Chapter 13

Taking a Strength-Based Approach: Bringing Student Homes into Schools During a Pandemic

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Abstract The COVID-19 pandemic has caused new ways of doing and being, both in education systems and beyond across the world. In the context of Aotearoa/New Zealand, the widely supported government approach focused on the well-being of the nation with a position that saving lives was more important than maintaining an open economy. As researchers and educators, we supported teachers as they worked with their students in their home settings. This provided us with an opportunity to explore a vision of a reinvented system of mathematics education beyond institutional and formal structures of schools. In this chapter, we present the analysis of the responses from 24 educators mainly from low socioeconomic urban settings as they reflected on how they enacted mathematics teaching and learning during the lockdown while connecting with students and their families as well as their subsequent learning from this experience. Results highlighted that the mathematical learning of students went beyond what was accessed by digital means and included parents drawing on rich everyday opportunities. A key finding was that by supporting and privileging the well-being of students and communities, the connections and relationships between educators and families were enhanced.

13.1 Introduction

The COVID-19 pandemic, across the world, has caused a new way of doing and being in a world that has suddenly become less safe and reliable. It is something that has never been experienced by the people of Aotearoa/New Zealand. This exposed our small, closely interconnected island nation of people to a reduced set of choices. Our widely supported government approach took a moral and ethical position in which saving lives was deemed more important than the economy. A collective national focus was placed on the well-being of the nation. Taking this relentlessly

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positive perspective enabled us as researchers and educationalists with a unique opportunity to support teachers as they worked with their students in their “lock-down” home settings. It also provided us with opportunities to explore how a reinvented system of mathematics education might look like beyond the institutionalized and formal structures of schools and classrooms.

Being able to learn how mathematics teaching and learning can be reinvented beyond classrooms is particularly important for Māori and Pāsifika, the group of diverse students we focus on in this paper. This is because this vulnerable group of students have a long history of being underserved in mathematics classrooms in Aotearoa/New Zealand (Hunter & Hunter, 2018). While Māori are indigenous to Aotearoa, Pāsifika peoples are first cousins from neighboring Pacific island nations. This multiethnic, heterogeneous group of people include those born in New Zealand and those who have migrated from the Pacific Islands. Anae et al. (2001) outline how this encompasses all those who identify themselves with the cultures of Samoa, Tonga, Cook Islands, Niue, Tokelau, Fiji, Solomon Islands, Tuvalu, and other Pacific Island countries.

Māori and Pāsifika learners, for too many years, have had concerning low levels of mathematical achievement in Aotearoa/New Zealand schools. The poor outcomes for these indigenous and close cousins correspond directly to the many structural inequities they encounter in mathematics classrooms in this country (Hunter & Hunter, 2018). The long reach of the negative effects of colonization across the past two centuries are many, but one clear link can be connected to the cultural and ethnic heterogeneity of twenty-first-century classrooms. Most teachers come from higher socioeconomic backgrounds and represent the dominant cultural group. This contrasts sharply with many of their Māori and Pāsifika students who represent both lower socioeconomic and culturally and ethnically diverse groups. Rubie-Davies (2016) suggests that such cultural mismatches cause cultural misunderstandings and the construction of deficit perspectives by teachers of their students. Therefore, there is an immediate need for these teachers to engage with these diverse students to develop rich understandings of their home lives and contexts.

In order to provide active support for teachers to engage positively with Māori and Pāsifika learners in the recent past, we have built on culturally sustaining practices promoted by Paris (2012) and incorporated strength-based approaches (González et al., 2005; Hunter & Hunter, 2018). In our ongoing professional learning and development work, we have taken explicit actions to deepen teacher knowledge of the lived realities of the home contexts of many of their students (Hunter et al., 2019). However, the novel situation created by the COVID-19 pandemic gave us an additional positive opportunity—the chance to place the home clearly into, and within, the school community and the mathematics classroom. In this chapter, we report on how we, as university lecturers and teacher educators, supported school leaders and teachers to engage in a range of new and different ways with students and their whanau (close and wider family members) as they engaged in mathematics during the lockdown. As we did this, we examined and explored the opportunities this provided all participants with to develop richer understandings related to

the students' funds of knowledge. The question we aimed to explore was: what is the learning for all of us when homes are integrated into a school context in relation to constructing and sustaining a strength-based mathematics pedagogical approach during the lockdown in a pandemic?

