

Schools *as* Communities and *for* Communities: Learning From the 2010–2011 New Zealand Earthquakes

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Abstract

The author followed five primary (elementary) schools over three years as they responded to and began to recover from the 2010–2011 earthquakes in and around the city of Christchurch in the Canterbury region of New Zealand. The purpose was to capture the stories for the schools themselves, their communities, and for New Zealand's historical records. From the wider study, data from the qualitative interviews highlighted themes such as children's responses or the changing roles of principals and teachers. The theme discussed in this article, however, is the role that schools played in the provision of facilities and services to meet (a) physical needs (food, water, shelter, and safety); and (b) emotional, social, and psychological needs (communication, emotional support, psychological counseling, and social cohesion)—both for themselves and their wider communities. The role schools played is examined across the immediate, short-, medium-, and long-term response periods before being discussed through a social bonding theoretical lens. The article concludes by recommending stronger engagement with schools when considering disaster policy, planning, and preparation.

Key Words: schools, community, natural disaster policy, New Zealand, earthquakes, physical, social, emotional, psychological needs, staff, students, families, emergency planning, preparation, response, recovery, principals, teachers

Introduction

On September 4, 2010, a 7.1 magnitude earthquake struck the city of Christchurch and the surrounding districts. The earthquake caused major damage to buildings, transport links, and infrastructure such as electricity, water supply, and waste removal. A state of emergency was declared, and rescue services began to search through the damaged buildings. Fortunately, because the earthquake struck in the early hours of the morning, no deaths occurred. Many residents found accommodation in emergency shelters until they were able to assess what had happened and consider what to do next (Canterbury Earthquakes Royal Commission, 2012).

Over the next two years, a further 12,000+ aftershocks, including four major quakes (over 6 on the Richter scale), each causing more damage and disruption, prevented the mammoth task of demolishing, repairing, and rebuilding from getting underway. The worst of the aftershocks occurred on February 22, 2011—a 6.3 magnitude jolt with an upthrust of twice the force of gravity. As a result, 185 people were to die, homes and businesses were damaged, and the city's central business district was devastated (Canterbury Earthquakes Royal Commission, 2012).

Following the September 2010 earthquake, many local schools became evacuation or drop-in centers for local communities. When schools reopened several weeks later, they continued to provide support to their students, staff, families, and wider communities. When the February 2011 earthquake occurred, this time during the school day, school personnel played a more immediate role in disaster response as they evacuated, calmed, and cared for students until they were collected by family (Education Review Office, 2013). Over the next three years, schools continued to operate, often under difficult conditions, and to support their communities through postdisaster stresses—even when some of the schools were earmarked by the government for postearthquake closure.

This article traces the response and recovery journeys of five primary schools all affected by the Canterbury earthquakes. It provides an insight into schools *as* communities, as well as describing the role of schools *in* and *for* their communities, especially in a time of need. The findings outline the ways in which schools met their own and their wider communities' physical needs—such as provision of food, water, shelter, and safety—and the ways in which they met emotional, social, and psychological needs. The role played by schools in this disaster context is traced across four time periods: immediate response (the first days after the event); short-term response (after approximately two–three weeks); medium-term response (after approximately six months); and long-term response and recovery (after approximately three years). The findings are

then discussed in relation to Gordon's (2004a, 2004b, 2007) theory of social bonding in disaster contexts before the article concludes with a set of recommendations for emergency management policymakers and planners in order that the valuable contributions schools make to community cohesion and resilience might be recognized and supported.

Literature Review

The literature on disaster prevention, response, and recovery is vast; the literature discussed here is kept manageable by focusing on what is most relevant to this article—the role of schools in disaster response and recovery. Ferris and Petz define disasters as “the consequences of events triggered by natural hazards that overwhelm local response capacity and seriously affect the social and economic development of a region” (2012, p. xix). Winkworth also talks of the way in which disasters shape “the sense that a group of people make of the event—a shared identity that they have, together, been affected by a major catastrophe” (2007, p. 17). Most descriptions highlight the suddenness or lack of preparedness, the unexpectedness of the size of the event and ensuing damage, and the inability of existing systems to cope. There is often large-scale death or dislocation and a lack of immediate access to food, water, shelter, and medical aid (Cahill, Beadle, Mitch, Coffey, & Crofts, 2010; Ferris & Petz, 2012; Ferris, Petz, & Stark, 2013; Smawfield, 2013; Winkworth, 2007).

A more detailed literature review by the author (Mutch, 2014) canvassed the literature on the role of schools in disaster prevention, response, and recovery in mainly urban settings. That review found that the largest body of literature focused on the role of schools in disaster risk reduction and readiness. The second, smaller body of literature described the role of schools in recent disaster response situations, and the smallest set of literature reported on the school's role in disaster recovery, although there is a larger body of literature on wider psychological recovery postdisaster. As schools are located in centers of population, a disaster affecting a community will impact local schools. Not only might schools be the site of the event or suffer damage themselves, but they will inevitably need to deal with the aftermath when affected children and staff return to school.

