AN EXPLORATION OF RECRUIT FIREFIGHTER TRAINING AND ADULT LEARNING PRINCIPLES

A thesis submitted by

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ABSTRACT

Firefighters are required to respond to unpredictable situations that necessitate physicality and time-critical actions. Recruit training is the initial training that is designed to prepare civilians for the rigors of their profession as firefighters. Traditionally, recruit firefighter training has been delivered utilising a paramilitary instructional approach. This training approach, which at its extreme applications has shown negative effects on self-esteem, learning capacity and psychological growth, is incongruent with modern adult learning theories. While the role and skillset of firefighters have undergone significant transformation over recent decades, the training approach for recruit firefighters has remained largely unchanged. This study conducted semi-structured interviews with 16 recently graduated firefighters from the Queensland Fire and Emergency Service. It examines whether the current recruit firefighter training program aligned with adult learning principles. It also explores the impact of the current training approach on the trainee and whether adult learning principles could be successfully applied to recruit firefighter training.

This study finds that while the training approach varied across recruit courses, instructors and individual experiences, the current recruit firefighter training program was heavily seated within a paramilitary instructional approach. The impact of this approach on the learner varied based on respondents' perception of whether paramilitary training was necessary or unnecessary for the development of professional competence. Furthermore, it found that respondents believe adult learning principles could be successfully applied to recruit firefighter training, however, that it should be applied in a manner that maintains the rigour of training and is contextually appropriate to the role of firefighters. This study proposes a reformed recruit firefighter training program. It recommends a blended training approach that draws on the strengths of adult learning and paramilitary training in a complementary framework.

CERTIFICATION OF THESIS

I certify that the ideas, experimental work, results, analyses and conclusions reported in this thesis are entirely my own effort, except where otherwise acknowledged. I also certify that the work is original and has not been previously submitted for any other award, except where otherwise acknowledged.

Principal Supervisor: Associate Professor Henriette van Rensburg

Associate Supervisor: Mr Ray Hingst

Student and supervisor signatures of endorsement are held at the University.

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LIST OF ABBREVIATIONS

BA	Breathing Apparatus
QFES	Queensland Fire and Emergency Service
RCR	Road Crash Rescue

CHAPTER 1: INTRODUCTION

1.1 BACKGROUND

Firefighting is a high-reliability occupation – whereby it demands decisive, proficient responses to high-stress, unpredictable and often dangerous situations (Backlund et al., 2009; Baumann et al., 2011; Butler et al., 2020; Wagner et al., 2016). Appropriately, firefighters have long-standing recognition as valuable community members – helping others when they need it most (Fast et al., 2016; Wagner et al., 2016). To best serve the community, modern firefighters must be trained to be competent, ethical and critical-thinking individuals (Childs, 2005; Joung et al., 2006). Recruit training is the initial, basic training that transforms a civilian into a trained firefighter. It plays a critical role in shaping the firefighters of the future (Baigent, 2001; Ko & Kao, 1993; Myers, 2005; Perez, 2019; Sommer & Nja, 2011).

Traditionally, fire services both within Australia and internationally have utilised a paramilitary instructional approach to train their recruit firefighters. Paramilitary refers to a model where the training and culture are comparable to that of a professional military (Wakefield & Fleming, 2008, in Frank, 2017). A paramilitary instructional approach is characterised by regimentation, intense tutelage, authoritarian instructors and an expectation of obedience. Some practitioners will insist that this training approach is necessitated due to the unique demands of the profession. However, research indicates that paramilitary instructional methods are incongruent with modern adult learning theories (Basham, 2014; Birzer & Tannehill, 2001; Marenin, 2004; Vodde, 2008). There is also mounting evidence, from an educational viewpoint, that paramilitary instruction can restrict psychological growth (Ko & Kao, 1993); develop only superficial obedience (Baigent, 2003); erode self-esteem and individuality (Post, 1992); impair learning capacity (Rock, 2008); and stifle critical thinking and problem solving (Vodde, 2008). It has also been argued that it fundamentally neglects the development of essential non-technical skills for firefighting, such as decision making, initiative and adaptability (Butler et al., 2020; Ford & Schmidt, 2000). A pertinent question lingers: Why

are modern teaching methods not applied to recruit firefighter training? This research will explore the complex landscape of recruit firefighter training to shed light on that unanswered question.

1.2 CONTEXT

1.2.1 Organisational context

This study is conducted within the Queensland Fire and Emergency Service (QFES). The Queensland Fire and Emergency Service are one of eight major state or territory fire services within Australia. Aligning with their strategic vision that embraces interoperability, intelligence and adaptability, the Queensland Fire and Emergency Service provided in principle support of this study.

The Queensland Fire and Emergency Service is the primary provider of fire and rescue, emergency management and disaster mitigation services within Queensland (QFES, 2020). It is comprised of approximately 6,000 State Emergency Service volunteers; 36,000 Rural Fire Service volunteers; 2,000 auxiliary fire and rescue firefighters; and 2,200 permanent fire and rescue firefighters (QFES, 2020). The Rural Fire Service provides volunteer fire service coverage to rural, semi-rural and some urban fringe areas in Queensland. Auxiliary firefighters are casual firefighters, usually based in semi-rural and urban fringe areas, who respond to emergencies when the demand arises. Permanent firefighters are full-time firefighters based at staffed stations, usually in populated areas.

This study is focused on recruit firefighter training for permanent fire and rescue firefighters. The role of permanent firefighters is highly varied – it includes responding to emergency incidents, such as fires, road crash rescue, technical rescues and hazardous material events; as well as undertaking community safety initiatives, such as fire education and building fire safety inspections.

To become a permanent firefighter within the Queensland Fire and Emergency Service, candidates are required to pass a range of cognitive

ability, physical, psychological, medical and criminal history assessments. The selection process is highly competitive. If successful, an applicant undertakes an intensive 16-week recruit course that takes place at the School of Fire and Emergency Services Training, located in Brisbane; or, more recently, a temporary facility at Townsville. The recruit course is competency-based and applicants must attain the required standard to graduate.

1.2.2 Personal experience

The motivation for undertaking this study was influenced by my own negative experience during recruit firefighter training. My recruit firefighter training was plagued by authoritarian instructors, inappropriate use of power, application of generalised stress and rote learning without practical grounding. The recruit course comprised 15 people who were highly motivated, successful in their previous professional fields, and dedicated to becoming career firefighters. It was difficult to fathom that this paramilitary style of teaching was still being implemented. Now, as a Senior Firefighter, I have experienced adult learning successfully applied to operational training that is delivered subsequent to recruit training. A strong belief that recruit firefighter training should be designed and delivered in a way that reflects best practice has led me to undertake this study.

1.3 PURPOSE

The purpose of the study is to examine the current recruit firefighter training program within the Queensland Fire and Emergency Service.

It aims to:

- examine the practices and philosophies of the current recruit firefighter training program within the Queensland Fire and Emergency Service from the perspective of the recruit; and
- explore recruit attitudes on the applicability of adult learning principles for recruit firefighter training programs.

To achieve these aims, the research will ask the following questions.

Research Question 1

To what extent does the current recruit firefighter training program within the Queensland Fire and Emergency Service align with adult learning principles?

Research Question 2

How does the current recruit firefighter training approach impact on the trainee?

Research Question 3

Can the principles of adult learning be successfully applied to recruit firefighter training programs?

The expected outputs of the study are:

- provide critical insight into current recruit firefighter training practices; the impact of these approaches on the learner; and the applicability of adult learning principles to the recruit training program; and
- provide recommendations to enhance recruit firefighter training practices.

1.4 SIGNIFICANCE

To maintain a responsive firefighting service, it is essential that the front-line workforce receives high-quality, best-practice training. Remarkably, there has been limited research conducted in relation to recruit firefighter training throughout the world. Currently, there is no published literature on recruit firefighter training in an Australian context. This study will address the significant gap in existing knowledge by presenting baseline data and critical insight into recruit firefighter training within the Queensland Fire and Emergency Service. The new knowledge will contribute to building an evidence base that can be used to inform future strategic direction of recruit firefighter training programs across Australia. Furthermore, it is anticipated that this study, through its inquisitive design, will generate further academic and organisational interest into the discipline of recruit firefighter training –

and produce signposts for future research.

1.5 SCOPE

This study transverses several major fields of study – namely firefighting, military, policing and education. While the research was designed to elicit this depth and breadth of information, clear parameters were established in order to produce meaningful outcomes within the allocated time period for the Master level qualification. The following topics were not explicitly excluded from research findings, however, they were not actively investigated by the research:

- recruitment processes;
- curriculum content;
- measuring the effectiveness of current programs; and
- training practices post-recruit course.

1.6 THESIS OUTLINE

This paper will be of a standard thesis format.

Chapter 2 explores current literature relevant to recruit firefighter training – spanning several major fields, as discussed earlier.

In Chapter 3, the thesis will discuss the research design – detailing the methodology and explaining the sampling, instruments, procedures and analysis implemented. It will outline ethical considerations and research limitations.

In Chapter 4, an in-depth explanation of research results from the semi-structured interviews is provided.

In Chapter 5, a discussion of the findings compared to the existing literature is undertaken.

Finally, Chapter 6, the research delves into the implications of the results; and provide recommendations for future practice.

A supplementary section is included with references and appendices.

CHAPTER 2: LITERATURE REVIEW

This chapter undertakes a review of literature relevant to recruit firefighter training. Through four distinct sections, it aims to provide a contextualised understanding of the key factors at interplay for recruit firefighter training. Section 2.1 will highlight key studies of reference and important learnings from relevant literature on the topics of recruit training and firefighter learning. Section 2.2 will examine idiosyncratic aspects of fire services, including organisational transformation; occupational identity; and competence development. Section 2.3 will delve into an understanding of behaviourist learning theory and the salient features of paramilitary instruction. And lastly, Section 2.4 will explore an adult learning framework as it relates to constructivist learning theory and firefighter training.

2.1 BENCHMARK STUDIES

Generally speaking, the field of firefighting is well-researched. There are a plethora of articles relating to the many aspects of firefighting – such as post-traumatic stress, firefighter physiology, occupational safety, wildfire and bushfire, fire suppression techniques, command leadership, women in firefighting, to name but a few. Furthermore, many studies have investigated firefighter training – such as decision-making (Bayouth et al., 2016; Restas, 2014), learning styles (Crandell, 2004; Goransson, 2004; Klingensmith, 2006; Tracey, 2014), error exposure training (Joung et al., 2006), virtual reality training (Backlund et al, 2009) and phased stress training (Baumann et al., 2011). However, despite the generalised research interest in firefighting, there is a surprising lack of studies on recruit firefighter training, both within Australia and internationally. The lack of research has resulted in the absence of an evidence base to inform development in this specialised field.

Given the scarcity of existing literature, it is worthwhile examining benchmark research on recruit firefighter training. The most prominent study into recruit firefighter training was conducted by Baigent (2003), who undertook a cultural audit of recruit firefighter training academies in the United Kingdom to

identify best practice in preparing trainee firefighters. This study classified training centres based on their training approach – using a rating model of regimented, transitional or progressive. Training centres that were classified as regimented were found to be discipline reliant and enforced group behaviours. Progressive training centres were explained to display mutual respect and encourage trainee self-development and self-discipline. Another prominent author, Holmgrem (2014; 2015; 2016) has published several articles over the last decade studying a reformed, tertiary-style firefighter training in Sweden. As part of the reformed program, Holmgrem (2014) has assessed instructor conceptions of professional learning and studied the implementation of distance learning into the training (Holmgrem, 2015; 2016). While the Swedish program is more academic than some recruit programs, Holmgrem's studies provide useful insight into barriers and successes to reforming training, particularly in relation to the influential role of instructors. Sommer and Nja (2011) conducted an exploratory study to analyse dominant learning processes in firefighters – which provides a critical understanding of the formal and informal mechanisms through which firefighters develop their competence. Lastly, Taber et al. (2008) have investigated how paramedics and firefighters learn their practice. It provides insight into the routinisation of daily work practices and adaptability in emergent situations.

These articles are complemented by literature drawn from police recruit training – it is a natural synergy as firefighting and policing share many vocational similarities. Both professions are high-reliability occupations whereby personnel are required to operate in "stressful situations involving complex environments, high degrees of uncertainty and time pressure, and severe consequences for mistakes" (Baumann et al., 2011, p.1). This makes policing a useful reference point, particularly as the introduction of adult learning techniques in police recruit training has been highly recommended in recent decades (Belur et al., 2020; Birzer, 2003; Blumberg et al., 2019; Marenin, 2004; McCoy, 2006; Shipton, 2009; Shipton, 2011). Notably, a study by Frank (2017) has studied the extent to which andragogy was applied in police recruit training academies in the United States of America – providing insight into successes and limitations of andragogy in police

training. Within this study, andragogy, which is described by Knowles (2005) as a set of assumptions of adult learners, is used as the framework of adult learning principles.

2.2 FIRE SERVICES

This section examines the current state of fire services and the key features that impact recruit firefighter training. It examines the diversifying role and skill set of firefighters. It discusses the powerful identity constructs associated with the profession of firefighting and it provides a contextualised explanation of learning styles and competence development in firefighters.

