

Research Article

Turning challenges into opportunities during the pandemic: Remote collaborative reflection model for teacher educators

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Emergency remote teaching has accelerated the search for alternative professional development practices that could meet the immediate needs of the teachers and be effectively implemented in times of the COVID-19 pandemic. This research aims to present the Remote Collaborative Reflection (RCR) Model a group of teacher educators (TEs) developed in a collaborative reflective endeavor originating from their own professional needs during emergency remote teaching in the fall term of 2020-2021. It also reveals TE's reflections on the RCR Model in developing and implementing the RCR consisting of several iterative steps. Findings revealed that the TEs reflected on their perceived cognitive, interpersonal, and intrapersonal gains from the RCR highlighting the challenges they faced while carrying out the model. Although the RCR was developed during the pandemic when social distancing was the norm, we believe it might also fit the face-to-face mode of professional development depending on the situational circumstances and needs of practitioners.

Keywords: Emergency remote teaching; Remote collaborative reflection; Professional development; Teacher educators

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1. Introduction

An immediate need for the professional development (PD) of teachers and teacher educators with little or no experience in remote teaching has emerged due to COVID-19 lockdowns. During the pandemic period, a great many research studies have been carried out (Flores & Swennen, 2020) and professional experiences of educators from different levels of education have been shared in a short time to disseminate educators' existing knowledge and experiences of distance education (Flores & Gago, 2020; Nasri et al., 2020; Quezada et al., 2020). Despite this collective experience exchange much is still unknown about remote PD opportunities for educators.

As we have all experienced, emergency remote teaching has increased the digital competence of teachers (Cutri et al., 2020). However, teachers also had to face a lot of challenges during this process. Teachers' painful experiences may serve as a catalyst for reflective practice, as Dewey

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(1933) indicates. Supporting Dewey, the reported shared problems during emergency remote teaching have become the source of inspiration for reflective practices (Carrillo & Flores, 2020). Adapting to new technologies, increased workload, and social isolation during the pandemic were listed as some common problems by Godber and Atkins (2021). Teachers' feelings of insecurity and inadequacy in the use of digital devices and platforms were reported in the studies as well (Nasri et al., 2020). Due to all these problems experienced all over the world teachers were highly concerned about their physical and mental health trying to find solutions to the unique situation they were unfamiliar with. Filipino teachers, for instance, preferred being engaged in purposeful activities with their professional community virtually to tackle pandemic related anxiety problems (Talidong & Toquero, 2020). Supporting this idea, Baloran (2020) suggested that equipping teachers with sufficient knowledge and skills in using technology helps to keep them mentally healthy in emergency cases.

Despite several studies focusing on the challenges of remote teaching for teachers, there is little knowledge about how they could overcome these challenges and pursue their PD from a distance during a pandemic. The aim of this study is to present a model a group of junior and senior teacher educators developed in dealing with the challenges they faced during the pandemic period in collaboration with their peers. Six teacher educators created a Remote Collaborative Reflection (RCR) Model with a collaborative four-month remote endeavor which was implemented iteratively. This study aims both to explain the RCR Model and to reveal the teacher educators' reflections on their experiences in the development and implementation of the model during the COVID-19 pandemic. By doing so, we are aiming to present a collaborative reflection model which can be used not only during emergency situations while teaching online but also for the professional development of teacher educators as well as teachers.

2. Collaboration and Reflection for Professional Development

Professional development is a key issue in teacher education and there has been a surge of interest in the PD of teachers in recent years (Egert et al., 2020). PD studies for teachers appear in a variety of fields with different groups. For example, some studies explored how primary school teachers (Taddese & Rao, 2022) reflect collaboratively for professional development, while others focus on middle school level teachers (Wang & Yu, 2021). Stenberg (2010), on the other hand, focused on the student teachers while Yu (2018) worked on the professional development of in-service teachers. Studies also concentrate on different perspectives of teachers' professional development. For instance, Admiraal et al. (2021), and Toker and Doğan (2023) emphasize the school as an environment to support teachers' professional development by embedding interventions to teachers' working conditions, and Perry and Booth (2021) indicate how school leaders enable professional development for teachers.

Collaboration has highly been emphasized for professional development activities for teacher educators. They have been seeking opportunities to exchange experiences and to work together with colleagues by networking inside and outside their institutions (Tack et al., 2018). Abdelmohsen and El-Khoulyv (2009) discussed how reflective practice might be employed to reinterpret the collaborative process between geographically separated team members. They developed a 3D graphical representation to comprehend the procedure for collaboration better (Abdelmohsen & El-Khoulyv, 2009). Darling-Hammond et al. (2017), for instance worked on determining the elements of effective professional development that alter teaching methods and enhance student learning outcomes, and Korsager et al. (2022) presented a structure for effective professional development for educators.

Similarly, and even more than collaboration, reflection has been reported as having a sustainable impact on the professional development of teachers. (Brookfield, 1995; Gün, 2010; Godinez Martinez, 2018; Schön, 1987). Researchers have derived numerous kinds of reflection from Dewey's definition of reflective practice as a tool for teachers to solve the problems they encounter (Dewey, 1933). Whereas Schön (1983) categorized reflection based on chronology as

reflection-in-action and reflection-on-action, van Manen (1991) suggests a third type of reflection called reflection-for-action, which can be characterized as predictive reflection prior to action.

Reflective practice has been reported to help teachers to increase their awareness-raising and problem-solving abilities (Ünver, 2003), understand and reconstruct their teaching knowledge (Godinez Martinez, 2018), strengthen their professional identities (Gutiérrez et al., 2019), and establish a link between teachers' professional and personal development (Ruge & Mackintosh, 2020; Toker, 2021). Ruge and Mackintosh (2020) argue that reflection occurs through both inner dialogues with ourselves and conversations with others. For Brookfield (1995), and Høyrup and Elkjaer (2006), reflection occurs only when others are involved in the process. Agreeing with them, Spiller et al. (2010) and Kennelly et al. (2013) state that participants can make personal discoveries about themselves and their instruction only when a collaborative reflective content or community is established. As stated in a very recent study by Radović et al. (2022), collaborative reflection helps teachers to go beyond cognition by not only encouraging the exchange of ideas and experiences of teachers but also by sustaining various perspectives.

