NCVER

Adult learning through fire and emergency service organisations in small and remote Australian towns

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Key messages

- Fire and emergency service organisations are important locations within rural and remote communities of Australia for adult learning, particularly for men.
- A relatively high proportion (40%) of fire and emergency service volunteers in rural and remote areas have not completed any formal education beyond Year 10. Their local fire and emergency service organisation provides a community context for them to be engaged in new forms of learning.
- Increasing community expectations, legal and other pressures are driving a demand for more formal training and assessment of volunteers. Although some volunteers are attracted by the prospect of gaining qualifications in a range of skills that can be used within and outside the organisation, others are reconsidering their voluntary commitment because of perceived difficulties with what they regard as unnecessary external imposition of higher and more formal demands.
- A proportion of volunteers (at least 3 in every 20) can be expected to have some difficulties with the standard training and assessment offered because of limited communication and/or literacy skills. This proportion is likely to increase as training and assessment demands increase.
- Literacy and communication skills training must be integrated within emergency services practice, delivered in context and accessible to all.
- Developing the skills of key people to mentor and support volunteers with low literacy skills as they complete regular training will be important to help overcome barriers to active membership. Trainers and assessors need to be skilled in working with a range of learners as well as in technical skills. Brigade/unit and regional officers may also benefit from a greater understanding of how they can assist a range of learners. One way to develop these skills is to create stronger links with local adult learning organisations experienced in providing literacy and/or communication skills training to people with a range of skills.
- Adult learning organisations, where they exist in small and remote communities, have traditionally not been involved with the training of fire and emergency service volunteers. There are opportunities to rethink networks and funding models to facilitate training through existing local structures, with flow-on effects to the community.

Executive summary

Communities in rural and remote Australia rely largely on volunteers to respond to fires and other emergencies in their area. This response is generally provided by local fire brigades and state and territory emergency service (SES) units. Increasing community expectations of these organisations and legal and other pressures are driving changes to the way volunteers are trained and assessed. This research investigated the impact literacy levels may be having on the ability of volunteers to meet these changing demands, the communication skills and other literacies needed by members of these organisations, and the role the organisations have in developing the skills of people in rural and remote communities.

To investigate these issues a study was undertaken of 20 fire brigades and state emergency service units in small and remote communities across five states—New South Wales, South Australia, Tasmania, Victoria and Western Australia. Members were surveyed and interviewed on site. In all, 329 survey returns were received (a response rate of 73%) and 230 volunteers and other community members took part in focus group interviews.

The research found that local fire brigades and state emergency service units are important sources and sites of adult learning in rural and remote communities. Apart from the important role of facilitating social capital—trust, reciprocity, networks—and encouraging informal learning through regular training, they offer opportunities for volunteers, particularly men, to engage in formally accredited learning. In some small and remote communities these organisations are the only local source of accredited learning opportunities.

Volunteers in fire and emergency service organisations identify as keen learners, and almost all are involved in other local community organisations. The skills they learn through their public safety organisations are transferable to, and demonstrably useful in, other aspects of their community, home and work life. In this respect, the training being undertaken at local fire brigades and state emergency service units is helping to build the capacity of communities and enterprises in rural and remote Australia.

The introduction of more formalised training and assessment is presenting challenges as well as opportunities, however. Some volunteers, particularly those in older age groups, are reported to have left or are reconsidering their participation because of the perceived increasing educational demands being placed on them. There are various reasons for this, including a belief that the more formal approach to training is unnecessary and that prior learning, skills and knowledge developed during years of experience are not being recognised appropriately. Some have expressed an inability or unwillingness to devote additional time to that already being volunteered. There is also concern related to the ability of some to successfully complete formal assessments because of literacy or other communication skills issues.

Of those surveyed, 15% indicated that literacy was an issue for them, and a similar proportion indicated that difficulties with their communication skills affected their ability to undertake some of their brigade/unit training. Given that these figures come from responses to a written survey, and that people are more likely to over-rate their literacy skills than under-rate them (ABS 1997),

the actual proportion of volunteers having difficulty meeting the changing training and assessment requirements is likely to be higher than the figures suggest.

The volunteers in this study valued hands-on and practical training in 'real' situations most highly and believed this was the best way to learn and to be taught: 'there is no substitute for experience'. A relatively high proportion (40%) of volunteers surveyed had not completed any formal education beyond Year 10, particularly in the more remote areas where volunteers are typically older. There was also considerably less access to other sources of adult learning in more remote areas, particularly to programs incorporating literacy and/or communication skills.

Difficulties in attracting and retaining volunteers were identified as an important issue in most brigades and units surveyed. It is therefore important to reduce any unnecessary barriers to participation such as discouraging people with literacy and/or communication skills issues from being active members. This is particularly true for older, more experienced and valued members of these organisations. Strategies to overcome the potential barriers to participation include ensuring the formal training and assessment required relates to the local situation, adapting training and assessment materials to take account of the characteristics and interests of the learners and including as much hands-on, practical training as possible.

The skills most highly valued by the volunteers surveyed were understanding and passing on spoken messages, reading maps of both familiar and unfamiliar areas, and reading and understanding the dials on equipment. The respondents' self-rating of their abilities on these and other communication skills indicate there are considerable training needs in a number of areas.

Indeed, 78% of those surveyed 'were' or 'might be' interested in additional communication skills training. The areas of most interest were reading maps of unfamiliar and familiar areas, using computers to find information and prepare documents, conducting briefings, writing reports, logging radio messages and speaking in public. Very little or no formal training in these areas was being offered locally to the brigades and units visited for this research, particularly in the fire organisations.

Most of those surveyed (72%) would prefer any communication skills training to be provided through their public safety organisation by either a trainer from within their brigade/unit or by someone from outside their local brigade/unit who is an emergency service trainer. A substantial minority (23%) would prefer the training to be provided by another local trainer who is not necessarily involved with their public safety organisation. The majority (82%) would like the training to be provided locally.

As well as interviewing volunteer firefighters and emergency service members, this research also involved interviewing representatives of other organisations in the local communities providing adult learning. Network diagrams (Golding 2002) were developed independently by both an adult learning representative and key informants in the brigade/unit to give an indication of the links between these and other local organisations. It was clear from both the network diagrams and the interviews that although there is considerable goodwill and positive feeling between these organisations, the current links between them are quite weak or non-existent. Indeed, in some locations the local brigade/unit key informants were unaware of the other sources of adult learning that were available locally. There is considerable potential to develop these links further and to share resources and skills to benefit local public safety volunteers. Any communication skills training provided through or with the support of these organisations would need to be directly related to the regular brigade/unit training and focused on the communication skills most highly valued by volunteers or in the areas of interest outlined earlier. The most significant barriers to providing such training would be the availability of sufficient funding and appropriate trainers with time available.

Given the dearth of literacy and/or communication skills training available in some of the communities visited, the overwhelming preference for practical, hands-on learning and the

preference of many volunteers for any training to be provided by someone from within (and usually at) their public safety organisation, another strategy for developing the skills of volunteers would be to further develop the abilities of trainers to deal with the wide range of learners in their training groups. Furthermore, the local trainers and other key people within the public safety organisations could act as 'mentors' or support people for those currently experiencing difficulty with literacy, communication or study skills.

The data from this study suggest that local public safety organisations are unlikely to be interested in providing training in literacy *per se*, particularly as there is a strong belief that it is the 'team' that needs to have the full range of skills rather than each individual. Team members are willing and able to work with each other's strengths and to accommodate for any areas where there are perceived deficiencies. Despite this, it is clear that the literacy and numeracy and 'learning to learn' demands on individual volunteers are going to increase over time in response to community expectations and legal pressures. This will, in turn, put pressure on trainers and assessors to develop their skills further to ensure all volunteers can continue to access the training required. This will be best done by embedding the development of literacy and communication skills into training which is of direct use or interest to volunteers in their public safety role.

Local fire brigades and emergency service units in rural and remote parts of Australia have the potential to provide training in a range of literacies to an otherwise difficult to reach cohort of (mainly) adult males. The provision of learning in the area between skills known to be of interest to volunteers (in reading maps, using computers, conducting briefings, speaking in public, writing reports and logging messages) and skills that would improve emergency response could serve as an accessible and efficient adult gateway to several new and emerging literacies in information and computer technologies for an already captive group of learners. This potential particularly includes the use of global positioning systems (for location and map reading) and the use of the internet (for information gathering, weather and fire prediction and communication by email with similar organisations). In the process, valuable skills will be developed in 'learning how to learn' that have broader benefits to individuals, families, enterprises and communities.

Context

The issue and its significance

Public safety organisations play a vital role in preventing and reacting to fires and emergencies throughout Australia. They put considerable effort into training volunteers for incidents and emergencies that may never occur, but that require rapid and accurate responses if they do. Changes in community expectations and legal pressures in recent years have increased the need to more formally train and accredit existing and new volunteers in the skills they need to safely respond to a range of emergencies.

New styles and expectations of training, accreditation and assessment have raised issues relating to literacy and numeracy levels required for both the necessary learning and the functional competencies of volunteers. Anecdotal evidence suggested that literacy and numeracy issues were preventing some people from completing the necessary training, causing others to leave organisations because they were unwilling to expose their literacy issues to colleagues and discouraging new recruits from joining (Hayes & Ryan 2001). Loss of volunteers as a consequence of training has implications for the volunteers themselves, their local fire brigades and emergency service units, and the community, which relies on them for protection. As Foster (2002, p.4) asked when discussing the challenges facing managers attempting to effectively implement the new national training system in Australia:

> With such large numbers of people, with a range of educational skills reflecting the full spectrum of Australian society, are our [firefighting organisations'] training programs really addressing the needs of all? Add to this the issue of the ageing profile of firefighters and experiential versus formal learning, the problem is magnified.

This research investigated the perception that some volunteers may not have the underpinning literacy skills to engage in some of the necessary training or to carry out volunteer tasks that involve a range of literacies and communication skills. The research is considered necessary to identify what literacies and communication skills are valued as well as to identify the most effective ways of facilitating learning of these skills in small and remote communities.

These issues are likely to be particularly pertinent in small and remote towns because the organisations themselves play an important community role that goes well beyond the critical voluntary fire and emergency service functions. In addition, voluntary organisations in small and remote communities draw deeply on the social capital (trust, reciprocity, networks) of community members in ways that makes the attractiveness of training and retention of volunteers particularly critical despite the likely difficulties caused by increasing geographic remoteness and small community size.

There are around 400 000 volunteers and 150 000 full time employees in the public safety industry in Australia, including around 17 000 paid and 270 000 volunteer and 'retained' (part-paid) firefighters and 100 000 volunteers in state and territory emergency services (Public Safety Industry Training Advisory Body 2003). The public safety industry is particularly dependent on the commitment of volunteers through their time, service and skills in the smaller rural and

remote areas in which this study is located. Full-time, professional fire and emergency services are neither feasible nor economically viable in these areas. It is important that any training and skills accreditation that is undertaken is sensitive to the learning styles and existing literacies of current volunteers in order to value and retain them in the organisation and to ensure ongoing recruitment of new volunteers.

How fire and emergency service training is organised

Fire and emergency service organisations are subject to differing degrees of management, accreditation and regulation, through a range of national, state and territory, and regional bodies. Within Australian states and territories, rural fire services and state emergency services generally have a central capital city-based 'headquarters' and regional offices through which much of the accredited training is coordinated. The regional offices provide services and facilitate regional training to brigades and emergency service units. In some states—New South Wales and Western Australia, for example—local government plays a critical coordinating and funding role.

Nevertheless, it is typically the responsibility of officers in the local brigade or unit to organise training relevant to their members, either by using local expertise, requesting support from a regional office or by arranging for external training. While groups of brigades or units sometimes come together to train where appropriate, most volunteer training is conducted locally and on site, within or adjacent to individual fire or state emergency service stations where their vehicles are typically located.

At the national level, the Australian Fire Authorities Council (AFAC) represents 23 fire service and land management agencies. Its role is to coordinate services between related agencies relevant to fire prevention, suppression and emergency response (Australian Fire Authorities Council 2003). The Australian Council of State and Territory Emergency Services (ACSES) is made up of the eight state and territory emergency services and provides a forum for exchange of knowledge, information and initiatives. At the time of the study the council was developing and implementing a national learning and development framework (Australian Council of State and Territory Emergency Services 2003).

Drivers for training

It has always been important for the purposes of public and volunteer safety that public safety employees and volunteers be properly trained. However, the type and delivery of this training has changed considerably in recent years. These changes have come about as a result of a number of pressures, including:

- ✧ the diverse and changing needs of both paid employees and volunteer groups
- ✧ changing external pressures (both community and legal)
- ✧ changing emergency response technologies
- ✧ changing bureaucratic processes involved in determining training needs and implementation
- ✧ the vast ranges of implementation strategies that are needed throughout Australia (Foster 2002).

In particular, legal pressures have increased the need for formal accreditation of training to national standards. According to Foster (2002, p.2):

> While national competency based frameworks were achieved within the [fire] industry in 1994, there has been no uniformity of implementation around Australia. A series of coronial inquiries have questioned training of both career firefighters and volunteers. These

> often long and expensive inquiries have reinforced the need for national training competencies, audited implementation strategies, and ongoing, effective skills maintenance training. It is no longer possible for volunteer based fire agencies to differentiate between volunteers and paid personnel.

The role and activities of public safety organisations has also been changing in recent times. As Ford (2002, p.1) points out:

> Community expectations for highest possible service quality, coupled with tougher accountability expectations to meet legal, moral and corporate governance requirements are also placing significant demands on volunteer emergency services far beyond traditional firefighting roles. Today's volunteer emergency services must manage training, safety, financial management, records management and legislative governance requirements just as any other large business organisation has to. And these responsibilities inevitably require work, expertise and a broader range of activity at the shop front brigade level.

Related literature

The research questions that underpin the study lie at the intersection between a number of disparate fields of research beyond the fire and emergency services literature, including literature and research about:

- adult community and informal learning
- accredited vocational training
- rural sociology
- social capital and community capacity building
- social and demographic change
- literacy and communication skills
- learning by older adults and men
- volunteerism.

Public safety volunteers are drawn from their local communities and are believed to come from a wide range of occupations and socioeconomic and educational backgrounds. Recruitment and retention of this relatively poorly known volunteer 'workforce' is clearly an important issue for these organisations and for the communities they protect. While Aitken (2000) and others suggest that literacy is one of the factors that could affect the retention of volunteers, there are no publicly available measures of literacy of public safety volunteers in rural and remote areas. A Western Australian study investigated perceived difficulties associated with the literacy skills required for training in three of the volunteer fire and emergency service organisations in that state (Adult Literacy Services Bureau 1997). Because of difficulties getting responses from people in rural/remote areas, however, only surveys undertaken in metropolitan areas were included in the results. That study found that around 15% of volunteers surveyed had difficulty with reading tasks required for training, 19% with listening and speaking tasks, between 20% and 33% with writing tasks and between 17% and 29% with the maths tasks associated with training.

National population data, such as the *Aspects of literacy: Assessed literacy skills* data (ABS 1997, p.7), suggests that approximately 20% of Australians have very poor literacy skills and 'could be expected to experience considerable difficulties in using many of the printed materials that may be encountered in daily life' (level 1). A further 27–28% 'could be expected to experience some difficulties' (level 2). Literacy levels tended to be lower for people with lower educational levels, people aged over 45 years, unemployed people, those with lower socioeconomic status, people whose first language was not English and Indigenous people. Men were also more likely to have

lower levels of prose literacy than women in all age groups except those aged 55–74 years. Men were more likely to perform at higher levels than were women on the quantitative scales. Interestingly, the 1996 study found that people with high literacy skills were likely to have higher participation rates in some social activities, including participating in volunteer or community organisations. Again, it is relevant to note that the Australian Bureau of Statistics (ABS) survey 'excluded those living in remote and sparsely settled areas' of Australia (1997, p.2). New South Wales and Victoria had larger proportions of people at level 1 than other states. The two territories had the smallest proportions at level 1, although, in the Northern Territory's case, this was thought to be because their sample was unrepresentative owing to the exclusion of people in rural and remote areas from the study (ABS 1997, p.12).

A few studies have specifically examined literacy in non-metropolitan workplace settings and industries (for example, Trenerry 2000; Continuing Education Centre 2000; Morgan 2001). These studies suggest that literacy issues may be causing barriers for workplace training in rural areas.

The literature on learning in Australian rural communities (Kilpatrick 1999) confirms that much learning occurs in small farm enterprise settings as well as in 'geographic communities, or communities-of-common-purpose, that is professional or common interest communities such as professional associations, networks of business and hobby clubs' (Kilpatrick, Falk & Harrison 1998, p.3).

The Continuing Education Centre (2000) notes that while learning is occurring in farm settings, 'today's farmers will need more management, communication, [Information Technology] and research skills' and that 'literacy skills will become even more important' (p.2).

Literacy has been of particular interest in studies of human capital because of the perceived link between literacy and employment levels. The most comprehensive recent review of numeracy and literacy in vocational education and training (VET) in Australia undertaken by Falk and Millar (2001) notes that 'the relationship between poor literacy skills and economic and social characteristics is well documented' (p.2).

Demonstrated links between levels of economic productivity and levels of skill during the 1990s, combined with an incorporation of literacy competencies in industry and enterprise standards, led to literacy being closely associated with debates about unemployment and labour productivity. There has been increasing recognition that skill sets and literacy in particular have value beyond work settings for personal, social and community reasons over a lifetime. These studies have led to literacy also becoming centrally embedded in policy debates about social capital and lifelong adult learning quite apart from initial and vocational education and training.

