

## L'I'L LARIKKINS – BUSHFIRE SAFETY STORIES FOR KIDS



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### AFAC RESEARCH UTILISATION CASE STUDY

#### Critical success factors:

- Get end users involved in the project as early as possible
- Research utilisation equals relationships
- Be flexible – turn obstacles into opportunities
- Practise the 3 Ps – persistence, pragmatism and patience



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*A drawing produced by a six-year-old research participant at Warrandyte, Victoria.*

## Synopsis

In 2007, researcher Briony Towers began interviewing 140 children about bushfires and bushfire risk for her Bushfire CRC-sponsored PhD at RMIT University. In doing so, she became the first researcher in the world to speak directly to children – her research end users – about their understanding of and attitudes to bushfire risk.

Nearly a decade later, the research findings have been internationally recognised and used in a range of successful Australian research utilisation projects. The early findings were so significant that some of these projects drew upon them even before Dr Towers' PhD thesis was completed in 2011. She is now a Research Fellow at RMIT University's Centre for Risk and Community Safety.

The major research utilisation outputs so far have included two 10-part series of safety message videos for children, featuring Li'l Larikkins characters; curriculum programs for school-based bushfire and disaster education; an e-book to equip parents to involve their children in making bushfire plans; a practice framework (in effect, a 'how to' guide), for working in children's emergency and disaster education; and many presentations at forums. As this case study was prepared, Briony was

collaborating with the South Australian Country Fire Service and the Department for Education and Child Development to produce bushfire education resources for schools in areas that had been recently exposed to bushfire.

The research continues to develop in new directions, inspired by the needs of end users, who range from fire agencies to government departments, schools, parents and, most importantly, children.

The original PhD asked the key research questions: “How do children understand bushfire risk?” and “What is the role of psychological and social processes in the construction of that understanding?”

In exploring children’s conception of bushfire risk, her research revealed an alarming gap in bushfire education for children. Among the early notable findings were that the child interviewees, who lived in bushfire risk areas, were enthusiastic about discussing bushfire risk and being involved in risk reduction. But neither parents nor school teachers were talking to them – each group apparently believed the other was talking to the children about these vital issues. Many children were left feeling anxious and vulnerable. The findings have provided information that fills this knowledge gap while addressing the question of whether children’s lack of knowledge was putting them at risk.

A child’s conception of bushfire behaviour is one example of a research finding that directly informed Li’l Larikkins video scripts. “Children might be living in a high risk area but don’t see themselves as personally at risk because they have a river between them and a forest so they believe a fire will stop at the river,” Briony says. One Li’l Larikkins episode about how burning embers can spread sought to address this misconception.

After 10 years of research in this field, this work is helping to increase understanding and change attitudes to children’s bushfire education. “We have shown that it reduces bushfire risk when kids use at home what they’ve learned at school. Even at policy level, it is being taken much more seriously and research we’ve done has shown kids are really vital participants,” she says.

More detail about the research can be accessed via references at the conclusion of this case study, which focuses primarily on critical success factors to research utilisation. Briony, as the lead researcher, Amanda Leck, from the national council AFAC, and Peta O’Donohue, from the South Australian Country Fire Service (CFS), as a key end user, share their insights about critical success factors throughout. In brief, they agree that involving end users as early as possible in the research utilisation process is among the most important critical success factors.

While the variety of research utilisation projects that drew (and continue to draw) upon this work is noteworthy, so too is the circuitous route, ad hoc events and lengthy delays that participants sometimes encountered in delivering them. This highlights that attributes such as flexibility, persistence and pragmatism are also advantageous as critical success factors for research utilisation.

## Background

The timing of Briony's doctoral research interviews with children was fortuitous. They predated Black Saturday in February 2009, so the children's responses were untainted by the heightened bushfire awareness after those tragic events. Post-Black Saturday, research into bushfire prevention received much greater funding and support. The subsequent 2009 Victorian Bushfires Royal Commission (VBRC) highlighted the need for bushfire education to be incorporated into school curricula nationally (*2009 Victorian Bushfires Royal Commission Final Report*), providing stronger impetus and funding to Briony's research utilisation.

The Bushfire CRC (the previous incarnation of the Bushfire and Natural Hazards CRC) and AFAC were quick to recognise the potential of Briony's work in 2007, she says, and drove its research utilisation.

