therefore, survey method was used to collect data from students of private schools, their teachers and parents. The study was focused on perceptions of participants about students' level of preparedness and readiness during their transition to e-Learning at the onset of pandemic and their experiences during online session as well. A Google form questionnaire was used to collect data.

4.1 Sample

An online survey was used to collect data. In total, 262 people completed the online survey and therefore, respondents from Punjab were included in the sample of the study to collect primary data through an electronic survey. The people who completed the questionnaire were students, teachers, and parents of primary and secondary schools in Punjab Province involved in online sessions during the COVID-19 lock down. Six cities in Punjab Province (Lahore, Islamabad, Gujranwala, Sialkot, Faisalabad, Kasur) were included in the sample to collect data. A total of 112 (46.6%) of the 240 in the study group were students, 76 (31.6%) of the 240 were teachers and 74 (30.83%) of the 240 were parents respectively. Table 1 summarizes the demographic characteristics of respondents.

4.2 Instrumentation

The online questionnaire was conducted among the target population using Google™ Form, a freely available online platform powered by Google. The researcher developed instrument in English language in the light of literature review for collecting information about the people eliciting their opinions and ideas enabling to benefit it to online teaching-learning environment of Pakistan.

Draft of the questionnaire was finalized on the basis of pilot testing and expert opinion; and the suggestions by them were incorporated that included rephrasing some definitions of terms and sequencing of items. Three separate instruments, for teachers, students, and parents, were developed to collect primary data from the schools of Punjab Province to ascertain the readiness and preparedness of students and teachers for implementation of online classes. The prime consideration was to look for valued information from the questionnaires serving the purpose i.e., the effectiveness of online sessions for students, teachers and mainly from parents.

The response rate was 76%. The readiness of students and teachers for online classes and teaching was assessed by the researcher developed questionnaire having 64 items (students 24 items, teachers, and parents 20 item each).

The questionnaires contained 24 items for students, 20 items for teachers and parents each. There were one open-ended (optional) and remaining close-ended questions that covered mainly the following features: (a) subject matter or concept clarity; (b) learning and teaching; (c) competency; (d) guidance and cooperation; (e) educational platforms; (f) general satisfaction; (g) response rate; (h) feedback; (i) experience (j) readiness of a child and (k) suggestions for improvement.

The online survey enquired about the aspects on a two-point (Yes/No) nominal scale and five-point likert scale for closed ended questions. Fourteen questions were employed to assess the technological competencies of the respondent, whereby each question had three ordinal categories: 1- "Poor", 2- "Good" and 3- "Excellent". A combined "comp_score" was computed by adding up individual skill scores for all 14 questions. The combined score ranged from 14 to 42 (14 being denoting the lowest competency score and 42 reflecting the highest competency). A new categorical variable "comb_cat" was created on the basis of combined competency scores with the categories Poor, Good and Excellent falling between the ranges, respectively, 14-25, 26-33 and 34-42. The skills were combined for using educational platform; MS office; email; browsing; uploading and downloading of files; social networking; self-directed; self-management; time management; firm class discipline; technological competencies; communication skills; professional and personal competencies.

Five factors were extracted using the SPSS; all had high reliabilities with Cronbach's $\alpha > .80$. A panel of two or three experts related to the field of education ensured the validity to determine the language clarity and content validity. The educationists confirmed to have acceptable content validity because the questions were developed based on a review of the literature.

4.3 Data analyses

Data analysis has been carried out using SPSS ver. 25.0 (IBM, Armonk, NY, USA) in the following two sections:

- Descriptive Analysis
- Inferential Analysis

A descriptive analysis was done to give data summaries and also to highlight the important patterns and relationships between various variables. Inferential analysis was performed to test the statistical significance of potential associations between various factors and responses of students and teachers to ascertain the degree of readiness and preparedness for implementation of online classes.

Descriptive Analysis:

A descriptive analysis constituted frequencies and percentages as given in Table 1.

Apart from demographic information in Table 1, nine questions were addressed to the students and teachers about preparedness, and the results are shown in Table 2. The key factors of preparedness and readiness of teachers and students depicted in the Table 2 below are in the form of frequencies and percentages to participate in online sessions in a time of crisis.

