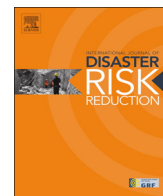




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Leadership in times of crisis: Dispositional, relational and contextual factors influencing school principals' actions



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ABSTRACT

In disaster situations, children and young people look for guidance from supportive adults. If a major crisis happens at school, they look to their principals and teachers. The expectation is that these adults will keep them safe, reassure them, reunite them with their families and help them adjust to their future circumstances. This article reports on themes drawn from interviews with four school communities as their principals led them through the events and aftermath of the 2010/2011 earthquakes in Canterbury, New Zealand. Five major earthquakes over 6 on the Richter scale, accompanied by over 12,000 aftershocks, caused major damage and on-going disruption to the city of Christchurch and surrounding districts. School principals found themselves taking on emergency management and crisis leadership roles for which they felt ill-prepared. From a constant comparative analysis of the data, this paper describes the role of school principals from immediate response, through short and mid-term recovery, to time for reflection. It uses concepts from the field of crisis leadership to frame the stories. The article concludes with a conceptual analysis which highlights three sets of factors – dispositional, relational and contextual – which help to explain the changing role of principals in a disaster context.

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1. Introduction

As schools are located in centres of population, large and small, a disaster affecting a community will impact on local schools. Not only might schools be affected by a natural disaster or traumatic event along with the rest of the community, they are now the sites of school-centred tragedies. In disaster situations, children and young people look for guidance from supportive adults [3,24,17,40–42,46]. If a major crisis happens during school time, they look to those *in loco parentis* – their principals and teachers [13,24,25,28,36,37,40]. Children expect these adults to keep them safe, to reassure them and reunite them with their families [14,26,28,37]. When school reopens children continue to need support to adjust to their changed circumstances [12,13,21,24,25,28,29].

This article draws data from a wider study of schools in the aftermath of the 2010/2011 earthquakes in Canterbury, New Zealand, to focus on the changing role of the principal during this time. Five major earthquakes over 6 on the Richter scale accompanied by over 12,000 aftershocks caused major damage and on-going disruption to the city of Christchurch and surrounding districts [10]. School principals found themselves taking on emergency management and crisis leadership roles for which they

often felt ill-prepared [13,32]. From an iterative constant comparative analysis of the school-related qualitative interviews, this article describes the principal's activities from immediate response, through short and mid-term recovery, to time for reflection. It uses theory from the field of crisis leadership to frame the findings and then further analyse the major themes. The theoretical analysis highlights three sets of factors that influenced the principals' decisions and actions. These are: *dispositional*, *relational* and *contextual*.

2. Context

On September 4 2010, at 4.35 am a 7.1 magnitude earthquake hit the Canterbury region of New Zealand causing widespread damage to the city of Christchurch and surrounding districts of Selwyn and Waimakariri. The earthquake was to be followed by 12,000 aftershocks over the next three years, including several over magnitude 6. The most destructive was at 12.51 pm on February 22 2011. At magnitude 6.3, it was centred closer to the city of Christchurch with an upthrust of twice the force of gravity. It demolished the city's business district, killing 185 people and injuring thousands more [10]; for more technical detail see: [2]. All educational institutions, from early childhood centres to universities, were closed for several weeks following the two major earthquakes of September 2010 and February 2011 [13]. As the

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region came to terms with the death and destruction, getting schools up and running again was a government priority. This meant that schools were thrust into significant disaster recovery roles for which they were largely unprepared.

A synthesis of principals' actions was drawn from a larger study, 'Christchurch schools tell their earthquake stories', conducted between 2012 and 2014 and funded by UNESCO and the University of Auckland. The purpose of the larger study was to record the earthquake stories of schools across the region. It included interviews with principals, teachers, school support staff, students, parents and family members (see [29]). The focus of this article uses an analysis of data drawn from discussions of the principals' role, mostly from the principals' interviews, but also from other school community members, where relevant. The article provides in-depth rich description of the principals' lived experiences [27,38] at different phases of the disaster as well as drawing out key themes for further discussion.

With disasters impacting on developed and developing nations alike and scientists predicting more adverse-weather related disasters [15,19,49], it is important that we learn from principals who have experienced these situations and led their schools successfully through them [44]. Capturing and disseminating findings will help current and future school leaders prepare for such eventualities and assist their, staff, students and communities to deal with these in ways that build resilience and hope.

