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# Learning from a dilemma: The opportunities online teaching provided for teacher growth and development

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## Abstract

The global 2020 COVID-19 pandemic impacted teaching and learning in all education institutions. The unprecedented and rapid shift from classroom based to fully online teaching raised unfamiliar dilemmas for educators, requiring immediate operational and pedagogical changes to meet previously unimagined demands. This study reports how an Australian school harnessed this experience and the teacher professional learning which ensued. Online focus groups were conducted with 50 teachers. The theoretical lens of Pedagogical equilibrium was used to explain the sense of unrest, curiosity, uncertainty and perplexity evident in teachers' responses as they began to address unfamiliar challenges. Data analysis revealed such disequilibrium provided opportunity for teachers to work together to socially construct new professional knowledge in three key areas: teacher agency, community collaboration and teacher well-being. The findings demonstrate the importance of positioning such disruptions as opportunities for teacher professional growth and strategically encouraging teachers to reflect, articulate and share their learnings. When done effectively, these processes can embody a dynamic, collaborative community culture based on respect, reciprocity and trust. Such a culture shift not only supports the construction of both individual and collective professional knowledge but also enhances teacher well-being.

**Keywords** Teacher professional learning · Online teaching · Dilemma · Teacher, school-based change · COVID-19

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## Introduction

In 2020, the rise of the COVID-19 virus powerfully impacted teaching and learning in educational institutions worldwide. Research has started to examine how this shift raised unprecedented dilemmas for educators and the ways in which they responded to previously unimagined demands (see for example: Zhao & Watterston, 2021). Studies have indicated the move to online learning presented challenges in terms of distance, scale and personalised teaching (Liguori & Winkler, 2020). Other studies have highlighted inadequacies in teacher knowledge of digital technologies and instant communication (Huber & Helm, 2020) and disparity for learners (McFarlane, 2019). However, research undertaken with teachers in a K-12 school in Victoria, Australia, demonstrated positioning this experience as an opportunity rather than a constraint, enabled a rich professional learning opportunity, informing future school planning and action. While this experience remained challenging and demanding for teachers, it also provided them the opportunity to think and work differently. Teachers shared dilemmas together and socially constructed new knowledge of professional practice.

### The dilemma of online teaching: a catalyst for professional learning

On the 25th of January 2020, the first case of COVID-19 was confirmed in Australia. To prevent the spread of, and deaths from the virus, the Australian government enacted strict rules and regulations. The measures included social-distancing and 'lockdown', where non-essential service personnel were authorised to work from home. Businesses, including schools were deemed non-essential and were mandated to close, almost immediately (with the exception of schools catering for vulnerable students and children of essential workers). With this unprecedented response, teachers at all levels of education in Victoria, Australia, worked rapidly to respond to COVID-19 stage 4 restrictions which required teaching and learning to be moved from face-to-face conditions to online classes. The swift response and unprecedented shift to online learning created what Mezirow (2000, 2003) in his Transformative Learning Theory (TLT) refers to as a 'disorienting dilemma' for teachers. According to this theory, these dilemmas act as a trigger to question assumptions, feelings and actions and may eventually result in a realisation that prior views or actions are no longer adequate, leading to uncertainty. Such dilemmas potentially change perspectives and the ways meaning is made within the workplace (Mezirow, 2000). The rapid move to online teaching, was a trigger for such dilemmas for teachers in all schools in Victoria (see for example Sharma et al., 2022) as it was for teachers around the world (Chaaban et al., 2021).

### Disorientating dilemmas and the search for pedagogical equilibrium

TLT (Mezirow, 2000, 2003) has been applied in relation to learning through various life experiences. Studies drawing on TLT in relation to disorienting dilemmas

have included understandings about palliative care (Campbell & Brysiewicz, 2018), tourists' intentions when ngaging with their destination (Kumar et al., 2022) and in relation to education. For example, Kreber (2022) explored the cultivation of professional identities in Higher Education. In relation to art education, Kokkos (2022) explored Transformative Learning and disorienting dilemmas, and found that participants' assumptions were sometimes either dysfunctional or unjustified, and a disorienting dilemma may initiate a critical appraisal or a review of their belief system, which may then transform their ideas.

