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Time to Transform: Challenges and Opportunities for Teaching Practice During COVID-19 and Beyond

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Abstract

Teaching practice is one of the most significant components of a teacher education program that prepares prospective teachers for a fast-changing and technology-infused world. However, in many developing countries like Pakistan, it has remained stuck in the traditional methods (face-to-face, without proper utilization of technology) which made it vulnerable during COVID-19. This study explores teaching practice methods and strategies used by Pakistani universities before and during COVID-19. It further identifies the causes behind its deficiencies to prepare prospective teachers for the challenges of the current era. Using semi-structured interviews, data was gathered from nine teaching practice supervisors from nine different universities. The study found that before COVID-19, eight universities used traditional methods and strategies for teaching practice. During COVID-19, the universities used four different approaches (online teaching practice in mock classes, online teaching practice with real students, microteaching 2.0, and teaching practice through emails and WhatsApp groups) for its continuation. Ignoring modern tools and technologies, lack of focus and attention, and a clerical approach were reported to be the main reasons behind its deficiencies to prepare prospective teachers for the challenges of the current world. The study highlights the importance of using blended modes for teaching practice, allocating some credit hours/modules for purely online teaching practice, giving more importance to it, and providing specialized training to teaching practice supervisors and cooperating teachers so that they can supervise and assess prospective teachers more effectively.

Keywords

teacher education, teaching practice, COVID-19, blended learning, microteaching, thematic analysis

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Time to Transform: Challenges and Opportunities for Teaching Practice During COVID-19 and Beyond

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Teaching practice is one of the most significant components of a teacher education program that prepares prospective teachers for a fast-changing and technology-infused world. However, in many developing countries like Pakistan, it has remained stuck in the traditional methods (face-to-face, without proper utilization of technology) which made it vulnerable during COVID-19. This study explores teaching practice methods and strategies used by Pakistani universities before and during COVID-19. It further identifies the causes behind its deficiencies to prepare prospective teachers for the challenges of the current era. Using semi-structured interviews, data was gathered from nine teaching practice supervisors from nine different universities. The study found that before COVID-19, eight universities used traditional methods and strategies for teaching practice. During COVID-19, the universities used four different approaches (online teaching practice in mock classes, online teaching practice with real students, microteaching 2.0, and teaching practice through emails and WhatsApp groups) for its continuation. Ignoring modern tools and technologies, lack of focus and attention, and a clerical approach were reported to be the main reasons behind its deficiencies to prepare prospective teachers for the challenges of the current world. The study highlights the importance of using blended modes for teaching practice, allocating some credit hours/modules for purely online teaching practice, giving more importance to it, and providing specialized training to teaching practice supervisors and cooperating teachers so that they can supervise and assess prospective teachers more effectively.

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Introduction

COVID-19 triggered incredible changes in every sphere of life: from business to tourism, economics to social life, and from religious practices to educational ones (Akkaya et al., 2021; Saladino et al., 2020; Tarkar, 2020). One of the worst affected areas was education. COVID-19-induced restrictions forced educational institutions to be either completely closed or abruptly go online. This especially hit developing countries as education systems did not have the adequate infrastructure, expertise, and culture to provide online education (Malik et al., 2022a). Theoretical courses were still managed somehow, but those that were of a practical nature suffered the most during the pandemic (Malik et al., 2022b).

Teaching practice is one of the most important components of a teacher education program (Haigh, 2001; Malik et al., 2022b; Mashile, 2008). It allows prospective teachers to

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apply the relevant theoretical knowledge in real classes and gain practical experience (Frey, 2008). Unlike many developed countries where teaching practice is infused with digital technology and online tools (Muir et al., 2013), in many developing countries, it is still carried out in a traditional way (Malik et al., 2022b; Nkambule & Mukeredzi, 2017). Prospective teachers mostly go to the classrooms to deliver face-to-face lectures using traditional pedagogical techniques. As a result, when they step foot into current professional life, they are often ill-equipped to incorporate modern educational tools, technologies, and techniques. During COVID-19, this weakness was especially exposed as many teachers in developing countries found it extremely difficult to use online education tools and techniques effectively (Hassan et al., 2020; Malik et al., 2023).

Teaching practice was one of the most negatively affected subjects during COVID-19 as the schools were closed and face-to-face teaching was strictly prohibited. Many teacher-education departments postponed teaching practice while others scrambled around frantically to find an alternative strategy (Noor et al., 2020).

In this study, we aim to investigate the situation of teaching practice in Pakistani universities before and during COVID-19. We also try to find out the reasons behind its deficiencies in preparing teachers for the emerging challenges of a technology-infused world. Finally, we come up with viable and pragmatic suggestions to make teaching practice more effective.

Although the study is about Pakistan, its implications can be far-reaching. This is because many developing countries face similar problems and issues in their teacher education programs and especially teaching practice (Nkambule & Mukeredzi, 2017). As a result, the findings and recommendations may be applicable to many other countries and regions with similar contexts and issues.

Research Questions

In this study, we sought to find answers to the following research questions:

1. What were the methods and strategies for teaching practice in Pakistan before COVID-19?
2. What methods and strategies did the universities in Pakistan use to provide teaching practice during COVID-19?
3. What are the main reasons behind the deficiencies of teaching practice in Pakistan in preparing teachers for the emerging challenges and a technology-infused world?
4. What should be done to improve teaching practice?