2.2.1 Role and skill diversification

The role and skill set of firefighters have dramatically transformed over the last few decades – with many arguing that recruit training has not kept up with this organisational transformation (Baigent, 2003; Snider 2012). The majority of a firefighter's role is spent in non-emergency operations – with Jacobsson et al. (2020) reporting that emergency work accounted for approximately 5% of their time (in relation to Swedish fire services). Firefighters are now spending increased amounts of time undertaking preventative and mitigative activities within the community (Childs, 2005). Likewise, many fire services have expanded emergency management functions – such as mitigation planning, community capability and disaster responses. In response to this diversification, Childs (2005) argues that firefighters are no longer blue-collared workers rather they are community service professionals – and, subsequently, the requisite competencies of firefighters need to be considered in a holistic way that is not restricted to practical and physical skills. This sentiment is aptly captured by Baigent (2003) who states: "while firefighters may occasionally need to kick down doors, the firefighter of the 21st century will be more interested in opening doors to the community" (p.1). The requisite competencies for firefighters need to incorporate technical and non-technical skills (Crichton & Flin, 2001). Crichton and Flin (2001) highlight the importance of training non-technical skills, such as communication, teamwork and decision-making, for effective

management of emergency situations. Interestingly, Jacobsson et al. (2020) identified an increasing emphasis on preventative work and an academic educational focus as hindrance themes in firefighter discourse – which indicates a cultural resistance to organisational transformation.

Accompanying the expansion of non-emergency work is a similar broadening in the types of emergency incidents attended by fire services. Within the Queensland Fire and Emergency Service, fires represent approximately 25% of all emergency incidents (Australian Government, 2020) – with firefighters increasingly responding to a diverse range of emergency incidents, such as road accidents, hazardous materials, technical rescues and medical assistance. The broadened response capacity means firefighters are fundamentally required to be problem solvers – using critical thinking, decision making and flexibility (Joung et al., 2006; Landry, 2011). Subsequently, adaptability is a key competency for firefighters – with adaptability described as "the ability to deal with changing work requirements and novel or unusual situations" (Hesketh & Neal, 1999, in Joung et al., 2006). Adaptability is explored by Taber et al. (2008, p.276) who discuss "grey areas" in emergency response – whereby they found that "due to the unpredictable nature of work of emergency services personnel, rules and guidelines do not cover every eventuality". This demands that firefighter competence "must span from automatic, skill-based behaviour to problem-solving, knowledge-based behaviour" (Sommer & Nja, 2011, p.437). Furthermore, firefighters are required to be part of high performing teams – whereby they are required to perform optimally as a team in ambiguous and uncertain contexts. High performing teams are described as groups of people with specific roles, and complementary talents and skills, deeply committed to a common purpose and value system, who consistently show high levels of collaboration, innovation and accountability, and manage the external environment to produce superior results (Bard, 2015; Castka et al., 2001).

2.2.2 Occupational identity

Fire services have a dominant culture that is perhaps best explained by

Jacobsson et al. (2020) who suggests that firefighters are “relatively homogenous, family-like, internally protective and externally respected working groups” (p.1). A resounding influence on fire service culture is occupational identity – whereby firefighters are often portrayed in high regard as role models and even heroes in modern society (Baigent, 2001; Childs, 2005; Goransson, 2007; Jacobsson, 2020; Wagner, 2016). This mythology has projected firefighters as protectors – the picture of strength and discipline (Baigent, 2001). Interestingly, Tracy and Scott (2006) compared occupational identity between firefighters and correctional workers. They found firefighters used discourses of occupational prestige and masculine heterosexuality to reframe their work in privileged, preferred terms, despite undertaking physically and socially ‘dirty’ work similar to correctional workers. This phenomenon was described by Baigent (2001) as “firefighters' masculinity” (p.1). He proposes that firefighters' behaviours have traditionally been driven by a belief that they must maintain the conflation of heroism and “special status” of being a firefighter. This masculinity is achieved by differentiating between those who can and cannot perform the job, according to these identity stereotypes (Baigent, 2001). The concept of “firefighter’s masculinity” has contributed to resistance to gender equality and diversity over the recent decades – with Jacobsson et al. (2020) finding firefighters in Sweden reported the pressure to progress towards increased gender equality as the most common hindrance to health and wellbeing at work. The preservation of occupational identity can also be seen in the long-held tradition of recruit training – whereby training experiences are often reminisced about in a war stories manner. It is underpinned by an enduring attitude of ‘it’s the way it’s always been done’ and an expectation that newcomers will start at the bottom and earn their stripes (Baigent, 2001; Holmgren, 2014; Goransson, 2007; Sommer & Nja, 2011).

2.2.3 Competence development

The development of competence for firefighters has been shown to be largely situated through peripheral participation – whereby newcomers undertake peripheral activities, such as simple and low-risk tasks, until their level of

mastery increases (Brooks et al., 2020; Sommer & Nja, 2011; Taber et al., 2008). The process of competency development is supported through the transfer of skills and knowledge from experienced firefighters to new firefighters – with new firefighters often imitating experience firefighters in order to carry out work the correct way (Sommer & Nja, 2011). Personal experience is a critical factor in the development of firefighter competence (Taber et al., 2008) – with firefighters reporting "getting the feel of it" as a measure of their competence (Sommer & Nja, 2011, p.445). Interestingly, firefighters rate learning through experience as the most important way of learning in the workplace – with formal training and education reported as only a supplement to workplace learning (Sommer & Nja, 2011; Taber et al., 2008). This finding suggests that recruit training, while important for basic skill development, is only a small component in the learning journey for firefighter competence. Interestingly, there is limited research on learning approaches employed post-recruit training for ongoing professional development.

The learning styles of firefighters have shown a distinct preference to being practically inclined – with theoretical and academic knowledge often regarded as not important (Sommer & Nja, 2011). This preference was evident in Göransson's (2007) research which reported problem-based learning, applied in theory training for established firefighters, was largely unsuccessful. Despite being an experiential-based learning pedagogy, it found firefighters had no desire for deeper theoretical knowledge – instead, they sought functional knowledge that could be applied in practical scenarios. Using the VARK (visual, audial, reading/writing and kinaesthetic) inventory, studies have shown firefighters have a preference for multi-modal approaches to learning (Klingensmith, 2006; Landry, 2011) – which accords with the preferences of the general population. Not surprisingly, Klingensmith (2006) found a kinaesthetic approach a close second preference. Noteworthily, in Landry's (2011) study of police officers, when adjusted by gender, reading/ writing was a close second preference for female respondents.

During recruit firefighter training, instructors have been shown to have a pivotal influence on competence development. While Göransson (2007) found a consensus that firefighters want to learn from instructors that had practical experience, or “real knowledge” (p.105), instructors that are experienced in an emergency. This finding was replicated within police recruit training, with McCoy (2006) reporting “they are experts in their content area, but are ill prepared to teach” (p.88). In Holgrem’s (2014) study of reformed recruit firefighter training program in Sweden, they found fire and rescue instructors had operational and adaption-oriented concepts of learning – and this conception affected the implementation of the reformed program. They also noted a reluctance among both team leaders and team members to develop new teaching approaches (Holmgrem, 2014). Furthermore, instructors often report the allocation of time to implement learning-centre teaching comes at the expense of providing necessary proficiency training (Holmgrem, 2014). A similar finding was reported by Basham (2014) who discovered that police instructors frequently do not have the understanding, awareness or skill required to incorporate andragogy into recruit teaching practices.

2.3 PARAMILITARY INSTRUCTION

This section explains paramilitary instruction – which has been widely used in firefighter and police training throughout the world (Blumberg et al., 2019). It examines paramilitary instruction in terms of its grounding in behaviourist learning theory. It also delves into the perverse features and implications of paramilitary instruction that make it an entrenched tradition within fire services.

A paramilitary instructional approach is closely aligned with behaviourist learning theory (Chappell & Lanza-Kaduce, 2011). Behaviourist learning theory views learning as a conditioned response to an environmental stimulus – it is concerned with observable behaviour to the exclusion of internal influences, such as thinking and emotions (McLeod, 2017). Learning success is correlated to the learner displaying the appropriate response to a stimulus (McLeod, 2017). A paramilitary instructional approach can be

described as operant conditioning – whereby Skinner proposed behaviour is voluntarily learned through reinforcement and punishment consequences. The paramilitary teaching environment uses punishments, administered through an authoritarian structure and disciplinarian instructors, to shape and control recruits (Chappell & Lanza-Kaduce, 2011). It conditions learners to become submissive and obedient – they learn to follow instructions and not question authority to avoid negative consequences (Cox, 2012). Paramilitary instruction assumes learners are "blank slates" to fill with new knowledge (Cleveland & Saville, 2007, p.4) – which accords with the behaviourist perspective that all behaviour is learned from the environment. Repetition is a key feature of behaviourist learning – whereby motor actions are performed until they become automatic or reflexive in nature. Paramilitary instruction has a heavy reliance on repetition through rote learning and direct instruction. The application of a behaviourist approach to learning has been explained by Murray et. al. (2000) as: "best for use on animals and children (who tend not to resent or rebel against such overt manipulation) and for the preparation of individuals to react immediately and reflexively in life threatening situations" (p.1). King (2006) supports the behaviourist approach by arguing for the criticality of formal training rituals and collective drills to enable soldiers to undertake coordinated practices – and minimise deviant actions caused by stress and confusion. While Baigent (2003) agrees that behaviourist learning is effective for teaching procedural skills, he argues that it fails to develop skills in problem-solving and decision making. This sentiment is extended by Holden (1994 in Vodde, 2008) to suggest that academies with strong discipline crush the initiative and creativity from recruits.

While paramilitary instruction demonstrates clear behaviourist characteristics, it also exhibits a series of underlying features that have a perverse impact on learners. These surreptitious features are engrained within recruit firefighter training tradition and, subsequently, present significant barriers for reform. The first of these features is a process of socialisation – whereby new recruits are inoculated into the cultural norms of the organisation (Novaco et al., 1989; Post, 1992; Conti, 2009; Chappell & Lanza-Kaduce, 2009). Within the paramilitary approach, there is an expectation of assimilation within the

existing social structure and explicit rule system. This can be considered in the sense of identity control – “where a standard of the ideal recruit is generated by academy staff” (Conti, 2009, p.421). Vodde (2008, p.19) takes this concept further in comparing it to “imprinting” that occurs in childrens' formative years. A key part of socialisation is conformity – with learners being taught obedience and deference to authority (Wooden & Nixon, 2014). Interestingly, Baigent (2003) found that this approach created only superficial obedience in recruit firefighters – with recruits complying because there is no alternative. It has been argued that socialisation can build comradeship, esprit de corp and occupational identity. Chappell and Lanza-Kaduce (2009) suggest it instils a belief that loyalty to the profession is paramount for the safety of themselves and the community. However, Ko and Kao (1993) in their study on the effects of paramilitary discipline on the psychology of firefighters, found socialisation to be highly restrictive to psychological growth in individuals and subsequently dysfunctional to behaviours favourable to firefighters’ success in the profession. The intent of socialisation within the recruit training experience accords closely with Goffman’s explanation of total institutionalism – which is described as the total control over the lives of residents, or ‘inmates’. It is characterised by an intense degree of rigid scheduling of activities, a distinct power imbalance between staff and inmates, and stripping of inmates outside world identity (Goffman, 1961). The recruit academy environment exhibits all of these characteristics and fits within the fourth type of total institutes which is purportedly established and justified to pursue work-like tasks (Goffman, 1961).

The second feature of paramilitary instruction is a manifest rite of passage that has a central process of shaming and re-integration. This process, as described in detail by Conti (2009), starts with the ex-communication of recruits based on their recruit status. Instructors view recruits as undisciplined and unworthy (Novaco et al., 1989). They are dressed differently as symbolic control and expected to defer to authority – as exemplified through ‘posting’ to higher ranks. Baigent (2003) identified a distinct process where trainers would assert their authority and put trainees in their place. The recruit endures a series of degradations and humiliations to

prove themselves worthy of an elevation of status (Conti, 2009; Baigent, 2003). These initiations have been shown to heighten group affiliation – with new initiates thought to overstate group attraction as a way of avoiding feelings of cognitive dissonance (Aronson & Mills, 1959; Kamau, 2009). The rite of passage is completed when the recruit is accepted into the new role of a firefighter.

The third salient feature of paramilitary instruction is the application of high levels of generalised, or non-specific, stress – which is often instigated in the form of verbal harassment, intimidation and criticism (Cleveland & Saville, 2007). This approach has been shown to impair learning capacity – with Arnsten (1998 in Rock, 2008) demonstrating a strong negative correlation between threat activation and available resources in the prefrontal cortex, which is responsible for executive functions such as working memory and planning (Arnsten, 1998 in Rock, 2008). Furthermore, Subramaniam et al. (2007 in Rock, 2008) have shown threats to inhibit the brain's ability to perceive more subtle signals required for problem-solving. It has also been argued that generalised stress undermines self-esteem and develops "dependent recruits" that are afraid to make decisions and show initiative (Post, 1992). Torrence (1993) echoes this sentiment by suggesting that a stressful, fear-fraught environment is unlikely to elicit openness, participation or positive feelings. A generalised stress model is in direct conflict with stress-exposure training – which is a proven technique used to prepare personnel to perform under high-pressure situations (Driskell et al., 2001; Friedland & Keinan, 1992; Ross et al., 2016; Saunders et al., 1996). Stress-exposure training allows learners to master basic skills under predictable conditions that maximise learning. It applies stress in an incremental way that is approximate to operational conditions (Driskell et al., 2001; Friedland & Keinan, 1992).

