



CHILD-CENTRED DISASTER RISK REDUCTION PROJECT

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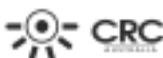
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Kevin Ronan & Briony Towers¹

The One-Page Elevator Pitch

What is the problem?: The problem this research addresses is “can previous research findings now be extended to provide new knowledge and application while also helping to solve identified problems in this area?” One problem is that research has focused on one-off education programs that have limited before and after assessment, tending to focus on knowledge-based and immediate outcomes. Thus, an aim of this study is to focus on an increased array of outcome indicators and extending timeframes for following cohorts to see whether any knowledge and skills gained extend over time. This would include, where applicable, areas where a natural hazard event occurs.

Why is this research important?: Children are the most vulnerable demographic group in disasters, representing 30-50% of deaths according to World Health Organisation estimates. They also represent the most vulnerable group for psychosocial effects according to a large scale systematic review of disaster victims. At the same time, preliminary research points to the active role children can play in communities assuming “shared responsibility” with government (National Strategy for Disaster Resilience, 2011) for preparing for and responding to natural, and other, hazard events. In addition, in anticipating the post-2015 Hyogo Framework for Action, not only can children be instrumental links in community efforts to solve current risks, they are also the adults of tomorrow who will be dealing directly with future risks. This is certainly in terms of learning disaster risk reduction and resiliency skills that can reduce personal, household, school and community risks in the future. However, it is also related to knowledge, and ways of solving problems, that children and youth can be acquiring that can perhaps over time help solve some of the complex policy issues in Australia and many other countries that have been shown to exacerbate, rather than solve, risk in relation to natural disasters.

How are we attempting to solve the problem?: Our programmatic research starts first with large scale scoping and review and pilot research in Year 1. That is, through scoping and review, we get the normative context across policy-practice-research in relation to children’s role in disaster risk reduction (DRR) efforts. However, we are also getting “ipsative” views, of a wide variety of stakeholder groups (end users, teachers/school personnel, EM/DRR professionals, parents, children and youth). Based on this normative and stakeholder input, Year 2-3 are then aimed at a suite of studies that reflect an overall “research narrative”, linked to moving knowledge and application forward while also trying to solve problems that have been identified.

¹ List of current integrated project team members:

Project Team: Prof Kevin Ronan (lead researcher; CQUniversity); Dr Briony Towers (post-doc fellow, RMIT); John Handmer (RMIT); Katharine Haynes (post-doc fellow, Macquarie); Eva Alisic (Monash); Save the Children (Nick Ireland, Marla Petal, Susan Davie); Research Associates: Joint Centre for Disaster Research, Massey University/GNS Science, New Zealand (David Johnston; Vicki Johnson).

PhD Students: Kate McAuslan; Avianto Amri; others being recruited inc PhD and Hons.

End Users: Liz Addison/Jennifer Pidgeon, WA DFES; Melanie Ashby, AEMI; Sandra Barber, TFS (TAS); Gwynne Brennan/Mathew Henry, CFA (VIC); Tony Jarrett, NSW RFS; Rob Purcell, MFB (VIC); Bob Stevenson, SA SES; Francie Tonkin, MFS (SA), Conrad Walsh, F&R NSW, Ben McFadgen, VIC SES

Introduction:

Over the last decade, the role of school-based hazards and disasters education has gained increasing emphasis in the international disaster resilience literature, in relation to practice and policy (e.g., UNISDR, 2005, Ronan, 2014) and empirically (Johnson, Ronan, Johnston, & Peace, 2014). The UN International Strategy for Disaster Reduction (UNISDR) and UNISDR's Hyogo Framework for Action (HFA; UNISDR, 2005) identify disaster education as one of the HFA's 5 key priorities in reducing the impacts of hazards and disasters, Priority for Action 3.² In planning for the post-2015 HFA framework (HFA2), a focus on education programs are expected to be made a major priority in the post-Hyogo framework in 2015 (Ronan, 2014; UNISDR, 2013). In Australia, the National Strategy for Disaster Resilience (NSDR; Australian Government, 2011) advocates for an increase in "shared responsibility" between government and communities for disaster risk reduction (DRR). In reflecting HFA-inspired principles, NSDR also emphasises education as part of the overall strategy to promote collective responsibility in DRR. Taking the idea of education one step further, in its final report, the 2009 Bushfires Royal Commission explicitly stated that bushfire education for children "remains the most effective approach to instilling the necessary knowledge in Australian families" (Teague et al., 2010, p.55) and formally recommended that the "national curriculum incorporates the history of bushfire in Australia and that existing curriculum areas, such as geography, science and environmental studies include elements of bushfire education" (Teague et al., 2010, p.2).