Literature Review

Role and Importance of Teacher Education

As the world has been changing and evolving at a rapid pace, so has been the required set of approaches and skills for teachers (Urbani et al., 2017). Information and communication technology (ICT) and digitalization have been changing the landscape of education at a great pace (Malik & Akkaya, 2021; Warner et al., 2021). The incorporation of digital infrastructure and the use of ICT in education have greatly influenced the teaching-learning process. Various facilities and innovations in school settings, such as the availability of computer labs, personal computers, easy access to the internet, and digital gadgets, have led to new educational approaches, practices, and models (Compton, 2009). Technological tools and ICT-based

techniques have given rise to digitalization in education, making the teaching-learning process more interactive, meaningful, and productive (Noreen & Malik, 2020).

One of the most effective ways to prepare prospective teachers for future challenges and needs is through teacher education programs. Realizing the role and importance of teacher education, most of the developed countries have established rigorous, dynamic, and continuously improving systems where teacher education programs, curriculums, and teaching practice techniques and strategies are continuously evolving and improving to ensure that the prospective teachers are prepared for a digitalized and fast-changing world (Cobb, 1999; Holdsworth, 2010; Niemi & Lavonen, 2020). Singapore, whose success is embedded in its technology, innovations, and educational excellence, has been following the path of sustainable innovation, constant improvement, and a futuristic approach to teacher education (Hogan & Gopinathan, 2008; Lim, 2013). In Finland, “teacher education is based on a combination of research, practice, and reflection” (Sahlberg, 2011, p. 35). Decentralization, persistent efforts, and emphasis on inclusiveness are the hallmarks of Finnish teacher education programs (Niemi & Lavonen, 2020). Although teacher education programs may differ in different developed countries (Heikkinen et al., 2018), they all share the common threads of constant improvement, continuous innovations, incorporation of modern technologies and teaching techniques, and preparing prospective teachers for existing and emerging challenges.

On the other hand, teacher education programs in many developing countries have not been able to evolve with the changing needs of the time and digital transformation (Sife et al., 2007). The same has been the case with Pakistan where teacher education programs have failed to evolve over the years. They have been facing severe challenges in terms of policy, quality, and resources (Jumani & Abbasi, 2015) which have kept them miles away from the influx of technology and innovation. In Pakistan, even technology-based courses like ICT in education are mostly taught through a traditional approach using a whiteboard and lecture-based methods (Malik et al., 2022a). Although COVID-19 changed this, it has been more of an unwilling, forced change than a well-thought-out, futuristic approach-based one.

Importance of Teaching Practice in Preparing Prospective Teachers for Emerging Challenges

Teaching practice is one of the most important components of any pre-service teacher education program as it helps prospective teachers to apply theoretical knowledge in a real classroom setting (Frey, 2008). Furthermore, it facilitates their abilities to observe and explore a real classroom environment, gain practical experiences, analyze their strengths and weaknesses, and identify which of the pedagogical approaches and strategies are best suited for a specific subject and level of the students (Mashile, 2008). Well-designed teaching practice is thus the most critical component for the preparation of quality teachers and their improved performance in the classroom (Zeichner, 2010), shaping their beliefs (Mtika, 2011), and providing them with exposure and hands-on experiences for future challenges (Frey, 2008).

Microteaching is one of the teaching practice strategies that has been quite popular in many countries. As compared to conventional teaching practice methods, it is “scaled down in terms of time and numbers of students” (Cooper & Allen, 1970, p. 1). It is a controlled teaching process in which prospective teachers focus on specific teaching skills (Allen & Eve, 1968), and “designed to develop observable teaching skills and their evaluation instruments” (Malik et al., 2022b, p. 66). Later, online tools and techniques were incorporated into it which led to microteaching 2.0 (Ledger & Fischetti, 2020). Microteaching 2.0 uses the concept of “technology as the classroom” in which traditional classes are replaced with online ones (Ledger & Fischetti, 2020, p. 40). Both microteaching and microteaching 2.0 are widely used in almost all developing countries.

Technology-based education, with its online and distance components, has the potential to re-conceptualize teaching practice for current and futuristic needs. Frey (2008) said that technology-based teaching practice also has the potential to make a positive impact on the professional growth of teachers. Unal et al. (2017) explain that technologically supported teaching practice helps teachers to develop strong self-efficacy. Realizing this, teaching practice is infused with technology and modern tools in many developed countries. In Australia, pre-service teachers use computer-based simulations in virtual classrooms for teaching practice by using Second Life (SL)TM (a virtual world and a place for social interaction). It not only helps them to experience real classroom settings but also allows them to improve their overall professional practices and behaviors by utilizing modern tools and techniques (Muir et al., 2013).

However, this is not the case in many other countries (Gregory et al., 2011; Nkambule & Mukeredzi, 2017). In many developing countries like Pakistan, teaching practice has mostly remained stuck in the old, traditional ways where prospective teachers still spend most of their time making lesson plans (which means repeating the same thing over and over), going to the schools, and using white/blackboard to teach through face-to-face interaction. As a result, prospective teachers often lack knowledge of modern pedagogical techniques and the use of technology (Busher et al., 2015). Davis and Ferdig (2009) indicated that teacher education and teaching practice were not geared for upcoming challenges and virtual systems as they were focused on face-to-face instructions in a traditional setting. Gregory et al. (2011) also found that prospective teachers were disappointed with teaching practice as they did not feel prepared for the current and upcoming challenges.

