Shifting from face–to–face learning to Zoom online teaching, research, and internship supervision in a technologically developing 'female students' university in Pakistan: A psychology teacher's and students' perspective

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During the Covid-19 pandemic, students, and teachers of the developing countries had to shift from the face-to-face traditional classroom to an e-learning environment, which elicited various reactions to teaching and learning. I conducted this research to understand how students perceived online learning and to share my reflexive experiences about this shift in a Pakistani public sector women university. I administered a short survey in seven domains. As a teacher, I found (working from home) online teaching, assessment, internship, and research supervision extremely productive, interesting, rewarding, and excellent for my health and wellbeing. More than 50 per cent of the students appeared adjusted to online mode of learning. Improvement in internet connection, development of teachers' and students' computer skills, and development of teachers' cultural sensitivity can enrich students' learning outcomes. Online educational systems need to be improved in developing countries. Students engaged in practical work or those progressing to online careers need more online hands on experience.

Keywords: *Covid-19; pandemic, Zoom; teaching; learning; research; job; employment; psychology; Pakistan; developing country; student; teacher; online; face-to-face; open book tests; critical thinking; internship; research; supervision; assessment.*

FACE-TO-FACE learning was and still is the traditional mode of teaching and learning in Pakistan. During the pandemic, the teachers of our university were trained to deliver lectures on Zoom. We (the teachers) were also trained to upload course material online, conduct assessments, evaluations, invigilation, and prepare and submit online results. The entire process was very convenient, fast, timesaving, and hassle free. It was easy to organise things online. Our university worked on provision of WIFI within the university, which also eased the communication process between teachers, administration, students, and the non-teaching staff members. On top of that, I found online teaching and research supervision extremely beneficial.

In the following article, I have discussed the benefits and drawbacks of online versus face-to-face learning in teaching and supervision from a teacher's (my own) perspective and students' perspective (*N*=66 students). I delivered Behavioural Neuroscience, Psychology, Organisational Behaviour, Personality Theories, Fundamentals of Psychology and Psychology of Adjustment modules online via Zoom app during the pandemic.

Research method
I developed and distributed a brief survey to around *N*=310 BS honours Applied Psychology and MS Health Psychology students of my institution who were my current and ex-students and were being

supervised and taught by different teachers. I obtained ethical approval for this research. I informed the students that I was collecting their feedback for a practice exchange paper and they could anonymously fill it in. Sixty-six students responded (i.e. 21 per cent of the students filled in the survey; see Table 1). The survey consisted of a single question, which was 'How did you find online teaching and learning as compared to face-to-face mode of teaching and learning?' The answer was sought in seven domains which were 1. Lecturing and class participation, 2. Classroom resources for student engagement, 3. Class discipline, 4. Internship supervision, 5. Theses supervision 6. Challenges to online assessment, and 7. International research collaboration and professional development.

The quantitative answers were obtained on a three-point scale of Excellent, Good, Dissatisfied and the qualitative answers were obtained in 'Any other comment'. There was also a 'Not applicable' option. Following is the discussion of results in all seven domains.

1. Lecturing and class participation
According to my perspective as a teacher, students benefitted from video recordings of the lectures and were able to ask questions publicly and comfortably in Facebook private classrooms – something, which was not possible in face-to-face teaching in classes due to social desirability effect, shyness, and lack of confidence (Khalili & Ostafichuk, 2020). Students also had the opportunity to speak out their minds using the mic and chat functions in Zoom. Khalili and Ostafichuk (2020) have shown that technological tools such as iClickers facilitate class participation through anonymous response systems. Even my self-efficacy improved in the online environment. I could freely express my creativity with a variety of online resources that included videos, podcasts, activities, and other visuals. Student expressions or students being noisy as in the traditional classroom did not distract me. Students seemed to understand the content very well because I used to repeat the content from

different websites and I received a good response from my students.