A recent "background chapter" (Ronan, 2014) commissioned by UNESCO and UNICEF for the HFA2 planning process and its Global Assessment Report on Disaster Risk Reduction 2015 was focused on one of the "core indicators" for HFA's Priority for Action 3: School curricula, education material and relevant training including disaster risk reduction and recovery concepts and practices (PFA3/Core Indicator 2). In addition to summarising policy developments internationally, including in Australia, it also summarised many education programs and practices being carried out. However, in Australia, as elsewhere internationally, DRR education practices and programs tend not to be formally evaluated and tend to be time-limited, one-off case, demonstration projects carried out through schools or emergency management agencies. Thus, compared to the amount of curriculum practices going on in relation to DRR, there is a dearth of systematically gained knowledge about the role of DRR education (DRRE) programs producing (1) increased risk reduction and resiliency indicators in the Prevention and Preparedness phase and (2) during the Response and Recovery phases of the disaster cycle.

However, that situation has started to change, with a recent systematic review of DRRE programs for children and youth (Johnson, Ronan, Johnston, & Peace, 2014) identifying 35 studies done since the mid-1990's, 34 of those since the turn of the century, published in either the grey or academic literature. The review accompanies this Annual Report and provides in-depth information about the design, methods and basic findings from those 35 studies. Overall, while these studies do point to the promise of DRRE, the majority of pre-post studies identified reported significant gains in knowledge, risk-related, preparedness and other resiliency indicators as a function of a DRRE

² HFA, Priority for Action 3: Use knowledge, innovation and education to build a culture of safety and resilience at all levels.

program (including reduced fears of hazardous events). Thus, preliminary data do support the question raised in the previous paragraph, do DRRE programs improve risk reduction and resiliency indicators during the Prevention and Preparedness phases of the disaster cycle? However, as pointed out in the review (Johnson et al., 2014), design and methodology across studies can be improved to assist in making more strong causal statements, in understanding in more depth what the active ingredients of these programs are (i.e., which elements produce which gains?) and in getting an increase in the types of indicators assessed (i.e., most studies rely on knowledge-based indicators) and sources (i.e., most studies rely on children as sole sources of information).

Further, research is also necessary to ask the critical question: do DRRE programs translate into effective Response and Recovery for children and their families? Currently, no study worldwide has examined this question.³ Pending answers to that question, another problem in this area (Ronan, 2014) is the problem of scale. Typically, as indicated earlier, DRRE programs are limited in size, scope and duration. Teacher survey and focus group research (Johnson & Ronan, 2014; see also Johnson, 2014) appears to indicate a number of obstacles preventing large scale uptake of disaster resilience education (see next section for more detail).

The Project:

Through a scoping and review exercise, and through discussions within the team, including with our end users, we have been developing a “research narrative”. That narrative then is to be the basis for a program of research including both pilot and main study research projects. Each study is intended to contribute to the narrative. Main study projects have not yet been finalised, but a summary of projects being planned to date are provided below. Pilot research plans have been finalised and are listed below, following a summary of the research narrative.

The research narrative:

The narrative for this study continues to be in development in various forms: (1) through compiling various theories related to DRRE, (2) through a flowchart approach and (3) through a written narrative. While the theory- and flowchart-based models are not as yet completed, the written narrative as it is currently developed is as follows:

We currently do not evidence-driven DRR education programs, or activities, that are known to save lives, property, reduce injuries and reduce psychosocial consequences. Related, the current best expert- and consensus-advice (e.g., “key messages”; IFRC, 2013; from important stakeholders⁴) has not been systematically accounted for or infused directly in DRRE programs, starting with basic messages for younger children that emphasise child protection and safety. With basic messages,

³ It might be added that there has been no study done internationally that has looked at a Prevention and Preparedness phase education/intervention program and systematically followed that same cohort into the Response and Recovery phase of a natural disaster.

⁴ These include emergency management (EM) professionals, parents/households, teachers/schools and children themselves. In the case of EM professionals, they are aware of local conditions which may impact on key messaging developed by international/national experts. In the case of other stakeholder groups, it is important to see what these groups see as key messages. This would include creating DRR messaging that accounts for widely held myths as well as to amplify widely held messages that are more likely to lead to effective responding.

there is then a foundation that can then be added to and built over time to more advanced topics in later years. Further, getting the balance right in DRRE promoting child protection and child participation is an area of contention in the field (Ronan, 2014). Internationally, the pendulum appears currently to be more in the child-participation/child-led direction when in fact research supports strongly our role as adults first in child-protection-based activities, that includes in educational setting basic guidance in relation to key Prevention and Preparedness messages. A basic problem in curriculum development and delivery is that DRRE programs tend to be one-off or time-limited and not systematically infused within the curriculum. Thus, developing evidence-/expert-supported curriculum materials that can be implemented on more widely and on larger scales, that help children learn and practice important key messages through participatory learning, messages that translate directly into effective Response and Recovery behaviours, including those that protect children, families and schools, all represent necessary next steps.

