Teachers' Critical Reflective Practice in the Context of Online Teaching: A Qualitative Study

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Abstract

This study aims to find out how online teaching is improved through critical reflection. The current study is a qualitative study using a hermeneutic phenomenology research design. Using semi-structured interviews, the researcher accessed the participants' world of the lived experience and their interpretations of these experiences. Purposive sampling was used to collect data from 10 research participants from different schools in Lahore. A semi-structured interview guide was used to collect data. The data analysis revealed a gap in the practical implementation of critical reflection among teachers to improve their teaching. Few teachers used critical reflection to identify the deficits and strengths of their teaching to enhance online pedagogy. It has been concluded that teachers need to be fully aware of its usefulness. The study suggests that critical reflection should be added to teacher training programs and made mandatory for all teachers.

Keywords: Online Teaching; Critical Reflection; Zoom; Hermeneutic Phenomenology

Introduction

There was a widespread shift in teaching style during the Covid-19 epidemic, with a growing reliance on internet services and the adoption of new standards (Zafar, Muhammad, & Bokhari, 2022). As a result of the change to an online work environment, national differences have diminished while global connectivity and educational possibilities have increased. Digital education has been used in developed nations such as Australia, Europe, and the United States of America for decades. In contrast to impoverished countries where online education is a relatively recent phenomenon, assessing teachers' perspectives is essential during a crisis (Sharjeel, Muhammad, & Waqar, 2022). Pakistan is a developing country that has yet to create a complete national infrastructure for online education via virtual classrooms. The majority of distance education is overseen by a single large public institution that fully embraces the online teaching paradigm. Plans to provide online classes during an emergency remained inadequate due to the growing importance of face-to-face education (Abid, Zahid, Shahid, & Bukhari, 2021).

Pakistani universities are already experimenting with distance learning. HEC has urged other prominent universities in Pakistan to assist these institutions in improving online teaching and learning. In developing countries, software administration is more complex. The online education system requires lesson design, instructional resources (audio and video), software installation and use, and technical help (Tariq, Dilawar, & Muhammad, 2019). However, the lack of IT knowledge and electronic device availability among faculty members is the biggest roadblock (Hani, Naz, & Muhammad, 2021; Mahmood, 2021; Naz, Hani, & Muhammad, 2020).

The ideas of critical reflection and the terminology used are inconsistent because no one theory of critical reflection is cohesive. Some individuals use introspection and critical reflection, reflectiveness, and critical self-reflection interchangeably (Van Woerkom, 2010). In education and management development, reflection, primarily based on experience, is critical for developing concepts that impact cognition and behavior (Reynolds, 1998). Critical reflection is the reflection process that includes those who ponder the effect of a socially dominant thought (Fook & Askeland, 2006).

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Critical reflection is a continual and intentional effort that ensures that our instruction is accurate and valid. We are participating in essential reflective training when we make a constant endeavor to recollect. Teachers engage in critical reflection when they become aware of how higher power and prevalent ideological frameworks influence educational procedures and relationships. The great bulk of the reflections is on technology. Many practicing teachers identify as progressive students committed to democratizing the classroom and empowering students (Brookfield, 2017).

Zoom, an app that was created for communication purposes, can now be utilized for educational purposes. In locations with restricted mobility and a scarcity of teachers, Zoom and Skype can be helpful. The sharing display capability of the webinar application satisfied the very minimum requirements for enabling the teaching-learning inter-location procedure. Zoom and Skype are only two of the many similar online learning technologies available. Therefore, Zoom is proven to be the best e-learning solution (Dharma, Asmarani, & Dewi, 2017).

Promoting collaborative cognition to identify, criticize, and create new reference frames, resulting in new behaviors, allows academics to teach reflexively and critically (Ossa Parra, Gutiérrez, & Aldana, 2014). Students can better understand the numerous social and political contexts in which they teach and the power dynamics in educational settings by critically reflecting on their teaching. Transparency, responsibility, continual questioning, and concern for the consequences of one's actions and the process by which outcomes are created characterize critical reflective teaching (Naseer, Muhammad, & Masood, 2020; Ossa Parra et al., 2014).

