Abstract
Public education has repeatedly been shown as a cost-effective means to reduce the cost and impact of hazardous events on human lives. There is considerable overseas literature on the educational value of puppet-mediated educational intervention in public safety programs. However, effective and useful formal evaluation of its use in the context of fire safety education was found to be very limited internationally and reports of Australian experience of these kinds of interventions are negligible. This paper reports on a 12 month research study, funded by Emergency Management Australia, through its 2002 Grant in Aid scheme (Project 12/2002). The study was of a fire safety educational puppet show based on the Year 1 Queensland Fire and Rescue Service (QFRS) Fire Ed program, and presented to early childhood students (P – 3) in Queensland. An independent evaluator attended all the performances to observe the students’ reactions. He then accompanied them to their classrooms after the performance to discuss their reactions and returned four to six weeks later to discuss fire safety with the students and to assess the impact of the performance on their longer-term understanding of fire safety issues.

The study found that the puppetry performance served to enhance student knowledge of fire safety by providing new knowledge, reinforcing previously learned knowledge and providing a new context in which they could rehearse their knowledge. The study also emphasised the importance of humour in teaching students about potentially disastrous situations.

A serendipitous finding was that while younger students (those in pre-school and years one and two) focused primarily on the fire safety message, by Year 3, many students considered that they ‘knew it all’ and expressed greater interest in the medium of puppetry than in the fire safety message. From this it was concluded that while constant reinforcement of safety messages is essential, we must guard against ‘fire safety fatigue’ that may lead to complacency.

Public education and disaster mitigation
Within a broad public policy context, the economic effectiveness of education programs in the areas of public health and safety have come under increasing scrutiny over the last 20 years. A recently released report by the Department of Health and Ageing (2003) clearly shows that such programs in the areas of tobacco consumption, coronary heart disease, HIV/AIDS and road safety do work. They have a major economic effect, both in the total return to society of investment in public health interventions and in savings to government. It is reasonable to conclude that a focussed national campaign to increase fire safety awareness among school students in the range P–3, the most vulnerable group in the community, would also have significantly similar benefits.

Puppetry as an educational medium
Puppetry is one of the oldest of the performing arts and is found in almost all cultures and historical periods across the world. In places and time periods where entertainment and education were relatively undifferentiated, puppets were used to entertain, satirise, depict historical events, folk tales and myths, and to attempt to explain the inexplicable. In the West, where education and entertainment before the advent of the Internet and cable television (as represented by the Discovery Channel and the Muppets) for many years appeared to drift apart, puppets appeared to be relegated to the sphere of children’s entertainment. However, throughout this period, there was a steady stream of research reports on their efficacy in the areas of school counselling and education.

John Lidstone reports on a study into the use of puppetry performances for children to enhance their knowledge of fire safety
Schmidt (1985) cited reports from as early as 1936 that identified the therapeutic effects of puppets on children with behavioural problems. In the 1970s, Maurer (1977) wrote of ‘puppets, feelings and children’, while James (1987) refers to puppets as ‘the elementary school counsellor’s right or left arm’. Carter (1987a; Carter, 1987b) wrote at length about the use of puppets to treat traumatic grief. The interest of counsellors has not waned, and Carter and Mason (1998) have given guidance on the selection and use of puppets in counselling.

While the use of puppetry in Australia appears to be quite limited, experience in many other countries (particularly in the USA, Canada, UK and South Africa) has demonstrated that puppets provide a very useful teaching tool (Roysdon, 1982) and has been shown to have major benefits as an aid in regular and special education—as a motivational strategy, an instructional tool in the curriculum, a remedial and therapeutic device, and as an entertainment and recreational tool.


While puppets can apparently be used to promote a wide range of learning (Leyser, 1984; Bredikyte, 2000), the literature is particularly supportive of its efficacy in promoting desirable social behaviours. Thus, Anderson (1983) discussed the contribution of puppets towards changing student attitudes toward the disabled, while Meleskie-Lippert (1994) discussed their contribution to improving the awareness of personal and oral hygiene in second graders, and Kelly (1997) considered improving student discipline at the primary level. Most recently, Yoon (2001) on behalf of the African Research and Educational Puppetry Programme has published an evaluation of the ‘No Monkey Business’ performances which are designed to introduce children to issues of sexuality, life-skills, gender, abuse and the facts of HIV/AIDS in South Africa. The aim was to encourage and strengthen individual children’s self empowerment, body awareness and self-worth.

The use of puppetry in the context of public safety education appears to meet the needs of both education and public safety requirements in that it provides students with educational experiences, while promoting the understanding of self, feelings, attitudes, and behaviours and assisting children to gain an understanding of the feelings and ideas of others (R. B. Carter & Mason, 1998), (Schmidt & Biles, 1985), (Maurer, 1977), (James & Myer, 1987). A 1993 New Zealand study on children’s knowledge of fire safety (Constable, 1993) found that a positive approach to imparting the message was essential where:

- students were asked questions to determine what they had learned;
- they were told what to do, not what not to do;
- they knew the why and how of fire safety;
- they received practical activities to follow up the visit by fire safety officers.

