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Problems and Difficulties Faced by Conventional University Teachers as a Result of Shifting from Face-to-Face to Virtual Teaching Mode during the Covid-19 Pandemic: An Empirical Evidence from Lahore

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ABSTRACT

COVID-19 have an unusual breakout around the end of 2019. Due to lock down situations the online education has become the popular alternative to conventional face to face teaching, yet it comes with some issues and challenges faced by online teachers. The purpose of this study is to investigate the challenges faced by the male and female conventional teachers shifted to online teaching due to this Pandemic. This paper focused on challenges such as pedagogical, technological, time management, online group assessments and lack of interaction. The study conducted using questionnaire survey. A sample of 70 teachers from different university of Lahore, Pakistan was selected. A five point scale questionnaire was developed to collect the data. Frequencies and percentage were used to analyze the overall perception of online teachers about the issues they faced. Independent samples t-test was applied to assess the difference in the perception and experiences of male and female teachers while teaching in an online setting. The correlation analysis was also applied to assess the association among the above-mentioned factors. It was observed that the teachers are mostly facing the pedagogical issues including unfamiliar courses, less visible connection with the students, multitasking and improvements in course contents, time management due to heavy workloads. Only a few teachers are facing technological issues. Most of the teachers found satisfied with the process of assessing the students in online learning. No gender differences were found regarding the issues except that female instructors face more technology-related issues than male. This research provide a baseline to investigate challenges faced by teachers in online space. To address the challenges like Pedagogical, technological, time management, online group assessments and lack of interaction, higher education institutions need to provide training, support and opportunities for the continuous professional development of teachers.

Keywords: Pedagogical, Technological, Time Management, Online Assessment.

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Introduction and Literature Review

The COVID-19, now classified as a pandemic, was initially misdiagnosed as a disease caused by a novel virus, with only a cluster of pneumonia cases of unknown etiology reported from Wuhan, Hubei, Mainland China, on December 8, 2019. It was revealed that it was caused by a novel virus known as SARS-CoV-2, which may have originated from an animal source in persons who visited Wuhan and/or consumed local seafood and animals after preliminary examination. The disease has spread to other countries and continents, according to reports from various countries, due to extensive travel of non-symptomatic infected people. Distance learning through the internet has become a common and quickly growing phenomenon.

Pakistan has a history of infectious epidemics and is the world's fifth most populous country (with 212.2 million people). Keeping in view the current lock down situations the online education has become the popular alternative to conventional fave to face teaching.

Higher education's fastest-growing component is currently online learning. Online distance learning proponents argue that it can be just as effective as, if not more effective than, face-to-face learning (Allen et al., 2004; Shachar and Neumann, 2003). According to research, the medium used to transmit instructional information has little impact on learning outcomes; nonetheless, content, teaching methods, communication, and learner support are all important factors in student satisfaction.

On the other hand, critics believe that students in online environments are more confused, alienated, and annoyed, reducing their learning effectiveness and satisfaction (Zaborova and Markova, 2016).

Academics are encountering issues of using IT skills for the sake of teaching, according to Islam et al. (2015). Furthermore, some experts, e-effectiveness learning's stems from the fact that it encourages greater student participation, which leads to better learning (Hiltz, 1994; Hardaker and Singh, 2011, Wang and Wang, 2009, Zhang et al., 2008; Huddlestone and Pike, 2008; Moos and Azevedo, 2009; Macharia and Pelser, 2014).

With proper course design, e-learning can be superior to face-to-face learning in terms of interaction quality and fast feedback, minimizing geographical barriers to education. (Chen and Yang, 2006).

In recent years, several research articles and case studies on how to use technology in education have been published. The majority of the research is focused on the needs of the students. For example, Macharia and Pelser's (2014) study of computer technology in Kenyan higher education sheds light on the factors that influence student acceptance of e-learning.

In terms of computer technology dissemination and infusion for educational purposes, the study offered new ideas for higher education administration. They came to the conclusion that E-success is dependent on the availability and accessibility of computer technology, as well as the quality and character of the institution's leaders. Learning's However, only a little amount of research has been done on academic personnel's opinions on e-learning. Such research is basically non-existent in Pakistan. This comes at a time when administrators and academic supervisors are increasingly looking for ways to integrate technology into the classroom in order to promote more active learning (Steele and Hudson, 2001; Eynon, 2005; Olaniran, 2006).

Moreover, Teo (2016) describes, “pedagogy is focused on giving the best method to learning”. To achieve the optimal learning outcomes, pedagogy necessitates the instructor's understanding of how students learn, the creation and presentation of course materials, and effective coaching of students. The basics of e-learning are the same.

If these conditions are met, e-learning will provide a return on investment. The cornerstone of every e-learning technology should be pedagogy. E-learning, on the other hand, demands a new pedagogical approach, notably in areas such as individual and group interaction, as well as online assessment. “To

become excellent online instructors, academics must master more than just new ICT abilities; they must also study pedagogy.

“These talents are not foreign to any distant schooling that has been offered for decades via postal systems, television, and telephone” (Islam et al., 2015). As e-learning becomes more extensively used, academics that are not technically competent to oversee the development of materials and delivery of online courses are impeding progress. They need to improve their skills significantly (Ellis et al., 1998).

Aldoayan et al. (2019) describes, “Around the world, the number of online courses is rapidly rising. Online degree programs, short courses, and professional development courses are all available from a variety of schools. Online courses have become a need and a craze at all levels of education since the Corona-virus epidemic.”

Instructors in these courses have an issue of lack of empowerment (Evrim et al., 2011). In such situations, the role of teachers in producing, molding, and integrating personal experiences into course content has been minimized (Rennert-Ariev, 2008).