At the same time, analysis suggests that there are significant obstacles preventing the development and systematic uptake of evidence-supported education programs, at both practice and policy levels. At the practice level, for both teachers and EM professionals who deliver DRRE programs, New Zealand focus group and survey research with teachers (Johnson & Ronan, 2014; see also Johnson, 2014), and additional consultation with EM end users on our project, indicates some significant obstacles. One is lack of training in DRRE curriculum development and delivery, resource and time limitations (e.g., too crowded curriculum in schools), lack of school/agency support for these programs, perception that such programs might scare children and other reasons (Johnson, 2014; Johnson & Ronan, 2014). However, research thus far has not been done on what teachers and EM Professionals see as obstacles, and facilitators, in the Australian context.

At the practice level, there is a lack of policy support for DRRE curriculum being directly, and systematically, infused in schools. At a more basic level, while anecdotal evidence suggests practitioners and policy-makers support the idea of DRRE in the curriculum, there is a lack of research to document that support. That is, with widespread support for the “aspiration” of DRRE, that can promote next steps in policy development, towards more systematic implementation of DRR curriculum practices. In addition, pending wider support from stakeholder groups, if DRRE program development can also be done with an eye to helping policy-makers and practitioners solve identified problems, that may also assist in promoting increased implementation.

Moving from aspirational policy to actual implementation would also involve working with important government agencies (e.g., education, emergency management) and help them advance sector-wide mapping, including ‘scoping and sequence’ policy and planning activities that then are capable of producing a K-12 curriculum that (1) meets children’s developmental needs, (2) inculcates key, evidence- or at least consensus-driven DRR activities, (3) produces “ultimate” outcomes (saving lives, property, reducing injuries and psychosocial consequences, and (4) are innovative, including solving various documented problems discussed above related to development, delivery and educator training.

More evaluation is necessary. In particular, rigorous evaluation of the following is necessary: (1) program content and delivery (e.g., content analysis; fidelity assessment), (2) program effectiveness in producing important outcomes (including immediate, ultimate and cost effectiveness outcomes) and, finally and critically, (3) implementation practices and effectiveness, including evaluation of

national capacity-building of DRR curriculum and teacher/EM professional training implementation and effectiveness.

In terms of this overall narrative, it is the opinion of this team of researchers that for large scale implementation of programs, taught by well trained teachers and EM professionals, that are effective in promoting risk reduction and resilience requires a different mindset. Moving from more of a one-off/project mentality to a longer-term, strategic curriculum and implementation mentality is necessary: One that starts with and is “fuelled” through the development of key relationships between those across policy-practice-research sectors. However, as the main focus of this project, that longer-term view will benefit substantially from data that speaks to the role of DRRE in producing immediate and longer-term risk reduction benefits for children, families, communities and government.

What’s been happening:

As we continue to review and scope the research narrative, we have our Year 1 plan well advanced. Two major pieces to the Year 1 plan include scoping and review and pilot research. Scoping and review includes separate chapters on policy, practice and research in the DRR and CC-DRR area. Ultimately, by the end of 2014, a 5 chapter Compendium is planned that will open with an introductory chapter providing some context and rationale for research in this area. Chapter 2 is to focus on guiding theory across the policy-practice-research nexus. Chapters 3-5 then will cover policy, practice and research, respectively. Following the Compendium, a brief version will then be distilled for sharing with end users and others on best practices discerned to date.

Pilot research begins at the beginning of the research narrative with Delphi and survey research with major stakeholder groups (children, parents, EM professionals, teachers/school personnel) on a variety of issues that are important to know for policy-makers, practitioners and researchers. For example, do children, parents, teachers, EM professionals think DRRE for children and youth (and their families) is a good idea or not? If so, what do the educators think should be the focus of such programs? What do they see as facilitators and obstacles to increased delivery of these programs? What would children and their parents like to see addressed in these programs? What do stakeholder groups currently think are the “key DRR messages” that ensure effective Response and Recovery? These questions have never been systematically asked, and we are asking them and others through surveys that are going out in the second half of 2014.