13.2 Culturally Sustaining Mathematics Pedagogy

Our adoption of culturally sustaining mathematics pedagogy (CSMP) was based on our search for a form of teaching that supports both culturally responsive practices and could include a dynamic view of culture (Gay, 2002, 2010; Ladson Billing, 1994, 1995). Such multiculturalists as Banks & Banks (2009) and Nieto & Bode (2011) suggest that the pedagogy needs to support an education system both culturally diverse and equitable. Within this frame, Johnson (2014) describes an education system in which all interactions take place across racial and ethnic lines in ways that enhance student learning and achievement and support outcomes equitably. Embedding the critical aspects of culturally responsive pedagogy in CSMP allowed its reframing as a strength-based or asset-based approach in which the “linguistic, literate and cultural pluralism as part of the democratic project of schooling and as a needed response to democratic and social change” is sustained (Paris & Alim, 2014, p. 88).

Our goal in adopting this framing of CSMP supported us to consider how we could ensure the empowerment of the whole community who are involved within our mathematics classrooms. At the heart of such empowerment is the development of relationships and trust (Bonner, 2014; Civil & Hunter, 2015; Hodge & Cobb, 2016; Powell et al., 2016). In this chapter, we aim to explore and explain how building trust and respectful relationships across the families and their communities supported empowerment and power sharing across the different participants, including the students, their families, their teachers, and us, as university staff.

Considerable research has shown that both teaching and learning which matches the cultural values and experiences of the learners along with parental involvement is a key factor in ensuring equitable outcomes for all (Averill, 2012; Bonner, 2014; Hunter et al., 2016; Robinson et al., 2009). In our work, we pay close attention to the values enacted by the communities we are working with. Our first consideration is given to our indigenous core Māori values such as “whanaungatanga” (sense of belonging), “kotahitanga” (oneness), “tuakana/teina” (relationships), “kaitiakitanga” (reciprocity), “whakapapa” (family lineage), “aroha” (love), “wairua” (spiritual well-being), and “hauora” (Berryman & Eley, 2017; White, 2011). These closely align with the values of Pāsifika peoples. Although a heterogeneous group, these people share a common set of values (Ministry of Education, 2013). These include such values as belonging, family, inclusion, leadership, love, reciprocity, relationships, respect, service, and spirituality. Clearly, both sets of values are underpinned by those of a collectivism society's and strongly focused on the well-being of the collective as a whole. In our recent research, we showed that students

named family, respect, and collectivism as particularly important educational values they drew on as they engaged in mathematics in classrooms (Anthony, 2013; Hill et al., 2019; Hunter, 2021).

A key aspect of CSMP, which we implement in our professional learning and development work with teachers, is the understanding of the importance of incorporating the cultural and social contexts of their students into their mathematics teaching and learning. A number of studies have shown the importance placed by parents and the community on pedagogical practices which support diverse and often marginalized students to build strong cultural identity as they learn mathematics (Bonner, 2014; Ladson Billings, 1994, 1995). An important aspect of this is teacher awareness of student and family funds of knowledge. In reference to funds of knowledge, Moll and his colleagues (1992) describe how all cultural groups hold historically accumulated bodies of knowledge and skills, which serve to support both individual and household functioning and well-being. We argue that it is important for teachers to know the family and community funds of knowledge. This is critical as a tool that can be mathematized in ways that support student engagement and achievement.