3. Methods

Research in on-going 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 [7]. The data for the wider study were collected within that approximate timeframe, that is, between May 2012 and May 2014. The study used a naturalistic, participatory, qualitative methodology [38] in which each school co-designed, with the lead researcher, the way in which data would be gathered, interpreted and disseminated (see, [33], for a detailed description of the co-construction of each school's project). The collated raw data was then made available to the research team for further analysis. Participants varied from school to school but were usually the principal, senior leaders, teachers, school support staff, students, parents and other family members. Qualitative semi-structured interviews were undertaken with adults and conversational focus group or arts-based methods with students [11].

The first round of data-gathering strategies focused on immediate disaster response and recovery, while the later interviews included time for reflection and dealing with new crises that arose as part of the long term recovery and rebuilding phases. Interviews were videoed or audio-recorded and transcribed. They were supplemented by artwork, photographs, video clips and documents gathered or created as part of the project (see [27,31], for more detail on each individual school's project).

The wider study's collated cross-school data has produced a range of findings – those that focus on the school as a whole, or the experiences of students, staff, families and the community. From the wider pool of data, 25 interview transcripts that related to school leadership, particularly as shared by principals, but also as noted by teachers and parents, were thematically analysed through an iterative, constant comparative method [27,47] – within and across schools. The themes in this paper are those that arose from (a) an initial thematic analysis and (b) those that arose from a theoretical analysis using the conceptual framework, discussed later.

The post-disaster setting of the study meant that the researcher needed to take time to build relationships with the principals and

schools. It was important that the schools did not see the researcher as collecting data for her own ends but as providing a genuinely reciprocal process that would benefit the schools. The initial concept was shared with local principals prior to the researcher's university granting ethical clearance. Ethical considerations included the expectations of informed consent, right to withdraw, school and parental permission for children to participate, children's assent and confidentiality. Anonymity was not an expectation where schools were sharing their own projects with their communities – and schools understood and agreed to this. It was provided, however, when the research team used the collated data for cross-school analyses, comparisons and interpretations for wider scholarly dissemination (as in this article).

The researcher used purposive sampling [27,38] and began with schools that fitted the earthquake experience profile and were already known to her. This helped with establishing a level of trust. That the researcher had also experienced the earthquakes meant that she could relate to the experiences and emotions of the participants. Other schools were later recruited through word-of-mouth. The researcher took a sensitively staged approach – usually a phone call to the principal, followed by e-mailing through the research brief, then a personal visit. Attendance at a staff and/or parent meeting, if requested, was also undertaken. Data gathering did not begin until each school felt it was safe to engage in the process. Once data-gathering had begun, participants could still withdraw from the research, decline to answer any question or take a break from the interviews or activities at any time. Participants could bring a support person and facilities for counselling or debriefing were made available. Throughout the setting up phase, the principal was usually the liaison person and so a relationship of mutual trust developed between the researcher and each principal. This made the leadership interviews rich and convivial.

Four primary schools from the wider project were the main sources of the data discussed in this article. They are labelled as Schools A to D (the order in which they joined the project). Selected quotations from principal, teacher or parent interview transcripts from the four schools are used to exemplify the themes.

It is important to note, that with the advent of 'school choice' policies, children in some countries do not necessarily attend their local school, but in Christchurch, in general, especially at the primary school level, most children do attend a nearby school and local schools have good relationships with their communities.

4. Literature review

4.1. Disasters and their effects on schools

Disasters are the consequences of events triggered by natural hazards or human interventions that overwhelm the ability of local response services to manage or contain the impacts. They are usually large-scale events, which seriously affect the physical, social and economic context of the region. They are characterised by suddenness or lack of preparedness, 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 [15,16,44,48,9]. Convery et al. [12] also note, "they are a multi-dimensional product of the social, economic and political environment, culturally, spatially and emotionally specific."

Much of the current literature relevant to school response and recovery relates to children. Disasters can have serious long term effects on children's health and well-being [1,35,6,8]. This literature focuses on strategies and resources for the social, emotional

and psychological recovery of students following trauma. The severity of their reactions will often depend on risk factors such as (a) pre-existing experiences, for example, previous traumatic events or mental illness and (b) exposure to the event, the level of physical destruction, injuries, loss or dislocation [21,24,25,6,8]. Many children experience symptoms of distress and anxiety but for most the symptoms reduce over time [1,21,23,6].