It can be seen that 94.6% of students and 89.5% of teachers had access to digital devices which emphasized the availability of ICT tools that could be used in online sessions. Also, 59.2% of teachers were technologically and professionally trained as their knowledge of ICT in education is necessary for online classes.

Most respondents believed that use of ICT in education reduced subsequent teaching time. In terms of examining the teachers' preparedness in online classes during lockdown, 35.5% of teachers were masters, 43.4% were postgraduate and 13.2% were doctorate. This indicates the extent to which their training prepares them to meet unexpected challenges and changing demands which they face in their online classrooms. Schools also provide students and teachers with strong administrative support, supervision, digital devices, platform, and professional training to successfully implement online classes. Students (87.5%) and teachers (94.7%) are provided with some or all resources to adopt remote learning fully that prepares them to be competent in online classrooms.

Characteristic	Respondents	
Gender	Frequency	%
Male	22	19.6
Female	240	80.4
Age		
< 11	39	14.9
11 – 20	73	27.9
21 – 49	108	41.2
> = 50	42	16.0
Cities		
Lahore	114	43.5
Islamabad	52	19.8
Gujranwala	25	9.5
Sialkot	38	14.5
Faisalabad	30	11.5
Kasur	3	1.2
Educational level (Student)		
Primary	39	34.8
Secondary	73	65.2
Educational level (Teacher)		
Graduate	6	7.9
Masters	27	35.5
MPhil	33	43.4
Doctorate	10	13.2

Table 1 - Demographic characteristics of respondents.

SR. NO.	Preparedness factors	Categories	Number of respondents (186)	
			Student (112)	Teacher (76)
1	Technological competency	Poor	6(5.4%)	04(5.3%)
		Good	91(81.3%)	24(31.6%)
		Excellent	15(13.4%)	48(63.2%)
2	Student Education Level	Primary	39(34.8%)	--
		Secondary	73(65.2%)	
3	Teacher qualification	Graduate	--	6(7.9%)
		Masters		27(35.5%)
		Phil		33(43.4%)
		Doctorate		10(13.2%)
4	Access to digital devices	No	06(5.4%)	08(10.5%)
		Yes	106(94.6%)	68(89.5%)
5	Follow-up Comments improves understanding	No	12(10.7%)	--
		Yes	100(89.3%)	--
6	Provision of instructional resources	No	14(12.5%)	04(5.3%)
		Yes	98(87.5%)	72(94.7%)
7	Troubleshooting	No	77(68.8%)	17(22.4%)
		Yes	35(31.3%)	59(77.6%)
8	Create quiz/ Assignments	No	29(25.9%)	13(17%)
		Yes	83(74.1%)	63(83%)
9	Trained teachers	No	60(53.6%)	31(40.8%)
		Yes	52(46.4%)	45(59.2%)

Table 2 - Classification of Respondents with respect to Preparedness Levels.

Inferential analyses

Inferential analysis involved application of tests of association using the Pearson chi-square (Daniel & Cross, 2018) test between various factors of preparedness and responses of students and teachers to ascertain the degree of readiness and preparedness for implementation of online classes.

Bivariate analyses of variables are shown in Table 3.

The availability of a smooth and fast Internet facility was found to be significantly associated with class discipline ($\chi 2 = 4.148$, $p= 0.042$). Hence, if there was no internet disruption during online sessions, then it was easier to maintain class discipline. An absence of a smooth and fast internet was a hindrance to joining online classes. The ability of students, teachers, and parents to trouble-shoot technological issues during online sessions played an important part in time management in class and was found to be significantly associated with each other ($\chi 2 = 4.052$, $p= 0.044$). There was a significant association between the

technological competency of teachers and the appropriate content delivery by them during online sessions which indicated that self-efficacy of the teachers to access and use technologies led to fewer flaws in content delivery ($\chi2 = 6.554$, p=0.038) as they were able to develop and use online course material in a better manner using various video conferencing applications and computer mediated tools. There was no significant association found in online learning of subject knowledge the same way as in physical classroom and the trained teachers for online sessions ($\chi2 = 2.266$, p=0.132). Hence, regardless of teachers being trained to deliver subject knowledge successfully during online sessions, it was not the same as content delivery in a school classroom environment. In online sessions administered by schools, a significant association was found between disruptions on the Internet and non-seriousness of students ($\chi2 = 5.084$, p=0.024). Smooth and fast internet access make students more engaged, attentive, responsive and participative in online classrooms, whereas non-availability or slow internet results in non-seriousness on the part of students. The test of association suggested that firm class discipline could not be maintained because of the non-seriousness of the students during online sessions as indicated by the significant association found between lack of class discipline and non-seriousness of students ($\chi2 = 6.703$, p=0.010).