The main form of accredited adult learning available in larger rural communities is vocational education and training through Technical and Further Education (TAFE), Adult and Community Education (ACE)[1] and private training providers. Falk and Millar (2001, pp.47–8) cited studies (for example, Stephens 1991; Holdsworth 1992; Milton 1996) of 'reportedly low rural participation rates' across all Australian states and territories. Breen et al. (1994) suggest that some of the observed associations between location (including rurality) and literacy in school settings were associated with socioeconomic differences. Bull and Anstey (1995) examine factors that construct literacy practices in rural communities. Their research was based on the premise, shared by the current study, 'that literacy is more profitably viewed as a social practice as well as a set of cognitive skills' (p.1), and that 'many different literacies are potentially available in each community' (p.4). Cox and Searle (1995) as well as Cliff (1997) examined ways of addressing literacy in these settings through training and education.

[1] ACE is taken in this report to include all forms of community owned and managed adult education.

The promotion and delivery of adult language, literacy and numeracy training in smaller rural and remote communities is likely to pose challenges, particularly for the training of older men. The local community may have limited access to adult training providers and may not put high value on formal education and training, particularly in areas where there are limited employment opportunities or where the employment available has not traditionally required strong literacy or numeracy skills. Where language, literacy and numeracy training is available it is often provided through ACE centres, though the availability of ACE varies significantly across Australian states and territories (Golding, Davies & Volkoff 2001). In some states, secondary colleges, state-funded TAFE campuses, public libraries and online access centres[2] provide some access to adult learning in smaller towns.

ACE providers tend to have significantly more women than men in their programs (Golding & Rogers 2002). Many ACE providers are comprehensively feminised spaces meeting the important and particular needs and learning styles of older women. Most ACE providers are staffed by women, with female committees and underpinned by mainly female learning programs and pedagogies. McGivney (1999) shows in the United Kingdom that:

> . . . men do not frequent as many learning environments and sectors as women . . . [W]omen follow a wider range of learning routes to achieve greater societal participation. They are more likely than men to be involved in non-vocational learning and far more likely than men to continue learning after age 40. (McGivney 1999, p.12)

Men were identified (along with people living in rural areas and those from non-English speaking backgrounds) in the Leigh Report (1997, pp.154–6, cited in Beckett & Helme 2001, pp.16–17) in Victoria as being under-represented adult learners. Several reasons were cited for this, namely:

- ✧ unlike women, men have gained fulfilment from work and now want to rest
- ✧ men prefer outdoor activities
- ✧ women are better at joining groups and networking
- ✧ men are afraid to appear weak by not knowing things
- ✧ adult learning centres are perceived as women's domains
- ✧ men don't respond to a structured learning environment.

In smaller and less accessible towns, provision of language, literacy and numeracy training in the workplace is difficult. Most enterprises are small and many people are self-employed. Even for those who are employed, many workplaces in such towns have only small numbers of employees and would be too small to provide a viable training group.

The combination of these factors in some rural and remote areas can mean that men, in particular, are at least being left out of, and at worst being excluded or self-excluding from (see McGivney 1999), the current training and adult education sectors.

The local fire brigade or emergency service unit is a potentially important organisation in rural communities for reasons other than just community safety. It can provide a source of social connectedness for individuals who often work in isolation. Furthermore, it is regarded by many volunteers as a place where people gain skills and knowledge in technical skills, leadership and supervision, occupational health and safety (OHS) and basic administration that can be transferred in a non-threatening way to their everyday lives. As the Chief Officer of the Tasmania Fire Service suggests:

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[2] The centres provide low cost access to 1:1 assistance and training in the use of computers and the internet for their local community (Department of Communications, Information Technology, and the Arts 2004). Learning is informal and usually involves personal assistance from a part-time coordinator or volunteers. Similar organisations have been set up in other states but may be referred to by other names. We have used the term online access centre to refer to all such types of centres.

> Volunteerism in this sector [emergency services] also contributes to the ongoing community building—it promotes community self-reliance, reduces community dependence on governments, and increases the skills base of individual volunteers and the community. The training requirements placed on emergency service volunteers are the most demanding of the activities placed on them. The benefits derived from the efforts in training contribute to the community as a whole, with obvious concentration in the outer metropolitan and regional areas, where volunteer work is often focused. (Gledhill 2001, p.4)

During the late 1990s, accredited training and more formal assessments were introduced to a number of state fire agencies, including the Country Fire Authority (CFA) in Victoria. One of the perceived consequences of this change was that it created:

> difficulties for a number of firefighters. In particular, those people with literacy and numeracy difficulties may be 'put off' by the challenge of undertaking formal training and assessment and/or find it difficult to succeed in modules being delivered using large amounts of written material. (Ryan & Hayes 2001, p.6)

Consequently, in 2000, pilot literacy programs funded through the Commonwealth WELL (Workplace English Language and Literacy) program commenced in Victoria for a few firefighters that 'all had quite low levels of literacy, had a poor opinion of their own abilities and were seriously committed to improving themselves and maintaining contact with the CFA' (Ryan & Hayes 2001, p.6). These programs were delivered by Swinburne University of Technology TAFE in collaboration with the Country Fire Authority Region 13 in local brigade settings. This program was extended across the state in 2002, with linkages being developed between local literacy and communication skills training providers and Country Fire Authority regional offices (Fraser 2002). Similar but smaller programs linking Queensland State Emergency Service and Queensland Fire and Rescue Service (QFRS) with private literacy providers and a program focusing particularly on internet skills with volunteer firefighters in country Victoria have also been established (McKenna 2003; Public Safety Industry Training Advisory Body 2003).

Other research inclusive of skills in Australian fire and emergency services relevant to the current study includes an exploratory comparative study by Betts (2000) of the skills of peer support personnel in the predominantly career-based (that is, paid) Queensland Fire and Rescue Service and the predominantly volunteer-based Country Fire Authority in Victoria. Betts identified that 'changes in the way training was being implemented' (p.17) were contributing to stress in the volunteer-based fire authority and that:

> the changes that have occurred within the organisation over the past few years are making the CFA more of a business. The volunteers are becoming more professional with an emphasis on training, increasing expectations and increasing administration within the brigades. (Betts 2000, p.33)

In some cases Betts observes that individuals volunteering for key roles 'did not have the skills to perform these roles and tensions developed within the brigades' (2000, p.38).

Cope and Kalantzis (2000) promoted the use of the term 'multiliteracies' to emphasise the point that many modern workplace tasks presuppose competencies and skills that go beyond reading, writing and numeracy. Many of the multiliteracies or 'communication competencies' that lie at the heart of the current research, including computer, networking, team and communication skills, are becoming increasingly necessary for leadership and higher level involvement in community-based volunteer organisations as well as in contemporary enterprises and workplaces.

As well as providing challenges, the provision of accredited training and assessment also has the potential to act as a positive recruitment and retention tool for emergency service volunteers. Fahey, Walker and Sleigh (2002) conducted a study into recruitment, retention, training and support of Tasmanian volunteer ambulance officers. They conclude that:

> Emergency services must not be afraid that training standards are a deterent to potential volunteers. It is clear that appropriate training will act as a powerful recruitment and retention tool for VAO [volunteer ambulance officers] if provided in a timely and suitable manner . . . All emergency services aiming to recruit and retain volunteers should investigate the flexibility, quality and timeliness of the training they deliver to ensure it reinforces the motivations of their workforce. Barriers to provision of such training need to be identified and removed. (Fahey, Walker & Sleigh 2002, p.7)

Barriers to adult learning have been identified in recent research by KPMG (2001) and Chapman et al. (2002). One of the barriers that public safety organisations will need to address is the literacy and numeracy skills of some of their members. Thus, the need to attract and retain volunteer members may become a driver for public safety organisations to take an interest in developing adult multiliteracies at the local level. This potentially presents a great opportunity for the promotion and delivery of language, literacy and numeracy skills to a wide range of people in rural and remote areas, particularly men.

Research questions

This research aimed to investigate the current role and wider potential for local firefighting and emergency service organisations in Australian rural and remote communities to provide a focus for adult learning and community capacity building through improving adult multiliteracies.

The research addressed the following questions:

- ✧ What literacies are valued and needed by fire and emergency service volunteers in rural and remote communities to perform job tasks?
- ✧ To what extent does literacy have an impact on participation in adult learning generally, as well as participation in firefighting and emergency service organisations and necessary training in particular?
- ✧ What broader role do local firefighting and emergency service organisations currently play in improving lifelong learning and developing the capacity of local communities?
- ✧ How could local firefighting and emergency service organisations, their members and infrastructure be used to promote and develop adult literacies in rural and remote communities?
- ✧ What resources would need to be provided to these organisations to better enable them to identify and support a wider range of adult learners?
- ✧ How could a range of adult literacies be most effectively developed, given that most emergency service organisations are male dominated and community and adult learning organisations (where they exist) largely female dominated?
- ✧ How might barriers to adult literacies be addressed in these settings?

Methodology

Overview

As well as reviewing existing literature in this area, this research gathered information from local fire brigade and emergency service members in five sites across southern Australia. The research method involved a quantitative survey and qualitative interview data. It was designed to take account of the individual, community and industry sensitivities of mainly adult males, who comprise the core of public safety volunteers in the smaller, remoter towns. Each site was visited on two occasions.

Theoretical framework

This research used mixed methods in that it was both qualitative and quantitative. It took an emic perspective using a number of principles of ethnography (Fetterman 1998). It relied on insider experiences and perceptions of volunteers within public safety organisations gathered by both intensive site interviews and surveys. The on-site focus group interviews were designed to allow follow up of themes and issues identified in the survey. The design anticipated that many respondents to the survey would become interviewees and relatively engaged, local stakeholders in the research, its findings and outcomes.

A selection of a range of contexts (sites, locations and degrees of geographical remoteness with differing public safety service types in five states) for the surveys and interviews allowed for a comparison, identification and examination of differences and similarities across contexts (Ragin 1987).

Given the dearth of previous published research in the area, the survey was essentially exploratory in that it asked questions of volunteers about aspects of current training, focusing on attitudes and perceptions about communication skills, learning and literacy in a community context. It also included some hypothetical questions about interest in types and desirable locations for communication skills training. Questions were included about characteristics of respondents that provided a framework for categorisation for subsequent quantitative analysis and comparison by group (for example, age, gender, and role in the brigade/unit).

Region, site and sample selection

To enable the research to have a national scope, one site was selected in each of five Australian states—New South Wales, South Australia, Tasmania, Victoria and Western Australia. Four locations of varying geographic accessibility/remoteness (measured by ARIA—Accessibility/ Remoteness Index of Australia 1999) and population size were chosen within each site (see table 1).

The selected sites contained locations with a wide range of accessibility and remoteness index values available within a single region. These sites also had widely differing economic bases and growth prospects (see Adams 2002, figure 2).

Table 1: Sites, locations and accessibility/remoteness (ARIA)

State / *Region*	Locations (ARIA)
NSW / *Murray*	Gol Gol (near Mildura, 2.7), Balranald (4.3), Hillston (5.9), Clare (8.4)
SA / *Eyre*	Whyalla (2.5), Kimba (5.1), Wudinna (7.5), Streaky Bay (10.0)
Tas. / *Mersey-Lyell*	Ridgley (near Burnie, 2.4), Waratah (3.5), Rosebery (4.4), Strahan (6.2)
Vic. / *Western District*	Bochara (near Hamilton, 2.5), Coleraine (2.7), Goroke (3.8), Netherby (4.9)
WA / *Great Southern*	Torbay (near Albany, 3.2), Jerramungup (6.0), Hopetoun (7.6), Lake King (7.9)

Note: ARIA = Accessibility/Remoteness Index of Australia (see Accessibility/Remoteness Index of Australia 1999): 0 indicates high accessibility, 12 indicates high remoteness. Region names are from Adams (2002).

The sites were selected in such a way that they included a range of populated rural and remote localities ranging from Accessibility and Remoteness Index of Australia 'accessible' (1.84–3.51) to 'moderately accessible' (3.51–5.80) and 'remote' (5.80–9.08).[3] Table A1 in appendix A demonstrates this spread. All sites except South Australia[4] included one locality relatively accessible to (5 to 25 km from) a large regional city that was rural but 'accessible' as defined by the index and with a population of least 10 000. Each of the regional cities—Mildura, Whyalla, Burnie, Hamilton and Albany—provided geographical accessibility to a wide range of possible adult learning opportunities (for example, a university campus, TAFE campus, ACE providers and private providers). Other locations in each site were selected because they were small, of increasing remoteness and with few or no local or nearby opportunities for adult learning (see tables A2 and A3, in appendix A).

The target population for this survey was therefore all volunteer members of fire and emergency service organisations in small and remote towns in Australia. The sample of individuals in the survey was a three-stage cluster sample. At the first stage, a region was selected within each of five states. At the second stage a sample of brigades/units was selected in each region. At the third stage, a sample of members was obtained from each selected brigade/unit. The sample of regions was selected purposively, on the basis of a steep remoteness gradient away from a major regional city. Of the few regions in each state that met this criterion, one was selected on the basis of its accessibility to the researchers. The sample of four brigades/units within each region was selected to be broadly representative in terms of a range of objectively measured remoteness index values and town population. A degree of randomisation was incorporated in this selection process. Within each selected brigade/unit, a key informant and a small group of volunteers were asked to distribute survey forms to all registered members. The final sample of members who returned completed forms was self-selected from the group to whom forms were distributed.

The respondent sample

Of the 521 surveys left with brigades/units for distribution, 339 completed surveys and 43 surveys that were not distributed were returned (response rate of 73%). Seventy-two interviews

[3] One location, Streaky Bay in South Australia, has an accessibility and remotenex index value of 10.0, which is in the 'very remote' range but was categorised as remote for the purposes of the analysis in this study.

[4] Since no fire or emergency service organisation existed 5 to 25 km from Whyalla, a state emergency service organisation in the township of Whyalla was included in the study.

were conducted with a total of 230 people. (The spread of respondents and interviewees across states is shown in tables A4 and A5 in appendix A.)

The majority of the survey sample was male (85%). Two hundred and eighty respondents (83%) were unpaid volunteers with rural fire services; 37 respondents (11% of the sample) were unpaid volunteer state emergency service members; 20 (6%) were retained (part-paid) volunteer firefighters and a small number (2: 0.6%) were unpaid volunteer members of ambulance or sea search services.

Sampling limitations

In terms of sampling errors, the sample sizes that were achieved are adequate for estimating population parameters with an acceptable degree of accuracy. For example, when estimating the percentage of respondents in the population who hold a particular opinion or who would give a particular response, the sampling error with a sample size of 339 is approximately ±5 percentage points. The samples within subgroups such as states are, of course, smaller, and the error margins are greater.

The effect of non-sampling errors or biases, however, must also be considered. The sampling error figure ±5 is predicated on the assumption that the sample is representative of the broader population of members. In this case, it is considered that the chosen regions are broadly representative of the diversity across all regions of Australia and that selected brigades/units within regions are representative of their regions. The response rate from individuals, while high in relative terms for surveys in general, was moderate in absolute terms, and so the factor of self-selection bias cannot be ignored. There may very well be important differences between the experience, characteristics (including literacy skills) and opinions of those who decided to respond and those who did not, and so the sample might not be representative of the population as a whole.

Furthermore, the response rate varied considerably from brigade to brigade, suggesting that the distribution procedure was not uniform across brigades/units. All of this suggests that the real margin of error or uncertainty associated with any sample estimate is probably greater, and possibly much greater, than a sampling error figure such as ±5 percentage points, calculated using probability theory and based on the assumption of random sampling. Consequently, sample estimates and their associated sampling errors plus all comparisons based on differences in proportions in different sub-samples, particularly state samples, should be interpreted with considerable caution.

A further important point is that, because only one region was selected in each state, differences between states are confounded with differences between the individual regions. Observed differences between responses from the various states cannot be attributed to state differences *per se*—they may be due to differences between regions within each state.

Survey and interview protocols

The research method was guided by an evaluation of a pilot program of literacy training that was conducted in public safety organisations in Victoria. The evaluation suggested that it is better to avoid the use of the word 'literacy' when researching a number of the multiliteracies deliberately targeted by this research (Fraser 2002). This is because people generally have the view that one is either 'literate' or 'illiterate'; that is, fully competent or unable to read and write at all. The 'greyer' but more inclusive concept of literacy being related to having the reading, writing and other communication skills to be able to undertake an effective role in particular contexts is less well understood. It was surmised that if the term 'communication skills' were used, people would be

more likely to participate in open discussions about their skills sets and the skills sets of others (Fraser 2002). These insights were accounted for when designing survey instruments and information sheets for the subjects of the research. Nevertheless, the term literacy was included in both the survey and interview questions to check whether the data generated by the research validated these assumptions.

On the first visit to each of the 20 locations a discussion was held with the key informant in each brigade/unit (usually the officer in charge) and a small group of volunteers selected by the key informant. Network diagrams (Golding 2002) were created during these discussions in order to identify the relationships within and between emergency services and other local learning and community organisations. This included whatever surrogate adult learning organisations existed in the smallest populated localities. A separate interview was conducted in each location with a person involved with adult learning in the local community—in most cases someone not associated with the brigade/unit—to develop a network diagram from a community perspective beyond the brigade/unit. These network diagrams assisted in the identification of potential interviewees for the second site visits and provided insights into the social capital—'the norms and networks facilitating collective action for mutual benefit' (Woolcock 1998)—that existed within, and particularly between, organisations.

The survey distribution protocols were discussed with the key small group of volunteers, including the key informant. The number of surveys left for subsequent distribution by this group matched the number of members identified as being registered members of the local brigade/unit. Members of the group were asked to act either as a support person for people who may experience difficulties reading or completing the form or to identify another person known to the particular brigade/unit member who could effectively undertake that role. These protocols attempted to maximise the response rate and address the obvious bias likely to be created by a written survey about literacy that presupposed an ability to read and respond in writing. A copy of the survey is provided in appendix B.