2.4 ADULT LEARNING

This section explores the constructivist and experiential groundings of adult

learning – which will be shown to be fundamentally incongruent with paramilitary instruction. It also discusses its relevance and applicability to recruit firefighter training.

Adult learning has been widely adopted by educators from various disciplines around the world (Birzer, 2003; Chan, 2010). McCoy (2006) argues that adult learning has been the "single dominant theme in the professionalism of the field of adult education" (p.78). Adult learning proposes that the needs of adults differ from children and, therefore, their educational needs should differ as well. A core component of adult learning theory is based on Knowle's theory of andragogy – which is defined as the art and science of helping adults learn (Knowles et al., 2005). The theory proposes five basic assumptions or characteristics of adult learners, which are described below. Throughout this paper, these assumptions will be broadly referred to as adult learning principles.

(i) Self-concept: Adults are self-directed learners that need to be actively involved in decisions. They are capable of being autonomous and taking responsibility for their own learning.

(ii) Learner experience: Adults have individual differences in backgrounds, learning styles, needs and goals – which will impact the learning situation. Adults have a wealth of previous experience that should be a resource for both learners and teachers.

(iii) Learner readiness: Adults are eager and ready to learn what they need to learn to succeed. Learning needs to have relevance to real-life – they want to know why they need to learn something. While adults tend to learn primarily out of necessity, it should be a gratifying and pleasurable experience.

(iv) Orientation to learning: Adults are interested in learning to solve problems. Learning should be task-oriented, problem-centred and life-focused, rather than structured around the subject matter.

(v) Motivation: Adult learners are primarily motivated by internal factors,

such as increased self-esteem and increased job satisfaction, rather than external factors.

These andragogical assumptions have a broad alignment with social constructivist orientations to learning (Jacobsson et al., 2020). Social constructivist theory emphasises learning by constructing knowledge through experiences with people and the environment (Laves & Wegner, 1991 in Illeris, 2004). It views learning as an active process that builds upon existing knowledge and values with community playing a central role in meaning making – which is identifiable across the andragogical assumptions. Similarly, andragogy accords with experiential learning theory – which advocates that learning is a process of creating knowledge through the transformation of experience (Kolb, 1984). It emphasises the importance of inquisitive learning, as does the problem-centred assumption of andragogy. Inquisitive learning supports the acquisition of adaptive experience and harmonises with Biggs' theory of deep learning – whereby the rudimentary mastery of skills is surpassed to become meaningful knowledge that can be applied flexibly in different situations (Biggs, 1988 & 1999; Dumont et al., 2010; Howie & Bagnall, 2013). Adaptive experience, which complements the general skill of adaptivity, is a critical learning requisite for firefighters who are required to utilise decision-making and problem-solving skills to respond to unpredictable and dynamic situations.

While many studies have proposed the application of adult learning in recruit training (Basham, 2014; Belur et al., 2020; Birzer & Tannehill, 2001; Marenin, 2004; Vodde, 2008), one of the few studies that have investigated its implementation is Frank (2017). Frank (2017) examined whether principles of andragogy were present in paramilitary police academies. While the study found "academies predominantly continue to operate in a pedagogical approach discounting the tenets and principles of andragogy", interestingly it found a disconnect between graduating recruits and the outcome needs required by the profession (Frank, 2017, p.403). The study reported that while an andragogical approach resulted in a more pleasurable experience for recruits, it negatively impacted acceptance of chain of command,

commitment, resilience and diligence. Frank (2017) recommended a hybrid approach that "blends the strengths of both andragogy and pedagogy teaching models" (p.450). Another major innovation in police recruit training that has the application of problem-based learning (Cleveland & Saville, 2007). Problem-based learning can be considered a derivative technique of adult learning in that it presents the learner with relevant ill-structured problems to solve utilising their existing knowledge and skills. Of relevance within a national context, this technique has been implemented and studied within the New South Wales Police Force (Makin, 2016; Shipton, 2011). In this setting, problem-based learning was used as a hybrid model whereby a combination of learning methods, such as lectures, tutorials, scenario-based training and problem-based learning sessions, were delivered. Shipton (2011) suggests that, when implemented with appropriate scaffolding, problem-based learning encourages higher levels of cognitive engagement, where students develop meaning and functional knowledge. While policing arguably has a greater community engagement function compared to firefighting, the implementation of adult learning into police recruit training provides valuable lessons and opportunities transferable to firefighting.

2.5 SUMMARY

This literature review has shown that recruit firefighter training is a complex topic that is shaped by multiple influences. The use of paramilitary instruction for recruit training can be seen as an institutionalised practice – whereby it has pertinacious features that protect occupational identity. Many studies critique a paramilitary approach as being an inflexible environment that is not conducive to learning. It is fundamentally disparate from the theoretical groundings of adult learning which is underwritten by socially and experientially situated learning. Adult learning presents a strong case for application in recruit firefighter training – to develop competencies that align with the learning styles and requisite skills of firefighter professionals.

CHAPTER 3: RESEARCH DESIGN

This chapter will detail the blueprint that was adopted by this research study to attempt to answer the study research questions. Section 3.1 will reveal the fundamental methodology and research design. Section 3.2 will examine the study sample and recruitment of participants. Section 3.3 explains the data collection technique. Section 3.4 will describe the method of data analysis, including the thematic analysis process and point of data saturation. Section 3.5 provide an overview of ethical considerations and study limitations.

3.1 METHODOLOGY AND RESEARCH DESIGN

3.1.1 Methodology

This study was undertaken as a work-based action research – whereby solutions to real-life problems were developed utilising robust research methodology. The methodology acknowledges the reality that work-related 'problems' are often not easily 'solved'. Fergusson (2019) describes how work-related problems can be "complex, ill-defined, difficult to describe and…not easily rectified" (p.107). He suggests this can lead to "messy" research, but it is this "leap into the swap" of messy, confusing problems that can address concerns of deeper value (Fergusson, 2019, p.107). This study embraced the messy classification – with an understanding that contributing new knowledge would, in a small yet definable way, address the work-based problem.

The research was undertaken within the Queensland Fire and Emergency Service. The Queensland Fire and Emergency Service provided in principle support of the study – recognising that the topic aligned with their organisational vision and goals. Subsequently, the researcher assumed a dual role of practitioner-researcher – which Workman (2007) describes as a professional that carries out research in their workplace or work discipline. The dual role afforded the researcher invaluable insight into the topic and understanding of the organisation. While Holian and Coghlan (2012) warn

that the nature of practitioner-researcher potentially lends the research process to bias, it can be counter-argued that qualitative research by nature is interpretive research – bias, values and personal experiences will shape the interpretations formed during a study (Creswell, 2007).

3.1.2 Research paradigm and design

The study adopted a pragmatist paradigm due to its real-world, practice-based orientation. It was considered an ideal fit for work-based research – seeking outcomes to questions in a sensible way rather than conforming to a single philosophical system (Mackenzie & Knipe, 2006). It was a qualitative design, using semi-structured interviews, in an exploratory approach. The qualitative design was chosen to elicit a contextualised understanding of the phenomena (Hennink et al., 2020) – to delve deep into the grey areas and messiness of the topic. Using an exploratory approach, it has sought to better understand the exact nature of the complexities of recruit firefighter training. As there are limited existing studies for reference in an Australian context, the study was earmarked as preliminary research – whereby it may not provide conclusive answers to the research questions (Given, 2008).

3.2 PARTICIPANTS

3.2.1 Study sample

The study was conducted with fire and rescue service permanent firefighters within the Queensland Fire and Emergency Service. To ensure recency of participants' memories, a target population was defined as fire and rescue service permanent firefighters that had completed recruit training within the previous 24 months. The parameters were delineated to completion of recruit training between 22 February 2019 and 22 February 2021.

The target population consisted of 282 personnel, which included 256 males and 34 females. The study sample consisted of 16 participants, which represented approximately 5% of the target population. The sample size was determined by the principle of data saturation (refer to *Chapter 3.5 Method of analysis*). The sample was identified using a combination of random and

convenience sampling (refer to *Chapter 3.2.2 Recruitment*). Participant anonymity was a paramount priority – with anonymity and other ethical considerations discussed further in *Section 3.5 Ethics and limitations*.

Figure 1: Schematic representation of study sample

3.2.2 Recruitment

The study utilised two strategies to recruit participants. The primary recruitment strategy employed random sampling - whereby an invitation to participate in the study was sent via email to a random sample of personnel (refer to *Appendix 1: Invitation to participate in research study*). The random sampling procedure was undertaken by the Planning, Research and Innovation Unit within the Queensland Fire and Emergency Service Futures Branch. The researcher was provided with a list of names and email addresses of the random sample. The email invitation utilised an opt-in approach – whereby it requested personnel to contact the researcher should they be interested in participating in the study. This ensured participation was entirely voluntary and there was no pressure or coercion. The email invitation was sent on a single occasion only – there was no follow-up or reminder for personnel that did not make contact with the researcher. A reminder email was sent to personnel that initially contacted the researcher but failed to follow through with booking an interview. The invitation contained a Participant Information Sheet *(Appendix 2: Participant Information Sheet)*.

The secondary recruitment strategy employed convenience sampling – which was utilised to bolster slow participation rates through the random sampling approach. Through the dual role of practitioner-researcher, the researcher

would encounter personnel that fitted within the study's target population on a regular basis. During the data collection phase of the study, the researcher would extend a verbal invitation to participate in the study to accessible personnel. To ensure personnel felt no pressure or coercion, the researcher would email personnel with the Participant Information Sheet and advise them to make contact should they wish to participate. To remove any potential for bias selection, the researcher would not invite personnel that had previously shared views on recruit training.

A total of 102 personnel were invited to participate in the study. Of those 102 personnel, 22 responded to the researcher to express an interest in participating in the study. Of those 22 personnel, 14 participated in an interview. A further two participants were recruited using convenience sampling.

3.3 DATA COLLECTION

The study utilised individual, in-depth semi-structured interviews to collect the data. Semi-structured interviews are commonly used in qualitative research because of the ability to explore meaning and perceptions – with DiCicco-Bloom (2006, p.39) explaining that the technique of interview "encourages the interviewee to share rich descriptions of phenomena…". The interviews were conducted either by videoconferencing utilising the Zoom platform, in-person or via telephone. The interviews were audio-recorded to enable accurate transcription.

An interview guide, which contained a set of pre-determined open-ended questions derived from the research questions, was utilised. The pre-determined questions were complemented by other follow-up questions that emerged from a dialogue between the researcher and participant. The researcher allowed an interview to deviate from the planned interview guide – as the digressions elicited useful information by delving into the participant's experiences and thoughts. A copy of the interview guide is included as *Appendix 3: Semi-structured interview guide*.

The data collection process utilised a phased approach – to allow the

researcher to undertake the reiterative process of interviewing and data analysis in a manageable way. Creswell (2007, p.64) describes this data collection process as “zigzag” process – whereby the researcher heads to the field to gather information, back into the office to analyse the data, back to the field to gather more information, and so forth. An explanation of data collection timelines is outlined in *Appendix 4: Detailed data collection timelines*.

3.4 METHOD OF ANALYSIS

3.4.1 Thematic analysis

This study utilised reflexive thematic analysis to analyse findings from the semi-structured interviews. This method was chosen due to its organic approach to code and theme development – which allowed the researcher to have an active role in identifying manifest meaning from within the data (Braun & Clarke, 2021). While flexibility is a key advantage of thematic analysis, it needed to be conducted in a deliberate and rigorous way to avoid an “anything goes” approach (Antaki et al. 2002 in Braun & Clarke, 2006, p.78; Nowell et al., 2017). Subsequently, this study utilised Braun and Clarke’s (2006) six-step method. Interviews were transcribed using Sonix talk-to-text technology and manually edited for accuracy. The coding process used an abductive approach – whereby deductive codes aligned with the interview questions and inductive codes were unearthed through unanticipated findings. The codes were not rigid; rather it was a continuous process of evolution as the understanding of the data deepened. A manual coding system was utilised – with data categorised using Microsoft Excel spreadsheet software. The codes were collated into themes – whereby the researcher attempted to examine the latent meanings from the content rather than simply categorising extracts. A theme was defined by three factors: (i) prevalence within the interview, (ii) prevalence across the entirety of interviews, and (iii) keyness to capturing something important about the overall research question. This required subjectivity from the researcher because, for example, a concept may not have prevalence across the entirety of interviews, however, it arose sporadically and presented critical

insight into capturing an essence of recruit firefighter training. The initial themes were reviewed at two levels. The first level assessed that the codes for each theme, and the associated data extracts, formed a coherent pattern. The second level involved re-reading the entire dataset to verify that themes accurately represented the entire dataset and to ensure that the themes fitted within the above-mentioned criteria. It also provided any opportunity to code additional data that was missed in earlier coding. Whilst a time-consuming exercise, it was a valuable and reflexive exercise. A thematic map was developed and used to provide a story utilising a combination of analytical narration and data extracts.