Teaching Practice During COVID-19

The COVID-19-induced paradigm shift frantically changed the pace of the technology-driven pedagogical transformation. With the closures of the schools, discontinuation of face-to-face classes, and very strict enforcement of social distancing, educational institutions had very few options other than going online, thus changing the whole anatomy of the teaching-learning process (Edelhauser & Lupu-Dima, 2021; Malik et al., 2022a). It was felt especially hard in the developing countries as most of them had been stuck in traditional pedagogical approaches and strategies mainly embedded in face-to-face, lecture-based models. The sudden and haphazard technological transformation left many teachers and students completely unprepared for those challenges (Malik et al., 2022a). As compared to other subjects that were theoretical in nature, teaching practice was harder to adapt. When the schools were closed during COVID-19, universities found it extremely difficult to continue it as most of the schools and universities were using traditional, face-to-face methods for learning.

COVID-19-induced challenges further highlighted the role and effectiveness of robust and technology-infused teacher education programs in general and teaching practice in particular, as many teachers could not incorporate technology into the teaching-learning process to meet the new challenges. Thus, proving that an effective, dynamic, and constantly evolving teacher education program is essential in preparing prospective teachers for the current and future challenges.

This study was thus carried out to investigate the situation of teaching practice before and during COVID-19 in Pakistan. It also investigated why teaching practice has not been able to prepare prospective teachers for a technology-infused education system. Finally, the study provides suggestions to improve teaching practice in order to produce better and more effective teachers.

Research Methodology

Research Method

Firstly, we went through the literature to identify different research methods and approaches that had been used for similar studies. Most of the similar studies employed qualitative (Mtika, 2011; Nkambule & Mukeredzi, 2017; Noor et al., 2020), questionnaires/scales-based quantitative (Malik et al., 2022b), experimental (Gregory et al., 2011; Saunders et al., 1975) or mixed-methods-based studies (Frey, 2008; Unal et al., 2017). Amongst those methods and designs, interviews-based qualitative studies were the most common. Furthermore, as the main purpose of the study was to get in-depth and rich data about a relatively under-researched problem, a qualitative research method was the most suitable (Patton, 2002).

As we wanted to draw main themes based on the research objectives and questions, a basic interpretive study approach (thematic analysis) was used. It is also the most commonly used research method for similar studies (Mtika, 2011; Nkambule & Mukeredzi, 2017; Noor et al., 2020).

Participants of the Study

Keeping in mind the research questions, the second and third authors collected data from nine faculty members belonging to nine different universities in Pakistan employing a purposive sampling technique (Patton, 2002). Sampling was carried out in two steps. In the first step, universities; and in the second, participants were selected.

We selected the universities from four provinces and the federal capital (Islamabad) to get a more comprehensive picture. The inclusion criterion for the universities was that they have at least one teacher education program with teaching practice. A list of Higher Education Commission, Pakistan (HEC) recognized universities was obtained from its website (HEC, n.d.). We selected three universities from Punjab, two from Sindh and Khyber Pakhtunkhwa (KP) each, and one from Islamabad and Balochistan each. Eight of them were public sector universities and one was in the private sector.

For participants, only those faculty members were selected who had been directly involved with teaching practice. They were teaching practice coordinators or supervisors. Multiple persons in every university met the criteria. I (first author) contacted them through telephone, WhatsApp, or email for their consent. Those who gave their consent were interviewed by the second or third author. Five of the participants were female while four were male (Table 1).

Table 1

Participants' Information

Pseudonym	Gender	Experience Group	Role	University Code	University Type	Location
Sana	Female	1 (0-5 years)	TP Supervisor	U1	Public	Islamabad (Federal Capital)
Maria	Female	2 (6-10 years)	TP Supervisor	U2	Public	Punjab
Ali	Male	3 (10-15 years)	TP Coordinator	U3	Public	Punjab

Naina	Female	2 (6-10 years)	TP Supervisor	U4	Private	Punjab
Rida	Female	2 (6-10 years)	TP Supervisor	U5	Public	Sindh
Pasha	Male	2 (6-10 years)	TP Supervisor	U6	Public	Sindh
Khan	Male	1 (0-5 years)	TP Supervisor	U7	Public	KP
Uzma	Female	2 (6-10 years)	TP Supervisor	U8	Public	KP
Bilal	Male	1 (0-5 years)	TP Supervisor	U9	Public	Balochistan

Data Collection Tool and Procedures

We decided to use semi-structured, one-to-one interviews for this study. Semi-structured interviews allow for further probes and flexibility (Patton, 2002) while one-to-one interviews were conducted so that the participants could express themselves more frankly.

I developed an interview guide for this purpose, containing five main research questions (i.e., what were the methods and strategies used for teaching practice before COVID-19 in Pakistan? Which methods and strategies were used for teaching practice during COVID-19? What were the strengths and weaknesses of the methods and strategies used for teaching practice during COVID-19? Why teaching practice was not able to prepare prospective teachers for the challenges of a fast-evolving and technology-infused world? What should be done to improve teaching practice in Pakistan?). This interview guide, along with the research topic and main research questions, was sent to three experts in the fields of qualitative research and teacher education. As per their feedback, some minor changes were made to the interview guide. Supplementary questions were asked when needed.