Consideration was given early in the project planning phase of incorporating a series of 'rich tasks' within the survey as a means of objectively measuring the reading and written literacy skills of volunteers. However, this option was considered difficult to practically administer and less effective than a questionnaire that asked respondents to self-assess their skills. There is an underpinning assumption in this research that a person's self-assessment of literacy skills may have as much impact on their willingness and confidence to undertake training as any objective assessment of their skills.

The 1996 *Aspects of literacy survey* (ABS 1997) investigated the relationship between people's self-perceptions of their literacy skills and objective assessments of their skills. As well as measuring people's skills on prose, document and quantitative scales, participants were asked in that survey to rate their own reading, writing and basic mathematical skills in the context of 'the needs of daily life'. It found that:

> Almost all (92%) of those who rated their reading skills for the needs of daily life as poor were at the lowest level on the prose scale, with negligible proportions at each of the other levels. Of those that rated their reading skills for the needs of daily life as excellent, 28% were at Levels 1 and 2 [the lower levels] on the prose scale. (ABS 1997)

It would appear from this data that people who rate their skills as poor are very likely to have objectively low skills and that it is actually more likely that people will over-rate their literacy skills than under-rate them. The ABS survey suggests one possible explanation for this:

> . . . people with lower skill levels (as measured by the objective assessment) who had little need to use advanced skills in daily life may consider that their skills are good enough to meet the demands placed on them, and, accordingly, rate their skills for the needs of daily life as good, or even excellent. (ABS 1997)

On the second visit to each location, audio-taped focus group interviews explored issues that were raised in the initial visit and identified through early analysis of the survey returns. Four interviews were arranged in each location. Each interview involved approximately four people. One interview was with people directly involved in leadership, management and/or training of the brigade/unit (often the same group interviewed on the first visit). Another interview was with long-term and/or recently lapsed members and another was with four of the most recently joined members. A fourth interview group comprised people in the town/district involved in adult learning or in responsible positions in other organisations identified primarily from the network diagrams, most of whom were not members of (or directly associated with) the brigade/unit.

Brief 'feedback sessions' were conducted at each location after the interviews to enable informal discussion and feedback to be given to the participants and community and organisational stakeholders. The use of direct, on-site feedback has been found from research in small and remote communities (Golding & Rogers 2002) to be valued by small communities and community-based organisations since it models, through an ethical research method, the reciprocities which form an important part of the social capital that is so highly valued in small and remote towns and that underpins volunteerism.

Findings

The following discussion summarises the findings of this research. Details of the interview and survey responses and the statistical analysis undertaken are contained separately in appendix A.

Overview

An analysis of the survey data revealed a number of statistically significant differences[5] as a consequence of the location of the learning, the attributes of the learners and, of particular interest in this study, with aspects of communication skills and literacy as self-assessed by respondents. The methods of analysis are described in appendix A and in table A6.[6] Table A7 summarises the outcomes of that analysis. The key findings are summarised here and elaborated further in the discussion that follows:

- Given a number of significant differences on a number of variables by state, any effective, national response to public safety training of volunteers needs to take account of the quite different learning histories, cultures and contexts in which learning takes place. It is likely, on the evidence available, that a 'one size fits all' approach to introducing and implementing accredited fire and emergency service training across small and relatively remote Australian towns will not result in either a consistent response or an effective outcome.
- Learning needs and opportunities differ significantly by relative remoteness (as measured by the Accessibility and Remoteness Index of Australia). Volunteers surveyed in the remoter areas were significantly less likely to have the skills necessary to find information using a computer, were more likely to prefer training to be provided from outside the brigade/unit and to have more limited access to local adult learning opportunities.
- The communication skills of fire and emergency service volunteers are significantly related to previous education levels, age and frequency of training attendance.
- At least 3 out of every 20 volunteers are likely to have difficulties with the training and assessment currently being provided because of issues related to their literacy and/or communication skills. These proportions are similar for those in local leadership positions. The proportions are likely to increase with increasing training and assessment demands.
- Respondents who identified that literacy was an issue for them are significantly more likely to have lower formal education levels and to consider that the difficulties with their communication skills affect their ability to complete some training. They are more likely to find the written training materials difficult and to rate their abilities to log (record) spoken messages and to use computers to find information as low. While there were similar findings

[5] Other than where indicated, the term *significant* is taken to mean $p < 0.05$ in a Pearson chi square test. Instances where qualifications to significance are advisable on the basis of more than 20% of cells with fewer than five cases are indicated in table A6.

[6] All tables with the prefix 'A' referred to in this section are contained in appendix A.

for volunteers who indicated that difficulties with their communication skills affected their ability to complete some training, respondents who acknowledged communication skills difficulties were also more likely to experience difficulty reading maps of familiar areas. They were also more likely realise they had significantly less access to adult learning opportunities locally.

- Although volunteers believe people with a range of skills can be readily accommodated within practical situations in the teams they work with, they feel uneasy when forced by outside regulation to conform to an externally imposed, formal training or assessment regime that they perceive exposes or judges their literacy or other competencies. These concerns are heightened in geographically remote situations where practical skills are often highly developed through experience and where the perceived need for standard training regimes is diminished by the lessened likelihood or need of transferability of volunteers to incidents outside their local area.
- While brigades and units actively seek new members, including women, most hands-on fire and emergency response in small and remote towns is currently done by men. Although 15% of respondents were women, they were significantly less likely to occupy leadership positions and were less confident of their ability to read maps. Conversely, women volunteers were significantly more confident of using computers to find information and often play an important role in brigade/unit communication and organisation facilitation. The interviews also confirmed the critical role undertaken by a number of other women who were not registered members of brigades/units but who were involved, usually through family and community ties, in essential community networking, volunteer organisation and practical facilitation within and beyond the brigades/units.
- Any effort to target and improve functional literacy amongst volunteers needs to take account of the fact that while it is the older members of fire services in particular who typically most *need* to develop skills using new and emerging information, learning and communication technologies—computers, email, the internet and, potentially, the use of global positioning systems—it is younger people who are more likely to be *interested* in taking part in improving such skills through further training.
- Although there is considerable goodwill between locally recognised adult learning organisations and local public safety organisations, the educational links between them are weak or non-existent. There is considerable potential for these links to be further developed.
- This study confirms the critically important role of brigades/units and the learning opportunities they create in the smallest and remotest communities. There is an inverse relation between community size on one hand, and the proportion and diversity of the community who are volunteers in fire and emergency service organisations on the other. Further, as community size decreases the local learning opportunities also decrease.
- Above and beyond the differences identified above, the contribution of volunteers to their community's safety and wellbeing is overwhelmingly positive. In the view of volunteers surveyed and interviewed, the effectiveness in emergency response situations is only marginally affected by literacy. The most urgent needs identified by respondents were for more members, money and local support.

The learning context

Brigade/unit training and members

The localities and public safety organisations sampled for the survey and the interviews were taken to be broadly representative of less accessible Australian small towns and the fire brigades and emergency service units associated with them.

This research highlights the importance of fire and emergency service organisations in small and remote towns and their important role as local adult learning organisations. Such organisations are not only important (and often the *only* sites in small and remote locations) for accessing regular, often accredited training to identified national workplace competencies, but they also provide a critical (and sometimes the *only*) focus for community building activities in small towns. Indeed, they are one of very few organisations in which older adults, and particularly older males, are able to sustain a culture of voluntary learning in a local community setting.

While most brigade/unit training is in technical, equipment and emergency response skills, a significant proportion of volunteers receive training in team, leadership and communication skills as well. Training in technical skills related to using equipment was received by 85% of respondents and in emergency response skills by 83%. A clear majority also indicated that their organisation provided team and/or leadership skills training (66%) and training in other communication skills (60%). Eleven per cent indicated that other training was provided. While these proportions varied between states, particularly in the areas of team and/or leadership and other communication skills training (see table A8), follow-up interviews confirmed that many of these skills are valuable and transferable to paid work, self-employment, commercial enterprise and other community settings.

The data reveal variations in the extent to which *accredited, national* training and assessment has permeated beyond capital cities and regional centres to local volunteer organisations in smaller and remoter towns in different states. While accredited training appears to have permeated furthest in Victoria and least in Western Australia, it must be noted that the Victorian localities sampled were considerably less remote. Also, fire brigades with 'retained volunteers'—volunteers who are paid to attend training and incidents (such as some of those sampled in New South Wales)—appear to have more regular formal training and assessment than those that do not.

A survey of the 20 brigades/units sampled illustrated that the resources available varied from a small shed for one truck to a large complex including learning resources and computer networks. What *was* consistent across all locations, however, was the commitment of the members to providing a high quality, voluntary emergency service to their communities.

Overwhelmingly, those surveyed identified as feeling good about taking part in a community activity (99.4%) and felt it was their duty to volunteer to support their brigade/unit (88%: see table A10). Many of those surveyed regularly committed considerable time as volunteers to the organisation. Of those surveyed 41% trained either weekly or fortnightly and 19% trained monthly. Around one in three trained less frequently: approximately one quarter (23%) trained 'a couple of times a year', 7% trained 'very rarely' and 4% 'never trained'. There were considerable variations by state, however. For example, although 98% of those surveyed in Tasmania trained at least monthly, only 13% of those surveyed in Western Australia trained that regularly. (This variation is illustrated in table A9.) The survey and interview data indicate other significant differences between the training and attitudes to training of respondents in the sites in different states outlined elsewhere in this report.

The profile of survey respondents is also suggestive of some differences by state, subject to the sampling limitations previously identified. Western Australian respondents were more likely to be non-operational, older and with a 'highest education level' at Year 10 or below than respondents from the regions sampled in other states. Tasmanian volunteers sampled were more likely to be newer members. Victorian volunteer respondents were generally longer serving in their brigades/units. Younger volunteers (age <25) comprised a higher proportion of volunteer respondents in New South Wales (14%), while female respondents comprised a higher proportion (24%) of volunteer respondents in South Australia.

Networks

The network diagrams developed by both the public safety organisations and the adult learning organisations showed that, in most locations, the links between them were weak or did not exist at all, other than in the sense of 'everyone gets involved if there is a major incident'. Links that did exist to non-brigade/unit organisations tended to be practical and related to issues other than learning, such as assisting at community social events, refilling water tanks during the recent drought or in one case 'cleaning the cockchafers out of the school roof'. Links tended to be strongest in places where members of the learning organisation were also involved personally or through family members with the brigade/unit. These links were often based around providing a venue for training or other physical resources such as access to computers for brigade/unit administration.

The strongest links that the local brigades/units had were with other local organisations they needed to work with in their public safety role—ambulance, police, fire, state emergency services, power companies, land management authorities, local government—nearby brigades/units within their organisation and the regional and state headquarters of their organisations.

Access to adult learning beyond the brigade/unit

This study provides evidence that members of fire brigades and emergency service units in the immediate rural hinterland of larger regional cities tended to have relatively easy access to training opportunities through the regional fire or emergency service offices as well as via the wide range of adult and vocational learning organisations available in regional cities. However, volunteers in smaller, remoter towns in all states appeared to have less access to locally available training opportunities, other than those provided through their public safety organisation, and relied more heavily on local volunteers to provide their training. The availability and diversity of adult learning opportunities, while very patchy by state as well as within states, appeared also to be a function of remoteness and town size (see tables A2 and A3, in appendix A).

Remoter locations had very limited access to local adult learning organisations. Those that were available were more likely to be online access centres and/or neighbourhood houses (ACE providers) and very small TAFE campuses, rather than larger TAFE campuses or universities. It must be stressed that the *range* of programs available through these often small online access, ACE and TAFE campuses, where they existed in the small towns in this study, was typically very limited compared to that available in larger and more accessible regional cities.

Brigades/units in the smallest towns were most closely representative of the local population and most likely to include people whose formal education, current computer literacies and access to local learning were most limited.

The interview data suggests considerable goodwill toward the public safety organisations by other adult learning organisations and a willingness to assist with the development of skills if possible. Apart from the finding that many volunteers would be very reluctant to learn in adult learning contexts beyond the locality and the brigade, issues around funding and the availability of staff with sufficient time to devote would be the main other barriers to adult learning organisations providing this support.

Attitudes to learning

Each organisation visited in this study was moving toward more formal training and assessment, although, as already discussed, the extent to which this had been introduced varied from state to state and by type of organisation. Attitudes regarding the best way for volunteers to learn and responses to these changes were investigated in the survey and during the group interviews. (For more detail of the interview responses, see appendix A.)

With few exceptions, volunteers felt that some sort of training was required so that people could learn how to perform their public safety role. The interview data confirmed and elaborated on the survey data that most volunteers would prefer training to be hands-on and believe this is the best way for volunteers to be taught and to learn. In particular, many interviewees highlighted the value of the learning that takes place at real incidents such as fires and vehicle accidents and when undertaking roadside burning or similar 'real' activities. Accounts from volunteers with recent experience in strike teams at major fires in New South Wales and Victoria supported the need for consistent, accredited training of outside volunteers at major fire events to provide safety for volunteers and an efficient emergency response.

There was some concern expressed about a tendency towards reduction in the amount of controlled and roadside burning that now takes place, as it was seen as reducing opportunities for people to develop their practical skills in real fire behaviour. The prolonged drought experienced by many of the areas visited also affected the number of fires that several brigades had attended in recent times, with so little fuel to burn.

There was a general view from the interviews that 'all the bookwork in the world is no use until you put it into practice'.

Many people viewed the changes toward accreditation of skills positively. Reasons for this included:

- ✧ The formal training and assessment further develops skills and increases confidence in performing the role.
- ✧ Volunteers can be more confident that others in the team have the skills required and can do the job asked of them, particularly at incidents outside the local area and in unfamiliar teams.
- ✧ The certificates and vocational competencies obtained are transferable. They can be used in other workplaces and, in some cases, to obtain paid work.
- ✧ The qualifications are recognised nationally and can be used as evidence of skills if moving from state to state or between public safety organisations.

There was also considerable resistance to the changes, however, especially among some of the older and/or more experienced members. This resistance was more marked in the interviews with fire organisations—state emergency service interviewees tended to have a more positive or accepting view, although this was not universal. This may be because more formal assessments appear to have been in place longer in the local emergency service units visited.

Reasons for concern about the changes included:

- ✧ Volunteers have performed their public safety role well without this requirement in the past.
- ✧ Many years of practical experience and existing knowledge and skills are not being recognised.
- ✧ It is not necessary, given local circumstances where involvement in outside emergency events is unlikely. Fitting in with statewide or national approaches to training appears much less relevant to people in remote areas with big properties and with their own emergency response contingencies. In such context, the general view is that the fire brigade is simply a group of people who have their own firefighting equipment and who are basically 'just helping a mate', for example. Some members in remoter brigades have no intention or capacity to respond to fight fires elsewhere.
- ✧ Formal training is perceived essentially as an exercise that the central organisation is undertaking to 'cover their butt' if something goes wrong. There is a related perception, by those who take this view, that the liability or 'buck' for any errors will be transferred back to the volunteers.
- ✧ People don't have the time or ability to travel to and/or undertake additional training.

- ✧ A number of members have left or are considering whether to continue their current level of participation because of the reasons above and/or because they do not have confidence in their ability to successfully complete the assessments, even though they may have the prerequisite experience, knowledge and practical skills.

This final concern was of particular interest for this research and is discussed further later.

Valued literacies

The survey and interview questions focused particularly on the communication skills valued and needed by fire and emergency services volunteers. As discussed earlier, the term communication skills was used in many instances rather than 'literacies' as it was likely to have more meaning for volunteers.

In the survey, participants were given a list of communication skills that might be required in their public safety role and asked to rate the importance of each to the brigade/unit on a scale of 'low', 'medium' or 'high'. They were also asked to rate their own skills in these areas on the same scale. The findings in relation to this question are summarised in table 2.

Table 2: Importance of skill to the brigade/unit and rating of own skills (% of respondents)

Importance to brigade/unit			Skill	Rating of own skills		
Low	Medium	High		Low	Medium	High
<1	10	90	Understanding spoken messages	2	45	53
1	12	88	Passing on spoken messages	2	44	54
<1	18	82	Reading maps of familiar areas	10	41	50
2	19	79	Reading and understanding dials on equipment	5	44	51
2	22	76	Reading maps of unfamiliar areas	16	49	35
6	25	69	Logging (recording) spoken messages	11	59	30
2	29	69	Reading and understanding training materials	5	51	45
4	30	60	Understanding messages on noticeboards	4	40	57
8	35	57	Conducting briefings	36	47	18
10	38	52	Writing reports	25	53	23
5	43	52	Taking part in meetings	10	50	40
11	46	43	Writing brief notes	15	55	31
10	46	43	Doing basic calculations	9	46	44
14	47	39	Leading meetings	35	44	21
18	46	36	Speaking in public	31	47	22
22	46	33	Writing letters	27	53	20
32	39	29	Using computers to find information	38	39	23
32	39	29	Using computers to prepare documents	45	34	22

Note: Sorted by importance to brigade/unit; *N* values ranged from 314 to 326.

The communication skills rated by most volunteers as being of high importance to the brigade/unit were understanding and passing on spoken messages. These findings reinforce the view that accurate communication (that is, accurately sending, receiving and processing messages) is critical to ensure accurate and efficient response by fire and emergency service organisations and their volunteers. The ability to read maps of both familiar and unfamiliar areas was also rated highly, as was the ability to read and understand dials on equipment. Given the perceived importance of logging messages and reading maps, it is pertinent to note that 11% of survey respondents rated their skills as 'low' for logging messages and 10% and 16%, respectively, rated their own skills as 'low' for reading maps of familiar and unfamiliar areas. Only 35% considered

their skills were 'high' in reading maps of unfamiliar areas and only 30% rated their logging skills as 'high'.

Skill areas with the greatest proportion of respondents rating their skills as 'low' were using computers to prepare documents and to find information, conducting briefings, leading meetings and speaking in public.