The online instructors are encouraged to participate in content development and take on a more autonomous and active role by questioning their ideas about online education on a regular basis (Evrim et al., 2011). Instructors may be in charge of creating and preparing material for online courses. It might be difficult to create new materials or adapt existing materials from face-to-face sessions to an online format (Li and Irby, 2008).

Instructors who are moving face-to-face course content to online platforms are typically under-trained and under-supported (Kyei-Blankson and Keengwe, 2011). There are many critiques concerning the quality of the e-learning systems while reviewing e-learning literature Chua and Dyson (2004). Usability difficulties, poor performance, institutions' failure to adapt to changing demands, and, on rare occasions, a teacher-centered system rather than a learner-centered system are all problems. To successfully run the programme, online education needs high-quality, well-developed content, as well as tutorials, guidance and counseling, and a comprehensive support system.

Instructors must devise ways for maintaining students' attention, limiting their exposure to technological irritants, and ensuring consistency in course offerings, navigation procedures, and evaluations.

Reeder et al. (2004) highlighted that the technical support for academics is lacking in comparison to the demand for learning accomplishment and the widespread use of e-learning technology. The majority of the funding goes to infrastructure and technological assistance.

A sensation of isolation has been mentioned in the literature as a problem in the online learning environment. Rovai (2000) explained the consequence of a lack of social presence in online learning environments by stating that distance learners have less touch with the teacher and other students, and may feel alienated (Shin, 2002)

Instructors in a face-to-face classroom draw cues from their students' spoken and non-verbal interactions (Coppola et al., 2001). When teachers can't see their students' faces, it's difficult to understand these emotional indicators in online distance learning (Crawley et al., 2009).

On the other hand, modern ICT is believed to have a lot of promise for effective communication. Communication and engagement in a virtual learning environment, it is argued, may be more student-centered, less scary, and inspire more involvement than classroom interactions (Allen et al., 2004).

There's also a lot of evidence that the quality and quantity of communication enhances students' overall impressions of learning and their satisfaction with it. The degree to which students feel linked to the teacher influences the effectiveness of an online course. Such an environment may be created by providing timely, meaningful, and regular input. Instructors must take the initiative to maintain frequent contact with pupils. Students feel more at ease when they perceive their lecturer is concerned about their progress.

Fish and Wickersham (2010) describes that students who received regular personalized instructor feedback had higher levels of satisfaction and academic achievement than students who only received collective evaluation.

It is advised that teachers make a schedule of when they are accessible to provide immediate feedback. To reduce the amount of responses, it might also be good to post some of the student responses to questions. It may be feasible to eliminate continuous feedback by providing students with clear expectations of what is anticipated in the course. Another challenge for online professors is the time commitment, as preparing, planning, and delivering an online class takes a substantial amount of time (Capra, 2011; Cavanaugh, 2005).

Well-planned courses enable students to focus on learning and so get the most out of the course. Many teachers feel that teaching in an online classroom will be more relaxed and informal than in a traditional classroom. Duties, deadlines, and communication are all frequent and demanding in an online employment. Many online instructors are pressed for time due to their online courses, personal lives, and other professional obligations. They must have a well-structured course since failing to manage time properly in an online class may be disastrous.

Online teachers must have a daily checklist of what needs to be done. As one might expect, academics face a variety of challenges when it comes to the use and effectiveness of e-learning in the classroom. The current discussion around the challenges in this area can be divided into five major categories: pedagogical, technological, time management, online group assessments and lack of interaction.

The purpose of this study is to investigate the challenges faced by the male and female conventional teachers shifted to online teaching due to COVID 19 Pandemic. This paper is focused on challenges such as pedagogical, technological, time management, online group assessments and lack of interaction. The study is conducted using questionnaire survey. A sample of 70 teachers from different university of Lahore, Pakistan was selected. A questionnaire using a five point scale is developed to collect the data. Frequencies and percentage were used to analyze the overall perception of online teachers about the issues faced by them. Independent samples t-test is applied to assess the difference in the perception and experiences of male and female teachers while teaching in an online setting. The correlation analysis is also applied to assess the association among the above-mentioned factors

Objectives of the Study

The objectives of this study are:

1. to identify the issues faced by online teachers during Covid-19 pandemic in the following five areas:
    i. Pedagogical
    ii. Technological
    iii. Time Management
    iv. Assessment of Online Students
    v. Interaction/ Communication with Students
2. To find out the difference in the issues faced by male and female online teachers during Covid-19 pandemic.
3. To provide some suggestions to address these issues to make online learning more effective and acceptable.

Null Hypotheses

H_{01}: There is no significant difference between the mean scores of male and female teachers on pedagogical issues.

H_{02}: There is no significant mean difference between technological issues of male and female teachers.

H_{03}: There is no significant mean difference between time management issues of male and female teachers.

H_{04}: There is no significant mean difference between issues related to the assessment of online students by male and female teachers.

H_{05}: There is no significant mean difference between issues of interaction and communication with students by male and female teachers.

The hypotheses were tested at α=0.05

Research Method

The study was conducted using questionnaire survey. A questionnaire was developed with 5-point Likert scale. The population consists of Conventional face to face university teachers, enforced to online teaching mode due to COVID-19 Pandemic. The sample of 70 teachers was selected using Simple Random Sampling Technique from four universities of Lahore. The sample size was calculated using Yamane formula using 10 percent precision level.Twenty teachers were selected to participate in the pilot study. The Cronbach's Alpha was used to check the reliability of the questionnaire. Further descriptive analysis and inferential statistics to test the hypothesis about mean(s) and correlational analysis were applied.