The VBRC recommendations also led governments to provide substantial funding for bushfire awareness advertising campaigns and other preparedness activities aimed at children and families. This enabled Victoria's Country Fire Authority (CFA), in July 2009, to commission a 10-part series of 30-second safety story videos for broadcast on television and online, directed at primary school children.

## National leadership

The CFA enlisted AFAC to lead the bushfire safety project and apply it nationally. 3-D animation company Ettamogah Entertainment produced the safety stories.

"My role was to manage the project, including coordinating this high-level collaboration and building the reference group, which comprised senior CFA representatives responsible for children's education, Ettamogah, and the researchers. Briony became involved part-way through and advised on the scripts," explains Amanda, who is Director of Information and Community Safety at AFAC.

Briony's contribution was a game changer. "We already had good research evidence to indicate that we could use community education programs to achieve behaviour change in adults who were at risk from bushfire. But we had no research showing how it was applied to children," she says.

"The research was ground breaking in understanding that children, at their level of cognitive understanding, are able to act as household agents to effect behaviour change for preparedness in a bushfire context."



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## Animation taps research findings

For the 2009 bushfire videos, the reference group “workshopped” topics and script content and coordinated the integration of various elements. Working with Ettamogah’s animators, Briony drew on her research findings to devise an episode formula and used children’s quotes from her interviews as actual dialogue. Each episode provided knowledge, raised awareness, and culminated in a “call to action” message. Ettamogah Entertainment did in-house testing with children in developing the characters and had a child psychologist ensure the concepts and language were age appropriate. It was a tight deadline but the videos were ready by November 2009, in time for bushfire season.

# Replicating success

Building on the success of these videos, in July 2010 AFAC partnered with the Australian Children's Television Foundation (ACTF) and State Emergency Services (SES) agencies around Australia to deliver a national Natural Hazards Children's Program, again produced by Ettamogah Entertainment. Amanda secured a National Emergency Management Program grant to fund ten 30-second videos for broadcast via television and websites, plus an integrated program of school-based education resources. The program encouraged primary school children and their families to understand and be prepared for storms, floods, cyclones and tsunamis.

Amanda, as Manager of the Project, drew on her experience when enlisting a new, national project reference team, with representatives from each state and territory SES agency, to work with Ettamogah and the ACTF. But the SES natural hazards initiative offered fresh challenges. "Those agencies had not worked collaboratively on a national educational program for schools before. This was new to them and it relied on lots of goodwill to see it delivered," she says.

Using the CFA Li'l Larikkins formula meant researchers did not need to be as heavily involved but they did review the material, she says.

Turning the bushfire safety animations into a national Bushfire Safety Education toolkit has been a more complex journey. Having received permission from CFA to use the videos in 2011, a collaboration of fire agencies started work on the related school-based education resources. Due to a series of delays, it wasn't until 2014 that Kids Media were contracted to write the curriculum materials. The resource kit was finally rolled out in late 2015.

Amanda is delighted with the results to date. "We've had feedback from teachers and schools that they are using the SES program and children love using it," she says. "It won an ATOM Award (Australian Teachers of Media) and a Project of National Significance for Disaster Resilience Award.

"Now both bushfire and natural hazards have been turned into interactive education resources that are designed to be delivered flexibly in classrooms, based on the learning interests of primary school children."

# Research in action

**'Involve Your Kids!'**, a free, downloadable bushfire education e-book for primary school-age children, was one of the early outputs of Dr Briony Tower's research on child-centred disaster resilience education.

This practical evidence-based resource was developed by the Bushfire CRC as a tool for fire and land management agencies to engage and support families in preparing for bushfire.



The CFA's Ellisa Bourne has experienced the research utilisation value of the e-book from two perspectives. As Community Capability Service Delivery Coordinator in the CFA's South East Region, she has promoted the e-book to high bushfire-risk schools, encouraging them to distribute it to parents. And as a parent of two, living in a high bushfire-risk area, she has used it to involve her own children in bushfire planning.

Ellisa says schools have responded very positively to the e-book, particularly because it is research based. "It's not just me saying, 'Get the kids involved in bushfire planning'. I can say, 'Here's the national research about why this is important and it does work'. It's a tool that backs up and validates what we at the CFA were already saying about involving children in bushfire preparation and planning."