The notion of disorienting dilemma resonates with the theory of Pedagogical equilibrium (Mansfield, 2019). This theory suggests a sense of unrest, curiosity, uncertainty, and perplexity may occur for a teacher if they encounter a situation which highlights their inability 'to enact their goals and intentions for teaching, or when they are surprised by the way they have implemented a lesson above and beyond what they had expected' (p. 191). Similar to triggers, which create a disruptive dilemma, challenges to equilibrium are often embodied within uncomfortable experiences and therefore demand the teacher's attention. Teachers often respond to such feelings of unrest and uncertainty by seeking ways of returning to a steady state. This process is known as the search for pedagogical equilibrium (Mansfield, 2019). To find such steadiness requires teachers to employ additional thinking; teachers often undertake alternative actions, as the routine knowledge they draw from is inadequate in managing the disruptive dilemma.

A challenge to pedagogical equilibrium, such as the shift to online learning, therefore signals an opportunity for teachers to think and work differently. Piaget (1959) noted that cognitive disequilibrium, manifesting as a degree of discontent, provides a necessary state to stimulate learning. Once the dilemma is recognised, the teacher may seek to manage these feelings of unrest. If the potential learning residing within such an opportunity is recognised and teachers are supported to embrace the challenge, then working through such a process may become similar to Mezirow's (2003) notion of facilitating transformative learning. Cognitive dissonance theory (Festinger, 1957), is similar and puts forward the argument that where an individual feels psychological discomfort there are often conflicting values, attitudes or beliefs. Individuals can be motivated to reduce the experience of cognitive dissonance by changing either their beliefs or reducing the importance of the conflict (Festinger, 1957). Studies using this approach have examined the dissonance in groups when personal values are violated (Glasford et al., 2008). Other studies include moderating listeners' perceptions of conversing with second language learners (Miao et al., 2023) and understanding students' cheating and behaviours through cognitive dissonance theory (Vinski & Tryon, 2009). In all of the studies reviewed, the search for equilibrium may provoke meaning making, facilitating transformative learning. However, for such learning to occur the teacher must be willing to work to manage the dilemma by critically examining their practice. This means initially recognising and drawing from any existing, relevant knowledge that can be brought to the new situation. The dilemma may require examining assumptions and testing alternative actions to manage the situation. In so doing, the teacher works towards returning to a state of pedagogical equilibrium. This process gives rise to transformative learning where the teacher achieves a new state of pedagogical equilibrium. This relies on a

willingness of the teacher to see their practice as problematic and recognise the new insights generated through the process of critical interrogation.

### Examining the rapid move to online teaching through a lens of pedagogical equilibrium

The frame of pedagogical equilibrium is useful for explaining the nature and progression of teachers' professional knowledge from an experience. The rapid move to online teaching provides an example of such an experience which involves cognitive and affective aspects of dilemma management, namely interest (Hidi, 2006) and self-efficacy (Bandura, 1997). The move to online teaching became an experience which for many reasons created a sense of unrest for teachers. Many perceived they did not have sufficient skill to use online teaching platforms (Maher & Zollman, 2021; Noor et al., 2020). Their degree of self-efficacy and interest may potentially impact their management of the situation. For example, a teacher's interest in learning may have been impacted by their belief in their own capacity to learn a new, online teaching platform. Or a high interest in learning may support the development of their self-efficacy. Hence, a teacher's beliefs and values are critical to understanding their experience with managing challenges to pedagogical equilibrium.