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 support children's re-introduction into school life [18,21,34,4,40,9].

An extensive literature review on the role of schools, in particular, in disaster preparedness, response and recovery [28] found that the majority of the literature focused on schools and disaster preparedness (usually disaster risk reduction). There was a limited but growing body of literature that explored school responses but very little on schools and disaster recovery. There is a vacuum in looking comprehensively at the role of schools at all levels of disaster management and across the disaster phases.

A further literature review [30] examined in more depth examples of the responses of educational settings to a wide range of crisis situations from natural disasters to school shootings. This review highlighted that traumas, large and small, can have a huge impact on schools and their wider communities. They are often unexpected or underestimated and leave a trail of loss, destruction, and dislocation. Impacts can be physical, social, emotional, psychological, educational and economic. The review highlighted several themes – the breadth of possible crises that an educational institution could face, the varying experiences of individuals or groups, the place of educational institutions in immediate response, the roles played by educational leaders in crisis response, and the need for a range of ongoing support strategies to aid long term recovery. It is the theme of leadership in times of crisis that will underpin the later theoretical discussion of the findings from this study and is the focus of the next section of the literature review.

4.2. Leadership in times of crisis

First, it important to acknowledge the wealth of literature on both leadership and educational leadership but in order to keep this study manageable, only literature on leadership in times of crisis was canvassed. While the role of leaders in crisis or emergency situations is becoming more common in other fields such as medicine and business (see, for example, [20,22,39,50], there is little on the role of school principals in these situations (the recent collection edited by Smawfield [44], being an exception). The literature in the field is of two distinct types: (a) there are theories that suggest what leaders should do in a crisis and (b) theories that derive from actual experience. It is the latter that will inform the development of the conceptual framework used to make sense of the findings from the Canterbury principals' earthquake experiences.

What is meant by crisis leadership? Boin et al. [5] define it as follows: "Effective crisis leadership entails recognizing emerging threats, initiating efforts to mitigate them and deal with their consequences and, once the acute crisis period has passed, re-establishing a sense of normalcy" (p.706).

By establishing a field of crisis leadership studies, it is now recognised that the decisions a leader makes in these situations may be far removed from their everyday leadership practises. Rego and Garau [43] give examples:

Crisis leadership is in several respects very different from leadership under 'normal' familiar circumstances. Whether a crisis is natural, man-made, or some combination, people experience systems that fail or are insufficient. Infrastructure, technology, alert mechanisms, information, and communication may be comprised. Processes fall apart, leaving organisations, communities, and individuals in unfamiliar territory. The failures may be brief or long-lasting, confined or extensive. The[re] may also be on-going or systemic problems that become apparent in a crisis. (p.11–12)

Crisis leadership and crisis management are seen as two related aspects of dealing with a crisis that affects an organisation. Crisis management is more operational: "those activities that occur during and after a crisis such as developing disaster plans, conducting disaster drills, and identifying roles and responsibilities during a crisis situation" [39], p.4), whereas crisis leadership is that and more, including maintaining a vision of what was, and what could be [39]. This article focuses on leadership in times of crisis but includes management activities as an integral part of leadership responsibilities.

5. Developing a conceptual model

Not all crises discussed in the crisis leadership literature relate to the impact of disasters, some are more political, financial or managerial. This article focuses on leadership in disaster or trauma contexts. Relevant articles of organisational leadership in times of crisis are synthesised to create a conceptual framework, which will assist in making sense of the actions of the principals in the Canterbury earthquake study. The development of this conceptual framework will draw on five key sources – all based on the experiences of leaders during times of crisis: September 11 [20]; Superstorm Sandy [22]; an outdoor education tragedy [45,46] and Hurricane Katrina [39,43].

The CEO of Marsh and McLennan had nearly 2000 people working in or visiting the Twin Towers on September 11, 2001; 295 of whom were to die, including one who was a passenger on one of the planes. He states: "These are the facts I can tell you with certainty; we have lived with them day and night ever since. What I cannot do is convey the grief we felt that day and the loss that stays with us" [20], p. 58). He goes on to describe the chaos when the news coming in was confusing and contradictory and all communication was difficult. As the tragedy unfolded, he chose to focus on four major areas: people, communication, operational issues, and business continuation. The focus on his people came first – establishing a family assistance centre, arranging grief counselling, keeping up the information flow, managing the media and planning a memorial service. He assigned a relationship manager to each family as a primary point of contact to arrange support, organise financial assistance, advocate for the family and plan remembrances. On reflection, he made four key observations: leadership has its place; culture comes to the fore; you need to be prepared to adapt; and people's well-being comes first. He noted that while any planning they had done prior to the disaster did not prepare them for such an eventuality, it did still matter that they had done some forward planning. He also noted that the leadership role was significant to others: "In a time of crisis, there is something reassuring about hearing the voice of a person in a position of authority, even if the information provided is scant" [20], p.64).