The school disaster response literature is not large and includes mainly firsthand or reported accounts of how schools coped with unexpected disasters. A useful compilation is an edited book (Smawfield, 2013) which includes chapters from the U.S., the U.K., China, Australia, and India. As well as providing recent examples of the role of schools postdisaster, it raised questions about better planning for the use of schools in such situations. Another firsthand example tells of what happened when a group of New Zealand school students

and their instructor were swept away and drowned in a flooded river in 2008. The principal needed to deal with multiple priorities such as liaising with police, families, media, the Ministry of Education, and his own staff. He drew on his skills as a leader and the relationships that he had already established to bring his school through this tragic time (Tarrant, 2011a, 2011b).

Many vivid accounts have come out of the 2011 triple disaster in Japan beginning with the magnitude 9 earthquake off the coast of Japan on March 11, 2011. It hit on a school day, but there were no reported school fatalities related to the earthquake (Ministry of Education, Culture, Sports, Science, & Technology, 2012; Parmenter, 2012). The tsunami that followed, however, required principals and teachers to make life-saving decisions. Children were evacuated to the top floors of their schools or to higher ground. Teachers then looked after cold, hungry, frightened children with no food, no water, and no power, some sleeping on the floor and singing to keep children's spirits up. Eventually, children were reunited with their parents or other relatives, where possible (Ema, 2013; Japan Society, 2011; Ministry of Education, Culture, Sports, Science, & Technology, 2012; Parmenter, 2012).

After a disaster, school recovery is an ongoing process as buildings and grounds are repaired or rebuilt or alternative sites or modes of learning are established. The 2008 Sichuan earthquake in China, for example, disrupted schooling for 2.5 million children (Zhong, 2013). Locations for schooling needed to be found and students prioritized. Students preparing for examinations were the first priorities and were sent to neighboring provinces or housed in prefabricated classrooms or tents. Child Friendly Spaces¹ provided daycare for young children, informal education for school-aged children, life skills training for adolescents, and support for parents (Zhong, 2013).

Parmenter (2012), writing about the role of schools in Miyagi and Fukushima in 2011 postdisaster Japan, highlighted two themes of interest to this article: the role of teachers in saving lives and leading communities; and the role of schools as sites and agents of community and citizenship in disaster situations. She continues:

While the focus in normal times tends to be more on school as a community, the designation of so many schools as evacuation shelters has highlighted their function in postdisaster Japan. For many children, schools became home for weeks or months, as they lived, ate, and slept with their families in the school gymnasium or classrooms. (p. 16)

The Education Review Office (New Zealand's school evaluation agency) undertook a study on how Christchurch schools had coped with the 2010–2011 earthquakes and what could be learned. The study found the focus was on people rather than procedures. They also noted how students and families

looked to school leadership for guidance. Principals and teachers modelled calmness and confidence even if this was not how they felt. Schools put an emphasis on the well-being of children, staff, and families and on getting children back into good learning routines while managing ongoing anxiety (Education Review Office, 2013).

Most school-related disaster recovery literature focuses on strategies and resources to be in place for the social, emotional, and psychological recovery of staff and students. Disasters can have serious long-term effects on children's health and well-being (Australian Psychological Society, 2013; Bonanno, Brewin, Kaniasty, & La Greca, 2010; Brock & Jimerson, 2013; Norris et al., 2002), but the severity of their reactions will often depend on risk factors such as (a) preexisting experiences, for example, previous traumatic experiences or mental illness, and (b) exposure to the event and the level of physical destruction, injuries, loss, or dislocation (Bonanno et al., 2010; Brock & Jimerson, 2013; Lazarus, Jimerson, & Brock, 2003a, 2003b).

Many children experience symptoms of distress and anxiety, but for most, these usually reduce over time (Australian Psychological Society, 2013; Bonanno et al., 2010; La Greca & Silverman, 2009). Children might become irritable or aggressive, not want to go to school, and display sleeping or eating disturbances, learning problems, poor concentration, or loss of interest in friends or activities. Children displaying extreme or ongoing symptoms, however, need specialists' help (Australian Psychological Society, 2013; Lazarus et al., 2003a, 2003b; National Association of School Psychologists, 2008).

Children not severely impacted benefit from opportunities to process the events without dwelling too much on the aspects they find distressing. Talking to a caring and trusted adult, finding support from their peers, expressing their feelings through creative activities, and maintaining normal routines are ways that schools can support children's reintroduction into school life (Bateman & Danby, 2013; Cahill et al., 2010; Gibbs, Mutch, O'Connor, & MacDougall, 2013; Prinstein, La Greca, Vernberg, & Silverman, 1996; National Association of School Psychologists, 2008).

In conclusion, there is a growing body of literature on the role of schools in disaster settings, especially in the field of disaster risk reduction. However, there is little literature that draws together what has been learned from the role of schools in disaster response and recovery, although there are vivid accounts arising from recent disasters. There is also a lack of a comprehensive, high-level approach that integrates school building design and construction and the inclusion of schools into national and local disaster planning (Back, Cameron, & Tanner, 2009; Smawfield, 2013; Wisner, 2006).