In addition to all these benefits, some problems of collaborative reflection have also been revealed in literature. As Jiang and Zheng (2021) revealed, teachers might refrain from expressing personal opinions and the tense climate that might come with it. Therefore, strategies to broaden teachers' perspectives, facilitate critical thinking, and create a more democratic atmosphere are suggested to accomplish teachers' collaborative reflection effectively. The interpersonal dynamics among the participating teachers present another difficulty with collaborative reflective practice. Murray (2015) asserts that an important factor in the success of the collaborative reflective cycle is the participants' professional relationship. People should feel safe discussing educational concerns in the group's supportive environment. Time constraints, psychological barriers, and a lack of a discussion culture were identified by Park and So (2014) as challenges to the practice of collaborative professional learning among Korean secondary-school teachers.

Not surprisingly, with the emergent situation experienced during the pandemic new needs arose for teachers during remote teaching. Technological, pedagogical, administrative, and personal support were listed among the most essential components of PD for remote teaching (Baloran, 2020; Berry, 2019; Cutri et al., 2020; Martin et al., 2019; Nasri et al., 2020). The importance of collaborative practices for their impact on the cognitive presence of teachers during remote teaching was highlighted by Carrillo and Flores (2020) in a recent study. Similarly, Laister and Kober (2005) emphasize the social aspects of collaborative learning in remote teaching and suggest collaborative online learning for social orientation. Agreeing with this perspective, in Kennelly and McCormick's (2015) study teachers worked with colleagues from other disciplines to address common problems and share success which resulted in a long-term teaching and learning community of reflective practice in the institution.

Although much emphasis has been put on collaboration and reflection for the PD of teacher educators, little is known about "how" they can collaborate and reflect together on their instruction without experiencing problems during this process, especially in remote teaching situations. To the best of our knowledge, no collaborative reflective practice has been suggested for teacher educators to pursue PD from a distance in a systematic manner. In this study, the RCR aims to fill this gap not only by suggesting a practice of PD for teacher educators but also by providing the participants' reflections on their experiences while they were planning and implementing the RCR during the pandemic, which might help a better practice in the future studies.

3. Method

A qualitative approach was followed to investigate the research phenomena. Designed in an effort to address a contextual problem -teacher educators' need for PD in times of COVID-19, this study was conducted as practical action research. In practical action research, as stated by Mills (2000) practitioners identify an area to be improved and decide to examine the effects of their

intervention, then they systematically reflect on it to see whether it makes a difference. In this study, the problem was the lack of a model that would support the PD of teacher educators when social distancing was the norm. As an intervention, we developed a Remote Collaborative Reflection (RCR) Model and then steps were taken to monitor how the model would unfold, as well as the kind of results it would produce for sustaining teacher educators' PD.

3.1. Context and Participants

This action research study was undertaken at a foundation university providing English medium instruction in Türkiye. Participants were six teacher educators teaching at the Faculty of Education and the Center for Teaching and Learning who voluntarily took part in the study. Participant profile is displayed in Table 1.

Table 1

Participant Profile

<i>Participant</i>	<i>Department</i>	<i>Years of Experience</i>
TE 1	Early Childhood Education	30
TE 2	Foreign Language Education	31
TE 3	Mathematics and Science Education	16
TE 4	Early Childhood Education	3
TE 5	Foreign Language Education	16
TE 6	Center for Teaching and Learning	17

3.2. Procedures

Transitioning to remote teaching due to the coronavirus outbreak brought about many challenges with it, as stated in the previous section. Just like the others all over the world, teacher educators in this study were feeling insecure and anxious trying to teach generation Z students with the unfamiliar remote teaching methods in their repertoires. They also lost physical and social contact with their colleagues, resulting in an interruption in the PD opportunities they previously had such as professional development seminars and peer observation. All these problems created a pressing need for educators to get together and discuss how they felt and in what ways they could support one another professionally in remote teaching. The study commenced as TE 2 suggested TE 1 coming together occasionally to discuss how they coped with the challenges of remote teaching. Then, they spread the word to the whole faculty of education and announced everybody interested in the idea was welcome to join them. Four more teacher educators volunteered, and the meetings started. All educators agreed that collaboration was key to the success of any professional endeavor, and highly recommended the need for teamwork, especially in times when they were isolated from all their colleagues. The main problem for all teacher educators was the lack of a systematic model that would help them address their PD needs during remote teaching. Some of the teacher educators previously engaged in reflection and were firm believers in the power of reflective teaching practices. They shared their past experiences and suggested ways how reflection could be embedded in the model. Out of their discussions in several meetings, the RCR Model was developed, and they all agreed to implement the processes they decided collaboratively during the fall semester of the 2020-2021 academic year.

Recent studies in literature have also been investigating tools utilized for reflection and it is clear that the recent emphasis has shifted to methods adaptable to circumstances such as online or virtual platforms (Burhan-Horasanlı & Ortaçtepe, 2016; Prawati, 2022). The model and teacher educators' reflections of using it by being in a collaborative reflective process to deal with their remote teaching problems will be explained in the results part.