Some interesting and significant differences were found in the rating of personal skill levels that related to state, accessibility and remoteness, age, gender, frequency of training attendance and whether the respondent was in a leadership role. The responses investigated further, using a Pearson's chi square analysis, were the ability to log messages, read maps of familiar and unfamiliar areas, and to use computers to find information (see tables A6 and A7, in appendix A). Perhaps not surprisingly, those respondents who indicated that they were in some sort of leadership role rated their ability to log messages and read maps of familiar and unfamiliar areas more highly than others. Even so, a small proportion (4–10%) of people in leadership roles rated their skills in these areas as 'low'. Self-rating by leaders of their computer skills did not differ significantly from other respondents, with around one in three leaders (32%) ranking their ability to use computers to find information as 'low' (see table A11).

Those who attended training less frequently than monthly rated their ability to log messages significantly lower than those who attended more frequently (18% rated their skills as 'low' compared with 6% of those who attended frequently). They were also more likely to rate their ability to use computers to find information as 'low' (50%, compared with 30%). These differences are more likely to be related to the age of those who attend training less frequently than to the training actually provided, particularly as specific training in computer skills was not being provided in any of the brigades/units sampled. In support of this contention there was a significant relationship between age and training attendance, with those attending training less frequently tending to be significantly older. Older respondents were also significantly more likely to rate their logging and computer skills as 'low'. However, older and less frequent training attenders were not significantly different from others on their self-assessed ability to read maps.

Fifteen per cent of respondents were women. The analysis shows that although there were no significant differences by gender for self-rating of ability to log messages, gender does have a significant impact on self-rating of ability to read both familiar and unfamiliar maps. As shown in table A12, women were much more likely to rate their skills in these areas as 'low' than men were. However, women rated their ability to use computers to find information significantly higher than did men. This finding is consistent with other research by Golding and Rogers (2002) that rural men have tended to defer to women in the necessary learning of new information and computer technologies, particularly in community owned and managed learning contexts. Our research provides evidence from rural and remote community organisation contexts to support Bull and Anstey's (1995) finding that although women themselves do not necessarily gain power through their literacy practices in rural communities, 'in many cases their practices were used powerfully and successfully; that is they brought about change for the community' (p.10).

Rating of the ability to use computers to find information was also significantly affected by state and accessibility. Volunteers surveyed in Victoria and Western Australia were more likely to rate their skills as 'low' than those in other states (see table A13). Those in moderately accessible areas were more likely to rate their computer skills as 'low' than those in either accessible or remote/very remote areas. Also, those in more accessible areas were more likely to rate their skills as 'high' than those in less accessible areas (see table A14). These findings support the contention, confirmed separately in the data on highest education levels of survey respondents and from interviews, that volunteers in small towns closest to major regional centres have relatively more access to services and opportunities for 'new' learning, including through paid work. By contrast, the benefits of accessing new information in the remotest locations appear to

heighten the incentives for 'getting online'. It appears to be volunteers in the moderately accessible small towns 'in between' that are more likely to have neither sufficient local opportunities nor sufficient incentives to embrace new information and computer technology skills.

Interest in communication skills training

The data suggest that there are clear training deficiencies in a number of the communication skills considered to be of importance to the brigades/units. This view is reinforced by the number of respondents indicating that they would (47%) or might be (31%) interested in training in communication skills. There were significant differences in this interest by organisational type, state and frequency of training attendance: volunteers in fire organisations were less likely to be interested than those in other organisations; those surveyed in Tasmania and New South Wales showed the greatest interest (see table A15) and those who attended training frequently (at least monthly) were significantly more interested than those members who attended training less frequently.

Even though there was evidence of a lower frequency and range of training being undertaken in Western Australia, there was evidence of a higher *demand* for training, particularly for training sourced beyond the brigade, than in other states.

The interview data suggest that little formal training was occurring at the local level in many of these communication skills, other than in map reading and the use of radios and other communication systems. In a number of cases people in leadership or administrative positions had taken the opportunity to undertake additional training in their roles (generally at a more central location) which addressed some of these skills, such as public speaking and running meetings. Interestingly, though, brigade/unit leaders were no more or less likely to be interested in attending further communication skills training than other members.

Respondents who indicated that they were (or might be) interested in communication skills training were asked to indicate the areas of training they would be interested in, using the same list of communication skills they had been offered before and being given the opportunity to add others, if desired. Of the skills considered most important, reading maps of unfamiliar areas was of most interest (57%), 45% were interested in training in reading maps of familiar areas and 43% were interested in training related to logging messages. These responses were surprising given the relatively low proportion of respondents that rated their skills as 'low' in this area (see table 2 earlier). Respondents also indicated an interest in training in some of the areas considered of lower importance, including using computers (51–52%), conducting briefings (45%), writing reports (44%) and speaking in public (42%: see table A16).

There was also some interest shown in communication skills that might be considered more closely aligned to the traditional view of basic literacy: reading/understanding training materials (37%), writing brief notes (32%), understanding and passing on spoken messages (31%), reading/understanding dials on equipment (31%) and doing basic calculations (22%). As table A16 shows, there appears, within limits imposed by the small state sample sizes, to be some variations in interest in several of these skills between states.

Impact of low literacy on participation

The deliberate focus on 'communication skills' in this research was designed partly to identify areas of literacy that may be causing difficulties for volunteers both directly, in terms of the functional skills, and indirectly in terms of the underlying skills required to complete the brigade/unit training.

When asked directly, 69% of respondents rated the reading and understanding of training materials of 'high' importance to the brigade/unit; however, only 45% rated their own skills in this area as 'high'. Only 5% rated their skills as 'low': approximately half (51%) rated their skills as 'medium'. It is reasonable to expect that a person having difficulty understanding spoken messages or messages on noticeboards may also have difficulties undertaking a range of training activities, however. Only 2% rated their understanding of spoken messages as 'low'; 53% regarded their skills as 'high'. Similarly, only 4% indicated that their ability to understand messages on noticeboards was 'low'; 57% rated their skills as 'high' (see table 2 earlier).

When asked to respond to direct statements regarding their literacy and ability to undertake training, however, a higher percentage indicated some difficulties in these areas: 15% either agreed or strongly agreed that 'difficulties with my communication skills make it hard for me to successfully complete some of the brigade/unit training' and 14% indicated that 'literacy is an issue for me'. Twenty-seven per cent of respondents agreed or strongly agreed that 'literacy is an issue for volunteers', however, and 40% agreed that there is not enough training to improve communication skills.

The actual proportion for whom literacy and/or communications skills are a problem in a formal training context is almost certainly higher than the percentage indicated, as it is reasonable to assume that there was a proportion of non-respondents with literacy issues that were unable or unwilling to complete and return the survey. Further, the ABS (1997) data suggested that people are more likely to overestimate their literacy skills than underestimate them. In practical terms, this means *at least* three members in 20 (the average number of members for the brigades/units sampled) can be expected to require additional support to complete the necessary training because of underlying literacy issues. This is a substantial minority of brigade/unit volunteers.

How many members may have already left brigades/units recently because of difficulties with their communication and/or literacy skills in volunteer training contexts is unknown, though there were examples provided anecdotally through the interviews. ABS (1997) suggested that people's self-rating of literacy skills might fluctuate according to the fluctuating current demands in everyday life. This study provides some evidence that if training and assessment demands placed on volunteers increases, the numbers of people experiencing literacy as an issue for them in this context is also likely to increase.

There were no significant differences on self-rating of literacy skills on a wide number of variables, including organisational type, state, proximity to a regional centre, remoteness and accessibility, frequency of training attendance, length of service, age, gender or leadership role. This final factor is particularly interesting as it suggests a reasonable minority of people in leadership roles also find literacy an issue. Similarly, there were no significant differences by leadership role in responses to the statement 'difficulties with my communications skills make it hard for me to successfully complete some of the brigade/unit training'. Responses to both these statements for those in leadership roles are shown in table A17. Again, this suggests that at least two to three leaders in every 20 are likely to experience difficulties with literacy skills and/or difficulties successfully completing training because of issues with their communication skills. This number is likely to increase as the demands on those in leadership positions in these organisations increase, as is expected to be the case (Ford 2002).

One important new finding in the data is that a surprisingly large proportion (40%) of volunteers surveyed have Year 10 or below as their highest level of formal education. This proportion was significantly elevated away from the regional centre (33% for those respondents closest to a regional centre compared with 46% for those furthest from a regional centre) and particularly elevated by age (23% of those respondents younger than 35 years compared with 67% of those age 55 years or older). An important implication is that training materials need to anticipate relatively low formal reading and writing levels amongst volunteers.

Indeed, volunteers reporting a highest educational level of Year 10 or below were also significantly more likely to agree or strongly agree with the statements that 'literacy is an issue for me' and that 'difficulties with my communication skills make it difficult for me to complete some brigade/unit training' than those respondents who had completed higher levels of education. They were also more likely to rate the written training materials and assessments as 'very hard' and less likely to rate their ability to log messages as 'high'. They were significantly more likely to rate their ability to use computers to find information as low (60% compared with 23% of those with higher educational levels).

In essence, low formal education levels of volunteers in this study are highly associated with low literacy and also create ongoing problems with access to adult learning as well as to the new educational technologies that are seen by some to be part of the solution.

Data from Australia (Teese & Polesel 2003) show that people in rural areas are more likely to leave school early. Greenberg, Swain & Teixeira 1995 (in the United States of America) show that although literacy levels of rural adults vary, they are relatively low on average; literacy is not a simple threshold and, in particular, that workplace literacy:

> should be viewed as a continuous measure of individuals' proficiencies at performing information processing tasks, which is related to but cannot be inferred by data from years of schooling completed or scores on academic achievement test.
>
> (Greenberg, Swain & Teixeira 1995, p.82)

While the penalties for younger people *not* acquiring basic education and literacy skills have become quite severe in modern workplaces, the penalties for older workers who, as Greenberg, Swain and Teixeira point out, 'completed their schooling at a time when rural primary and secondary education had not caught up to urban education' are perhaps less severe in rural areas (1995, pp.85–6). As they explain in a United States context:

> The demand for workers with good literacy skills is considerably lower in nonmetro labor markets than in their more urbanised counterparts. Relatively low labor market rewards for literacy, in turn, probably tend to depress rural literacy because individuals have less incentive to develop these skills, while those who have high literacy skills tend to gravitate to urban jobs. (Greenberg, Swain & Teixeira 1995, p.91)

Although age was not a significant factor in how a person rated their literacy skills or difficulties with communication skills in the current study, older respondents were significantly more likely to find the written training materials and assessments 'very hard'. Not surprisingly, older participants rated their ability to use computers to find information significantly lower than younger participants (see table A18).

Some of the interviewees working on large farm enterprises indicated that, quite apart from the literacy demands in voluntary roles, the demands for computer and other literacy skills for modern farming and small businesses are increasing. Many of the younger participants indicated that they regularly used online sources of information to assist with farm operation and management. Requirements for Farm Chemical User Certificates and the like to satisfy occupational health and safety requirements are also increasing and demanding higher levels of literacy in rural areas.

A number of interviewees also expressed a concern that demands for training and commitment of time in many voluntary organisations in rural and remote areas are increasing—not just in fire and emergency services. There was a feeling expressed in some instances that these demands were overextending the small number of available volunteers in small and remote communities who have the necessary skills. (Some examples from this interview data are cited in appendix A.)

The levels of literacy necessary to function on the job as a firefighter or emergency service worker or to engage in the necessary training are dependent, to some extent, on the nature of the

training and assessment. People surveyed who indicated that literacy was an issue for them were significantly more likely to find the written training materials 'very hard' but there were no significant differences between them and others in their rating of the assessments. This may be because most fire and emergency service organisations provide the option of verbal assessment for volunteers who request it. Strategies for adapting training for people with literacy issues mentioned in interviews included providing practical and hands-on training and spending more time going through the material when required. Clearly those 15% who agreed or strongly agreed 'difficulties with my communication skills make it hard for me to successfully complete some brigade/unit training' were finding the current system of volunteer training challenging in some way.

While changes in information and computer technology have increased the range of skills required to undertake routine tasks in most workplaces and to competently undertake some tasks in many voluntary organisations, it was frequently pointed out in the interviews that not all members of an organisation need the same set of high-level skills. Some of the least formally literate volunteers may be the most effective team members, particularly if other members recognise and accommodate for them in situations where reading, writing or communicating through new technologies are important or critical for basic safety.

Despite this evidence of accommodation through a team approach, there was general agreement that some basic knowledge and skills were essential for volunteer and public safety, particularly when people are required to operate without supervision or in unfamiliar teams or settings.

The finding that almost all respondents regarded their communication skills as good enough to take an active part in the brigade/unit (97%) and to work in a team (95%) suggests that informal accommodation strategies are enabling most people with literacy/communication problems to contribute as valuable and active members. When asked to indicate whether the hands-on training, written training materials and assessments were 'very easy', 'about right' or 'very hard', most respondents indicated that they were 'about right' (see table A19). Only 1% found the hands-on training very hard, 7% found the written training materials very hard and 6% found the assessments very hard. Significant differences in rating of the assessments were found to be related to age and educational level, with those who were older and/or with lower education levels more likely to rate the assessments as 'very hard'. Given that the written training materials and assessments were more likely to be found 'very hard' for these groups, adapting these materials could make the training more accessible for a wider range of learners.

Despite general agreement that the written training materials and assessments are 'about right', some interviewees indicated that they knew of people who had left or were considering leaving the organisation because of the changing training requirements. Considerable concern was expressed about this trend, particularly as a number of those leaving were considered by the interviewees to be some of the more experienced and capable members.

Value of public safety training to the broader community

There is evidence from the interviews that when the issues of skill acquisition are put aside, the skills already developed through local public safety organisations are highly valued and used by volunteers in other aspects of their lives, at home, at work and in the community (see table A20).

The types of valuable skills mentioned most often by volunteers in interviews were those related to general communication (for example, communicating verbally with others, having confidence to give directions and using radios in workplaces), first aid, driving and occupational health and safety.

The survey also showed high levels of community involvement beyond the brigade/unit sampled. Of the 197 volunteers who responded to the question regarding involvement with

other organisations, virtually all were members of at least one other community organisation (99.5%). Twenty-two per cent were actually members of four or more other community organisations (see table A21). There is evidence from the interviews that valuable skills learnt in one voluntary organisation transfer to other like and unlike organisations in the community.

Public safety organisations were also valued by their members for the critically important role they play in enhancing social connections in their communities, in particular in very small communities regardless of their geographic remoteness.

Skill development also appears to extend beyond the fire and emergency service organisations' registered members. For example, spouses/partners play an important role backing up members, particularly officers, by, for example, answering the emergency response system phones when an incident is reported, communicating messages and mobilising a response, organising meetings, and providing food and other support at extended incidents.

Strategies for literacy development

Literacy and learning were more likely, on the evidence from this study, to be a problem in public safety organisations where training expectations and requirements were more formalised, where more written training materials were used and where members had lower educational levels. Educational levels were significantly lower as distance from a regional centre increased and where the average age of members increased. As all of the organisations sampled, particularly the fire organisations, were rapidly moving toward more formalised training and assessment regimes, an increasing proportion of volunteers can be expected to experience problems with their literacy/communication skills, including literacy becoming a barrier to active participation.

The results from this research suggest the communication skills that volunteers currently learn through their public safety organisation are more likely to be developed through the experience of being part of the team than by specific formal training in these skills. There were no specific programs for development of literacy skills at the sites visited; rather there was accommodation in the style of assessment and types of tasks undertaken by these individuals. When questioned about how literacy issues were dealt with at the brigade/unit level, there was general agreement that there were adequate strategies in place to ensure all members were able to complete the minimum levels of training required to become and remain active members. The focus in the interview responses was around a concern that a number of members didn't realise this and had left or were planning to leave because of a *perception* of imminent exclusion as a consequence of increased training and assessment requirements and whether formal assessment of experienced members was *actually* needed. There were no spontaneous suggestions or requests during the interviews that literacy training *per se* be provided, although some personnel involved in providing training mentioned that they would like to know more about how to support people with low literacy or study skills to succeed with the necessary training.

It can be argued that it is not the core business of fire and emergency service organisations to provide literacy development for their members. There is no evidence from this study that it should be. The increasing training demands may be having an impact on people with low literacy skills, however, and this may, in turn, affect the numbers and characteristics of people able to become and remain active members. Given the apparent difficulty of attracting volunteers, any barriers to a person joining and continuing to take an active role should be minimised where possible. What *is* important is that opportunities for learning are provided for new and existing volunteers to acquire new literacies necessary for engaging in inevitable changes in training and emergency response as technology, regulations and social contexts change.

The overwhelming preference was for hands-on training delivered on site and through the voluntary organisation. The clear preference (by 82% of respondents) was for the training to be provided either at the brigade/unit or a nearby brigade/unit.

Overall, around three-quarters (72%) of respondents would prefer to have any communications skills training provided through their own public safety organisation, either by another member of the brigade/unit with the appropriate skills (29%) or by a fire/emergency service trainer from outside the brigade/unit (44%). Just under one-quarter (23%) of respondents indicated that they would prefer a local communication skills trainer who may or may not be involved with their brigade/unit. Only 5% indicated that they would prefer the training to be provided one-on-one with someone else or in some other way.

There were significant differences in these results by state, accessibility and remoteness, frequency of attendance and age, however. Volunteers surveyed in Western Australia were much more likely to want the training provided by a fire/emergency service trainer from outside their brigade/unit than those in other states and much less likely to want the training to come from within the brigade/unit or from another local trainer (see table A22). South Australian respondents were more likely than those in other states to prefer to have the training provided by another member of their brigade/unit.