Findings and Discussion

Reliability of the Instrument

Table 1. *Reliability of the Questionnaire*

Cronbach's Alpha	N of Items
.755	20

The Table 1 shows that the Cronbach's Alpha value was 0.755 which is above 0.7 (rule of thumb). A pilot sample of 20 respondents were used for the calculation of Cronbach alpha value. The Cronbach alpha value of 0.7 or higher indicate acceptable internal consistency (Taber, 2018). So we conclude that the instrument is reliable and can be used for further data collection.

Table 2. *Mean scores of male and female online instructors on various issues; scale 5*

Issues faced by Teachers during Covid-19 pandemic	Male Mean	Female Mean	Overall Mean	t	Sig. (2-tailed)
Pedagogical Issues	2.71	2.35	2.53	1.97	0.05
Technological Issues	2.72	3.02	2.87	-2.7	0.0075 (*)
Time Management Issues	2.84	2.72	2.78	1.43	0.153
	3.54	3.38	3.46	-0.92	0.367
Interaction and				-0.08	0.963
Communication issues	2.96	3.10	3.03		

The table II shows the mean values of male, females and over all means. The "3" represents the Neutral category response so the averages above 3 like Issues in Assessment has 3.46 mean shows that more disagree responses are obtained as response of the particular question. Similarly, The mean response below 3 like for variables Pedagogical Issues, Technological Issues, and Time Management Issues are likely to have more agree responses. The The overall mean scores on various issues show that the most prominent area of issues was online student assessment, followed by interaction and technological issues. Pedagogy was the least problematic area. By gender mean scores show that both the male and female teachers were equally uncomfortable with Assessment.

Independent sample T test results are shown in Table II. The P Value is less that 0.05 for the variable Technological issues which shows that there exists significant difference between male and female teachers regarding the issues faced by them. The remaining factors have P value greater than 0.05 so no significant difference exists between male and female teachers regarding the issues faced by them. Female Instructors face more technology-related problems as compared with male teachers. The null hypotheses H_{01}, H_{03},H_{04} and H_{05} are rejected while the hypothesis H_{02} is accepted.

Table 3. Pearson Product Moment *Correlation between the issues faced by instructors due to change of mode of education from conventional face to face to online during Covid-19 pandamic*

	1	**2**	**3**	**4**	**5**
Pedagogical Issues	1				
Technological Issues	.442**	1			
Time Management	.61**	.282**	1		
Issues in Assessment	0.12	0.206	0.277**	1	
Interaction and Communication issues	.445**	.495**	.323**	.414**	1

** Significant correlation i.e. factors with Sig. Value less than 0.05

Table 3 shows the association/inter-dependency between all the factors: Pedagogical Issues, Technological Issues, Time Management, Interaction, and Communication issues. The correlation coefficient is applied to check the association. The factor "Issues in Assessment" has weak (insignificant) correlation with Pedagogical Issues and Technological Issues, which also shows that the factor "Issues in Assessment" is not interdependent with the factors Pedagogical Issues, Technological Issues.

Table 3 shows that the factors Pedagogical and Technological Issues have Pearson Correlation r = 0 with significance value 0.0 which is less than 0.05, so it is concluded that Pedagogical and Technological Issues are moderately positively correlated with each other and the correlation between these factors are statistically significant. Similarly, the factors Pedagogical and Time Management Issues have Pearson Correlation r = 0.61 with significance value 0.000 which is less than 0.05 leading to conclude that Pedagogical and Time Management Issues are moderately positively correlated with each other and the correlation between these factors is statistically significant. Moreover, the factors Pedagogical issues and Issues in assessment have Pearson Correlation r = 0.12 with significance value 0.254 which is greater than 0.05 showing that Pedagogical issues and Issues in the assessment are positively correlated but the correlation is very low and is also not statistically significant. The factors Pedagogical issues and Interaction and Communication issues have Pearson Correlation r = 0.445 with significance value 0.000 which is less than 0.05, so we can conclude that Pedagogical and Interaction and Communication issues are moderately positively correlated with each other and the correlation between these factors are statistically significant. The factors Technological Issues and Time Management Issues have Pearson Correlation r = 0.282 with significance value 0.002 which is less than 0.05, so we can conclude that Technological Issues and Time Management Issues are low positively correlated with each other and the correlation between these factors are statistically significant. Moreover, the factors Technological Issues and Issues in assessment have Pearson Correlation r = 0.206 with significance value 0.05 which equal to level of significance 0.05, so we can conclude that Technological Issues and Issues in the assessment are positively correlated but the correlation is very low and is also not statistically significant.

The factors Technological Issues and Interaction and Communication issues have Pearson Correlation r =0.495 with significance value 0.000 which is less than 0.05, so we can conclude that Technological Issues and Interaction and Communication issues are moderately positively correlated with each other and the correlation between these factors are statistically significant. The factors Time Management issues and Issues in assessment have Pearson Correlation r = 0.258 with significance value 0.007 which is less than 0.05, so we can conclude that Time Management issues and Interaction and Communication issues are moderately positively correlated with each other and the correlation between these factors are

statistically significant. The factors Time Management issues and Interaction and Communication issues have Pearson Correlation r = 0.323 with significance value 0.001 which is less than 0.05, so we can conclude that Time Management issues and Interaction and Communication issues are moderately positively correlated with each other and the correlation between these factors are statistically significant The factors Issues in assessment and Interaction and Communication issues have Pearson Correlation r = 0.414 with significance value 0.000 which is less than 0.05, so we can conclude that Issues in assessment and Interaction and Communication issues are moderately positively correlated with each other and the correlation between these factors are statistically significant.