Due to the pandemic-induced restrictions, telephonic interviews were conducted. Interviews were 13 to 33 minutes long. They were audio-recorded with the permission of the participants.

Data Analysis Techniques

Interviews were transcribed by the third author and verified by the other two. Following the steps suggested by Patton (2002), a thematic analysis was carried out. First, the transcripts were read and annotated to identify the main themes. It was used to develop the coding scheme to apply to the data. The study used inductive coding to generate the themes from the data. Later, similar themes were merged, and some were renamed to draw a more coherent and clearer picture. This process was carried out by the first and second authors independently. Later, we compared, discussed, and finalized them. Following the strategy used by Malik et al. (2020), this whole process was carried out in MS Word using cut, copy, paste, and highlight functions. Verbatim quotations were also used as they helped in conveying the true feelings and expressions of the participants (Corden & Sainsbury, 2006).

Research Findings

Research findings were divided into four major themes generated from the interview data (methods and strategies for teaching practice before COVID-19, methods and strategies for teaching practice during COVID-19, reasons behind the inability of teaching practice to

prepare the prospective teachers for emerging challenges and a technology-infused world, and suggestions to improve teaching practice).

Methods and Strategies for Teaching Practice Before COVID-19

The participants were first questioned about the methods and strategies used for conducting teaching practice before COVID-19. The findings revealed that by and large, all the universities under study employed similar traditional, face-to-face methods and strategies for conducting teaching practice.

Talking about the process, the participants said that they would guide their students theoretically about teaching practice (through supervisory or orientation sessions), assign them teaching practice supervisors, and then send them to schools to first observe the classes and the teaching-learning process, and finally for teaching practice. Two persons would be responsible to supervise and evaluate the students throughout this process: the teaching practice supervisor (a.k.a. practicum supervisor/ university supervisor- a university faculty member assigned with the responsibility to supervise teaching practice students) and the cooperating teacher (the schoolteacher whose classes the prospective teacher would teach). The cooperating teacher would observe the prospective teacher regularly, while the teaching practice supervisor would visit more infrequently.

Despite a lot of similarities in the teaching practice methods used by the universities before COVID-19, there were a few differences (although mostly cosmetic in nature). The first difference was based on the number of students sent to a single school. Sana said, “Not more than five students to a single school. We do not like to overburden one school,” but other participants did not report any such restriction. Similarly, in some universities, a relatively low supervisor-prospective teacher ratio was set. Ali said that it was “normally, five students for one TP supervisor. We have a big faculty so we can manage easily.” Others told that it was more “flexible” (Rida). While most of the participants (eight out of nine) reported that the process was entirely face-to-face, one (Pasha) said that microteaching was also used during this process.

Methods and Strategies for Teaching Practice During COVID-19

COVID-19-forced closure of schools and social distancing compelled the universities to either discontinue teaching practice or use an alternative way. The second research question was about the methods and strategies that the universities used to continue teaching practice during COVID-19. Those methods and strategies were divided into four categories: online teaching practice in mock classes, online teaching practice with real students, microteaching 2.0, and teaching practice through emails and WhatsApp groups.

Online Teaching Practice in Mock Classes

Four participants (Sana, Maria, Khan, and Uzma) said that their universities used mock online classes to continue the teaching practice. The class would be comprised of their fellow students who would act as school students of that grade. Sana explained the process in these words: “First [we] ask [prospective teachers] to prepare lesson plans. [They] share with us. Then online teaching lesson is delivered [by prospective teachers].” According to the participants, it would be a comprehensive and complete lesson, just like a traditional class with all the regular activities. The prospective teacher would deliver the lesson, give the students (actually his/her class fellows) activities and then take questions from them. All of the participants (the prospective teacher, his/her classmates acting as the students, and the teaching

practice supervisor) would join the class online from their respective places. They would also use WhatsApp groups for better and smoother communications throughout the semester.

Despite following a similar method and pattern, there were some differences; for example, in their strategies for preparing lesson plans. Sana said that they would first give the students two weeks to prepare the lesson plans and also to get used to the system. During this time, teaching practice supervisors would share the relevant online materials with them. The students would share the lesson plans through emails. Khan and Uzma also used similar strategies. Maria and her colleagues would use Google Classroom for this practice as it “offered multiple options.” They would discuss the lesson plans in the presence of other students for further improvement. Another difference was in the platform that they used for online teaching practice. Three of them (Sana, Maria, and Khan) said that their universities used Google Meet, whereas Uzma said that Zoom was used.

While realizing the limitations of this strategy, the participants pointed out the drastic circumstances that they had to face. Uzma said that her university had “no other choice.” Maria elaborated further, saying,

What else can we do? All the schools are closed. We do not have access to school students. By the way, do public school students in Pakistan have access to and expertise in online education? We had two options: do things this way or stop teaching practice altogether.

She believed that in that way, they could at least “continue the process” and ensure that “the students could finish their degree in time” (Maria).

