Preservice EAL/D Teachers' Relational Agency during Online Paired Practicum

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Abstract: There is scant research on preservice English as an additional language or dialect (EAL/D) teachers' paired practicums in an online context. Underpinned by Cultural Historical Activity Theory, this paper explores how preservice EAL/D teachers exercise their relational agency during online paired practicums. Data were collected from five preservice EAL/D teachers' weekly journals written during their paired practicums and interviews after they completed their paired practicums. Following the key components of relational agency, the thematic analysis highlights the dialectical relationship between preservice teachers' relational agency and different types of collaboration, evidenced by the formation of mutual objects, tool mediation, and shared expertise. This paper provides new insight into how preservice teachers' knowledge, especially related to the affordances of technology, may be expanded and mediated by collaboration.

Introduction

Over recent years, paired practicum placements have become increasingly popular in initial teacher education (Dang, 2017). Despite the benefits for preservice teachers, such as enhanced communication, reflection, and collaboration (Gardiner & Robinson, 2009; Mau, 2013), key challenges such as the conflict between preservice teachers and unclear communication with the supervising teacher (Dang, 2017) of paired practicums have emerged from the relational aspects. Yet, we know little about how preservice teachers take agentic actions in responding to the challenges encountered during a paired practicum (Jechura & Bertelsen, 2016). In addition, most existing research focused on individual teacher agency, even though the nature of teacher agency is relational. Thus, more research is needed to explore teachers' relational agency (Stetsenko, 2020). Relational agency refers to "a capacity to recognise and use the support of others in order to transform the object" (Edwards & D'arcy, 2004, p. 149). This is particularly important in a paired context. Enhanced understanding in these areas will provide more evidence about the contexts of paired practicums which in turn will support the development of preservice teachers' content knowledge, pedagogical skills, and agency in coping with challenges by seeking relational resources. This research explored the relational agency and the formation of shared knowledge of a group of preservice English as an Additional Language or Dialect (EAL/D) teachers during their paired practicum in an online learning context. The study was conducted during the Covid-19 pandemic. As a result, the participants undertook their practicum in an online teaching context. This was indeed distinctive but, as a differentiated form of practicum, can enrich research on paired practicums with regard to how preservice teachers'

relational agency enhanced and expanded their knowledge and practice of using technology in the online context.

Literature Review and Theoretical Framework

In this section, the research on paired practicums, online practicums, and relational agency is reviewed. The need for research on preservice teacher relational agency in the context of online practicums is highlighted. In particular, the contradiction and tension in preservice teacher's relational agency are conceptualised from a Cultural Historical Activity Theory (CHAT) perspective.

Paired Practicums

Paired practicums are commonly practised in the United Kingdom and are increasingly being adopted by teacher education programs in Australia, New Zealand, and Vietnam, among other countries (Dang, 2017). The benefits of paired practicums have been recognised in the research literature. For instance, it has been found that paired or small group placements have the capacity to facilitate preservice teachers' deep learning and classroom management skills through their collaboration, discussion, and observations of each other's practice (Ammentorp & Madden, 2014; Ongrsquo & Jwan; 2009; Sorensen, 2014). Other research has revealed that paired practicums provide psychological – especially emotional support – to preservice teachers, as well as aid in the development of their sense of self as teachers (Ammentorp & Madden, 2014; Comoglu & Dikilitas, 2020).

Meanwhile, personality clashes and conflicting ideas between paired preservice teachers could have a negative impact on their practicum experience (Ammentorp & Madden, 2014). However, this should not be viewed as something inherently negative as tensions can also be learning opportunities. For instance, learning experiences and knowledge of the curriculum could be enriched via tensions, dialogues, and reflections (Baeten & Simons, 2014). In a study focusing on early childhood paired practicums, Jechura and Bertelsen (2016) found that preservice teachers brought their life experiences and reflections into the practicum. In addition, researchers suggested that teacher educators need to foster preservice teacher agency and skills of collaboration through collegiality (Jechura & Bertelsen, 2016), and reconceptualise their ability to collaborate (Gardiner & Robinson, 2009). Therefore, this study adopted the concept of relational agency to explore and conceptualise the experiences of a group of preservice EAL/D teachers who undertook a paired practicum experience.

Within the domain of second language teacher education, research on paired practicums is relatively scant, especially in relation to conceptualising two aspects of this configuration of practicum: (1) the link between the context and language teachers' professional learning; and (2) teacher learning in relation to contradiction, which is a common issue during paired placements (Dang, 2017). Regarding preservice EAL/D teachers' practicum, it has been suggested that a team or pair teaching experience could provide opportunities for preservice teachers to cope with various issues related to the subject content and pedagogy of EAL/D teaching (Nguyen & Dang, 2021). Dang's (2017) study focused on the tensions in the English as a foreign language paired practicum and related them to teacher learning from a CHAT perspective. Her study highlighted a need to reconceptualise the tensions and contradictions that emerged during the placements. However, not all contradictions lead to learning unless they are resolved with appropriate tools/artefacts (Yang, 2015), such as creative use of teaching strategies or resources to

support students' learning. Therefore, this paper draws on a CHAT account of relational agency and links the tensions to tool creation and mediation, which will be further explained in the theoretical framework.

