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# **Emergency Preparedness and Response in New Zealand Schools**

A thesis presented in partial fulfilment of the requirements for the  
degree of

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**Karlene Susan Tipler**

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## Abstract

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International disaster risk reduction efforts prioritise school safety. Providing a safe learning environment for students and ensuring their continued access to education after an emergency has a positive influence on student, family, and community resilience. Existing school-based emergency management literature is limited. The project aimed to investigate current emergency preparedness and response activities in New Zealand schools, and identify key practices that support efforts to keep students safe during emergencies. A multiphase mixed methods research design, underpinned by a pragmatic philosophical approach, was employed to conduct three separate but linked studies that investigated: Emergency preparedness in schools (Study 1); Emergency management requirements and expectations of schools (Study 2); and Emergency response in schools (Study 3).

Study 1 employed a survey to collect quantitative (n=355) and qualitative (n=514) data from schools throughout New Zealand about their experiences participating in the nationwide 2012 New Zealand ShakeOut earthquake drill, and the types of emergency preparedness activities undertaken. Findings identified lessons learned, and presented ways in which drills can be linked to other aspects of school preparedness. Schools were also found to undertake a range of preparedness activities (e.g., develop emergency plans, conduct frequent drills, and provide students with hazards education). However, differences in preparedness levels were identified, suggesting that some schools may be under-prepared to keep students safe in emergencies. A lack of clarity in the legislative requirements for school-based emergency management was proposed as a possible reason for differences in preparedness.

Study 2 combined interviews of three emergency management practitioners with a review of New Zealand legislation, policy, and guidelines to identify the preparedness activities New Zealand schools are required to undertake to ensure the safety of the students in their care. The legislation was found to be generic, at times ambiguous, and schools were not provided with clear guidance. As a result, it was recommended that preparedness benchmarks be established and that standard operating procedures for core emergency response actions (i.e., shelter-in-place, lockdown, building evacuation, relocation, and family reunification) be developed to provide a consistent approach to school-based preparedness efforts.

Studies 1 and 2 discussed emergency preparedness in New Zealand schools. However, there remained a need to investigate the link between preparing for and responding to emergencies by investigating how schools responded to real emergency events. Study 3 used three case studies to explore how three schools responded in a range of emergency events. Findings included the identification of generic, recurring response activities across a selection of emergency types, which were used to develop a six-stage school-based emergency response model. The lessons learned from participant's first hand experiences of various emergency events enabled the identification of factors that contribute to an effective emergency response, including activities undertaken before, during, and after an emergency.

Research exploring emergency management in New Zealand schools is still in its infancy. This project has contributed significant knowledge to understanding how New Zealand schools prepare for and respond to emergencies to keep their students safe. Findings from the research may also have relevance for an international audience.

## Acknowledgements

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In completing this thesis, I would like to thank all the schools who took part in the research. I appreciate that time is a precious commodity in schools, so thank you for your contributions.

I would like to thank my supervisors. First and foremost, Ruth Tarrant who has been a wonderful mentor, counsellor and confidante throughout this adventure. Also thanks to David Johnston and Keith Tuffin who have provided ongoing encouragement, support, and the odd coffee.

To my fellow PhD students, staff in the JCDR and School of Psychology, thank you for your unstinting kindness and assistance.

To my long suffering family, thank you for the laughter and tears that have helped me get to the end of what has been a very challenging journey.

Finally, to my most ardent supporter and biggest cheerleader, thanks Mum, I couldn't have done it without you.

This thesis is dedicated to Gerard Neilson (1947 – 2017)

A wonderful parent, inspiration, and friend.

## Personal Statement

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Before you begin reading this thesis, it seems appropriate to shed some light on what this research experience was like for me. In hindsight, my thesis topic was simply a natural progression of the path I was already following. I have always had an interest in earth sciences demonstrated by a BSc in Geography, and a MSc in Physical Geography. Therefore, an investigation of hazards and disasters made sense. Between my BSc and MSc, I trained as a secondary school teacher and spent a few years teaching geography. This experience as a teacher provided me with insights into how schools operate and what factors they need to consider to keep students safe when at school or on field trips. Therefore, schools provided a relevant and appropriate setting for my research. As a consequence of the 2010 Darfield and 2011 Christchurch earthquakes, I was able to assume a newly created role as an emergency management advisor within the Wellington City Council. A major component of this role was assisting schools in preparing for emergencies and disasters. As a result, I became familiar with the type of information and support that schools consistently requested, such as advice on developing emergency plans and conducting response drills. Therefore, an investigation of emergency preparedness and response in schools seemed fitting. As with all researchers, my background influenced my approach to the project by helping me identify what I wanted to achieve with the research, which was to create practical outputs for schools, government, researchers, and practitioners, to enhance emergency preparedness and response efforts in schools. However, knowing what I wanted to investigate was only the first step in a challenging but fulfilling adventure.

My natural instinct was to stand back and view the research process as something totally independent of myself. This has meant that I have avoided including a first person account of the research process within the thesis. Such an approach may suggest that perhaps I did not engage fully with the research process in a way that would allow me to develop as a researcher. However, this was not the case. Throughout the research literature, especially within the qualitative methodologies, there is discussion of how research is a reflexive process. Often this reflexivity takes the form of a research journal, or in my case a notebook, in which I recorded notes from discussions with my supervisors, lists of to do tasks, questions to follow up as I progressed through the project, ideas from workshops I attended, and feedback from presentations of my research findings. While my approach to reflexivity was not

undertaken as formally as some of the literature recommends, it still resulted in my research improving as I progressed, both in how I was conducting my studies and also in the outputs produced.

All data requires interpretation and this is especially so within qualitative research, as it reflects the values, biases, and judgements of the researcher. By recognising and acknowledging my own background, potential biases, those of my participants, and limitations of the research methods employed, the trustworthiness of the research and robustness of the research process is increased.

Now here I am at the end of this journey, about to share with you, the reader, the details and results of my adventure, and I ponder what I learnt about myself. Before this process I had always seen myself as a teacher, others did the research and I helped share it with people (whether children or adults). But I now see myself as both a researcher and a teacher. Furthermore, I have learnt that I have a perspective of my field of research that is both valid and valued. So if I had to do this all again (god forbid!) would I change anything? Yes, I would perhaps I would make different decisions about some aspects of the research like how many case study schools or whether I should have included more questions in my survey to get additional details about school preparedness activities. However, for the most part, I am pleased with the research I conducted, and proud of the difference that my research can make in keeping students safe in school-based emergencies both in New Zealand and internationally. And as a researcher, I can't ask for more than that.

Karlene



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