People in remote or very remote areas were much less likely to want the training to be provided by someone who was not a member of the brigade/unit or an external fire/emergency service trainer (only 14% compared with 34–35% in accessible or moderately accessible areas). People who attended training monthly or more frequently were much more likely to want the training to be provided by another member of their brigade/unit than those who attended less frequently (38% compared with 14%) and less likely to want the training to be provided by a fire/emergency service trainer from outside their brigade/unit (34% compared with 60%). The differences by age are shown in table A23.

The clear preference is for a strategy for delivery of adult multiliteracy skills that enables provision at a local venue in the context of training that is already being undertaken. Such training has the potential to engage reluctant adult learners (particularly males) in rural and remote communities.

This research confirms experience (Fraser 2002; Hayes & Ryan 2001) that suggests public safety volunteers with literacy issues may have limited time available for training additional to that already being provided through their brigade/unit. In rural and remote areas many of these volunteers are geographically remote from sufficient numbers of other learners requiring similar support to be able to form an economically viable training group and have limited adult language, literacy and numeracy trainers available locally.

Volunteers in rural and remote areas are already involved in comprehensive training and skill development through their local organisation. These organisations already play a critical role in developing the multiliteracies of the people in their communities and approximately three-quarters of those responding would prefer any communication skills training to be provided through their public safety organisation. Any promotion or development of adult multiliteracies through these organisations would therefore be best coming from within the organisational structures that already exist and delivered locally. Strategies to achieve this could be to further develop the skills of key people within regional training departments and in each brigade/unit to modify written training materials to suit a wider range of learners. They could also model effective communication skills and provide mentoring and other support to those who would like to develop their literacy and/or communication skills. Use of current members to support and/or mentor those with literacy/communication skills issues in the context of regular hands-on brigade/unit training could overcome some of the identified barriers to such training. This would particularly be the case where local adult learning organisations do not exist or where they have limited service provision in these areas of learning.

Literacy programs developed through the Country Fire Authority in Victoria, the Queensland Fire and Rescue Service and Queensland state emergency services are showing that developing partnerships between local adult learning organisations and public safety organisations is also a viable way to develop the multiliteracies of volunteers. The current research has found considerable goodwill exists toward local public safety organisations by adult learning organisations where they do exist in rural and remote communities. The current links between fire and emergency services volunteers and adult learning organisations tend to be weak, however. There is therefore considerable scope to broaden and develop partnerships between these organisations. Any concerns identified in this study about providing this training support related to funding and the availability of suitable trainers. Funding models will need to take account of the possible small training group numbers and the likelihood of training being delivered outside 'normal' business hours to suit the availability of the volunteers.

In particular, given the interest shown in further computer training and the availability of at least some computers in most of the locations visited (albeit only three or four in some locations), there may be a potential to develop literacy skills through further developing local links with computer skills training providers. Relating this training to sourcing practical information directly relevant to their fire/emergency service, community and/or work roles, and providing it at a time suitable to the volunteers would be critical.

The communication skills most highly valued by volunteers in this study were the abilities to understand and pass on spoken messages, read maps and read and understand dials on equipment. Providing training on the underpinning literacy and numeracy skills needed in these areas is likely to be of most benefit and interest to volunteers. Training delivery in tandem with a public safety organisation trainer and at the brigade/unit whenever possible would help ensure the training is practical, relevant and as hands-on as possible.

This research shows that while most (95%) volunteers regard themselves as keen learners, only around one-half (48%) 'actively take part in adult learning opportunities that are offered in their community'. It was clear from the initial discussions setting up the site visits and from the group interviews that many volunteers were unaware of the adult learning opportunities available in their communities. Even if formal training links are not established between the public safety organisations and other adult learning providers, disseminating information through brigades/units on training courses being provided elsewhere in the community could be a useful way of informing a wider group of people of the training that is available locally. Given the concerns expressed about the increasing amount of paperwork coming into brigades/units, this may be best done on a personal level, either by a representative of the adult learning organisation visiting the brigade/unit or contacting brigade/unit officers directly and asking them to pass the information on to their members.

The barriers to engagement of adults, particularly males, in adult learning could potentially be removed by ensuring training and assessment materials and methods of delivery suit the full range of learners in volunteer public safety organisations. Barriers could also be removed by further developing the skills of key people within the organisations at both the regional and the local brigade/unit level to support and develop the skills of a range of learners, and broadening partnerships between public safety organisations and other adult learning organisations in rural and remote communities. This will provide benefits for the individuals involved, their public safety organisations and the wider communities in small and remote towns.

Conclusions

A range of conventional *and* new literacies is required by fire and emergency services volunteers in small and remote towns. The most critical literacies required to perform job tasks and to meet

essential competencies are the ability to understand and accurately pass on spoken messages, to read maps and to read and understand dials on equipment.

There is also evidence of a broader interest in learning that goes beyond these industry competencies. This interest remains relatively untapped for a group of learners that are otherwise not measured in conventional adult learning data and are often (wrongly) regarded as an unreachable cohort through most existing adult learning organisations.

While in some small towns fire and emergency services organisations are the only or most important site for accredited training, they are not currently regarded by most local people, including their members, as learning organisations.

A focus on literacy *per se* in these settings is not likely to be productive. Literacy is less of an issue in team situations where volunteers tend to compensate for known shortcomings of members of the team. There is a belief among many volunteers that there is no need for all members of the team to have the same multiliteracies at the same high levels in an operational fire or emergency service situation. One situation where literacy has an impact on volunteers (for around 15% of members) is in the training context where limited communication skills currently affect the ability of volunteers to complete some of the necessary training.

Those volunteers who identify literacy as an issue for them are significantly more likely to have lower levels of formal education. They are also significantly less likely to be able to log spoken messages or feel competent with the existing written training materials. It would therefore seem wiser to focus on customising the learning for the learner than on raising the 'literacy' of the learner to meet the levels presupposed in formal training materials.

Fire and emergency service volunteers are extremely positive about learning, with a clear preference for hands-on training—preferably from a fire or emergency service trainer outside the brigade/unit or another person inside their brigade/unit. The preferred sites for training are at their own brigade/unit or at a nearby brigade. In essence, very few volunteers would feel comfortable training in a conventional formal classroom setting, particularly in a setting beyond their own organisation even if it is close and accessible.

Volunteers in these organisations are also unlikely to be otherwise involved in formal or non-formal adult learning, though many learn informally. In general, their knowledge of existing adult learning organisations (including online access centres, ACE providers and TAFE) is very limited, even where they exist locally.

There is some evidence that any unnecessary formality associated with either the learning settings, the learning materials or the assessments is likely to affect the levels of volunteerism for younger members and the retention of older members. While fire and state emergency service organisations are in many important senses adult and community learning organisations, the extent of learning that takes place is currently limited to fire and emergency service related competencies. The potential for wider learning in and through fire and emergency service organisations, including as a site for engaging young people while still at school, is large.

This study confirms the finding of Bull and Anstey (1995) that in many rural communities literacy, as it is traditionally defined, was seen more as 'women's work'. 'Conversely, men generally saw literacy in more functional terms in order to complete tasks or augment work' (Bull & Anstey, p.9). There is potential for some brigades/units to improve their status as community learning organisations for an otherwise difficult-to-reach cohort of (mainly) adult males. This might involve focusing on provision of learning in the area of intersection between skills known to be of interest to volunteers—in reading maps, using computers, conducting briefings and speaking in public, writing reports and logging messages—and in skills that would improve emergency response. Furthermore, it could serve as an accessible and efficient adult gateway to several new and emerging literacies in information and computer technologies for an already

captive group of learners. This potential particularly includes the use of global positioning systems and the internet—for information gathering, weather and fire prediction and communication by email with like organisations. In the process, valuable skills will be developed in learning how to learn that have broader benefits to individuals, families, enterprises and communities than literacy initiatives *per se*.

Training already has significant benefits that go well beyond the ability to militate against, prepare for and respond to community fire and emergency situations. Volunteers in local fire brigades and state emergency service units, particularly those that train regularly, develop high levels of bonding social capital—trust, reciprocity, networks—within their organisational structure. These are essential in providing a quick and coherent response to local community emergencies and, when required, to distant major emergencies. Bridging social capital is largely with like organisations within and beyond the locality.

The extent to which fire and emergency service organisations are truly inclusive of the pool of the potential adult volunteers differs across communities but is somewhat limited in many cases. There is considerable scope, through already active fire and emergency service organisations in small and remote communities, for more emphasis on the creation of an environment that is attractive *for* discretionary learners who learn by choice. Compulsory, unnecessarily formal learning has the potential to work against experienced volunteers. Broadening opportunities for learning might, in the longer term, create a more sustainable pool of new volunteers, including young adults and women. The local public safety organisation might then play an even more important role for many volunteers and community organisations.

While local adult learning organisations are broadly supportive of fire and emergency service organisations and vice versa, there is a mutual lack of knowledge as to what each does and has the capacity to do, even in many small towns. If initiatives are undertaken to develop the role of learning through public safety organisations, these initiatives should improve rather than duplicate existing opportunities. Any new resources should augment the existing brigade/unit capacity, particularly in the use and attitudes towards new literacies, including information and computer literacy.

Fire and emergency service volunteers throughout rural and remote Australia are clearly investing considerable time and energy into providing an essential service to their communities. Formal training and assessment demands that are being placed on them are increasing in response to a number of external and internal pressures. This research has shown that it is critical that training and assessment strategies be put in place to ensure these increasing demands do not discourage current members from continuing their involvement or deter new members from joining. Where these strategies are put in place, local fire and emergency service organisations in rural and remote Australia have the potential to develop important literacy skills, as well as positive attitudes towards learning, for people who may otherwise have few or no local opportunities for such development.

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Appendix A: Supporting data

Profile of brigades/units and locations

Table A1 shows the spread of the locations visited, by the Accessibility/Remoteness Index of Australia (ARIA). 'Accessible' is described in the index typology as having 'some restrictions to accessibility of some' goods, services and opportunities for social interaction. Moderately accessible is defined as having 'significant restriction' to goods, services and opportunities, remote as 'very restricted accessibility' and very remote as 'very little accessibility'.

Table A1: Spread of locations by accessibility/remoteness

	Accessibility/remoteness and ARIA range			
	Accessible *(1.84–3.51)*	Mod. accessible *(3.51–5.80)*	Remote *(5.8–9.08)*	Very remote *(9.08+)*
No. of locations	**7**	**6**	**6**	**1**

Note: ARIA = Accessibility/Remoteness Index of Australia.

Table A2 summarises the accessibility, district population, organisational type, membership and local learning opportunities in the 20 locations sampled, sorted by increasing accessibility and remoteness values.

Table A2: Selected characteristics of the locations and brigades/units sampled

Location	State	ARIA	District population (approx.)	Organisation type	Members	% of district population in the brigade/ unit*	Local learning opportunities†
Ridgley	Tas.	2.4	800	Fire	17	2.1	PA
Whyalla	SA	2.5	20 000	SES	50	0.3	PSTA
Bochara	Vic.	2.5	200	Fire	24	12.0	–
Gol Gol	NSW	2.7	600	Fire	14	2.3	P
Coleraine	Vic.	2.7	1100	Fire	24	2.2	P
Torbay	WA	3.2	300	Fire	33	11.0	P
Waratah	Tas.	3.5	250	SES	15	6.0	P
Goroke	Vic.	3.8	300	SES	17	5.7	PS
Balranald	NSW	4.3	1400	Fire	10	0.7	PSA
Rosebery	Tas.	4.4	1800	Fire	13	0.7	PSA
Netherby	Vic.	4.9	100	Fire	39	39.0	P
Kimba	SA	5.1	1300	Fire	16	1.2	PST
Hillston	NSW	5.9	1800	Fire	10	0.7	PS
Jerramungup	WA	6.0	400	Fire	25	6.3	PSA
Strahan	Tas.	6.2	1600	Fire	16	1.0	PA
Wudinna	SA	7.5	600	Fire	18	3.0	PST
Hopetoun	WA	7.6	400	Fire	8	2.0	PA
Lake King	WA	7.9	150	Fire	26	17.3	P
Clare	NSW	8.4	50	Fire	11	22.0	P
Streaky Bay	SA	10.0	800	Fire	20	2.5	PS

Notes: ARIA = Accessibility/Remoteness Index of Australia

*The total number of members in the organisations surveyed, excluding Whyalla state emergency service which is located within a large regional town, was 356. This represents 3.3% of the 10 750 people in these 19 locations.

† Key: P = Primary school; S = Secondary school; T = TAFE campus; A = ACE or equivalent provider with computer access (e.g. online access centre or telecentre).

Table A3 presents a summary of data on the accessibility to learning for the 20 sampled locations, sorted by accessibility and remoteness values.

Table A3: Approximate distance to learning centres for the 20 sampled locations (in kilometres)

Locations	ARIA	Town 5000+	Primary school	Secondary school	ACE	TAFE campus	University campus	PSO regional office	PSO training centre
Ridgley	2.4A	12	0	12	12	12	12	12	12
Whyalla	2.5A	0	0	0	0	0	0	0	0
Bochara	2.5A	10	10	10	10	10	10	10	45
Coleraine	2.7A	34	0	34	34	34	34	34	69
Gol Gol	2.7A	7	0	7	7	7	7	36	36
Torbay	3.2A	25	0	25	25	25	25	25	25
Waratah	3.5MA	70	0	70	0	70	70	70	220
Goroke	3.8MA	70	0	0	70	70	164	70	261
Balranald	4.3MA	100	0	0	0	110	156	300	206
Rosebery	4.4MA	167	0	0	0	53	167	180	278
Netherby	4.9MA	107	0	30	35	107	107	107	240
Kimba	5.1MA	120	0	0	0	0	210	210	210
Hillston	5.9R	110	0	0	110	110	336	162	290
Jerramungup	6.0R	180	0	0	0	180	180	180	180
Strahan	6.2R	212	0	40	0	40	212	212	40
Wudinna	7.5R	220	0	0	0	0	310	310	310
Hopetoun	7.6R	237	0	50	0	337	237	332	237
Lake King	7.9R	256	0	69	45	256	256	362	115
Clare	8.6R	214	0	76	76	214	214	200	200
Streaky Bay	10.0VR	320	0	0	0	210	320	320	320
Averages	**5.1**	**124**	**0**	**21**	**21**	**92**	**151**	**157**	**165**

Note: ARIA = Accessibility/Remoteness Index of Australia.

Key: ARIA—A Accessible, MA Moderately Accessible, R Remote, VR Very Remote; all other numbers are kilometres to: nearest town of 5000+ people, Secondary School (to Year 10), Adult and Community Education (ACE) provider or equivalent facility, Public Safety Organisation Regional Office and Regional Training Centre.

The respondent sample

Table A4 summarises the survey returns by state.

Table A4: Respondents to the survey by state

State	Frequency	% of sample
New South Wales	80[7]	24
South Australia	71	21
Tasmania	40	12
Victoria	77	23
Western Australia	71	21
Totals	**339**	**100**

Table A5 summarises the number of interviews and types of interviewees by state.

Table A5: Number of interviews and interviewees by state and organisation type

State	No. of interviews	Organisation type		Total interviewees
		Fire/SES*	Community	
New South Wales	14	32	11	43
South Australia	14	40	8	48
Tasmania	13	32	10	42
Victoria	16	42	13	55
Western Australia	15	33	9	42
Totals	**72**	**179**	**51**	**230**

Note: *32 of these interviewees were state emergency service members.

Statistically significant differences

Final analysis of the 339 survey returns included cross-tabulations of a number of variables and chi square tests of significance as summarised in tables A6 and A7: an explanation of how the variables were categorised is shown in table A6; statistically significant p-values (< 0.05) in table A7 are italicised. These indicate significant relationships between the two categorical variables, or equivalently, significant differences in the profiles of one variable within each category of the other variable. The columns of table A7 are ordered according to the number of variables exhibiting significant differences. Among the variables examined, the greatest number of significant differences observed were by state (10 variables), frequency of training attendance (8 variables), age (8 variables), educational level (7 variables), perceptions about communication skills (7 variables) and literacy (5 variables), and length of service (5 variables).

[7] 35 of the New South Wales surveys and four of the Tasmanian surveys were from other small and remote town brigades/units in the same region as the brigades/units where interviews took place.

Table A6: Details of the variables investigated

Variables	Survey question numbers	Attributes used to identify categories	No. of categories	Details of ascribed categories
State	—	Location of brigade/unit	5	NSW, SA, Tas., Vic., WA
ARIA category	—	Geographic Accessibility/Remoteness (ARIA) of brigade/unit	3	Accessible, moderately accessible, remote or very remote
Org type	—	Organisation type	2	Fire, Other organisation
Proximity	—	Distance from the main regional city at that site	3	Closest to regional centre, intermediate from regional centre, remotest from regional centre
Attendance	2	Frequency of training attendance	2	Monthly or more frequently, less frequently than monthly
Hands-on trg	6	Rating of hands-on training	3	Very easy, about right, very hard
Written mats	6	Rating of written training materials	3	Very easy, about right, very hard
Assessments	6	Rating of assessment materials	3	Very easy, about right, very hard
Computers	7	Self-rating of ability to use computers to find information	3	Low, medium, high
Logging	7	Self-rating of ability to log (record) spoken messages	3	Low, medium, high
Maps—familiar	7	Self-rating of ability to read maps of familiar areas	3	Low, medium, high
Maps—unfamiliar	7	Self-rating of ability to read maps of unfamiliar areas	3	Low, medium, high
Diffs with comm skills	8	Response to statement 'difficulties with my communication skills make it hard for me to complete some of the brigade/unit training'	4	Strongly agree, agree, disagree, strongly disagree
Literacy is an issue	8	Response to statement 'literacy is an issue for me'	2	Strongly agree/agree, disagree/strongly disagree
Lng opps avail	8	Response to statement 'opportunities for adult learning in our community are limited'	4	Strongly agree, agree, disagree, strongly disagree
Preference for trg—who	9	Type of person the respondent would prefer communication skills training to be provided by	3	Another member of this brigade/unit with the appropriate skills, a fire/emergency service trainer from outside this brigade/unit, other local trainer
Preference for trg—where	9	Where the respondent would prefer communication skills training to be held	4	This brigade/unit, a nearby brigade/unit, a local learning organisation, other
Interested in comm skills	9	Would or might be interested in communication skills training	3	Yes, maybe, no
Leader	11	Whether in a leadership role	2	Yes, no
Length of service	11	Years membership of the brigade/unit	3	Less than 2 years, 3–10 years, more than 10 years
Age	12	Age of respondent	3	Younger than 35 years, 35–54, 55 or older
Education	14	Highest education level	2	Year 10 or below, Year 11 or above
Gender	13	Gender of respondent	2	Male, female

Note: ARIA = Accessibility/Remoteness Index of Australia.