Online Language Teaching and Practicums

Language teaching is an inherently communicative endeavour and has thus traditionally been conducted in classroom settings. However, the onset of the Covid-19 pandemic changed this and forced learning to be shifted online instantaneously; of course, this occurred in all other educational contexts as well. This posed significant challenges and saw the emergence of research from various contexts focusing on the nature of these challenges relating to online teaching and how they were addressed. For example, Cruickshank (2020) suggested that the switch to online teaching was a struggle. Moreover, language teaching involves a focus on different aspects of language. In relation to this, for instance, Bailey and Lee (2020) have pointed out that in speaking and conversation classes, moving online reduces opportunities for live interaction and communication, and this is amplified when students leave video cameras turned off, which was a widespread issue for teachers. There is also the potential for students to be distracted and teachers to be somewhat powerless to address this (Melor et al., 2012).

Another area where online language teaching in the context of the pandemic has caused problems is in relation to emotion and the capacity to cope, as outlined by MacIntyre et al. (2020). This is of relevance to the current study as paired practicum offers a form of peer support. Some of these challenges have been addressed by Compton (2009) in a model of online teaching encompassing the technology, pedagogy and evaluation of online language teaching. This model suggests that a novice online language teacher needs to become versed in a range of strategies for community building, building communicative competence, incorporating language teaching theories in online teaching, and strategies for online language assessment, among others. This is problematic when pre-service teachers are very much novice teachers in the general sense, let alone in how to teach effectively in this online context.

While challenges such as these are of significance to teaching more broadly, they extended also to pre-service teachers – as has been mentioned – who were still required to undertake practicums as part of their studies in order to be eligible for teacher registration. The online practicum was not a feature of the vast majority of initial teacher education programs before 2020 when the impacts of Covid-19 were first felt. However, along with teaching and learning pivoting to online in response to the pandemic, globally many initial teacher education programs had to integrate, redesign, and shift practicums online to ensure preservice teachers were still able to complete their studies. This was also important to prevent a severe shortage in graduating teachers entering the workforce. However, this change had to contend with a significant shortfall in preservice teachers' readiness to teach online and digital literacy (Burns et al., 2020). Since then, research on online practicums has been conducted worldwide (e.g., Brinia & Psoni, 2021; Burns et al., 2020; Celik, 2021; Jimarkon et al., 2021; Korucu-Kis, 2021).

The key challenges during online practicums included engaging students in an online context and managing their off-task behaviour (Celik, 2021), as well as coping with technical problems, and making full use of digital technologies (Jimarkon et al., 2021). Research revealed teachers' agency in responding to these challenges from various aspects, such as their agency in relation to technological affordances (Chen, 2022) and the practical evaluation aspect of teacher agency in maximising the educational benefits for their students

(Ashton, 2022). The significant factors influencing teachers' agency were their dynamic relationships with colleagues and students, and the relational agent-environment affordance (Ashton, 2022; Chen, 2022). However, the relational aspect of preservice teacher's online practicum remains unexplored.

At the same time, and of relevance to this study, research on online practicums highlighted the advantages of collaboration. For instance, some preservice teachers gained multiple perspectives and formed shared understanding by exchanging ideas with peers (Korucu-Kis, 2021). Therefore, this study aimed to conceptualise the process of forming a shared understanding between preservice teachers during a paired online practicum. This knowledge of how preservice teachers exercise their relational agency in creating opportunities and tools for collaboration during an online practicum will be of significance, as the paired practicum will continue after the pandemic. Our research sought to address the research gap by exploring preservice EAL/D teachers' relational agency during their paired online practicum in the Australian context.

Relational Agency from a CHAT Perspective

Teacher agency has been viewed as a "sociocultural mediated capacity to act" (Ahearn, 2001, p. 112), and can be demonstrated in resistance, adaptation, compliance, or change to their working environment (Pyhältö et al., 2015). Specifically, the relational nature of teacher agency has been conceptualised through teacher relationships and interactions at different levels. The relational nature of teacher agency also impacts teacher professional and knowledge development (Edwards, 2011).

This research used a CHAT account of relational agency (Edwards, 2007) to conceptualise preservice EAL/D teachers' online paired practicum experience. CHAT was initially formulated by Vygotsky and Leontiev in the 1920s and 1930s, and further developed by Engeström (Stetsenko & Arievitch, 2004). As the key idea of CHAT research is to promote social changes, CHAT research conceptualises "the self as an important agentive dimension within a profoundly social and relational view of human life and development" (Stetsenko & Arievitch, 2004, p. 476). There are three prominent strands addressing agency within the field of CHAT: (1) transformative activist stance (e.g., Stetsenko, 2017), (2) transformative agency through double stimulation (e.g. Sannino, 2015), and (3) relational agency (e.g. Edwards, 2017).