According to students' responses, most (55 per cent) found online lecturing and class participation good just as Egyptian University students preferred virtual sessions (Basuony et al., 2020). Improved online interactions were also observed in Zhu et al. (2020). However, 30 per cent were dissatisfied. Dissatisfied students had problems focusing on the content due to lack of interaction with the teacher and distraction in the surroundings. Three comments were:

> No doubt some teachers give their best to satisfy students but the class participation affects, due to the surroundings. As we, students cannot all sit alone. So environmental factors distract our attention, hence leads to distortion in participation. As it does not provide a 'class-room' environment.

> Class participation wasn't good enough even understanding and continuous attention was quite difficult.

> There's a lot of difference between face-to-face and online mode of teaching. As students are unable to interact with their teachers.

I would agree with the dissatisfied students because I understand that students are living in extended families in a collectivistic society. I think that people will take time to adjust to online mode of learning and soon realise that students need some quiet space for work. In their semi-structured interviews with university students, de Oliveira Dias (2020) found that a lack of online student-teacher interaction, an inadequate home learning environment, and the ability to avoid direct participation during the video call, all had a negative impact on students' engagement. Students mostly and teachers sometimes switch off their videos so students' interaction with one another and the teacher is more like an audio interaction instead of a

face-to-face interaction in which lip movement, and body gestures can be observed. Visual learners who learn through observation of teacher's bodily gestures and lip movements might be experiencing considerable difficulties in understanding the lectures. I think that advanced technology, which enables embodied virtual interaction (Pustejovsky & Krishnaswamy, 2020) with peers and teachers would be more useful for visual and social learners. Socialisation enhances academic competence (Valiente et al., 2020).

Since, the students belonged to a high context culture (Asian culture) where power distance makes students dependent on the authorities and visual cues, social interaction becomes important to learning. Written instructions, which represent low context interdependent cultures, can cause miscommunication between the teacher and the students. Similarly, anonymity, which is another factor of a low context culture, can discourage student involvement and class participation (Westbrook, 2014). Since one student is able to speak at a time by unmuting the mic on Zoom, students are unable to interact with one another online as compared to on-campus face-to-face classes.

Students' psychological and work well-being is contingent upon students' class participation (Novo et al., 2020). Bangladeshi students have also reported problems of paying attention, electricity issues, and internet connectivity issues in online classes (Al-Amin et al., 2021). So, according to the current survey results, low levels of class participation justify students' psychological dissatisfaction and dissatisfaction with their performance.

2. Classroom resources for student engagement

From a teacher's perspective, a range of resources was accessible through online teaching. By sharing my screen, I could share hard copy notes, slideshare, websites, podcasts, videos, Kahoot, all of which proved to be very engaging and very insightful for students. Online learning has the benefit of skipping the class by leaving Zoom chat and then listening to an audio recording of the lecture. During face-to-face classroom teaching, I had limited resources such as white board and personally developed exhibits. Due to loopholes in the infrastructure, even now, I sometimes find it difficult to work online physically from my workplace (Al-Amin et al., 2021; Joshi et al., 2020).

Most (53 per cent) of the students found the classroom resources 'good' but 41 per cent were dissatisfied with the classroom resources for online engagement. Those students who found online classroom resources to be 'good', might have found exposure to YouTube Videos, PowerPoint slides, website material more useful in comparison to the traditional classroom with a white board. Also, the audio recordings of the lectures might have helped them in preparing their exams (Peacock et al., 2020).

The dissatisfaction in this area also seems to suggest adjustment difficulties to online distance learning. Students' perceived flexibility and usefulness of distance learning predicted their satisfaction with classroom technology in Sahin and Shelley (2008). Thus, classroom technology might have not met my students' expectations and needs. Also, other teachers might not be comfortable with technology and thus might not be able to share sufficient resources with students (Stefanile, 2020). Training of both teachers and students in efficient use of technology would be helpful for student engagement (Agyemang & Haggerty, 2020). Lack of student-teacher and student-student interaction might have led to less student engagement (Mataka et al., 2020; Muzammil et al., 2020). Students' feelings of belongingness depend on the opportunity to engage with other students, and the teacher, feel supported, and accepted as members of a certain course classroom. Thus online classrooms need to incorporate discussion forums where each student is acknowledged for their input (Peacock et al., 2020). Nowadays (after the response on current feedback

survey), we have a mixed mode delivery with online and on-campus classes on alternate days. During online classes, I ask questions and encourage student to participate in class. I mindfully pause during my lecture, acknowledge students who participate in my class by mentioning their name, thanking them for their contribution and appreciating them. Similar to face-to-face classroom teaching, I use bilingualism by explaining YouTube English videos in Urdu (the national language of Pakistan). Audio-visual material can also foster a sense of belongingness in students (Peacock et al., 2020).