3.3. Data Collection and Analysis

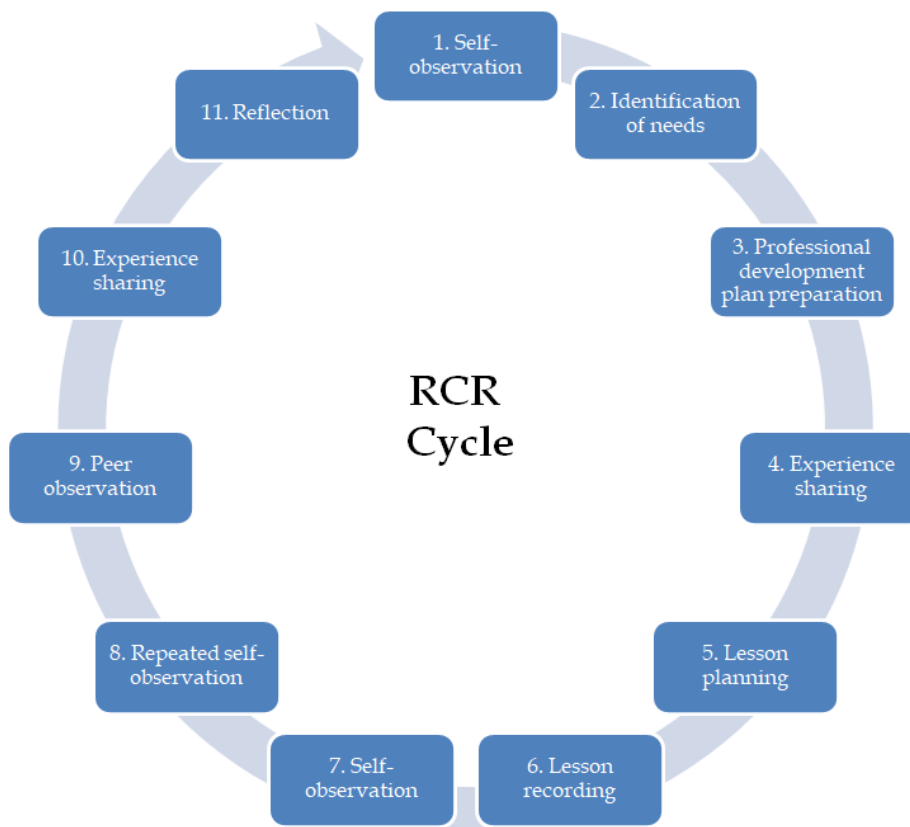
Data for the study mainly came from the reflections the participants made as they used the model they developed in their teaching. Since the meetings included teachers' reflections, the recordings, and all the meeting notes were also analyzed as sources of data qualitatively. All meetings which lasted approximately two hours were recorded remotely. No predefined categories were used at any stage of the study and the data was analyzed thematically as suggested by Grbich (2012). Reflective reports were read and reread several times. Meetings were watched, and key moments and comments were highlighted and transcribed. Emerging issues were noted down and possible themes were discussed by all the participants during the meetings.

4. Results

The first aim of the study was to present the Remote Collaborative Reflection (RCR) Model teacher educators (TEs) developed in a collaborative reflective process which would meet their needs during emergency remote teaching. The RCR Model consisted of 11 steps carried out in an iterative manner, as shown in Figure 1.

Figure 1

Remote Collaborative Reflection (RCR) Model



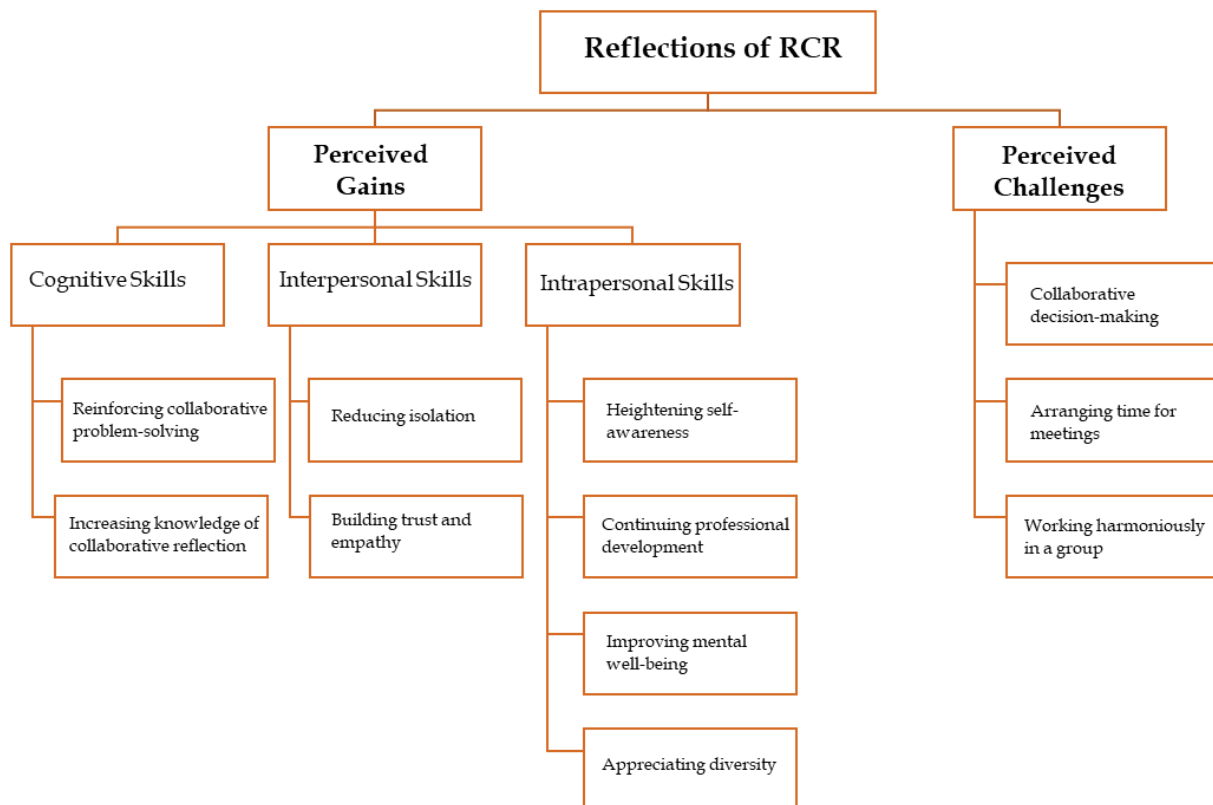
Cycle 1 commenced when each TE recorded one of their lessons and watched it by themselves to reflect on their immediate PD needs (Steps 1&2). Then, they freely picked one lesson to record and to reflect. Preparing a PD plan focusing on areas of strength and improvement and sharing this plan with the other participants in the meetings were the following steps of the model (Steps 3&4). This session was planned to serve as an opportunity to learn from each other regarding how they tackled similar issues in their own classes. Having been informed about various practices, TEs designed their own future lesson plans individually, taught and recorded it (Steps 5&6). After a few days, each TE watched and re-watched their recorded lesson independently to see how they performed the lesson plan, finding out the positive and negative aspects of their teaching (Steps 7&8). Next, two TEs who worked in pairs came together to watch the recorded lessons, gave each