The Blazer to the Rescue! project

Ros and Hugh Childers founded Mana Puppets in 1998 and developed an initial script for a fire safety puppet show in 1999. The script built on the ideas of the Year 1 Queensland Fire and Rescue Service (QFRS) Fire Ed program. In May 2001, QFRS granted Mana Puppets a licence to use their Blazer fire safety koala character in the production entitled ‘Blazer to the Rescue!’ A successful proposal to the Emergency Management Australia grants program led to the current project whereby this performance was presented to students ranging from pre-school to Year 3 in ten schools in and around Brisbane.

The specific objectives of the study were to:

- refine the puppet show for the target audience and to validate the safety messages with the Queensland Fire and Rescue Service (QFRS);
- present it to students in the target age group in ten schools in both metropolitan and rural-urban fringe state and private schools;
- research the effectiveness and potential of both this specific program and the concept of puppet-mediated fire safety initiatives with Years P–3 students; P–3 at the time of data collection in Queensland referred to Preschool (voluntary but almost universal for children in the year in which they reached five) to Year 3 who are 8-year olds.
- identify specific factors that influence the immediate reception of the safety messages, their influence on behaviour and their long-term retention; and
- assess the potential of this medium as a way of promoting safety in other disaster contexts.

Blazer is the puppet fire safety koala character used during the performance.
The story

Scene one
The playboard (the puppet theatre set) involves a high rise unit where three little pigs, Percy, Peter and Patty, live. In the opening scene, the two boy pigs are panicking about their flat being on fire. They go to the window and shout and then decide to call the fire brigade. It is Patty who demonstrates the correct way to make such a call and reinforces the emergency number. Blazer (the koala) then arrives in breathing gear and, having reassured the pigs about the noise of his breathing and praised them for standing near the window, rescues them by ladder.

Blazer then addresses the audience directly and reinforces a variety of messages including the telephone number to call (000), the information that should be given to the operator, how the pigs knew that they could not/should not use the stairs (the door was hot), and where they should wait (just inside the window).

Scene two
Scene two opens with Percy complaining that his piggy tail has been burned in the fire and singing a song, I put cold water on my burned bottom … and the burn got better soon. The pigs then discuss the causes of the fire – which apparently included ‘putting undies in the oven to dry’, leaving ‘socks in the toaster to dry’ and ‘leaving a heater on near the curtains’. Patty then declares that she is not prepared to live with the boys any more until they learn fire safety. The three pigs then depart to build themselves houses: of straw, of sticks and of bricks.

Scene three
Percy finds some straw and decides to build a straw house which would have lots of exits. ‘Blazer said we needed to have lots of exits’. There is a brief aside when an animated lighter tempts Percy to play with him, but commonsense prevails and Percy asks Blazer to look after the lighter. The audience is asked to comment on how safe the house of straw is, and, realising that he could be a ‘homeless pig again’, he goes off to see if the others have managed to build safer houses. On the way, Blazer talks to Percy about what to do if his clothes catch fire and in a song reminds him to:

Never put your undies in the oven.
Never put your clothing on heaters to dry.
Never put hot gadgets near carpets or curtains,
Furniture or anything else that could catch fire.

Scene four
Peter has found building a house of sticks has tired him and plans to have a sleep after a barbecue. He plans to build the fire near his house and this leads Blazer to explain the difference between a ‘good fire’ and a ‘bad fire’. Having agreed that a fire should not be built near a wooden house, Peter makes a cup of tea while Blazer checks the rest of the house and suggests that smoke alarms would be a good idea. The audience is asked how many of them have smoke alarms fitted at home. Peter and Percy leave to buy alarms while Blazer checks on Patty’s progress.

Final scene
Patty has finished building and is busy installing her new electric appliances, although one appears to have a frayed cord. As she plugs it in there is a bang and the lights go out. Patty wants to pull out the cord, but is warned not to do so by Blazer who explains the dangers of the ‘burn that can kill with a touch’.

The three pigs join to sing their final song and take their exit, while Blazer comes out to have a final question and answer session with the audience. Questions include:

- In a fire should you hide under a bed or in a cupboard or should you get out quickly?
- How should you get out of a burning room?
- What should you do if your clothes catch fire?
- What should you tell the fire brigade when you call?
- Why shouldn’t you go through a door that is hot?
- What were the things that started the fire in the pigs’ first house?
- Why should you not go back into a burning building?
- What can you put in your home to warn you of a fire?
- What should we do to make cooking out of doors safe?

Successful responders are invited to come to the front and manipulate the puppets behind a half size playboard while the whole audience join in with a final rendition of all the fire safety songs.

Research methodology
Ten schools were selected to represent both state and private systems, higher and lower socio-economic systems and a range of student ethnic origins. Once identified as willing to participate, the project proceeded in five phases.