3. Class discipline

During face-to-face classes, the students who were not interested in learning, stayed in the class to get their attendance marked or just for the sake of saving face. They also distracted other students from learning. There were always some students coming in and going out of the class (with or without permission) who distracted everyone from the lecture. I found it very beneficial that during Zoom lectures when the waiting room was disabled, there was no coming and going that disturbed the class. The 'disable attendee annotation' was a very useful function, which allowed me to prevent students from being disruptive online. Those students, who were just interested in having their attendance marked, marked their own attendance by typing their name and roll number in Zoom chat room and quietly left the class.

Most of (58 per cent) the students were satisfied with class discipline while 26 per cent were dissatisfied.

One student said, 'As it is obvious that class discipline cannot be maintained 100 per cent. There are many factors like our surroundings sometimes we feel lazy to attend as we don't feel it the considerable substitute of face-to-face classes.'

Those students who were satisfied with online class discipline were probably satisfied because peer distraction that exists in a traditional classroom did not bother them and they were looking at a single screen focused on their lecture, which was a form of teacher-centred learning (Wong, 2020). Students at the National University of Singapore were able to focus on online lectures and deliver presentations online. The shy students felt less intimidated while presenting online as opposed to face-to-face mode of learning (Wong, 2020). An online class is an extremely flexible mode of learning as opposed to sitting in wooden chairs with others in a classroom. Therefore, students might have perceived 'discipline' as something that involves sitting in a certain serious posture and attentively listening to the lecture with other students' physical presence at the same time and place. The lack of such discipline 'and not being in a traditional classroom environment with the peers and teachers' might be affecting students' motivation and pace of learning (Mataka et al., 2020). Lack of discipline has been associated with 'no real classroom' and the comfort of attending a class from home in Durak and Çankaya (2020).

Some teachers who were not comfortable with technology, encountered technical problems, or disruptive home environment might have found it difficult to engage students in lectures and assessments online (Joshi et al., 2020).

Zoom features that allow students to mute themselves and switch off their videos can also affect class discipline. A study in the USA (Gelles et al., 2020) revealed that students with their cameras switched on felt more self-disciplined because switched on cameras made them feel more present in their class. Lack of technological infrastructure that provides advanced options in Zoom probably limited the teacher's control of classroom discipline (Joshi et al., 2020). Teachers can only request students to unmute themselves and to switch on their videos. If all students switch on their videos, they will be able to see each other and sit in a proper sitting place instead of attending a class from a bed. When students will know

that attending a class requires them to be properly dressed and sit like a student, only serious students will join the online class.

However, this will not be an inclusive education system and it will deprive bed-ridden students who are ill, from real-time learning. Such a system will reduce the levels of teaching and learning flexibility. Another downside of such a system is that it could prevent those students from attending the class who have security concerns, and who keep their videos switched off because they feel insecure online and do not want to be seen, or appear in a video call online. Teachers also might have such security concerns (Joshi et al., 2020).

Teachers and learners have different perspectives of the online learning methods. The perspectives of teachers and learners about online versus face-to-face learning also vary across cultures (Gómez-Rey et al., 2016).