A considerable amount of critical reflection literature, according to numerous studies, shows the essential importance of critical reflection for educational development and its requirement for teachers' professional growth (Ahmed, Muhammad, & Anis, 2020; Saif, Muhammad, & Safdar, 2021). But unfortunately, there is no evidence that teachers can enhance their online teaching practices by watching their recorded lectures objectively to identify and remedy instructional problems.

Teachers in developing countries such as Pakistan are less equipped to think critically and adapt their lessons as needed. Teachers use Zoom to deliver lectures to students and record them for later use. On the other hand, they did not utilize Zoom recordings to reflect on them or analyze and enhance their teaching critically. As a result, this research focuses on teachers who use Zoom recordings to improve their online education. There is still a shortage of understanding as to why this occurs. This research aims to learn more about this phenomenon and close a gap in the literature.

Ensuring quality learning and a better learning experience is also essential for online learning and teaching. There are various theories for effective face-to-face learning and teaching, of which Chickering and Gamson (1987) is an excellent theory that provides a clear guideline for ensuring pedagogy in undergraduate education. The first researcher of this has chosen an effective way to implement this theory for the effective delivery of online education. Checkering and Gamson's (1987) "Seven Principles for Good Practice in Undergraduate Education" are a milestone in ensuring pedagogical education for face-to-face study. However, most higher education institutions in Pakistan and other parts of the world offer online education during this pandemic. Still, the biggest concern is quality assurance and teaching for effective online instruction.

Critical reflection includes evaluating one's individual and professional belief systems. Teachers who are critical of both their education and the societal contexts in which these activities occur. They care about fairness and social justice issues in and out of the classroom, and they want to tie their work to democratic values. Critical reflection is widely acknowledged in literature to assess one's work's ethical, social, and political impacts. There is, however, a lot of variation in the presence of a self-reflection or challenge system. Critical reflection is dialogical, intimate, and intrapersonal (Larrivee, 2008).

The purpose of this study is to explore how teachers improve their online teaching through critical reflection on Zoom recordings. An in-depth examination of their experiences might reveal how teachers think about and engage in the critical process of reflection. As a result, this research focuses on teachers' opinions on Zoom-recorded lecture criticism and provides an in-depth examination of the reflective process. It describes how teachers reflect on their teaching and delves into the content of their thoughts, as critical reflection is crucial for teachers' Professional Development. It might significantly impact a teacher's capacity to improve their teaching through professional development involving critical reflection throughout the educational process.

Methods

The current study used a hermeneutic phenomenology research design (Sharjeel et al., 2022). The researcher selected criterion sampling, which involves selecting cases that meet some predetermined criterion of importance (Suri, 2011). The following criteria were used to decide the inclusion of participants in this study:

(1)   All the participants had experienced online teaching.

(2)   All the participants had enriched information related to online teaching through the Zoom application.

(3)   All the participants had access to the internet.

(4)   All the participants were willing to share their perceptions and experiences voluntarily.

(5)   All the participants approved of recording their interviews for transcription.

Table 1: Demographic information of the participants

Participant	Gender	Age	Academic Qualification	Experience (Years)	School
Participant 1	Female	25	MPhil ELM	2	Private
Participant 2	Female	24	MPhil ELM	2	Private
Participant 3	Female	26	MPhil ELM	4	Private
Participant 4	Female	28	MPhil ELM	1	Private
Participant 5	Male	40	MPhil ELM	18	Private
Participant 6	Female	35	MPhil ELM	15	Private
Participant 7	Female	28	MPhil ELM	3	Private
Participant 8	Female	24	MPhil ELM	3	Private
Participant 9	Male	40	MPhil ELM	17	Private
Participant 10	Female	27	MPhil ELM	6	Private

In the current study, semi-structured interviews were conducted to collect data. Usually, in a hermeneutic phenomenology research study, semi-structured interviews are the most frequently adopted option to collect data. During the dialogue, the researcher adds questions in a pre-planned interview form to pre-information from the participant. As per the study structure, wherefrom fewer participants, more data is expected to collect; the semi-structured is considered the most appropriate option.