This research adopted relational agency as the key conceptual framework for analysing preservice teachers' experiences during their online paired practicum. Firstly, CHAT provides a strong analytical framework for teacher collaboration in terms of conflicts, mutual object, and mutual responsibility (Edwards, 2007; Prain et al., 2021). From a CHAT perspective, a person's intentions and wilful actions in responding to a conflict/contradiction can be viewed as their agency (Engeström, 2011). In some particularly relevant research, Dang (2017) showed that preservice language teachers' learning was closely related to the timely resolution of conflicts or contradictions in the paired teaching relations. Thus, this study aimed to explore how preservice teachers exhibit their agency in responding to the challenges/conflicts during their paired practicum and how that impacts their professional learning. Relational agency reveals how people with different motives collaborate (Hopwood, 2022). In addition, two constructs – mutual object and mutual responsibility – can illustrate the bonds in teacher collaboration, especially the why and the how aspects of collaborations, which are also the focus of relational agency (Edwards, 2007).

Secondly, CHAT highlights the role of tools/artefacts for teachers to achieve their mutual object (Edwards, 2007). Creating tools/artefacts in teaching is a clear indication of

teacher agency (Yang, 2015). In turn, effective tools/artefacts can mediate the sharing of knowledge, the construction of mutual goals and the sharing of responsibility (Edwards, 2007; Nguyen & Dang, 2021; Prain et al., 2021). In addition, CHAT can also reveal the rules and resources used in collaboration (Edwards, 2007; McNicholl, 2013). Relational agency equips teachers with intellectual support via the mediation of shared expertise, relational knowledge, and artefacts.

One key concept from CHAT is mediation. Vygotsky (1981) claimed that tools and artefacts are crucial to mediating human higher mental functioning. There are three major types of tools/artefacts mediating the practice of language teachers: social activities, social relations, and concepts (Johnson, 2009). In the context of paired practicums, social activities refer to the activities and interactions preservice teachers engage in during the experience. Social relations are then manifested in the mediating tools/artefacts, such as mentoring feedback, discourse, and questions, as well as any teacher-student, mentor-preservice teacher, and peer-teacher contradictions (Johnson, 2009; Nguyen, 2019). Tacit notions about language teaching and academic pedagogical concepts mediating language teachers' learning (Johnson, 2009; Nguyen, 2019). This study focused on how preservice teachers adopt the concepts and internalise them in their practice in terms of their pedagogical and content knowledge.

Existing research revealed two key features of relational agency: the intellectual and project dimensions. The intellectual dimension includes critical reflection, shared expertise and knowledge, and agentic action-taking. Studies have shown that the knowledge-building aspects of teacher agency emerge from interaction with others and critical reflection on actions (Pyhältö et al., 2015; Yang, 2021). This also confirms cultural historical views on learning that suggest that learning and knowledge originate from social interaction (Vygotsky, 1978). In Edwards' (2017) work, shared knowledge emerged as a resource that mediates collaboration on complex problems. In addition, a sign of teacher agency was the expanded object, which included increased understanding and expertise about the problem and the creation of new ideas or resources (Edwards, 2011; Yang, 2021). Melasalmi and Husu (2019) revealed that the relational aspect of teacher agency emerges from active negotiation, co-construction of knowledge, and collaborative teaching and research. More research is needed to enrich our understanding of how teachers learn in the paired teaching context (McNicholl, 2013).

The projective dimension of relational agency pertains to looking forward via forming and enacting goals (Molla & Nolan, 2020). Supported by their relational agency, individual teachers can form their future professional aspirations and goals (Hadar & Benish-Weisman, 2019). In addition, the relational context prompts individuals to develop their capacity and intention for shared goals and aspirations (Chang et al., 2021). Simultaneously, mutually supportive relationships can also strengthen preservice teachers' action-taking as these relate to achieving the mutual object and goals (Molla & Nolan, 2020). For example, Chang et al. (2021) found that Chinese bilingual teachers demonstrated relational agency via predicting their future roles in the classroom and expressing their goals for bilingual education.

As shown, the key concepts related to relational agency include mutual object, shared expertise and knowledge, and projective dimensions. These concepts underpinned the research design and analytical framework of this study. The research question guiding this paper was:

• How did preservice EAL/D teachers exercise their relational agency during online paired practicum?

Method

To understand preservice EAL/D teachers' relational agency during online paired practicums we explored their practicum during placement and post-placement, with a particular focus on their mutual goals, mutual responsibility, tool mediation, and agency in responding to contradictions. This study used a narrative approach based on the data collected from the five preservice teachers. This enabled the researchers the capacity to engage in an in-depth exploration of the preservice teachers' experiences and the meanings they assigned to these experiences (Salkind, 2010b). The purpose was to enrich our understanding of preservice teachers' relational agency in the online practicum, with an emphasis on their subjectivity and particularity rather than objectivity and universals (Salkind, 2010b).

