






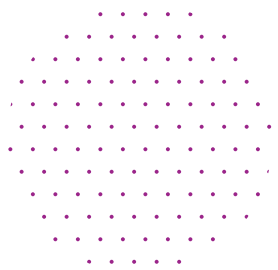
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**'We want to show people
what kids can do': A
participatory student-led
evaluation of the Strathewen-
Arthurs Creek Bushfire
Education Partnership**

Brodie, Lachlan, Liam, Rory, Scarlett and Safari
Strathewen Primary School Grade 6 students

Lisal O'Brien and Jane Hayward
Strathewen-Arthurs Creek Bushfire Education
Partnership



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ADRC Abstract 304, 'We want to show people what kids can do'. A participatory student-led evaluation of the Strathewen Arthurs Creek Bushfire Education Partnership.

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Introduction

Strathewen is a small town north east of Melbourne with a population of 180. Infrastructure includes a community hall, a primary school of 43 students, a fire station and a sports pavilion. Strathewen was impacted heavily by the 2009 Black Saturday fires. They lost 27 local lives, many loved pets and wildlife, the local primary school, the community hall and many houses. In the years following Black Saturday, the primary school was rebuilt (in record time), as was the hall and some of the houses. The natural environment had begun to regenerate and the sports pavilion was a prized new addition to the area. Emotionally, however, the Strathewen residents were battling.

At Strathewen Primary School, Principal Jane Hayward and her staff still had many students who were experiencing various forms of severe anxiety, including sleep issues, poor memory and concentration, emotional difficulties and facial tics (Hayward, 2018). Much welfare work had been carried out at the school and the students were learning how to manage their anxiety through various breathing and relaxation exercises, but it was time to address the mystery and fear attached to bushfires. As Jane has commented, "I wanted these kids to love where they live again, instead of living with worries and fears that children shouldn't have".

The Arthurs Creek Strathewen Fire Education Partnership: Origins, objectives and activities

Following the 2009 fires, Jamie Mackenzie, a staff member of the Victorian Country Fire Authority (CFA) and volunteer at Anglesea CFA spent an enormous amount of time with the Arthurs Creek Strathewen Fire Brigade members, assisting them to debrief about Black Saturday. Through this process he became a respected, trusted and dear friend of the brigade.

In 2015, Jamie began running a community-based, child-led bushfire education program for the Grade 5 and 6 students at Anglesea Primary School. On one of his visits to the Arthurs Creek Strathewen Fire Brigade, he told local member Lisal O'Brien that he had a vision: he wanted to see a similar bushfire education program introduced at Strathewen Primary School and for both schools to share their learnings. Seeing potential in that idea, Lisal approached Jane, who was keen to give it a go. For Jane, "the timing was perfect."

In that initial discussion between Lisal and Jane, the objectives of the Arthurs Creek Strathewen Fire Education Partnership were established. They wanted to build a strong connection between the school and the brigade and work together in partnership to deliver a program that would support the students of Strathewen Primary School to become knowledgeable, confident and resilient.

The Strathewen Arthurs Creek Bushfire Education Partnership officially commenced in 2016 and continues to this day. Every week, members of the Arthurs Creek Strathewen Fire Brigade and other 'outside experts', including Jamie Mackenzie, gather together with the Grade 5 and 6 students at Strathewen Primary School to share their knowledge of bushfire behaviour.

The students are encouraged and supported to investigate the various elements that influence bushfire behaviour and as their knowledge begins to develop, the Fire Danger Rating (FDR) system is introduced. The students then learn the importance of the FDR boards that are spotted around the local area and explore what each rating means for their community. Practical sessions enable the students to take measurements with advanced measuring tools and determine the FDR for Strathewen on any given day. The students quickly begin to develop their own interpretations and instincts surrounding fire and when they are safe or not safe.



Figure 1. Students working with a brigade member and the fine fuels moisture meter.

On the annual excursion to Yan Yean Reservoir and King Lake National Park, students discuss and observe fuel loadings, topography and bark types with Jamie and the local park ranger, Tony Fitzgerald. Fire trucks are used as transport, which takes away any misconceived mystery or fear associated with those vehicles. Then, in August of each year, Jane and Lisal take the students on a school camp to Anglesea where they share their program experiences with the Grade 5 and 6 students of Anglesea Primary School.

As part of the program, students use the knowledge gained from their weekly sessions to create a movie or picture storybook with a bushfire theme. In 2016 students created an animated movie about Gem Gem, a local dog who lives in Strathewen with her family. Gem Gem talks through the meaning of each FDR and when it's time to evacuate.

In 2017, students produced a picture storybook, which addresses the issue of new residents moving to Strathewen. Many of these new residents don't have any bushfire knowledge. They don't understand FDRs or how to respond, which means they are putting themselves at risk.

In 2018, students produced an animated movie, which covered three periods in Strathewen's fire history. Ian Hunter, a local elder from the Wurundjeri tribe taught the students about the use of fire by local indigenous people. A community bonfire with elderly community members helped the students understand the causes and impacts of 1939 bushfires. Students also interviewed local community members, including members of the Arthurs Creek Strathewen Fire Brigade, about their knowledge and experience of the 2009 fires and the important lessons learned from that event.