For schools and teachers to develop deep understandings of their students' funds of knowledge, they need to be closely connected. Many studies show the significant effect on mathematical achievement when parents are involved and connected in authentic and culturally appropriate ways (Barton et al., 2004; Civil & Bernier, 2009; Monson, 2010). To achieve authentic connections, Barton et al. (2004) caution that parent involvement needs to be seen from a wider lens than that from what is traditionally prescribed by schools. They argue that the widened lens would avoid schools from labeling parent involvement as minimal. As Civil and Bernier (2009) argue, this needs to include consideration of language and individual differences as well as the promotion of parents as essential partners in their children's education. A study conducted in Aotearoa/New Zealand with parents during the COVID-19 pandemic lockdown also promoted the need for improvement in home-school partnerships (Riwai-Couch et al, 2020). Riwai-Couch et al. (2020) stated that "finding ways of developing such partnerships and valuing the learning that happens across the boundaries between homes and schools, seems an important step in expanding our view of what counts as quality education, making schooling more equitable, and in honoring the Tiriti o Waitangi" (p. 7). In this paper, we suggest that the COVID-19 pandemic lockdown provided the background for possibilities for changing these partnerships when the students' homes were brought directly into the school setting.

13.3 Massey University

Massey University is based in Palmerston North but has significant campuses in Albany and Wellington. It has approximately 30,883 students of which 13,796 are extramural or distance learners, making it Aotearoa/New Zealand's second-largest

university. Research is undertaken at all three campuses. Albany Campus, where this research has taken place, was opened in 1993 and has around 7,000 students. In the QS rankings, Massey University was ranked 287th and the Institute of Education was ranked in the top 150 universities for education in the world.

The researchers who wrote this chapter are on the Albany Campus and belong to the Institute of Education in the College of Humanities and Social Sciences. They are also lead members of the Centre for Research in Mathematics Education (CERME). CERME brings together experts to work on a common theme: the place of mathematics education and its transformational potential in Aotearoa/New Zealand, the Pacific region, and the world. A focus on equity and cultural responsiveness underwrites our research projects and the developmental work we engage in with teachers, postgraduate students, and new researchers. Our strong tradition of collaboration with international and national researchers enables us to contribute to scholarly debates, in both the research and professional fields.

The research which informed this chapter was part of a multimillion-dollar funded and ongoing collaboration with Massey University and the Aotearoa/New Zealand Ministry of Education. This is based around a professional learning and development research-based program across many communities within Aotearoa/New Zealand and includes two Pacific nations, Niue and the Cook Islands. The research has a background of fifteen years of research-informed professional development in schools.

13.4 Developing Mathematical Inquiry Communities

Developing Mathematical Inquiry Communities (DMIC) is an evidence-based comprehensive professional learning and development (PLD) model founded in equitable outcomes for *all* students (Civil & Hunter, 2015; Hunter et al., 2018). It is a model of best practice for teaching and learning mathematics and integrates culturally sustaining pedagogy, ambitious teaching, and complex instruction (Paris, 2012; Kazemi et al., 2009; Featherstone et al., 2011).

Our goal within this model is to reposition traditionally marginalized students (e.g., Māori, Pāšifika, and other diverse students) to have equitable opportunities to learn mathematics with deep reasoning using a range of mathematical practices (Hunter & Anthony, 2011). This includes the use of mixed ability grouping and a focus on student and family wellbeing. It is also inclusive of promoting a positive cultural identity as well as a positive mathematical identity in our learners and users of mathematics (Alton-Lee et al., 2011; Hunter & Hunter, 2018; Hunter et al., 2019, 2020a, b).

In the focus on community building within and across schools and their local communities, DMIC involves 210 schools and a team of 35 researchers and teacher educators from Massey University.

13.5 Methodology

The data included in this study examined the experiences of school leaders and mathematics teachers as they work with their students and families and grappled with the unknown during the COVID-19 pandemic lockdown. Our first case of COVID-19 was reported on February 28th, 2020. By March 21st, 2020, with a rising number of cases, a four-level alert system was introduced by the Aotearoa/New Zealand Government. On March 23rd, 2020 with over 100 cases and evidence of community transmission, New Zealand moved to a higher alert level 3, and educational facilities were closed. On March 25th, 2020, the country moved into the highest alert level 4. All nonessential businesses closed, and people were instructed to stay home for a minimum of four weeks. Schools closed from March 25th, 2020 with partial reopening on April 28th, 2020 of approximately 5–10% children of essential workers. Full reopening occurred on May 18th, 2020.