The challenge to equilibrium (Mansfield, 2019), was conceptualised by drawing on the theories of Pedagogical discontent (Southerland et al., 2011), cognitive disequilibrium (Piaget, 1959) and cognitive dissonance (Festinger, 1957). That is, discontentment can arise when actions and intentions do not align. This can create cognitive dissonance which triggers the search for cognitive equilibrium. Through this lens, the rapid move to online teaching can be considered as an experience which triggered feelings of unrest or uncertainty. For many teachers their routine knowledge of teaching was suddenly insufficient to manage the complexities associated with an unfamiliar teaching context, such as managing student inequities with technologies (Ferri et al., 2020) or managing their own lack of knowledge and experience (Noor et al., 2020). These feelings can be likened to what Southerland et al. (2011) refer to as a sense of pedagogical discontent. Given Dewey's (1930) observed human tendency to avoid or try to quickly alleviate feelings of discomfort and uncertainty, it is not surprising that online learning was immediately framed both socially and at the level of the individual educator as a 'disruptive situation' (English, 2013; Schön, 1983). Yet, supporting teachers to consider such uncertainty as less of a disruption and more as an opportunity for professional growth, possibly reframes such challenges as valuable professional learning experiences (see for example Sharma et al., 2022 and Midcalf & Boatwright, 2020). However, such learning always requires teachers to be willing to consider their existing professional knowledge and teaching routines as problematic. A willingness to enter uncertainty is also necessary to identify, consider and attend to specific dilemmas. Working in this way illustrates that 'mistakes, misrepresentations, confusion, conflicts, and little gifts of error' are crucial to understanding and constructing knowledge, as are 'the small and large adjustments and insights we make from these events' (Britzman, 2003. p. 2).

The sense of uncertainty teachers faced with online teaching and the quest to find personally meaningful solutions inevitably created difficult work for teachers during the lockdown periods (Midcalf & Boatwright, 2020; Noor et al., 2020). Teachers require particular support to be able to undertake such demanding work. Research indicates opportunities for teachers to work together, sharing ideas and concerns, and collaboratively reflecting on their actions is a valuable process (Schön, 1983, 1987). These approaches enable teachers to look critically at events after they have occurred, particularly those experiences which have triggered a sense of unrest. Hargreaves and Shirley (2012) assert that when teachers work together, they can be supported to articulate critical concerns and develop the levels of trust which contribute to mutual learning. As teachers collectively identify shared problems arising within and across situations of practice, they can be supported to recognise these challenges do not reflect inadequacy or failure as a teacher but rather teaching is often problematic by nature (Loughran, 2010). This is critical to establishing a capacity to think and work differently.

Sharing dilemmas and experiences is a process which can lead to deep pedagogical shifts and transformation of practice (Groundwater-Smith & Mockler, 2009). Such social interaction ensures individual learning contributes to the social construction of knowledge. As teachers work together to articulate and continually evaluate events, they collectively pay thoughtful attention (Dewey, 1933) to practice. This encourages them to adopt a mindful approach to teaching and professional learning by actively noticing (Mason, 2002) and collaboratively questioning their thinking about teaching. The process explicates teacher thinking, providing insights about how teacher professional knowledge of practice (Fenstermacher, 1994) informs teaching. The role of the teacher in professional learning is redefined and moves from that of 'working on' teachers to 'working with' teachers (Ward & Tikinoff, 1976).

The subjective emotional and intellectual reactions (Adams & Fleer, 2019) inherent in teachers' online teaching experiences, potentially characterised a series of disorientating dilemmas which teachers could explore if they were supported to do so. Creating conditions which enable teachers to work both individually to search for a sense of pedagogical equilibrium and then share these learnings together may potentially nurture the development of professional knowledge, shaped by the disorienting dilemmas. Leadership in schools is required to create opportunities to encourage teachers to work together and pool experience to socially construct professional knowledge (see for example, Sharma et al., 2022). When teachers are actively positioned to attend to the 'disruption' of online teaching in this way, the central place of teachers and their context in planning, learning and action is recognised, and valued, which is critical to effective teacher learning (Day, 1999; Fullan, 1993; Smith, 2017).

## Context

The current research is based in an independent co-educational K-12 school located in the Eastern suburbs of Melbourne, Australia. The school has approximately 400

students across K-12-year levels. The school leadership team was particularly interested in understanding how teachers' experiences with online classes impacted their teaching and what learnings teachers would take forward into their future practice. As a consequence, all teachers in the school were invited to participate in this research. In response, this research focuses on how the experience impacted teacher professional thinking and learning about: the conditions that enhance student learning, the implications for their online practice, and, any insights gained which they regarded as significant enough to take forward into their future teaching. In this paper we offer an overview of the broad findings from this research with more detailed examination of the key themes offered in subsequent publications. Ethical approval for the research was granted by the Monash University Human Research Ethics Committee (MUHREC)—Project ID: 19223.