other detailed feedback by discussing the important portions of the lesson, and suggested improvements. Points learned as a result of self-viewing and peer feedback were shared with everyone else in the group so that other TEs would benefit from this experience and add their comments if any (Steps 9&10). To end the cycle, one last meeting was held including all the participants to discuss how the model and each procedure they developed worked in reality in detail (Step 11). All these steps were completed in the fall term of the 2020-2021 academic year.

Another aim of the study was to reveal TEs reflections on the RCR model so that it could be suggested to other teacher educators as a tool to help the professional development of teachers especially during remote teaching. While neither the meetings nor the reflections followed any structured format the analysis of the data revealed TEs' perceived gains from the RCR experience besides the challenges they faced during the process. The benefits they reported were identified as cognitive, interpersonal, and intrapersonal categories and four challenges were reported as collaborative decision making; arranging time for meetings and personal expectations were identified from their reflections. Figure 2 displays emergent themes and categories.

Figure 2

Emergent themes from data analysis



4.1. Perceived Gains in Cognitive Skills

4.1.1. Reinforcing collaborative problem-solving

Even the senior TEs reported feeling like complete novices at remote teaching and being negatively influenced by the sudden outbreak of the pandemic. They had too many questions as to course delivery, teaching methods, and students' engagement due to the lack of experience and skills in remote teaching 220 as expressed by TE1 below:

Swift transition to distance education with COVID-19 was a new and worrying experience for me. I had 222 been teaching face-to-face for almost 30 years but had no experience in remote teaching. I was very worried about the technical problems and my lack of pedagogical knowledge and experience in online education.

The participants stated that sharing the pedagogical difficulties they were going through and hearing other colleagues' suggestions for similar problems and generating solutions together despite disciplinary differences were relieving, as expressed in the comment below:

We talked about the issues we had the most difficulty with such as mastering technology, giving instructions, and time management. We noticed our problems were alike despite disciplinary differences. We focused on the ways to resolve them by referring to the literature on remote teaching. (TE3)

Not until she joined the RCR, did TE4 realize passive students in her online lessons were a shared problem. She appreciated the value of the RCR for creating a common platform to handle a specific teaching problem. In her reflective report, she wrote:

I believed students' little participation in my online lessons was an acute problem of mine until we came together to talk about what troubles we were dealing with. I noticed it was not an individual problem. So, we started seeking specific strategies to solve our common problem. (TE4)

4.1.2. Increasing the knowledge of collaborative reflection

The participants considered the RCR to advance their knowledge of collaborative reflection as a field of research in teacher education. Although some TEs had previous experience in PD practices, collaborative reflection during the pandemic was new to all. TE4 expressed that, "I had heard some of these titles (reflection, collaboration) before; however, I didn't even know that they had theoretical foundations and that there were research studies on these subjects. I believe my knowledge of collaborative practices for teachers increased".

Knowledge construction began by doing a literature review and reading articles on remote teaching, reflection, and collaboration in teacher education. Collaborative research of articles and virtual discussion meetings on what was learned from reading seemed quite useful to acquire knowledge of collaborative reflection:

We read and shared articles, communicated different sources to each other in meetings, and tried to gain awareness of collaborative reflection for teacher educators. It was useful to gain such knowledge during the group meetings. During discussions, I felt as if I had read 5-6 articles at the same time. (TE3)

4.2. Perceived Gains in Interpersonal Skills

Most members in the group perceived the RCR as a supportive process providing them with social dialogue between colleagues. Two categories emerged here: *reducing the feeling of isolation* and *building trust and empathy among colleagues*.

4.2.1. Reducing the feeling of isolation

The RCR alleviated the TEs' sense of loneliness. Seeing that even the senior TEs were concerned about adapting their practice to remote teaching, less experienced TEs felt they were not standing alone, as TE6 stated that, "I think one of the best aspects of this experience was feeling I wasn't alone. It was enjoyable to know that even the most experienced teachers are suffering from a lot of hardships".

It was not only the new TEs, but more experienced ones seemed to benefit from the RCR process, which was described by TE2 as follows:

Regardless of my previous experience, I felt like a new teacher in remote teaching. Learning that each of us has some concerns related to the online teaching environment and that we are all trying to find solutions to our problems helped me feel that "I was not alone".

Besides group discussions, communication with peers while exchanging feedback lowered isolation and offered different perspectives about good remote teaching practices:

It (RCR) allowed me to look at the teaching process from different perspectives. What I learned from my partner (I was spoon-feeding the students, not giving them responsibility for their own learning) was very enlightening. I realized I had not approached the subject from this angle before. (TE1)

4.2.2. Building trust and empathy among colleagues

Despite their voluntariness, the TEs initially felt worried because they had not taken part in a multidisciplinary collaborative program whose members scarcely knew each other. TE3 wrote that, "I was inexperienced in collaborative professional development practice. I liked the idea of working together but I was not familiar with all the group members. They were from different disciplines, which somewhat stressed me".

