Professionalism: education and training for emergency management leaders

Abstract

The bushfires of the 2019–20 summer were followed by a global pandemic. Both events highlighted the importance of skills of emergency managers and their importance in the response to and recovery from these and other emergency events. In Australia, the Royal Commission into National Natural Disaster Arrangements was conducted with the bushfires as a background event and, at the same time, the initial response to the COVID-19 pandemic outbreak. Findings of the royal commission addressed a range of areas including the capability building of emergency managers. These are underpinned in part by the education, training and experience of emergency managers who will implement the royal commission's findings in the years to come. Education, training and experience are aspects of the human capacities of the emergency management leader and each emergency manager is different. Capability is based on recruitment, education, training, development and experience built up over time. This paper arises from a larger study of the human capacities of emergency managers and examines the supporting education and training opportunities available within the Australian education and training system and how they are affected by the concept of experience. This paper contributes to the understanding of the suite of human capacities required by emergency managers in Australia. The paper draws on research that examines human-capacity lessons from previous events that can develop emergency managers. This paper builds on a previous paper that examined certification for emergency management leaders.

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Introduction

In Australia, most communities have been affected by an emergency or hazardous incident at some point in their history. Emergency events range from individual accidents to the effects of bushfires, floods or the currently occurring pandemic. The people who manage these events (emergency managers) require knowledge, skills and abilities (human capacities). These human capacities allow the emergency manager to lead the prevention of, preparation for, response to and recovery from emergency events. This study examined aspects of the emergency manager and exposes education, training and experience as a concept in human-capacity building. Aspects of education, training and experience are explored within the broader consideration of emergency management 'professionalism'.

The literature examined during this study was broader than 'emergency management literature' in recognition of the applicability of human resource development. The literature review focused on Australian training and education and the systems used in delivery. This is compared with concepts of experience that people gain outside of the formal frameworks.

Dippy (2020, p.56) noted that the terms 'incident management' and 'emergency management' are often used interchangeably in Australia, but that 'emergency management' was defined to include all aspects of the prevention of, preparation for, response to and recovery from an emergency. This use of emergency is broader than the use of incident that focuses on the response and recovery aspects of the emergency. For the purposes of this paper, the term 'emergency manager' is used in recognition of the broad role of the emergency manager in prevention, preparedness, response and recovery phases.

The concept of professionalism is complex. Dippy (2020, pp.57–58) provides a full description of the pathways to professionalism. For the purposes of this article, professionalism is associated with the completion of formal qualifications (Dippy 2020, p.57). In particular, this paper focuses on the completion of vocational emergency management qualifications within Australia as one aspect of professionalism.

Definitions

The Macquarie Dictionary describes 'education' as a systematic acquisition of knowledge whereas 'training' is a process of learning the skills that are needed for a particular job.

Australian Qualification Framework

In Australia, education and training are delivered within the Australian Qualification Framework and its delivery sectors. The Australian education and training system is underpinned by the Australian Education Framework that:

- accommodates diversity in education and training
- supports consistent outcomes
- provides pathways for students
- supports lifelong learning
- enhances student mobility between workplaces and industries
- enables alignment with international systems (Australian Qualifications Framework Council 2013, p.8).

The framework provides for 10 levels of education and training starting at a Senior Secondary Certificate level (often the final year of school for many students) and builds through another 10 levels of further education and training. Each level equates with a standardised type of qualification with Level 1 of training equalling a Certificate 1, a Level 7 equalling a Bachelor degree and a Level 10 equalling a Doctoral degree (Australian Qualifications Framework Council 2013, pp.14–18). While the framework is based on a taxonomy of levels (see Figure 1), the levels do not need to be completed in an order and many people will work towards different levels of qualification depending on their needs and abilities. While the levels of education are set by this framework (Australian Qualifications Framework Council 2013, pp.12–17), it also applies to the content that is delivered in ensuring the standards are applied and training accredited to each of those levels.

The delivery of the 10 levels of education is achieved by accredited organisations delivering training and education within approved levels and qualifications. Schools teach the Senior Secondary Certificate level and are now also issuing, often in partnership with other education providers, some Certificate 1 and 2 qualifications. The vocational education and training sector includes providers such as South Australian Technical and Further Education colleges and jurisdictional equivalents (e.g. Canberra Institute of Technology), registered training organisations that provide level 1–8 qualifications and universities and tertiary organisations providing level 5–10 qualifications (Australian Qualifications Framework Council 2013, p.21). Overlap of vocational and tertiary education facilitates movement between sectors and provides a wider range of education and styles for students.