The first researcher contacted the participants by phone to discuss the next steps in the research process. The format of the interviews was semi-structured, and participants were individually interviewed through an online zoom meeting (Gray, Wong-Wylie, Rempel, & Cook, 2020). Zoom recording was used as a digital audio recording device to record the interviews. In addition, the interview guide was used to take notes whenever it was deemed necessary (Brinkmann & Kvale, 2018; Roulston & Choi, 2018). All interview recordings were transcribed and translated into the English language using Otter software.

Thematic analysis of interview data can be done in a variety of ways (Miles, Huberman, & Saldaña, 2020). However, in this study, the analysis of data was done using framework analysis (Furber, 2010). It's typically used to describe the meaning of interview transcripts. This method involves six steps: Familiarization with data, coding, generating themes, reviewing themes, defining and naming themes, and writing up (Parkinson, Eatough, Holmes, Stapley, & Midgley, 2016). The first researcher studied the data carefully to uncover recurring themes, subjects, concepts, and sequences of meaning (Ritchie, Lewis, Nicholls, & Ormston, 2013).

Results

Significance of Critical Reflection

Participants were inquired about their knowledge of critical reflection and its significance. They were asked and probed to talk about their viewpoint and thoughts related to critical-reflective practice. They were asked about the importance of critical reflection in the Pakistani context. Additionally, they were asked about the essential role of critical reflection in teaching and its implication in teaching practice.

Collected data showed that most of the participants knew about the term "critical reflection." They believed it is a process of looking back on past experiences to analyze, examine and generate new meaning. In this process, individuals learn from past experiences and use them in future action planning. For example, a participant stated

> *Critical reflection is rethinking past experiences to learn something from them. This process is done to bring change for the sake of improvement. We look into past events and identify what amendments are needed for the future. (Participant 3)*

On the other hand, few participants responded that critical reflection develops critical thinking and caring culture. For example, a participant stated

> *Critical reflection is the process of self-analysis, identifying or assessing how we perceive any situation, event, belief, and feelings regarding a specific issue. It asks us to think about our practices and develop critical thinking. It is important to develop caring cultures among people by analyzing what goes wrong. (Participant 1)*

Participants were asked to share their understanding of the importance of critical reflection in the current educational context of Pakistan. Most participants believed that critical reflection has a vital role in developing teachers' skills, but there is a gap in introducing this concept properly among teachers. They thought that most teachers did not know about critical reflection because it was not part of teacher training programs. For example, one of the participants stated

> *This concept is essential for all individuals, regardless of any specific field. Unfortunately, in Pakistan, this concept has not made enough space. It enhances self-organization, teamwork, building relationships, giving direction, teacher's pedagogy, and preparing to accept change. Except for these benefits, less than 10% of Pakistanis used this concept of critical reflection. The reason is that we believe in criticism of others, not in self-assessment. This concept is not incorporated into teaching training programs. Why do teachers have no awareness regarding it? Critical reflection is not only needed by teachers but by all Pakistanis. (Participant 7)*

On the other hand, a few participants responded that some teachers knew about critical reflection but did not use it due to a lack of motivation and a heavy workload. For example, one of the participants stated

> *In Pakistan, some teachers know about critical reflection, but they are too occupied with other tasks that they don't manage to do critical reflection. Our culture is that if we get an incentive to do any task or it affects our career, then we take that thing seriously. Otherwise, we refuse to adopt that habit. In our country, we do reflections that are not time-taking but avoid those which take time. (Participant 9)*

Role of critical reflection in teaching

After an inquiry about the participants' knowledge and the importance of critical reflective practice in the Pakistani context, interviewees were asked about the role of critical reflection in the teaching profession. Most participants believed that critical reflection helps teachers improve their pedagogy and enhance their teaching skills. Critical reflection gives direction to the teacher and boosts their confidence level. For example, one of the participants stated

> *Critical reflection is very important for teaching. It helps teachers to develop more skills. Through critical reflection, a teacher can explore new teaching strategies for their students. Critical reflection helps to gain the confidence of students while teaching. Critical reflection on pedagogy enhances students learning and makes it easy for them. (Participant 10)*

Few participants responded that critical reflection brings innovation and creativity to teaching. For example, one of the participants stated

> *Critical reflection helps a teacher to understand his students. It also helps in enhancing teaching strategies. It brings innovation to your teaching, like when you teach your students with the same methods or face any problem in the classroom. Then, you critically reflect on your teaching and find out the gap where the actual problem lies. Here, you change your teaching strategies and make it attractive for students to try different teaching ideas. So, critical reflection acts as a change agent in teaching. (Participant 6)*

One of the participants responded that critical reflection gives a new way of thinking.