Starting in 2015, the main study will begin to examine core aspect of the narrative, do DRR education programs produce both immediate and longer-term benefits that promote increased resiliency and risk reduction before, during and after hazard events? If so, are they delivered in such a way that has potential for delivery on a larger scale? Do they have scope to deal with crowded curriculum, teacher training problems and other obstacles? At the same time, are they packaged in a way that both those who deliver the programs (teachers, EM professionals) and those who participate (i.e., children and youth) find them useful and engaging? If they produce immediate and longer-term DRR benefits, are they cost effective and, thus, more attractive to policy-makers within a whole-of-community DRR approach? Currently, there are 4-5 studies being planned that address

aspects related to these core questions. These include at least two PhD studies⁵ and 2-3 other projects. These will be presented in more detail towards the end of 2014 as each study finds its place within the overall research narrative. As part of this planning, consultations have been underway with end users soliciting input, ideas and interest in being directly involved in the main study.⁶

In terms of other activities:

- Workshops of researchers and end users
 - o Workshop being planned for the end of 2014, in consultation with end users as to timing, method of delivery (e.g., live versus webinar format), content/focus;
 - o In addition, several consultations have occurred including live consultation at the initial Adelaide BNHCRC Research Advisory Forum in March 2014, a teleconference in May 2014 (right prior to a research team meeting); a follow-up email consult in June 2014 soliciting both input and interest in being involved directly in the research⁷; another email consult in August 2014⁸; teleconference planned for September; planned end of year workshop/webinar.
- Recruiting – who has come into the project (both post-docs and PhD students) – include photos wherever possible
 - o Research team is listed below, including those post-doc, PhD and those in other roles.
- Major equipment purchases
 - o None as yet, though school drill simulation software is currently being scoped;
- Major field trips.
 - o None as yet
- Papers and conferences attended representing the BNHCRC
 - o Adelaide BNHCRC RAF, March 2014: Brief powerpoint and presentation providing overview of project scope and aims;
 - o PrepCom1, Geneva
 - Part of UN Science and Technology Major Group delegation
 - o Wellington AFAC/BNHCRC Conference
 - 3 posters (2 PhD student projects; 1 main study);
 - 1 presentation (K Ronan to do 30 minute presentation on project);
 - 1 proceedings paper about project (due August 15).

Publication list:

⁵ As of this writing, two PhD students are formally enrolled. At the same time, discussions are being held with 4 additional prospective PhD students, two from Victoria, one from Bangladesh, one from Nepal. Sourcing funding is the key issue with three of the four. Collaborative efforts have been underway to source funding streams.

⁶ End users are also involved in pilot research, both a Delphi study on “key DRR messages” and a larger survey for EM professionals.

⁷ Thus far, 2 end user organisations have expressed interest about direct involvement in the research, including evaluation of DRR education programs within schools in their “patches”.

⁸ Focus here on email being planned for dissemination in early August is on attendance at AFAC/BNHCRC conference, project involvement, input on products and resources, end of year workshop and scheduling a next teleconference (for mid-end Sept prior to next research team meeting Sept 30).

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Other things of interest

Team contributions to the post-2015 Hyogo Framework for Action review and planning process:

1. Ronan, K. R. (2014). Attendance at PrepCom1, United Nations, Geneva Switzerland, July.⁹
2. Team members were lead authors for Background Chapters for the Global Assessment Report on Disaster Risk Reduction 2015, both chapters linked to topics to this project:

⁹ PrepCom1 was the first of two PrepCom (PC) meetings that are part of the planning process for the post-2015 Hyogo Framework for Action (HFA2). Prof Ronan attended PC1 as part of the UN's Science and Technology Major Group (S&T MG). Since PrepCom1, plans are to attend PC2 Nov 17-18, 2014 in Geneva with the S&T MG. In addition, through Prof Ronan and the UN's Integrated Research on Disaster Reduction (IRDR; Dr Rudiger Klein; Prof David Johnston), plans are moving ahead to coordinate more directly with the UN's Child and Youth Major Group in the lead up to PC2 and to the 3rd World Conference on Disaster Risk Reduction (WCDRR) in March 2015 in Sendai City Japan.

- a. Briony Towers and John Handmer: Chapter on HFA Priority for Action 3, Indicator 4: Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.
- b. Kevin Ronan: Chapter on HFA Priority for Action 3, Core Indicator 2 : School curricula, education material and relevant training including disaster risk reduction and recovery concepts and practices.
 - i. The entire team contributed an Input Paper (see citation above) that was one of the inputs to this Background Chapter.