Vocational sector

Within this framework of training in Australia sits the vocational training and education sector and its component parts. The primary part applicable to emergency managers is described

Figure 1: Australian Qualifications Framework.

Source: Australian Qualifications Framework Council (2013), pp.19

within the Public Safety Training Package, which includes qualification levels from Level 2 (Certificate 2) to Level 8 (Vocational Graduate Certificate) in industry-wide areas and sector-specialty areas including fire, police, state emergency service, biosecurity and oil spill (Commonwealth of Australia 2018, pp.32–36). This package addresses the skill needs of 506,000 volunteers and career personnel across Australia (Commonwealth of Australia 2018, p.100). A training package is defined as a set of individual competency standards including their assessment guidelines. Packages of competencies that make an accredited qualification are documented and presented in such a way as to ensure consistency, reliability, flexibility in training and assessment leading to verifiable outcomes (Commonwealth of Australia 2018, pp.96–97). The Public Safety Training Package recognises that the knowledge, skills and attributes required of people who operate in emergency management are broad and not able to be documented in one package of learning. To this end the Public Safety Training Package includes parts of other training packages from areas such as agriculture, business services, community services, property services, forestry, health, information and communications, local government, water, public sector management, sport and fitness, tourism, training and education, maritime and transport and logistics (Commonwealth of Australia 2018, pp.73–79).

Tertiary sector

The tertiary education sector includes Australian qualification level 5 (Diploma) to 10 (Doctoral) and is regulated by the Tertiary Education and Quality Standards Agency (TEQSA) (Tertiary Education Quality and Standards Agency 2017a). The TEQSA maintains a register of self-accrediting and non-self-accrediting providers. All Australian universities are self-accrediting and 113 other providers are accredited by the TEQSA (Tertiary Education Quality and Standards Agency 2017b). Each of the self-accrediting providers determines, accredits and delivers qualifications as per the Australian Qualifications Framework. Non-self-accrediting providers must have their courses accredited by TEQSA (Tertiary Education Quality and Standards Agency 2017c). This process of accreditation allows a range of qualifications to be issued within the tertiary system. Each will have a different focus with some contained in a central register and others available on university websites.

The application of the levels of training are described within the Australian Qualifications Framework. This framework describes how the knowledge and skills are applied at each level and this leads to industry alignment of tasks to levels within an organisation (Australian Qualifications Framework Council 2013, pp.14–17). In summary, the qualification levels are applied with Certificate 2 and 3 (levels 2 and 3) often required for team members, Certificate 4 (level 4) for team leaders and the Bachelor degree (Level 7) and above qualifications being applied to levels of management.

Experience

Qualifications and the 2 educational sectors that deliver them are well described, regulated and split into delivery sectors with defined roles and levels of training mapped to levels of qualification. However, experience is not well described in the literature or emergency management systems.

The Macquarie Dictionary describes 'experience' as:

- knowledge or practical wisdom gained from what one has observed, encountered or undergone
- the process of personally observing, encountering or undergoing something
- encountering or undergoing something.

These descriptions draw out aspects of knowledge, skills and having previously undertaken a task. However, unlike qualifications, the concept of experience does not address the scope of the knowledge, the amount or level of skills displayed or the appropriateness or outcomes of the past completion of the task. This definition of experience is vastly different from a qualification that describes skills demonstrated and the scope of how those skills have been applied.

Experience is difficult to describe and quantify with descriptors based on duration of activity or number of repetitions. Descriptors of experience do not address level, standards or duration of skill demonstrated. The repetition count method of simply counting the number of repetitions, could identify multiple repetitions but at a very low skill level and without any complicating factors. The duration of activity description leads to a colloquial statement of '50 years of experience or 1 year of experience repeated 50 times'.

While qualifications are used as a discriminator in employment decisions, experience is often considered as a beneficial and valuable recruiting tool (Cully 2005, p.7, O'Donnell & Dunlap 2014, p.611, Ridoutt *et al.* 2005, p.7). Experience is shown to improve the skills of a qualified person (Haas, Orav & Goldman 1995, p.1090; Ridoutt & Hummel 2005, p.63) and improves knowledge of the person (Nass 1994, p.47). It improves the general economy (Jenkins 2017, p.445) and is deemed to be critical in teaching roles (Smith 2013, p.30).

