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Schools in Fire Country

Beginning the journey

Building a strong foundation with research evidence and cross-sector collaboration



Image: Harkaway Primary School

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Summary

Over the last 10 years, research on school-based bushfire education has established the importance of place-based, participatory approaches that position children as agents of change in their communities. Through a human-centred design process, the Schools in Fire Country project has translated that research into a good practice model of bushfire education that is designed for scalable and sustainable delivery in primary schools across Victoria.

This practice brief describes the five research-informed good practice principles for school-based bushfire education that underpin the Schools in Fire Country program. It then outlines the iterative, collaborative, human-centred design methodology that drove program development. It concludes with practitioner reflections on the development process and the outcomes that have been achieved.

Image: Chewton Primary School



“Quality bushfire education in schools requires much more than a shiny product. We need strong governance mechanisms, collaborative partnerships, and ongoing funding in place to sustain locally driven, strengths-based approaches.”

- Member of the Schools in Fire Country working group

Why this matters

Translating the research on good practice in bushfire education into scalable and sustainable programs has represented a complex challenge for the emergency management and education sectors.

From the very outset, the Schools in Fire Country project team recognised that meeting this challenge would require the input and involvement of teachers, students, school leaders, fire agency staff and volunteers, land managers and other subject matter experts.

By convening an expert working group and actively engaging with school communities throughout the development process, it has been possible to develop an approach to bushfire education that meets the needs, priorities and expectations of the education and emergency management sectors, as well the students themselves.

Learn more about the Schools in Fire Country project [here](#).



Good practice principles for school-based bushfire education

The foundational research on school-based bushfire education in Australia was conducted as part of the Bushfire and Natural Hazards Cooperative Research Centre (BNHCRC) project on **Child-Centred Disaster Risk Reduction**.

Led by Dr Briony Towers and Prof Kevin Ronan, the research team evaluated several bushfire education programs that had been developed by the state-based fire agencies.^{1,2,3}

The research team also engaged in several collaborative research projects with schools and local brigades.^{4,5,6} The data generated by these activities enabled the identification of five good practice principles for school-based bushfire education in Australian schools.

1. Transdisciplinary curriculum design

A transdisciplinary approach to bushfire education integrates content from learning areas across the curriculum, including science, mathematics, the humanities and social sciences, design and technology, and the arts.

This provides students with a holistic understanding of bushfire hazards and risks.⁷ It also provides them with valuable opportunities to develop their general capabilities, especially critical and creative thinking, intercultural capability, and personal and social capability.

2. Place-based pedagogy

For children to develop the knowledge, skills and understanding they need to make genuine contributions to bushfire risk management, teaching and learning needs to be focused on their local environment.

In place-based pedagogy, students engage with local landscapes, local experts and members of their local community to learn about bushfire in ways that are relevant and meaningful in the context of their own lives.^{8,9}

3. Action-oriented learning goals

Action-oriented learning goals ensure that students are not just acquiring knowledge about bushfire risk management, they are learning to plan, implement and evaluate risk management activities and initiatives in response to authentic problems and issues that concern them.

This positions students as 'agents of change'¹⁰ who can make valuable contributions to bushfire risk management in their communities. This has positive benefits for their sense of safety, security and wellbeing.



4. Student voice and agency

Student voice recognises that students have unique perspectives on learning and should have the opportunity to actively shape their own education.¹¹

Student agency recognises that students have the ability and the will to set goals, reflect and act responsibly to positively influence their own lives and the world around them.¹²

When bushfire education promotes student voice and agency, students show greater motivation to learn and they are more likely to engage in purposeful action.⁶

5. Collaboration and partnership

Transdisciplinary, placed-based, action-oriented bushfire education that promotes student voice and agency requires cross-sectoral collaboration and partnership between the fire management and education sectors.

The involvement of the education sector ensures that programs are informed by good practice in teaching and learning, while the involvement of the fire management sector ensures that programs reflect current knowledge and practices in fire management.



Collaboration and partnership between agencies and the education sector is essential to the development of good practice bushfire education.

Image: Harkaway Primary School

A collaborative approach to research utilisation

In early 2020, the Victorian Country Fire Authority (CFA) and the BNHCRC research team began discussing how the five good practice principles for school-based bushfire education could inform the design and implementation of effective programs in Victoria. These discussions led to **Schools in Fire Country**, a collaborative research utilisation project co-funded by CFA, the Victorian Government Safer Together program, and Natural Hazards Research Australia.

The primary objective of Schools in Fire Country was to develop and test a research-informed school-based bushfire education program for upper primary students that would be scalable and sustainable.

Over a period of two years, in the context of extended COVID-19 lockdowns and extreme uncertainty, the project team employed a human-centred design methodology which put the needs and priorities of educators, fire managers and students at the heart of program development.



The human-centred design process included six key phases.

1. ESTABLISHING A WORKING GROUP

An expert working group was established to facilitate increased collaboration between the education and emergency management sectors.

The working group included subject matter experts from state government fire agencies, the education sector, academia, Traditional Owner groups and the broader emergency management sector.

Throughout the project, the working group convened regularly for interactive workshops, strategic planning sessions and mutual learning exercises. Working group members were also invited to provide advice, guidance and feedback at key points during program development.