## Methodology

At the time of conducting this research, a series of COVID-19 restrictions had been imposed by the Victorian State Government. This required all data collection processes to be compliant with safe distancing restrictions. The Zoom platform was utilised for online data collection. Online focus groups were conducted with 50 teachers from across levels within the school (30 secondary teachers and 20 primary).

Virtual focus groups were used due to the advantages of accommodating participants and maintaining geographical separation of participants due to the COVID-19 pandemic (Dos Santos Marques et al., 2021). However, this approach can be challenging if participants have limited technological proficiency, or technical hurdles arise, like connectivity issues and platform updates. Such challenges may delay start times of data generation (Dos Santos Marques et al., 2021). In light of these challenges, online data collection, through the focus group format, required adaptation and flexibility in the choice of tools and channels (Bolin et al., 2023). Recognising the necessity for methodological adjustments in the current study, the Google Docs platform was used as a way to communicate questions to participants and gather the teachers' collective thinking. In the Google Doc, space was provided under each question for group responses to be recorded. Using Google Docs was innovative as it enabled all of the focus group participants to build on each other's ideas. Although research indicates using smaller groups is beneficial during online data gathering (Bolin et al., 2023), through the use of Google Docs, we were able to accommodate a large number of participants in smaller groups. This enabled all groups to participate and build on each other's ideas and responses in real time.

Consent to participate was obtained from participants by signing a consent form before the focus groups commenced. Three focus groups were created to acknowledge both primary and secondary levels of schooling as different education contexts within the school with the potential to explore different issues and or considerations. The groups were structured in the following ways: Primary teachers only (FG: Prim), Secondary teachers only (FG: Sec), a mix of both primary and secondary teachers (FG: Mixed). The mixed focus group was initially created as a consequence

of participant numbers and a need to ensure researchers were able to manage the focus group approach in the online space.

Each focus group consisted of approximately 16—20 teachers. Within each of the three focus groups, teachers were then randomly assigned by the researchers into break out teams. Each focus group had approximately four breakout teams and each team consisted of between four to five teachers. Each break out team worked to answer a series of questions organised in a table format on a Google Doc that was common across the focus group. Hence data generated comprised three Google Docs (i.e. primary, secondary and mixed cohort documents).

Questions were used to prompt teacher thinking about their experiences during online teaching. The questions were formulated to encourage teachers to reflect on their experiences, adaptions, and perceptions of online teaching and learning. They highlighted the challenges and opportunities presented with this new mode of curriculum delivery (See Appendix 1 for example questions).

## Data collection

The format for data collection provided an approach which enabled the teachers to engage in discussion to co-create meanings and interpretations through a collective conversation (Liamputtong, 2016). A series of protocols was shared by the researchers with the participants in each focus group to ensure shared participation, group self-monitoring and respecting ideas of others. Breakout teams were assigned a different text colour which was used to record each of the team's responses on the Google Doc. Colour then became an identifier of a team's response across all sections of the Google doc. In the breakout teams, teacher thinking was prompted through the questions. Time was provided for participants to further develop their responses after listening to, or sharing ideas with each other, voicing their specific needs and concerns in their own words and on their own terms (Liamputtong, 2016).

## Data analysis

Data, consisting of written comments which captured teacher thinking and experience, were analysed using a grounded theory approach (Corbin & Strauss, 2008). Data analysis aimed to identify the conditions teachers valued for online teaching and learning and to generate a theory to explain what emerged as significant in the data. Initially, open coding was used, and a process of conceptual abstraction was undertaken where general concepts (codes) were applied to singular incidences in the data. The data were then examined for connections across these codes using a process of axial coding and as a result, data became organised into abstract conceptual subcategories (Scott & Medaugh, 2017) establishing relationships between the codes.

A constant comparative method was applied repeatedly across each emerging stage of data analysis. As this analysis continued, concepts became more numerous and more abstract. Selective coding was then used to establish the core categories (Corbin & Strauss, 1990) where concepts that pertained to the same phenomenon

were grouped to form a category. Data analysis was triangulated between the three researchers as all researchers worked collaboratively across all data to compare and contrast findings and discuss and compare initial categories. Similar categories were then integrated into a single category representing a higher degree of abstraction (Robson, 2002). When categories were decided it then became important to develop an explanation of each category. Through reiterative data analysis the properties and features of each category became further dimensionalised because of 'the conditions which gave rise to it; the action/interaction by which it was expressed, and the consequences that it produces' (Corbin & Strauss, 1990, pp. 7–8). Descriptions were developed about the conditions or 'catalysts' which identified the tensions and enablers teachers encountered.