Variable 1	Variable 2	χ^2-value	p-value
Smooth Internet	Firm class discipline	4.148	0.042
Troubleshooting	Time management	4.052	0.044
Technological competency	Efficient content delivery	6.554	0.038
Trained teachers	Online learning same as in physical classroom	2.266	0.132
Smooth Internet	Students' non-seriousness	5.084	0.024
Non-seriousness of students	Firm class discipline	6.703	0.010

Table 3 - Bivariate Analysis.

One open-ended question was asked from all respondents with regard to their experiences of online classes in an emergency situation.

Students: The attitude of some students during online classes needs to be improved. Seriousness on the part of students should be inevitable and they should avoid disrupting these classes for their amusement which learners need to understand. Some students find it difficult to understand the concepts given by teachers online. Online learning creates many health and social problems. Some students cannot stay constantly in front of a laptop, computer, or phone. Interaction with another person online can be hampered due to connectivity issues. Online sessions are not beneficial for students because institutions do not have the appropriate infrastructure. Some stated that they found no significant flaw in the online teaching system and did not find difficulty in switching from a physical classroom to an online classroom. However, students living in remote areas did not have an Internet facility and found difficult to switch between the medium. Instead of online classes, lectures should be uploaded so that the students without an Internet facility will not miss the lecture. Online classes should not be considered a permanent medium because several aspects cannot be taken care of in an online teaching system, such as personality development, social skills, and co-curricular activities. There should be online interactive programs during the school year so that, if an emergency arises, one knows how to deal with it. Some respondents found online education convenient, enjoyed the service, and felt that the time that could have been "wasted" due to the COVID-19 was saved and the syllabus could be covered in a timely manner. It would be better to create one portal where lectures can be posted for a specific time. Too many assignments with short deadlines should be avoided and teachers should not post assignments during weekends. Graded assignments are not posted by most teachers so students who have worked hard do not know how they performed.

Teachers: According to teachers, students have not taking online classes seriously. The Parents should enforce and assist them to complete homework on time and students should practice themselves too. Reading books should be made compulsory during their free time. Training regarding online teaching for faculty and students must be provided. Online classes may help if teachers are fully equipped and trained according to the requirements for online teaching. Also, how well adapted and well-equipped students are, and the extent to which they are serious about their course and studies is important. Ensuring that, students are busy and productive will help to avoid stress and frustration during the COVID-19 pandemic. Not every student and teacher will have an Internet facility at home. Hence, an educational "Web TV" channel should be introduced where lectures of all classes are conducted, may be a more suitable way forward in the future. Children in junior classes will need parent's assistance, but some parents are unaware of how to use computer appropriately. Moreover, some teachers recommended that it is necessary to keep students engaged so that they do not feel isolated, and students should be provided the opportunity to participate in online group discussions. Lastly, new academic their free time. Training regarding online teaching for faculty and students must

be provided. Online classes may help if teachers are fully equipped and trained according to the requirements for online teaching. Also, how well adapted and well-equipped students are, and the extent to which they are serious about their course and studies is important. Ensuring that, students are busy and productive will help to avoid stress and frustration during the COVID-19 pandemic. Not every student and teacher will have an Internet facility at home. Hence, an educational "Web TV" channel should be introduced where lectures of all classes are conducted, may be a more suitable way forward in the future. Children in junior classes will need parent's assistance, but some parents are unaware of how to use computer appropriately. Moreover, some teachers recommended that it is necessary to keep students engaged so that they do not feel isolated, and students should be provided the opportunity to participate in online group discussions. Lastly, new academic calendars should be scheduled.