> *Critical reflection is critical in teaching because it provides a framework to think differently and gives you a lens through which to see the situation differently. It enables a teacher to change their values and beliefs according to the needs of the present day and the needs of students. (Participant 8)*

Another participant responded that critical reflection improves critical thinking and decision-making skills.

It helps a lot to teachers to improve their teaching abilities by critically reflecting on them. It also enhances critical thinking abilities and improves problem-solving skills or decision-making powers among teachers. Critical reflection helps teachers articulate why they choose specific instructional techniques and improve their instruction to influence students positively. (Participant 1)

Developing a sense of critical reflection among teachers to enhance skills

All the participants agreed that developing a sense of critical reflection helped teachers enhance their teaching skills. They believed that critical reflection helped in many ways to develop teaching skills like it helped generate new knowledge to enhance students' learning. Critical reflection brings innovative ideas and versatility to teaching strategies. Teachers left obsolete practices and replaced them with new techniques. Critical reflection gives direction to the teachers to observe other people's practices and adopt valuable practices to improve their practices. By encouraging the research habit, critical reflection could also be made in practice to enhance teaching practices. For example, one of the participants stated:

Yes, if teachers develop the habit of critical reflection regularly, they can learn a lot from it and can enhance their skills. You can adopt new strategies in your teaching and bring creativity to it. You can make your teaching a fun activity by developing students' interest in the teaching-learning process. You can understand the needs of your students after critically reflecting on them. A teacher can also enhance their students' learning ability when he reflects on their abilities and tries to overcome their deficits. (Participant 6)

Need for critical reflection among teachers

All the participants favored teaching the course of critical reflection to all the teachers for many reasons. They were asked about the need to teach critical reflection. They believed that critical reflection should be part of the teaching training program because most teachers did not know it. They said that critical reflection is beneficial for teachers in improving their skills. It is necessary for the overall development of teachers. For example, one participant stated

To improve learning and teaching skills, every person takes the support of critical reflection and critical thinking. We do a lot of critical thinking and reflection in daily life activities. Unfortunately, there is a deficiency of critical reflection in our education system. Even our curriculum is not aligned to promote critical thinking and developing critical reflection habits. There is a need to develop a sense of critical reflection and critical thinking. When they understand what critical reflection is, then they will understand the importance of critical reflection. People are unaware of the impacts of critical reflection on society. (Participant 9)

On the other hand, one participant responded that critical reflection couldn't be taught to the teacher until they were unwilling and motivated to learn.

I think that critical reflection can't be taught if teachers are not willing to learn and practice this concept. We should add this concept at a very early stage of the learning process so that teachers can make a habit of doing critical reflection practice. This concept is essential for both students and teachers to enhance and polish their skills. Our culture and atmosphere of institutes do not support critical reflection on why there is a gap in developing this important phenomenon. It will take time to develop a sense of critical reflection and make it habitual. (Participant 6)

Change in beliefs after knowing critical reflection

After inquiring about the need for critical reflection among teachers, the interviewer asked participants about the change in their values and beliefs after learning the concept of critical reflection. Most participants believed that critical reflection is a self-analysis procedure that did for the sake of self-improvement. It is not a criticism, but it is positive feedback that is given to bring improvement in existing practices. For example, one participant stated

When I did my reflections, a few things were embarrassing for me, and some were funny. But then, I realized that these are just for the sake of improvement, not for criticism or being worried. Critical reflection is a positive thing. (Participant 7)

Few participants responded that critical reflection is beneficial for improving teaching skills and dealing with other problems. For example, one participant stated

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When I learned this concept, it helped me in teaching and other projects in every aspect, as I also worked as a CEO of a funding community. It helped me in dealing with management issues, dealing with parents, and dealing with my colleagues. I reflected on my communication skills when I talked like this and what its impact was on others. So, what should I do to cover it? (Participant 5)