2019, has a community message theme. Students are creating two community messages, or 'public service announcements'. The first of these provides information about what you can and can't do on Total Fire Ban days. The second provides advice about FDRs and trigger points for evacuation.

Every year, after the students have made their decisions concerning the format and theme of the annual production, two 'Community Helper Days' (aka 'Slave Days') are held at the school. These days provide an opportunity for local brigade members, community members, emergency services personnel and other experts to come together and assist the students to build characters and props for their production. Each student is allocated a community helper or two (aka 'slave') who they supervise for the day. This not only enables the successful completion of these labour-intensive productions; it also provides valuable opportunities for building intergenerational connections between students and adult community members.



Figure 2. Community Helper Days.

At the end of the year, the whole community and all of the ‘slaves’ are invited to the local hall to see the production and participate in different student-run workshops, which provide a taste of what they have learned during the year.

The program has a unique and successful learning approach. It does not involve formal lesson plans or specific learning locations. While the general aim each year is to use and understand highly sophisticated measurement tools and bushfire behaviour concepts, the journey to reach that understanding is student-led and not locked down or restricted. Each student experiences a different and individual journey to understand each concept. Students are supported and encouraged along the way. As Jane Hayward has commented: “It has been a pleasure to watch the growth and strengthening happening in the cohort of kids that are part of the program. The impact is always incredible’.

Evaluating program outcomes

In 2017, during the second year of delivery, the program was formally evaluated by researchers from RMIT’s Centre for Urban Research and the Bushfire and Natural Hazards Cooperative Research Centre (BNHCRC) (Towers et al. 2018). Through in-depth interviews with students, teachers, parents, and members of the Arthurs Creek Strathewen Fire Brigade, the evaluation found that the program was achieving a wide range of valuable outcomes for the participating children, their families and the wider community.

Outcomes for children included increased knowledge of local bushfire risks and the actions people can take to manage those risks; increased confidence for sharing their bushfire knowledge with others; a strong sense of pride and empowerment; and a reduction in bushfire-related fears and anxieties. Outcomes for families included increased bushfire

planning and preparedness within households; increased levels of child participation in household bushfire planning and preparedness; and increased household capacity for emergency response. The evaluation also found that the program had strengthened the relationship between the local brigade and school, which was having tangible benefits for the school's emergency management plan.

Embarking on a student-led evaluation

The RMIT evaluation helped to establish the Arthurs Creek-Strathewen Fire Education Partnership as a legitimate community engagement initiative. It also alerted the school and the brigade to the importance of ongoing evaluation for the continuous improvement of the program and the sharing lessons learned with other bushfire prone communities. Lacking the financial resources to engage a professional evaluator or university researcher, the school decided to embark upon its own evaluation of the program. In the spirit of the student-led philosophy that underpins the program, the Grade 5 and 6 students were invited to lead the evaluation process. The students accepted the challenge, and with some initial technical guidance from RMIT's Centre for Urban Research, the students set about formulating their evaluation questions and designing separate surveys for three key stakeholder groups: the members of Arthurs Creek Strathewen Fire Brigade involved in program delivery; the Grade 5 and 6 students; and the parents.



Figure 3. Evaluation session with the students.

The stakeholder surveys

The surveys for each stakeholder group comprised a combination of multiple choice and open-ended questions. The surveys for the brigade members included questions about their motivation for getting involved in the program, the personal benefits of their involvement, and the benefits of the program for students. The surveys for the Grade 5 and 6 students included questions about the knowledge and skills they have gained through the program, the most enjoyable and important program activities, and the influence of the program on bushfire-related discussions and preparedness activities in their households. The surveys for parents included questions about the benefits of the program for students and their families and the influence of the program on bushfire-related discussions and bushfire preparedness activities in their households.

At the 2018 community presentation night, the students delivered a short presentation about their evaluation project and disseminated the surveys to the brigade members and parents, who were asked to return their completed surveys to the school office. The student surveys were disseminated and completed at school. A total of 12 parent surveys, 6 brigade member surveys and 7 student surveys were completed and returned. For such a small population of potential respondents, this represents a high return rate.

Key findings

The findings of this student-led evaluation both consolidate and extend the findings from the original evaluation that was conducted in 2017. Data from surveys indicate that the program is providing students with important opportunities to develop the knowledge and skills that are needed to live safely in a high bushfire risk area. These opportunities are highly valued by the students, who now feel much better equipped to manage a bushfire emergency in their community.

"I know more now than most adults and I know how to keep my family and I safe. The bushfire education program is important because we live in a high fire risk area and we need to know how to react [or we our] and stay safe." - Student

"I know all about our area and the fire history and how much it affects our community. The bushfire education project is good because if a fire came through I would know what to do." - Student

Moreover, as reported by students and parents, learning about bushfire risk and the actions people can take to protect life and property has provided students with an increased sense of safety and has reduced their bushfire-related fears. In a community that was so heavily impacted by the Black Saturday bushfires, this is a significant outcome.