4. Internship supervision

I supervised six BS Honours students online in Covid-19 health psychology internship. Internship supervision was extremely easy online, because the students did not have to wait in a cue for six hours at the university on a single appointment day when I commuted to the university to supervise students in the face-to-face mode of internship supervision. Each student appeared at the appointment time from the comfortable space of her home and I provided individual coaching and training about the write up of internship report to my students on different days and times on Zoom. It was easy to mark out the problems with their writing style online and identify the exact areas of improvement. I kept in touch with my supervisees via Whatsapp group (Bhavya & Sambhav, 2020), and whatever I learned from an individual student's mistakes, I forewarned other students about that mistake (without mentioning the name of the student who made that mistake). Mobile phones with apps have made communication faster and more convenient than before (Bhavya & Sambhav, 2020). It was a flexible supervision process

because students were free to ask me any questions any time and I was free to answer those questions at my own convenience. The students were very happy and satisfied at the end of their internship. They were grateful for my continued support throughout their supervision (according to their Whatsapp messages). In face-to-face learning, the student would take back the corrections and still ponder over the ways a report could be re-organised and reappear with the same mistakes. 35 per cent of the students found online internship supervision to be 'good' (Young-Pelton, 2013). Since the majority of the students were not BS honours semester 8 students, they did not have any experience of internship. So, 56 per cent of the students never completed an internship.

Nevertheless, students did not get exposure to the physical environments of the hospitals and organisations, which they usually get during a regular face-to-face internship (Mataka et al., 2020) at Fountain House, Mental Hospital, Fatimid Foundation, Shaukat Khanum Hospital, Children Hospital, Alzheimer's Pakistan, and Psychiatry wards of different hospitals in Lahore, Pakistan. A study in Mataka et al. (2020), has also shown that students had problems following online lectures because they were more teacher directed, and they could not do things by themselves, and one student even missed his chemistry and biology practical lessons because of his lack of access to simulations for the practical lessons. While online labs such as Labvanced (2020) are emerging, we need access to hospital and community samples online through either advanced databases such as Prolific (Prolific, 2021) or through online Zoom meetings with the in-house staff of hospitals and healthcare organisations, otherwise students would have to risk exposing themselves to the hospital environment and other public organisations amidst Covid-19 pandemic to conduct internships in natural settings (because the Covid-19 vaccine is still not available to the general public in Pakistan yet).

5. Theses supervision

Research supervision also became easy. I currently have four theses with six students, two BS honours (group projects of two students) and two MS Health Psychology theses. I met with my students online at a specified time. I started training students as a researcher. We have one class every week on Zoom. I delivered components of research proposal writing and presentation, research ethics, and we also kept time for specific project/thesis topic relevant discussions. We also communicated via Whatsapp (Bhavya & Sambhav, 2020) throughout the week. Articles in *Psychology Teaching Review*, The Journal of the British Psychological Society, was very helpful in explaining various steps of research and the concept of pre-registration in research. We had individual student meetings with our research teams consisting of foreign researchers from different countries on Zoom. The students sent their supervisory record forms after every meeting via Whatsapp (Bhavya & Sambhav, 2020). All meetings' content is saved online (thus paper use is saved). Students also received voice recordings of the meetings and my voice notes on Whatsapp (Bhavya & Sambhav, 2020). Up till now, I have received a very positive response from my supervisees. I also began research supervision YouTube series and I often send links to new episodes through WhatsApp. My students are very grateful and satisfied with their research training.

In the pre-pandemic era, as a supervisor it was difficult to meet with the supervisee because my supervisee was living in another city and had issues in commuting to the university for discussing her research progress and meeting deadlines. Even though in the pre-pandemic times, research supervision was conducted through emails whereby students used to send in their research proposals and literature review and receive the feedback through email, the supervisee was not communicating in-person or online (on Whatsapp or email) which made it very difficult to continue the supervisory relationship. If the online technologies such as Zoom had been used during the pre-pandemic time and if student supervision was allowed for distance learners on Zoom, if the supervisee had been responsive to online supervision, then the research supervision communication would have been very fast and convenient for both the supervisor and the supervisee. The addition of Zoom has enriched the supervisee experience through the share screen option which allows almost anything from word documents, SlideShare, PowerPoint presentations, videos, to journal articles, blogs, and websites to be shared with the supervisees. Perhaps with a complete shift to the online mode, supervisees have become more serious about online (whatsapp and email) research supervision than before (when an in-person option was available).