Use of critical reflection among experienced and prospective teachers

Collected responses showed that most participants believed that most teachers did not use critical reflection because they didn't know about it. There is a lack of awareness among teachers related to this concept. Others who know use it significantly less due to busy routines. They emphasized that if teachers understood the usefulness of this concept, they would use it in their teaching to improve. For example, one participant stated

Significantly fewer teachers used this approach in their teaching. Most teachers didn't know about critical reflection. Other teachers didn't use it due to their busy routines and having no habit of writing. (Participant 4)

Few participants responded that experienced teachers did not use critical reflection in teaching because they thought they did not need improvement, but few prospective teachers used it. As one participant stated

I see very few experienced teachers using the critical reflection approach to improve their teaching. I think they feel that they didn't need any improvement. They are comfortable with their teaching strategies. They also didn't know about the concept of critical reflection as much and how this process is helpful for them to bring innovation to their teaching. In contrast, prospective teachers know the basics of critical reflection. Prospective teachers are less confident in their teaching. That's why they want to self-assess their teaching strategies. They use critical reflection to improve their skills. (Participant 1)

Role of critical reflection in the professional development of teachers

Participants were asked about the role of critical reflection in the professional development of teachers. Most participants responded that critical reflection is the key element of the professional development of teachers; it creates a sense of accepting mistakes and taking responsibility for their learning among teachers, and it develops confidence among teachers. They accept their flaws and try to improve them. For example, one participant stated

Critical reflection develops the sense of taking responsibility for learning and improvement. Teachers accept the change with open-mindedness. They welcome any situation and act accordingly. They do not blame anyone for any case, and they analyze the problem from a different perspective and find the best solutions. (Participant 10)

Another participant stated that every time degrees or diplomas do not work for the professional development of teachers. As stated that

For professional development, you don't need new degrees and diplomas all the time. To bring continuous improvement in your teaching strategies and attitude, you need regular critical reflection. The one best thing an educator can do is to learn from himself. Your diplomas, certificates, and training are nothing if you don't learn from yourself and always feel the need for improvement. You had to analyze your mistakes and, at the same time, your strengths. You should need to identify opportunities for you and what is required to minimize, and so on. (Participant 5)

Practical Implementation of Critical Reflection in Teaching

Teachers were inquired about the application of critical reflection in improving their teaching. They were also asked about doing critical reflection on lecture recordings to identify their mistakes and strengths, what gaps they observed and how they overcame those while doing critical reflection.

Personal use of critical reflection in teaching

Collected responses showed that all the participants used critical reflection to improve their teaching strategies. They believed that it was the best tool to self-evaluate their practices. For example, two participants stated

I used critical reflection in my teaching. Many situations demand you to think and reflect on your practices because you know every problem is different, and you must act according to that situation. For example, when I'm teaching, I have to adopt some new strategy when

something happens suddenly. It is just due to reflection because if I'm not using reflection, I cannot develop my thinking abilities. (Participant 8)

Sometimes, I need to know whether my lessons helped to engage the class or not. Did my students find my delivered lecture interesting? So, I did reflections to identify the answer to my question. (Participant 3)

Recording online lectures

All the teachers responded that they did lecture recordings to reflect on it later. They later self-evaluate their teaching. They recorded a lecture on the Zoom application. Most teachers said that they didn't do reflections regularly on each recording but did when needed. For example, one participant stated

Yes, I mostly record my lectures to listen to what went well and what went wrong during the class. (Participant 3)

Yes, I watched my lectures many times but especially when I felt any problem in that particular session. Recorded lectures are the best tool to improve our teaching. When I critically analyze my whole lecture, I find out my little or big mistakes and gaps related to gestures, voice pitch, voice clarity, and way of communication. Then, I practiced those things. After applying that in my teaching, I again record my lecture and critically reflect on it. (Participant 4)

Critical reflection on recorded lectures

After inquiring from teachers about lecture recording, the interviewer asked them to critically reflect on those recorded lectures to check what went well today and what is not. Most teachers reported that they watched recorded lectures and also self-evaluated the whole lecture. They said that lecture recordings are an excellent way of live evaluating yourself without waiting for feedback. They also mentioned that it gave them direction to achieve their goals effectively. For example, one participant stated