Sr. No.	Key factors	Categories	Number of respondents (262)		
			Student (112)	Teacher (76)	Parents (74)
1	Technological competency	Poor	6(5.4%)	04(5.3%)	07(9.5%)
		Good	91(81.3%)	24(31.6%)	20(27.0%)
		Excellent	15(13.4%)	48(63.2%)	47(63.5%)
2	Troubleshooting	No	77(68.8%)	20(26.3%)	40(54.1%)
		Yes	35(31.3%)	56(73.7%)	34(45.9%)
3	Smooth Internet	No	64(57.1%)	24(31.6%)	39(52.7%)
		Yes	48(42.9%)	52(68.4%)	35(47.3%)
4	Easy Interaction	No	76(67.9%)	--	--
		Yes	36(32.1%)	--	--
5	Students' Non-seriousness	No	36(32.1%)	54(71.1%)	25(33.8%)
		Yes	76(67.9%)	22(28.9%)	49(66.2%)
6	Complete assignments independently	No	60(53.6%)	--	45(60.8%)
		Yes	52(46.4%)	--	29(39.2%)
7	Good time management	No	62(55.4%)	36 (47.4%)	53(71.6%)
		Yes	50(44.6%)	40(52.6%)	21(28.4%)
8	Students enjoy online sessions	No	50(44.6%)	--	--
		Yes	62(55.4%)	--	--
9	Trained teachers	No	--	43(56.6%)	17(23%)
		Yes		33(43.4%)	57(77.0%)
10	Switch to Online	No	83(74%)	40(52.6%)	--
		Yes	29(26%)	36(47.4%)	
11	Morals	No	--	42(55.3%)	54(73%)
		Yes		34(44.7%)	20(27%)
12	Online Continuation	Temporarily	--	44(57.9%)	60(81.1%)
		Permanently		22(28.9%)	2(2.7%)
		No		10(13.2%)	12(16.2%)

Table 4 - Key factors of the respondents' experiences for online sessions in a time of crisis.

Parents: Online education is fulfilling academic requirements to a reasonable extent, but children are finding difficulties in understanding the concepts and are not learning basic manners and etiquettes. Teachers should be proficient in online education strategies. The online sessions should be more interactive and should focus on individual attention. Some parents suggested that online teaching should involve innovative ways of learning through games and quizzes. Online classes should be continued temporarily so that students may involve themselves in healthy activities. Requisite online training for teachers must be provided, and teachers must be confident in using digital technology to manage time, discipline and to enhance student interest in class.

Results and Discussion

The experiences of students, teachers, and parents regarding online sessions, in a time of crises, have been reported in counts (percentages) as shown in Table 4.

Most of the students seemed to have good (81.3%) technological competency regarding online learning experience while majority of the teachers had excellent (63.2%) and good (31.6%) competency in managing technical aspects of the online sessions. A great number of parents (63.5%) were also technologically sound enough to assist their children in attending online sessions. 68.8% of the students had poor ability to troubleshoot technological issues online. Furthermore, 73.7% of the teachers and 54.1% of the parents' exhibited confidence in troubleshooting. Yacoba, Kadirb, Zainudinc, & Zurairahd (2012) examined the plan of action for successful online classes for students that is to be aware of new technology and willingness to study. Teachers (68.4%) acknowledged the smooth and fast Internet access during the online sessions which indicated the preparedness and readiness of them. Although 57.1% of students and 52.7% of the parents complained about weakness of the Internet signal at home which may have been the reason for the non-seriousness of students as it was also hard to ask queries during online sessions. Large number of students (67.9%) complained about asking queries from teacher easily during online sessions. Maheshkar and Soni (2016) concluded in his study of examining online education that serious impediment in joining online classes is the students' access to online platforms and Internet connectivity which is not viable to every student. All these issues affected time management and firm discipline in class.