3.4.2 Data saturation

The sample size was determined by the principle of data saturation – which is described as "the point in data collection when no new additional data are found that develop aspects of a conceptual category" (Francis et al., 2010, p.1230). The study planned for a sample size ranging from 10 to 20 interviews. This was based on findings from two benchmark studies: Guest et al. (2006) found that the first 12 interviews elicited 97% of important codes out of a total of 60 interviews. Furthermore, Hennink et al. (2017, p. 591) found code saturation occurred at nine interviews, however, meaning saturation, "a richly textured understanding of issues", was not reached until 16-24 interviews.

There are no concrete guidelines on how to establish data saturation in practice – and that is because study designs are not universal. This study utilised a proposal by Francis et al. (2010) whereby a minimum sample size for initial analysis (initial analysis sample) was specified and the number of interviews to conduct without new ideas emerging was also specified (stopping criteria). Francis et al. (2010, p.1242) found an initial analysis sample of 10 and stopping criteria of 3 to be "a fairly effective" criteria for deciding data saturation in theory-based interview studies. Furthermore, Dibley (2011, in Fusch & Ness, 2015) aptly suggests that a sample should be considered in terms of richness (in terms of quality) and thickness (in terms of quantity). With a target population of 282, an initial analysis sample of 10

and a stopping criteria of 3 was deemed appropriate because, at minimum, it would reflect roughly a 5% sample.

In actuality, Francis et al's. proposal was accurate. By the end of 10 interviews, it became apparent that no new information or themes were being found. A further three interviews were undertaken to confirm this assumption of data saturation. At the point of 13 interviews, data saturation was achieved. A further three interviews were conducted as the researcher had committed to undertaking interviews with all respondents that had expressed interest in participating in the study.

3.5 ETHICS AND LIMITATIONS

3.5.1 Ethical framework

The study operated under the ethical framework outlined in the Australian Code for the Responsible Conduct of Research 2018 (NHMRC, 2018) and National Statement on Ethical Conduct in Human Research 2007 (NHMRC, 2007). It was guided by the principle of beneficence – whereby the benefits of the research were anticipated to greatly outweigh any possible risks to participants. A Human Research Ethics Approval was obtained through the University of Southern Queensland Human Research Ethics Committee. The research was deemed to be low or negligible risk research; with the only foreseeable risk for participants being minor discomfort or inconvenience. Informed consent was sought from all participants and confidentiality strictly maintained. Participant anonymity was maintained by removing all personal identifiers from the data.

3.5.2 Dual role of practitioner-researcher

As discussed in *Section 3.1.1 Methodology*, conducting research within one's workplace required the researcher to maintain objectivity – not allowing prior assumptions, insider knowledge, previous experiences or personal beliefs to influence the rigour of the research. While the researcher's pre-existing assumptions cannot be eliminated, they were managed by the following reflexive strategies:

- regular mentoring with a supervisor to reorient objectiveness;
- careful interviewing techniques to avoid leading questions and wording bias;
- consciously looking for themes during data collection and analysis that conflicted with the researcher's personal experiences;
- consciously avoiding cognitive distortions, such as over-generalisations and mental filtering.

The dual role also presented a challenge in terms of role conflict or dilemma (Workman, 2007). In this study, the researcher had to wear two distinct 'hats'. The first, and enduring, hat was that of the role of firefighter – whereby the researcher works as a peer and colleague with study participants, possibly within the same crew. The second, and time-limited, hat was that of the role of researcher – whereby the firefighter is working as a researcher as part of an external organisation.

This duality of the role/s was often met by a mixed response of confusion and scepticism. Many potential participants, as well as firefighters who had heard on the grapevine about the research, struggled to understand the distinction in roles. Commonly asked questions were: 'so QFES has commissioned you to do this research' and 'does QFES know you're doing this research within their organisation?'. The study clearly disclosed to participants that the research is undertaken through the University of Southern Queensland – and was not an initiative or project of the Queensland Fire and Emergency Service. The researcher made a clear distinction of these role boundaries by avoiding discussing the study in the workplace.

3.5.3 Limitations

The results reported herein should be considered in light of some limitations. These limitations are detailed below.

- The study was concerned with recruit courses conducted within the previous 24 months. The training invariably differs from course to course – with different instructors and academy managers. The generalisability

of these findings is subsequently limited to the previous two-year period, as training approaches could be administered differently before or after this period.

- The study has reported findings from the perspective of recruits. It does not represent the perspective of instructors.
- The sample had a very high representation of participants from tradesperson and military backgrounds – which may skew the findings.
- The data collection method used self-reported information which may be influenced by participant biases, such as selective memory, social desirability and fear of recourse. In fact, fear of recourse was a factor in this study – as many participants further opened up about their experiences post-interview when the recording was stopped, citing they 'didn't want to say that on tape'. This indicates that participants may have watered down their responses to avoid being perceived as speaking against their employer.
- The opt-in nature of the study means the sample may not represent a natural distribution and rather may be skewed towards more extreme experiences, feelings or ideas. It is possible that people with 'neutral' experiences, feelings or ideas may not 'bother' to participate in the study.

CHAPTER 4: RESULTS

This chapter provides an in-depth explanation of results from the semi-structured interviews. It will examine the themes identified through the process of thematic analysis, as they align with the research questions.

- Section 4.1 will provide an overview of the study sample.
- Section 4.2 identifies seven themes that describe how closely, or vastly, current recruit firefighter training aligns with adult learning principles. These themes are authoritarian instructors; playing the game; drill marching; punishment; institutionalisation; assimilation; and preferential or prejudicial treatment.
- Section 4.3 has distinguished five themes of the current training approach that impact on the learner. These themes are necessary; unnecessary; stress and anxiety; rite of passage; and job preparation.
- Section 4.4 presents four themes that influence the application of adult learning principles to recruit firefighter training. These themes are instructors as role models; instructors as skilled educators; blended training approach; and contextually appropriate.
- And lastly, Section 4.5 presents a summary of the findings.

4.1 STUDY SAMPLE

The study sample consisted of 16 participants, 13 males and three females – which reflects about 5% of the total study population. In this study, females represented about 18% of participants which is slightly higher than the target population at approximately 10% females. The mean average age of participants was 35 years – with ages ranging from 27 to 45 years. Interestingly, there were six participants from the same recruit course. In terms of previous occupations, a resounding 44% of participants had military, police or firefighting backgrounds and a further 38% of participants were from trade backgrounds. Further information on the study sample is included in *Appendix 5: Comparison of target population and study sample.*

4.2 TO WHAT EXTENT DOES THE CURRENT RECRUIT FIREFIGHTER TRAINING PROGRAM WITHIN THE QUEENSLAND FIRE AND EMERGENCY SERVICE ALIGN WITH ADULT LEARNING PRINCIPLES? (RQ1)

Recruit course training was found to be delivered utilising distinctive paramilitary features that were disparate to adult learning principles. The extent of the paramilitary approach fluctuated across recruit courses, instructors and individual experiences – ranging from moderate to extreme.

4.2.1 Authoritarian instructors

Recruit instructors were found to play a pivotal role in recruit training. Some instructors were reported to be skilled teachers. However, there was also a heavy presence of authoritarian instructors or, as one respondent indicated, “the designated yellers” (R14). Noteworthily, there was consensus that the yelling was generally carried out in a way that was explicitly respectful – in that it was not derogatory or a personal attack.

> *There was sort of a designated yelling guy. I guess he was just good at. And we always sort of knew in advance what he was gonna do. When he went about it in a way that he never singled anyone out. (R14)*

> *I respect that whole rank structure and, you know, you got to earn your stripes. And I felt that it was just part of the course. I don't think in any way were they unreasonable in terms of how they did it. I felt that they did it respectfully. (R1)*

In contrast to these sentiments, several respondents did feel it was implicitly invective and employed to intimidate, belittle and perpetrate power.

> *Some of the yelling would happen while drills were going on. A lot of that was just getting people moving over noise. I wouldn't have an issue with that. It was only a couple of them that would really just... because you can see they do it to belittle people or to intimidate. (R4)*

But I think some trainers perceive that as putting pressure on you. Whereas I perceived it, and I know a couple of other recruits perceived it, as just out and out abuse. (R8)

Furthermore, the authoritarian instructor appeared to have a role in attempting to break down the recruit.

... Live fire is another prime example, we had a station officer tell us after the first burn, you know, that how shit we were and that he, you know, he doesn't want us on any of his trucks. (R6)

At least one-half of respondents believed that instructors were directed to teach utilising an authoritarian approach, regardless of whether that was the instructors' teaching preference.

Some of them were super nice and you could see that they struggled with the authoritarian side that they had to put on. (R10)

Look, I've been fortunate that nearly all of the instructors that we had, I have worked with on shift. They say 'oh yeah, we had to be like, yeah, we have to be a certain way when we're there'. And they're all way more laid back when you meet them back on shift. (R1)

You start hearing some of the anecdotal stories behind the scenes where they're like see, you know, one of them might be saying "Oh man, they've been giving me grief. They want me to yell and scream but it's really not in my character. I just like to teach how I like to teach". (R12)

4.2.2 Playing the game

Another hallmark feature of recruit training was 'playing the game'. Playing the game was a reference used by recruits to explain an expectation to 'keep their heads down', follow orders and understand their place at the bottom of the organisation. Whilst recruits were not explicitly instructed to play the game, it was heavily implied by instructors and highly recommended by colleagues and fellow recruits.

Yeah, so I knew that you had to shut your mouth, toe the line and just play, you know, the bottom rung. (R6)

[In terms of playing the game] I hated it. I didn't understand what that meant until about the six week mark, when I realized okay I just got to shut up and do what I'm told and not have any real individual thought or input really. (R7)

Playing the game was often synonymous with recruits being treated with a degree of disregard and disrespect.

It's not to do with the subject matter, like the things you're learning are really serious things. The game is almost in how you're treated while you're learning those things. (R12)

It's the ones that just turn it into like their own private enjoyment, that you go 'no you've missed the mark'. And there were, it seemed that they were those guys there, and the thing was they didn't build you up... (R6)

But yeah, and I mean they're respecting... We felt... we knew they respected us as humans. Like there wasn't anything like shocking going on, like that. But we also knew that we got the amount of respect that a recruit firefighter is probably expected to get. (R10)

Some respondents felt that it was designed to be frustrating and annoying to test the recruits' resolve. Another respondent suggested that playing the game often became 'games being played' – as exemplified by instructors hiding personal protective equipment to make an example of recruits. One respondent noted the gaming was excessive compared to that experienced in military training.

I don't feel like it was taken to the same level as the instructors on firies course took it. I feel like it was trying to take it to another level to really try and get people frustrated and pissed off and really push buttons. And I don't know, was it was that an actual intentional thing or was it a

bit of an abuse of power kind of thing? I guess it's up to interpretation, isn't it? (R15)

4.2.3 Drill marching

Drill marching was performed in all recruit courses. One-half of respondents believed drill marching has a valid place in recruit course training. They reported it as a useful way to learn spatial awareness, create unity, follow instruction and instil pride in the uniform.

It instils a sense of pride in your uniform and instils a sense of structure. And it enables you to realize that you have a commander and there is a chain of command…And when you're given a direct order "holt", you do it. (R2)

However, instructors were often suggested as being untrained in drill protocol – which reduced the effectiveness of the activity.

We had no one that was a marching instructor that knew really what they were doing. And so half the time we were out of the parade ground...It just be people toing and froing between what was the correct way to do it... And just yeah just felt like a waste. (R7)

The remainder of the respondents had either a neutral or negative perception of drill marching. A small proportion of those respondents reported it as being "pointless" (R8). Several respondents pondered whether drill marching was an effective use of the limited time at recruit training. Many respondents noted it was mostly undertaken for march out on graduation day.

Drill is used as a tool to get people presenting themselves...professionally and operating as a group. However, once you finish course, we don't use marching drill again. So is it appropriate? Is it a good effective use of time and effort? (R15)

It's funny that we do we do it so much at the academy yet once you're on shift, it very rarely happens. (R1)

It was a really good feeling to march in, it looked very professional. And I think going from never having done it before, to where we were by graduation, I did feel quite good. I think everyone respected it. Family and friends really enjoyed seeing. So yeah, I think it had its place, I quite enjoyed it. (R10)

4.2.4 Punishment

Some respondents highlighted that instructors had high expectations – whereby recruits were expected to master skills very quickly. Mistakes were often viewed by instructors as being unacceptable and they were often dealt with harshly.