I watched my recorded lectures later and critically reflected on the recordings. I identified that during the course, there were frequent movements in body language. My hands' actions were more than usual. Then, I limited my body's actions. I felt that I spoke fast and that some of my words were not audible to others. Then, I practiced speaking slowly. Besides this, critical reflection also helps you determine which content is delivered from which method. What would be your methodology? It also helps to maintain the sequence of the lecture. Critical reflection helps from the very start of the teaching-learning process till the point of assessing the student. Everything is counted under it. (Participant 5)

Few participants responded that critical reflection helped enhance the lecture's effectiveness by identifying the root causes. As one of the participants stated

Once I trained a batch to promote blended learning. After the training, I didn't find desired results. Then, I critically reflect on that session. I found that most of the participants were not technology familiar. That's why training on blended learning remained aside. All the focus of the participants was shifted toward learning technology. Then, I concluded that blended learning is more beneficial for those who already know technology usage. On the other hand, you should first train them in a session on technology and then bring them towards blended learning. (Participant 9)

Gaps existed in teaching

Teachers were asked about the gaps they identified in their teaching during a critical reflection on recorded lectures. Most of the teachers believed that there was a gap in their teaching strategies. They felt that their strategy was poor as students were not engaged in classroom activities. Students' attitudes were disturbing in the class. Students did not understand the lecture due to a flawed teaching method. For example, one of the participants stated

When I critically reflected on recorded sessions, I identified that I taught the skin's internal structure in one of my lectures by drawing the diagram on the whiteboard with a blackboard marker. I realized that all the structure was mixed, and a mess was created. Then, I thought it was not clearly understood myself then. How could my students understand it? The next day, I delivered that same lecture using board markers of different colors and properly highlighted parts to clarify their other parts. Critical reflection not only points out your gaps but also gives you possible ways to overcome those. (Participant 7)

Few teachers responded that they identified a gap in their communication skills and body language. One participant stated

> *I identified that I used repeated words and phrases, and I was unaware of it. When I reflect on recordings, I get to know them. I feel it is a very non-professional manner of delivering a lecture. Then, I practiced it to overcome it. (Participant 6)*

Identifying weaknesses and strengths of teaching

Teachers were asked about the usefulness of critical reflection to identify their teaching weaknesses and strengths after watching recorded lectures. All the teachers believed that critical reflection analysis of lecture recordings is constructive in identifying the deficits and substantial areas of teaching. One of the participants stated

> *Yes, we can better analyze our teaching because we know our capacities and capabilities. When I critically reflected on my lecture recordings, I noticed minor points that I had never felt before. I found many mistakes which I considered casual. Then, I practiced it to avoid them. Critical reflections on recordings are the best way to identify your weak and strong areas. (Participant 10)*

Barriers to online teaching

Teachers were asked about the barriers to online teaching which they faced. Most teachers believe that technical issues are the main hurdle in online teaching. They met poor internet signals and also in devices used for online teaching due to heavy load. For example, one participant stated

> *The major issue in online teaching is Internet connectivity. I experienced bad voice distortions in the classroom. It wasted most of the time of the class. In zoom, after a very 45mins meeting was ended. Then, again generated a link and assured whether all students joined the link or not. It was a very irritating moment. Sometimes zoom application was down due to excessive use of it. (Participant 1)*

Few participants responded that parents' and students' attitudes toward online teaching are non-serious. Parents do not cooperate with teachers. One participant stated

> *The hurdles I faced were mainly from the side of students. Students had ethical issues, and their attitude towards online teaching was extremely non-serious. When I pointed out the students, they just left the class and did not unmated their microphones. One other thing is that parents did not cooperate in online teaching. (Participant 10)*

One participant stated that school administration is the main barrier in online teaching-learning because the curriculum is not according to online teaching. They didn't provide facilities for online teaching.