Participants and Data Collection

Participants were preservice secondary EAL/D teachers enrolled in a Teaching English to Speakers of Other Languages (TESOL) teaching method course, in an initial teacher education program in an Australian university. This course is typically run as an intensive from June to July each year and includes a 2-week paired practicum. Since the beginning of the pandemic, the course has been run online. The students were placed as pairs for their 2-week TESOL practicum, which took place at mainstream schools or intensive English centres in greater Sydney. After obtaining the ethics approval from the university the authors were affiliated with, this project was conducted in 2021 when there were 42 preservice teachers enrolled in this course. The project information was sent to all enrolled students and five female preservice EAL/D teachers volunteered to participate in this project. Two of them were placed in the same school as a pair. The other three participants also completed their practicum as part of a pair but were the only members of their pair to participate in the study. Despite the fact that two of the participants were actually in the same pair, they were interviewed separately; thus, it can be said that each of the five participants was treated as an individual participant who had engaged in a paired placement (as opposed to one pair and three individuals). This ensured a balanced approach to the treatment of the participants and the data collected. Although the results from the volunteer sample would not be generalisable to other settings due to the narrow focus (Salkind, 2010a), this method was suitable for our research. The results provided an in-depth understanding of preservice teachers' paired practicum experiences and how they make sense of those experiences (Omona, 2013).

Data were collected from two sources: reflective journals and interviews. These are two common forms of data for narrative research (Salkind, 2010b). Firstly, participants completed a weekly journal entry during their placement (2 entries per participant and 10 in total). The journals had three simple guiding prompts for each entry to help the preservice teacher to reflect on the collaboration with their partner preservice teachers and the impact on their teaching. These prompts were:

- Briefly describe an aspect of your teaching today or this week in your paired practicum that was either positive or negative in nature.
- How did working and collaborating with your partner impact this event?
- Give a brief assessment of how this has affected your approach to teaching.

At the completion of the placement, both researchers conducted individual interviews with each participant. Informed by the reflective journals, the semi-structured interviews were designed to elicit more details from participant's reflections on their paired practicum

experience, including their use of pedagogical strategies, knowledge construction, agency, collaboration, and peer support. An overview of the participants is shown in Table 1.

Pseudonyms	Number of submitted journals	Interview	Context of practicum: Intensive English centre
P1 Anne	2	No	Junior class
P2 Betty	2	Yes	Junior class
P3 Cathy	2	Yes	A junior class and a beginner class
P4 Debby	2	Yes	
P5 Eve	2	Yes	Y11 essay writing

Table 1: Participant profiles

Data Analysis

The key elements of relational agency from a CHAT perspective formed the coding schemes (Table 2) for a thematic analysis of the journals and interview data. The analysis included two rounds of coding. In the initial round, the journals and interviews were coded following the coding schemes listed in Table 2. The second round focused on extracting recurrent themes by comparing the journals and interview transcripts. The first author did the initial coding and analysis, and following this all coding and themes were double-checked by the second author. When there was disagreement, both authors checked the coding with the evidence from the data and reached the agreement after three rounds of checking.

Coding themes	Explanation	Journal example
Contradictions (Engeström,	The gaps or mismatch between the	"Most challenging was getting
2011)	participants, or participant and their goals.	comfortable with things going wrong."
Mutual object and mutual	Both preservice teachers reached an	"We needed to find ways to
responsibility (Edwards,	agreement for the object/goal of	engage the students."
2007; Prain et al., 2021	teaching and shared responsibility in achieving the goal(s).	
Resolution and tool	The tool mediates preservice teacher's	"We used thumbs-up reactions."
mediation (Johnson, 2009;	learning and practice in terms of social	"It was really rewarding to see the
Nguyen, 2019)	activities, social relations, and concepts.	kids learning."
Shared expertise and	preservice teachers make use of and	"My partner has been particularly
knowledge (Edwards, 2007)	combine their expertise and knowledge in teaching.	helpful in asking prompting questions."
Projective dimension (Molla	Forming and enacting their future goals.	"This will better prepare me for
& Nolan, 2020)		my future teaching career as I
		believe that teaching is a
		collaborative effort."

Table 2: Coding schemes

Findings

The analysis of the data revealed a range of significant findings. These can be divided into *four* main areas: 1) Challenge/contradiction, 2) Mutual object and responsibility; 3) Resolution and tool mediation, and 4) The projective dimension of relational agency. These were also able to be broken down into more focused sub-elements (Figure 1). In the following sections, these findings are presented along with evidence and excerpts from the data.