Challenges and Issues within Major Problem Areas;

Each of the five selected areas were explored in detail to find out the tasks which are considered difficult or challenging by the teachers. The overall scores in the preceding section show that pedagogy was managed by the teachers better than other areas. Within this area teachers felt a challenge when assigned some unfamiliar course with a mean of 2.67 and 60.7% 0f the teachers agreeing to this statement.

Table 4. *Means and percent distribution of teachers' responses teaching in online mode; maximum possible score=5(SA=1 to SD=5)*

Factor1: Pedagogical Issues	**SA(%)**	**A(%)**	**N(%)**	**D(%)**	**SD(%)**	**Mean**
Teaching unfamiliar courses.	12.7	48.0	12.7	11.8	14.7	2.67
Less visibility and connectivity with students	24.5	53.9	14.7	5.9	1.0	2.04
Existing course material needs improvement.	22.5	53.9	14.7	8.8	0.0	2.09
Online teaching demands multi-tasking.	28.4	42.2	20.6	4.9	3.9	2.13
Factor 2: Technological Issues						
Unable to interact due to a power failure or a server issue.	12.7	13.7	21.6	40.2	11.8	3.24
Hard to learn new and updating software	3.9	12.7	13.7	60.8	8.8	3.57
Satisfaction with the tools/software available	9.8	47.1	28.4	14.7	0.0	2.48
Reliant upon network adapters, power, computers, servers, software, web browsers etc.	32.4	51.0	10.8	5.9	0.0	1.90
Factor 3: Time Management Issues						
Lack of a schedule.	11.8	69.6	0.0	17.6	1.0	2.26
Larger workload.	22.5	50.0	10.8	15.7	1.0	2.22
Lack of time management because of extensive work.	10.8	30.4	30.4	23.	4.9	2.81
The responsibilities and deadlines are ongoing and intense.	14.7	55.9	20.6	5.9	2.9	2.26
Factor 4: Issues in Assessment						
Feedback is not timely and constructive.	0.0	18.6	22.5	53.9	4.9	3.45
The assessment activities do not assess what students have learned.	3.9	35.3	13.7	46.1	1.0	3.04
Problem in the coverage of content.	0.0	10.8	20.6	50.0	18.6	3.76
Assessment is the cause of Student stress.	15.7	43.1	28.4	10.8	2.0	2.40
Factor 5: Interaction and communication Issues						
Aggressive emails and continually complaining messages of the students.	4.9	35.3	18.6	38.2	2.9	2.99
It is a challenge to communicate without the help of body language.	16.7	41.2	19.6	21.6	1.0	2.49
Difficult to maintain sufficient student contact.	8.8	45.1	21.6	22.	2.0	2.63
Not giving the prompt feedback to the student.	5.9	36.3	14.7	41.2	2.0	2.97

Table 4 shows the responses for each statement and their respective means. The responses are coded as SA=1 to SD=5. From Table IV we can see that most of the teachers are facing the Pedagogical Issues. They are teaching unfamiliar courses (mean =2.67). They are facing the issue of less visibility and connectivity with the students (mean=2.04). The respondents/teachers are also agreed to the fact that existing course material needs improvement (mean=2.09). They are also agreed with the fact that the online teaching also demands multi-tasking (represented by mean = 2.13).

The teachers disagree to the fact that they are not able to interact due to a power failure or a server issue (mean =3.24). The teachers do not face difficulty to learn new and updating software (mean=3.57). The teachers agreed that they are satisfied with the available tools and software's (mean=2.48), They are also reliant upon network adapters, power, computers, servers, software, web browsers etc. (mean=1.90).

The teachers are also facing time management issues (mean =2.26). Teachers are agreed that in online teaching there is lack of schedule, larger workload and ongoing intense deadlines (as mean for each statement is <2.9).

Mostly teachers are satisfied with the online assessment procedure. The only thing that was highlighted by the teachers is the fact that the assessments are the major cause of Student stress (Mean =2.40).

The Interaction and communication Issues are also one of the major issues faced by online teachers. They are facing Aggressive emails and continually complaining messages of the students (mean=2.99). One of the challenge is to communicate without the help of body language (mean=2.49). They also face the issue of not giving the prompt feedback to the student(mean=2.97). Teachers also face difficulty maintain sufficient student contact (mean=2.63).