Thirty-nine per cent of the students found it to be good. Most of the students were satisfied with their thesis supervision in a university in Iran (Pourbairamian et al., 2019).

Thirty-five per cent of the students in the current survey were dissatisfied. The reason for dissatisfaction might be that students are at a very early stage of their thesis whereby they have not even received ethical approval for their research yet. So, many of them might have found thesis as something unpredictable and daunting. Supervisees' dissatisfaction with thesis supervision might also have stemmed from lack of skills required to become an independent researcher (Pourbairamian et al., 2019). Perhaps blended learning that provides opportunities for in-depth discussion might be more useful for thesis supervision as suggested in Slamet et al. (2021). Barriers in data recruitment and selection might appear as students progress in their research work because the participant samples are not accessible through databases such as Prolific (Prolific, 2021) and students and teachers are not skilled in the use of online labs (Labvanced, 2020).

6. Challenges to online assessment

Fifty-six per cent of the students were satisfied with the online assessment challenges. However, 30 per cent were dissatisfied. Students who were satisfied with online assessment maybe had good critical thinking skills or they found it easy to copy material (cheat) from various sources instead of producing rote-memorised content.

Since it is difficult to invigilate exams on Zoom, we have resorted to open book tests. Open book exams require critical thinking skills, which students often lack. When I check students' papers, I realise that students have been unable to shift to an open book learning paradigm. For example, I asked my students to compare Biological and Humanistic approaches to personality and express their own views about which theory is more convincing according their own point of view and state the reasons for it. What I found was that students simply described both theories and at the end of their paper selected one of the theory and said that it was more comprehensive. They did not say how one theory was more convincing than the other one, or why they found the evidence more compelling in one of those theories. Open-book exams have been welcomed in the UK (Chadha et al., 2020), but they are something new for Pakistani students who have been educated in government schools and are studying in public sector government universities, due to two reasons, 1 – English is their second language, 2 – They are not used to critical thinking skills. A study (Din, 2020) on undergraduates in Pakistan has revealed that students lack critical thinking skills in critical reading skills. Suhail (2021) contends that when teachers have not developed their own critical thinking skills, how can they train students in critical thinking skills? According to Suhail (2021), public primary school teachers of Pakistan scored low on critical thinking disposition. A review of literature on open book tests (Rakes & Rakes, 2008) shows the need for training in taking online open book tests. Critical thinking skills were merely an option in the pre-pandemic era but online teaching and learning with less control over cheating mechanisms has made them a crucial component of online open book assessment during the pandemic.

Technological difficulties and dealing with open book tests might have been some of the insurmountable challenges for some students. According to Boyles (2011) taking online assessments can be difficult for some students because online assessments are new and students also have to take online assessments in a face-to-face environment. According to Rowe (2004), online assessment is accompanied with security issues such as facilitation of cheating methods and cheating might become common through software packages. I agree with Rowe (2004), because I recently refused to help a customer student with cheating in exams, who contacted me through a well known online company that pays tutors for hourly lessons and requested me to help her with cheating in her exam. The ease of cheating (Rowe, 2004) and knowing that the peers can also cheat on exams might be reducing the self efficacy of students who want to compete and excel in reproducing rote memorised content. Lack of self-motivation due to reduced competition (Mataka et al., 2020); high context cultural inclination (Westbrook, 2014) and dissatisfaction with online learning methods might also be the factors leading to dissatisfaction with online assessment (Basuony et al., 2020). The apparent reasons might be explained by the students' comments below.

> There is a huge list of challenges including
> – lack of attention
> – distraction from surroundings
> – lack of seriousness
>
> A lot sometimes I feel I wasted my courses of two semesters

Lack of attention is a common problem (Al-Amin et al., 2021) in an online environment probably because one has to focus on a single screen for long hours, which can

strain the eyes and body muscles (Huseyin, 2020). According to de Oliveira Dias et al. (2020), distraction is an obvious problem when one is working in the home environment. In Bisht et al. (2020), female students were under low pressure and easily adapted to the online assessments. 'Lack of seriousness' might be interpreted in terms of ease and passing exams without having actually learned anything and might have given the students a feeling that they had not actually memorised anything, whereby memorisation is equated to mainstream learning in Pakistan. Students in Spain also reported 'feeling of wasting time' (Ramos-Morcillo et al., 2020) because they did not receive any clinical training. This shows that students' learning has been compromised according to their perspective. In case of my students from Pakistan, mostly it is a rote memorisation perspective but in case of nursing students from Spain, it is the absence of practical clinical training.