They mentioned multiple issues with this strategy. Other than typical issues that online education faces in countries like Pakistan such as electricity and internet issues, inability to use the platform and tools effectively, and continuous audio/video issues, they also pointed out some specific issues about online teaching practice. The most prominent of them was the absence of a real classroom and students. Sana talked at length about it. She said,

We tried much, very much, different activities, discussions, online groups, online classes; but it was not like school classes, you know, real school classes with real students. It felt fake. They (prospective teachers acting as school students) knew these were their fellows. Some did not ask questions to support them, some out of friendship, some so that others do not ask them tough questions, for a good performance. And their questions were not like grade eight students. They did not act and react naturally. It was not like teacher-students interaction, it was friends-friends interactions. It felt fake, often.

Maria also pointed out the limitations of online teaching practice by pointing out many activities which are an integral part of a schoolteacher’s life (e.g., morning assembly). Online teaching practice could not prepare prospective teachers for them. The participants said that teaching practice supervisors and students were also frustrated. Maria said that her students repeatedly told her that they “need to go to schools to perform better.”

Online Teaching Practice with Real Students

Pasha also used the same method and strategy as mentioned by Sana, Maria, Khan, and Uzma; however, there was one major difference. Whereas those universities used mock classes with prospective teachers acting as students, in the university where Pasha worked, online classes were composed of actual school students. When asked how it was possible, he said,

Our university has a network of affiliated schools. We provide support to them in curriculum development, training, and other things. Those schools are much better than other public sector schools, and already used technology in the teaching-learning process even before COVID-19. Consequently, online teaching practice was no issue for us.

During the pandemic, school students were already being taught through Zoom. For teaching practice, the same platform was used. All the participants attended classes from their houses. Both the cooperating teacher and teaching practice supervisor attended those classes. Whereas the cooperating teacher would stay there for the entirety of the lecture, the teaching practice supervisor would join the class for ten to 15 minutes. Sometimes, even the school principal joined the online classes.

This strategy appears to be the most suitable as there were real school students. As they were already using an online mode of education during COVID-19, they did not face many issues. Despite this, Pasha did not think the online teaching practice was very effective. He said that both the prospective teachers and the students were “still not very much empowered or habitual of using digital tools;” neither could the prospective teachers learn the strategies relating to the context and the environment of a real classroom. The prospective teachers, despite their utmost efforts, found it difficult to engage the students. According to him, the efficiency level for teaching practice was 30-35% in online mode and 80-90% with face-to-face.

Microteaching 2.0

Three of the participants (Ali, Naina, and Rida) said that their universities used microteaching 2.0 for teaching practice during COVID-19. Different platforms were used for it: Ali said that his university used Zoom for it, while Naina and Rida reported using Google Meet.

The pattern and process of microteaching 2.0 classes were, by and large, quite similar in all three universities. The prospective teacher would prepare the lesson plan and then deliver a short lesson online (usually around fifteen minutes) to a small size class (consisting of his/her fellow students). Lectures would usually focus on some specific objectives.

Ali said that the class would consist of ten students at most, while Naina and Rida said that there was no set criterion for it. This whole process would be recorded. Later the prospective teacher who had delivered the lecture, his/her classmates (who had performed the role of the students), and the teaching practice supervisor would watch and discuss the recorded video to evaluate and comment on it. They would find out shortcomings and suggest ways to improve the teaching method.

The participants said that due to the prevailing circumstances, it was a good alternative. Naina mentioned how recorded lectures were more effective than live ones, saying, "We can watch recorded lectures many times. We can focus on even small details. In live lectures, many small details may be lost." They also pointed out the advantage of a relatively small group in which different aspects of teaching practice could be discussed more deeply.

Other than the general issues that are associated with online teaching, the participants also mentioned some specific ones. They did not believe that it could replace face-to-face teaching practice. Ali called microteaching 2.0 “unnatural.” Naina mentioned the lack of context and a real classroom environment. It was further elaborated by Ali in these words,

In the school setup, most of the time from 8:00 am to 2:00 pm, students are involved in various activities in teaching, administration, overseeing, visiting,

and observing classes. So they are all the time engaged in school setup; but in microteaching [2.0], they have very limited exposure.

Rida also pointed out the fact that microteaching 2.0 was for a short amount of time and mostly focused on a single aspect of teaching practice. As a result, it could not lead to comprehensive professional development. She believed that teacher professional development should not be about “knowing different things individually, but to use them together effectively for the given objectives.” They all unanimously believed that microteaching 2.0 could complement traditional, face-to-face teaching practice, but it was not comprehensive enough to replace it.

Teaching Practice through Emails and WhatsApp

Bilal, who belonged to one of the lesser developed areas in Pakistan, said that his university provided teaching practice to prospective teachers through emails and WhatsApp. The students would be asked to prepare lesson plans and send them to their teachers through email. They would sometimes discuss it through WhatsApp groups. There was no actual teaching practice during the whole time. The entire activity was carried out “for formalities and [to make] sure that the students complete their degrees on time.” Bilal cited poverty, acute internet and electricity issues, lack of access to computers or smartphones, and inability to use those platforms and software as some of the key reasons behind it.

Reasons Behind the Inability of Teaching Practice to Prepare Prospective Teachers for Emerging Challenges and a Technology-Infused World

It was quite apparent that schoolteachers in Pakistan were not well-prepared for a technology-infused world and unexpected challenges like COVID-19. Pre-service teacher education (especially teaching practice) is one of the most important ways to prepare teachers for such challenges. This question was posed so that the gaps and deficiencies in teaching practice could be explored. Based on them, the study could come up with suggestions to improve it. Three main themes emerged from the responses of the participants: ignoring the use of modern technologies and tools, lack of focus and attention to teaching practice, and clerical, not creative, approach.