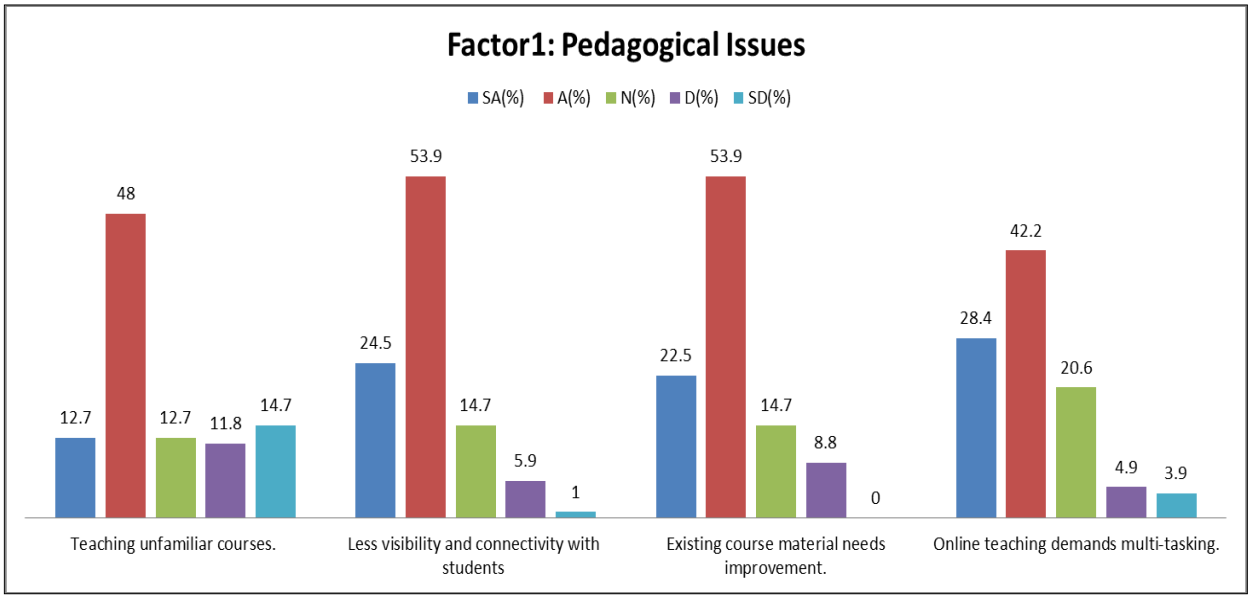

Figure 1: Responses to Factor1: Pedagogical Issues (%)

Figure 1 shows the responses for each statement and their respective means. The responses are coded as SA=1 to SD=5. From figure 1 we can see that most of the teachers are facing the Pedagogical Issues. They are teaching unfamiliar courses. They are facing the issue of less visibility and connectivity with the students. The respondents/teachers are also agreed to the fact that existing course material needs improvement. They are also agreed with the fact that the online teaching also demands multi-tasking.

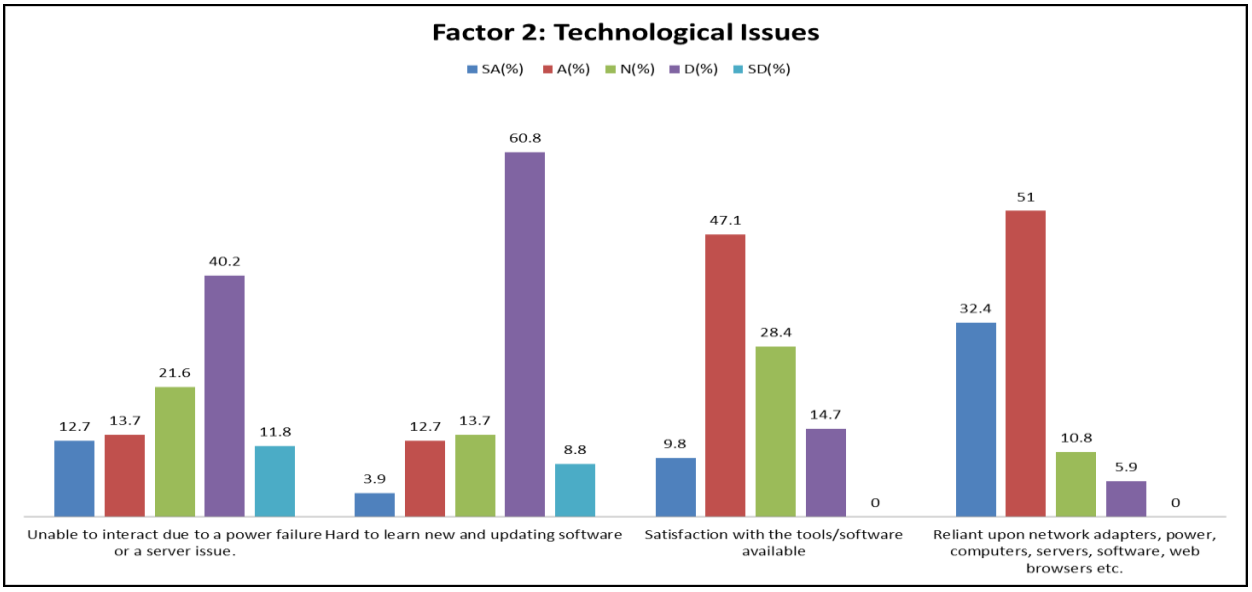

Figure 2. Responses to Factor 2: Technological Issues (%)

Similarly figure 2 shows that the teachers disagree to the fact that they are not able to interact due to a power failure or a server issue. The teachers do not face difficulty to learn new and updating software. The teachers agreed that they are satisfied with the available tools and software's. They are also reliant upon network adapters, power, computers, servers, software, web browsers etc.