Table A7: Cross-tabulations of a number of key variables (p-value for chi-square test of independence)

Variables compared	State	Attendance	Age	Education	Differences with communication skills	Literacy an issue	Leader	Length of service	Gender	ARIA Category	Organisation type	Proximity
Computers	*.003*	*.001*	*.000*	*.000*	.122	*.007*	.187	*.000*	*.016*	*.004**	.339	.135
Age	*.000**	*.000*	–	*.000*	.147*	.317*	*.006*	*.000*	.387*	.111*	*.002**	.474
Logging	.081	*.001*	*.017*	*.003*	*.009*	*.002*	*.001*	.391	.105	.219	.094	.349
Written mats	*.007**	*.005*	*.024*	*.008*	*.000*	*.021*	.708	.336	.615	.180*	.209	.109
Education	*.016**	.075	*.000*	–	*.005*	*.027**	.176	.071	.585	.084*	.491*	*.041*
Lng opps avail	*.004**	.500	.482	.055	*.048**	.119*	.181	.481	.567*	*.011*	.731*	*.000*
Leader	*.023*	*.004*	.103	.447	.205	.553	–	*.000*	*.005*	.842	.684	.842
Preference for trg—who	*.000*	*.000*	*.027**	.703*	.805*	.631*	.066*	.072*	.051*	*.006*	.701*	.113*
Literacy an issue	.610*	.294	.736*	*.000*	*.000**	–	.570	.238*	.333	.087	.464*	.877*
Interested in comm skills	*.008*	*.002*	.557	.441	.207	.269	.199	.088	.150	.829	*.009*	.305
Maps—familiar	.263	.190	.504	.193	*.001*	.287	*.000*	.091	*.000*	.208	.226	.279
Take part in lg opps	.059*	.073	*.047**	.231	.782*	.372*	*.016*	*.039*	.115*	.138*	.451*	.158
Diffs with comm skills	.122*	.058	.648	*.000*	–	*.000**	.073	.838*	.809	.964*	.296*	.964*
Gender	.071	.135	.670	.290	.993	.099	*.005*	*.000*	–	.243	.110	.070
Maps—unfamiliar	.781	.892	.946	.238	.107	.138	*.001*	.682	*.000*	.255	.251	.524
Assessments	*.005**	.387	*.004*	*.010*	*.016**	.541*	.771	.073	.776*	.063	.243*	.269
Preference for trg—where	*.004**	*.004**	.074*	.235*	.576*	.856*	.129*	.128*	.142*	.552*	.712	.175*
Hands-on trg	.212*	.858*	*.014**	.492*	.637*	.170*	.162*	.098*	.851*	.318*	.056*	.085*

Notes: ARIA = Accessibility/Remoteness Index of Australia; some totals exceed 100% due to rounding.

Key: Italicised: significant difference $p < 0.05$; *indicates where 20% of cells had fewer than five cases.

Brigade/unit training

Table A8 shows the type of training provided by state. Apparent variations between states, particularly in 'team and/or leadership' and 'other communication skills' are subject to limitations of sample size identified in the full report.

Table A8: Type of training provided by state (% of respondents)

Type of training	Vic.	WA	NSW	Tas.	SA	All states
Emergency response	77	68	88	100	88	83
Technical skills	81	68	88	100	94	85
Team and/or leadership	62	37	71	85	81	66
Other communication skills	51	37	75	72	65	60
Other	10	16	12	10	6	11
N =	*74*	*63*	*76*	*39*	*69*	*321*

Survey respondents were asked how often they attended training with their brigade/unit. The data on training frequency are summarised in table A9. It should be noted that the 'fortnightly' option was not provided in the survey but a number of respondents in Victoria and New South Wales indicated this frequency in their responses.

Table A9: Training attendance by state (% of respondents)

Frequency of training	Vic.	WA	NSW	Tas.	SA	All states
Weekly	1	1	38	83	78	36
Fortnightly	16	–	6	–	–	5
Monthly	16	11	34	15	16	19
A couple of times a year	38	47	14	3	7	23
About once a year	14	13	1	–	–	6
Very rarely	14	14	4	–	–	7
Never	1	13	4	–	–	4
N =	*77*	*70*	*80*	*40*	*71*	*338*

Survey participants were presented with a list of statements and asked if they 'strongly agreed', 'agreed', 'disagreed' or 'strongly disagreed' (see survey question 8, appendix B). Those statements where more than 75% of respondents either agreed/strongly agreed or disagreed/strongly disagreed are listed in table A10. The statements presented in table A10 have been sorted into themes; this was not the case in the original survey.

Table A10: Opinions of respondents about communication skills, training, the brigade/unit and the community (%)

Statements	Strongly agree	Agree	Disagree	Strongly disagree
Communication skills				
My communication skills are good enough to be able to take an active part in this brigade/unit	29	68	3	<1
My communication skills help me work with others in a team	19	76	5	–
I would like to improve my communication skills	15	64	20	–
Difficulties with my communication skills make it hard for me to successfully complete some of the brigade/unit training	4	12	64	21
Literacy is an issue for me	3	11	50	36
Training				
I am a keen learner	26	69	5	<1
I would prefer much more 'hands-on' training	25	61	14	<1
Members of this brigade/unit need more training	18	68	13	2
The resources this brigade/unit has are adequate for on-site training	12	69	16	3
The brigade/unit and the community				
Our brigade/unit warmly welcomes new members	51	46	2	<1
Volunteer organisations need more government assistance	47	44	7	<1
This brigade is equally welcoming of male and female members	45	53	2	<1
I feel good about taking part in a community activity	42	57	<1	–
I feel it is my duty to volunteer to support my brigade/unit	32	56	10	1
This brigade/unit is well connected to the local community	23	66	10	<1
This brigade/unit has strong links outside of the town	17	64	17	2
This town's small size is an advantage in communicating	16	60	22	2

Note: Each set of skills is sorted by strength of agreement; *N* values ranged from 290 to 332.

Attitudes to learning

Each organisation surveyed was moving toward more formal training and assessment, although, as discussed in the full report, the extent to which this had been introduced varied by state and type of organisation. Attitudes regarding the best ways for volunteers to learn were investigated via the survey instrument and during the group interviews.

'Hands-on', practical training preferred

It was clear that volunteers felt that some sort of training was required so that people could learn how to perform their public safety role. The interview data confirmed the survey response that most volunteers preferred much more 'hands-on' training (86%) and believed this was the best way for volunteers to be taught and to learn:

> The training that is the most effective is the hands-on training where you get out and actually practice the skills. (Volunteer, New South Wales)

> You get a group of blokes and sit there for four hours just doing paperwork: now those blokes have lost interest straight away pretty well. But if you got them outside, and you've got flame and you want to put water on it—because that's what they want to do, is put the fire out—and do your training, you'll win them every time. As long as they're doing something manually and hands-on the equipment you'll win them all the time. (Volunteer, Victoria)

> The training that you receive inside watching videos or whatever, half the time you fall asleep. I think firstly if you are out there doing some practical, it's the only way you are going to learn, perhaps it's gonna sink in better . . . [than it] will sitting in a classroom. (Volunteer, New South Wales)

> I believe hands-on is the best way to go. Most people tend to nod off when you get into the classroom applications. Yeah, there are some times that you have to carry out the theory, a lot of external training; but a lot of hands-on, I find people get more involved with their training. (Volunteer, Tasmania)

Many interviewees highlighted the critical value of the learning that takes place at 'real' incidents, such as major fires and vehicle accidents and when undertaking roadside burning.

> Nothing beats the practical hands-on when the action is on for learning because when you come back and have a few cans after and have a debrief, informal debrief, you find out what you should have done and it rectifies itself next time. (Volunteer, Western Australia)

There was some concern expressed in several states about the reduction in the amount of roadside burning that now takes place as it was seen as reducing opportunities for people to develop their practical skills in fire behaviour.

> In the last three or four years a lot of it is being assessed . . . When I first started it was 'as you went', you know, on-the-job . . . A lot of training was through doing things like burning off . . . From there it has got very paper-based and you've got accreditation. (Volunteer, Victoria)

The prolonged drought that many of the areas visited were undergoing had also had an impact on the number of fires that several brigades had attended in recent times.

> We've hardly had any fires the past 10 or 12 years. (Volunteer, New South Wales)

> A lot of people don't feel they need formal training because they have been fighting fires for years and they really only think about fighting fires when there *is* a fire. When there is a fire everybody joins in and fights it but when there are no fires there's not many interested. (Volunteer, Western Australia)

There was a general view that 'all the bookwork in the world is no use until you put it into practice':

> For me, as a young person, it's just hands-on. [Person's name] done it in the past with the truck and a couple of other blokes, people that have never been on a truck or seen a truck. Its just spending an afternoon showing them, telling them what it's about. Then when it comes to the actual situation with a fire, you can't tell anybody, can't train anybody. Until they have actually had that experience of going to a fire, you can educate them about things, but until you go, you don't know. (Volunteer, Western Australia)

Advantages of accredited training

Many people viewed the changes toward accreditation of skills positively. Reasons for this included the points summarised and cited from transcripts below.

✧ Training and assessment is necessary and further develops skills.

> Training has changed a lot: you had to be more or less seen to be qualified to do what you do, otherwise there could be repercussions come back on you. You don't go out and do road rescue if you haven't got the qualifications to do it. I mean [persons' name] used to go out and chop up a car and stuff like that and not worry about it, but now you do because you've got LP gas, you've got hybrid cars, you've got your buses with the air shockers and if you cut the wrong line you drop the bus on the ground. So I mean training is very important in those aspects. (Volunteer, Victoria)

> If there is a fire somewhere in the bush . . . we will get a lot of volunteers and they will all turn up wanting to help, but if they haven't been trained they're a bloody nuisance, because they don't know how to use the equipment properly. (Volunteer, Western Australia)

- ✧ Training increases confidence in performing volunteer roles.

> [Training] has become more formalised, it has become more outcome-based, criterion-referenced and accredited so that both volunteers and the organisation can have [the confidence] that people who go out on emergency services are trained and will do the job safely: safely for themselves and safely for others of the crew who are with them. (Volunteer, Victoria)

> When I was involved in the fire brigade . . . I came up through the ranks of 16, 17 and 18-year-olds [and] there wasn't the structure there—this was before the minimum standard was put into place. So I haven't actually ever been, 10 years in the Fire Brigade, haven't actually ever been to a fire because I didn't feel confident that the training was there. A structured training course which has now come in, [I can] say, well, I'm ready now to go fight fires. (Volunteer, Victoria)

- ✧ Volunteers can be more confident that others in the team have the skills required and can do the job asked of them. This was particularly mentioned by people who had been involved in major incidents where crews were made up of people from different brigades or units who they didn't know well. (This research was undertaken soon after major bushfires in Victoria, New South Wales and the Australian Capital Territory over the 2002–2003 summer in which a number of those interviewed had been involved.)

> When you go into a mountainous area . . . from a flat land, it's a hell of a change, so you resolve everything back to your training. We were trained to cope with those areas even though we'd physically never done it. The situation was quite disastrous a couple of times because one of the crews that went [to the New South Wales fires] got overrun at one stage and all they did was just turn back straight to their training and it worked. They stuck with what they'd been taught and it worked. What we noticed was the quality of . . . our training, the guys that went . . . were very well thought of. We got compliments wherever we went for our professionalism. We even had some of the hierarchy from up in the hills when we were leaving say that we're no longer considered 'flat-landers'. (Volunteer, New South Wales)

> . . . by 2005 people who haven't done the training will no longer be called a firefighter, and even now we're unwilling to have on the fire truck anyone who isn't an accredited fire fighter, so there are some members of our community who would regard themselves as firefighters who are going to be disappointed I suppose. They have been invited to join the training, but the fact that they haven't come along means either that they don't understand the importance of it or they think that their experience is a substitute for it, but as [person's name] was saying, old ways of tackling fires are quite different from the way we do it now where there is a very heavy emphasis on teamwork and communication between crews. (Volunteer, Victoria)

- ✧ The skills developed and certificates obtained can be used in other workplaces and in some cases to obtain work.

> I've done a lot of training courses, not just with SES [state emergency service], and during those training courses you [get] bits of paper . . . and if you can poke one of those up somebody's nose—and I did one day, it earned me about an extra fifteen grand a year—so you know, pieces of paper, unfortunately [are important]. I know some extremely qualified people, but they've got no letters or bits of paper and they don't get paid anywhere near what they should . . . The good part about the training is that it seems to be going down the road of [accredited] training which means that people will be able to transport this into the workplace. Like . . . four-wheel drive training . . . The chainsaw course . . . people could use that, nursery people or whatever. (Volunteer, South Australia)

> I did a leadership course. With my employment I found it really useful because a lot of the stuff I learn actually helped me with my job—actually training people, being a leader. I've learnt from my training course. (Volunteer, South Australia)

> I was going to say that because the brigade is a fairly major part of our community—it is not the only one, but a major one—there are a number of communication skills that are practiced. For example, the organising of training, of meetings, of other events, just meeting procedure, meeting protocol, that should be a good training ground and practice. You can use that in like Hall committees or Church committees and School sorts of things. (Volunteer, Victoria)

> I did the training trainee course with the fire service and from that I developed skills and found out that I had skills I didn't know I had. Now part of my job is exactly what I have been doing here for 15 years, so now I am being paid quite well to do the skills I learnt here. (Volunteer, Tasmania)

- ✧ The qualifications are recognised nationally and can be used as evidence of skills if moving from state to state or from organisation to organisation.

> The [training] changes we are going through now are going to be quite significant because before training was localised . . . now the training is going to be nationally recognised. [I can] leave here and say go to [a place in another state] where I can transfer straight into the brigade and retain my accreditations. (Volunteer, Tasmania)

> I think the training needs to be nationally accredited. There's a current move in that direction with some of the courses. Certainly what we do needs to be equated to another state or another organisation so there's that transferability, skills can move across the country or even between some of the emergency services. (Volunteer, South Australia)

Concerns regarding imposed accredited training

There was also considerable resistance to the changes to training, however, especially among a number of the older and/or more experienced members. This resistance was more marked in the interviews with fire organisations; state emergency service interviewees tended to have a more positive or accepting view, although this was not universal. This may be because more formal assessments appeared to have been in place longer in the local emergency service units visited.

Reasons for concern about the changes included the points summarised and illustrated by citations below.

- ✧ Volunteers have performed their public safety role well without formal accredited training in the past.

> With rural brigades you tend to find that your membership base is probably on the forty and older age bracket. There are people who comment 'Why do we have to do this, we've been here for so long, we know this, is it really necessary for us to go through this?' There's always that concern with some people that they feel that they're going over things they already know. 'Do I need to spend all this time to have a piece of paper filled in showing that I can do it when all the knowledge is up in my head?' . . . People have been in the brigade for a number of years and have all that practical experience which the [Country Fire Authority] doesn't necessarily acknowledge unless you've got that piece of paper which says that you've sat down and done certain things. (Volunteer, Victoria)

> When I first started in the brigade we used to see a puff of smoke go up and everybody turned up and you fought the fire and you went home. These days you are accredited for a lot of things which is a lot of baloney . . . In the last 100 years blokes have fought fires, pointed the hose at it, put it out and went home. These days you have accreditation to know how to point a hose, not waste water and all that stuff. Drive trucks. When we did

the accreditation there were about five different things . . . Sometime you think 'Aw God. What you gotta do this for?' (Volunteer, Victoria)

It's only the last few years that there has been any form of training in fire fighting: before it was just experience. A lot of people here did a lot of experienced fire fighting because they cleared the land from virgin bush. (Volunteer, Western Australia)

✧ Many years of experience and existing knowledge and skills are not being recognised.

I think what happened post-Linton was that the existing skills that so many people had—really on the ground knowledge of the land, knowledge of the bush and knowledge who has strengths in the team—was just shelved, and people were really upset and offended . . . People who have had 50 or 60 years of real environmental knowledge have just been disregarded. Instead of taking them on board and them being utilised as part of the training for the whole big picture, we wiped them and now you're starting from [scratch]. I just think that's just such a waste of resources, such a waste of human capital. (TAFE teacher, Victoria)

There's sorta not much room for those that have the practical experience or a number of years experience, there's nothing that balances that out versus having to complete the various modules and whatever else to get accredited in certain areas. There seems to be a need, there should be a trade-off between so many years experience. [If] they've demonstrated that they can handle those situations then they should be accredited in that field. (Volunteer, Victoria)

It's been proven. A couple of years or three back, they were getting blokes there that wouldn't know their arses from their elbows, but they could [get] a bit of paper, [they knew] the right answers. Blokes who were natural born crew leaders . . . and had been doing the same without that bit of paper for years were being pushed aside for these other blokes. (Volunteer, Victoria)

✧ Formal accredited training is not necessary given their local circumstances.