The Business Continuity Vice President at BNY Mellon describes how Superstorm Sandy put her organisation's crisis leadership to the test [22]. Her belief is also that planning pays off. She explains:

Leadership during a crisis is essential. It is often believed to be the sole responsibility of an individual who takes command and has every answer. However, the reality is often quite different. Successful crisis response is the result of proven leadership developed through an on-going team effort long before an emergency occurs. (p.62)

Kielkowski found that the essential matters in forward planning for emergencies include understanding the unpredictable nature of crises, being able to lead a decision making process, communicating effectively, taking the 'big picture' into account and looking for creative solutions. While being prepared is helpful, crisis plans are written at a time when the type of event is unknown. She continues, "During a large-scale event, roles can change and due to the magnitude, it is difficult to get everything right. Being flexible and having realistic expectations are leadership characteristics that allow an effective response that is appropriate to the scenario" (p.64).

A school principal, Murray Burton, found himself leading his school through the death of six students and a teacher in an outdoor education tragedy in New Zealand [45,46]. One of his immediate tasks was managing the flow of information. Details of what happened came through in a haphazard and fragmented way. He was asked by the police not to give out any information that was not confirmed by them. Meanwhile rumour and speculation were rife. One way to manage the situation was for the principal to be the only one from the school talking to the media. While doing this, he was also leading his own team through the emotionally-charged and quickly changing situation, arranging for the Ministry of Education's traumatic incident team to provide support to the school and families, and responding to the community's and the nation's outpouring of grief. In hindsight, what helped him manage the situation was his skill as a leader and the trust, respect and relationships that he had already established to bring his school through this tragic time. The principal commented:

A tragedy like this does not go away for a very, very long time. The aftermath of it has a complete life of its own, and any research or documentation has to state that. We are nearly two years down the track now, and wherever I go I get asked about it. I'm still doing talks occasionally, we are still working through legal processes, endless conversations and decisions about memorials. It never stops – the administration...is quite incredible. Those sorts of things colour your world for a long time. " [46], p.83)

Tarrant, who interviewed Burton, notes that although leaders are subject to the same physiological responses as other people when confronted with a sudden crisis, they are expected to take control and act rationally and calmly while displaying creative thinking, social judgement and complex problem solving skills. Interestingly, she also comments that much crisis decision making draws on intuitive responses, situational cues, prior experiences and unconscious knowledge as well as established processes [45]. It is also important for leaders to get support for themselves – through a crisis mentor, a specialised counsellor or critical friend. They should also build in time where they can get away from the situation and get some respite from the multiple responsibilities of business-as-usual alongside the evolving crisis demands [46].

Porche [39] examined leadership failure following Hurricane Katrina. His particular interest was in how other leaders emerged to fill the vacuum left behind by the city, state and federal leaders as they were overwhelmed by the enormity of the task. He noted that there were both crisis management and leadership issues to be attended to. Operational management matters included diagnosis, decision making and resource mobilisation. Crisis leadership

included oversight of such management strategies but also a focus on the 'bigger picture' including providing vision and direction. What was needed was, "a complex leadership skill that require[d] integration of prior knowledge, leadership acumen and practical experience" (p.23). Leaders also needed to be seen: "During a crisis a true leader remains visible, accessible, and engaged throughout the entire crisis " (p.23). His findings discussed knowing when to use and when to deviate from a crisis management plan, how informal and formal leaders emerged as crisis leaders, and how leaders managed complex tasks simultaneously. He also noted the importance of team work, how leaders managed communication, and the provision of post-crisis support and debriefing. Porche summarised the crisis leadership characteristics displayed by the emergent leaders in his study as being trusted and respected, decisive, calm, visible and accessible, mission focused and visionary. Crisis leaders were also autonomous and displayed self-less commitment, confidence and a positive attitude. They could multitask, had physical stamina, and were knowledgeable and experienced.