Methodology and Ethics

Research in ongoing emergency settings suggests 12–24 months after the onset of an ongoing disaster event to be a useful time to start to review what has happened (Bornemisza, Griekspoor, Ezard, & Sondorp, 2010). The author of the present study (who was also the lead researcher) set up the research project “Christchurch schools tell their earthquake stories.” It was funded by UNESCO and The University of Auckland. The funders allowed the author to design a sensitive, flexible, facilitative, and participatory approach. The author and her research team acted as project managers, facilitators, data gatherers, and analyzers. The schools would receive a completed product that they could keep as a record to share with their communities, and the research team would get access to the raw data in order to conduct further analysis and share the insights gleaned more widely.

Because of the nature of the undertaking, a sensitive, contextual, and ethical approach was needed. The initial concept was shared with Canterbury principals prior to the lead researcher’s university granting ethical clearance. Ethical considerations included the common requirements of informed consent, right to withdraw, school and parental permission for children to participate, children’s assent, anonymity, and confidentiality. It was also important to take time to build a relationship with each school, to have support mechanisms (such as a counsellor) available in case the interviews caused distress, and to provide postinterview debriefing for the researchers. That some of the research team, including the author, had been through the earthquakes themselves helped build rapport and trust with each school.

One school was willing to get underway immediately after the author had met with the principal and then shared the proposed research with staff and the school community. Over time, four more schools joined the project. Participants varied from school to school but were often the principal, senior leaders, teachers, school support staff, students, parents, and other family members. A range of qualitative and arts-based methods was used for the inquiry (see Mutch, 2013a; Mutch & Gawith, 2014, for more detail on the full range of projects and outcomes).

This article focuses on data from approximately 25 semistructured, qualitative interviews mainly with principals and teachers but also some with students and parents. Interview techniques included individual and group interviews, which were videorecorded, audiorecorded, or recorded in note form, according to the school or participant wishes. The data were analyzed in a constant comparative manner (Mutch, 2013b). Each set of interviews from each school was independently analyzed for codes, categories, concepts, and themes. These

were then compared and contrasted horizontally (across each school) and vertically (across each timeframe). In this article, the focus is on the role of schools in providing (a) physical facilities and services, and (b) psychosocial and emotional support as they and their communities moved through the response and recovery phases.

After the findings, the discussion introduces a theoretical lens through which to view the role of schools in communities in postdisaster settings. The lens is that of social bonding (Gordon, 2004a, 2004b, 2007) which came out of many years of research on postbushfire communities in Australia. This is supplemented by the work of Drabek (1986) whose phases of disaster response and recovery are well-cited in disaster literature.

Findings

Immediate Response (on the day of the event and over the next few days)

The September 2010 earthquake was centered 40 kilometers to the west of Christchurch city. Undamaged schools, especially those with large halls or gymnasiums and extensive kitchen and bathroom facilities, became evacuation shelters until people could be rehoused or felt safe enough to go home.

That [September earthquake] happened overnight, and there wasn't anyone on site, but there was a lot of damage in our community. We were set up as a Civil Defense base, so for the first week and a half there were families from not only our community but the other schools as well coming here to receive support from Civil Defense. There was an overnight area in our hall where people stayed, so we were getting a good picture of the needs of our community. (Principal, School B)

As the need for the use of school facilities lessened, principals focused on getting their schools ready for the children's return. Emotional support became a higher priority.

Within that first week and a half, we were working out the safety of our school first. We were checking in with our staff to make sure that they were emotionally ready to support children, and also how our families were coping and what they [staff and students] might need when we got them back. (Principal, School B)

Before the serious task of recovery and rebuilding could begin, a second major earthquake struck some five months later. On February 22, 2011, most primary and early childhood students were eating lunch in their classrooms or were playing outside. Many secondary students had a free half day for a teacher union stop work meeting.

I had no idea. I was so surprised. My friends were frightened because we didn't think it would happen again. Things were shaking about. Things were falling down. Windows were smashing. Things were spread across the floor. (Student 4, School A)

Children from one school were with teachers and parents at the local swimming complex learning a range of water skills:

My thoughts then were never, "We aren't going to get out" or that it would collapse, but my thoughts now when I look back is that the whole place could have fallen in. We were so jolted that we stood up, then we were jolted back down the force was so great. There was a group of children in the boat, and all we could see was the whole thing swamped with the big waves, and we couldn't even get to them. We tried to stand and go forward, but we were just knocked back...the lights went out, and the children were screaming. All I remember is the siren noise, and I went and grabbed a few of the Year 4 children out of the pool, and I just huddled with them. I was guiding them back out, and I remember glass being on the carpet in the foyer, and we all had bare feet. I calmly told the children to watch out, and I walked them out. (Teacher 2, School E)

Some schools, which had suffered badly in September, had put streamlined emergency systems in place:

At that time we had a Twitter message that we could send out to families who [could] receive cellphone messages: "The children are all safe, assembled, and accounted for."...The community was also aware that if no one picked the child up, then a staff member who they feel comfortable with—their child will be going home with them. (Principal, School B)

Other schools felt the full force of the earthquake for the first time, but their earthquake drills were put to good use, and principals took charge:

I put on my principal's smile. Parents arrived and were standing outside. I realized then that I had an audience and my response needed to be calm and instantaneous. I had to look like I was in control. (Principal, School A)

School systems moved into automatic gear. Teachers and support staff looked after children. At School A, office staff were meeting parents at the gate and giving them the message that their children were okay and asking them to act in a calm manner as they collected their children:

The school was phenomenal. The children streamed out of the classrooms and down onto the field. The teachers were incredible. It was very prompt and calm. (Parent, School A)

Across Christchurch, teachers checked that children were accounted for and then comforted them until they were picked up. This was despite the information that came in intermittently as teachers heard stories of their own houses being damaged or their loved ones being trapped. Principals had to weigh it all:

But there were other implications to think about. There were staff who had families elsewhere at other schools—their partners working in town. Because the mobile network wasn't reliable, there was no information coming in for them, so we had to review which staff could be released first to go for their personal reasons. (Principal, School B)

Many principals, teachers, and support staff waited until late that night until every child had somewhere to go before they could focus on their own families and checking the state of their homes:

We had to wait until all the parents had picked up the children. I had one girl in my class whose mum didn't come for a very long time. As time went on, she got a little bit more worried, but I assured the kids that their parents were on their way and that there would be road blockages. When the mother arrived, she was in a real state...in tears and red-faced, and she was like, "The Cathedral's gone, there are people dead in the streets..." That was like the moment of reality. (Teacher 2, School A)

Post-February, schools again became local hubs along with sports clubs, community centers, and *marae* (Māori community centers). Residents came to sleep in the school hall or in tents in the school grounds, get water from the water trucks, use the portable toilets, get hot food, or get information from the various agencies that located themselves there.

Short-Term Response (2–3 weeks after the event)

After September 2010, schools were checked and repaired or relocated, if necessary, over a period of several weeks. School B was hard hit by the September earthquake. The principal said of his experience, "It's certainly changed the basic job description that principals have." He found his teachers were constantly checking on how the students were coping emotionally. Staff were more aware of the concerns children were bringing from home. They spent much more time supporting families, as many were struggling with the basics, let alone the extras. His school was very grateful for the support they received from outside the region, and the donations helped replace equipment and school uniforms and ensure no children missed out.

In February 2011, many more schools were damaged, and those still awaiting repairs from September often sustained further damage. Again schools were inspected and temporarily repaired. Where they were unsafe, alternative

arrangements were made. Schools relocated, put up tents, shared sites, worked in shifts, or set up community learning hubs. More homes were damaged and families displaced.

We were one of the last schools to come back, mainly because of the power and water in the area. I can't remember the first contact we had, I think our senior teachers e-mailed or texted or made sure we were okay over the next few days. We obviously knew because it was state of emergency schools would be closed anyway. We had no power out here for two weeks at least because it was such a badly affected area. (Teacher 2, School E)

Prior to schools reopening, school personnel kept in contact with their communities. School A reported that they wanted to create a sense of community for their school families to return to. Before the school reopened, they were putting daily news on their school website so their community knew what was happening. They felt it was important for families to know, step by step, the stages of readiness of the school. Principals and staff also kept in touch with each other:

We had a few teachers with young kids or who were solo mums so we made sure they were being cared for and had food because they were still living in the area. A lot of them moved in with other people. We were more or less told not to go near school, so we had two meetings off site instead. (Teacher 3, School E)

Before school opened, schools held teacher-only days where teachers were encouraged to share their own stories:

We had a big debrief in the staff room. We had a chance to connect with the other staff to find out about all their different situations as some of the staff had lost homes and really suffered. The session was not just about commiserating, we were also celebrating that we were all still here. (Teacher 2, School A)

Schools also discussed how to act and what to say when the students returned:

We received support from the Ministry of Education—had a support team come in and meet with the staff about two days before we opened, and we talked about the kind of things we could do to support the children. To say: “It’s okay to tell your story about what happened in that quake and the aftermath,” and that it was good to tell the children that every story was important, and “the way you are feeling is a normal feeling...some people might feel differently [than] you about what happened, but however you are feeling is normal.” (Principal, School B)

Prior to schools finally opening, principals, teachers, and caretakers returned to get the classrooms ready:

Eventually we had to build up towards coming back. It was at least 3–3½ weeks afterwards, but we had a day where we came in and cleaned up because everything was off the shelves....All our rooms were a mess. I had so much in the book room, and everything had come down, and we couldn't get in. The caretaker had to saw a hole in the door so I could climb in and stack things back again, so that's still there...[pointing to the hole]. (Teacher 3, School E)