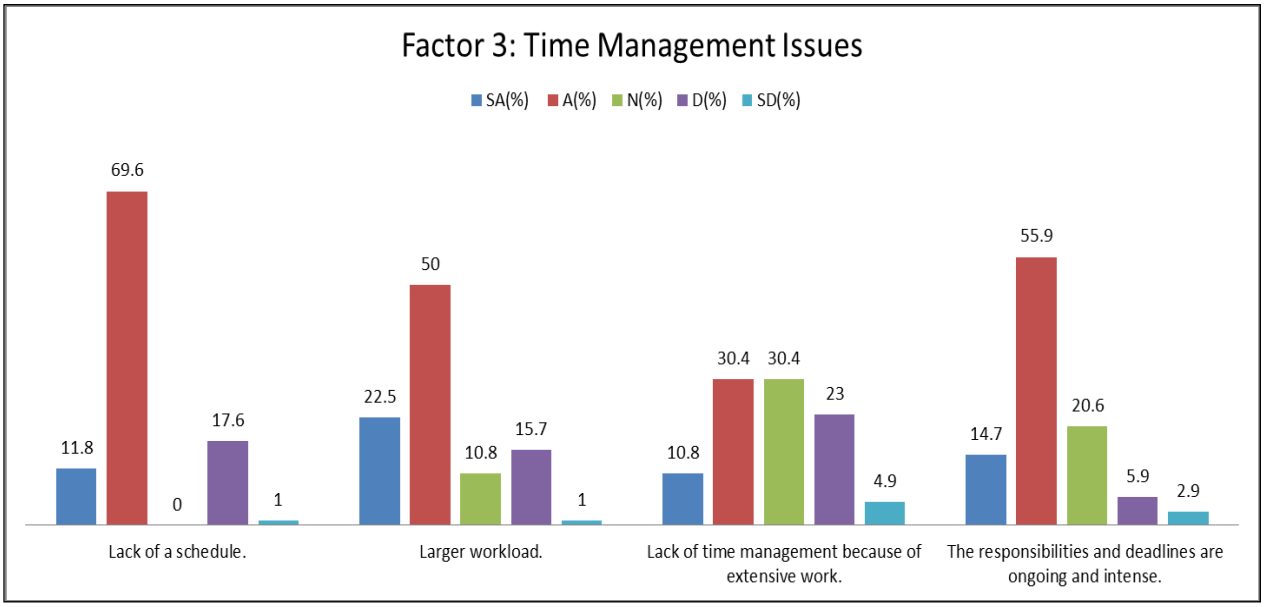

Figure 3. Responses to Factor 3: Time Management Issues

The teachers are also facing time management issues. Teachers are agreed that in online teaching there is lack of schedule, larger workload and ongoing intense deadlines.

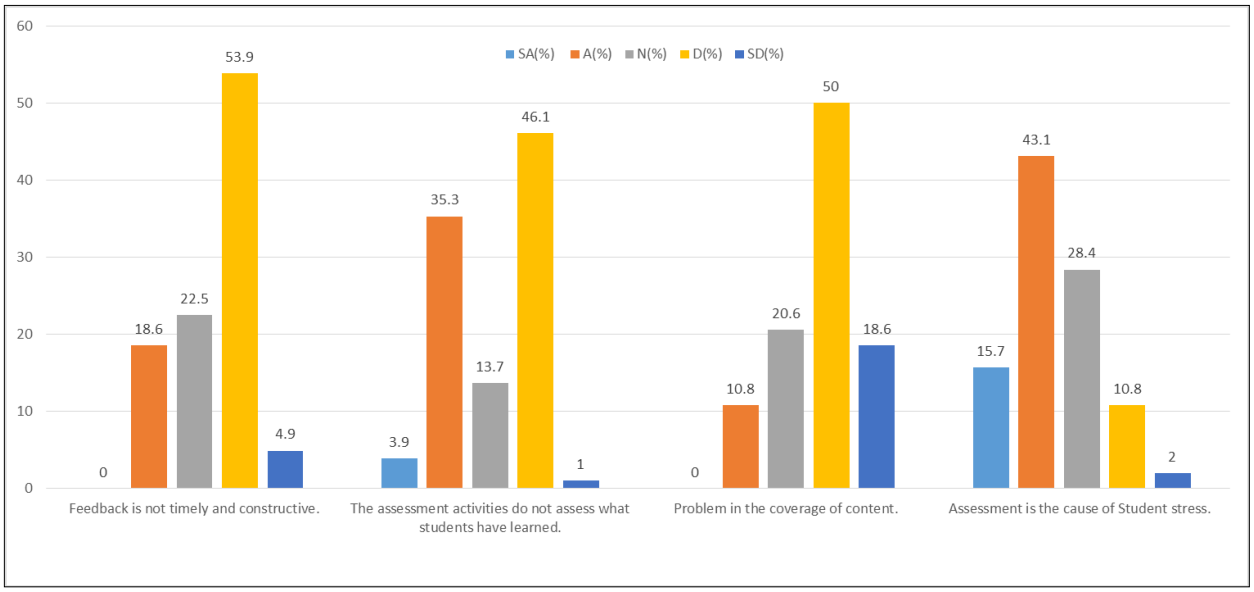

Figure 4. Responses to Factor 4: Issues in Assessment (%)

From figure 4 we can see that mostly teachers are satisfied with the online assessment procedure. The only thing that was highlighted by the teachers is the fact that the assessments are the major cause of Student stress.