> *First, our curriculum is not aligned with digital learning. Second, our schools do not have adequate ICT infrastructure for online teaching and learning. Schools and teachers have no motivation to adopt digital learning. Third, our school leaders are not much aware of the need for and importance of E-learning. They have no passion for incorporating online teaching and learning. (Participant 9)*

Preparing portfolios and learning journals

The interviewer asked about writing reflective diaries and preparing learning journals and portfolios. Most participants believed that they didn't prepare portfolios and learning journals, but they composed a reflective diary and reflective notes. After critical reflection, they wrote the important points in their reflective notes for later use. One participant stated:

> *Yes, I have a habit of writing, and I always keep my diary to write reflections. I also wrote a research paper that was later published. That paper was related to reflective practice and its challenges. I wrote all the problems teachers faced in online teaching and during reflective practice. (Participant 5)*

Few participants stated that they did not write any reflection in a diary or portfolio. As one participant stated:

> *Due to poor English writing skills and a busy schedule, I could not make an official diary or portfolio after reflecting on related tasks. I just jotted down reflections on paper where I needed them. (Participant 3)*

Benefits of portfolios or learning journals

After inquiring about preparing learning journals, portfolios, and diaries, the interviewer asked teachers about the benefits of writing reflective diaries, portfolios, and learning journals. Most of the

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participants responded that learning journals, portfolios, and diaries provide support in teaching. They answered that it is the way to record your performance and keep it as a shred of evidence for your improvement. For example, one participant stated

> *It is the guideline for your teaching. For example, when you teach a topic to the students and write reflections regarding that topic. After a month, you have to teach that topic you consult that reflective notes keep the important points in your mind. What to do and what don't do while delivering that topic. You can now try another approach to teaching that topic and can see the difference. You can now analyze which method is more fruitful. So, portfolios are the record of your teaching. (Participant 7)*
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> *I prepared portfolios after reflecting on my teaching strategies. It was evidence of the improvements that I bring to my teaching. This portfolio was the record of my teaching career. It was also helpful for prospective teachers because they would find it useful in their teaching careers. (Participant 1)*

Few participants responded that it is the best tool to remember key points of reflection. As one participant stated:

> *Yes, it may be helpful for teachers because, due to the heavy workload, we often forget important points and even reminders. Diary provides you support to remember that information when needed. (Participant 9)*

Barriers to Critical Reflection

Teachers were asked about the limitations of doing critical reflection. Most of the participants mentioned that it is a time-taking procedure. Due to the heavy workload, they could not manage time to do recordings of lengthy lectures. For example, one participant stated that

> *The only hurdle is a hectic routine and workload. It is very challenging to manage time to watch a minimum of 40 minutes of recording, critically analyze it, and find its best solutions. (Participant 10)*

Few participants responded that they had no patience to do such lengthy tasks. They admitted that in our culture, teachers do not want to do any side activity without any push or incentive. One participant stated that

> *I realized that we do not have enough patience and continuity to do such tasks, and this phenomenon is time-taking. It is a lengthy procedure to collect data, critically analyze that data, and then judge it. Our culture is that if we get an incentive to do any task or it affects their career. Then, we take that thing seriously; otherwise, we refuse to adopt that habit. (Participant 9)*

Discussion

This qualitative study opted to explore the perceptions of teachers to improve online teaching through critical reflection. The underlined theory of this study was the critical theory which highlights the process of critical reflection and its usefulness in enhancing teaching skills. The study's findings revolved around four major themes significance of online teaching, the significance of critical reflection, the practical implementation of critical reflection in teaching, and barriers to critical reflection. Semi-structured interviews were conducted to explore these themes.

This study found that most teachers had their first online teaching experiences. They reported that their online teaching experiences were good because their schools provided them with adequate ICT infrastructure. Most teachers support online teaching because they think it is the demand of the 21st century. They also reported that online teaching saves time and teaches new ways of teaching. On the other hand, some teachers mentioned that online teaching is ineffective in our culture because of parents' and teachers' non-serious attitudes. Parents didn't cooperate with teachers and didn't provide a proper learning environment for their children at home. All teachers used the Zoom application to teach online during the pandemic. Most of the teachers were easy with using technology. They reported that learning technology is not a big issue in today's era. Proper training can minimize the hesitation of technology usage among teachers.