The concept of experience can be broken into 2 parts. These are:

- skills developed while obtaining qualifications, constrained by the education and training environment
- skills obtained outside of the training environment that are not so constrained.

There may be confusion with these sets of skills as it is often considered that there is a link between the concepts of qualifications and skills. As such, it may be inferred that qualifications are a proxy for skills. This link of qualifications and skills is not as clear as may be first thought. It has been shown not to be the case in a study of literacy skills (Massing & Schneider 2017, p.22). However, training and support has been directly linked to effective emergency management self-efficacy (Kim *et al.* 2012, p.1156).

Role of education, training and experience in professionalism

This paper does not explore the language that underpins the use of the term 'professionalism' in detail, nor does it explicate the use of the occupational terms of 'vocation' and 'profession' when applied to emergency management. Professionalism is used as a label to describe the outcome of the process of professionalisation (Birkett & Evans 2005, p.101). The use of occupational descriptors of vocation and profession is not static in the literature nor in the occupations that form the emergency management field. The term 'blue-collar professionalism' (McCann *et al.* 2013, p.754) is a variation previously used for ambulance officers in the United Kingdom who abided by the ethos of public service and had some autonomy but whose work was not entirely consistent with a profession in that they did not enjoy levels of autonomy of practice available to a recognised profession (McCann *et al.* 2013, p.760). While blue-collar professionalism was previously used for ambulance officers, the occupation has since been recognised as a profession in Australia (Australian Health Practitioner Regulation Agency 2018). De-professionalisation occurs from declining community prestige (Freidson 1984, p.4) or loss of control over the body of knowledge (Gorman & Sandefur 2011, p.281) The literature shows inconsistencies in the use of words describing the occupational status of people within the emergency management sector. What is consistent when reviewing the use of these words is the foundation of each with an amount of education, training and/or experience. Thus, the term 'professionalisation' describes the deliberate journey aimed at changing the occupational recognition from vocation to profession, acknowledging the functions, skills and attributes that apply to a profession. The terms 'professional' and 'professionalism' describe a level of service delivery applied by a person regardless of the label applied to their respective occupation.

Emergency management training and education in Australia

Australian vocational emergency management qualifications are predominately delivered against the Public Safety Training Package (not explored in this paper). This package contains 31 qualifications from Certificate 2 (Level 2) to a Graduate Diploma (Level 8) in topics including aquatic rescue, firefighting, emergency management, community safety and crisis leadership (Department of Education Skills and Employment 2020). Potential students of these qualifications include fire and emergency services agencies as well as other response agencies such as health, biosecurity, police and organisations that undertake recovery operations. Across the range of qualifications delivered under this package of training over the period 2017–19 a total of 9,236 qualifications were issued in Australia. Table 1 provides a breakdown of Public Safety Qualification levels by year.

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1. It is noted that figures contained within tables 1 and 2 are sourced from publicly available data. It is acknowledged that industry-produced data are being compiled in 2022 that shows this public data may under report the statistics that are publicly available. This new data, once verified, may affect the outcomes described in this paper.

Table 1: Public Safety Qualification completions for 2017, 2018 and 2019.

Qualification	2017	2018	2019 (Preliminary)	Total
Certificate 1	0	0	0	**0**
Certificate 2	1,489	2,387	2,791	**6,676**
Certificate 3	350	356	651	**1,372**
Certificate 4	159	78	202	**451**
Diploma	102	107	136	**352**
Advanced Diploma	91	145	149	**385**
Total vocational qualifications	**2,191**	**3,073**	**3,929**	**9,236**

Source: VOCSTATS, extracted on 24/12/2020

Table 1 lists the totals of qualifications and relate to many agency-specific or hazard-type qualifications such as firefighting and state emergency services operations. The Certificate 2 and 3 qualifications are in areas applicable to the training of new members who undertake team member type roles. The Certificate 4 is applicable to people with leadership roles and align with the Australian Qualifications Framework.

There are 2 qualifications specific to emergency management that are issued under the training package. They are the Diploma (Level 5) – Diploma of Public Safety (Emergency Management) and the Advanced Diploma (Level 6) – Advanced Diploma of Public Safety (Emergency Management). These qualifications were reviewed and updated in December 2020 (Department of Education Skills and Employment 2020). For 2017–19, the total of dedicated emergency management qualifications issued in Australia was 562. Table 2 provides a breakdown of qualification levels by year for emergency management qualifications only).

Table 2: Dedicated emergency management qualification completions.