Ignoring the Use of Modern Technologies and Tools

All the participants agreed that teaching practice methods and strategies in Pakistan were inadequate to prepare teachers for emerging challenges and a technology-infused world. They pointed out how teaching practice before COVID-19 was still very much rooted in a traditional mindset and pedagogical approaches. There was very little to no use of technology. Sana said that all the courses were taught in traditional classrooms with board and board markers. In the same way, the whole teaching practice course was designed based on the traditional teaching method; consequently, prospective teachers were ill-prepared to teach using modern technologies and tools.

Maria compared the use of technology during teaching practice in Pakistan with other countries in these words:

[In] many other countries especially developed ones; they use modern technology, tools, and platforms. In teaching practice even, they blend both traditional and online pedagogical approaches. As a result, when students enter

into professional life, they are prepared for both online and traditional methods. Here... just board, and board markers, charts, and models! How can we expect them for the challenges like COVID-19?

Uzma said that this attitude was not limited to teaching practice courses only as many university teachers were either unable to use modern tools and platforms or were unwilling to do so.

Lack of Focus and Attention to Teaching Practice

Seven of the participants (Sana, Ali, Naina, Rida, Khan, Uzma, and Bilal) said that teaching practice in Pakistan was not given due focus and attention. Naina said that senior faculty members usually avoided supervising teaching practice. Sana said that most of the teachers who were supervising teaching practice were “not qualified.” Khan said that in many universities, these were lecturers or young assistant professors who were given the responsibility of supervising teaching practice. He further elaborated by saying,

Tell me [any] university, single one [in which] associate professor or professor supervise[s] teaching practice. A single one! No, they think it is below their status. Universities do not give importance to it, departments do not give importance to it. Very few want to supervise teaching practice. It is not [a] choice, it is imposed.

The participants believed that although teaching practice was a very important component of a teacher education program, it was considered a low-level activity in Pakistan and was mostly assigned to young, junior faculty members. As a result, the whole practice would instead become just a formality and would often fail to yield the desired results.

Clerical, not Creative Approach

Six participants (Sana, Maria, Naina, Pasha, Khan, and Uzma) said that the whole teaching practice approach and strategies in Pakistan were more “clerical than creative.” Naina specifically pointed out the activity of developing lesson plans as one of the examples. She said,

For the last thirty to forty years, prospective teachers have to prepare lesson plans, the same thing, and the same way. What they do? Either get lesson plans from some online source or colleagues, change a few words and that is it; or they prepare one lesson plan, and the others are just copied and pasted. Change a few things here and there, otherwise, just copy and paste. No creativity, no planning.

Maria said that the whole process was a “mere formality.” She said that often the cooperating teachers would also take it as a mere formality, and some of them would “give their class to prospective teachers and go to the staffroom.” Pasha wondered if every subject teacher was qualified to be a cooperating teacher. He believed that the departments of education did not pay enough attention to the details, making teaching practice a superficial and routine work that was meant to just complete the requirement.

Suggestions to Improve Teaching Practice

The participants were finally asked to give suggestions to improve teaching practice so that it can help prepare prospective teachers for a fast-evolving and technology-infused world.

The suggestions given by the participants were divided into three main themes: incorporating an online mode of education, paying more attention to teaching practice, and specialized training for teaching practice supervisors and cooperating teachers.

Incorporating Online Mode of Education

The foremost suggestion given by the participants was to incorporate the online mode of education into the existing traditional, face-to-face teaching practice model. Their suggestions went in two different directions: using blended learning and adding a few lessons or short-term teaching practice with a purely online mode.

All the participants suggested using blended learning for teaching practice. They said that during face-to-face teaching practice, prospective teachers should incorporate online teaching techniques and practices. Sana said that prospective teachers should not "focus only on the face-to-face teaching," but use a blended approach. She said that it would bring "more adaptability" and the prospective teachers would be better prepared for a technology-infused world. Naina further added that "to meet the demands of 21st-century teaching skills and also to give students real-life experience of school and classroom settings," a blended learning approach should be used.

Four participants (Maria, Naina, Rida, and Uzma) opined that just blended learning may not solve the problem of unforeseeable issues and challenges like COVID-19 which demand a purely online approach. Naina believed that even if prospective teachers had learned to deliver lectures using blended learning, it would not prepare them for purely online classes. Maria said, "[Due to the] changing time, so I would not suggest that teachers should be only prepared to teach in face-to-face mode, they should [also] know all the crafts and tools to become a good teacher online." She further added that a good teacher in the current world should be effective and skilled in both modes.

Uzma believed that COVID-19 provided a great opportunity for higher education authorities, accreditation councils for teacher education, and universities to come forward and revisit teacher education programs, especially teaching practice. She believed that teaching practice should be offered through blended learning (in conventional classes using elements of online education); however, some credit hours should be reserved for microteaching 2.0. She argued in these words,

See, in B.Ed Honours, there are 15 credit hours of teaching practice, stretching over five semesters. First, the students go to the schools for observations and then for short-term teaching practice, and then for long-term teaching practice. After observations, instead of short-term teaching practice in the schools, they should do it through microteaching [2.0]; and then go to schools for short-term and long-term teaching practice. This would allow them opportunities to not only practice their pedagogical skills in traditional classrooms but also through online mode.