People have joined the fire brigade as a community service basically, so they have come here to put water on fire and to help someone out. They don't want to come and do all the training. The training that we do as retained members is basically the same as the permanent members. The permanent members will get more calls in a month than we get in a full 12 months. They need to know all that different training, and I can see how it would turn people off joining the brigade having to do all the training and all the questions and answers and all the responsibilities, whereas in a small community like this, I don't think it is warranted. It is a lot of extra training that gets boring. We would rather come to drill, go out, draw some water, swirl it around, summertime probably get a bit wet, but now they want us to learn how to tie knots 15 different ways, and how to do all sorts of things that are really not what people join the brigade for. (Volunteer, New South Wales)

There is no formal introduction to brigade membership, or anything like that, because we are so sparse on the ground that anyone that's here is automatically considered to be a member of the brigade. There is no prerequisite training or anything like that. We just can't afford all that. (Volunteer, New South Wales)

The New South Wales Rural Fire Service now has got to the ridiculous point that if someone wants to become a member of the Rural Fire Service they have to have a police check done on them to see if they have any record of paedophilia or arson. There are two different worlds in New South Wales: those that live along the coast and those that live out here and they are trying to impose their standards on us by all this training, because they get people who turn up over there that have never seen a fire, that have never lived in the bush. All the people out here have survived in what is a fairly harsh environment for all their lives and you don't do that without picking up a fair amount of skills along the way.

> And those skills they pick up are quite sufficient to fight fires in this country. To try and impose east coast standards on us out here is (1) insulting and (2) just bloody ridiculous.
>
> (Volunteer, New South Wales)

- ✧ It is just an exercise that the central organisation is undertaking to 'cover their butts' if something goes wrong. The 'buck' for any errors will then be put back on the volunteer themselves.

> . . . that's where it boils down. I mean, if somebody gets crook or something bad goes wrong and we end up in the Coroner's Court they're going to say 'Well, what experience [have you had]?' 'What have you got under your belt to prove that you should be doing this or that or something else?' And then they'll try to go back and say 'Oh, you've got no accreditation', 'You've been doing it for 40 years but you've got no accreditation'.
>
> (Volunteer, Victoria)

> Well you can't do anything unless you are covered is what it comes down to. Before it used to be like you would act in good faith, you were a volunteer, you've given up your time, job, everything to go help the community out. If someone's house burns down, that isn't directly your cause, but you could be answerable for it and that might be stopping people from putting their services forward because they are scared that if they do something wrong they are going to wear the bill. (Volunteer, Western Australia)

> When the fire brigade first started, people sort of joined because they wanted to help their communities and their neighbour in times of crisis and they were prepared to go out and give their time to do that with whatever they had. And then over the years its now got that we have quite sophisticated equipment, therefore people have got to go and do training and learn all the rules because of all this public liability. I think the term 'volunteer' is now wearing perhaps a bit thin, especially with the older ones, they're not really doing what they set out do. That's just how I feel. (Volunteer, Western Australia)

- ✧ People don't have the time or ability to travel to and/or undertake the training, which in some cases is seen as additional to what is already happening at the brigade/unit.

> The distances [out here] preclude situations like Sunday morning training.
>
> (Volunteer, New South Wales)

> I think probably one of the difficulties is the distance makes it hard for us to go anywhere, [Person's name] just went to [place] that's four or five hours away . . . We would like more training here. They actually did the first aid course here this year. That was good because we didn't have to waste time training or take time away from our jobs.
>
> (Volunteer, New South Wales)

> [Training] sort of bites into your private life a fair bit . . . nowadays there is a lot more HAZMAT [hazardous materials] and [other] important things to be doing, other than just general fire duties. There is a lot of training to do, which a lot of the younger guys don't really want to do—all the [technology] and know how it all works. They just want [you to know] how to put the wet stuff on there and go and do it. (Volunteer, New South Wales)

> Younger people just aren't interested. They have too many other things [other than training] to occupy their minds. (Volunteer, Western Australia)

> [More training] falls back on to their wives and families. They have skills and qualifications and could be working, they're getting caught up having to do more intensified work for their other income unit and things . . . 'Who's going to look after the kids?' and 'Who's going to go to which training?' and 'Which course to keep up with everything?' So even childcare and kidcare is getting neglected. Kid's homework and access and support is being neglected by mothers or fathers having to go out to meetings and learn things.
>
> (Volunteer, Victoria)

> What we have had to do in the field to meet the requirements, I suppose, is request our volunteer bushfire fighters . . . to [do] something that they will accept in terms of time.

> Most of the large courses tend to be a long duration and by nature our volunteer bushfire volunteers will give you maybe two days at tops, but more likely half a day to a day, so we have had to . . . evolve a system where we can utilise existing modules which at the moment don't appear to be accredited under any sort of curriculum basis and present those in the field generally to a small number of people . . . We have had our dramas . . . from a practical sense, trying to make people who probably haven't had an interface at the ground level understand that a five-day course isn't going to work.
>
> (Public Safety Organisation training officer, Western Australia)

- A number of members have left or are considering the level of their participation because of the reasons above and/or because they do not have confidence in their ability to successfully complete the assessments, even though they may have the knowledge and skills.

> It looks excessively formal, the things that we do in terms of our training, with manuals and questions and tests and pieces of paper at the end of it . . . [People who] are not subjected regularly to learning have a fear of failure when they're presented with that situation. They might take a point of view 'I'm not going to try because I might not measure up to others'. The fire brigade is an area where there's quite a bit of peer pressure to do the right thing, and to be seen to [not] be capable is a barrier. (Volunteer, Victoria)

> If the [Country Fire Authority] brings it in that they've got to have all this accreditation and everything they'll find at that stage that people won't join up. It's a voluntary thing, and if they want you to be highly educated and do all that kind of work, and if you're of an age and you haven't had an education, I'd say to myself 'I'm not going over there and [make] an idiot of myself filling in all those forms'. So you don't write . . . and then all of a sudden they find things dropping off. (Volunteer, Victoria)

> From past experience everybody was very willing to volunteer and in fact once the sons had reached 16 years of age and were eligible to volunteer, they were encouraged. So fathers and sons were generally volunteers of the fire brigade, but I think since the requirements came in . . . some felt a little bit threatened by having to go through the minimum skills testing. Some felt that there was a bit more liability in becoming a volunteer, they felt that perhaps they weren't going to be looked after in the case of an incident. I think probably, mainly because so much more was required of the volunteer, in turn it was actually putting them off. (Volunteer, Victoria)

Valued literacies

Survey respondents who indicated that they were in a leadership role rated their ability to log messages and read maps of familiar and unfamiliar areas more highly than others. Even so, some people in leadership roles rated their skills in these areas as low, as summarised in table A11.

Table A11: Self-rating of selected skills by respondents in leadership roles (%)

Self-rating of skills	Logging messages	Reading maps of familiar areas	Reading maps of unfamiliar areas	Using computers to find information
Low	7	4	10	32
Medium	51	32	44	42
High	42	64	46	27
Totals	**100**	**100**	**100**	**100**

Note: N values ranged from 302 to 326.

Fifteen per cent of respondents were women. The analysis shows that although there were no significant differences by gender for self-rating of ability to log messages, gender does have a significant impact on self-rating of ability to read both familiar and unfamiliar maps. As shown in table A12, women are much more likely to rate their skills in these areas as low than are men.

Women rated their ability to use computers to find information higher than men, however—a consistent pattern observed in other small town research by Golding and Rogers (2002).

Table A12: Self-rating of selected skills, by gender (%)

Self-rating	Logging messages		Reading maps of familiar areas		Reading maps of unfamiliar areas		Using computers to find information	
	Men	Women	Men	Women	Men	Women	Men	Women
Low	12	2	7	26	13	35	40	23
Medium	59	60	40	47	49	48	39	39
High	29	38	54	28	38	17	21	39
Totals	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Note: *N* values ranged from 302 to 326.

Self-rating of the ability of volunteers to use computers to find information was also significantly affected by state and accessibility. Volunteers surveyed in Victoria and Western Australia were more likely to rate their skills as low than those in other states (see table A13). Those respondents in moderately accessible areas were more likely to rate their computer skills as low than those respondents in both accessible and remote or very remote areas. Those respondents in accessible areas were more likely to rate their skills as high than those in less accessible areas (see table A14). Some of the reasons are proposed in the full report.

Table A13: Self-rating of ability to use computers to find information, by state (%)

Rating	Vic.	WA	NSW	Tas.	SA	All states
Low	53	49	27	25	30	**38**
Medium	31	38	41	40	46	**39**
High	16	13	32	35	24	**23**
Totals	**100**	**100**	**100**	**100**	**100**	**100**

Note: *N* = 315.

Table A14: Self-rating of ability to use computers to find information, by ARIA category (%)

Rating	Accessible	Moderately accessible	Remote or very remote	All states
Low	33	51	35	**38**
Medium	36	35	48	**39**
High	32	14	17	**23**
Totals	**100**	**100**	**100**	**100**

Note: ARIA = Accessibility/Remoteness Index of Australia; *N* = 315.

Interest in communication skills training

There were significant differences in interest in communication skills training by state as shown in table A15.

Table A15: Interest in communication skills training, by state (%)

Interested?	Vic.	WA	NSW	Tas.	SA	All states
Yes	36	46	58	70	36	**47**
Maybe	35	30	27	20	37	**31**
No	29	24	15	10	27	**22**
Totals	**100**	**100**	**100**	**100**	**100**	**100**
N	*75*	*70*	*79*	*40*	*70*	***334***

Respondents who indicated 'yes' or 'maybe' were asked to indicate the areas of training they would be interested in, using the same list of communication skills they had been offered before. As table A16 shows, there were considerable variations between states on a number of these, although the differences are subject to the limitations previously identified in the methodology.

Table A16: Interest in communication skills training, by type of training, by state (%)

Types of training	Vic.	WA	NSW	Tas.	SA	All states
Reading maps of unfamiliar areas	53	58	69	49	51	**57**
Using computers to prepare docs	39	48	60	60	55	**52**
Using computers to find information	45	46	55	57	53	**51**
Reading maps of familiar areas	41	46	52	43	41	**45**
Conducting briefings	37	38	51	63	39	**45**
Writing reports	33	40	55	49	43	**44**
Logging spoken messages	41	40	52	34	43	**43**
Speaking in public	22	44	52	57	37	**42**
Reading/understanding training material	41	29	39	37	37	**37**
Writing letters	29	27	48	40	31	**36**
Leading meetings	29	33	46	49	22	**36**
Writing brief notes	25	23	43	31	31	**32**
Understanding spoken messages	29	29	42	31	18	**31**
Reading/understanding dials on equip.	29	31	37	26	27	**31**
Passing on spoken messages	25	33	39	34	20	**31**
Taking part in meetings	22	27	34	34	22	**28**
Doing basic calculations	16	13	36	26	14	**22**
N (Yes or Maybe)	*53*	*53*	*67*	*36*	*51*	***260***

Note: The table is sorted by interest in types of training for all states.

Impact of low literacy on participation

The responses to the survey statements 'literacy is an issue for me' and 'difficulties with my communication skills make it hard for me to complete some brigade/unit training' specifically for respondents in leadership roles is shown in table A17. This data suggest that at least two to three leaders in every twenty are likely to currently experience difficulties with literacy skills and/or difficulties successfully completing training because of issues with their communication skills. This number is likely to increase as demands on leaders and their organisations increase.

> The . . . paperwork's probably quadrupled over the last five years, just to keep track of the actual training side of it isn't an easy thing now. With the new competency books, when we get into using them fully, that makes more work . . . Computers have actually created paperwork and not stopped it. (Volunteer, Victoria)

Table A17: Responses of those in leadership roles to statements about literacy and communication skills (%)

Statement	Strongly agree/agree	Disagree/ strongly disagree	Totals
Literacy is an issue for me	13	87	**100**
Difficulties with my communication skills make it hard for me to successfully complete some of the brigade/unit training	12	88	**100**

Note: *N* =321 and 308.

Not surprisingly, older respondents rated their ability to use computers to find information significantly lower than younger participants, as summarised in table A18.

One older interviewee referred to a 'generation gap' between older and younger members.

> I find at work with young apprentices, they go and do this new beaut computer training and I can't even spell computer, let alone switch it on. (Volunteer, Victoria)

An older interviewee told a humorous but self-deprecatory story about the first time he attempted using a local public access computer after another older interviewee mentioned 'I get into enough trouble on my own computer without going to stuff someone else's up':

> I saw it glowing there and thought 'Shit. I'll switch that off and save a bit of power'. I switched it off at the wall there, and it did chew some paper up and I had the fax machine and everything else spitting paper all over the place. (Volunteer, Western Australia)

Table A18: Self-rating of ability to use computers to find information, by age group (%)

Self-rating	Younger than 35	Age 35–54	Age 55 and older	All ages
Low	20	33	70	**38**
Medium	48	42	23	**39**
High	32	26	7	**23**
Totals	**100**	**100**	**100**	**100**

Note: *N* =315.

Some of the interviewees commented that demands for computer and other literacy skills were increasing in a number of other work areas outside the brigade/unit and that demands for training and commitment of time in many voluntary organisations were also increasing.

As one female interviewee in a small town contended:

> There is too much volunteering—by the time they run the kindies, at school, the fire, the tennis and cricket or bowls club, the health centre, you name it. Of a small population of this size [600], the people are required to do too much volunteer work, which therefore encroaches into their time to do other things. So I would say my family's volunteer work, my husband's, encroaches into our abilities to do study and improve ourselves.
>
> (Volunteer, Victoria)

A male interviewed in the same small town reinforced these contentions and observed:

> There are certainly not as many around to volunteer and that's probably what makes it harder because in a small town there are that many other things that people are trying to do and they can only spread it around in so many places. (Volunteer, Victoria)

The importance of attracting volunteers in community terms is perhaps best understood within the smallest and remotest towns. An interviewee in the geographically remotest location in this study observed that:

> In any isolated community such as this, volunteering plays a very big role in how things operate in town and whether they become successful or not successful . . . Volunteering is a very hard thing to encourage people to do. There seems to be the same volunteers helping out with everything. (Volunteer, Tasmania)

In some cases distance as well as small numbers was seen as the part of the problem retaining volunteers.

> It's hard to keep any volunteer-run organisation going in this area because every time you go to a committee meeting of some description . . . you see the same faces . . . they are the only ones that have got time, and make time, to be a committee member or volunteer. We have the tyranny of distance. Some of the farmers live 50, 60 and 70 km away on the edges of the Shire. It's not like they are all in town and it's a five minute jaunt to the local hall to have a meeting. (Volunteer, Western Australia)

The harshest criticisms were voiced for what were seen to be unnecessary demands for regulation of training. A volunteer involved in more than one public safety organisation commented:

> I've seen membership declining, all through the emergency services down here over the years. There was a big drop-off in the [organisation] when they brought all those regulations in. Then when they started mentioning liability, that frightened a hell of a lot of volunteers. (Volunteer, Western Australia)

One informant in a very remote brigade stressed that 'They just want to wake up that we are volunteers. We don't want to be pushed about' (Volunteer, New South Wales). Another retorted that 'If you get pushed from anybody, you'll have no volunteers. It will be like (in) Victoria, lose 40 000 in one hit and it *will* happen here if we get too much regulation' (Volunteer, New South Wales).

In summary, there was a commonly expressed feeling that the broader demands on volunteers were overextending the relatively small number of people available in small communities who had the necessary skills.

There is evidence from the interviews that the levels of literacy necessary for volunteers to function on the job as a firefighter or emergency service worker are of less importance to volunteers than a currently perceived necessity to engage in unnecessarily formal training.

As one interviewee argued, people who are less literate are often skilled at accommodating in familiar contexts.

> Literacy is a bit different to not being able to read and write. I think you will find that most farm-orientated people, if they are having a problem of reading and writing . . . they still understand. They can make up for their skills. So I don't see that as a great problem. (Volunteer, Western Australia)

It was frequently argued in the interviews that the perceived literacy 'problems' of volunteers might alternatively be explained by the inappropriate formality of some of the training.

> We have a local young fellow . . . and he has very poor skills; writing and reading skills, yet he worked for a local fertiliser contractor, and probably travelled into every local property and knew every creek crossing, knew everybody's laneways. He knew what gate led to what paddock because he knew them like the back of his hand. Now those skills, he could get you into a firefight the safest way or, more importantly, get you out of a fire area, and yet, if he were to be involved in a map reading exercise, he would fail miserably. I'm not saying he mightn't be able to learn those map reading skills, but he would instinctively say 'no, I couldn't do that', and yet the very skills we are looking for are there, so that's the difficulty I see with this. (Adult learning provider, Victoria)

A number of interviewees indicated that while formal literacy and/or poor communication skills may be seen by *outsiders* as a problem for training and assessment in their organisations, it was much less of a problem in terms of service delivery. Interviewees identified three main reasons why literacy problems might be overplayed in public safety provision by volunteers:

- ✧ emergency service is essentially a quick-response activity governed by verbal instructions
- ✧ volunteers work in teams that accommodate for difference
- ✧ there are relatively low levels of functional literacy required in emergency roles and situations by volunteers.

These views were validated by several adult literacy personnel in small towns. As one experienced adult literacy teacher said:

> I don't think I've ever had anyone come to me and say 'I want to move up in the [Country Fire Authority] and I need to improve my [literacy]' because most people, if they want to improve their literacy skills, it's either for their own very specific purposes, or to help their children . . . [M]ost people with really poor literacy skills have been able to support the [Country Fire Authority] quite readily and quite happily and it's never been an issue in my experience. (Adult learning provider, Victoria)

While changes in information and computer technology have increased the range of skills required to undertake tasks in most workplaces and to competently undertake some tasks in many voluntary organisations, it was pointed out in the interviews that not all members of the organisation need the same set of high-level skills. Some of the least formally literate volunteers may be the most effective team members, particularly if other members recognise and accommodate for them in situations where reading, writing or communicating through new technology are important or are critical for basic safety.