1. A video recording of the proposed puppet show was prepared and reviewed by representatives of the Queensland Fire Service. The script was adjusted in response to feedback, although it must be said that little change was proposed.
2. A set of photocopy-ready materials suggested for use by the teacher in class before and after the presentation was sent to the school, together with confirmation of the day and time of the performance.
3. The 45 minute puppet performance was presented to the students.
4. The researcher visited one or two classes of students in their own room with their own teacher for a follow-up discussion immediately after the performance.

5. Teachers were invited to give the researcher access to any follow-up work undertaken by the students either as suggested by the project or at the teacher’s own instigation.

6. The researcher returned to the classes about four to six weeks after the performance for a final discussion.

The discussions with students both immediately after the performance and on the return visit were guided loosely by a set of written questions (an aide memoire) which were provided in advance to the teacher. However, the actual discussions were much less formal than this would suggest, and in fact, took the form of very open unstructured informal conversations between teacher, researcher and class.

The guiding questions used immediately after the performances were as follows:

- What did you particularly like or dislike about today’s performance?
- What do you think Blazer particularly wants you to remember about fires?

The guiding questions used in the follow-up visit were as follows:

- Are there any things that you already knew about fire safety that Blazer forgot to mention today?
- Have you or your family ever been involved in a fire? What did you and your family do?
- How could the puppet show be made better for children of your age?

The guiding questions used immediately after the performances were as follows:

- You remember a few weeks ago we had a puppet performance called ‘Blazer to the Rescue’. What are the main things you remember about that performance?
- What did Blazer remind you to do if you are in a room or house that is on fire?
- What did Blazer remind you to do if your clothes catch fire?
- Can you remember the mistakes that the pigs made that might cause a fire?
- What did you learn that might help you make sure that your own home doesn’t catch fire?
- What would you do in your own home if it were to catch fire?

| Table 1. Details of the schools and classes included in this study. |
| --- | --- | --- | --- | --- | --- |
| **Type** | **School description** | **Number of classes** | **Total Ss** |
|  |  | **Pre-school** | **Yr 1** | **Yr 2** | **Yr 3** |
| 1. 1 | State | Rural/urban fringe, high SES | 5 | 120 |
| 2. 2 | State | Rural | 1 | 1 | 1 | 1 | 45 |
| 3. 3 | Private | Regional urban | 3 | 3 | 118 |
| 4. | State | Rural/urban fringe, low SES | 2 | 2 | 1 | 125 |
| 5. | Private (Religious) | Urban | 2 | 2 | 1 (Composite) | 106 |
| 6. 6 | Private (Religious) | Urban | 1 | 2 | 2 | 2 | 100 |
| 7. 7 | State | Urban | 4 | 90 |
| 8. 8 | Private (Religious) | Urban | 2 | 2 | 3 | 160 |
| 9. 9 | Private (Religious) | Urban | 2 | 2 | 2 | 162 |
| 10. 1 | Independent Community | Urban | 2 | 2 | 1 | 75 |
| TOTAL | | 5 | 25 | 13 | 11 | 1,101 |

Note: At the time of this study, children in Queensland entered Pre-school in the year in which they turned five. Year 1 is 6-year-olds, Year 2 is 7-year-olds and Year 3 is 8-year-old children.
Depending on the particular school, the performance was presented in an undercover area or large hall. The plywood was set up along one side and the students sat on the floor two to three metres in front. While Ros operated the puppets either behind or in front of the plywood, Hugh sat at a table to one side operating the sound system and various stage effects. The researcher sat with the class teacher at the side of the room where he could see the plywood and puppets and the faces of the audience while taking notes throughout the performance. Each teacher was provided with a sheet describing the nature of the project, explaining the interest of the researcher in the students’ reactions and listing the key questions. His presence caused no comment or interest from the children.

At the end of each 45 minute performance, the classes returned to their usual rooms and the researcher visited one or two classes depending on the time available before the next formal break. In the classrooms, it was explained to the children that ‘John is interested in what you have learned from the puppet show you have just seen and how it could be made even better for children of your age’. The discussion in the classroom was usually conducted by the class teacher in conversation with the researcher. This ‘three-way’ conversation between the two adults and the class was found to cause minimum disruption to usual classroom mores while engaging the students as ‘serious participants’ in the evaluation. Before leaving, the researcher formally asked the teacher on behalf of the class, if he might return in a few weeks to learn more about students’ understandings of fire safety. The teachers were also invited to send the researcher copies of any follow-up work the students might produce after the performance. Depending on the normal school routines, the classroom discussions between researcher, teacher and class varied between 20 and 45 minutes. This would be about as long as any single activity could be with children of this age.