She further added that designing the teaching practice course in that way would also "help the students in using blended learning." As the students would have delivered purely online lectures, they would be more adept and comfortable in using them in a traditional class.

It is important to note that the participants did not want purely online teaching practice as it would not equip the prospective teachers with essential skills. Instead, they advocated for a blended mode and allocating some credit hours for purely online mode along with the traditional one.

Paying More Attention to Teaching Practice

Another point on which all the participants unanimously agreed was giving more importance to teaching practice. The participants pointed out that in Pakistan, teaching practice was mostly considered a "clerical" and "low-level" task; consequently, it was often assigned to young and junior faculty members. Naina said that it was often given to those faculty members who were "not in the good books" of the head of department or dean.

The participants highlighted the role and importance of teaching practice in teacher development programs and asked the universities to pay more attention to it. Senior faculty members should also be given the responsibility of teaching practice. Maria also suggested organizing seminars and workshops to highlight its role and importance and to find out better strategies for it.

Specialized Training for Teaching Practice Supervisors and Cooperating Teachers

Seven participants (Maria, Naina, Rida, Pasha, Khan, Uzma, and Bilal) talked about providing specialized training to teaching practice supervisors and cooperating teachers. Pasha believed that in order to improve teaching practice, "we should train ourselves first." Khan said that often young faculty members were given the task of teaching practice who find it difficult to manage it efficiently.

The participants pointed out that teaching practice was a highly specialized program and needed specialized skills. In almost all universities, faculty members are randomly picked to supervise teaching practice without any proper training. Rida explained that in these words, "I have seen training workshops for teaching methods, for assessment, for research, for publications; I have never seen [any] about supervising teaching practice." It was suggested that there should be training workshops for teaching practice supervisors. These should not be one-time training sessions but at the start of every semester in which teaching practice was to be carried out. In this way, not only can they refresh their knowledge, but also add new strategies and techniques.

Maria and Rida suggested training cooperating teachers so that they can also evaluate the prospective teachers properly and objectively. Rida pointed out that in many cases, it was just the subject teacher who would sit there and evaluate the prospective teacher. Despite being provided with the documents and materials, many were not "competent enough" to observe the prospective teachers. Rida also suggested that cooperating teachers should be properly trained in "observing, analyzing, and reporting" prospective teachers.

Discussion and Conclusion

Teaching practice is one of the most important components of any teacher education program (Mashile, 2008). Unlike many developed countries where teaching practice has evolved over the years to incorporate innovative pedagogical approaches, digital tools, and modern technologies (Cobb, 1999; Heikkinen et al., 2018); in many developing countries, teaching practice has remained stuck in traditional approaches and strategies (Sife et al., 2007). Traditional and conservative approaches coupled with the specific nature and needs of teaching practice made it especially vulnerable in many developing countries, and it was caught off

guard in the wake of the pandemic (Kundu & Bej, 2021). This study aimed to find out the teaching practice methods and strategies before and during COVID-19 in Pakistan and explore why teaching practice has not been able to evolve and produce teachers who can handle the challenges of a fast-changing, technology-infused world.

The findings of this study reveal the same. Before COVID-19, only one university in Pakistan was incorporating elements of the online mode of education for teaching practice. Others were using traditional approaches. Literature also indicates that before COVID-19, teaching practice in Pakistan was carried out through traditional methods and strategies (Jumani & Abbasi, 2015; Malik et al., 2022b). Not only did it make teaching practice ineffective, but also inflexible and rigid as a subject that was more susceptible to the challenges of COVID-19. This left the universities in a spot of bother as they tried to find alternative ways and strategies for online teaching practice.

The second research question explored the methods and strategies that Pakistani universities employed to continue teaching practice during COVID-19. Being a heterogeneous country with multiple diversities and disparities (Amin & Ahmad, 2018), Pakistani universities' responses to COVID-19 varied a great deal based on their infrastructure, technological expertise, geographical location, and the students' socio-economic background (Malik et al., 2022a). According to the respondents, most of the universities (eight out of nine) used different online teaching practice methods and strategies during COVID-19. Literature also points out online and digital teaching practice as a go-to strategy during the pandemic (Noor et al., 2020; Sepulveda-Escobar & Morrison, 2020). On the other hand, the university, which was situated in Balochistan (the least developed province of Pakistan), had almost no teaching practice. They just provided the materials to the students through emails and WhatsApp to show that the process was continuing. This indicates a deeper issue. COVID-19 has not only created problems for education systems overall but also added to the existing social, economic, and educational disparities as a result of the digital divide (Azubuike et al., 2021; Cheshmehzangi et al., 2022; Malik et al., 2022a).

This instigated us to probe deeper into the status of the universities in Balochistan during COVID-19. HEC compiled data about the situation of Pakistani universities during COVID-19. It assesses the universities based on the required infrastructure, resources, and expertise to offer online classes during the pandemic. A look at the relevant webpage shows that whereas the universities in other provinces and regions did reasonably well (KP and Sindh, 80%; Punjab, Islamabad, and Azad Jammu & Kashmir around 90%; however, these findings should be read with caution as they are based on self-reported data), there is no data for Balochistan (HEC, n.d.) despite the fact that there are more than ten universities in the province. In their study about the responses of Pakistani universities during COVID-19, Malik et al. (2022a) also pointed it out, even fearing that COVID-19 would not only "further increase the disparities in the country but may also increase frustration and sense of deprivation in those areas" (p. 12).