The findings of this study have some resemblance with the past literature. It will also contribute to the future literature as teachers' experiences with online teaching have been explored. Bolliger and Wasilik (2009) discussed online teaching and the factors that affect the online learning environment. The facts discussed in this article are pretty similar to our results. The outcomes of this study are in line with the work of Conrad (2004), which shows that teachers are not adaptive to

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the online teaching paradigm. They are not trained for virtual classroom settings. Novice teachers face a lot of hurdles in online teaching. Proper training programs for building skills related to online teaching should be initiated for all teachers. They should be motivated toward online teaching and bring creativity.

The study found that there is very less awareness among teachers in Pakistan about critical reflection. Few teachers in Pakistan know and use critical reflection in their teaching to bring improvement. The significant finding of the study is the perspective of teachers regarding critical reflection. This study discovers that teachers who know about critical reflection use it to identify their weaknesses and strengths in their teaching. They recorded their zoom lectures and did critical reflections on them. They found out their teaching gaps and tried to overcome those. The study also identified that experienced teachers use less critical reflections than novice teachers because experienced teachers think that their pedagogies don't need any improvements. Whereas novice teachers find space to improve their pedagogy, they use critical reflections to become confident teachers.

A qualitative survey conducted on the benefits of reflective thinking (Hussain, Mehmood, & Sultana, 2011) has similar views to the findings of our study. The discussion proves that critical reflection helps in solving problems and learning difficulties. Self-reports and past experiences of teachers enabled them to resolve their teaching challenges and enhance their conduct. Similarly, (Ashraf & Rarieya, 2008) also have the same views as the findings of our study. Teachers must be acknowledged the concept of critical reflection by incorporating reflective talks and reflective dialogues. Underdeveloped nations must adopt reflective discussions to bring the flexibility of embracing change where improvement is needed. Critical reflection should be adopted as a teacher-development strategy.

The study findings related to the barriers to critical reflection indicated that teachers do not use critical reflection due to the lack of habit of writing reflections, lack of managing time in their hectic schedule, and teachers not motivated to do reflections. (Watson, Kenny, & teaching, 2014) has similar results that match our findings. This article mentioned the difficulties of integrating critical reflection. Carefully introducing the concept at the graduate level enhanced the capabilities of students.

This study is limited to the awareness of critical reflection concepts among teachers. Participants of the study were limited due to the current situation of covid-19, and the researcher was able to collect data from participants from only one institute. Future research can be enhanced for public and private sector teachers. Face-to-face interviews were not conducted in this study so that future researchers can conduct face-to-face interviews to collect more enriched data from participants. The result of this study is helpful for the policymakers to develop new policies for teachers to develop the habit of critical reflection, preparing learning journals, and challenges they face in doing essential reflection. The study results indicate that policymakers should motivate teachers intrinsically and extrinsically to adopt critical reflection for their professional development.

Conclusion

The current study aimed to explore the teacher's perception of improving online teaching through critical reflection to understand their attitudes better. After analyzing the gathered data, this study concluded that all the teachers knew the critical reflection concept. All the teachers believed that critical reflection helps to improve their online teaching skills and has a vital role in improving pedagogy. All the teachers agreed that critically reflecting on the recorded lectures can help identify the gaps in their pedagogy and other classroom problems. After critical reflection on it, they can find out possible solutions to overcome those gaps.

Participants found critical reflection beneficial as it highlighted not only mistakes but also strengths. They agreed that critical reflection polished their strengths in a more organized way. They thought that teachers did critical reflections on their practices to make changes in them according to the demands of society. They also mentioned that teachers could bring innovative ideas and creativity to their pedagogy by critical reflection on their practices and others' practices. They believed that critical reflection is a key element in a teacher's professional development. This research study concluded that critical reflection should be taught and practiced to all teachers and added to all teaching training programs. So, all the teachers make it habitual and take responsibility for their improvements.

It is hoped that the participants' detailed descriptions in this study will guide policy implementation departments to facilitate teachers if they want to implement these instructional strategies in Pakistan. Moreover, it is also hoped that the study will prove to be helpful for policymakers to understand the need to introduce this concept among teachers to know about the ground realities of our education system.

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