During the lockdown period, Massey University staff supported teachers by running online workshops on digital learning, providing in-the-moment coaching during Zoom sessions as teachers taught groups of students. In addition, the staff provided sets of mathematical tasks suitable for online or remote learning. In this chapter, we focus on the responses of 24 educators as they were supported by Massey University staff to continue to engage with their students and their families. This included 19 teachers and five principals/deputy principals representing 24 schools and more than 500 students. The teachers and principals/deputy principals ($n = 18$) were from urban schools in low socioeconomic areas or ($n = 6$) at schools in rural locations. The data was comprised of audio-recorded interviews or written responses to 14 interview questions which focused on how they connected with students and their families, how they enacted mathematics teaching and learning over the lockdown period, and their learning as a result. A grounded theory approach supported the development of codes that described patterns that emerged (Strauss & Corbin, 1994). For instance, the data was initially coded in relation to the responses to each question. One question as an example was: “What are the things that you need to consider when using Zoom or a digital platform with your students at home?” Themes that were developed in relation to responses to this question included well-being, relationships, respect when “entering” the home, privacy, pedagogical actions, and information technology skills. We then identified the common themes that appeared across different questions and began grouping these together to develop patterns. Reliability was ensured through cross coding the data independently by two researchers and member checking. Where contradictions emerged, the wider research team reviewed the data to reach a consensus. Insights from the data are presented in the following sections.

13.6 Findings and Discussion

We begin by examining the themes which emerged which related to how the Massey University researchers and teacher educators provided mathematics support to the homes. We show how the well-being of students and communities was supported and privileged and ultimately enhanced connections and relationships across all participants.

13.6.1 *A Well-Being Orientation to Building Relationships*

The clear digital divide in access to devices and connectivity was the first concern of the Massey University staff. Rewai-Couch and colleagues (2020) describe such inequities related most often to Māori and Pāsifika learners in low socioeconomic communities. Our educators, cognizant of this factor, immediately and proactively ensured that families were provided with culturally sustaining mathematics activities at home. Half ($n = 11/24$) of the educators described how they physically supplied their school community with hard copies of culturally appropriate learning packs. Their immediate deep concern and support were evident to the community and showed their awareness of what Moll et al. (1992) describe as family funds of knowledge. Such actions as Bonner (2014) suggests, provides a central component of relationship building: teacher awareness of their family's funds of knowledge. A clear focus was placed on well-being within a holistic view of family need before considering mathematics teaching. As a teacher explained, "Teachers all made family group phone calls and emails to follow up on contact, wellbeing, connectivity throughout lockdown time – this point of contact has been effective for the big picture" (J. Hunter, personal communication, May 9, 2020). In terms of maintaining both a sense of security and wellbeing of the child, as they engaged in mathematics lessons, she went on to explain: "The same teacher takes a progression of two to three lessons so they build and students get used to each teacher's different approaches (three to four teachers taking turns fronting the workshops). Having another adult (teacher or teacher support worker) in the Zoom room for support and security helps with more open teaching as there is always someone else watching to give feedback" (J. Hunter, personal communication, May 11, 2020). Such action could best be described as encompassing the Māori concept of "hauora." The teachers' attention to the physical, mental, and emotional, social, and spiritual well-being of communities began what Barton et al. (2004) argue is needed—a changed school-home partnership. The relationships were changing, and as Riwai and colleagues (2020) explain, through such relationships the possibility of a shared power relationship was being constructed. At this point, the Massey University staff were able to attend to mathematical learning in a new space where they needed to go into their students' homes through remote means.

13.6.2 Opening Spaces for Mathematics Learning

Although the pandemic was at the top of the school communities' minds, the teachers also wanted to continue working with the university and continue their professional learning journey in mathematics. Despite the prospect of a prolonged shutdown and the possibility of having to learn and adopt digital tools to teach mathematics, they outlined their need to: "make necessary changes to the way we deliver, but not what we deliver." (J. Hunter, personal communication, May 8, 2020). In order to support the educators, Massey University staff provided schools with a set of cognitively demanding mathematical tasks which matched the lived reality of the students' home world and were able to engage families to work together on them through drawing on their collective funds of knowledge and mathematizing it (Moll et al., 1992). The tasks, designed by Massey University staff, were intended to scaffold the teachers to maintain culturally sustaining mathematics pedagogy (Paris & Alim, 2014).