Observations from the performances

In observing the children at each performance of Blazer to the Rescue!, two features stood out. Firstly, all children watched with rapt attention throughout and, secondly, few if any children failed to respond to questions that were asked either by the puppeteer per se or as Blazer. They responded readily to questions about what they should do if their house were to catch fire and used a mixture of ‘learned’ responses such as *Get Down Low and Go! Go! Go!, or Stop Drop and Roll* and more generic responses such as ‘We should get out of the house quickly’. One boy had obviously learned the lesson well from his teacher: ‘You go on your hands and knees with your head down and your bum up in the air!’ Despite fears expressed in some quarters that Australian students may be influenced by American TV programmes which promote the US emergency telephone number 911, these children in South East Queensland had no hesitation in responding with 000. Furthermore, they seemed quite unperturbed by whether it was expressed as ‘zero zero zero’, ‘oh oh oh’, ‘nought nought nought’ or with the use of the word ‘triple – as in ‘triple zero’, oh or nought’. This was true regardless of the ethnic origins of the children or their mother tongue language. It appears that children of this age are well versed in the theory of what to do in the event of a fire – a tribute to their teachers, parents and those members of the hazard management community who target schools as part of their public education mission.

The humour in the presentation – especially references to burned bottoms, barbecued pork, undies in the oven or socks in the toaster – was generally enjoyed by all. The enthusiasm of the reactions appeared to depend on the general nature of the school ethos with some evidence that students in religiously-based schools sought the tacit approval of their teachers before expressing their own amusement at the notions. A similar variation was observed between schools in reaction to the music that accompanied the performance. In schools with a strong music curriculum, the students picked up the various rhythms quickly and knew how and to what extent they could respond. There was considerable ethnic variation in the schools involved, but whether the students were of European, African, South American or Asian origins, there seemed little difference in their responses. However, a considerable variation to this pattern was observed in the Aboriginal and Torres Strait Island School where students showed a much more muted response to both the jokes and the music. This was also the only group of children who appeared ‘shocked’ by the inappropriate behaviour that was the source of some of the humour. For example, when Percy Pig finds a lighter and says ‘A lighter – you’ll be fun to play with’, the children in this school spontaneously said (rather than shouted) ‘No!’

On the other hand, at the end of the performance, these children were particularly enthusiastic at the chance to touch and manipulate the puppets. Unfortunately, the researcher was unable to investigate possible cultural influences on these reactions and it may be necessary to undertake further research in this area.

Discussions with students – immediately after the performance

As noted above, although the discussions in each classroom were generally unstructured and conducted by the teacher with appropriate input from the researcher, both the researcher and teachers had copies of an aide memoire of five questions to guide them and to ensure consistency. The account that follows is structured according to those five questions.

1. Likes and dislikes about the performance

Back in the classroom, the children were interestingly critical of the performance, as might be expected from a generation to which so much entertainment is available.
Children present when a gust of wind at an outdoor venue blew the playboard over were keen to analyse where the wind had come from, while a comment from a girl that she particularly liked ‘the girl pig because she is so sensible’ immediately brought forth the comment from a boy that ‘the show is boring – I know all that stuff.’ Children were happy to discuss the types and volume of the music in the show, and responded well to those teachers who insisted that any observation beginning ‘I think that …’ had to be followed by ‘because …’. The jokes were particularly popular but on a number of occasions the boy-pigs were described as a ‘bit silly’. A number of boys regretted what they saw as a lack of realism in the performance. They would have liked ‘real smoke’ and ‘real water coming out of the hose’. One particular boy in Year 3 explained that ‘puppet shows are not as good as television because you can’t swap channels’. Over all classes visited, it appeared that the younger children commented most on the storyline and message of the performance, while those in Year 3 appeared most concerned with the technical aspects of puppeteering and the strengths and weaknesses of puppetry as compared with other entertainment media. These older children also enjoyed carrying the metaphorical aspects of puppetry further and suggested the addition of other puppets to represent water (a water puppet) and two separate puppets to represent fire (wildfire as an evil puppet and backburner as a good puppet).

2. What does Blazer want you to remember?
When asked what they thought Blazer particularly wanted them to remember from the performance, there was rarely any doubt. Few children had any hesitation in repeating Get Down Low and Go! Go! Go!, Stop Drop and Roll, ‘don’t go back into a burning building’, ‘don’t wait to collect your favourite toys’ and ‘dial triple zero’, although there was considerable uncertainty about whether or not they should look for pets before leaving! Suggestions from the teachers or the researcher that perhaps the safety of pets could be left to the Fire Brigade were accepted, although often with some reluctance.

The conviction of so many children that they should dial triple zero led the researcher to ask how many children had telephones in their bedrooms. In some classes, well over half answered in the affirmative and followed up questions from the teacher concluded that many children had play phones or ‘real’ telephones that are not connected to any exchange. Whether they would differentiate reality from fantasy in the event of an actual fire was impossible to determine in the context of this study. On the other hand, confusion about the order in which things should be done, and who should do them was a recurring theme in the discussions. The following dialogue occurred in a Year One classroom.