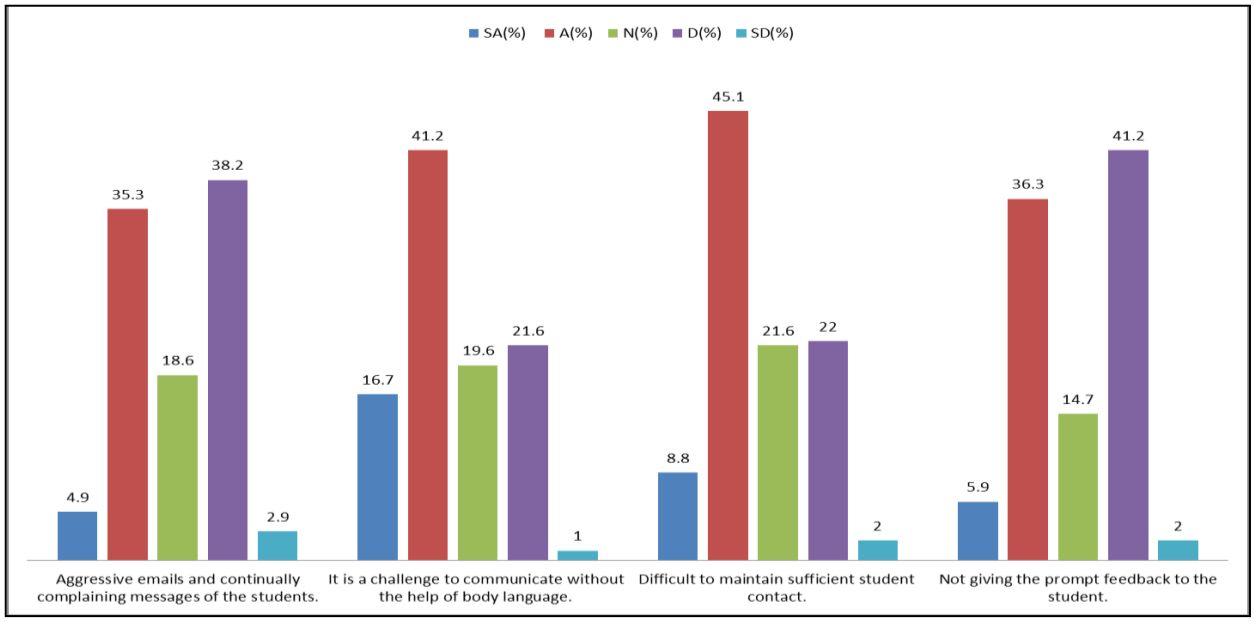

Figure 5. Responses to Factor 5: Interaction and communication Issues (%)

Figure 5 shows the Interaction and communication Issues are also one of the major issues faced by online teachers. They are facing Aggressive emails and continually complaining messages of the students. One of the challenge is to communicate without the help of body language. They also face the issue of not giving the prompt feedback to the student. Teachers also face difficulty maintain sufficient student contact.

Conclusions

The study is conducted to identify the issues faced by the conventional (face to face) teachers due to switching from face to face to online teaching mode because of Covid 19 Pandemic. The study shows that the teachers are mostly facing pedagogical issues including unfamiliar courses, less visible connection with the students, multitasking and needed improvements in course contents. Only a few teachers are facing technological issues. Most of the teachers are satisfied with the technological aspect of online teaching. Many teachers are facing time management issues such as plenty of workloads, intense and ongoing deadlines and lack of schedule. In the assessment, many teachers are satisfied with the process of assessing the students in online learning. But they agreed to the fact the assessment is a part of student stress. In grading the assignment, the teachers are facing difficulty as they receive a lot of emails from students for providing feedback. After pedagogical issues, the interaction and communication issues in online teaching are highly responded. Most of the teachers' state that it is a big challenge to communicate with the students without the help of body language. Because of the lack of face to face interaction, it is difficult to conduct online learning and give timely and effective feedback to the students. By identifying and outlining key patterns of barriers for teaching online courses identified in the literature, this study filled in the gaps. Higher education institutions should address these issues and, as previously stated, provide continuous professional development for online teachers, bits of training for students, and appropriate assistance for technological issues and multimedia integration to improve the quality of online education.

Suggestions

1. Due to switching of mode of education from conventional to online mode of education during the Covid-19 pandemic, it is necessary to give training to the teachers for the development of skills for dealing the online teaching environment. Continuous professional development of the teachers should be part of the life of online teachers. Workshops and seminars must be conducted from time to time to keep them abreast of new and updated strategies and technologies.
2. Women teachers should be provided more support and training in the use of technology.
3. The training of online teachers may focus on:
    i. Engaging and supporting the student's right from the start and for the duration of the course to maintain effective learning.
    ii. Provide feedback is an essential component of the online learning environment. Teachers must provide continuous feedback to the students so that they are able to identify the behaviors and skills needed to be improved.
    iii. Content, curriculum, and delivery for online learning should be interesting, interactive, and supporting.

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Conflict of Interest

Authors have no conflict of interest.

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References

Aldoayan, M., Sahandi, R., John, D., & Cetinkaya, D. (2019, March). Collaborative cloud-based online courses: Issues and challenges. In *Proceedings of the 2019 8th International Conference on Educational and Information Technology* (pp. 17-21).

Allen, M., Mabry, E., Mattrey, M., Bourhis, J., Titsworth, S., & Burrell, N. (2004). Evaluating the effectiveness of distance learning: A comparison using meta-analysis. *Journal of communication*, *54*(3), 402-420.

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.

Capra, T. (2011). Online education: Promise and problems. *Journal of Online Learning and Teaching*, *7*(2), 288-293.

Cavanaugh, J. (2005). Teaching online-A time comparison. *Online Journal of Distance Learning Administration*, *8*(1), 1-9.

Chen, C. C., Wu, J., & Yang, S. C. (2006). The efficacy of online cooperative learning systems: the perspective of task-technology fit. *Campus-wide information systems*.

Chua, B. B., & Dyson, L. E. (2004, December). Applying the ISO 9126 model to the evaluation of an e-learning system. In *Proc. of ASCILITE* (Vol. 5, No. 8, pp. 184-190).

Coppola, N. W., Hiltz, S. R., & Rotter, N. (2001, January). Becoming a virtual professor: Pedagogical roles and ALN. In *Proceedings of the 34th Annual Hawaii International Conference on System Sciences* (pp. 10-pp). IEEE.

Crawley, F. E., Fewell, M. D., & Sugar, W. A. (2009). RESEARCHER AND RESEARCHED The Phenomenology of Change From Face-to-Face to Online Instruction. *Quarterly Review of Distance Education*, *10*(2).

Ellis, A., O'Reilly, M., & Debreceny, R. (1998). Staff development responses to the demand for online teaching and learning. In *ASCILITE'98: flexibility the next wave? Proceedings of the 15th Annual Conference of the Australasian Society for Computers in Learning in Tertiary Education* (pp. 191-201). University of Wollongong.