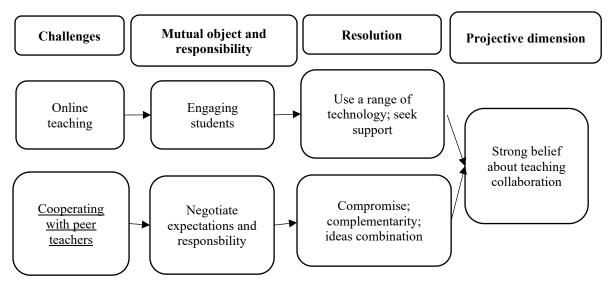


Figure 1: Themes and subthemes of the findings

Challenge/Contradiction

Two types of challenges were reported by the participants. One related to online teaching and the other to collaborating with their paired teaching partners.

Technology/Online Teaching

Challenges related to online teaching included students' lack of access to technological devices, technical problems or breakdowns, lack of students engagement, and a perceived low level of motivation to learn in general. For example, Anne wrote in her journal:

Most challenging was getting comfortable with things going wrong, because we knew it was even harder for the kids. Most of our students didn't have access to an individual computer and were sharing with multiple siblings. Some didn't have access to a camera so most of our lessons were taught to blank screens. (Anne's journal)

A significant issue identified by all four of the other participants was linked to the challenges of engaging students in an online learning context. For example, Betty expressed that she felt disappointed with herself because she had to spend most of her teaching time "making sure that the students even understood the questions I asked". In addition, as it was her perception that the quality of student work had been low, she felt that she was "allowing for low expectations". This was troubling to her as she had high expectations for her own teaching.

The other three participants reported similar issues when teaching via Zoom and students would not respond to questions. This can be seen through Cathy's experience. She explained that "we couldn't tell whether they were having technical issues, or they couldn't understand what we were saying, or if they didn't feel confident enough to answer the question".- Debby, who was Cathy's partner on the paired practicum, observed that "the students started losing motivation in the online learning. For example, they kept changing their profile pictures and names on Zoom – showing signs of distraction." All participants

identified the challenges with their interpretations and reasoning in relation to students' learning.

Cooperating with Peer Preservice Teacher

Through the journal entries and the post-practicum interviews, participants indicated that overall they were happy with the team teaching with their partner during the paired practicum. However, both Anne and Betty mentioned that they had different teaching styles from their partners. This was particularly challenging for Betty who commented:

The most challenging experience was being able to understand the purpose and flow of each lesson when my partner and I had constructed different parts of it. The logic of the lesson would not be entirely clear.

I pay more attention to detail, and my partner has a more relaxed "get it done" mentality. Also, we were teaching mathematics (data and statistics). I wanted to teach mathematics, however, my partner preferred to focus on English topics which had a slight relation to mathematics. (Betty's journal)

This kind of feedback is not completely surprising. Team teaching is a specific skill that requires flexibility and negotiation. However, each participant negotiated with their partner and figured out some way of collaboration that aligned with their mutual object and responsibility.

Mutual Object and Responsibility

When it came to confronting and managing the challenges they encountered, the participants worked closely with their teaching partners in forming some shared objects and actions. This was expressed by Anne, who remarked:

We need to find ways to engage the students, both with language and technology. We decided to have one person monitoring and responding to the Zoom chat, and one person facilitating the lesson. (Anne's journal)

This excerpt focused on the paired preservice teachers' decision to engage students, which implied the formation of a mutual object. Based on that, Anne and her partner shared mutual responsibility during online teaching. In addition, she commented that they negotiated a routine structure for the lesson plan which worked effectively for both of them. Furthermore, they also had regular, reflective debriefing discussions with their supervising teacher.

As for Betty, due to the different teaching styles and preferences for the teaching content, she and her partner had a dialogue about their own expectations and aims for the lessons and subsequently negotiated the objective of each lesson. This demonstrated the formation of a mutual object. With regard to the content, they split the responsibilities, which Betty indicated in her journal, stating: "My partner focused on talking about the report (our task), and I focused on running activities". In her interview, she elaborated on the nature of their collaboration and suggested that she regarded her partner as "a backup" who helped to reduce the overall workload and thus improved the efficiency of planning.

Cathy and Debby did not report any conflict in their paired teaching relationship. In fact, they explained in detail the benefits they saw in the paired practicum in terms of facilitating the development and adoption of a more cooperative way of team teaching. They often brainstormed ideas and resources during the planning stage and gave feedback to each other on learning activities and classroom management after class. While teaching, they had a

division of duties with one teaching and the other monitoring the students and clarifying instructions. They commended that "the paired nature of the practicum allowed us to constantly support each other both in the classroom and outside of the classroom" (Cathy's journal). These examples highlighted the shared responsibility and working towards common goals that were features of the paired online practicum.

Resolution and Tool Mediation

Regarding the challenges of engaging students in the online learning environment of Zoom, the resolutions created by the participants included two types: (1) making full use of various digital technologies; and (2) seeking support and advice from other teachers.