**Teacher:** What would you do if you discovered a fire in your home?

**Children:** in unison

**Teacher:** Call zero, zero, zero

**Children:** Where would you go?

**Teacher:** Would you get out of your home or go to the phone?

**Children:** long silence, then …

**Hannah:** very tentatively
Get outside?

**Carlie:** reassured by the nod of approval from the teacher
for Hannah’s response

I would wake up Mum and Dad and shout and bang.

**Daniel:** a little doubtfully
Sometimes you would rescue your pets.

**Another child:** Alive things you’d have to.

**Teacher:** You can’t wait for them can you?

**Daniel:** obviously uncomfortable
You’d have to.

At this stage the tension and discomfort in the class was palpable, and with a glance at the researcher, the teacher moved the discussion on.

In another class, the issues were seen differently.

**Year Two**

**Teacher:** What does Blazer want you to do if you found a fire in your home?

**Jamie:** Get down low and go go go.

**Katie:** Stop whatever you are doing and stop drop and roll.

**Talin:** If there is a fire and a lot of smoke, get on your knees and go.

**Teacher:** Where would you go?

**Talin:** To the phone.

3. Blazer’s message and ‘What Blazer Forgot’

Few children were in any doubt about the message that Blazer wanted them to receive. In all classrooms they vied with one another to repeat the established mantras of fire safety – Get Down Low and Go! Go! Go!, or Stop, Drop and Roll. However, further discussion revealed that they were far from sure of the difference between these two injunctions. The link with either smoke in the room or with burning clothes was rarely made explicit and the subtleties of potential fire threats, eg a fire in the house, a fire with considerable smoke in the rooms, and a situation where a child’s clothes are on fire all appeared to be poorly differentiated in the children’s minds. Chloe stated quite confidently that ‘if the room is on fire, you should put your hands over your face’. It
was only when asked what they already knew about fire safety that most children appeared to drop back into the vernacular and state what they could imagine doing if their own homes were on fire. Thus, most did appreciate that the most important thing to do was to get outside as fast as possible. Hannah (Year 2), very seriously, said she thought that Blazer should have told the pigs to ‘Shout very loudly for Mummy or Daddy’ – on the face of it, a most practical and sensible suggestion. Jade also pointed out: ‘If your coat is on fire, take it off’. Relatively few children were able to articulate the reasons for Get Down Low and Go! Go! Go!, or Stop, Drop and Roll. – that the dirty or smoky air collects near the ceiling was rarely mentioned. While all children seemed to gain some satisfaction from enjoining others to make personal sacrifices – ‘don’t go back to get your Playstation even if it is new!’ – they appeared somewhat confused by the conflict over whether to save pets or not! In one class of Year 2 students, a discussion developed about whether it was right that pets should be treated differently from baby brothers and sisters – the general consensus was that they should not! While they accepted that they were instructed not to search for, or wait for, pets, the researcher was far from convinced that they would indeed act in this manner in a real emergency. Mitchell (Year 1) was quite determined to confirm that he should ‘feel the door first in case it is hot, in case there is a fire outside the door. Else it might zoom in and kill you!’, while Karlen in the same class said they should ‘Stop panicking and don’t run’. Lauren, in a more conservative classroom, reminded us rather primly that you should ‘put all matches safely away from children’.

Discussions on what Blazer may have forgotten varied quite considerably between schools and may have reflected the usual teaching style of the school or the teacher. While in some schools and classes, the researcher observed students attempting to gain approval from the teacher by being ‘very sensible’ and repeating precisely what they had been told, in others, students had obviously been encouraged to be more creative. Thus, Damien suggested that Blazer should have told the children to ‘have a whistle by your bed’, and Hannah thought they should have been warned to ‘jump out of a window if there is a trampoline there’. Mitchell wanted to record that ‘If your Mum and Dad smoke, tell them not to throw cigarette butts out of the window of the car’. Justin explained in great detail: ‘If there is a fire on the other side of the door, don’t open the door. Put a pillow on the window and punch through it to get out. (proudly) – Mum told me that when I was three years old’. Shaun, however, added cautiously ‘If the handle is hot, it might be the sun’. Finally Rose pointed out that Blazer might have mentioned that ‘You shouldn’t phone the fire brigade unless there really is a fire’, although her reason for refraining from this was that ‘you might get into trouble’.

Children were encouraged to participate during most stages of the performance.
Across the whole cohort of students, however, there seemed to be little that Blazer had ‘forgotten’ to remind students, although the ways they interpreted his words varied quite considerably. Differences between those students who felt they should only respond with the ‘conventional wisdom’ they had been taught and those who allowed their imaginations greater freedom are hard to interpret in this study. It may indicate that what children of this age say they would do, and their actual behaviour in a hazardous situation may vary more significantly than we would wish.

4. Personal experiences of house fires

Interestingly, only in about half the classrooms did any child admit to having experienced a fire at home, and of these, half went on to describe bonfires or barbecues that had apparently become a little larger than expected, which were usually dealt with ‘by Dad’ or in one case, ‘Dad and his mate from next door’. One child described a frying pan fire in the kitchen where ‘Dad helped me to find my doll and then we got out’ while another told of a television that had caught fire, ‘but Dad turned it off’. In one classroom, the teacher confided that two children had burned their own home down after playing with lighters, but neither volunteered to speak on any of the questions.