Also following Hurricane Katrina, The Centre for Creative Leadership undertook a two-day workshop at their Greensboro campus with ten front-line leaders involved in the Katrina crisis [43]. They took an appreciative inquiry approach, focusing on building on strengths rather than apportioning blame. First, however, they needed to review the characteristics of the Katrina event. They noted that systems failed, plans were insufficient, time was compressed, the picture became distorted and authority was limited (and limiting). Yet through all that, new informal leadership emerged. The key lessons from Katrina were that:

Leadership takes place when setting direction, building commitment, and creating alignment occur – whether or not "a leader" is present. In a crisis, individual people bring their talent, perspective, vision to the challenge. Acts of courage, risk taking, and bold action shine the spot-light on individual leaders. And though individuals are important during a crisis, survival and success requires many participants, a collective effort. Relationships are essential. [43], p. 20)

[43,44]) found that there are things that leaders can do to prepare for a crisis and their roles in dealing with one. First they need to appraise their personal strengths and limitations, hone the key skills they might need, build a network of strong relationships and create a culture of empowerment. During the crisis, Rego and Garau suggest leaders manage their own emotions, make connections to shared values, be proactive, and act positively, sincerely and respectfully. They also highlight the importance of communication: "People need information in a crisis; it provides emotional stability for them as well as tactical guidance" (p.25). In the end, however, leaders need to understand that nothing may go according to plan – and what works at one phase of the disaster might not work at another:

Crisis has multiple phases; the leadership response needed will vary accordingly. In the short-term, emphasis is on taking action, quick response. Risk taking is essential; you might make mistakes, but standing still is not an option. A key challenge is sustaining the effort through fatigue, blame, and lack of attention and resources. In the long term, priorities are less clear-cut and require people to connect through differences, wade through complexity, and find common ground to continue the work that must be done together. (p.42)

In drawing these sources together, I have summarised them as three sets of factors that influence leadership decision making and action during a crisis, that is, *dispositional*, *relational* and *situational*

Table 1
Three sets of factors influencing leaders in crisis contexts.

Factors	Explanation	Examples from some of the five key sources
Dispositional	What leaders bring to the event from their background, personal qualities, experiences, values, beliefs, personality traits, skills, areas of expertise and conceptions of leadership	Porche [39] listed the characteristics of emergent crisis leaders during Hurricane Katrina as: trusted, respected, decisive, calm, visible, accessible, mission focused, visionary, autonomous, self-less, committed, confident, positive, strong, knowledgeable and experienced.
Relational	The ways in which leaders offer a unifying vision and develop a sense of community within the organisation, engendering loyalty, enabling empowerment, building strong and trusting relationships and fostering collaboration	Tarrant states: "In a wisely chosen support team, there will be effective interpersonal relationships where there is mutual trust, respect, and effective communication between the principal and the team. To enable prudent decision making in a crisis, a leader will encourage his/her support team to bring relevant perspectives to the trauma situation, and at times will entrust team members to attend to certain matters on his/her behalf" ([45], pp.75–76).
Situational	How leaders assess the situation as it unfolds, understanding the context, being aware of different responses (including cultural sensitivities), making timely decisions, adapting to changing needs, making use of resources (both material and personnel), providing direction, responding flexibly, thinking creatively and constantly re-appraising the options	Greenberg discusses his first reactions to 9/11: "I needed to get to my office and start dealing with what this atrocity meant for MMC. Were people getting out of the buildings? Had we lost people? Which facilities were affected? Which clients were affected? What could we do? Where should we start? My phone was out. I had a TV moved in to get news... By ten o'clock, I had gathered a group of managers in a nearby conference room, and we were beginning to figure out what needed to be done" ([20], p.59).

(see Table 1).

This conceptualisation of the factors influencing leaders in crisis contexts sets the scene for a discussion of the study of the crisis responses of the Canterbury principals to the 2010/2011 earthquakes and on-going disaster recovery. First, the findings will be outlined in relation to the way the disaster unfolded to provide detailed insight into the principals' decisions and actions. Second, the findings will be discussed in relation to the conceptual framework. This approach examines *what* happened before providing a possible explanation of *why* principals acted in the way that they did.

6. Leadership through a crisis situation

As noted earlier, four schools from the wider study have been used to exemplify successful leadership in a crisis context. The principals and their schools are named A–D to protect their identities. It is not intended to compare the principals to each other but to use examples of their decisions and actions to highlight wider themes.