2. EMPATHISING WITH KEY PARTNERS

Designing a scalable and sustainable program model required empathising with the needs, priorities and expectations of key partners across the emergency management and education sectors.

In-depth interviews and discussions with teachers, students, school leaders, fire agency staff and volunteers, land managers and other subject matter experts enabled the project team to develop a deeper understanding of people's diverse perspectives and experiences in relation to school-based bushfire education.

These interactions also provided insights into the potential challenges associated with the implementation of good practice and highlighted examples of successful school-based programs in other jurisdictions.

3. DEFINING THE PROBLEM

The working group commenced this phase by examining key barriers and enablers related to the scaled implementation of good practice bushfire education.

This provided the group with a solid basis for analysing the problem in relation to four end-user groups: students, teachers, school management and contributing partners.

The resulting consensus amongst the working group was that good practice bushfire education was not being implemented in schools due to:

- an absence of strategic support and coordination structures
- limited or inconsistent capability and/or capacity in agencies and schools
- outdated teaching and learning resources
- constraints on the time available to implement good practice approaches

4. IDEATING SOLUTIONS

With the problem clearly defined, the working group members drew on their expertise and experience to identify solutions that would be desirable, feasible and viable in the dual context of the emergency management and education sectors.

The proposed solutions were focused on four key areas:

Strategic enablers

Aligning the program objectives and approaches to relevant legislation, policies, and strategies in emergency management and education; obtaining ongoing funding to support program development, implementation and improvement; establishing clear and transparent governance arrangements.

Coordination

Identifying the key management contacts in the district and regions and working with them to co-design systems and processes that can enable the coordination of key program activities.

Capability and capacity

Examining the existing cross-sector capability and capacity for program delivery; developing tools, methods and networks to further develop and enhance cross-sector capacity and capability.

Classroom resources

Developing and testing research-informed, curriculum-aligned teaching and learning resources to support scaffolded, age-appropriate learning experiences; designing an online repository to house teaching and learning resources and other program materials.

5. PROTOTYPING

During the prototyping phase, the project team collaborated with the expert working group to develop prototype classroom resources, including a learning scope and sequence document and curriculum-aligned teaching and learning activities.

The prototyping phase also involved a deeper investigation of the other key focus areas identified by the working group in the ideate phase (i.e. strategic enablers, coordination, capacity and capability).

This investigation confirmed the fundamental importance of the following actions:

- developing cross-sector multi-agency partnerships at the strategic level.
- aligning program objectives and approaches with state policies and strategies.
- leveraging existing coordination structures.
- building capability and capacity for program implementation at the regional, district and community level.

Recognising the need for high level guidance on these actions, the project team established a steering committee comprised of senior decision makers from the education and emergency management sectors.

6. TESTING AND REFINEMENT

The prototype resources were tested and refined in collaboration with teachers, school leaders and a broader audience of subject matter experts.

The outcome of this process was the development of a three-phase project-based learning model and a comprehensive suite of teaching and learning resources to support its implementation in the classroom. In July 2022, after numerous delays caused by COVID-19 lockdowns and restrictions, the learning model and supporting resources were tested in a school-based trial at Harkaway Primary School.

Incorporating elements of co-design into the testing process enabled teachers and students to directly influence the design of the resources and improve their practical application.

The steering committee that was established during the prototyping phase will continue to play an integral role in the ongoing testing and refining of the strategies and plans that will help to embed the program as a sustainable, scalable option for schools and communities in bushfire risk areas.

Read more about the school-based trial in [Practice Brief 3](#).

Reflections from the project team

Historically, the development of school-based bushfire education programs have often been driven by a single organisation (e.g. an emergency management agency, education department or non-government organisation), with the outputs and outcomes veering in favour of their own unique priorities and strategic agendas.

In this project, the time dedicated to building trusted relationships and partnerships has generated a groundswell of support and investment across the emergency and education sectors, resulting in processes and resources that can be tailored to meet the needs and priorities of local school communities throughout Victoria.

It is hoped that the development process outlined here will provide agencies in other states and territories with a blueprint for the development of good practice programs that empower Australian students as agents of change in disaster risk reduction and resilience.

This practice brief is the second in a series of five that chronicle the development of Schools in Fire Country - a research-informed bushfire education program for upper primary school students in Victoria, Australia.

The program was developed through a multi-agency, cross-sector collaborative partnership with funding support from Country Fire Authority (CFA), The Victorian State Government Safer Together program, and Natural Hazards Research Australia.

The program has received federal funding until 2027 from the National Emergency Management Agency to continue the development of sustainable partnerships, processes and resources and continuously adapt to the needs of schools, students, fire agencies and communities.

The complete series of practice briefs and other information about the program can be accessed [here](#).

For all program enquires [click here](#).

Endnotes

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3. Towers, B, Perillo, S., & Ronan, K. (2018). *Evaluation of Survive and Thrive: Final report to the Victorian Country Fire Authority*. Bushfire and Natural Hazards CRC, East Melbourne.
4. The Harkaway Bushfire Safety Committee., Towers, B., Johnson, L. (2019). *Learner agency is an essential element of effective bushfire education for upper primary school students*. Bushfire and Natural Hazards CRC, East Melbourne.
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12. *Ibid.*