5. How could the show be improved for children of your age?

Although all children made suggestions, the hypothetical nature of the question generally appealed to the older rather than the younger children. Some younger children, eager to please, suggested that the pigs could be re-cast as horses or cows, while some children suggested that it would be more realistic if people had been used. On the other hand, many of the comments from older children reflected the sophistication of children’s entertainment in the 21st century. Thus, suggestions that the show should include hoses that shot ‘real water’, the need for ‘real smoke and flames’ and a regret that it was ‘just one show – you can’t change characters as an artform that occurred in most of the venues both before and after the performance. When prompted, they appeared quite happy with the way the traditional story of the three little pigs had been adapted, although some suggested that a larger number of characters would ‘make it more interesting’.

Perhaps Toby, a mature Year 2 boy in a composite Years 2/3 class, expressed the view of many of his more mature colleagues most clearly when he said ‘Show us what to do if the curtains catch fire. Show us a fire extinguisher and real life stuff. Show the real stuff – with people!’

Discussions with students – a month later

When the researcher re-visited the schools about four to five weeks after the performance, he again took an aide memoire to guide the discussions. The account that follows is based on the questions:

- You remember that a few weeks ago we had a puppet performance called Blazer to the Rescue! What are the main things you remember about that performance?
- What did Blazer remind you to do if you are in a room or house that is on fire?
- Can you remember the mistakes that the pigs made that might cause a fire?
- What did you learn that might help you to make sure that your own home doesn’t catch fire?
- What would you do in your own home?

The main memories of the performance

When asked about their main memories of the performance, younger children tended to respond initially with a reference to ‘fire safety’ while older children mentioned the ‘three little pigs’ as their first thought. The younger children mentioned Stop! Drop! and Roll! and Get Down Low and Go! Go! Go! spontaneously and then described details of the performance later – often basing them on the humorous aspects. On the other hand, in a Year 3 class, however, recall was as follows:

Olivia: It was called Blazer to the Rescue! and it was about the fire brigade. They had a fire and needed to escape through the window, and the fat guy wanted to get his play station.

Chloe: The fat pig wanted his play station but he wasn’t allowed to as he would get badly burned.

Other children ‘remembered’ that socks had been put in the microwave (rather than the oven), that the pigs had to build new houses because they had lost their home, although no comment was made about the three different building materials, that one pig found a lighter and wanted to play with it, and finally, one child volunteered that they had to remember ‘Never play with fire without supervision’ – a form of words that again seemed recalled rather than interpreted.

As the discussions continued, however, most of the same details as recorded in the discussions immediately following the performance were elicited.
**Remembering Blazer’s message**

The specifically taught forms of words Get Down Low and Go! Go! Go! and Stop Drop and Roll and were remembered with great accuracy. Often, in many classes, however, a great deal of prompting was required to elicit the different circumstances in which each of these injunctions should be obeyed.

**Year 1 Teacher:** Why should you Get Down Low and Go! Go! Go?  
**Students:** silence  
**One student:** tentatively  
To avoid smoke?  

**Another student:** The smoke is up high?

While a Year 3 student responded: ‘If there is a fire in your room, don’t phone Nanna. Get out of the house’, a Pre school child who had no hesitation in responding Stop Drop and Roll and Get Down Low and Go! Go! Go! seemed quite confused when asked where she would go.

**Zoe:** Stop Drop and Roll and Get Down Low and Go! Go!  
**Teacher:** Where would you go, Zoe?  
**Zoe:** To the door.  
**Teacher:** If the door feels hot, what would you do?  
**Zoe:** Don’t go. Call Blazer.  

**Another child:** Ring the police on zero, zero, zero.

Continued questioning failed to reassure that Zoe, faced with a fire, would either remain on her knees or move towards a window when faced with a hot door. In another Preschool class, Lewis said that he would Stop! Drop! and Roll! if he were in a room on fire. He went on to say that he would ‘go and find a telephone if you don’t have one in your bedroom’. Why would he ‘drop’? ‘To go and find a phone – you get down low so you don’t get burned. Smoke is hot and height is hot, but cool is down’.

The evidence from many classrooms suggests that these young students remember the basic message, but over time the messages become muddled and the appropriate behaviours may not be forthcoming in a genuinely hazardous situation.

**The pigs’ mistakes**

In almost all classrooms, children had little difficulty in remembering the ‘silliness’ of the pigs, however, girls in particular often pointed out that the ‘biggest’ mistakes were made by the ‘boy-pigs’. In a few cases, children seemed to extrapolate from the ‘mistake’ and its underlying message and in so doing, missed the point. For example, when a Year 1 child remembered that one of the pigs had ‘put her undies in the oven’ another immediately stated that she should have used a clothes line or a dryer. Perhaps such a literal reaction is to be expected from those so young, although it could also reflect an attempt to gain teacher approval.