6.1. Response

The 7.1 September 4 2010 earthquake was centred 40 km to the west of Christchurch city. It happened at 4.35 am on a Saturday morning. In the days and weeks that followed, when regular school was suspended, school buildings were sometimes used as shelters and information centres. If so, principals quickly became community hub facilitators: "We were set up as a Civil Defence 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 Defence. 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 B).

The 6.3 February 22 2011 earthquake happened in the middle of a school day. Most primary and early childhood students were on a lunch break. Many secondary students had a free half day for a teacher union stop work meeting. Principals needed to snap into action, often taking up a 'command and control' approach. As one principal stated: "I put on my principal's smile. Parents arrived and were standing outside. I realised 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 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 calmly. As one parent notes: "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).

Some schools, which had suffered badly in September, had already 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'" (Principal B).

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

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" (Teacher, School A).

6.2. Recovery

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.

Many donations were received from outside the region and these helped replace equipment, school uniforms and ensure no children missed out: "There were kids without lunches, there were kids without breakfast; we just fed them as the need arose. Kids were

really tired so we would put cushions in the back of the room for them to sleep” (Principal C).

In February 2011, many more schools were damaged and those still awaiting repairs from September often sustained further damage: “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, School D).

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 damage was caused to infrastructure, buildings and homes. There was considerable movement of families after the February earthquake, either temporarily or permanently. Over 10,000 students enrolled in schools in less damaged parts of the city or elsewhere in the country (ERO, 2013): “We’ve had a number of families move in – they’ve been through the earthquakes and at least one move ... about 50 short-term enrolments from the February quake” (Principal B).

Prior to schools re-opening, principals 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. Before schools opened, they 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” (Teacher, School A).

School C’s principal 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 socio-economic area where many families struggled meant the earthquakes caused further hardship. School C 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’” (Principal C).

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” (Principal B).

As time went on, 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...” (Principal C).

As the months passed, schools settled in routines as best they could. Principal B said: “Even normal is difficult.” Schools made use of the range of community, government and non-government agencies to support students, staff and families. They were not just focusing on emotional and psychological support but 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: “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 A).

6.3. Reflection

Interviewing principals two to three years after the major earthquakes allowed them to reflect: “So almost two years later, we are still positive, we are still giving positive messages. We are still advocating for the school... but our reserves are running out” (Principal A).

Their comments revealed schools dealing with high levels of stress and anxiety in their communities:

We’ve always had a really strong positive school culture but once we got through the initial emotions of the earthquakes, we’ve galvanised a lot more. Teachers and staff are more aware to support the children emotionally they have done in the past. They are 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 – children do not 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 B)

Principals and teachers were dealing with their own health, housing and family issues then arriving at school and supporting children and their families: “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’ wellbeing” (Principal D).

As time went by, people needed opportunities at different points in time to re-examine and re-story their experiences, not in a way that focused on unhelpful rumination but in a way that helped them move on:

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 B)

In summary, schools played a pivotal role in supporting their communities through the earthquakes. Principals took on roles that went beyond a focus on educational leadership to dealing with an immediate crisis, managing their schools as post-disaster community hubs, rebuilding the fabric of their school communities and all the while being sensitive to the physical, emotional, social and psychological needs of their staff, students and families.

These findings mirror the report of the Educational Review Office (ERO). ERO is New Zealand’s school evaluation agency. When Christchurch schools were sufficiently recovered for school reviews to be continued, ERO focused on how schools had coped and what lessons could be learned from their experiences. ERO 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 wellbeing of children, staff and families, and on getting children back into good learning routines while managing on-going anxiety [13].

7. Discussion

The principals in this study were successful in leading their schools through the disaster because they displayed, in different

ways, their responses to three sets of factors that influenced their leadership decisions and actions: *dispositional*, *relational*, and *situational*. The responses of these principals resonate with the accounts of the crisis leaders discussed earlier. The principals were also able to simultaneously provide higher level leadership while continuing to manage the ever-changing situation on the ground.

7.1. Dispositional factors

Dispositional factors include personal qualities, prior experiences, values, beliefs, skills, expertise and conceptions of leadership. The principals were all experienced school leaders and had each been at their schools for some time, except for Principal D, who had taken up a one-year position as a transitional principal to support a school that was closing as part of the post-earthquake educational renewal process. That he would do so was remarked upon by his new school community – both teachers and parents, who noted that he was the right person for the job. He had a good balance of experience, empathy and practicality, which meant that he was able to connect with and support an already fragile school community.