Although the teachers drew on the provided tasks at the same time, they ($n = 12/24$) noted that the parents were adept at drawing on and using day-to-day community-based activities. These included a range of both indoor (for example, cooking) and outdoor activities (for example, collecting and selling firewood or mixing petrol and oil for a motorbike). Clearly the teachers were being exposed to, and learning about, their student's funds of knowledge within mathematics (Moll et al., 1992). Entering the students' homes changed the home-school partnership as the teachers viewed the way in which parental knowledge of mathematics was drawn on and used in their home settings. As Civil and Bernier (2009) show, such respectful observations are required if parents and the other members of the local community are ever to be perceived as real education partners.

13.6.3 Taking Mathematics into Homes Through Digital Means

Although there was a digital divide, many schools obtained and delivered IT equipment to those who needed it, and others were already online schools. Where online teaching and learning were possible, teachers used many different methods. Most commonly, Google classroom ($n = 16/24$), synchronous teaching Zoom ($n = 15/24$), or Google meet ($n = 6/24$) were used. For both forms of online teaching, educators ($n = 9/24$) described the need to provide students with different means and ways to explain reasoning including photos of solution strategies, videos of students explaining, threads or chat functions, and online whiteboards or annotation tools to support the continued focus on developing mathematical practices. The different teachers described their goals as having students engage in such practices as providing a mathematical explanation, justifying, generalizing, and representing reasoning. For example, one teacher explained her new perspective as she adapted her

expectations: “being able to do a ‘connect’ at the end- what did you do that helped you solve this problem? Me writing their thinking took away the mechanics of putting their thinking out there, and also helped to model a way to record mathematics thinking for others to follow.” (J. Hunter, personal communication, May 13, 2020). It was evident that the teachers were seeking ways to maintain a focus on having students as mathematicians wherever and however they could. A significant amount of research from Massey University supports the need for these diverse students to be supported to engage in these practices in order for them to see themselves as mathematicians (Hunter & Hunter, 2018; Hunter et al., 2018, 2019).

For over a decade, Massey University researchers have maintained focus on developing mathematical practices in a collaborative setting with Māori and Pāsifika learners as a clear equity issue (Hunter & Anthony, 2011; Civil & Hunter, 2015; Hunter et al., 2018). Some teachers ($n = 6/24$) specifically identified the opportunities the breakout rooms in Zoom provided. Others ($n = 8/24$) described the importance of preexisting relationships between students and the establishment of norms to support discursive interactions. One teacher explained the value of students’ voices in these rooms compared to writing their explanations: “I like the kids to voice record their explanations because typing it out is tricky-our kids sometimes struggle with justification and it’s difficult for them to record them” (J. Hunter, personal communication, May 12, 2020). Clearly, this teacher expected to maintain ambitious forms of mathematics as described by Kazemi and her colleagues (2009) while working in an asynchronous form of online teaching. However, in the online environment, some teachers ($n = 6/24$) described the introduction of either new norms or adaption of existing ones to manage the virtual environment. For example, a teacher explained how the use of “talk moves as hand signals and use of the reactions tool on Zoom helps the flow of conversation and sharing of ideas” (J. Hunter, personal communication, May 8, 2020). Hunter and Anthony (2011) describe the carefully considered approach teachers need to take to develop these social norms to ensure that all their Māori and Pāsifika students engage confidently. Here, the teachers had continued to carefully consider the importance of these social norms in the digital environment.