The idea that fire and emergency service organisations require older, experienced volunteers with hands-on skills operating in teams rather than formally trained individuals working on their own was often mentioned.

One interviewee noted that while:

> Most of the farmers are a bit long in the tooth . . . hands-on they're good. When it comes to throwing around figures . . . they're not as quick as others. But to do the job, they can go out and do it. No problem. They can do it as good as the blokes that read out of books. (Volunteer, Tasmania)

Several interviewees stressed that training needed to emphasise verbal communication protocols and teamwork. For example:

> We've got to be trained to know who we can speak to, who we can get our instructions from, whether it be verbally through the radio. Yeah, I suppose it comes naturally. You're in a small town, everybody knows everybody, so we work as a team. (Volunteer, South Australia)

> Most of the guys would need to know how to read a map and basically to be able to understand verbal direction and communication. In communication, in most instances, particularly out here, we don't issue too many of our instructions in writing because you are usually talking on the end of a radio. In fact in one instance I was at a fire talking to a guy 150 km away whom I never saw for the whole duration of the fire. (Volunteer, Western Australia)

Survey participants were asked to rate the difficulty of the hands-on training, written training materials and assessments used at the brigade/unit as 'very easy', 'about right' or 'very hard'. A summary of responses by state is shown in table A19.

Table A19: Rating of the difficulty of 'hands-on' training, training materials and assessments used, by state (%)

Aspect	Vic.	WA	NSW	Tas.	SA	All states
'Hands-on' training						
Very easy	23	25	24	26	12	**22**
About right	77	72	76	74	86	**77**
Very hard	–	3	–	–	3	**1**
N =	*73*	*61*	*74*	*38*	*69*	***315***
Written training materials						
Very easy	21	8	11	17	15	**14**
About right	70	74	86	80	82	**79**
Very hard	9	19	3	3	3	**7**
N =	*71*	*53*	*72*	*35*	*68*	***299***
Assessments						
Very easy	25	10	4	11	7	**12**
About right	73	77	90	83	87	**82**
Very hard	3	14	6	6	6	**6**
N =	*69*	*52*	*70*	*35*	*69*	***295***

Some interviewees indicated that they knew of people who had or were considering leaving the organisation because of the training requirements. For example:

> I can see people in the future leaving the brigades because they won't be able to qualify to what standards they are setting. It is just going to be too high, especially in volunteer brigades. (Volunteer, Tasmania)

Value of public safety training to the broader community

Participants were asked to indicate whether the skills learnt through the brigade/unit were useful in other aspects of their lives, at home, at work or in the community. As table A20 illustrates, most volunteers found the training useful beyond the brigade/unit setting.

Table A20: Usefulness of training in other contexts (% of respondents)

Type of training	Useful elsewhere (%)	Not useful elsewhere (%)	*N*
Emergency response	98	2	*305*
Technical skills	98	2	*305*
Team and/or leadership	95	5	*293*
Other communication skills	96	4	*272*

The types of useful skills mentioned most often by volunteers included those related to general communication (for example, communicating verbally with others, having confidence to give directions and using radios in workplaces), first aid, driving and occupational health and safety. For example:

> I work for [name] and doing all the knots with [emergency services] and that, sometimes I've gone to work with cranes and stuff . . . some of the crane drivers [don't know how to do the knot . . . [I showed them the] knots—90% of the knots we do—and they're doing them all the time now. (Volunteer, South Australia)

Table A21 summarises survey data relating to membership of other organisations. The data suggest that virtually all public safety volunteers are members of at least one other community organisation.

Table A21: Membership of other community organisations

No. of other organisations	% of respondents
None	1
One	26
Two	31
Three	21
Four	12
More than four	10

Note: *N* = 197.

There is evidence from the interviews that public safety organisations are valued by their members for the role they play in improving existing social connections in their communities beyond the networks of common purpose in community protection. As one interviewee explained, 'The [Country Fire Authority] is a central point. It's all that's left in the country . . . your local community base' (Volunteer, Victoria). Another observed that 'the fire brigade just becomes an integral part of that 'getting to know people in the community', but also actually working together for a common purpose protecting our properties' (Volunteer, Western Australia). Yet another interviewee noted that:

> There is probably a lot of bonding and mateship [in the brigade]. They are very social people anyway. They interact with each other outside of being in the fire brigade . . . [The district] has such intricate social networks that the fire brigade works very efficiently. Everybody knows each other, everybody has been working with each other for 20 years. It's the social network that has enabled them to be as good as what they are.
>
> (Volunteer, Victoria)

Skill development also appears to extend beyond the organisation's registered members. Spouses/partners have an important role backing up members, particularly officers, by answering the emergency response system phones when an incident is being reported, for example, and communicating messages and mobilising a response, organising meetings and providing food and other support at extended incidents. Several interviewees remarked in particular on the changing role of women in brigades. Several volunteers alluded to the effect other outside regulations, in this case safe food handing regulations, were having on involvement.

> Another big difference I've noticed is women are always involved in the fires now. Like when there's a fire on, they all got together, there's sandwiches made, tea was made. Now they have to do it in an authorised place because they reckon their kitchens are not clean or firemen might get crook. But they have been doing it for 100 years and nobody died yet.
>
> (Volunteer, Victoria)

Strategies for literacy development

Survey respondents were asked to indicate their preference for the type of person they would like to provide communications skills training. As shown in the data summarised in table A22, there are significant differences between states.

Table A22: How those interested in communication skills would prefer the training to be provided, by state (%)

Preferences	Vic.	WA	NSW	Tas.	SA	All states
Another member of this brigade/unit with the appropriate skills	26	14	26	38	49	**29**
A fire/emergency service trainer from outside this brigade/unit	37	73	40	44	22	**44**
Other (i.e. another local trainer, one on one or in some other way)	37	14	34	19	29	**27**
N	*43*	*51*	*65*	*32*	*45*	***236***
Totals	**100**	**100**	**100**	**100**	**100**	**100**

Notes: This table includes data from 236 (70%) of the 339 survey respondents who expressed an interest in communication skills training (*yes* or *maybe*); some totals exceed 100% due to rounding.

The differences in response to questions about communication skills training by age are shown in table A23.

Table A23: How those interested in communication skills training would like it to be provided, by age (%)

Preferences	Younger than 35	Age 35–54	Age 55 or older	All ages
Another member of this brigade/unit with the appropriate skills	36	29	22	**29**
A fire/emergency service trainer from outside this brigade/unit	49	37	53	**44**
Other (i.e. another local trainer, one on one or in some other way)	15	35	26	**27**
Totals	**100**	**100**	**100**	**100**

Notes: This table includes data from 236 (70%) of the 339 survey respondents who expressed an interest in communication skills training (*yes* or *maybe*); some totals exceed 100% due to rounding.

The clear preference (by 82% of respondents) was for the training to be provided either at the brigade/unit or a nearby brigade/unit.

Survey respondents were given a list of resources and asked to indicate whether these resources were 'required urgently', 'required at some stage' or 'not required'. Data for this question are summarised in table A24. The resources required most urgently were members and money. When the 'required urgently' and 'required at some stage' responses were combined, the main required needs became members (97%), training (95%), local support (90%), money (89%) and training in communication skills (88%).

Table A24: Resources required by urgency of requirement (%)

Resources	Required urgently	Required at some stage	Not required
Members	43	52	5
Money	41	48	10
Local support	29	61	11
Training	21	74	5
Communication equipment	20	56	25
Computers	19	45	37
Internet/email access	17	41	41
Resources for station/shed (e.g. tables/sinks)	16	50	35
Training in communication skills	15	73	12
Firefighting equipment	13	64	24
Training equipment	12	52	36
Training materials	9	66	24

Note: *N* values ranged from 285 to 307; table sorted by resource required most urgently.

Appendix B: Survey of brigade/unit members

ADULT LEARNING THROUGH PUBLIC SAFETY ORGANISATIONS

Survey of Brigade/Unit Members

Thank you for agreeing to complete this survey. You can fill it out on your own or with help from someone else (for example, another member of your brigade/unit, a family member or friend). If you need a hand or have any questions about the survey, please speak to

_____

You can also contact the researchers directly if you want. Our contact details are at the end of this form.

You do not need to tell us your name. We will not be reporting any information that can identify individuals.

Please answer the questions by placing ticks ✓in boxes or comment where appropriate.

1. What is the name of your brigade/unit? _____

2. How often do you usually attend training with this brigade/unit? *(Tick one)*

☐ Weekly ☐ Monthly ☐ A couple of times a year
☐ About once a year ☐ Very rarely ☐ Never

3. What type of training is provided? (*You can tick more than one answer)*

☐ Emergency response (eg fire suppression, rescue techniques)
☐ Technical skills related to using equipment (eg. chainsaws, breathing apparatus, radios)
☐ Team and/or leadership skills
☐ Other communication skills (e.g. taking part in meetings, recording information, giving and receiving instructions, reading documents, speaking to a group)
☐ Other *(Please specify*): _____

4. Is there any training you are <u>not</u> provided with that you would like to get through this brigade/unit?

☐ No ☐ Yes If yes, what sort of training would you like?

_____

5. Is the training you receive at this brigade/unit useful in other aspects of your life? *(Tick one box in each row)*

Type of training	Useful at home	Useful at work	Useful in the community	Not useful
Emergency response	☐	☐	☐	☐
Technical skills related to using equipment	☐	☐	☐	☐
Team and/or leadership skills	☐	☐	☐	☐
Other communication skills	☐	☐	☐	☐

6. Which of the following best describes the training, training materials and assessments used at this brigade/unit? *(Tick one box in each row)*

Aspect	Very easy	About right	Very hard
The 'hands on' training	☐	☐	☐
The written training materials	☐	☐	☐
The assessments	☐	☐	☐

7. How important are the following communication skills to this brigade/unit and how do you rate your current level of skill?

A number of communication skills are listed. Please indicate:

- ***on the left,*** *how important you think each skill is for brigade/unit members*
- ***on the right,*** *how you rate your current skills.*

Importance to brigade/unit			**Skill**	**How you rate your current skills**		
Low	Medium	High		Low	Medium	High
☐	☐	☐	Understanding spoken messages	☐	☐	☐
☐	☐	☐	Logging (recording) spoken messages	☐	☐	☐
☐	☐	☐	Passing on spoken messages	☐	☐	☐
☐	☐	☐	Understanding messages on noticeboards	☐	☐	☐
☐	☐	☐	Reading and understanding training materials	☐	☐	☐
☐	☐	☐	Writing brief notes	☐	☐	☐
☐	☐	☐	Writing letters	☐	☐	☐
☐	☐	☐	Writing reports	☐	☐	☐
☐	☐	☐	Reading maps of familiar areas	☐	☐	☐
☐	☐	☐	Reading maps of unfamiliar areas	☐	☐	☐
☐	☐	☐	Conducting briefings	☐	☐	☐
☐	☐	☐	Speaking in public	☐	☐	☐
☐	☐	☐	Using computers to find information	☐	☐	☐
☐	☐	☐	Using computers to prepare documents	☐	☐	☐
☐	☐	☐	Doing basic calculations	☐	☐	☐
☐	☐	☐	Reading and understanding dials on equipment	☐	☐	☐
☐	☐	☐	Taking part in meetings	☐	☐	☐
☐	☐	☐	Leading meetings	☐	☐	☐

8. Please indicate how strongly you agree or disagree with the following statements.
(Tick one box in each row)

	Strongly agree	Agree	Disagree	Strongly disagree
Members of this brigade/unit need more training	☐	☐	☐	☐
The community expects too much of its volunteers	☐	☐	☐	☐
I feel good about taking part in a community activity	☐	☐	☐	☐
The government has too much say in the training that takes place in our organisation	☐	☐	☐	☐
There is too much training on things we can already do	☐	☐	☐	☐
Keeping volunteers is an issue for this brigade/unit	☐	☐	☐	☐
I feel it is my duty to volunteer to support my community	☐	☐	☐	☐
My communication skills are good enough for me to be able to take an active part in this brigade/unit	☐	☐	☐	☐
There is too much importance placed on completing modules or certificates in our training.	☐	☐	☐	☐
I would prefer much more 'hands on' training	☐	☐	☐	☐
There is not enough training to improve communication skills	☐	☐	☐	☐
This area is disadvantaged by its isolation	☐	☐	☐	☐
There is not enough official recognition of what people already know	☐	☐	☐	☐
I am a keen learner	☐	☐	☐	☐
I would like to improve my communication skills	☐	☐	☐	☐
This town's small size is an advantage in communicating	☐	☐	☐	☐
Young people in our area seldom join this brigade/unit	☐	☐	☐	☐
My communication skills help me work with others in a team	☐	☐	☐	☐
Difficulties with my communication skills make it hard for me to successfully complete some of the brigade/unit training	☐	☐	☐	☐
There are strong links between this brigade/unit and local government	☐	☐	☐	☐
Our brigade/unit warmly welcomes new members	☐	☐	☐	☐
Emergency service organisations are dominated by men	☐	☐	☐	☐
I don't have time to get more involved in the community	☐	☐	☐	☐
This brigade/unit is well connected to the local community	☐	☐	☐	☐
Literacy is an issue for me	☐	☐	☐	☐
It is difficult attracting new volunteers to this brigade/unit	☐	☐	☐	☐
This brigade/unit has strong links outside of the town	☐	☐	☐	☐
Opportunities for adult learning in our community are limited	☐	☐	☐	☐
I actively take part in adult learning opportunities that are offered in our community	☐	☐	☐	☐
This brigade/unit is equally welcoming of male and female members	☐	☐	☐	☐
Volunteer organisations need more government assistance	☐	☐	☐	☐
Adult learning organisations (e.g. community/neighbourhood houses) are dominated by women	☐	☐	☐	☐
This brigade's/unit's resources are available for wider community use	☐	☐	☐	☐
Literacy is an issue for volunteers	☐	☐	☐	☐
The resources this brigade/unit has are adequate for on-site training	☐	☐	☐	☐

9. If training in communication skills was available through this brigade/unit, would you be interested in taking part?

☐ Yes ☐ Maybe ☐ No (*go straight to question 10)*

If 'Yes' or 'Maybe', which type of training would you be interested in?
(Tick as many as you like)

- ☐ Understanding spoken messages
- ☐ Logging (recording) spoken messages
- ☐ Passing on spoken messages
- ☐ Understanding messages on noticeboards
- ☐ Reading and understanding training materials
- ☐ Writing brief notes
- ☐ Writing letters
- ☐ Writing reports
- ☐ Reading maps of familiar areas
- ☐ Reading maps of unfamiliar areas
- ☐ Conducting briefings
- ☐ Speaking in public
- ☐ Using computers to prepare documents
- ☐ Using computers to find information
- ☐ Doing basic calculations with numbers
- ☐ Reading and understanding dials on equipment
- ☐ Taking part in meetings
- ☐ Leading meetings
- ☐ Other (*please specify*) _____

How and where would you like this training to be provided?
*(Tick the **one** box in each column that you would most prefer)*

By: *(tick one)*

- ☐ Another member of this brigade/unit with the appropriate skills
- ☐ A fire/emergency service trainer from outside this brigade
- ☐ A local communication skills trainer who may or may not be involved with this brigade/unit
- ☐ One-on-one with someone else
- ☐ Other

_____

At: *(tick one)*

- ☐ This brigade/unit
- ☐ A nearby brigade/unit
- ☐ A local neighbourhood or community house or learning centre
- ☐ The local TAFE college
- ☐ On-line at home
- ☐ A venue outside your local area
- ☐ Other

_____

10. Please indicate which of the following, if any, you think this brigade/unit needs in order to improve its effectiveness. *(Tick one box in each row)*

This brigade/unit needs more …	Required urgently	Required at some stage	Not required
Fire fighting equipment	☐	☐	☐
Training equipment (e.g. video player, whiteboard, data projector)	☐	☐	☐
Training materials (e.g. training manuals)	☐	☐	☐
Communication equipment	☐	☐	☐
Computers	☐	☐	☐
Internet and/or email access	☐	☐	☐
Members	☐	☐	☐
Training in communication skills	☐	☐	☐
Local support	☐	☐	☐
Resources for the station/shed (e.g. tables, sink)	☐	☐	☐
Money	☐	☐	☐
Training	☐	☐	☐

Finally, ABOUT YOU

11. You *(tick any that apply)***:**

- ☐ are an operational member of this brigade/unit
- ☐ are a non-operational member of this brigade/unit
- ☐ have a leadership role within this brigade/unit
- ☐ joined this brigade/unit within the past two years
- ☐ have been a member of this brigade/unit for more than ten years

12. Your age:

- ☐ Younger than 20
- ☐ 20-24
- ☐ 25-34
- ☐ 35-44
- ☐ 45-54
- ☐ 55-64
- ☐ 65 or older

13. Your gender

- ☐ Male
- ☐ Female

14. Your highest completed formal education

- ☐ Below Year 9
- ☐ Year 9
- ☐ Year 10
- ☐ Year 11
- ☐ Year 12
- ☐ TAFE certificate or diploma
- ☐ University degree
- ☐ Other (*Please Specify*) _____

15. How long have you lived in this area? _____

16. Are you a member of any other brigades/units/public safety organisations?

☐ No ☐ Yes If yes, how many? _____

17. How long (in total) have you belonged to brigades/units/public safety organisations?

_____

18. How many <u>other</u> local community organisations are you a member of? _____

19. If you wanted to learn more about computers, would you: (*tick all that apply)*

- ☐ Ask a friend
- ☐ Go to TAFE
- ☐ Learn through your public safety organisation (i.e. fire brigade, SES unit)
- ☐ Go to a community learning centre
- ☐ Go to the library
- ☐ Go on-line

20. If you wanted to do a computer course in a class setting, how far would you have to travel?

_____ km

Thank you for completing the survey

Please return it to the person who gave it to you or post it to the researchers in the reply-paid envelope provided as soon as possible

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