From a teacher's perspective, as opposed to other teachers in Pakistan (Farooq et al., 2020), since I am comfortable with technology, I felt it easier to construct online assessment, mark them online, prepare online results and submit them to the exam branch via email in line with Nulty (2008). It was and still is difficult to carry so many exam papers physically from place to place and to get the assessment printed and physically submit it to an office (Nulty, 2008).

7. International research collaboration and professional development
Pandemic has optimistically opened online venues of job opportunities so every cloud has a silver lining. Freelancing has proven to be beneficial particularly during the pandemic (Tudy, 2020). Working from home saves travel time and one can have several jobs at a time; being tech-savvy is the condition! Online businesses have sustained the effect of Covid-19 crisis. Those entrepreneurs who were proficient in the use of online tools in the pre-pandemic era experienced positive or no effects of the pandemic crisis (Koltai

et al., 2020). During the pandemic, I found that travelling to the university is not only a time wasting activity that harms the environment and exposes a human being to various air pollutants, but it also reduces the level of productivity. During the pandemic lockdown pollution in the largest cities of Pakistan including my city Lahore was greatly reduced (Ali et al., 2021). Whenever, I am at home, my productivity increases, I am able to easily multitask online from home. I am better able to manage my time and energy and I have been able to have a healthy work-life balance. I have also been able to find research collaborators from India, Chile, and Pakistan. Liew et al. (2020) have also talked about the opportunity for research collaborations due to the online presence of researchers and healthcare professionals. On the whole, working online from home offers huge amount of flexibility from a comfortable home environment, promotes physical and mental health provided that a supportive workplace environment and healthy work-life balance is maintained (Bazorova, 2020), and is more fulfilling than physically travelling to the university. This is also evidenced by my year-wise achievements (pre-pandemic number of achievements: 37 and during-pandemic number of achievements: 81). A study (Kraft & Simon, 2020) on Indonesian teachers also found that work from home was flexible, saved travelling time and cost, provided more free time, flexible working hours, and minimised traffic stress.

Most of the students were not working or looking for work so 42 per cent were dissatisfied with research and employment opportunities online, but surprisingly 41 per cent found them 'good' while nine per cent found them to be excellent.

Online work was considered difficult before the pandemic, but nowadays online jobs and online research work seems more promising towards a healthy family life (Strielkowski, 2020). Those students who found employment online, might have found it out of desperation during the pandemic. Dunn et al. (2020) have observed that women free-

lancers are being forced into difficult working arrangements instead of pursuing freelancing according to their work flexibility.

For those students who were dissatisfied, lack of technological skills, access to online resources (Sciuto, 2017), internet connectivity, and electricity breakdown (Al-Amin et al., 2021) necessary to professionally develop themselves might be some of the reasons for not being able to find and sustain online internships, trainings, and jobs. Since Pakistan is a technologically developing country, most of the research collaboration and professional development happens in a face-to-face environment (Mumtaz et al., 2021). Cassum et al. (2020) suggest improvement of e-learning programmes in low middle-income countries.

Conclusion
Overall (see Table 1 overleaf), more than 50 per cent of the students have adjusted to the online system of learning and career development but around 35 per cent of the students are still struggling with the online system of learning due to their problematic surroundings, technological issues (e.g. Agyemang & Haggerty, 2020), and lack of real time interaction with their teacher and peers (Shim & Lee, 2020). Teachers generally might be more likely to adapt to the online environment as compared to the students (Khan et al., 2020). Teacher and student training in computer skills can also maximise the performance of teachers in course delivery and enhance student competence in learning online.