Non-seriousness on the part of students was observed by students (67.9%), teachers (28.9%) and parents (66.2%) during online conduct of the classes. It was realized that slowness or non-availability of the Internet might have contributed to the non-serious behavior of the students which led to poor time management and also the firm class discipline could not be maintained. Almost half number of students (53.6%) found it difficult to complete their assignments independently without any assistance whereas parents (39.2%) experienced assisting their children in completing their school assignments. Without parental assistance they

were not able to complete their tasks independently, however, the students at this level were required to realize the need of their role of self-directedness, self-management and solve tasks independently. Quite a large number of students (55.4%) and parents (71.6%) observed poor time management in online classes, while almost half of the teachers (52.6%) were of the different view. Also majority of students seemed to be motivated as 55.4% of them enjoyed online sessions which was an indication of readiness of students. Yacob, Kadir, Zainudin, & Zurairah (2012) found that the students of primary and secondary levels are still teenagers and required interactive learning that will make them ready for learning.

Training for teachers to be prepared in using computer mediated applications and digital technology was the requisite for e-learning for effective content delivery, firm class discipline and to keep students active and responsive in class. 56.6% of the teachers found that training must have been provided to improve their preparedness for online teaching and parents (77%) pointed out that teacher training was essential for good class management and interactive teaching. Maheshkar and Soni (2016) indicated that the learner learns more when they are active participant and engaged in associated activities. Switching from traditional schooling to online platforms was found to be difficult by teachers (47.4%), whereas most of the students (74%) experienced the switch not that difficult. Benchevae (2010) concluded in his study that online learning also includes various components that are very familiar with the face-to-face learning, such as, students' creative ideas, group discussions, assignments, gave remarks on assignments, and other different forms. Teachers (55.3%) and parents (73.0%) reported that students had not learned etiquettes and morals in online environment. Teachers (57.9%) and parents (81.1) were of the view that online classes should continue only temporarily until the crises of COVID-19 prevails. Furthermore, 28.9% of teachers wanted to switch to online more on the permanent basis, whereas almost all the parents (97.3%) opposed it. Teachers (13.2%) and parents (16.2%) were not in the favor of online classes.

On the basis of findings, the researcher developed a model for teachers and students' preparedness before online learning. The model highlights students' and teachers' traits to successfully benefit from online sessions and overcome their challenges. The model was chosen to incorporate behavior-specific terms and a range of technological competencies. It explores the factors that have an impact on students' and teachers' readiness to adopt online classes in schools of developing countries like Pakistan. Thus, for the successful implementation of online sessions during pandemic the model was proposed for the readiness to embrace technology and attitude of students towards e-learning.

The model is based on the findings of the study to reduce barriers in successful implementation of online classes and for improvement on the current situation.

- It is obvious that students need to possess a positive attitude towards innovations to confidently participate in online sessions, which

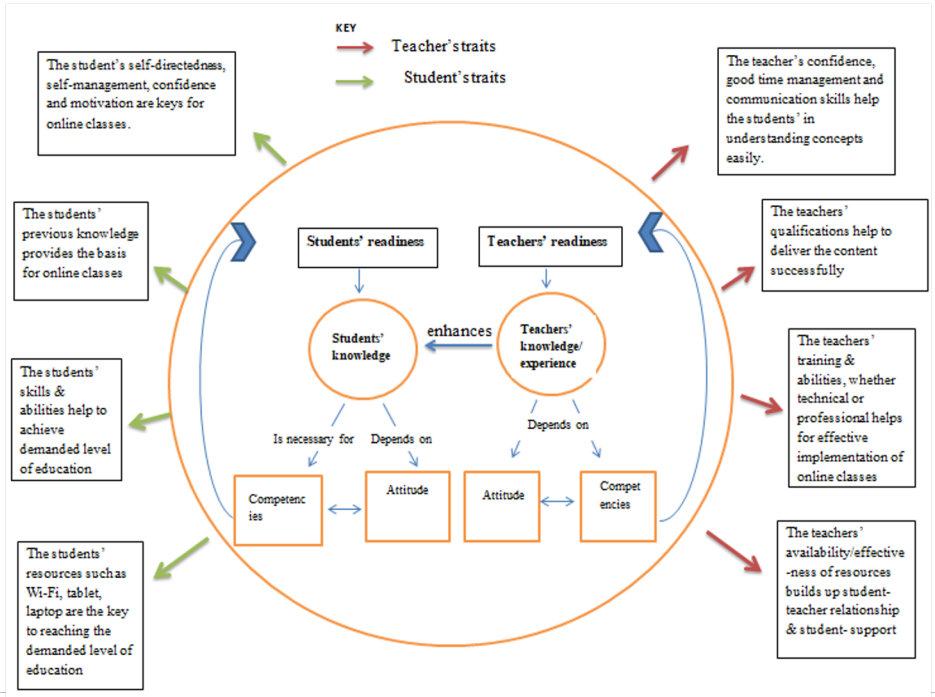

Figure 2 - The researcher made model for readiness of students and teachers for implementation of online classes.