The shift from ability grouping to mixed ability grouping is an essential but challenging part of DMIC for many teachers (Hunter & Hunter, 2018; Hunter et al., 2020a, b). The educators were challenged to consider this working in an online community when multiple family members were present. However, the digital environment and the lockdown provided the educators with space to reflect with their Massey University partners and develop a changed view of what it meant. As one educator recounted: “well we always talk about mixed ability groups, and when they have got older siblings around, in a way that is a mixed ability group” (J. Hunter, personal communication, May 14, 2020). Many teachers described their positive experiences with parents and other household members joining in and interacting during the different IT platforms used to connect. This matched what Riwai-Couch et al. (2020) described as needed by the Māori and Pāsifika parents they surveyed. The parents asserted a need for a change in the home-school boundaries. We suggest

this was happening in an open and trusting environment, and mathematics was the tool used by both teachers and parents to achieve it.

13.6.4 Growing Relationships Through Changing the Boundaries

Most educators ($n = 18/24$) viewed synchronous online mathematics lessons as a relationship building process. They ($n = 16/24$) noted how engaged family members were in the learning: “Having parents working alongside their children during teacher-led lessons on Zoom is great. We are hearing really rich conversations and seeing parents actively supporting learning” (J. Hunter, personal communication, May 14, 2020). COVID-19 had positively positioned teachers and our team at Massey University to see rich and engaging across community conversations. Paris and Alim (2014) talk about asset-based pedagogy, and this had come alive in the power-sharing collaborative mathematical conversations.

The teachers ($n = 16/24$) affirmed the welcome they received as they went online and into their students’ homes: “We have been welcomed into the homes of our whānau and have learned about real-life for them.” (J. Hunter, personal communication, May 13, 2020). Here, the educators had opportunities to walk in the world of their students and between all participants construct a real and positive partnership. As Riwai-Couch et al. (2020) suggest, relationships were changing into a form of real home-school partnership and with the possibility that these could endure beyond the lockdown. The teachers ($n = 12/24$) also noted the warmth of relationships being offered to them and between family members: “We have built strong working relationships between school and home which I wish to continue fostering and developing as I have seen a huge growth in some students. It is also very special to see those relationships between parent and child working during Zoom workshops. We don’t normally get to see that” (J. Hunter, personal communication, May 8, 2020). Others ($n = 5/24$) described the importance that their school communities placed on mathematics. One principal described their learning about the value parents and communities placed on mathematics and how popular the online sessions were. Clearly, bringing the home into the school provided important opportunities to counter the deficit views many school educators construct. These often occur through what Rubie-Davies (2016) describes as cross-cultural misunderstandings. Hunter et al. (2019) and the Massey University team have completed significant work with teachers in schools to combat deficit thinking recognizing the direct link it has to changing teacher expectations.

Engaging with and observing families as they collaboratively work on mathematics together further pressed some teachers to revise their views of their students. Independent and online learning for mathematics gave them a window into their student’s mathematical dispositions. Some teachers ($n = 5/24$) described how the students managed their own mathematical learning: “they are actually pretty

resilient; they have just gone on with it” (J. Hunter, personal communication, May 8, 2020). Within the well-being focus most educators applied, resilience was often observed. Other teachers noted what happened when students were given opportunities to manage their own mathematics learning. For example, one teacher described how she allowed choice and how this opportunity taught her a lot:

So, I chucked easy medium hard...choose the right ones that you think that are just right for you to be able to solve. Now some of my kids are regrouping decimals and whoah, that was something I had no idea they could do. And I even sent one of our kids, he had done phenomenal work and sent it to the other teacher to ensure she put it into his folder for evidence. So, seeing my kids were more capable than I realized. Those who are not as visible, and I was able to see how much they could do-seeing a wider range of strategies (J. Hunter, personal communication, May 12, 2020)

Here again we can see important teacher learning but also, we are presented with lowered school-based expectations. Despite involvement in culturally sustaining professional learning and development with Massey University staff, this illustrates how long deficit expectations take to combat.