Nevertheless, the more group members got to know each other, the more trusting relationships they began to develop:

...but they (teacher educators) were all nice and understanding during the process. The more time we spent together, the better I learned about their personality and working style. I felt more comfortable as I knew them more and stopped getting worried about being there. (TE3)

TE5 mentioned she was new both at school and remote teaching, so she was anxious about adapting herself to a new phase in life. She became troubled by the idea of group work at first. She later noticed that other colleagues, despite disciplinary and experience-wise differences, were going through similar problems. Further, she wrote she highly appreciated the understanding behavior and respectful attitude in the group. She expressed in a group meeting:

I was new at school, completely new in online education, so I felt very worried at that time. I also did not want to turn down the offer of group work, because it could contribute to me socially and professionally. After all, it was a relief to understand that we were tackling the problems brought by the pandemic situation. (TE5)

TE3 felt distressed to be paired up with someone from a foreign language department. She ascribed her initial concerns to her own prejudices against speaking in English. She was worried about being criticized during peer observation due to her language proficiency. However, they were able to build a trusting relationship with her partner, and her initial concerns faded away during the feedback session: "My peer had no judging attitude, which created confidence in me towards my peer and allowed me to express my areas of concerns in comfort during peer feedback" (TE3).

4.3. Perceived Gains in Intrapersonal Skills

The TEs completed the RCR with heightened self-awareness and motivation for continuous professional learning. Improved mental well-being and appreciation for diversity were also identified as the perceived gains in intrapersonal skills.

4.3.1. Heightened self-awareness

One of the perceived benefits of the RCR was increased awareness of TEs' strengths and weaknesses in remote teaching. Observation (through video-recording) and peer feedback initially caused apprehension for some participants since they did not know their peers well. Despite this, relaxing atmosphere during feedback sessions softened the tension and encouraged awareness-raising of teaching practice: "...but her feedback was very helpful for awareness raising. I learned, thanks to my peer, that I was asking too broad questions, which made it challenging for the students to respond" (TE3).

TE5 wrote in her reflective report that peer feedback was invaluable for seeing her own and a colleague's practice. TE2 mentioned any type of observation -self and peer- was helpful to increase consciousness of one's teaching practice, although the process was not very comforting: "Observing your own lesson and letting someone observe and give you feedback about your teaching is not easy. However, it helps you develop self-awareness of how good or not so good you do it (teaching)."

The advantages of observation are accepted by all; however, by whom and how the feedback is given should be taken into consideration as reported by TE1: "Peer observation, if done with the right person systematically, gives way to self-reflection on your practice. I don't mean experience here, but the person using appropriate feedback language".

4.3.2. Motivation for continuing professional development

The RCR contributed to professional development in remote teaching with respect to the TEs' areas of concern identified through self-observation. Regarding her own PD, TE4 wrote that, "Although I cannot say I could completely resolve teaching-related issues, I think that I have made some progress in time management, and the use of technological tools in distance education".

Senior TEs highlighted the significance of life-long learning to sustain PD. They underlined the value of learning from novice colleagues about an area where they did not feel competent enough:

It was a great opportunity for someone with 30 years of classroom experience to receive suggestions from a younger colleague as to her remote teaching experiences. 30 years does not mean I am doing everything very well. I feel confident about teaching, but not much about online teaching. I can always be better at my profession by learning from new teacher educators. (TE2)

Thanks to the RCR, TEs seemed to become encouraged about collegial learning and communication. TE1 was quite optimistic about taking part in future projects which bring novice and experienced colleagues together. In a group meeting, she said:

There is always a place for improvement. I decided to get involved in this study because although I was an experienced faculty member, the online teaching platform was new for me, and I needed new networks for learning and improving my instruction. I will seek other opportunities for future collaborations.

4.3.3. Improving mental well-being

The RCR fostered solidarity among group members, particularly when everyone felt life went upside down. Physical distancing had social and psychological consequences; therefore, communicating with colleagues even from a distance felt good for their mental well-being. TE5 wrote: "The feeling of solidarity and sharing gave me strength during these difficult times. The conversations before the meeting felt like therapy from time to time". TE3 shared similar views regarding the positive influence of the RCR on her psychology, appreciating the collaboration provided psychological support as the most valuable aspect of the RCR model.

4.3.4. Appreciating diversity

Carrying out a multidisciplinary study, despite having disagreements from time to time, was an enriching experience resulting in collegial learning and support as expressed by TE4: "I was very happy to have taken part in this study because I saw there was a lot I could learn from my colleagues from other disciplines with a distinct professional background and experiences".

The TEs had been so stuck in the structures of their disciplines that they hadn't realized the presence of other instructional practices, work disciplines, and problem-solving strategies which could work well in teaching. TE3 said: "Although we teach in different departments, I observed that there were several useful practices my peer used in her teaching, and I can adapt and implement them in my lessons".

TE5 was really wondering how online teaching was carried out in another discipline and what instructional commonalities and differences they might have as teacher educators. She felt very pleased by the feedback given by a mathematician about her materials design:

I was wondering if she had any particular style of teaching. I noticed we were not very different regarding difficulties. ...I received feedback about the design of my slides having asymmetrical geometric visuals, which she, as a mathematician, believed could distract some learners' attention. (TE5)

4.4. Perceived Challenges of the RCR

While the collaborative reflective process teacher educators went through was highly appreciated by all the participants and they enjoyed the whole process as much as they learned from each other, some difficulties were also stated by the participants. Collaborative decision making; arranging time for meetings and personal expectations were identified from their reflections.

4.4.1. Collaborative decision making

Making decisions collaboratively was one of the challenges of the process as it was the biggest strength of it. Deciding on the procedures of the model took TEs' a lot of time to complete. It took more than a month to read, share and discuss what was learned from researching. Collaborative practice, team teaching, reflection, or critical friendship were all among the discussion topics which caused a chaotic atmosphere initially, at least for some as expressed by TE6 as "At the beginning of the study, we could have used our time more efficiently. We were making a lot of suggestions based on our research model and it was not easy to come to a shared decision". While the group discussions were facilitating the professional development process of the teachers, everyone's understanding of collaboration and reflective practices was different.