School D reported that while the September earthquake had varying impacts depending where people were that weekend, in February everyone in the school was in the same place and endured a shared experience. The principal's memory is of many more tears and cuddles, of parents needing to talk, of strengthening relationships with her community. Being a lower socioeconomic area where many families struggled anyway meant the earthquakes caused severe hardship. When several children were not able to be picked up after the February quake, they were taken to the local *marae* (Māori community center) to be cared for until family members could find their way across the city to claim them. School D reopened weeks later not knowing what they might find:

[When school resumed] we just made ourselves out there. We had a coffee morning straight away for the parents. We had lots of notices around the school saying, "*Kia kaha* [stand tall], we're strong, we can work through this together." And we kept referring to this as we welcomed the kids back. Half of them didn't come back, of course, because some of them had shifted [moved] away. Some of them were too scared to come back. Some parents were too scared to let their children come back, so there were a whole lot of different reasons why we didn't have our normal cohort. (Principal, School D)

Students responded positively to the way their schools welcomed them back, and provided reassurance:

It's really good that they talked it through with us and they shared their experiences, and we knew that we weren't alone. (Student 13, School E)

Schools took on a much greater pastoral care role. They looked after the needs of families as well as their students. Principals noted that teachers put the children in the classes before their own personal situations and went out of their way to care for them:

Teachers are great. I can't say enough about how much strength, how much integrity, how much they would go the extra mile to drop kids off,

to look after kids in their classrooms after school, to buy them special treats, take them to McDonalds, all those sorts of things...to find clothes for them, to find a pram for a mother who didn't have a pram to wheel her baby to school. (Principal, School D)

Schools across the city reviewed their emergency procedures again, not taking any chances with the further aftershocks:

One initiative we did was to put survival packs together so we knew kids would be warm, if they were outdoors for another earthquake or major aftershock. As a parent it gave me peace of mind that the packs were ready, and as a teacher I didn't have to think, "Would I have enough resources to keep the children warm so no one would be shivering on the lawn?" (Teacher 3, School A)

Medium-Term Response (6–12 months after the event)

As the months passed, schools settled into routines as best they could. Principal A said, "Even normal is difficult." Schools made use of the range of community, government, and nongovernment agencies to support students, staff, and families. They were not just focusing on emotional and psychological support but also on very practical things such as collecting and distributing food and clothing or helping parents access services and advice. In return, schools reported that the relationship with their communities had strengthened as they worked together to repair schools, homes, lives, and the fabric of the community:

We wanted to reinforce the message that we were a warm and caring community, and that they [the children] were all in a safe place and normality was back....From the experience of losing a school parent, we developed a real sense of community and doing things together, especially as the school parents were taking meals to the family who had lost their mother for six months after the earthquake. (Principal, School A)

Long after their formal use as drop-in centers, families and community members continued to visit their local school for companionship, emotional support, and advice.

They [the community] started caring more. They feel cared for; they start helping others. I've got a whole lot of people who would've actually come into the school offering to help other people in our community—people who they felt needed help. To me, that's the synergy of really strong relationships in a community. (Principal, School D)

Through all of this time, principals and teachers came to school and put their students first, despite their own personal tragedies, the loss of their homes and possessions, or dislocation and fragile emotional states:

I've just been so amazed with some teachers in particular whose homes were badly damaged in town, and they were offered discretionary leave to sort out their own lives, but all of them wanted to be here for the children, and when I asked them or pleaded with them, they said, "We deal with that outside of school hours. This is a fantastic distraction for us. We want to be here for our children, for our classes." I've just had so much admiration for the teachers throughout the whole process. (Principal, School B)

Schools became aware of the need to continue to look after each other. They reported that, as a staff, they met socially off-site, at each other's homes, and relaxed over a meal and tried to talk over whatever they needed to:

I've had a really supportive team, and they have got in counsellors for staff and children and parents. They have provided opportunities for us to talk, just to chill out together; even when the school was closed, we still got together as a staff and just processed everything. (Teacher 2 School E)

Long-Term Response (up to 3 years after the events)

Interviewing principals, teachers, children, and families two to three years after the major earthquakes still revealed high levels of stress and anxiety:

We've always had a really strong positive school culture, but once we got through the initial emotions of the earthquakes, we've galvanized a lot more. Teachers and staff are more aware to support the children emotionally [than] they have done in the past. They're aware that some children are in some very different situations in their homes—living in torn apart homes; some don't know where they are going to be living; some have been living in caravans [campers]—children don't always tell you these things. We've had to open up the communication lines even more with parents and children to make sure they tell their teacher. (Principal, School B)

Principals and teachers were dealing with their own health, housing, and family issues, then arriving at school and supporting children and their families with theirs:

We know from all the international literature that this will stay with people. I've got colleagues who've been diagnosed with cancer, with

stress-related illnesses. They go to the doctor, get medical attention, but still there has been a gradual decline in teachers' well-being. Support staff here have been counsellors on the phone with crying parents. (Acting Principal, School E)

While ongoing support was available for the stages of trauma, grief, or stress that people were going through, not every eventuality could be planned for. A teacher at School A, who had a student in her class whose mother had died in the earthquakes, mentioned how difficult negotiating this had been for her. In 2012, she wondered about how to deal with Mother's Day and making cards. She asked her student whether he wanted to make a card and take it home or perhaps to his mother's grave. He did want to make a card, but he made it for his dad who had become both mother *and* father to him.