Making Full Use of Various Digital Technologies

As for the use of technology, according to their mutual object of engaging students, the participants made effective use of various technologies, such as chat, thumbs-up reactions, and designing collaborative activities using breakout rooms in Zoom. In addition, they embedded other online technologies and applications for collaborative learning, such as Google Jamboard, Padlet, and Google shared slides (Anne, Cathy, and Debby). The selection and use of technology was based on their specific aims and the affordances of the technology. For instance, Cathy and Debbie identified the problem that their students were reluctant to speak in front of the class. Accordingly, their use of chat, breakout room, Google Jamboard, and Vocaroo (an online audio recording software) were all in a concerted effort to give students individual space to add their thoughts. In addition, they intentionally used more positive verbal feedback "to encourage more student participation and to praise students who are being risk-takers and putting in the effort" (Cathy's journal). In addition, they also used humour to address the issue of distraction, which helped to build "a more positive relationship and improve, students' enthusiasm and concentration in the following class" (Debby's journal).

With a slightly different focus, Betty used digital instrument to ensure students understood the instructions:

The most successful experience was the consistency and clarity of the way I uploaded the digital learning resources. I also invested time into creating videos about the content and made the instructions as clear as possible. (Betty's journal)

However, it is important to note here that Betty's reflection was focused on herself. She did not mention her partner when describing these actions. These technological tools and verbal artefacts were used to mediate their relationship with their students and resolve the challenges to a certain extent.

Seeking Support and Advice

The second type of resolution and mediation was seeking advice from others, demonstrating relational agency. As for the common issue of a lack of student responses in Zoom, Eve and her partner consulted their supervising teacher and were reassured that "for online teaching, it's okay to just wait for a little bit longer" (Eve's interview). Similarly, Cathy and Debby proactively reached out to other teachers of their students in order to observe other lessons "to better understand their abilities and prior knowledge, so that we can

build up their confidence in our lessons" (Cathy's journal extract). In addition, in order to engage students, Anne worked with her partner to run a lunchtime Homework Club to build rapport with their students. These were the resolutions formed via help-seeking and relational support.

Regarding the challenge of working with peers, the participants shared mutual responsibility based on their shared expertise and also constructed shared knowledge. Their collaboration consisted of three types: compromise, complementarity; ideas combination.

Compromise

Betty believed that negotiation and mutual respect helped resolve the conflicting ideas between her and her partner. This is significant as it is key to effective team teaching in any context. Betty stated:

We negotiated these problems successfully as both of us are reasonable. For example, my partner was fine with my changes to her lesson plans, and I make sure that I only commented on things that impeded communication, rather than any personal preferences. There has been mutual respect from the start. (Betty's journal)

This quote implies that balance was achieved through negotiation and the compromise between the two preservice teachers and maintained through mutual respect and boundary.

Complementarity

The collaboration between Cathy and Debby was defined by its complementarity in how they strengthened their teaching through their shared contributions, each bringing different elements. For example, in their interview, Cathy acknowledged the support and knowledge shared by Debby:

My partner has been particularly helpful in asking prompting questions whenever students are struggling to answer questions. When many students were reluctant to contribute to the Jamboard, my partner suggested that we focus on one question at a time, which was helpful. Our mutual support allowed the lessons to run more smoothly. (Cathy interview)

The phrase "mutual support" indicated that shared expertise mediated their collaboration. In addition, Debby also mentioned the complementary aspect of collaboration:

Having a reliable teacher like my co-teaching colleague at this uncertain time can highly mobilize my teaching potential and enthusiasm, and motivate me to think and plan for our classes. At the same time, the tacit understanding between us has made our overall teaching more dynamic and positive (Debby's journal).

Having a higher degree of motivation combined with their mutual tacit understanding implied the shared knowledge formed between them. In addition, they commented on the impact of this complementary collaboration on students' learning:

As a result of this complementarity, certain gaps in teaching resources and information are filled effectively. From the students' perspective, they are exposed to a wide variety of teaching styles and resources. This makes learning more accessible to them. (Cathy interview)

Their shared knowledge was supported by communication in both oral and digital forms:

Collaboration and communication determine the effectiveness of the co-teaching classroom, so we have agreed on a record and communication system, for example, using Google Drive to share and update our teaching resources (Debby's interview).

Here, verbal communication and Google Drive were the tools mediating and supporting the team teaching. Similarly, Anne and her teaching partner also had a complementary model of collaboration that was evident in her comment that "we were good at celebrating the wins together, but also able to give each other good feedback or suggestions.". The shared expertise, or knowledge, was reflected in the peer feedback and joint debriefing.

Ideas Combination

It was clear from Eve's interview that she saw her paired practicum as a combination of shared expertise. She stated: "We both would come up with different ideas for teaching and then we would just combine our ideas, like planning the lesson by doing different sections." Among the three types of collaboration, idea combination and complementarity were more likely to empower both partners to contribute to the shared work and draw on each person's expertise in collaboration.