Improvement in internet connection, computer skills, development of critical thinking skills, improvement in peer to peer and student-teacher online video interaction with face-to-face discussions, and instructional mode of teaching (Van Wart et al., 2020) might help students in adjusting to the online mode of learning. Cultural sensitivity needs to be developed. Blindly following Western models of education would not be helpful while dealing with Asian or high context culture students (Westbrook, 2014).

I think we need Zoom-like software whereby teachers would have more control over students' behaviours. Teachers should have more control online so that class discipline can be maintained. Since unmuting students raises issues such as background noise, there should be features that enable the teacher to mute or minimise background noise while student's voice can be heard so that distractions can be removed from online classrooms. Students' needs and expectations should also be incorporated in the new classroom technology, which includes factors such as development of computer expertise and flexibility in online learning (Sahin & Shelley, 2008). Online learning and online jobs are the need of the time, offer work-life balance, save time and energy, and are pro-environmental, will progress and speed up higher education (Strielkowski, 2020).

Therefore, employers in developing countries need to increase online job and internship opportunities to improve students' professional development and career prospects. For example, my student interns did not find hospital or corporate environment online in which trained clinical psychologists and occupational psychologists could supervise them (Mataka et al., 2020). They conducted internships by recruiting participants through personal references, and interviewing participant clients online, based on their theoretical learning and my guidance. Similarly, my students who needed clients with schizophrenia to administer Bender Gestalt Test did not have access to Pakistani clients online from Fountain House and Mental hospital, Lahore (Mataka et al., 2020). They had to manage report writing based on case studies online or self-learn from online videos, manuals and other online material. This way the quality of learning was seriously compromised.

In order to make learning more meaningful and practical, I strongly recommend that hospital and clinics should develop online systems through which psychologists and psychiatrists in Pakistan can supervise student interns online to provide them with

Table 1: Student *N*=66 (100 per cent) responses to 'How did you find online teaching and learning as compared to face-to-face mode of teaching and learning?'

	Excellent	Good	Dissatisfied	Any other comment	Not Applicable
	N %	N %	N %		N %
1. Lecturing and class participation	10 15%	36 55%	20 30%	1. Face-to-face mode was better. 2. No doubt some teachers give their best to satisfy students but the class participation affects, due to the surroundings. As we, students cannot all sit alone. So environmental factors distract our attention, hence leads to distortion in participation. As it does not provide a 'class-room' environment. 3. Class participation wasn't good enough even understanding and continuous attention was quite difficult. 4. There's a lot of difference between face-to-face and online mode of teaching. As students are unable to interact with their teachers.	
2. Classroom resources for student engagement	4 6%	35 53%	27 41%		
3. Class discipline	10 15%	38 58%	17 26%	1. As it is obvious that class discipline cannot be maintained 100 per cent. There are many factors like our surroundings sometimes we feel lazy to attend as we don't feel it the considerable substitute of face-to-face classes.	
4. Internship supervision	4 6%	23 35%	2 3%		37 56%
5. Theses supervision	6 9%	26 39%	23 35%		19 29%
6. Challenges to online assessment	6 9%	36 56%	20 30%	1. There is a huge list of challenges including –lack of attention –distraction from surroundings –lack of seriousness 2. A lot sometimes I feel I wasted my courses of two semesters 3. A lot	1 2%
7. Did you get time to utilise Research and Employment Opportunities Online?	6 9%	27 41%	28 42%	1. Yes 2. Yes I did a lot 3. No 4. No 5. No experience 6. Yes	

an exposure to the work environment along with expert and professional supervision. This is necessary for students' career development and transition to online jobs or face-to-face post-pandemic jobs.

Limitations of this research

Two of the survey questions, 1 – 'Challenges to online assessment' and 2 – 'Did you get time to utilise research and employment opportunities online?' did not align with the rating scale of 'excellent', 'good' and 'dissatisfied'. The meaning of the challenges and the provision of employment opportunities could not be gauged by the rating scale. However, 'Any other comment' was a sort of open-ended answering space that provided the students with the opportunity to say whatever came to their minds regarding these two survey questions.

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Psychology Teaching Review 27.2

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