## Findings

The purpose of this research was to understand how teachers' experiences with online classes impacted their teaching and what learnings teachers would take forward into their future practice. Through data analysis, three core categories emerged: Teacher Agency, Community Collaboration and Teacher Well-being. Each category is described in terms of specific characteristics of teacher actions which defined the category, the evidence from the data which gave rise to this category, the conditions or 'catalysts' promoting or facilitating defining actions, and the positive and valued consequences emerging as a result of the catalysts. The final categories remain grounded in the data but are abstract and integrated as well as being highly condensed.

The core categories were further defined by subcategories. Conditions which enabled teachers to think and work in the ways associated with each subcategory were identified as catalysts. Table 1 outlines the categories, subcategories and catalysts with supporting data samples. The following sections will consider findings from each of the core categories in turn.

### Teacher agency: teachers finding ways to think and work differently

The move to online teaching had teachers dealing with many dilemmas as they tried to change their practice to meet the demands of this new context. Yet teachers' strong beliefs about the role of the teacher, the role of the student and what mattered when developing quality student learning, remained firm and continued to shape how teachers developed online education (see Table 1). This way of thinking was categorised as Teacher Agency, as teachers were trying to manage dilemmas by changing their practices in ways which aligned with their beliefs and values (see Mansfield et al., 2023). For example, teacher thinking about assessment illustrates this point. Teachers identified dilemmas in their assessment practices, which led to questioning and identification about what was important.

> Do we really need to do so much testing? How should we be assessing across the school? How important are 'grades'? Focusing on growth more? (FG: Sec)

**Table 1** Categories, subcategories and catalysts

| Categories | Sub categories | Catalysts | Data |
| --- | --- | --- | --- |
| Teacher Agency | Teachers finding and enacting ways to think and work differently | Open mindedness<br>Flexibility<br>Reduced complexity<br>Relationships<br>Parents | We are dedicated, adapted as required. We value what we offer to students. (FG: Sec)<br>Getting back to core study without added extra fluff. (FG: Prim)<br>Ability to work at own pace at home, allowed to prioritise what was essential, and what we personally needed to focus on. (FG: Sec) |
| | Socially constructing professional knowledge | Nature of support<br>Team work as a condition for collaboration<br>Facilitating professional dialogue<br>Opportunities for shared learning | Provided/forced an opportunity for us to experiment with different ways of assessment. Some worked better than others, but forced to work outside of the 'comfort' of the classroom space. (FG: Sec)<br>We have developed some teaching resilience, forced us to try new things and had to just 'fly' with it. Principal's advice to us at the start telling us to go slow, try and don't be afraid to make an error, support from him very helpful. (FG: Mixed)<br>Collaborative approach amongst staff in terms of sharing resources, skills, experience, ideas AND Emotions! (FG: Sec) |
| Community Collaboration | Building real time community collaboration | Contextual support<br>Emotional support<br>Acknowledgement and respect of mutual expertise<br>Real time professional dialogue<br>Effective communication systems | Praise from peers and parent's support, setting small goals and lowering expectations to succeed, set boundaries and stick with them. (FG: Mixed)<br>Parents were appreciative and realised we were trying hard, they could see the efforts staff were putting in. (FG: Mixed)<br>Parent support and having them visibly on side with all the change makes you want to keep going and do your best. (FG: Prim) |

**Table 1** (continued)

| Categories | Sub categories | Catalysts | Data |
|---|---|---|---|
| Teacher Well-Being | Managing the tensions of work life balance | Opportunities to exercise choice<br>Trusting relationships requiring reciprocity<br>Adaptive, proactive mindset<br>Staying connected with parents and educators beyond the school | Check-ins with other teachers/ working together—felt like we were a team. Working together made it much easier. Faculty catch-ups. (informal) (FG: Mixed)<br>Trusting in colleagues. Support from other team members while working from home. (FG: Prim)<br>Be gentle, yet firm in your expectations.<br>We are all learners, kids and Teachers alike. (FG: Prim)<br>Insight into families and home lives—this can support wellbeing lessons. (FG: Prim) |