Projective Dimension of Relational Agency

The shared knowledge these participants gained from the paired teaching also impacted their perceptions of future teaching practice. This was made clear by Cathy in her journal, where she commented:

I believe that this will prepare me for my future teaching career as I believe that teaching is a collaborative effort. This experience has given me appropriate and effective communication strategies and how to be more receptive to others' ideas. (Cathy's journal)

These communication and collaborative strategies were founded on the shared knowledge constructed from the paired practicum experience. Similarly, Eve also mentioned that she felt "the biggest thing I learned was how to collaborate very closely with someone". In addition, she commented she would like to become an approachable and easy-going person so others want to collaborate with her. Debby's reflection bore a strong connection with the affective aspect: "This cooperative teaching made me feel that teaching can actually be more enjoyable and positive. This experience reminds me that our traditional single-person teaching is not necessarily the ideal [way]." These reflective notes showed that the paired practicum experience impacted their perceptions about teacher collaboration and their sense of self in relation to others.

Discussion

Regarding the research question, the findings reveal that these preservice EAL/D teachers exercised their relational agency from three key aspects: the formation of mutual object, the participation in different types of collaboration, and the construction of shared

expertise and knowledge. There are two new insights revealed by the findings: (1) the formation of mutual object drives the types of collaboration, which further mediate the shared knowledge; and (2) there is a dialectical relationship between relational agency and collaboration.

Relational Agency and Mutual Object

Evidence of the participants' relational agency was their formation of mutual object. The challenges encountered drove them to discuss and negotiate with their partners and form a mutual object for action. For instance, a common challenge was a lack of student responses in online classes. All participants engaged in discussions with their partners to analyse the issue, and then collaboratively formed the mutual object of engaging students. For Betty, there was another layer of challenge pertaining to conflicting ideas about the focus of a particular lesson with her partner. However, this was overcome by negotiating the objective of each lesson via engaged discussion, which represented a sign of forming a mutual object for teaching. This demonstrated that they were able to identify a complex problem and negotiate a shared object based on that (Nguyen & Dang, 2021). Through the negotiation and discussion, they were able to develop a fuller understanding of the issue (Sorensen, 2014). For instance, Cathy and Debby determined that the causes of students' off-task behaviours were due to the lack of access to technology or anxiety of speaking in the main room of the Zoom. These findings are also in line with the claim that paired teaching provided the basis for productive dialogue between teachers, including reflective analyses and actions to address the issue to achieve the intended outcome (Ashton, 2022; Chen, 2022; Prain et al., 2021). In addition, they all demonstrated some adaptivity in accommodating the varying needs of their students and their partners, which constituted their negotiated mutual object. This confirmed that relational agency emerged and situated in "social and material interaction" (Hopewood, 2022, p. 2).

Dialectical Relationship between Relational Agency and Collaboration

One new insight revealed by the findings was a dialectical relationship between their relational agency and collaboration. On the one hand, their relational agency strengthened their collaboration (Nguyen & Dang, 2021). Their relational agency empowered them to work together towards a mutual goal. In turn, the mutual goal/object led to different forms of collaboration. In other words, their relational agency mediated their collaboration, which was something that was also found by Nguyen and Dang (2021) in their research. On the other hand, the types of collaboration mediated and enhanced their relational agency. For example, the routine structure of the lesson plan and regular debriefing with the supervising teacher established by Anne and her partner empowered their capacity to work together. Similarly, Cathy and Debby expressed, "the paired nature of the practicum allowed us to constantly support each other", this echoed the claim that "collaboration represented resources for the relational agency to manifest" (Nguyen & Dang, 2021, p. 647).

The data showed that mutual objects of the preservice teachers led to shared responsibility and different ways of collaboration. For instance, one common way was to divide the labour associated with lesson planning (adopted by Betty and her partner) and managing online Zoom teaching (adopted by Anne, Eve and their partners). Similar to Prain et al.'s (2021) findings, Cathy and Debby adopted a more reciprocal type of support for synthesising ideas for lesson planning and gave feedback for each other's teaching practice.

Although Betty and her partner admitted to having conflicting ideas about the focus of teaching, they both had a clear sense of respect and were willing to compromise in negotiating the objectives of teaching. This echoed the findings about relational agency that "each person recognised what mattered for the other and was able to listen to how the other interpreted the problem and how they were able to respond to it" (Edwards, 2017, p. 11). Similarly, the other four participants often acknowledge their partners' strengths and expertise. This reflected the need to value each other's expertise in collaboration (Bell & Baecher, 2012). In addition, each preservice teacher's special strengths enabled them to work with rather than against each other (Edwards et al., 2017; Hopwood, 2022). The CHAT perspective can reveal the participants' capacity in collaboration by identifying rules and tools used for different ways of working together (Edwards, 2005; McNicholl, 2013). These tools and artefacts highlighted the how and why aspects of collaboration (Nguyen & Dang, 2021) and enriched the CHAT research on the micro-level negotiation and the process of "externalisation through joint action" in response to shared object (Edwards, 2007, p. 15).