Again, I think some days, like when we had strict officer, the mistakes weren't welcomed. They saw it as a hindrance and that you were a problem. And you needed to fix that problem. I guess that was the thing that a lot of us, sort of found frustrating was that you would get shown a skill that you never ever done or seen or known about, an hour before. And then you have to go out and perform it. And if you're not performing it to that level within a couple of hours, you know, you're then, you then not worthy in a way, I guess you could say, on the extreme end. (R10)

Yeah, I copped a fair bit of stuff. And I remember there was one day where I like broke down and cried just from, just a genuine honest mistake. It was my first time trying it and copping a fair bit of abuse and... it just makes me feel like shit. (R4)

While some instructors would provide constructive feedback to address mistakes, other instructors were reported to be ineffective in assisting recruits to improve their skills.

Depends on the instructor. Again, the good ones were direct, corrected the mistake and moved on. And didn't hold it against you, if that makes sense. Where is there are some instructors if you made a mistake, you know, they'd smash you. And then that would go on the you know, the unwritten

list of this guy's making mistakes. (R6)

There were many accounts, across various recruit courses, whereby recruits were required to carry around a piece of equipment as punishment. The punishment was typically administered for making a recurrent mistake.

> *Take this piece of equipment run to the top of the tower. Hold it above your head and scream to the fire ground. This is my standpipe. I love my standpipe. I will never let my standpipe go or run around and tell every instructor as loud as you can what you just f****d up or that sort of thing. (R12)*

> *"Hey mate, like just around lunchtime, you're going to carry this. This is going to be your baby for the next two hours. And you're going to carry it everywhere you go". (R16)*

Respondents almost unanimously agreed that this type of punishment was an effective teaching technique and they found it intended in a good-spirited way.

> *And we all thought it was hilarious… so I thought it was a great teaching tool and no one ever took it to heart with that either. (R16)*

> *It was one of those things where it was just a bit of a... it kinda made you feel like you in this unique little culture a little bit more. (R6)*

Several respondents did highlight that it needed to be administered correctly in order to be an appropriate punishment.

> *So I've seen that before and I think it works quite effectively, but you've got to be very clear that it's not punishment of the individual, it's a learning experience in the group. Otherwise that becomes that bastardisation and targeted inappropriate workplace behaviour, all that kind of stuff. (R11)*

> *I liked it. Because I'm one to joke around. But if you get someone a bit softer, they can, I guess, have a bit of a cry, but I think it was in good*

spirit and it's something they will never do again. (R4)

4.2.5 Institutionalisation

The training was reported as being physically, mentally and emotionally exhausting. Most respondents indicated that the training days comprised of long hours and there was an expectation to study at night and on weekends. It was reported as being an all-consuming 16 weeks, which was exacerbated for many by living away from home for the duration of the course. Living away from home also created additional pressures on family life.

> *But it is a very tense environment, it is emotionally, physically and mentally exhausting every day. And I know it's designed for that. But even though you know that, it can still be a lot to handle some days. (R10)*

> *It consumes every aspect, to me it consumed every aspect of my life. You know, like I would go home and I'd be thinking about that day, I'd be thinking about what was coming up next, and the next week. (R10)*

The most challenging aspect of the training was often reported as the emotional and mental aspects – created through some of the paramilitary teaching aspects.

> *But you know intensity was up there with obviously QFES because of the nature of the job and the drills and skills that we were doing. And that was sort of on par with the military stuff because it was just go, go, go, go for the same sort of period of time. (R11)*

> *It was challenging. It was probably one of the most challenging things, I've done. Less so from a physical point and more so from a mental aspect. (R7)*

4.2.6 Assimilation

About one-half of the respondents felt there was an expectation for recruits to display a certain type of attitude or standard of behaviour.

Well I sort of understood, maybe a week-in, just because of my personality, I like to have fun. And you just have to... a lot of people just wanted to not be known, to just cruise through, where some people were oblivious to that and were just being their natural selves. (R4)

And there was an expectation that we all acted and behave in a certain way, that was a given. But there was also an appreciation of everyone's individuality. (R9)

One respondent noted that whilst recruits had their individualities, they did share many common attributes and personality traits. There were many references to being the 'grey man' which implies that recruits should not stand out. Recruits that did not assimilate were termed 'heat seekers'.

Like I don't want to stand out in any way, shape or form of being different. And yeah, you'll see the people like they, you know, they even termed them heat seekers. It's like if you stand out, it's almost that tall poppy thing. You quickly get squash back down into your recruit box. And then yeah try and stay in there. Try and stay the same colour, shape and size as everyone else and don't draw attention. (R12)

Diversity was a divisive topic. Generally, the majority of respondents felt diversity was not valued during the recruit course, however, many thought this was necessary to ensure all recruits were treated equally.

I honestly think they probably do their best to squash out any diversity and making one homogenized whole that is the recruit. And then the recruit is treated equally. But yeah, I don't think there's a place for, they don't look for or celebrate diversity would be how I would see it. (R12)

There were two distinct examples of segregation that occurred based on gender, however, it appeared not to be malicious acts rather misguided attempts at supporting diversity. The first situation was noted as a recruit course whereby all the female recruits were assigned to female mentors – making it appear as special treatment. The second instance is described below:

Yeah, look my course had the most female recruits they had ever had at one time and so that was probably a big deal. There was one incident where the Commissioner came and only wanted to meet with all the girls in the room. Some of the blokes got upset about it. (R1)

At least one-quarter of respondents expressed concern about either confidentiality or permission to participate in the study. Respondents did not want to be perceived as 'breaking ranks', 'speaking out of turn' or 'having an opinion'. One respondent jokingly suggested: "the paint's not even dry on my name badge yet" (R5). When probed about their recruit course experience, numerous respondents sought to frame their experience in a positive light – proposing the training was worthwhile to become a firefighter.

It got me to the end of the 16 weeks and I've got my uniform. That was my goal. It was just a journey. (R2)

At the end of the day, it's not... it doesn't seem like it's that much to ask. (R14)

The phrase 'eat dirt now, eat cake later' repeatedly occurred – as a reference to this rite of passage. There was a trend for respondents to seek to avoid appearing as weak, taking it personally or being ungrateful.

You didn't take it personally. Like you think you were trying to strive to get acceptance and to make your peers proud or, yeah, just to gain acceptance. (R1)

I think there's such a big emphasis like, you know, you're told how competitive it is to become a firefighter and what a prestigious job it is. But so you don't want to look at it as a negative thing, and you don't want to just, you don't want to come across as ungrateful. (R7)

4.2.7 Preferential or prejudicial treatment

Three quarters of respondents felt there were instances of preferential or prejudicial treatment of recruits.

The instructors had their favourites, they had people they didn't like on the course and I'd say those people had a very difficult time on the course. (R3)

At least one-quarter of respondents felt that instructors preferred recruits with military and trades backgrounds compared to those with white-collar backgrounds. Several respondents felt that recruits with backgrounds as auxiliary firefighters received harsher treatment. One recruit course had several reports of older recruits receiving unfavourable treatment. However, this unequitable was not apparent across all recruit courses – with several respondents reporting that recruits were treated equally.

It was mainly just a blanket sort of treatment I would say of the recruits. (R7)

One respondent reflected that whilst they did not experience any prejudicial treatment, they did match a stereotypical image of a firefighter.

I didn't feel that there was any sort of stereotype. You know, I guess, I never really had attention on me, there was no one questioning me or asked about why I did things a certain way or anything like that. You know, there were some recruits who struggled at the start and people started picking apart who they were as a person… But I'm a white Australian, 30 odd male, with a trade background, so I thought I was kind of fitting for the job anyway... (R10).

Most respondents said there were no instances of bullying witnessed either between recruits or from instructors. Any minor incidents or indiscretions were widely reported as being appropriately addressed or rectified by the instructors. The most common inappropriateness was prejudicial treatment.

The only incident I can say I saw of bullying was people let's say getting ridden with a different level of pressure to pass something. (R3)

However, there were numerous reports relating to one recruit course whereby the paramilitary teaching style was perceived as being very close to

unacceptable behaviour. Furthermore, there was a trend for respondents to describe questionable behaviour as being appropriate.

> *I don't believe in bastardization, but I think there's a bit of a rite of passage. (R6)*

> *Some instructors would pick out some people on purpose, but I think it was done in good humour, sometimes it felt otherwise, but those recruits probably deserved it from having a shit attitude, which was then fixed up. But yeah, I wouldn't say it was direct bullying or anything, it's just boys being boys. (R4)*

4.3 HOW DOES THE CURRENT RECRUIT FIREFIGHTER TRAINING APPROACH IMPACT ON THE LEARNER? (RQ2)

The paramilitary approach to training impacted learners in different ways. The impact was heavily influenced by personal perceptions on whether paramilitary training is necessary or unnecessary. The training experience often elicited feelings of stress and anxiety in recruits, however, the cause of these feelings had varying explanations. An implicit impact of recruit training was identified in the embedment of a rite of passage tradition that is framed as necessary to become a firefighter. And lastly, the training was seen to prepare recruits with a high level of fundamental firefighting skills, however, they were ill-equipped for the holistic role duties of firefighting.

4.3.1 Necessary

Some respondents found the paramilitary approach as necessary for the nature of the profession – which requires respect for rank and a safety focus. These respondents felt authoritarian instructors were an essential component of training because instructions need to be relayed in a succinct way within a noisy environment. Almost one-quarter of respondents suggested that if yelling occurred it was justified – being used to correct safety breaches and impart the seriousness of performing critical skills.

> *No, there were elements of yelling but typically that was well deserved.*

But I did not feel there were any instances of bastardisation or anything along those lines. So when someone lost their temper it was for a genuinely good reason. (R9)

... Being on the fire ground for training, if they were getting yelled at it's because they stuffed up. And it could be a critical, something they've done that could be dangerous. (R13)

The same one-quarter of respondents also described the current training style as being effective in teaching discipline and building confidence.

For me, I felt confident and empowered. We were given all of the relevant information was provided to us... we had all the resources under the sun. We had instructors who made themselves readily available to us. I felt completely adequate and I felt empowered and prepared. (R9)

Over one-half of respondents had a military background – with many emphasising that their previous exposure to military-type training had prepared them for the paramilitary-style that was utilised on firefighter recruit course. A common response was: “I’ve been yelled at worse” (R11). Furthermore, the military background seemed to engrain an acceptance or understanding of the reasons behind utilising an authoritarian approach.

I found on these courses like people without military background who don't understand the whole yelling and screaming and why they do it. They come in like, "Why are they yelling at me. They can't yell at me like this. This is not nice". No, but if you're in a burning building and someone's in there and they go, “You need to do this, you need to do that now”...You're gonna go "uh-huh, uh-huh". And you're not going to... take offence to it. (R2)

Some respondents acknowledged that the current paramilitary approach was intense and that other recruits may have had a different experience from their own.

I don't know how else you teach things like that. There's probably other ways. But I think it is an effective method. You have to be receptive to it. I'm sure there's some people that it's just clashes with entirely. I think it worked for me. (R14)

Obviously not coming from defence, they weren't prepared for that level of intensity. (R11)

Several respondents felt that the recruit course was a more positive experience for those recruits that had been adequately prepared for the style of training. There was a sentiment that recruits should know what to expect on the first day.

I think because I've got told by so many people this is what you can expect to get in. If I didn't have any idea and I went into probie, it would be a big culture shock for me. But I had the expectation coming in that I knew how it was going to be. (R13)

I knew the game coming into it. (R6)

Furthermore, a couple of respondents likened success at recruit course to personal responsibility – through being proactive, having a good attitude and working hard.

They made it very clear from the outset, it's not sufficient to sit back and just be spoon fed the information. You've got to go and actually seek that learning, ask questions, work on the skills that you need to work on yourself. It's not something that you're just going to sit in a classroom all day, go home and be confident. You've got to actually work on it. so that required proactivity as recruits. (R9)

So it was up to me to be there and absorb and to learn, and to get hands-on, and ask questions, and to make sure that I come out of the academy the best firefighter I possibly could. Not just sit there and go through the motions and look at my watch and go is 16 weeks up yet. (R8)

There was much discourse from respondents on the dangerous and esteemed aspects of firefighting – with many respondents discussing situations of burning buildings, rescuing people, risky situations and looking professional in public.

4.3.2 Unnecessary

On the contrary, other respondents found that the paramilitary approach was administered in a way that demonstrated a disregard or disrespect of the recruits. Interestingly, most of these respondents were not averse to a paramilitary teaching style – instead, they reported being opposed to the unnecessary ways in which it was implemented.

> *I didn't enjoy the way the recruits were treated. Or the way you were treated there. Coming from an adult learning background myself. I certainly didn't appreciate the way that people were, or that I was, treated there. So I really struggled with that. I must admit*. (R8)

Over one-half of respondents emphatically stated that 'playing the game' was an unnecessary aspect of recruit training – and it was often taken too far.

> *Yeah, I would say the game is not worthwhile. I think the things we're learning and the things you need to be taught are very worthwhile. I think the game was how you were treated while you were learning it and I think that's what could possibly be addressed at some level*. *(R12)*

> *Like I'm all across and understand the requirements to do sense of urgency training and you know the one in all in and create that team cohesive dynamic. But the way in which it was done, I think it could be done better. (R15)*

Many respondents felt that the drill sergeant-type yelling was unconstructive. There was a clear distinction made by respondents between a paramilitary approach that was effectively applied compared to a paramilitary approach that was unnecessary and unhelpful.