Different educational backgrounds and teaching fields also affected group members to have different interpretations expressed as "The group members' being teacher educators from different fields with different experiences enriched our discussions but also made it difficult to come to a common point from time to time. (TE6)"

The whole process was carried out in a democratic way without any hierarchy. Everyone was free to say whatever they wished, and no one dominated the process. Yet, the absence of a facilitator was reported as a problem for TE5, as she explained "In the meetings, I sometimes felt disoriented or focused unnecessarily too long on a topic. I believe a facilitator could moderate our discussions, arrange the schedule, and keep meeting minutes. (TE5)"

4.4.2. Arranging time for meetings

Implementing the RCR was challenging due to TEs' busy schedules. Different course hours and administrative responsibilities prevented setting a common meeting time. TE3 said that, "Everyone was so busy with lots of things to do and other types of responsibilities. This heavy schedule each of us had limited our discussion times." Even if the time was set, some group members had to leave before the meeting ended, which made decision-making and progress harder. There were even times they could not meet for more than three weeks. As was reported by TE5, this created a sense of alienation from the group: "We were suffering from time arrangement problems. I believe that the meetings held at long intervals alienated us from the study. (TE5)"

4.4.3. Personal expectations

All TEs agreed that the process they went through was very beneficial for them and suggested collaborative studies to be encouraged more within the faculty. However, as can be imagined, personal expectations and personality types play a great role in collaborative studies. This was also expressed by TE5 as, "I prefer to work alone or with a friend I get along well with. I feel I can express myself more easily this way. We can also be more productive in groups of 2-3 people." TE6 also stated her preference to work with a smaller group in future work as "If I were to join a similar study in the future, I would reconsider the number of the participants".

5. Discussion

Results of the study revealed the TEs' needs for professional support especially when everyone was physically distant and psychologically detached from each other during the Pandemic. The RCR developed in this study showed the steps followed during the process turned into an area of growth for the participants. Despite the minor challenges experienced throughout the process, collaboration among the TEs was highly appreciated having several contributions to their PD, which corroborates the studies emphasizing the importance of PD particularly in the COVID-19 times (Nasri et al., 2020; Cutri et al., 2020).

The findings indicated the RCR allowed mutual sharing and learning from one another, as similarly highlighted by Quezada et al. (2020). Realizing that an instructional problem that was thought to be personal was in fact a shared one helped TEs feel better and resolve the problems together. Further, the process of co-construction of knowledge was appreciated by the TEs, a

finding which was also specified by Jackson and Jones (2019). Similar to Godber and Atkins (2021) who found the feeling of social isolation created a sense of frustration in the participants, our participants focused more on the social and psychological assistance as a very important aspect of the RCR in remote teaching than its pedagogical assistance, which might contradict the study by Martin and et al. (2019) showing the importance of pedagogical support in remote education.

Regarding the differences in the participants' disciplines, the findings showed working for a shared purpose with colleagues from different departments helped them handle the issues from different perspectives instead of "being stuck in the structure of their disciplines" as stated by Carrillo and Flores (2020). Reading and discussing the related literature collaboratively speeded up the knowledge gaining process and indicated the benefits of shared responsibility in collaborative studies.

All TEs appreciated the feedback they received from each other not only in improving their online teaching experience but also in dealing with professional isolation during the Pandemic, which was probably a major problem experienced by many in the teaching field. Each participant's constructive, respectful, and polite attitude without any judgment was very important in enabling them to build trusting relations with each other and express themselves openly. This highlights the importance of creating a positive and relaxed environment for a healthy collaborative reflection. There is no doubt that only in stress-free environment participants can overcome their anxieties of being judged. Therefore, a warm-up at the beginning of each meeting during which teachers share their ideas, worries, or happiness in their daily lives should be suggested as a necessary step in such a collaborative reflection setting.

The results of the study underline that collaborative reflection nurtured participants' self-awareness of their own thinking processes and practices in addition to proving to them the value of learning from each other. Although the possibility of receiving negative feedback from a colleague was a source of anxiety, the positive professional attitudes of the participants towards each other and the respectful language they used while giving feedback seemed to eliminate this problem. Thus, our participants focused on feeling appreciated rather than being criticized by other group members.

As for the challenges, the TEs expressed that deciding on the procedures of the model took a lot of time. While it might be perceived as wasting their time for some TEs, reading, sharing, and discussing the related literature might have also contributed to establishing the theoretical background of the study as well as letting them know about each other's perspectives before peer observations. As stated by Ní Shé et al. (2019), online or remote teaching and learning require certain competence, role, and PD. The absence of a facilitator was also mentioned as a challenge by some participants. While the presence of someone moderating the discussion could have positive effects for some teachers who are fond of more strict structures, the absence of one contributed to the creation of a more democratic discussion environment where everyone can express themselves freely, as expressed by the majority. The highly busy schedules of the participants were obviously one of the biggest challenges in setting time for the RCR meetings. Therefore, working in smaller groups might be suggested for future studies. Based on the personality types and preferences of the participants, the distribution of specific roles among the group members such as a moderator and/or a facilitator might also be a topic of consideration for some groups of teachers who are interested in going through such a collaborative process.

6. Conclusions and Recommendations

Lifelong learning is essential for all, but it is more essential for teacher educators who are dedicated to raising future teachers. Supporting teacher educators for lifelong learning opportunities through PD can provide them with a clear path to follow. We believe the Remote Collaborative Reflection (RCR) Model can fulfill this aim by not only providing professional help but also offering social and psychological support to teacher educators. This study has shown that teachers' taking responsibility for their own knowledge construction can develop a good model for

others as well. Despite all the challenges, the collaborative reflective process is a very valuable teaching experience for professionals (Glazer et al., 2004; Godber & Atkins, 2021).

The RCR developed in this study was designed by a group of TEs themselves in emergency remote teaching situations and presented their reflections on their experiences throughout the process. On the other hand, how these practices affected student learning was not in the scope of the study. Thus, further studies can focus on whether and how the RCR can impact student learning. Secondly, all the participants were females, which might positively impact the feeling of empathy in the group. Nevertheless, including male participants in the process might bring different perspectives to the conceptualization of the events.