Relational Agency and Shared Knowledge

In the paired practicum, the shared knowledge of the preservice teachers was expanded and mediated by the tools and artefacts created in their collaboration, driven by the challenges and mutual object. There were three key findings. First, the created tools and artefacts have multiple functions in mediating their shared knowledge. As for the challenges of teaching online, their collaboratively created tools and artefacts can be categorised into social activities, social relations and concepts (Johnson, 2009). One new finding was the overlaps between these three types of tool mediation. the tools created for social activities were integrated with the concepts including their pedagogical knowledge and knowledge of technology. In addition, the tools in relation to social relations, like positive verbal feedback to address students' off-task behaviours, were also implemented in the social activities to engage students in the online learning environment. For example, they used breakout rooms and Jamboard to create a safe and collaborative space to encourage students' contribution. This collaborative use of technology demonstrated their knowledge of the why and how of their practices (Nguyen & Dang, 2021). This echoed the findings that collaboratively created mediating tools and means can aid in the co-construction of expanded knowledge of teaching (Melasalmi & Husu, 2019). These findings further elucidated the findings from Ashton (2022) and Chen (2022) by providing details of the types of resources created by the participants. This was evidence of their relational agency in exploring and utilising various affordances of education technology to create pedagogical benefits for students.

Second, the common knowledge they constructed during the collaboration further mediated their relational agency and collaboration on complex issues encountered during the online practicums (Hopwood, 2022). All the participants confirmed their learning from the collaboration and valued collaborative teaching. This served as confirmation that paired practicums have the capacity to increase preservice teachers' pedagogical knowledge and enhance their sense of shared practice (Prain et al., 2021). These findings confirmed that teachers' agency was influenced by the social context and also transformed into the context via their purposeful appropriation of resources (Nguyen, 2019).

Third, the shared knowledge and expertise influenced their future orientation. When talking about the impact on their future teaching, all participants agreed their communication and collaborative strategies were improved, and they valued collaboration in their future teaching. This showed that the shared expertise mediated their relational agency in the projective dimension (Nguyen & Dang, 2021). The use of affective words, such as "enjoy"

and "positive", indicated that the collaborative paired practicum provided emotional support for preservice teachers (Comoglu & Dikilitas, 2020). Preservice teachers provide sustained psychosocial support to each other in discovering knowledge about teaching and developing a sense of self as a teacher through dialogic interaction with peers (Nguyen & Dang, 2021). This confirms the CHAT in terms of how collective actions transfer into individual development (Edwards, 2005).

Conclusion, Implications, and Limitations

By analysing preservice teachers' relational agency during their paired online practicum in this EAL/D context, this research yielded several new insights. First, the formation of mutual object is important in the paired practicum collaboration, which further mediates the types of collaboration and shared knowledge. The analysis also highlights the dialectical relationship between relational agency and the types of collaboration. The findings echo the CHAT perspective that during the collaboration, individual learning is "shaping and being shaped by how the group established and sustained its ways of working" (McNicholl, 2013, p. 228). In addition, the findings reveal how preservice teachers' knowledge and use of technology have expanded via the exercises of their relational agency. This parallels other research findings about online practicums that suggest preservice teachers' digital literacy and teaching strategies improved after overcoming the challenges with abundant online teaching experiences (Brinia & Psoni, 2021; Jimarkon et al., 2021). These findings contribute to the literature on online practicums in times of ongoing crisis of the COVID-19 pandemic. The shared knowledge of the affordances of technology and strategies of engaging students can be transferred to the face-to-face setting and empower teacher collaboration even after the pandemic.

Further, this research yielded some implications for initial teacher education programs. First, teacher education programs could incorporate a systematic approach of collaboration to equip preservice teachers with an explicit understanding and necessary skills of a range of collaboration types (Ongrsquo & Jwan, 2009). For instance, a teacher education program could include a paired practicum as an option for every preservice teacher. This would not be a replacement for individual placements. Rather, a paired placement could be a beneficial and justifiable inclusion in an initial teacher education program that provides opportunities for the development of collaborative skills and experience, emotional support from a peer, and pedagogical development. Second, some targeted instruction about the affordances of digital technologies and resources for teaching and collaboration could support preservice teachers' practice in both normal classroom and online learning environments and prepare them for an uncertain future.

While overall we consider the experiences recounted as being a valuable insight into paired practicums, especially in this online context, we must acknowledge one limitation. The study had a small sample size and relatively short practicum period which may not guarantee the generalisability of the findings in other contexts. Therefore, our future research area will be a longitudinal study of preservice teachers' relational agency during longer practicums.

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