Eynon, R. (2005, April). The use of the internet in higher education: Academics' experiences of using ICTs for teaching and learning. In *Aslib proceedings*. Emerald Group Publishing Limited.

Fish, W. W., & Wickersham, L. E. (2009). Best practices for online instructors: Reminders. *Quarterly Review of Distance Education*, *10*(3), 279.

Hardaker, G., & Singh, G. (2011). The adoption and diffusion of eLearning in UK universities: A comparative case study using Giddens's Theory of Structuration. *Campus-Wide Information Systems*.

Hiltz, S. R. (1994). *The virtual classroom: Learning without limits via computer networks*. Intellect Books.

Huddlestone, J., & Pike, J. (2008). Seven key decision factors for selecting e-learning. *Cognition, Technology & Work*, *10*(3), 237-247.

Islam, N., Beer, M., & Slack, F. (2015). E-learning challenges faced by academics in higher education. *Journal of Education and Training Studies*, *3*(5), 102-112.

Khan, A.W., Safdar, G., Ashraf, M. (2018). Effects of Mobile Phone Usage on Social Behaviours of University Students: A Case study of Islamia University of Bahawalpur, Pakistan. *Global Media Journal Pakistan Edition, 11*(1), 1-26.

Kyei-Blankson, L., & Keengwe, J. (2013). Faculty-faculty interactions in online learning environments. In *Learning tools and teaching approaches through ICT advancements* (pp. 127-135). IGI Global.

Li, C. S., & Irby, B. (2008). An overview of online education: Attractiveness, benefits, challenges, concerns and recommendations. *College Student Journal*, *42*(2), 449-459.

Macharia, J. K., & Pelser, T. G. (2014). Key factors that influence the diffusion and infusion of information and communication technologies in Kenyan higher education. *Studies in Higher Education*, *39*(4), 695-709.

Moos, D. C., & Azevedo, R. (2009). Learning with computer-based learning environments: A literature review of computer self-efficacy. *Review of educational research*, *79*(2), 576-600.

Olaniran, B. A. (2006). Applying synchronous computer-mediated communication into course design: some considerations and practical guides. *Campus-Wide Information Systems*.

Reeder, K., Macfadyen, L. P., Roche, J., & Chase, M. (2004). Negotiating cultures in cyberspace: Participation patterns and problematics. *Language Learning & Technology*, *8*(2), 88-105.

Rennert-Ariev, P. (2008). The hidden curriculum of performance-based teacher education. *Teachers College Record*, *110*(1), 105-138.

Rovai, A. P. (2000). Building and sustaining community in asynchronous learning networks. *The Internet and higher education*, *3*(4), 285-297.

Safdar, G. Khan, A.W., Abbasi, A. (2018). Role of Social Media for Promotion of Education in Southern Punjab. *Journal of Education Research, 21*(1), 73-85.

Safdar, G., Javed, M.N., Amin, S. (2020). Use of Internet for Educational Learning among Female University Students of Punjab, Pakistan. *Universal Journal of Educational Research, 8*(8), 3371-3380.

Safdar, G., Khan, A.W. (2020). E-Learning: Current Scenario of Internet and Educational Learning among University Students of Punjab, Pakistan. *Journal of Educational Research*, *23*(1), 171-185.

Safdar, G., Rauf, A., Ullah, R., Rehman, A.U. (2020). Exploring Factors Leading to Quality Online Learning in the Era of Covid-19: A Correlation Model Study. *Universal Journal of Educational Research, 8*(12A), 7324-7329.

Shabir, G., Safdar, G., Imran, M. (2014). Higher Education and its Importance for citizen: a Comparative Analysis of UK and USA. *Research on Humanities and Social Sciences, 4*(25), 17-23.

Shabir, G., Safdar, G., Jamil, T., Bano, S. (2015). Mass Media, Communication and Globalization with the perspective of 21st century. *New Media and Mass Communication, 34*, 11-15.

Shabir, G., Safdar, G., Shah, S.R.A., Asim, M. (2014). Iranian Higher Educational System and its Socio-Political Impacts in 21st Century. *Journals of Educational Research, 17*(2), 107-116.

Shachar, M., & Neumann, Y. (2003). Differences between traditional and distance education academic performances: A meta-analytic approach. *International Review of Research in Open and Distributed Learning*, *4*(2), 1-20.

Shin, N. (2002). Beyond interaction: The relational construct of'transactional presence'. *Open Learning: The Journal of Open, Distance and e-Learning*, *17*(2), 121-137.

Steel, J., & Hudson, A. (2001). Educational technology in learning and teaching: The perceptions and experiences of teaching staff. *Innovations in education and Teaching International*, *38*(2), 103-111.

Taber, K. S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in science education*, *48*(6), 1273-1296.

Teo, T., Milutinović, V., & Zhou, M. (2016). Modelling Serbian pre-service teachers' attitudes towards computer use: A SEM and MIMIC approach. *Computers & Education*, *94*, 77-88.

Wang, W. T., & Wang, C. C. (2009). An empirical study of instructor adoption of web-based learning systems. *Computers & Education*, *53*(3), 761-774.

Zaborova, E. N., & Markova, T. L. (2016, February). Students as social actors of virtual educational environment. In *Actual issues of sociology of culture, education, youth and management: materials of the all-Russian scientific conference with international participation* (pp. 392-397).

Zhang, H., Keung, J., Kitchenham, B., & Jeffery, R. (2008, March). Semi-quantitative modeling for managing software development processes. In 19th Australian Conference on Software Engineering (Aswec 2008) (pp. 66-75). IEEE.