> Feedback became very important - no face to face teaching meant written feedback, formative feedback cycle was interrupted. (FG: Sec)
> Time to reflect on feedback must be included in lessons. (FG: Prim)

In the online teaching space, streamlined assessment data collection processes remained extremely important to teachers, yet they found their previous approaches to such data collection were no longer effective when working online. With this in mind teachers worked to think and act in ways that were different to their routine practice in the face to face classroom. Maintaining streamlined approaches to assessment guided the ways they began to use online tools and this challenge produced some exciting results (see also Table 1).

> Immediate feedback is working very well. Chat facility is quick and efficient. Assignments sometimes became overwhelming. Looking for a method to streamline this. (FG: Prim).

The professional knowledge teachers created about teaching and learning often developed as a result of noticing and responding to concerns that arose in their practice. Yet, as illustrated in the quotes above and in Table 1, it was often difficult for teachers to develop new practices to meet the needs of their students in online learning. Teachers valued active encouragement and support to work in flexible ways, exercising freedom to make decisions about how to allocate and use time within their daily teaching schedules (see also Table 1).

> There wasn't much pressure to get it right the first time. (FG: Mixed).

> Expectations changed to align with the new paradigm. (FG: Sec).

> Less hard on ourselves for making mistakes - having a go, trying new things, being open minded. (FG: Mixed)
> Flexibility to create within a tight program. (FG: Prim)

This enabled teachers to reconsider what mattered, clarify their pedagogical reasoning in order to reprioritise learning intentions.

> Problem solving came to the fore, sometimes content was less critical as other skills were vital to thrive in an online environment. (FG: Prim)

It appeared the individual mindset of the teachers either enabled or constrained personal action. For example, teachers in the secondary focus group noted they '…had to adapt, couldn't get out of it. This changes a person's mindset from an "opt-in" to a "let's get this done"'. Data indicated teachers were aware their personal willingness to change was a determining factor for success and professional growth. A personal 'desire to lift, change and develop' (FG: Sec) was identified as essential while sitting in the uncertain space of online teaching. Valuing 'your own experience helps you to streamline yourself over time' (FG: Prim). This catalyst also appeared to directly relate to the support and encouragement derived from relationships within the school environment, e.g. generous colleagues and team members. However, if working alone, the insights teachers developed may well remain tacit and personal.

### Teacher Agency: socially constructing professional knowledge

Sharing professional thinking enabled individual learning to be made explicit and accessible by others (i.e. 'Collaborative approach amongst staff in terms of sharing resources, skills, experience, ideas AND Emotions!' (FG: Sec), from Table 1). Relationships enabled teachers to feel more confident when facing uncertain and unpredictable aspects of their practice. When opportunity was provided for teachers to work together to address shared concerns, they were able to collectively explore a range of possible responses. As teachers noted, 'We are collaborative. We like to get feedback from others and working in teams is important to us' (FG: Sec). In doing so, teachers engaged in purposeful and focused dialogue, articulating and sharing understandings. This type of interaction appeared to enable teachers to socially construct meaningful and contextually relevant professional knowledge which changed their practice (see Table 1).

### Community collaboration

The second core category emphasised the collaborative and communal nature of teaching and learning. Teachers identified that school leadership, teaching colleagues and parents provided valuable support when they encouraged teachers in their efforts to try new approaches (see Table 1). Teachers stressed the importance of trusting colleagues and when colleagues were open to sharing their practice and ideas. This assisted them to move forward with their online teaching to more effectively meet the needs of their students and the overall teaching and learning needs of their school. 'Decisive leadership' (FG: Prim) was valued and seen as an important part of professional relationships. Teachers valued attempts to ensure they were able to maintain ongoing collegial connections and they appreciated the 'initiative and support by colleagues' and their 'dedication' (FG: Prim).