It took time for some people, children and adults alike, to open up and talk about what happened. Teacher 1 in School A said her teenage son didn't talk about the day of the earthquake until 18 months later when told her he was on a bus (in an area of the city where buses had been crushed and people killed). He finally said, "I was unlucky going on that bus," to which she replied, "No, you were lucky. You were on the right bus." One of the findings of the larger project, written about elsewhere (see Gibbs et al., 2013; Mutch & Gawith, 2014), was that as time went by, people needed opportunities at different points in time to reexamine and restory their experiences, not in a way that focused on unhelpful rumination, but in a way that helped them move "from the particular ('my story') through the more general ('our story') to the conceptual ('What does our story tell us about who we are?')" (Gibbs et al., 2013, p. 135). As one principal stated:

We've got some really strong values and beliefs, but now the children are thinking about living them a lot more than they had before the quakes—particularly "*arohanui*," which is caring for people, being there for others, and making sure that people are feeling okay or if they need someone to be with. They are really resilient and want to help. (Principal, School B)

In 2012, the Ministry of Education announced that 30 Christchurch schools would close or amalgamate as a result of earthquake damage or population movement. Principals and teachers reported being shocked and angry, saying the proposal was "unfair and cruel."

School is the SAFE place that they [schools] have tried to provide. Children were at school for the big February earthquake, and it created a stronger bond in their communities, so it is very challenging when the Ministry wants to break that up in some communities and schools. (Teacher 3, School E)

Principal A was disappointed with the timing, considering the Ministry should have instead been celebrating what schools had achieved. School D was on the original list of schools to merge with a neighboring school, but later received a reprieve. School E was not so fortunate and closed at the end of 2013 with the staff and students being merged with another school to create a new school. The acting principal of School E, appointed to see it through to closure, stated, “In military terms it would be called collateral damage.” He continued:

How does that affect the staff? The emotional ties and the relationships are torn apart; families that have been associated with the school for decades have gone. That kind of link and historical connection and knowledge of the community and the school and its involvement goes as well. History goes; it travels with the people. [School E] has been around for 141 years...it's not a place of recent history, we're looking at quite a significant place in the community, and the community's grown up around the school. (Acting Principal, School E)

Discussion

Theorizing Community Bonding

Rob Gordon, a community psychologist, observed patterns of community response to bushfires in Australia over 20 years (see Gordon, 2004a, 2004b, 2007). This provides a useful framework for examining the ways in which schools supported their communities through this disaster situation. Gordon explains community response and recovery as a process of debonding and rebonding. Prior to a disaster, communities are webs of social structures and interactions. There are relatively predictable patterns of relationships. In the immediate aftermath of a disaster or emergency, the focus shifts to survival. Preexisting social relationships and patterns are disrupted. Thus, the disaster causes social *debonding*. As the immediate event subsides, people begin to organize themselves in order to cope with the aftermath. A new, emergent, and context-related social fabric emerges. This is a stage of *fusion* or *hyperbonding*, in which acts of heroism, altruism, and togetherness form new bonds. As the disaster situation moves from response to recovery, groups become aware that recovery is not proceeding similarly for everyone. Tensions lead to heightened perceptions of inequity and unfairness. As the differences between groups are exacerbated, *cleavage* planes develop. In order to minimize cleavage and promote community cohesion, social infrastructures need to be reestablished through *rebonding* strategies. The concepts of debonding, hyperbonding, cleavage, and rebonding align well with the phases of disaster response and recovery and echo the experiences of the schools in this study.

Debonding

The *debonding* phase focuses on immediate survival when usual networks of interaction are bypassed. Often hierarchies of status or power are ignored. Immediately after the earthquakes, especially in February when principals and teachers had to take on the role of *in loco parentis*, their first thoughts were of the physical safety of the children in their charge. They evacuated them, and in the case of School E, rescued many of them, before calming and reassuring them. They had to put thoughts of their own homes and families aside as they focused on the task in hand. They often had to calm parents, who arrived shocked and agitated on school grounds. Principals and teachers then waited until late that night until all children had somewhere to go before they could make their own way home to whatever awaited them. In the interests of survival, many rules and norms were broken. School E crammed children into cars and transported them across damaged roads and bridges, driving up on footpaths or the shoulder of the road in order to get through. The School D principal had to stop looters running through the school grounds because, as she said, “the children had seen enough.” School A reported a nicer story where a local shop gave them bags of ice cream treats because the contents of the freezer were melting with the power outage.

Once school staff arrived at their own homes, the reality of what they had been through and what was still facing them began to sink in. Again, survival, safety, and security were uppermost in their minds. They reported having to clean up their homes, help neighbors clean up, collect and look after elderly relatives, take in people who had lost everything, contact insurance companies, and begin repairs or pack up and leave their homes for temporary accommodation. They had little energy to go beyond their immediate responsibilities.