**Lessons retained from the presentation and how children think they would react in their own homes**

In many of the classroom discussions, these two guiding questions from the aide memoire were considered together and became part of a more general discussion on what children know about fire safety and what they would do in the event of a fire in their own homes.

Given that the designers of the presentation were at pains to ensure the consistency of their message with other fire safety initiatives, especially those undertaken by the Queensland Fire Service, it is not surprising that in most cases the children ‘remembered’ fire safety advice from a wide range of sources, regardless of whether they had received it originally from the puppet presentation. Unfortunately, in some cases, they also appear to have integrated some ‘folk wisdom’ as well as some poor advice into their memories. Thus, Georgina in Year 3 ‘remembered’ Blazer as advising her to ‘smother a fire with a blanket’ or ‘stomp on it with your feet’ or ‘put sand on it’ – which seems reasonable if the problem is an out-of-control camp fire but which was not advice given by Blazer. However, it did lead to an interesting discussion during which one boy said he thought there were special kinds of blankets that you should use, but he didn’t know what they were called. Other children ‘remembered’ that Blazer had told them ‘if you are camping and there is a fire, get in the car and put a blanket over you’. Of greater concern, perhaps are those children who ‘remembered’ being told to ‘blow the fire out’, ‘turn the fans on in the house to make the house colder’ or perhaps to ‘go and get a hose and squirt it’. The first two of these comments brought forth rebukes from others in the class who pointed out that ‘fire needs air, so you would just make it worse’, while the teacher suggested that before attempting the third response, the child might like to call her parents or another adult. Mark thought that ‘if there’s a fire, you should put salt on it’, while someone else advised that we should all ‘get special paint that won’t catch fire’.

A surprising number of children referred to problems they anticipated in getting out of their rooms – usually through the windows. Thus they frequently referred to the need for telephones in their rooms, knowing where keys to security doors were located, and having ready access to screwdrivers in order to remove security screens. It proved impossible to obtain accurate information on the extent to which these items were available to the children themselves, or whether they were improvising on themes which originated from a wide range of sources. One girl would ‘wrap myself in my own special doona and then the fire couldn’t hurt
me’ while another would ‘get a big bottle of water and put it on the fire’. When ‘jump out of the window’ was suggested, a disturbing number of children responded to follow up questions from either the researcher or classroom teacher about high set or two storey houses by referring to ‘placing a trampoline under the window’, ‘jumping on to the top of the fence’, or ‘using a parachute’. The mystical properties of doonas, used by many parents including the present writer to calm a worried child, emerged in a more dangerous context with the suggestion that one girl would ‘wrap myself in my doona and then jump from the window’. In one school, the teacher summed up such a discussion by ‘reminding’ the children that ‘it is better to break a leg in a fall than to burn to death in a house’.

These discussions in almost all classrooms revealed that over time, the messages, whether first received from the teacher, a visit to the school from the Queensland Fire Services or from Blazer, get muddled for a significant number of children. The mantras of Stop, Drop and Roll, and Get Down Low and Go! Go! Go! were repeated with scant regard for the different conditions under which each might be appropriate. Myths such as getting a hose, jumping from a window and putting butter on burns, emerged from a relatively large number of classrooms. Advice such as ‘if the door is hot, then wet your hands before touching it’ are potentially very dangerous and may be interpreted as reflecting an attempt by the children to integrate the wide range of advice they receive from ‘official’ sources with societal myths, half truths and their own sense of incongruity when they attempt to use the theoretical perspectives they have received with novel situations.

**Conclusion**

The public education for disaster reduction conducted by the various organisations concerned with reducing the fire toll appears to have been very effective with the children and schools involved in this study. By the time children reach Year 3, after perhaps four years of group education, most have received a wide range of advice and training from their parents, teachers, the fire services, television and in the case of these children, dramatic and or puppet presentations such as Blazer to the Rescue! It would be invidious to suggest that any one form of presenting safety information is more effective than any other. In fact, all appear to be effective to a greater or lesser extent with all children. However, the messages received appear to become muddled in a relatively short time. When this is put into the context of a generation used to rapidly changing, dynamic media, it may be suggested that frequent reminders of the fundamental messages needed by the children need to be presented in as varied a way as possible.

In the current study, all the children enjoyed the puppet presentation, with the younger ones in the cohort primarily receiving the fire safety message and the older ones (Year 3) focussing initially on the puppets and then enjoying critiquing Blazer’s message. About half of the Year 3 children appeared to feel that they were ‘too old’ for the three little pigs and perhaps that is why they initially showed more interest in the art and mechanics of puppets than the story itself. However, this does not mean they exhibited significantly more sophisticated understandings of fire safety than the younger children, and indeed, on follow up visits, referred to Blazer’s advice in much the same way as the Year 1 children.