Principal A was a longtime principal at her school and well-known for her leadership in the local principals' association. In her interview she spoke passionately about distributed leadership as her preferred leadership style: *"It has shown me the power of real leadership. It put all the theory into practise especially relational trust. They do say practise makes perfect."* She also saw her role as much behind the scenes as leading from the front: *"Principals don't think about themselves. They don't tell people what they've done. They just need to know that they are doing the right thing."*

Principal B spoke frequently about his school's values – drawn from his own beliefs and the values of the local Maori (indigenous) people – *arohanui* (love, support and empathy) and *manaakitanga* (hospitality, care and reciprocity). After the September 2010 earthquake, which severely affected his town on the outskirts of Christchurch, he was quick to check in with his school community to see how everyone was faring, what their needs were and how the school might help: *"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."* After the February 2011 earthquake, School B hosted evacuees from Christchurch as way of repaying all the kindnesses shown to them some months earlier.

Principal C also talked of the importance of her school having *"a 'culture of care' with values of persistence, respect, care and curiosity."*

7.2. Relational factors

Building strong relationships, developing a sense of community, engendering loyalty, and fostering collaboration are typical relational characteristics of successful crisis leaders. These strengths were to the fore in the principals in this study.

Principal C welcomed her families back with empathy and warmth: *"We just made ourselves out there. We had a coffee morning straight away for the parents."* As did Principal A: *"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."*

Principals and senior leaders were also sensitive to the situations of their staff members: *"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"* (Senior Teacher, School D).

The relationships principals had built up over time with their communities paid off: *"They 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 C).

7.3. Situational factors

Situational factors include assessing the situation as it unfolds, understanding the context, being aware of different responses, making timely decisions, adapting to changing needs, making use of resources (both material and personnel), responding flexibly, thinking creatively and constantly re-appraising the options.

A key situational factor is knowing the nuances of the context – in this case the school community. Right from the first earthquake, Principal B was assessing how his community was coping: *"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 C was conscious that she already had a vulnerable community: *"Half of them didn't come back, of course, because some of them had shifted 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."*

Making quick decisions is another important characteristic. On February 22, children were at school when the earthquake hit so principals had to make quick decisions to make sure students were safe: *"I was just walking out into the playground and BANG! So the response from me was: 'Right, what do we need to do here? We need to make sure the children know where to go and to go there immediately and not back to their rooms'"* (Principal B).

Once children were safe, other decisions needed to be made. Principals had to prioritise. They put aside their own concerns, rationalised who would stay at school and who could go to collect their own children as well as organising how to arrange food, drink, shelter and support for those left waiting: *"I was getting texts from my daughter who is a nurse and she was trapped in the hospital. My grandson was trapped at school and my schoolteacher husband couldn't leave either. I couldn't think of my family at the time and just had to assume they would be okay"* (Principal A).

Principals needed to keep information flowing: *"We were communicating with staff in a variety of ways, through emails and texts and the team leader was communicating via the communication trees. And lots of communicating with parents"* (Principal A). *"At that time we had a Twitter message that we could send out to families who [could] receive cellphone messages"* (Principal B).

Dealing with operational matters while keeping the big picture in mind is another key matter. Before schools reopened, principals checked on the state of their schools: *"I had a dilemma, if I couldn't get into the school then we couldn't get it ready. So the caretaker and I bought hard hats and wore sensible shoes and organised electricians, plumbers and builders to re-open the school"* (Principal A).

In the days just prior to opening, principals organised teacher-only days for teachers to debrief: *"We had a chance to connect with the other staff to find out about all their different situations... The session was not just about commiserating, we were also celebrating that we were all still here"* (Teacher, School A).

They then needed to consider as a school how they would deal with the children's return: *"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"* (Principal B).

Managing multiple priorities – the day-to-day alongside the evolving disaster recovery process – is another important factor. Once school began, principals needed to manage the educational

needs of their students, organise psychological support, arrange pastoral care and oversee practical tasks: “*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*” (Teacher, School A).

All the time, principals kept an eye out for their staff: “*I had a teacher who was in the red zone [designated for demolition and re-location] who for a good part of a year didn’t have a toilet and in the end didn’t have a house. She had to leave. That starts to wear down the staff so we knew we had to look after each other. We really had to look out for each other ... be prepared, watch the signs*” (Principal C).