implies that they are more likely to accept and adapt it well, as a mode of education in maintaining their interest.

- Successful implementation of online classroom activity in education requires commitment. Moreover, effective and successful implementation largely depends on teachers who require in-depth professional development to improve students' learning, but how they will improve the skills and competencies acquired from the tools and training provided to them is another part of the issue that needs to be addressed.
- Keen attention needs to be given to teachers' training to adopt innovations (as cited in Nikolopoulou, 2018, p. 93) and to acquaint them with the sufficient technological competencies, so to keep teachers well-informed with ever-changing technologies and to prepare them to confidently use technology effectively in their teaching.
- Different teaching methods with the variety of creative processes in which learners can engage (as cited in Nikolopoulou, 2018, p. 89) should also be developed through the use of new educational and communications technology.
- Effective implementation of online classes involves substantial resources, which is very hard to manage in developing countries like Pakistan. Inequity of access to high speed Internet and related modern digital devices to every student negatively influences the use of ICT in education.

Conclusion and Suggestions

According to the findings, students and teachers are moderately ready for online classes in the time of crisis. The results showed that the students' and teachers' readiness is their technological competencies, time management skills, effective content delivery, and attitudes. The results indicate that the students seemed to have good (81.3%) and teachers had excellent (63.2%) technological competencies in managing technical aspects of the online sessions which indicated their technical readiness for the online mode to see whether they were prepared to switch schooling to a new system. However, students (57.1%) and parents (52.7%) complained about the smooth Internet connection, whereas, teachers (68.4%) acknowledged the smooth and fast availability of the Internet which indicated that if there was no internet disruption, then it was easier to maintain class discipline, whereas, non-availability or slow internet resulted in non-seriousness on the part of students. Smooth and fast internet access made students more active and interactive in online classrooms. The test of association also suggested that firm class discipline could not be maintained because of the non-seriousness of the students during online sessions as indicated by the significant association found between lack of class discipline and non-seriousness of students ($\chi 2 = 6.703$, $p=0.010$). The study revealed that there is little awareness among students on how they should behave in the online environment and therefore, understanding student characteristics is important to prepare students for online learning.

Moreover, 71.6% of parents and 55.4% of students indicated poor time management in online classes as also 77% of parents pointed out that there is a need for more teacher-training workshops for good class and time management. The teachers' ability to teach confidently is based on the use of technology in education that reduced subsequent teaching time and improves the preparedness for online classes. Furthermore, 56.6% of the teachers also agreed on the need for training. Agormedah, Henaku, & Ayite, (2020) found similar issues associated with teachers' training and students' behavior; lack of teachers' training, experience in online learning platforms and students' unpreparedness in active participation in learning, technical skills proficiency, self-directed learning, and efficacy in the use of e-learning devices has affected remote education. Using the survey information, the researcher has developed a model for students and teachers' key traits as a pre-requisite for online sessions. This model is recommended to be adopted by all online disseminating institutes and agencies for its smooth running and maximum effectiveness.

Furthermore, it is recommended that the Pakistan government should take more strategic steps for the successful implementation of online learning in primary and secondary schools of Punjab to make accommodations for students who do not have digital devices and Internet accessibility. Also, the study suggests that changes in the schools of Punjab Province are not straightforward and easily accessible and instead they require the collaborative efforts of educational administrators, technological experts, decision-makers, educational institutions, and teachers, all of whom are stakeholders in the education sector. It is also important to expand the scope of online sessions providing requisite training to students, teachers, and schools for effective use of the Internet and to resolve troubleshooting issues. Therefore, appropriate guidance and training will lead to the effective use of learning resources.

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