Briony's research is the foundation for 'Involve your Kids!' and many other projects. "It was really clear that parents were unsure as to extent to which they should involve their children and didn't know how to do that," she says.

"Where parents might have been reluctant in case they scared their kids, the fact is that as soon as kids became aware of bushfire risks in their area they're scared anyway but they hold that fear in and don't necessarily talk about it with their parents," she says. "We felt it was really important to reassure parents that it's OK to talk about it with their kids from when they are in school."

As a parent, Ellisa has found that using 'Involve your Kids!' has made her children more engaged in the process "which in turn makes them more relaxed if an event occurs. If we are leaving on an extreme fire weather day, it's not a big deal because we've had the conversations. They are not all of a sudden wondering, 'Why are we going? Where are we going? What happens to the dog?' They feel a lot more confident in the process."



Community members and CFS personnel watch the Sampson Flat fire. Photo: Angry Planet.

# Events drive demand

Sometimes bushfire events catalyse a community's demand for a research utilisation initiative. The CFS's Peta O'Donohue says this occurred after the Sampson Flat bushfire devastated local communities in the Adelaide Hills in January 2015. In the aftermath, the local community wanted school-based bushfire education that was sensitive to the needs of children who had recently been through this harrowing experience. Peta knew whom to call, having previously met Briony at the CRC's Child-Centred Disaster Risk Reduction (CC-DRR) project team meeting. This group comprises researchers and end users. Peta had also become aware of the Li'l Larikkins project years before through her workplace networks.

In 2016, Peta is collaborating with Briony and the South Australia Department for Education and Child Development in what they hope will become a pilot research program for targeted bushfire education in bushfire-affected schools. It will use a variety of resources, including elements of Li'l Larikkins. Ideally, the program would be tested and evaluated before CFS introduces Li'l Larikkins state-wide in the fourth term of 2016. Peta aims to run a professional development session to enable teachers to deliver the materials. Having assessed it, the program would then be introduced to many more schools. "We are aiming to draw on Briony's work with local schools to create a teacher-led, resources and programs website page for South Australia. This will allow teachers to adopt it and adapt it for their own schools and classrooms."

# Communicating and collaborating

Peta cites the Building Best Practice in CC-DRR project team, which includes Briony, as “the best example of a research group that has a real grasp of what we need”. This team is funded by the CRC. “They are experienced in positively engaging with end-user groups during the process. For an end user, it’s really encouraging to know we’ll have a replicable, sustainable child-centred, disaster-risk education program that has key agreed points, rather than getting a 200-page report and thinking ‘Oh no, what am I going to do with that?’”

But Peta says both the researchers and the end users have to consider what they want to deliver at the end. “End users who are consulted about a community safety research product or program are not necessarily working at the coalface. They are not always thinking about its practicality in applying it in the community.” She believes achieving this applicability demands early and continuing communication, both internally and externally. This should link the ultimate end users – the communities, schools and children – to the senior end user who signs off on the product within the agency, and externally to researchers and other interested stakeholders. “It all comes down to communication, in the end, and it’s a constant challenge.”

Briony says communication with end users is built into the BNHCRC’s research funding model, which fosters capacity and the human relationships that are critically important for doing applied research. “We do twice yearly workshops with our end users, and that engagement is part of our funding agreement. It enables us to learn what agencies are struggling with in terms of their capacity. From that, we design the next phase of our research.”

After overseeing both major Li’l Larikkins projects, for the bushfire agencies and SES, Amanda says that any successful collaboration for research utilisation “needs to have the right people in the room. Our team were highly skilled at specialised areas, for example, Ettamogah at producing 3-D animation, and the Australian Children’s Television Foundation are the experts on children’s television series and associated education programs and have huge credibility.”

It also injected credibility to have the researchers around the table, offering an evidence-based perspective to queries from the project team.

A structured program schedule was another key factor to the collaboration’s success, she says. “Clearly articulating the deliverables upfront and the time frames was critical.”