> *I didn't mind being yelled at if it's justified. And that's it, like if it was*

justified and we're all adults you go "yep, look, I bloody stuffed up here". But cop it on the chin and you move on. But we would be on parade some mornings and they would just yell. There was no reason for it. They would just yell. And then when you're doing something they would just start screaming and carrying on and throwing their arms around. And there was no need for it. (R16)

The yelling was often described in terms of being futile, ineffective and unmotivating.

There's two types yelling and screaming. You know, there's the direct yelling because you need to do something now and we want it done and that's just the way it goes and that's fine. Because at the end of the day, in the heat of a job, that stuff happens too. Like there's no feelings or emotions. So yeah that stuff happened. But then, yeah, there was times where we were like "man you're carrying on like yelling and screaming. And it's having zero effect: 1) because we're well and truly into the game now; 2) we're not absorbing or listening to it because it's rubbish; and 3) you're losing our respect, so we're not listening anyway. We're gonna sit there quietly and, you know, look at a spot on the wall until you finish spitting and then yeah go back to what we were doing". (R5)

A lot of people I spoke to on that course were saying the same thing. It just wasn't motivating, there was like people just not wanting to turn up. (R5)

Many respondents described a negative impact on their confidence and learning opportunities – with a fear of making mistakes, second-guessing decision-making and anxiety about on-shift life.

Probably not as empowered and confident as you, I guess, want to be… even though I've done all the training because you just you still in the mind set if you do something wrong you just going to get absolutely knife handed and destroyed. (R3)

I think it sorted of stunted a lot of opportunities for questioning things. And asking questions. Like to ask a question, it was always felt risky. (R7)

Furthermore, a number of respondents indicated pressure applied during the early stages of learning impeded their ability to acquire basic skills.

It's not a very good teaching method because people start to stress out that they're you know, they're worried about how like the little things. They go pretty much if you're worried about getting yelled at when you're trying to learn a technical skill for the first time. You're not going to have, you're not going to learn it. It's not going to sink in and because if you're just worried about like that you're constantly doing the wrong thing instead of having a very relaxed environment. (R4)

And then you have another instructor who would just blast you the whole time from the get-go. You go to try and put your BA on and he'd just be in your face screaming. And it's like not necessarily a good training way because you're going to you're going to miss a skill you're going to do something wrong cause you're already under stress. (R3)

4.3.3 Stress and anxiety

Many respondents talked about experiencing stress or anxiety during their training, particularly during assessment periods. This stress and anxiety were exacerbated by a fear of not passing the recruit course – and the pressure and expectations recruits put upon themselves.

I think my Achilles heel was that I put a lot of stress on myself to perform, so even without other people doing it, I was doing it to myself. (R10)

But still, we had other people that really did struggle with it, you know to the point where they were nearly kicked out a live fire, like you know, they nearly didn't make it through because you know they didn't quite nail stuff first time. (R6)

Two respondents disclosed that recruit training had a profound effect on them as a person. They both questioned whether that effect was positive or negative. One of those respondents detailed an account of feeling so stressed and anxious that they were unable to perform a skill that they had competently undertaken for many years in their previous profession.

Over one-quarter of respondents discussed the long journey to become a firefighter. They described feelings of being fortunate to be a recruit firefighter. The threat of not passing the recruit course was used against recruits.

> *Multiple times a day, you were getting told that "we've sacked, you know, people got to the last day of this course and been fired". (R5)*

Somewhat paradoxically, there was consensus that most instructors, regardless of their personality or teaching style, were willing to help recruits. Some instructors were, however, more approachable than others. Instructors would regularly spend time outside of the actual training hours, such as coming in early and at lunchtimes, to assist recruits with extra training.

> *There was always, despite like some of the negative things that might have happened and the yelling, like all of it was done under the guise of trying to help us. And I genuinely do believe that they were trying to get us through. (R7)*

There was almost unanimous feedback that the 16-week course timeframe was extremely fast-paced and impacted by time constraints. Many respondents suggested the course should be longer. Respondents recounted they would often learn a skill, be assessed on it a few days later, and then move on to the next skill.

> *…You have to learn so much so fast, right? It's just, it was just jam-packed. (R7)*

> *Yeah, I think that's the underlying issue with recruits, you're so time poor the whole time, like from the minute you walk in you're pretty much*

running late. (R10)

The fast-paced schedule meant that it was easy to fall behind. Responsibility was placed upon the learner – and recruits were required to catch up with learning in their own time.

> *…You miss something or if you didn't quite get something you've got to put a lot of time and effort into your own time. (R16)*

4.3.4 Rite of passage

The completion of the recruit course, or graduation, was seen as a badge of honour for recruits. For some recruits, a negative experience becomes normalised or repressed over time.

> *Some guys almost look fondly back on the way they were. And I think to myself well that's great but I'm sure at the time you probably hated it as well. (R8)*

Several respondents surmised that the recruit course experience becomes somewhat of a cycle of abuse – a pattern of behaviour that continues to repeat. Recruit training was perceived as a long-standing firefighting tradition.

> *I feel like that becomes a bit of Stockholm syndrome…It's that thing where it's like it was done to me and I'm fine. So I'm going to do it to you. It becomes almost, at the extreme level, perpetrating abuse and continuing that history of abuse just because that's the way it is. (R12)*

> *So there's the thing it's like when they came through, you know, we got shit thrown on us. So we're going to throw shit on everyone else... probably it's just they learned something one way and that's how they know how to teach it. And they think that's the best way and everyone has to go through it. And, you know, it's probably not the best way to learn and teach people. (R3)*

Yeah. Yeah. I do think they are told that you need to smash these guys and bring them down, build them up. I always got the impression that was done because that was the way they'd always done it. And they don't progress with the times. (R8)

4.3.5 Job preparation

Noteworthily, recruit training was reported to have well-prepared recruits in fundamental firefighting skills. However, many respondents felt ill-equipped for the holistic skills required of an on-shift firefighter. They recounted that the transition from recruit to an on-shift firefighter was daunting and nerve-racking because they did not know what to expect. One respondent highlighted that the lack of information seemed to stem from the attitude of 'you haven't passed recruit course until you march out'. Furthermore, it was widely acknowledged that commencing on-shift as a firefighter was the start of another learning process – with the most valuable learning occurring through real-life experience.

It prepares you for the skill, not for the job. (R8)

Actually doing it and putting it into practice in real life situations is how you get experience, and you get to see why you do something a certain way. (R1)

4.4 CAN THE PRINCIPLES OF ADULT LEARNING BE SUCCESSFULLY APPLIED TO RECRUIT FIREFIGHTER TRAINING PROGRAMS? (RQ3)

There was a general consensus that adult learning principles can be successfully applied to recruit firefighter training. Instructors were found to have a pivotal role in facilitating an adult learning environment – both as role models and skilled educators. There was an overwhelming preference for adult learning to be applied in a blended way that maintains paramilitary approaches and is contextually appropriate to the unique role of firefighters.

4.4.1 Instructors as role models

Instructors were shown to have an inextricable influence on the way recruit training was delivered and on the recruits' experience. Respondents often made a distinguishment between effective and ineffective instructors - with effective instructors described as those that were tough yet fair. These instructors were explained as being firm, maintained professional boundaries and did not become 'too friendly' with recruits.

> *They knew when to be strict and knew when to back off. They knew when to give you encouragement. And they knew enough to smash you. (R6)*
>
> *… Gave you dressing downs. But also knew, you know, when to have a smile and have a laugh…. very old school. Abrasive at times. Blows up. Goes off but, you know, five minutes later he's unbelievable... uses swear words, uses profanities, gets directly to the point. But he also is, you know, he is very nurturing. He will do anything for your education. (R6)*

The instructors that were reported as being good role models were those that led by example.

> *[In relation to good role models] Absolutely, led by example. And inspired us to be good firefighters, to be the best firefighters we could be. Not necessarily by what they were telling us to do, but how they were actually carrying and bearing themselves. (R9)*

It was commonly agreed that respect should be applied within the recruit training environment – with respect being mutually reciprocated by instructors. Poor role models appeared to receive only superficial respect from recruits.

> *I was saying I don't think it should be necessarily made easier, but I just think if you take the rubbish out of it, so that people are working with a bit more respect. (R5)*

... If the instructors were taking a more mentoring approach, it would be more effective. (R15)

So there were some people that would be really good. They give you a kicking if you did the wrong thing. But then they would offer you a solution. And I had total respect to those people. But the other ones that are just absolutely smashing me, I had no respect for them whatsoever. (R8)

There was a preference amongst respondents for instructors that were experienced firefighters – with experience being measured by years of service. There was a trend across recruit courses for most instructors to be Senior Firefighters rather than substantive Station Officers – with one respondent highlighting that their course had only one substantive Station Officer.

Furthermore, there was a strong sentiment that recruit training would be significantly enhanced by employing the right type of recruit instructors. Several respondents believed some instructors were not at recruit training for the right motivations.

But finding a way to make the instructors be the best people for the job rather than the people who want to be there for different, like ulterior motives almost, but the ones who want to teach and want to impart knowledge and want to have good firefighters. (R12)

Like I could tell that there was some people there because they generally cared and wanted to improve the workplace. Then you could sort of get a vibe that some people are there just to increase their pay packet and take home money. (R4)

4.4.2 Instructors as educators

Skill as a teacher was highly valued – with some respondents differentiating between capable firefighters and capable teachers. It was found that instructional ability would be improved with better training for instructors.

Some were very good and experienced operators who may not necessarily be good at teaching. (R9)

So yeah, I mean sure they're firefighters and they're not trained in education or how to deliver courses and stuff like that. (R10)

Competent firefighters, yes. Competent leaders, some of them were... I would say some of them would benefit from more training. (R7)

A key factor in instructional ability was identified as the ability to provide constructive feedback and positive reinforcement to enable recruits to improve their performance.

And then you had your guys that were just like "okay you made an error here, but you identified you made the error, you fixed it, that was great to see, however in the future maybe try this". And that alleviates that error. (R11)

The guy that ran the course, he was harsh but he was fair. Once again, he gave you a solution. And certainly all the instructors down there [at the Live Fire Campus]*, were great. They would come over and they'd explain to you what you'd done wrong. They would explain to you how you can improve. I actually found live fire quite enjoyable. (R8)*

And he just had that perfect balance of give you a kick if you need it. But will also pat you on the back if you do well. (R15)

The need for greater training support for instructors was also highlighted through some reported inconsistencies in the teaching content.

And that was also evident a number of times throughout the course where we, as a group, had to grab the instructors and sit into the room, and say look 'you were all teaching us different things, on a particular skill or a particular subject area'. We were getting different messages and different information and different requirements which didn't line up from one instructor to the other. So there was different consistencies in regards to the capabilities as instructors. (R9)

4.4.3 Blended approach

The application of adult learning principles in recruit firefighter training was well received by respondents – with nearly 70% actively supporting its implementation. However, there was an overwhelming sentiment that recruit training should maintain its rigour through a hybrid training approach that reflects a combination of paramilitary and adult learning approaches. Several respondents suggested that a regimental approach should be applied in the early stages of recruit training, with that approach relaxing as the course progresses to better emulate the role expectations of on-shift firefighters.

> *So I think for the greater part of that, I think those principles can be applied to recruit training, in the same way that the training is conducted now in terms of the paramilitary fashion. I don't see them as being mutually exclusive, I see them as actually being complementary. (R9)*

> *So I think adult learning definitely can be implemented into QFES training, but I wouldn't necessarily say we need to get rid of all of the military stuff out of it. I still think it's a good tool to get people used to work in under pressure in a team and having one person in charge… (R3)*

> *… An adult learning environment is hands down the best way to go. Because people learn more. They can learn off their peers. They can learn off the instructors. And you can really use that team environment which is what we do on station everyday… the authoritarian stuff sort of links back in with the discipline and the ceremonial aspect. And that's required but it's not required to overkill and to discourage people from the learning environment. (R11)*

There was distinct agreement that training should not be ‘soft’ and that behavioural and performance competence was necessary to meet the dangerous demands of the job.

> *Yeah, I do feel it has a place and I don't think if it was a softer approach, I don't think that it would have the same outcome or effect. (R10)*

That's just the difference with other careers. You might be able to just take a stab with this role and say 'Oh well it didn't kill ya'. But yeah, it's a different work environment. So you just got to expect what's expected of you is probably going to be higher than what it would be in other careers. (R1)

You know, there's definitely got to be discipline. There's no doubt about it, you can't just let us roam free or anything. I think the paramilitary style definitely helps. (R16)

I feel that sometimes the respect needs to be created by the paramilitary type training. (R1)

Several respondents proposed that recruits, by nature of the extensive and competitive process to become a firefighter, are intrinsically motivated. They suggested that respect and discipline were not traits that needed to be 'taught' during recruit training.