Looking back what comments would they make? “*There was a lot more I could have done but you can only plan for about 50%. I would have the emergency procedures more detailed and clear in my mind*” (Principal B). Principal A, however, was pleased with the planning that her school had done: “*On the day, the leadership team kicked in and they were making sure the right thing happened. The training and up-skilling really worked for the school. They worked calmly and there was no personal heroism.*”

For School D, it was more difficult as they faced closure at the end of 2013: “*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*” (Principal D).

8. Conclusion

In summary, this article has examined the changing roles of principals in response to the earthquakes of 2010/2011 in the Christchurch, Selwyn and Waimakariri districts of New Zealand’s South Island. The literature review highlighted the dearth of literature that examines the roles of schools in disaster contexts, particularly, the expectations that are put on principals to support their students, staff and wider school communities.

A first level analysis of the data drawn from interviews with principals, teachers, and parents was discussed in a semi-chronological manner which highlighted principals’ actions in the response, recovery and reflection phases of the disaster. This gave a glimpse into the complexity of a principal’s role when dealing with an on-going crisis.

The second level of analysis drew on a conceptual framework, distilled from the literature on crisis leadership, in which leadership factors were grouped into three interrelated themes – dispositional, relational and situational. This analysis highlighted that principals who became successful crisis leaders drew on their *dispositional* qualities and prior experiences along with the *relational* skills they had honed over time to build an effective school community, and managed the on-going crisis by assessing and responding to the *situational* demands in a thoughtful, flexible and nuanced manner. There was constant interplay between the three sets of factors and they played out differently across the crisis phases.

In the response phase, principals appeared to their communities to act calmly and decisively. To do this, they drew on their prior experiences, their leadership style, their ability to diagnose a situation, their personal qualities, which put other people’s needs before their own, and their clear communication skills. They also drew on the strong relationships they had forged with students, staff and families, in the hope that the goodwill they had established would lead to people trusting their decisions, following instructions and acting responsibly. They were also constantly appraising the situation, analysing new information and weighing up alternatives as the situation evolved.

Between the response and recovery phases when schools were closed, principals had time to collate all the information to hand, consider appropriate courses of action and begin preparation for a return to school – in whatever form that might take. Meanwhile, they kept checking on the wellbeing of their staff and students, communicating the most up-to-date information and offering comfort and hope. They had more time to appraise the on-going situation and make more deliberate longer term plans. When school commenced, they needed to balance the business-as-usual of education with wide-ranging pastoral care needs.

As time went by, principals had time to reflect. They could get a sense of how far they and their school communities had come and what might still lie ahead. They could remind their communities of the visions and values they had as a school, prior to the disaster, and how they had drawn strength from these as they moved faced the unimaginable. The bonds forged between the schools and their communities continued to be strengthened as students and parents found schools places of safety and support. At the same time, as the rebuild dragged on and people became physically weary and emotionally stressed, principals needed to remain focused and positive without ever knowing when it would come to an end.

The schools in this study saw their principals as successful leaders throughout these difficult times. While it could be argued that leadership in times of crisis is simply good leadership put under pressure, the unfamiliar context, the fast changing nature of the environment, the multiplicity of actions and interactions, the speed at which decisions need to be made and the possibly life-saving implications of these, added new layers of complexity. More research needs to be done: longitudinally – to map the changes over time; comparatively – to examine leadership across different crisis contexts; and in-depth – to get more finely-detailed understandings of leaders’ actions and decisions under pressure, in order that we can learn more about this phenomenon.

The conceptualisation of leadership in times of crisis, through dispositional, relational and dispositional factors, was helpful in synthesising key ideas from the literature and applying to the data gathered in this study. It will be important to see if this, too, has applicability across other situations. If so, it will be a useful tool for addressing the recommendations from prior studies of schools in disaster contexts (for example, [44] that suggest better training for principals to lead and manage in crisis situations and for disaster agencies to make better use of principals as a resource.

In conclusion, as Canterbury communities are resettled into new homes and students attend repaired or reconfigured schools, it is important that the role of local principals is acknowledged. With the teachers who worked alongside them, they worked tirelessly and selflessly for their students, school families and communities. As one parent commented, they are “quiet heroes” in the story of the Canterbury earthquakes.

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