*The devastation of Black Saturday and the findings of the VBRC saw significant funding opportunities.*

# Critical success factors

## **Involve end users early on**

Adoption and adaptation by end users across an organisation is critical to any successful research utilisation process. All case study interviewees agreed that consulting end users from the start, if possible, is the best way of engendering this sense of ownership and of ensuring that the research utilisation is integrated into an organisation's own programs. This optimises its long-term sustainability beyond the support of a few committed individuals, who may eventually leave the organisation.

## **Practise persistence, pragmatism and patience**

Peta can attest to the many detours a research utilisation project can take. In late 2014 Peta inherited responsibility for finalising the curriculum-linked school resources that were based on the original CFA-funded Li'l Larikkens bushfire videos, five years after that first video project began. AFAC member agencies, including the NSW Rural Fire Service (RFS), Western Australia's Department of Fire and Emergency Services (DFES), and the CFS in South Australia, funded the school resources. Peta recalls that although Li'l Larikkens was regarded as important, it was repeatedly sidelined by staff departures, departmental restructures, and post-bushfire research that took higher priority. The challenge of ensuring that the school resources could be applied nationally, and gaining agreement about details such as terminology across all states and territories, was also enormously time consuming, she says.

Briony Towers says: “As an early career researcher, it takes a long time to build your profile in the sector and those research utilisation relationships. It happens very organically. There is no right or wrong way to do it. And if you are starting out, you have to earn your stripes. It will be years before people start looking to you as the expert.

“It takes persistence and you need to find people who show an interest and can champion your work. That is your starting point. You have to put yourself out there at conferences, and get help from the CRC to expose your research with end user agencies.”

### Be flexible

Nobody could have predicted the provision of significant funding as a result of Black Saturday and the VBRC. However, bushfire agencies did recognise this rare opportunity to develop high quality animated bushfire education resources for children and responded quickly to the challenge, with AFAC as project leader. Amanda says the pooling of resources and expertise nationally across agencies made the research utilisation projects possible.

Briony says the research utilisation of her work would not have been possible without the CRC’s support and funding model. This offers researchers a high degree of autonomy, which allows them to respond quickly to research opportunities, such as post-bushfire projects. “Having the support of the CRC, we can be manoeuvring ourselves much more freely.” She also says having supporters within her university for end-user focused research is another critical success factor.

Briony says if researchers encounter resistance to research adoption by end users, it is usually due to the bureaucratic and budgetary constraints involved in changing existing educational materials and curriculums. “You have to be very realistic – they can’t change it overnight. They’re in a bureaucratic environment where everything needs to be signed off. You need to understand and support them in working with those processes.”

Sometimes she has belatedly discovered her research is being misused. “Someone might take my thesis or my paper and use it and perhaps misconstrue it. But if someone wants to utilise the research, I’m always happy to advise about how best to use it,” she says. “If they then allow us to do some research and monitoring and evaluation on their program, that can be really useful . . . What looks like a hazard – misapplied research – becomes a valuable opportunity.”

### Identify and build relationships

Peta: “Liaising with the right people at the right management level, who can make the decisions, is important, whether you are networking within the education department, agencies, schools or with local government.

“And it’s not enough to have a committed individual supporting the project. They also need the back up from their organisation and colleagues. In a school, for example, a principal who wants to run a fire drill program will need support from the teachers, school leadership, and from parents as well.”

Briony says “not nurturing those relationships with end users” – the relationships that drive the CRC model – would undermine a research utilisation project. “Research is really just the beginning of knowledge utilisation,” she says. “It’s important to understand that the CRC model is not about doing whatever you, as the researcher, want to do. You have to compromise. If you are starting out, you need to put significant time and effort into getting to know your end users and privileging their perspectives, which can sometimes mean letting go of your initial research plans.

“But the fact is, end users have a job to do and you are doing this research to help them do their job better. If you don’t, your research won’t be used. You might get great papers, but you won’t see that impact of having it used in the agencies.”



## Conclusion: Final thoughts

### Research utilisation rewards

The Li'l Larikkins series' success is evident through the national awards it has won and the positive feedback from schools and academics (who have cited it in their own research).

In addition to greater recognition for bushfire education for children, Briony is gratified that the Victorian Department of Education and Training has invited her to join a working group of the Victorian Emergency Management Plan. It is developing innovative approaches for building the capacity of children and youth for emergency management. "I've shared our practice framework for children's emergency and disaster education. It's a 'how to' model for anyone who wants to know more about children's disaster education. They can design a program with really clear outcomes and emphasis on children actually doing things."