So I think I think using the recruit course as a means to drill in respect is just too late. If you're not going to have respect at that age, you're not going to have respect for authority ever. (R7)

In a way, I feel like if you pass the tests to get in, you're intelligent enough to know that there is a rank structure and that you will be expected to obey commands without necessarily knowing the reasons behind them. I feel like at this point, we're all adults. We know that's how it works. (R12)

4.4.4 Contextually appropriate

Many respondents described the specialist training components within recruit course as the ideal application of adult learning. These training experiences were reported in an overwhelmingly positive way. In this specialist training, respondents indicated they were treated like adults, allowed to try different methods and encouraged to work as a team. This was particularly noted for Road Crash Rescue (RCR) and technical rescue.

Because when we got to the RCR component, there was... we got a lot of all new instructors come in, and we're all of the sudden actually allowed to do things and try things and have a go. And had input. We could sort of work as a team a bit. And that was probably pretty good. Because our normal instructors weren't standing over us. (R5)

The RCR instructors that came in were amazing, like really passionate, really knowledgeable, really happy to do absolutely everything to give you the skills you need to do the job. And really good at imparting their knowledge and the rescue instructors as well. The technical rescue side of things was also really well done. (R12)

And then the RCR training was phenomenal. The instructors that we had were really experienced, they were really, really good. (R11)

There were adult learning principles, such as autonomy and problem solving, that some respondents thought would be inappropriate for firefighter training. These respondents felt that adult learning may encourage freelancing and insubordination which conflicts with a command-and-control environment. However, another respondent described how adult learning could be contextualised to a firefighting situation:

So you're required to go to make entry into that structure and to conduct a left hand search. That's exactly what you're going to do. Once you get into there, how you actually do that, you have some level of autonomy in that once you're actually in the environment. But it's not a democracy. (R9)

Furthermore, one respondent emphasised with regards to teaching approaches: “obviously you need to cater to the majority, not the minority” (R11). However, several other respondents recognised contextually appropriate opportunities for adjusting teaching styles.

But in terms of, from an adult learning background so there needs to be allowances for learning, language, numerical difficulties. (R8)

So the recruit course, you do get split into smaller groups and I feel like at that point if you break off into a group of three or four with your instructor, that's the time to really personalise and hone in on individuals. (R12)

There were a few examples provided that showed instructors actively tailoring the teaching style to suit the recruits' style of learning. Two respondents provided examples of instructors that drew upon recruits' prior life experience to enhance the teaching process. For example, the expertise of a recruit who was previously a river guide was utilised during swift water training.

There was a couple of the instructors that were really like "okay who's a kinaesthetic learner, who's a visual learner? Okay cool, guys come over here. The visual learners have a look at this. This is how we do it. Step 1 Step 2 Step 3. Okay, kinaesthetic guys. Come over here. Let's grab this one. Yep okay, this is how we're going to do it. I will explain how to do it, I will demonstrate it and then you're going to imitate it"... and I think that was something that was good… I think that was more an instructor thing, than an academy thing. (R11)

There was a pretty strong emphasis on trying the different methods for different people. A lot of that was like they would try to collaborate so that each any instructor had a different way of teaching, they'd have a go at it each, if that makes sense. They would try everything they could think of 'til everyone was pretty comfortable with something. (R14).

Many respondents reported that training needed more hands-on, practical learning to increase its relevancy. They felt that the course should be more practically focussed – with less emphasis on non-critical theory lessons. Rote learning of theoretical aspects was common – with respondents indicating they often did not retain the information.

You know like, rather than going to university, it's all about the hands-on experience. And the best way to learn as a firefighter is using your hands. So I think that they have gone, you know, probably a little bit too

much on to the study side of things. (R16)

But me personally I think a lot of stuff in the classroom, I don't think we had to do. And we could have spent more time than other things. (R13)

So live fire is completely different again. Those guys I tip my hat off to them. They are 100% professional. They are absolutely unreal. And when they were explaining something they would do motions. They would show us exactly what they wanted. (R16)

4.5 SUMMARY OF FINDINGS

The study found that recruit firefighter training within the Queensland Fire and Emergency Service was characterised by a paramilitaristic instructional philosophy that generally did not display attributes of adult learning. The training approach was highly instructor dependent – with instructors having a pivotal influence on the way training is delivered. The extent to which the paramilitary instructional approach was implemented varied quite significantly across recruit courses. The paramilitary approach was found at times to be poorly implemented – with the focus often shifted from its intended purpose of instilling discipline to become an unnecessary abuse of power. On the other hand, some recruit courses operated within the paramilitary philosophy yet incorporated limited aspects of adult learning approaches, such as a degree of mutual respect and some tailored teaching styles.

The impact of the paramilitary training approach on recruit firefighters produced mixed outcomes. There was a noticeable trend for many recruits to report recruit training as a good experience, however, many of those recruits would then go on to describe numerous examples of negative experiences. Often a ‘good’ experience was extrapolated to indicate that it achieved a ‘good’ outcome – becoming a firefighter. This occurrence reflected the rite of passage associated with recruit training whereby recruits felt they need to ‘earn their stripes’ and assimilate within the existing organisational culture. The training course was a high-pressure environment. Some recruits found this impeded their learning, whilst other recruits found it

suitable for learners who were prepared and proactive. While there were no reports of conspicuous bullying, there was a culture of questionable behaviour, such as favouritism and prejudice, occurring undertaken under the guise of paramilitary methods. In relation to performance competency, the training was found to prepare recruits with a high level of fundamental firefighting skills. However, there was a gap in the development of soft skills to adequately prepare recruits for the holistic expectations of qualified firefighters.

The study found general accord that adult learning principles could be successfully applied to recruit firefighter training. There was, however, a clear preference for the training to retain some paramilitary aspects. Recruits indicated that training should avoid becoming ‘soft’ – with the paramilitary approach seen as important in maintaining rigour. The ideal approach was a hybrid model – whereby adult learning principles are implemented in conjunction with paramilitary aspects. There were examples of adult learning principles being successfully applied by some instructors and during some specialist training within the current recruit courses.

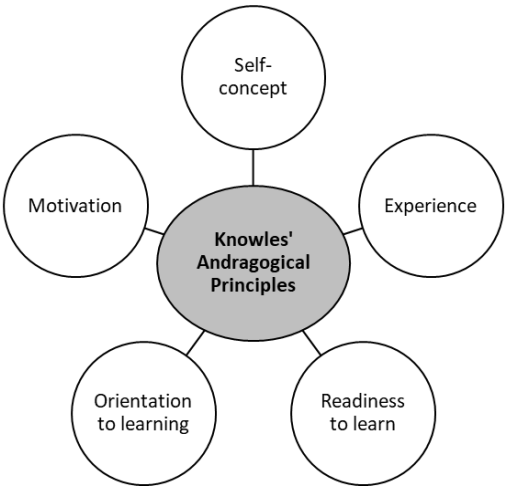
Overall, the recruit firefighter training program within the Queensland Fire and Emergency Service was shown to be achieving the goal of performance competency. However, there is significant scope to enhance skill development and the learner experience by the application of adult learning principles within the training approach.

CHAPTER 5: DISCUSSION

The current approach to training for firefighter recruits within the Queensland Fire and Emergency Service has demonstrated a paramilitaristic approach that vastly differs from adult learning theory. This study has identified many themes that closely correlate to findings from Baigent's (2001 & 2003) cultural audit of firefighter initial training in the United Kingdom. While Baigent (2001 & 2003) did not actively investigate adult learning principles, his approach to classifying training centres (as regimented, transitional or progressive) is highly reflective of the extent to which paramilitary or adult learning principles are utilised. This study has also identified many similar findings to that from Frank's (2017) study of whether the principles of andragogy were present in police recruit training – which found training academies predominantly operate in a pedagogical approach that discounts the tenets of andragogy.

This section will discuss recruit training in the context of adult learning – using Knowles' five assumptions of adult learners as the andragogical framework. It will discuss the conflicts that occur between the paramilitaristic approach and adult learning by contrasting and comparing the interview data with existing literature on this topic. It will also explore adult learning in application to recruit firefighter training.

Figure 2: Andragogical framework - Knowles' five principles of andragogy (adapted from Knowles, 2005)



5.1 SELF-CONCEPT

A paramilitaristic teaching approach, which views the learner as unworthy and incompetent, is fundamentally incongruent with the principle of self-concept. Frank (2017, p.404) describes the paramilitary approach as "counterintuitive to a climate of adultness" – citing the loss of autonomy in the removal of rudimentary adult privileges, such as freedom to speak and restriction of movement. Within this study, there was evidence of the shaming and breaking down the process as described by Conti (2009) – which caused an erosion of self-esteem and confidence in some learners. This was described by R3: "probably not as empowered and confident as you, I guess, want to be". There was also a tendency to normalise experiences to fit within the paramilitary self-concept. This was strikingly obvious in the trend to state that recruit training was a positive experience despite some recruits detailing many negative, and at times degrading, experiences. For example, the majority of recruits agreed that primitive punishments were effective teaching methods, such as being made to shout from the top of a tower "…this is my standpipe. I love my standpipe. I will never let me standpipe go" (R12). This tendency was echoed within Frank's (2017) study whereby the threat and application of physical force, and the use of fear, to assure success was viewed by many recruits as being both acceptable and expected during police recruit training. The normalisation of potentially negative experiences accords with studies on rites of passage – which suggest that severity of initiations heightens group attraction as a way to avoid feelings of cognitive dissonance (Aronson & Mills, 1959; Kamau, 2009).

To apply the andragogical principle of self-concept to recruit firefighter training, recruits would need to be treated with a greater degree of respect. Within this study, recruits resoundingly indicated that mutual respect could, and should, be applied within the training. However, an environment of mutual respect would need the domineering hierarchical structure to be relaxed to make a supportive learning environment. The authoritarian instructor role, as described in this study, would need to be replaced with

instructors that take on a facilitatory position. This was aptly summarised by R15: "… if the instructors were taking a more mentoring approach, it would be more effective". The power shift that accompanies this transitioning of instructor role will challenge deep-seated occupational identity – because it challenges the masculine constructs that firefighting necessitates a special type of training (Basham, 2014). This enhanced sense of occupational identity was reflected in dialogue from recruits within this study – as they often referred to dangerous situations and the uniqueness of firefighting. To overcome these challenges, instructors would need to become skilled educators. Shipton (2009) and Birzer and Tannehill (2001) purport that instructors often lacked appropriate training to be able to effectively teach students and, moreso, successfully utilise adult learning principles. This sentiment was echoed by recruits who made differentiations between effective and ineffective instructors. Interestingly, many recruits within this study reasoned that instructors should have operational experience and rank – which does not necessarily relate to skill as an instructor. The principle of self-concept would also be applied by recognising the autonomous capabilities of recruits – which could be achieved through relieving the control and regimentation. Interestingly, some recruits identified that autonomy in terms of input into learning needs and self-directedness was unlikely to be successfully applied in their environment. These recruits proposed that it would encourage freelancing and insubordination. However, autonomy could be achieved by actively encouraging learners to undertake critical reflection on their own and others' actions, particularly during debriefing sessions. This approach is strongly advocated by Childs (2005) who recommends the use of critical reflection to enhance the ability of firefighters to be adaptable and accountable. Childs (2005) argues that critical reflection not only provides the opportunity for change and growth, but it supports implicit and deeper learning.

5.2 LEARNER EXPERIENCE

A paramilitary training approach has a disregard for the andragogical principle of learner experience. By viewing learners as blank slates to fill with

knowledge, it discounts the existing wealth of knowledge that adult learners possess. Furthermore, the expectation of socialisation into the cultural norms of the organisation discourages diversity and individuality. Within this study, the paramilitary approach to training presents a cultural paradox – the Queensland Fire and Emergency Service is committed to workforce diversity, equity and inclusion (QFES, 2021), however, recruit firefighters, at their first encounter with the organisation, are expected to assimilate into a narrow range of preferred behaviours. Within this study, assimilation was referred to as being the 'grey man' – with those who were unable to assimilate being termed 'heat seekers' that would often be ostracised. This desire to fit in was also identified in Baigent's (2003) study that found a proportion of recruits consciously choose to assimilate within the existing culture because they have no alternative. The assimilation process, and associated socialisation, was intensified by the creation of an exhausting and all-consuming experience – which reflects the hallmark characteristics of institutionalisation, as described by Goffman (1961). This study found the topic of diversity at recruit training was also contradictory. There was consensus that diversity was not valued, however, this was perceived as essential to ensure that recruits were treated equally – "[in terms of discouraging diversity]… making one homogenised whole that is the recruit. And then the recruit is treated equally" (R12). Interestingly, equality was the emphasis, in that recruits were treated the same – rather than equity in terms of fairness in outcomes. Despite this reported equality, there were many accounts of favouritism and prejudice – which, in some instances, was extrapolated to relate to those recruits who did, or did not, fit within instructor perceptions, or stereotypes, of ideal firefighters.