"I reckon the fire education program is really good for kids. It helps them understand the risk of fire where they live and how to react if a fire did start. By learning about fire, kids become less scared when they learn about fire and understand it." - Student

"I was apprehensive at first as I was concerned that [the program] would make the kids fearful of living in the bush. So far it has been positive as they understand there is some predictability to weather and fire risk and they can discuss fire risk in an informed way." - Parent

In addition to providing children with essential knowledge and skills for managing bushfire risk, the program is also providing students with opportunities to build their competence in other areas, such as public speaking, film and book production, and working in a team. These opportunities are highly valued by students and parents alike.

"It teaches me public speaking, working with an adult, teamwork, and speaking to adults to get ready to take charge if there is a fire." - Student

"Aside from the fantastic bushfire education they receive, it also teaches them many skills around public speaking, team-work, project development and sharing stories." - Parent

Importantly, the survey data indicate that students are not only gaining new knowledge and skills, they are communicating what they have learned to their parents and this is having a positive influence on bushfire-related discussions and preparedness activities in households. For example, many parents reported that the program has influenced their own awareness of FDRs and their plans for leaving early.

"We have discussed what we will do on Severe and Code Red Fire Danger Ratings. We hadn't been motivated with this information before." - Parent

"[We have] more awareness, especially regarding a decision to leave the family home." - Parent

"[We have] a better reading of the environment and weather on high fire danger days...to make decisions about when to pack up and leave." - Parent

Perhaps most importantly, parents also reported that their children have become more in those discussions and activities.

"[We are] giving the kids more of a voice in plans and preparation." - Parent

"We are more inspired and pressured to be prepared around the house. The kids ask where the equipment is. We speak more openly about fire preparedness." - Parent

The survey data indicate that the key factor underlying these valuable outcomes is the child-led approach that guides the design and implementation of all program activities and the sense of ownership this instils in the students.

"Another benefit [of the program] is kids have really good ideas sometimes, so it's good to let the kids control the project and make it how they want it." - Student

"The program is 'child-based'. They decide what, how and with whom. That's why it's successful. It belongs to them and that ensures both enjoyment and successful outcomes." - Fire Brigade Member

"[The program] empowers them to take action. It gives them ownership over fire preparation and response." - Parent

The survey data also indicate that the program is highly valued among the brigade members who support program delivery through their active involvement in the excursions, 'slave

days' and community presentation nights. Comments from brigade members suggest that their sustained commitment and support can be attributed to their strong belief that the program is contributing to increased levels of knowledge and awareness amongst the children and their families.

"The program provides an amazing depth of knowledge about living in a fire prone area for the children – and for their families who learn so much through their children." - Fire Brigade Member

Several brigade members also emphasised that the program has provided them with opportunities to further develop their own knowledge and make meaningful connections with students and other community members.

"I have learnt new skills as well as being able to help people learn them too. I enjoy being with kids and the other volunteers in an atmosphere of helping each other and sharing our time. I have met new people and helped others." - Fire Brigade Member

Finally, amongst the students, parents and brigade members who completed surveys, there is wide consensus that efforts should be made to expand the program to other bushfire prone areas. As one parent stated:

"I believe the program is essential to communities living in areas where bushfires are a likely event. Such programs should be compulsory in schools in these areas." - Parent

Conclusion

The results of this evaluation show that the program is making a valuable contribution to bushfire risk management in the Strathewen community. It is having a positive influence on levels of knowledge, awareness and action amongst children and their families. It is also providing fire brigade member to build meaningful connections with the school community. Most importantly, it is providing children who have grown up in the context of disaster recovery with a sense of safety and security. This kind of feedback is essential for the further development and implementation of the program. It highlights the parts that are working and more importantly, it alerts the school and the brigade to any negative impacts, which can be quickly modified. Actively participating in the evaluation process has also provided opportunities for the students to think critically, problem solve, and engage with their community. Moreover, sharing their results is providing a mechanism for them to amplify their voices on the topic of child-led bushfire education and proudly tell the world about their program. For these reasons, student-led evaluation has now become embedded in the culture of the Arthurs Creek Strathewen Fire Education Partnership.

References

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.

Hayward, J. (2018). Learning to love where we live again: Strathewen-Arthurs Creek Bushfire Education Partnership. *Australian Journal of Emergency Management*, 33(4), 11-12.

Acknowledgements

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Further Information

2016 Animated Movie: You Tube

Survive and Thrive, a bushfire message from Strathewen Primary School

Behind the Scenes- Survive and Thrive, a bushfire message from Strathewen Primary School

2017 Animated Movie: Behind the Scenes of Life in the Bush-Gem Gems next adventure

Life in the Bush: Gem Gems next adventure. Picture Story Book

2018 Animated Movie: You Tube

A Walk Through Strathewen's Fire History

Facebook: Strathewen Arthurs Creek Bushfire Education Partnership