Traditional teaching practice approaches in Pakistan not only made it more prone to COVID-19-induced crisis but also made it ineffective in preparing prospective teachers for an ever-changing, digitalized world. While talking about the causes behind its deficiencies in preparing teachers for those challenges, the participants unanimously pointed out overlooking the use of modern tools and technologies. Realizing the role and importance of ICT and digital tools, the world had been fast incorporating modern technologies, tools, and techniques into the teaching practice long before COVID-19. Interactive online classrooms, virtual classrooms, microteaching 2.0, and Second Life became common components of teaching practice in developed countries (Dalgarno et al., 2016; King, 2002; Muir et al., 2013); however, in many developing countries, such practices remained elusive until COVID-19 forced them to change their methods and practices. This can be perfectly exemplified by microteaching (and later

microteaching 2.0), a teaching practice strategy that has been introduced and practiced in the United States since the mid-1960s (Allen & Clark, 1967; Saunders et al., 1975). In Pakistan, on the other hand, it was not until the pandemic that the universities started to use it (Malik et al., 2022b). It means that Pakistan was almost fifty-five years behind the USA in its implementation.

Even though literature repeatedly highlights its role and importance (Haigh, 2001; Mashile, 2008), the participants stated that teaching practice was not given due attention and importance in Pakistan. As compared to research, there are very few workshops, seminars, and conferences held for the innovation in, promotion of, and training for teaching practice in Pakistan, despite the fact that supervising teaching practice is a very different and specialized task. A Ph.D. or M.Phil. may be able to teach courses or supervise research based on his/her previous academic knowledge, skills, and experiences, but those skills and experiences may not be enough to help in supervising teaching practice.

While talking about the ways to improve teaching practice, the participants strongly suggested using a blended mode. Literature indicates that technology-based approaches help prospective teachers in their professional development (Frey, 2008). However, the participants of the study believed that as prospective teachers have to go to traditional schools to teach, using purely online teaching practice methods would not be realistic and effective. The blended mode was believed to be the most effective in this situation. Literature also suggests that using a blended mode can be the most effective for teachers' professional development (Hellmig, 2008). Using new and innovative pedagogical approaches and infusing technology into teaching practice methods has led developed countries to produce skilled, knowledgeable, innovative, and effective teachers who can meet the challenges of the 21st century (Dalgarno et al., 2016; Hogan & Gopinathan, 2008). However, some also suggested that some modules or credit hours for teaching practice should be reserved for purely online sessions like microteaching 2.0. This would not only help them understand the role and importance of the online mode of education but would also help them during crises like COVID-19.

Teaching practice, being one of the most important components of teacher education (Mashile, 2008), should be given due importance and attention. It is a highly specialized subject in which the role of the supervisors is critical (Bourke, 2001; Stimpson et al., 2000). Unfortunately, it does not appear to be the case in Pakistan. It is generally considered clerical work which is often avoided by senior faculty members. Also, despite requiring specialized skills and expertise, teaching practice supervisors and cooperating teachers are not provided with adequate and relevant training. The participants stressed this fact, suggesting that not only should its role and importance be understood better, but teaching practice supervisors and cooperating teachers should also be provided with specialized training for it. This process should be continuous, with training sessions for teaching practice supervisors and cooperating teachers at the start of every semester so that they can learn new and innovative tools, techniques, and technologies for it.

With all these improvements and innovations, teaching practice will no longer be just a subject for the students to pass but a vibrant, dynamic, and innovative process that would not only equip prospective teachers with necessary knowledge and skills but would also prepare them to meet the challenges of a fast-evolving and technology-infused world.

Limitations and Further Research

In this study, we followed the eight criteria of a good qualitative study presented by Tracy (2010). Those criteria are “(a) worthy topic, (b) rich rigor, (c) sincerity, (d) credibility, (e) resonance, (f) significant contribution, (g) ethics, and (h) meaningful coherence” (Tracy,

2010, p. 839); however, there were a few limitations and shortcomings in this study due to multiple factors such as time, access, and resources.

Originally, we wanted to gather data from two teaching practice supervisors from each university to improve credibility. Interviewing prospective teachers for triangulation was also considered. Another suggestion was to request the participants to allow us to be part of online teaching practice classes so that we could observe and triangulate the findings. However, due to the lack of time and access, we had to limit it to one teaching practice supervisor from each university. This reduced the credibility of the study.

Rich rigor demands a careful and full understanding of the context and time in the field (Tracy, 2010). Initially, we wanted to visit the universities to conduct face-to-face interviews. It could also give us a better understanding of the context and allow us to spend more time in the field. This was again shot down by COVID-19-induced restrictions, budgetary issues, and our professional commitments. We believe that if those limitations could have been overcome, the credibility and rigor of the current study would have improved.

Further studies can be carried out using mixed-methods to see if and how much the findings persist across the country. Data can also be gathered from prospective teachers for a more comprehensive picture. This study gives some suggestions to improve teaching practice methods and strategies. It is important to conduct pilot studies with those suggestions to see how effective they are.

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