Qualification	2017	2018	2019 (Preliminary)	Total
Diploma	76	77	78	**233**
Advanced Diploma	88	121	123	**329**
Total vocational qualifications	**164**	**198**	**201**	**562**

Source: VOCSTATS, extracted on 24/12/2020

Based on the Australian Qualifications Framework application of qualifications, these broader emergency management qualifications are suited to people moving from agency-based leadership (Level 4 qualifications) to agency-management roles.[1]

Manock (2001, pp.4–6) described the development of tertiary emergency management in Australia since it commenced in 1993 with an Associate Diploma (approximately equal to the Australian Qualifications Framework Level 6) in one Australian state to a range of qualifications at the Degree (Level 7) to Masters (Level 9) being delivered by multiple tertiary institutions.

In particular, Manock (2001) noted that the development of tertiary education was required as 'the provision of workplace related training courses, seminars and conferences is only a part of the educational support required by emergency management organisations and personnel' (p.5). Manock (2001) concluded that further work was needed to develop better alliances between education providers and industry to 'enable tertiary educational institutions to provide programs that would benefit the emergency management community, improving their professionalism, capabilities and service to the community' (p.6).

The Generic Emergency and Disaster Management Standards (GEDMS) were developed in 2017 after an extensive review of emergency management tertiary education being delivered in Australian and New Zealand (FitzGerald *et al.* 2017). The GEDMS were developed in recognition for a need for an 'evidence based curriculum designed to inform tertiary emergency and disaster management programs' (FitzGerald *et al.* 2017, p.4). It was noted that without standards many providers of tertiary education were focusing on the context brought to the programs by those who developed the material (FitzGerald *et al.* 2017, p.4). The GEDMS outlines that tertiary training should address domains of knowledge, skills and application to support the development of tertiary education programs for emergency managers for Degree (Level 7) qualifications and above.

Vocational and tertiary education is not static in the content delivered. Already in 2022, there are 2 projects underway in Australia to amend the Public Safety Training Package. The first project is developing improved recovery training for recovery practitioners including specific units of competency and full qualifications. The second project is providing further units of competency for the Diploma and Advanced Diploma of Public Safety (Emergency Management) and a further specific emergency management qualification at the Certificate 4 level (Australian Industry Standards 2022).

Discussion

The 2018 Public Safety Training Package was delivered to 560,000 volunteers and sector staff (Commonwealth of Australia 2018, p.100). However, the training records show that only 9,600 (see Table 1) people obtained qualifications over a 3-year period (about 2%). Taking that further, only 562 (or about 0.1%) of those people undertook dedicated emergency management training over the same period (see Table 2). There are no data showing the completion of tertiary training but it is contended that this would be a lower number of completions than for vocational training.

These reported training numbers do not include any training delivered to the sector that involves individual units of competency or parts of qualifications from the Public Safety Training Package. Part qualifications may or may not be delivered through other accredited and non-accredited training from other training packages or specific industry training regimes. A full training audit of every member in the public safety sector would be required to determine the total training delivered and the source of their training standards, which is beyond the scope of

this review. Individual agency application of part qualifications to suit business need is also not within the scope of this paper. However, this aspect should be considered for further research to support the ongoing review process of vocational and tertiary qualifications.

The numbers of qualifications delivered does not describe the state of the emergency management workforce, as the numbers given are for new qualifications issued. These numbers do not address the total number of people who have been issued with these qualifications over time. The rate of take-up of vocational training in Australia, as shown by publicly available data, does not appear to support the aim of professionalisation within the emergency management sector and will not support an increase in certification. Increasing the completion of education and training qualifications is one aspect that would allow emergency managers to support professionalisation of their industry. While vocational and tertiary education, training and experience cater for different roles within emergency management, they can be sought by a range of individual emergency managers.

Conclusion

Emergency management in Australia is moving down the path of professionalisation. What the outcome will be is not yet agreed and should be considered both in further research and industry engagement. Professionalisation is supported by qualifications, training, education and experience. While vocational and tertiary qualifications have been developed and are constantly being reviewed and refined, unfortunately, broad agreement and adoption of qualifications, training, education and experience has not occurred. This paper supports emergency management professionalisation but further research is required. In particular, noting that industry data and publicly available data may not be consistent, future research should seek to address data standards in the recording of emergency management education packages. If improvements are to be made in emergency management qualifications, it is incumbent on emergency managers to consider their ongoing training, education and experience as part of professionalisation.

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