While the participants were from different disciplines, they were all from the field of education. Therefore, encouraging interdisciplinary collaborations might be suggested in future studies. Further, participants' non-judgmental attitude is essential in collaborative studies. Without a trusting atmosphere, sincere and open sharing might not be possible. Lastly, the RCR was developed to tackle the problems experienced in emergency remote teaching, but we strongly believe that it can be adapted for face-to-face educational contexts for professional development of both teachers and teacher educators.

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References

- Abdelmohsen, S. & El-Khouly, T. (2009). Representing Reflective Practice in a Remote Design Collaboration Process, Digital proceedings of the 3rd Conference of International Association of Societies of Design Research (IASDR 2009), COEX, Seoul, Korea, pp. 1317 - 1326. <http://papers.cumincad.org/cgi-bin/works/Show?ee30>
- Admiraal, W., Schenke, W., De Jong, L., Emmelot, Y. & Sligte, H. (2021). Schools as professional learning communities: what can schools do to support professional development of their teachers?, *Professional Development in Education*, 47(4), 684-698. <https://doi.org/10.1080/19415257.2019.1665573>
- Baloran, E. T. (2020). Knowledge, attitudes, anxiety, and coping strategies of students during COVID-19 pandemic. *Journal of Loss and Trauma*, 25(8), 635-642. <https://doi.org/10.1080/15325024.2020.1769300>
- Berry, S. (2019). Professional development for online faculty: instructors' perspectives on cultivating technical, pedagogical and content knowledge in a distance program. *Journal of Computing in Higher Education*, 31(1), 121-136. <https://doi.org/10.1007/s12528-0189194-0>
- Brookfield, S. (1995). *Becoming a critically reflective teacher*. Jossey-Bass.
- Burhan-Horasanlı, E. & Ortaçtepe, D. (2016). Reflective practice-oriented online discussions: A study on EFL teachers' reflection-on, in and for-action. *Teaching and Teacher Education*, 59, 372-382. <https://doi.org/10.1016/j.tate.2016.07.002>
- Carrillo, C. & Flores, M.A. (2020). COVID-19 and teacher education: A literature review of online teaching and learning practices. *European Journal of Teacher Education*, 43(4), 466-487. <https://doi.org/10.1080/02619768.2020.1821184>
- Cutri, R.M., Juanjo, M. & Whiting, E.F. (2020). Faculty readiness for online crisis teaching: transitioning to online teaching during the COVID-19 pandemic. *European Journal of Teacher Education*, 43(4), 523-541. <https://doi.org/10.1080/02619768.2020.1815702>
- Darling-Hammond, L., Hyler, M. E. & Gardner, M. (2017). *Effective teacher professional development*. Learning Policy Institute. <https://doi.org/10.54300/122.311>
- Dewey, J. (1933). *How we think: A restatement of the relations of reflective thinking to the educative process*. Heath & Co.
- Egert, F., Verena D. & Fukkink, R. G. (2020). The impact of in-service professional development on the quality of teacher-child interactions in early education and care: A meta-analysis. *Educational Research Review*, 29, 100309. <https://doi.org/10.1016/j.edurev.2019.100309>

- Flores, M.A. & Gago, M. (2020). Teacher education in times of COVID-19 pandemic in Portugal: national, institutional and pedagogical responses. *Journal of Education for Teaching*, 46(4), 507-516. <https://doi.org/10.1080/02607476.2020.1799709>
- Flores, M.A. & Swennen A. (2020). The COVID-19 pandemic and its effects on teacher education. *European Journal of Teacher Education*, 43(4), 453-456. <https://doi.org/10.1080/02619768.2020.1824253>
- Glazer, C., Abbott, L. & Harris, J. (2004). A teacher-developed process for collaborative professional reflection. *Reflective Practice*, 5(1), 33-46. <https://doi.org/10.1080/1462394032000169947>
- Godber, K. A. & Atkins, D. R. (2021). COVID-19 Impacts on teaching and learning: A collaborative autoethnography by two higher education lecturers. *Frontiers in Education*, 6, 647524. <https://doi.org/10.3389/feduc.2021.647524>
- Godinez Martinez, J. M. (2018). How effective is collaborative reflective practice in enabling cognitive transformation in English language teachers? *Reflective Practice*, 19(4), 427-446. <https://doi.org/10.1080/14623943.2018.1479688>
- Grbich, C. (2012). *Qualitative data analysis: An introduction*. Sage
- Gutiérrez Alvarado M.V., Neira Adasme, M.A. & Westmacott, A. (2019). Collaborative reflective practice: Its influence on pre-service EFL teachers' emerging professional identities. *Iranian Journal of Language Teaching Research* 7(3), 53-70. <https://doi.org/10.30466/IJLTR.2019.120736>
- Gün, B. (2010). Quality self-reflection through reflection training. *ELT Journal of Education*, 65(2), 126-135. <https://doi.org/10.1093/elt/ccq040>
- Høyrup, S., and B. Elkjaer. (2006). Reflection – Taking it beyond the individual. In D. Boud, P. Cressey, & P. Docherty (Eds.), *Productive reflection at work: Learning for changing organizations* (pp. 29-43). Routledge.
- Jackson, B. L. & Jones, W.M. (2019). Where the rubber meets the road: Exploring the perceptions of in-service teachers in a virtual field experience. *Journal of Research on Technology in Education* 51(1), 7-26. <https://doi.org/10.1080/15391523.2018.1530622>
- Jiang, Y. & Zheng, C. (2021). New methods to support effective collaborative reflection among kindergarten teachers: An action research approach. *Early Childhood Education Journal*, 49, 247-258. <https://doi.org/10.1007/s10643-020-01064-2>
- Kennelly, R. & McCormack, C. (2015). Creating more 'elbow room' for collaborative reflective practice in the competitive, performative culture of today's university. *Higher Education Research & Development*, 34(5), 942-956. <https://doi.org/10.1080/07294360.2014.911259>
- Kennelly, R., Gilchrist, J., McCormack, C., Partridge, L., Ruge, G., Schonell, S. & Treloar, G. (2013). Why make time at the HERDSA conference in Auckland to TATAL. *HERDSA News*, 35(1), 13-16.
- Korsager, M., Reitan, B., Dahl, M.G., Skår, A.R. & Frøyland, M. (2022). The art of designing a professional development programme for teachers. *Professional Development in Education*. Advanced onlinefirst article. <https://doi.org/10.1080/19415257.2022.2038234>
- Laister, J. & Kober, S. (2005). Social aspects of collaborative learning in virtual learning environments. <http://www.networkedlearningconference.org.uk/past/nlc2002/proceedings/papers/19.htm>
- Martin, F., Wang, C., Budhrani, K., Moore, R. L. & Jokiahio, A. (2019). Professional development support for the online instructor: Perspectives of US and German instructors. *Online Journal of Distance Learning Administration*, 22(3), 1-17.
- Mills, G. E. (2000). *Action research: A guide for the teacher researcher*. Merrill
- Murray, E. (2015). Improving teaching through collaborative reflective teaching cycles. *Investigations in Mathematics Learning*, 7(3), 23-29. <https://doi.org/10.1080/24727466.2015.11790343>
- Nasri, M. N., Husnin, H., Mahmud, S. N. D. & Halim, L. (2020). Mitigating the COVID-19 pandemic: a snapshot from Malaysia into the coping strategies for pre-service teachers' education. *Journal of Education for Teaching*, 46(4), 546-553. <https://doi.org/10.1080/02607476.2020.1802582>
- Ní Shé, C., Farrell, O., Brunton, J., Costello, E., Donlon, E., Trevaskis, S. & Eccles, S. (2019). *Teaching online is different: critical perspectives from the literature*. Dublin City University. <https://doi.org/10.5281/zenodo.3479402>
- Park, M., & So, K. (2014). Opportunities and challenges for teacher professional development: A case of collaborative learning community in South Korea. *International Education Studies*, 7(7), 96-108.
- Perry, E. & Booth, J. (2021). The practices of professional development facilitators. *Professional Development in Education*. Advanced onlinefirst article. <https://doi.org/10.1080/19415257.2021.1973073>
- Prawati, M. T. (2022, April). Virtual Reflective Practice: An Ecological Perspective. Paper presented at 10th International Conference on Information and Education Technology (ICIET), 9-11 April, Matsue, Japan. <https://doi.org/10.1109/ICIET55102.2022.9779046>