Peta found it fulfilling to be part of a project that achieves progress and constructive change in bushfire education for children. And Amanda says it was personally rewarding to develop these high quality teaching and learning materials. "There's no way that fire and emergency agencies would normally have budgets to develop and deliver these sorts of programs and run national TV campaigns."

**“ There’s no way that fire and emergency agencies would normally have budgets to develop and deliver these sorts of programs and run national TV campaigns.”**

*– Amanda Leck, Director of Information and Community Safety at AFAC*

### **Evaluating outcomes**

Briony says that in hindsight, it would have been good to have evaluated the Li'l Larikkins episodes with children during production. "At the time, we just had the marketing and output data about how many times it was aired during the bushfire season, and extrapolated from that how many children viewed it. But we will be able to get children's views on the episodes when we evaluate the Li'l Larikkins programs this year [2016]."

### **Still reaching children**

The Australian Council of SES and NSW SES host Li'l Larikkins videos and school resources on their websites. Andrew Richards, NSW SES Community Engagement Manager, says requests for the Li'l Larikkins program materials show the continued support for its approach. "We have in the past done a mail-out to high natural-hazard risk schools in NSW and we've had quite a good uptake of the resource, and we've sent quite a few packs across the border to Queensland. We still get requests from schools from word of mouth, even from home schools, and School of the Air has contacted us in the past."

Li'l Larikkins has been a valuable resource for the SES, he says, because it was tailored to the natural hazards space rather than being "bushfire centric". Its Ettamogah animations have appealed to children and been easy to promote to schools, he says, and the techniques the series employed to spread safety messages, such as peer to peer mentoring and deductive learning, had more impact than just presenting children with safety theories to be adapted into their lives.

"We get positive internal feedback from our volunteers who do the delivery on our behalf. They also say this resource was a great partnership project and something we wouldn't have been able to do on our own."

# Read, click, watch



## **Fire Notes**

*Fire Note 89*. 2012. Children's Knowledge of Bushfire Hazards  
[www.bushfirecrc.com/resources/firenote/children](http://www.bushfirecrc.com/resources/firenote/children)

## **Reports and resources**

AFAC Bushfire Education Program information for teachers and students, Li'l Larikkins videos and cross-curricular activities.

[www.afac.com.au/initiative/lillarikkins](http://www.afac.com.au/initiative/lillarikkins)

*Involve your Kids!* Bushfire CRC Bushfire Survival Planning E-book

[www.bushfirecrc.com/resources/product/involve-your-kids-bushfire-survival-planning-ebook](http://www.bushfirecrc.com/resources/product/involve-your-kids-bushfire-survival-planning-ebook)

Owen C, *Report on Research Utilisation Review*, (AFAC 2014)

[www.afac.com.au/docs/default-source/ru/february-2014-report-on-research-utilisation-review.pdf?sfvrsn=4](http://www.afac.com.au/docs/default-source/ru/february-2014-report-on-research-utilisation-review.pdf?sfvrsn=4)

*Principles for Educating Children in Natural Hazards and other Emergencies* AFAC (2014) Available at [www.afac.com.au](http://www.afac.com.au)

SES Li'l Larikkins Natural Hazards Children's Program.

[www.ses.org.au/943064.html?3](http://www.ses.org.au/943064.html?3)

*2009 Victorian Bushfires Royal Commission Final Report*, Recommendation 6: That Victoria lead an initiative of the Ministerial Council for Education, Early Childhood Development and Youth Affairs to ensure that . . . existing curriculum areas such as geography, science and environmental studies include elements of bushfire education.

[www.royalcommission.vic.gov.au/Commission-Reports/Final-Report/Summary/Interactive-Version.html](http://www.royalcommission.vic.gov.au/Commission-Reports/Final-Report/Summary/Interactive-Version.html)

## **Research paper**

Towers B, Children's knowledge of vulnerability and resilience to bushfires (doctoral thesis 2011)

<http://eprints.utas.edu.au/14807/2/whole-Towers-thesis-exc-pub-mat.pdf>

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