Teachers openly discussed the need for relationships with the school community to be based on reciprocity and trust between all stakeholders. This thinking came to the fore as teachers worked in real time with parents, during online learning sessions. Teachers found they were engaging in professional dialogue with parents in the moment, because parents required explanations about the pedagogical basis for their decisions (i.e., what teachers were doing, and why they were doing this). For example, 'Finding ways to make the parents feel more relaxed in an online environment (teaching their children from home)' (FG: Prim). Teachers had to actively explain, providing further information about their approaches. By articulating their professional knowledge in this way parents came to understand how this thinking guided curriculum delivery, and how teachers used this knowledge in the moment to determine appropriate responses to student learning needs (see Table 1). Data indicated that as a result of this process teachers positioned parental support as valuable and essential in online teaching.

> Parent support and having them visibly on side with all the change makes you want to keep going and do your best. (FG: Prim).

When teachers and parents worked together effectively, such collaboration provided a deeper understanding of students and enriched the support that could be made available for their learning.

### Teacher well-being

The final core category highlighted teacher well-being and the challenges that arose when teachers tried to balance demands of the workplace with demands from home. Teacher well-being was closely dependent upon the other categories (i.e., Teacher agency and Community collaboration), such as teachers being able to find different ways of thinking and working, and working effectively with other members of the community such as fellow teachers, school leadership, students and parents. Data analysis revealed effective peer collaboration potentially enhanced a teacher's personal sense of well-being. The parent community also made a significant contribution to teacher well-being, particularly when parents invested trust in teachers, acknowledged the professionalism of their work and collaborated with teachers in productive ways. Teacher comments indicated such support reduced teacher stress and in doing so enabled teachers to achieve an improved sense of well-being (see Table 1). However, data also revealed teachers believed they needed to accept responsibility to be proactive, seek assistance and collaboratively negotiate ways to enhance time management and productivity in order to support their own well-being.

> It's a NEW world now so we have to adjust and work alongside the students. (FG: Prim)
> Ask for help, not just in an online space. We all need to ask questions, even when things are going well. (FG: Sec)

The findings revealed online teaching involves complex work which is interrelated to and situated within the expectations of education systems, school vision, accountability measures, school-based cultures, classroom dynamics and parental expectations. All layers of this complexity were interconnected. To effectively teach online and do so in ways which teachers believed would enhance student learning, all layers of this complex structure needed to be in alignment. To understand the overall phenomenon of effective online teaching and learning, it is necessary for all categories to be understood as interrelated.

## Discussion

These findings emerged because teachers were positioned to think critically about their practice. The shift to online teaching and learning was a disruptive dilemma (Mezirow, 2000, 2003) for teachers, yet the school positioned this experience less as constraint and more as an opportunity for professional learning and growth. The school encouraged teachers to engage in a process of recalibrating thinking and action to manage individual and shared dilemmas. In doing so the school

supported teachers to engage with the process of 'searching' for pedagogical equilibrium (Mansfield, 2019).

Teachers quickly recognised that routine knowledge was not sufficient to manage aspects of teaching in the online space. For example, many teachers needed to learn about and practise using new online technologies. Immediate changes were required at both a pedagogical and organisational level within the school, to enable teachers to find ways to think and work differently. Each teacher faced new dilemmas and for many this required a 'search' for new ways of understanding and alternative action. Professional relationships came sharply into focus yet existing beliefs and values around the place of curriculum and assessment remained firm (MacGilchrist et al., 2004).

Perception of dilemmas triggered feelings of unrest and uncertainty in teachers. Teachers worked individually and collaboratively in an attempt to manage such concerns. Part of this process required teachers to intellectualise their dilemmas, naming and framing aspects of their practice, and identifying assumptions to recognise what was and was not working. The process was difficult and unsettling yet necessary for professional growth. Teachers engaged with the process individually and collaboratively, developing shared understandings when socially constructing professional knowledge, emphasising the value of providing time and space for teachers to collaborate and discuss disruptive dilemmas as a rich learning opportunity. Teachers began to think differently about the nature of their work in the online teaching space. Integral to managing this process was feeling a sense of support from various stakeholders within the community, including students and parents. Yet perhaps even more influential was active encouragement from school leadership to focus on learning and experimenting, rather than pressure to 'get it right', a similar finding to Chaaban et al. (2021) and Sharma et al. (2022).