Yet, interestingly, principals wanted to get back to their schools to assess the damage and get everything back up and running again. This left Principal D very frustrated. Despite not being allowed on school property until schools were checked and declared safe, Principal A and her caretaker ignored this, bought hard hats, and set about surveying the damage and organizing tradespeople for repairs. After the September earthquake, Principal B found himself arranging his school facilities to house earthquake victims and provide a base from which local people could access food and water, services, and advice. After the February earthquake, Principal B found himself again supporting earthquake families, not his own this time, but those evacuated from the areas of Christchurch worst hit in the latest quake. He felt it was his duty to return the *arohanui* (love and care) and *manakitanga* (warm hospitality) that was shown to his school when they were in most need.

A Complementary Theory

These examples of courage, thoughtfulness, and care produce a stage that Drabek (1986) calls “the honeymoon period.” In Drabek’s postdisaster sequence, the first phase is shock and disorganization. This is followed by an altruistic or heroic phase when individuals put their lives at risk to help others. This leads to a period of high morale, called the “honeymoon period.” This lasts until governments, aid agencies, and recovery systems are seen to not be living up to expectations. Communities become dispirited; individuals become depressed. Eventually reconstruction begins and a renewed sense of hope begins to emerge.

At the honeymoon stage, survivors are relieved to have survived, are proud of how their community has pulled together, and have high expectations for a speedy recovery process. In Canterbury there was a period of high morale after September 2010, but the devastation and deaths in the February 2011 earthquake were extremely disheartening, and the ongoing aftershocks were exhausting. The June 2011 6.3 earthquake became known as “the one that broke their spirit.”

Hyperbonding

In this air of despondency, people often turn towards those with whom they have a shared experience—Gordon’s stage of *fusion* or *hyperbonding*. People from all five schools in this study reported becoming closer to each other and their communities. School staff kept in touch and met when they could before their schools opened again. Similarly, the author, who at the time shared an office in a building where 18 people died in the February earthquake, met with her colleagues on the outskirts of the city several days after the quake. They told stories of being trapped or watching their colleagues being rescued. They cried, and laughed a little, and cried some more. The bond they developed will stay with them always.

In this state of fusion, members identify with each other because they share the same experience; they feel strong emotional attachments because of what they have undergone together and rapidly develop a shared disaster culture of stories, symbols, and memories. (Gordon, 2004a, p. 12)

This is also the case for School E. The heroics of the teachers and parents who rescued and calmed the children then guided them back to school through treacherous conditions led to their special bond. At the end of 2013, the parents still regularly dropped into the school, and the students returned to visit those teachers even when they had moved to other schools.

Rebonding

As communities begin the recovery process, fusion can become obstructive because it creates tensions between different fused groups or between fused groups and those not included in the fusion. This can lead to *cleavage*. To minimize cleavage and support communities to rebond, Gordon (2004a) recommends “developing a new flexible set of bonds to bind the multiple, disparate elements into relationships” (p. 20); these relationships require clear communication channels which “facilitate opportunities for new bonds, and new bonds lead to new structures, which in turn lead to new postdisaster identities” (p. 20). These new bonds can be achieved by rebuilding community systems and norms, maintaining communication links, providing timely and accurate information, and encouraging community meetings, self-advocacy, and collective activity.

Each of the schools in this study played a significant part in *rebonding* their communities. Because they were often sites of physical and material facilities postearthquake and because they had built strong networks over time with families and the wider community, they were natural communication and support hubs. Principals reported using multiple forms of communication: notices, posters, newsletters, e-mail, Twitter, texts, Internet, Facebook, and face-to-face conversations. Principal A talked of providing her school community with regular web updates. Principal D spoke of being “out there” for her community. Counselors, social workers, and family support services were located at schools. Schools were often the sites of fundraising for earthquake efforts or, later, for the Japanese triple disaster, cyclones in the Pacific, and other causes.

Gordon (2004a, 2004b, 2007) also suggests building on community symbols, rituals, and identity in a way that preserves continuity with the past while promoting a new vision. Community meetings, social events, commemorations, and memorial sites all help bring a community back together. Each of the schools held information evenings, family fun days, and community fairs. Each September and February, schools were, and continue to be, sites of earthquake anniversary events. In school grounds there are memorial sites. School A has a seat; School B has a mosaic. Other schools have planted trees, created gardens, or laid plaques. Each of the schools that eventually closed brought their communities together to farewell the old school and, in some cases, welcome the new. School E had each school member ring the school bell before releasing 141 balloons, one for each year of their history. Cassim (2013) suggests that personal objects, symbolic spaces, and everyday practices also allow disaster participants to restore their lives, remember lost loved ones, and begin to move forward.