For all of us, other learnings also occurred during online teaching and learning. Bringing home into the school context taught us and them ($n = 18/24$) that an assumption that parents understood the changes within school mathematics was erroneous. The educators described how initially there was: “A lot of focus on the answer rather than the process. As we have gone along, I have noticed a family sitting to the side (further away but still present) and not pressing so hard for answers but responding to the teacher and more promotion of math practices and understandings” (J. Hunter, personal communication, May 11, 2020)

The lockdown journey caused by COVID-19 had gradually supported a better balance in the partnership. Many teachers ($n = 14/24$) described the increased awareness of parents in what it means to learn and do mathematics successfully in the twenty-first century: “Nearly every child on Zoom has an adult (parent or family member) sitting next to them who helps them out throughout the lesson. Parents obviously share the ways that they know how to work out maths problems (using algorithms, etc.) but very quickly adapted to realizing that the students were going to need to explain the strategy so just working it out for them or using a calculator was not going to suffice” (J. Hunter, personal communication, May 13, 2020). Increasing parental and community knowledge related to the importance of increased mathematical talk and practices gave them insight into the life of their children in mathematical classrooms. The possibility of more effective partnerships promoted by Civil and Bernier (2009) had become a very real possibility.

Teachers being taken into student homes through the online sessions also supported more effective partnerships. Many teachers ($n = 12/24$) recognized the need to take a considered approach to enter their students’ homes as visitors. Home is considered “vā,” a sacred space for most Pāsifika people, and this was mentioned by a number of educators. One teacher in talking about her privileged position in entering the home via Google hangout referred to a recent academic article in thinking about her student’s responses:

...their perceived reluctance to turn their cameras on cannot be assumed as being a sign of disrespect or defiance. This is a classic example of delving deeper into the why in terms of cultural responsiveness to understand what else is impacting the decisions that learners are making about the way that they are learning, or the way that they are willing to learn. As an educator, I have a duty to demonstrate complete mindfulness for the whole learner, and all of the variables impacting the learner, if we are to connect with learners in a way that shows reciprocal shared learning, as outlined in the pedagogical practice of *Ako* and *manaakitanga*. (J. Hunter, personal communication, May 13, 2020)

Clearly, the work she had done with Massey University educators had encouraged her to reflect and apply a respectful lens. Others ($n = 5/24$) reflected on the need to maintain respectful relationships including thinking about how they spoke and timing the mathematics lessons to suit families. One educator acknowledged that they avoided synchronous platforms such as Zoom given that: not all kids are in a position to have a quiet space where they can join a meeting. Such actions illustrate the importance these teachers took. Furthermore, a number of researchers promote these actions as important in the building of relationships, trust, and respect (Averill, 2012; Bonner, 2014; Powell et al., 2016).

Looking towards schools reopening, all educators wanted to find ways to continue the positive relationships they had across their home communities. They described how important they considered the power-sharing partnership was and how they wanted it to extend into the future when schools reopened. It was evident that taking the home into the school community had empowered all participants. Crossing boundaries had given possibilities to developing balanced power-sharing relationships as described by many researchers (Bonner, 2014; Civil & Bernier, 2009; Hodge & Cobb, 2016; Powell et al., 2016). The possibility of more equitable mathematics education was evident.

13.7 Conclusions and Implications

We argue that rather than positioning the disruption in schooling caused by the COVID-19 pandemic as a wholly negative experience, instead we can also view the opportunities for learning that occurred. It was possible both with the support of the New Zealand Ministry of Education and Massey University to facilitate educators to learn about mathematics within diverse learners' homes as strengths and assets during the lockdown. Both educators and the Ministry of Education took a key role in providing mathematical resources to the school community while also privileging both the well-being of students and their families. The mathematical learning of students that took place went beyond that accessed by digital means and included parents drawing on rich everyday opportunities. In turn, this provided teachers and school leaders with opportunities to learn about students' funds of knowledge.

We have illustrated that it was possible to continue with a strengths-based culturally sustaining approach to teaching mathematics through the lockdown period. Teachers engaged in deep reflection and took actions to ensure that they drew on opportunities both for asynchronous and synchronous mathematics teaching. A

clear focus on well-being arguably led to strengthened relationships. This was echoed through teachers' statements, and many referenced their wish to further build and develop relationships with parents and the community after the lockdown. In the new post-COVID-19 world, we argue that there needs to be ongoing consideration of how we, as teacher educators, can build on the disruption and use this as an opportunity to grow and learn about the communities within which we work.

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