Collaborative dialogue enabled teachers to work together to actively share their concerns and issues and examine the nature of these dilemmas. This provided a catalyst for teacher thinking and growth. Teachers began to think critically, consider options and socially construct new ways of understanding this disruption. As a result, teachers began to restructure their knowledge and organise the learning environment in new ways. This was similar to findings from García-Martínez et al. (2019) who observed in their literature review how the building of collegial and trusting relationships through a common project stimulated teachers as agents of change. Teachers used collaborative dialogue and negotiation to achieve consensus about a shared dilemma.

The move to online teaching highlighted yet again that teachers work within complex and dynamic systems and communities. They contribute to the collective endeavours of schools which are influenced by and exist within wider cultural contexts. This research reinforces the idea that school culture is dynamic by nature. Schools are ultimately further shaped by disruptive experiences if the main stakeholders (e.g., leaders, teachers, students, parents and school board) are empowered and supported to critically evaluate, develop considered responses and work together in new ways. In this research, the school culture itself became a dynamic structure reinvigorated by the disruptive experience, reinfused with meaning, such as patterns

of shared beliefs, assumptions and value systems (Liddicoat et al., 2018; Schein, 1992).

### Limitations and implications

The focus group format posed limitations as it confined participants to structured discussions, with their contributions being summarised as brief statements entered into a table within the Google Document. The presence of a single scribe may have introduced a degree of subjectivity and selectivity when recording data for the Google document table. The data collection was held at a particular point in time with K-12 teachers from one school in Victoria, and therefore, the data are not generalisable to all schools, considering the unique characteristics of each institution.

For future research, we aim to expand the study's scope, with the aim of better understanding the three core themes that have been identified (teacher agency, community collaboration and teacher wellbeing). Initially, further investigation is warranted to understand whether these areas are currently of concern to teachers, after the resumption of onsite learning. We also seek to better understand the underlying factors that contribute to these concerns and the interrelationship of these areas. This research would be of value, especially in relation to the use of these themes as possible frames for investigating conditions which may stimulate a teacher's search for pedagogical equilibrium.

## Conclusion

The purpose of this research was to understand how teachers' experiences with online classes impacted their teaching and what learnings teachers would take forward into their future practice. Findings from this study demonstrated how teachers at this school experienced an individual and collaborative challenge to their pedagogical equilibrium (Mansfield, 2019). As they began to explore and think about what mattered in their practice, the tacit features of teacher knowledge became explicit. Teachers' subjective dialogue informed conversations (Adams & Fleer, 2019). They began to talk about what was valued, why this was important, why they needed to work in particular ways and the type of learning and teaching they wanted to achieve. The teachers needed active encouragement, explicit support, and flexibility to engage in dialogue to create conditions that enabled active recognition and showed the value of critical effective professional learning (Smith, 2017).

When such conditions were provided, teachers explored the complex work of teaching and learning by sharing concerns and finding new ways of working. Teachers pooled their collective knowledge and interrogated a range of assumptions about assessment and planning and began to work together to socially construct new professional knowledge. The process was challenging but necessary, providing a powerful professional learning experience, one that teachers will not easily forget.

Student learning is enhanced when teachers, leadership and community work collaboratively together. The challenge more generally, is to continue exploration of

the conditions that give rise to such work and attend to the aspects of school life that will ensure teacher agency, community collaboration and teacher well-being are effectively supported, continue to grow and are enabled to enhance the learning cultures in schools.

## Appendix 1: A selection of focus group questions used in the Google Doc for teachers to discuss and then document their discussion.

- Consider the tensions (psychological/physical) that make you feel uncomfortable in the online learning space. What do these tensions tell you about what you value as a teacher?
- What ways did online teaching change your thinking about the learning agendas or objectives you developed for your classes?
- When considering both online teaching and familiar classroom approaches, what conditions now seem most effective for providing students with opportunities for deeper learning, e.g., developing conceptual knowledge in more integrated, coherent and meaningful ways?
- What has positioned you to cope with rapid change and flexible delivery?

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**Availability of Data and Materials** Data is not publicity available as consent was not sought for public sharing of the data sets.

## Declarations

**Ethical approval** Ethical approval for the research was granted by the Monash University Human Research Ethics Committee (MUHREC)—Project ID: 19223.

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