Cleavage

It was not possible to completely avoid the *cleavage* phase. In Christchurch, as in other urban disaster settings—such as New Orleans post Hurricane Katrina—cleavage often settled along socioeconomic lines (Hawkins & Maurer, 2010). The city’s business district appeared to get the most publicity as it housed many of the city’s iconic buildings, such as the ruined cathedral. The more affluent suburbs appeared to be repaired and rebuilt more quickly. The eastern side of the city, which was home to the most vulnerable populations and contained huge swathes of damage, appeared to be less of a priority. When the Ministry announced the school closures, eastern suburb communities were most affected and again felt neglected and betrayed, describing the announcements as “another aftershock.” Yet despite this, the affected teachers and principals continued to support their students and families through this next phase. Many questioned why the government disregarded the role that schools had played “as the glue” of their communities during this difficult time. In terms of Gordon’s model, it would appear to undo much of the good work done in rebonding those communities. Yet one resilient teacher said that while she didn’t agree, she intended to help the merger go smoothly for all concerned:

By making it a positive thing for myself, staff, and students—looking forward and knowing that out of this we can still create another great school. (Teacher 3, School E)

Phases of Response and Recovery

The findings from this study align well with the literature. Table 1 summarizes the stages of response and recovery with examples drawn from the study alongside Gordon’s (2004a, 2004b, 2007) framework of social bonding and Drabek’s (1986) disaster phases.

Table 1. Comparison of the Current Study's, Gordon's (2004a, 2004b, 2007), and Drabek's (1986) Phases of Disaster Response and Recovery

This Study's Phases	Gordon's Phases	Drabek's Phases	Examples of the Role of Schools in Disaster Response and Recovery From This Study
Immediate Response	Debonding	Shock and Disorganization	<ul style="list-style-type: none"> • Rescuing students • Evacuating students to safety • Providing calm and comfort • Keeping everyone safe • Providing for physical needs • Providing emotional support
Short-Term Response	Fusion and Hyperbonding	Altruistic or Heroic Phase	<ul style="list-style-type: none"> • Celebrating survival • Cleaning up and repairing the school • Helping others clean up • Providing food and clothing for children and families • Providing facilities, services, advice, and companionship for families • Keeping community informed
Medium-Term Response		High Morale or Honeymoon Phase	
Medium-Term Recovery	Cleavage	Disillusionment	<ul style="list-style-type: none"> • Dealing with delays and setbacks • Coping with ongoing aftershocks • Dealing with the toll on staff health • Supporting children and families with ongoing issues • Coping with the secondary stressors, such as school closure announcements and process
Longer-Term Response and Recovery	Rebonding	Reconstruction and Hope	<ul style="list-style-type: none"> • Keeping communication channels going • Providing accurate and timely information • Creating opportunities for fun and socializing • Celebrating milestones • Finding opportunities to continue to help others • Holding commemorative events • Building a shared history

Conclusion and Recommendations

This study tracked five primary schools and their communities through the first three years of their recovery from the 2010–2011 Canterbury earthquakes in New Zealand. This article highlights the important role that schools played in supporting their students, staff, and wider communities through the enormity of the disaster and the longevity of the recovery. Principals and teachers gave of themselves over and above expectations, willing yet unprepared. As one principal says:

One of the aspects of this recovery process is the fact that the teachers have not been recognized as the first responders to this disaster. I see no courses, no training; there's nothing at all. And there continues to be nothing. I don't see any words or any conversations about it. (Acting Principal, School E)

What Table 1 clearly shows is that through all disaster response and recovery phases, schools were engaged in positive and helpful activities that attended to the physical, social, and emotional needs of school community members plus the wider community. It is surprising that most governments and local councils have not recognized the potential that schools and school personnel have to play in a coordinated disaster preparedness, response, and recovery approach. To conclude, here are some recommendations for policymakers to ensure:

1. When designing or upgrading school buildings, provisions are made for adequate protection of the school population in the event of a damaging event (as is appropriate for the school's geographic and risk location).
2. School facilities are designed in a flexible manner so that they can be used in a range of community ways, including in the event of an emergency.
3. The school and local community develop emergency plans and scenarios collaboratively, in conjunction with relevant government agencies and disaster response organizations.
4. School leaders are provided with professional development in crisis planning and management.
5. Teachers and other school staff have professional development on school-based strategies for emergency response and recovery, including appropriate strategies for ongoing emotional support and processing of events.

These recommendations align with the literature that suggests considering the location, design, and capacity of school buildings and facilities both for their intended purpose and the ability to transform them into emergency relief centers as required. The literature notes the need for increased understanding and recognition of the role of principals and teachers. The findings of this

study concur and also suggest better understanding of the role the schools can play in building and sustaining community resilience and cohesion, not to mention the extra roles taken on in times of disaster response and recovery. While this is taken for granted in Japan, for example (Parmenter, 2012), there was very little recognition beyond local communities of the role schools played in the Canterbury earthquakes and of the toll that it took on all concerned. These are lessons from which everyone can learn.

Endnote

¹Child Friendly Spaces: this is a generic term for places set up to cater to the physical, emotional, and educational needs of children and young people in emergency situations, such as postconflict or postdisaster. They are often administered by aid agencies such as UNICEF.

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