- Quezada, R. L., Talbot, C. & Quezada-Parker, K. B. (2020). From bricks and mortar to remote teaching: A teacher education program's response to COVID-19. *Journal of Education for Teaching*, 46(4), 472-483. <https://doi.org/10.1080/02607476.2020.1801330>
- Radović, S., Firsova, O., Hummel, H.G.K. & Vermeulen, M. (2022). The case of socially constructed knowledge through online collaborative reflection. *Studies in Continuing Education*. Advanced online first article. <https://doi.org/10.1080/0158037X.2022.2029389>
- Ruge, G. & Mackintosh, L. (2020). Facilitating reflective practice: Developing built environment educators' capacity for teaching and learning. *Construction Economics and Building*, 20(3), 160-174. <https://doi.org/10.1080/02607476.2020.1801330>
- Schön, D.A. (1987). *Educating the reflective practitioner: Towards a new design for teaching and learning in the profession*. Jossey-Bass.
- Spiller, D., Bruce Ferguson, P., Pratapsingh, P., Lochan, S. & Harris, T. (2010, November). Advocates for teaching: Reconceptualising the practice of teaching development in a university. Paper presented at *Contemporary Ethnography across the Disciplines (CAED) Hui Conference*, University of Waikato, NZ, 16-19 November.
- Stenberg, K. (2010) Identity work as a tool for promoting the professional development of student teachers, *Reflective Practice*, 11(3), 331-346, <https://doi.org/10.1080/14623943.2010.490698>
- Tack, H., Valcke, M., Rots, I., Struyven, K. & Vanderlinde, R. (2018). Uncovering a hidden professional agenda for teacher educators: A mixed method study on Flemish teacher educators and their professional development. *European Journal of Teacher Education*, 41(1), 86-104. <https://doi.org/10.1080/02619768.2017.1393514>
- Taddese, E.T. & Rao, C. (2022). School-based collaborative reflection for professional learning: a case study of primary school teachers in Ethiopia, *Reflective Practice*, 23(6), 663-675. <https://doi.org/10.1080/14623943.2022.2107501>
- Talidong, K. J. B. & Toquero, C. M. D. (2020). Philippine teachers' practices to deal with anxiety amid COVID-19. *Journal of Loss and Trauma*, 25(6-7), 573-579. <https://doi.org/10.1080/15325024.2020.1759225>
- Toker, Z. (2021). Effective Training of teachers in the teaching of mathematics: A reflective professional development model for teachers-as-designers. In E. C. Espinosa (Ed.), *Developing mathematical literacy in the context of the fourth industrial revolution* (pp. 31-60). IGI Global.
- Toker, Z. & Doğan, M. F. (2023). Ders denetimi uygulamaları içeren bir mesleki gelişim modeli önerisi: Okul temelli yansıtıcı matematik koçluğu [A Professional development model proposal including lesson supervision practices: School-based reflective mathematics coaching]. *Milli Eğitim Dergisi*. Advance online publication. <https://doi.org/10.37669/milliegitim.1138739>
- Ünver, G. (2003). *Yansıtıcı düşünme* [Reflective Thinking]. Pegem
- van Manen, M. (1995). On the epistemology of reflective practice: Teachers and teaching. *Theory and Practice*, 1(1), 33-50. <https://doi.org/10.1080/1354060950010104>
- Wang, J. & Yu, S. (2021). A model of online teacher professional development in chemical subject of middle school. *Journal of Education and Learning*, 10(6), 68-81, <https://doi.org/10.5539/jel.v10n6p68>
- Yu, W.M. (2018). Critical incidents as a reflective tool for professional development: an experience with in-service teachers, *Reflective Practice*, 19(6), 763-776, <https://doi.org/10.1080/14623943.2018.1539652>