Many of the children had already received a visit from the Queensland Fire Service and had undertaken various classroom activities with their own teachers before they watched the puppet presentation. Although it might be suggested that Blazer to the Rescue! might usefully have preceded the Fire Service visit, there is ample evidence provided by this study that Blazer re-presented the message in a way not previously experienced and therefore contributed strongly to maintaining its integrity. Blazer to the Rescue! – both as a form of presentation (puppetry) and in the way in which it presents the fire safety message – is revealed by the study as being a highly effective medium for children of Years P–3.

In terms of improving the script of the Blazer presentation in particular, and the fire safety message as given to children in general, there is obviously a lack of understanding about the technical equipment involved. At various times in the discussion with
children, it emerged that there is confusion about the difference between fire extinguishers and the tanks of breathing apparatus. Further, some children seemed to believe that fire alarms might actually help in putting out fires. Perhaps they had failed to observe the difference between sprinkler systems in the ceilings of public buildings and the smoke alarms installed in many houses. It was not until the writing of this paper was well advanced that the researcher saw links in his notes between children's reactions to smoke alarms and fire, and the common parental reaction of flapping a towel or newspaper at the alarm to stop it shrieking when activated accidentally. Finally, and perhaps only marginally concerned with the issue of fire, the children often referred to the characters as 'boys and girls' or as boy pigs and girl pig and noted that it was the boy pigs who caused the problems by being 'silly' and the girl pig who was 'sensible and got it right'. Perhaps in these days of concern at the lower levels of performance of boys at school, this aspect of the message might need some amendment, although to adult eyes, Patty was far from the paragon of virtue perceived by the girls.

The least recall at all stages of the study concerned electrical fires, and even after considerable prompting, this aspect of the puppetry performance appeared to have had little impact. There was perhaps some confusion between electricity as a cause of a fire (similar to a lighter or barbecue) and as a threat in its own right – 'Electricity – the burn that kills'. Perhaps the abstract nature of electricity itself makes electrical safety a separate issue that requires further research with young children, beyond the scope of the current study.

However, the study reveals further significant causes of concern in 'fire-proofing' young children. That a month or so after the children's most recent 'reminder' of the fire safety message so much myth and magic should have crept back into their internal narratives emphasises the need for ongoing reminders of the fire safety message at least throughout their primary school years and perhaps throughout the lifetime.

The most compelling evidence of this was seen with the twin mantras of *Stop drop and roll* and *Get down low and Go! Go! Go!* While nearly all children of all ages could parrot them both, a significantly large number failed to differentiate between the former being appropriate when clothes are on fire and the latter when there is a lot of smoke. For children of this age, the conditional: ‘If your clothes are on fire, then …Stop drop and roll’ does not seem to be appreciated. For some children, the injunction to ‘put your hands over your face’ appeared to be associated with the ‘get down low and go go go’.

Given the range of accommodation options available, children of these ages obviously need to be trained in the specifics of fire safety in their own homes. However, in only one school were all children in Year 1 encouraged to draw a house plan with the help of their parents and to agree in advance which routes to follow.

*The Blazer character often addresses the audience directly to reinforce the messages.*
to leave the house in an emergency. (The researcher found this an interesting phenomenon in view of the inclusion of materials to encourage this approach provided to teachers before the performance).

Differences between those students who felt they should only respond with the ‘conventional wisdom’ taught and those who allowed their imaginations greater freedom are hard to interpret in this study, but may indicate that what children of this age say that they would do, and their actual behaviour in a hazardous situation may vary significantly. Perhaps a further study could be conducted in which children of this age are placed in a simulated house fire and watched to see how they react. It might also be possible for those responsible for ‘debriefing’ children after house fires to record their recollections of their actual behaviours in order to create a database for further analysis.

The final conclusions that must be drawn from this study are:

• puppetry presentations such as Blazer to the Rescue! have huge potential for presenting and reinforcing safety messages including fire safety for children in the early childhood years;
• such messages cannot be regarded as ‘one-hit’ remedies but rather need to be reiterated frequently throughout the school years (and probably throughout our lives) through a variety of media, not only to ensure that the messages are retained, but also to delete misunderstandings that constantly reappear; and
• the messages must be constantly re-evaluated for their relevance to changing societal conditions and to ensure that they are appropriate for the developmental stages of those to whom they are presented.

References


Author’s note
The writer, as researcher, accepts full responsibility for data collection and analysis involved in this project. He acknowledges the expertise and professional skills of Hugh and Ros Childers (Mana Puppets) in preparing and presenting the ten performances of Blazer to the Rescue! on which the study is based, and the initial work they undertook in finding international references to puppetry as education during the planning period of the project.

Acknowledgements
The project team of Hugh and Ros Childers (Mana Puppets) and John Lidstone, are grateful for the financial assistance of Emergency Management Australia, through their Grant in Aid scheme (Grant No: 12-2002) for making this study possible and thank the Principals and staff of the schools involved for making us so welcome.

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