The application of the andragogical principle of experience to recruit firefighter training would involve recognising and valuing differences in learning styles, personalities and backgrounds. This approach would need to supersede the intense and purposeful assimilation and socialisation process that currently exists. As the workforce profile of firefighting continues to diversify, the principle of experience is becoming increasingly pertinent. This study identified a sentiment amongst recruits that you "need to cater for the

majority, not the minority" (R11), however, there was an acknowledgment that some alternative teaching approaches could be utilised. In practice, this would involve tailoring the dominant teaching approach to incorporate appeals to different learning styles. This approach is recommended by Birzer and Tannehill (2001) and it supports findings that emergency responders preferred a multi-modal method of learning (Frank, 2017; Klingensmith, 2006). A key part of learner experience is valuing previous experiences – which, for recruit training, would signal a change from recruits being discouraged from sharing knowledge and thoughts. In fact, this study highlighted instances where previous life experience was successfully implemented to enhance training.

5.3 READINESS TO LEARN

A paramilitary teaching approach fundamentally contradicts the principle of readiness to learn. It primarily presumes that recruits need to be primed for learning – which is to be achieved through instilling the precursory qualities of respect and discipline. It also entirely discounts the concept of relevance – with the priming activities often highly disconnected from firefighting skills. Interestingly, this study found a divisive opinion on learner readiness. Some recruits perceived the paramilitary approach as being worthwhile and necessary to develop intuitive respect and discipline. On the other hand, some recruits believed it was ineffective, unnecessary and taken too far. This latter sentiment accords with findings by Frank (2017) whereby police recruits were not opposed to the teaching approach rather the lack of transparency and element of secrecy that caused it to feel undermining, punitive and degrading. The use of drill marching was a classic example in the argument of relevance. With drill marching being rarely used outside of recruit training, it has no apparent consequence to firefighting. Some recruits argued that it was an ineffective use of time within the jam-packed recruit training schedule, whilst others recognised the value in teaching for command and teamwork. The latter perspective accords with King's (2006, p.510) work on communication and cohesion in the military. He purports that "communication is critical to social cohesion and the successful conduct of

collective drills". Drill marching incorporates two out of three primary communication drills – collective representation (such as words of command) and collective movements (such as coordinated bodily action).

Learning readiness is a pertinent andragogical principle to apply to recruit firefighter training. The most significant application of readiness would be the elimination of the unnecessary gaming aspects of training – whereby the instruction would be focussed on enhancing capability rather than testing the resolve of recruits. This would mean limiting the yelling, punishment and power games. It would also involve a greater focus on practical learning. Many recruits within this study emphasised the need for less theoretical learning – particularly theoretical learning that was not perceived as immediately relevant within the recruit training period. Mandatory competencies could be delivered in innovative ways, such as in pre-course or post-course training. This readjustment of focus would allow greater time to focus on relevant training – and, subsequently, alleviate some of the pressure associated with a fast-paced training schedule.

5.4 ORIENTATION TO LEARNING

A paramilitary instructional approach is dominated by rote learning and procedural-driven teaching – which disregards the problem-centred orientation of adult learners. It relies on repetition and routinisation – at the neglect of the development of holistic skills, such as adaptability and critical thinking. Excessive routinisation has been argued to impede the ability to identify and manage change (Ellstrom, 2010, p.8) – which are essential capabilities for the expanding role of firefighters. It also fails to match how firefighters have been shown to develop their competence – which is often through situated learning and imitating peers (Sommer & Nja, 2011; Taber et al., 2008). However, King (2006) argues for the criticality of formal training rituals and collective drills to enable soldiers to undertake coordinated practices – and minimise deviant actions caused by stress and confusion. The importance of both routinisation and adaptability was evident within this study – whereby recruits reported that while they felt well-prepared in technical skills, they were ill-prepared for the broader role of firefighting.

The application of problem-orientation to recruit firefighter training would embrace experiential learning. In a practical sense, this would involve encouraging inquisitiveness rather than it being dissuaded. It would allow mistakes to be made during the learning stages, without punishment or performance management. For over a decade, the New South Wales Police Force has implemented problem-based learning within the Associate Degree in Policing Practice for New South Wales Police Force (Shipton, 2011). While Goransson (2007) found that problem-based learning in theoretical training was ineffective for firefighters, it could be trialled in practical training scenarios. This approach accords with findings that problem-solving can create better retention and deeper learning (Biggs,1999, in Shipton, 2009). Noteworthily, many recruits within this study perceived that the application of problem-solving within recruit training would create insubordination and freelancing. The problem-oriented approach would need to be applied in a complementary way – which trains for both standard operating procedures and adaptability (Righi et al., 2016). This could involve learning drills in a rote learning manner before applying those skills, as part of a team, to dynamic, real-life simulations – supporting learning through communities of practice. Furthermore, in order to build ability to perform under challenging conditions, the training would utilise proven phased stress training techniques. These techniques allow learners to build their competency in a supportive environment before applying incremental and relevant stress (Driskell et al., 2001; Friedland & Keinan, 1992; Ross et al., 2016; Saunders et al., 1996).

5.5 MOTIVATION

A paramilitary teaching approach relies on a heavy presence of extrinsic motivators, such as yelling, threats, criticism and punishments - which does not align with the intrinsic motivation of adult learners. One recruit within this study noted the negative effect of this approach by stating “…it just wasn’t motivating, there was like people just not wanting to turn up” (R5). Several studies have suggested that extrinsic motivators create only temporary motivation and superficial obedience (Baigent, 2003; Frank, 2017) – with

Holden (1994 in Vodde, 2008, p.23) suggesting it “teaches the wrong lessons for the wrong reasons”. This sentiment was likewise identified within this study: “But the other ones that are just absolutely smashing me, I had no respect for them whatsoever” (R8). The recruits within this study had high levels of existing intrinsic motivation – which was made evident by recounts of the lengthy process undertaken to become firefighters and details of the self-expectation and pressure placed upon themselves to perform optimally. This accords with Baigent’s (2003, p.6) findings that “trainees that arrive on the first day are willing, eager and compliant” and ready to fit their aspirations with those of the fire service. This existing intrinsic motivation is further supported by the finding that police recruits rated personal satisfaction as their most motivating force (Frank, 2017). Interestingly, motivation can also be viewed in the context of recruit instructors. This study identified that many recruits felt that instructors were subjected to external pressures to conform with organisational teaching philosophies, despite these philosophies conflicting with their own ideals of teaching: “you could see that they struggled with the authoritarian side that they had to put on” (R10).

The application of andragogy would be achieved through facilitating, rather than undermining, the intrinsic motivation of recruits. Self-determination theory, which purports that people are motivated by a need to grow and gain fulfilment, suggests that competence, autonomy and relatedness are key factors of intrinsic motivation (Houde, 2006). In recruit training, intrinsic motivation would be fostered using positive reinforcement, constructive feedback and greater autonomy – to replace the use of negative extrinsic motivators. This would see instructors adopting a coaching leadership style. In this study, recruits indicated that constructive feedback enabled them to improve performance – as described by R11 who stated: “… you had your guys that were just like ‘okay you made an error here, but you identified you made the error, you fixed it… however in the future maybe try this’. And that alleviates that error”. Furthermore, instructors had a pivotal influence on the learning experience – and, subsequently, the motivation of recruits. One recruit stated: “And he just had that perfect balance of give you a kick if you need it. But will also pat you on the back if you do well” (R15). In practice,

recruit instructors would be positioned as role models to display desirable behaviours and capabilities – influencing recruit perceptions of competence and relatedness. Within this study, good role models were described as instructors that led by example: “not necessarily by what they were telling us to do, but how they were actually carrying and bearing themselves” (R9). This approach is supported by Vodde (2008) who suggests that police instructors who role model desirable behaviours, such as collaboration, challenge and open-mindedness, condition recruits to show complementary desirable behaviours, such as responsibility and initiative.

CHAPTER 6: CONCLUSION

This study, which was conducted as part of a work-based research project, aimed to address a significant gap in the current literature on the specialised field of recruit firefighter training. Using a qualitative design, the study undertook semi-structured interviews with 16 participants that had recently completed recruit training within the Queensland Fire and Emergency Service. It contributes to new knowledge by providing baseline insight into current training practices. This chapter responds to the study's research questions. It also discusses future considerations for recruit firefighter training and it synthesises these directions to a series of recommendations for future practice.

6.1 RESEARCH QUESTIONS

This study aimed to answer the following research questions.

RQ 1: To what extent does the current recruit firefighter training program within the Queensland Fire and Emergency Service align with adult learning principles?

RQ 2: How does the current recruit firefighter training approach impact on the trainee?

RQ 3: Can the principles of adult learning be successfully applied to recruit firefighter training programs?

This study has found that the recruit training program within the Queensland Fire and Emergency Service is heavily reliant on a paramilitary instructional approach. While the training approach varied across recruit courses, instructors and individual perceptions, the current approach was shown to undermine self-concept; discount learner experience; assume learners needed to be primed for learning; lack a problem-oriented focus; and rely on external motivators. The paramilitary instructional approach is not aligned with adult learning principles.

It found the impact of the current training approach on the learner varied

based on trainees' perception of whether the paramilitary training approach was necessary or unnecessary for the development of professional competence. There was a distinct tendency for trainees to normalise negative experiences during recruit training – which has been shown as a common occurrence during rite of passage experiences and also accords with a preservation of organisational identity. Recruit instructors had a pivotal impact on the learners' experience during recruit training – with recruits making a clear differentiation between effective and ineffective instructors. The perceived effective instructors demonstrated progressive teaching styles that applied adult learning principles – however, this progressive style was actively discouraged by the training academy. The perceived ineffective instructors relied upon an authoritarian style whereby they adopted a gatekeeper role to the profession.

There was consensus among trainees that adult learning principles could be successfully applied to recruit firefighter training. Overall, recruits indicated a preference for greater respect from instructors; the removal of the 'gaming' aspects of training; and greater relevance of training to the actual role of firefighters. These characteristics transverse Knowles' andragogical principles – while also broadly align with modern-day societal values.

These findings have highlighted an emerging divergence within the Queensland Fire and Emergency Service – whereby there are two distinct camps: progressivists and traditionalists. The divergence is identifiable throughout all aspects of the organisation, not just recruit training, and presents a significant crossroads in organisational development.

6.2 FUTURE DIRECTIONS

There is resounding support in the literature for the application of adult learning principles to police and, to a lesser extent, firefighter training. Likewise, this study recommends the application of adult learning, albeit as a blended model for recruit firefighter training – which accords with the opinions of participants from this study. This assertion also concurs with findings from Frank (2017) who found that too great a reliance on andragogy had a

negative effect on acceptance of hierarchy and chain of command; career commitment and longevity; the sense of entitlement and diligence. The blended approach would maintain paramilitary rigour and be complemented with progressive learning principles. The blended approach reflects a middle ground – whereby the left and right of the arc represents paramilitary and andragogical extremes. This approach replicates progressive leadership models within firefighting – whereby command and control leadership is switched on during operations and facilitatory leadership styles are applied during non-operational periods. The blended approach recognises the complementary nature of paramilitary and andragogical aspects of training – drawing on the strengths of training for both routinisation and adaptability. It acknowledges the need to retain some behaviouralist learning approaches, such as collective drills, and maintain rigour through the use of stress exposure training and competency-based assessments. The resounding finding within this study was the need to apply andragogical principles in a manner that is contextually appropriate to the profession of firefighting.

A blended approach to recruit firefighter training should not be mistaken as an unplanned melding, or hodgepodge, of training approaches. It represents a systematic and deliberate application of andragogical principles into a paramilitary framework. This requires a clear definition of a paramilitary framework, which in turn demands a clear vision of organisational identity. Currently, the identity of the Queensland Fire and Emergency Service appears conflicted – with a distinct discordance between the espoused organisational values of respect, integrity, courage, loyalty and trust (QFES, 2021) and the current manner in which recruit training is delivered. A clear organisational identity will shape the paramilitary framework of recruit firefighter training. It will extract values from a paramilitary philosophy to reflect a modern fire and emergency service. It will, likewise, reject redundant values that do not accord with the future organisational vision. In fact, it is arguable whether paramilitary is the most fitting terminology – whereby perhaps the framework better aligns with values of high performing teams. High-performance teams are highly relevant to firefighting – with firefighters required to perform optimally as a team in ambiguous and

uncertain contexts. However, re-branding the paramilitary framework would represent radical organisational change – and would more likely be successful in future iterations of reform. Nonetheless, it reaffirms the essentiality that in order to reform recruit firefighter training, the organisation must first decide whether it identifies its future self as being a paramilitary institution.

The implementation of a reformed recruit firefighter training program will require a shift in cultural and conceptual perceptions across all levels of the organisation. Firstly, fire service organisations are notoriously renowned for considering themselves aloof from mainstream organisations and, often, unreceptive to being told what to do. Secondly, the implementation of a reformed program will challenge enduring occupational identity – because adult learning moves away from the masculine and heroic constructs of firefighting. Firefighter's masculinity can, at times, be toxic to change. Likewise, it will redefine long-standing traditions – such as the rite of passage tradition whereby trainees become initiated into the privileged occupation. Thirdly, it will require a sustained commitment to build training capacity. This starts with a shared vision of training philosophies, values and expectations cultivated across the organisation – particularly addressing misconceptions that adult learning is 'political correctness' or a 'softening' of recruit training. Instructors have a pivotal impact on training delivery, and ultimately, the success of a reformed program (Holmgrem, 2014). Future research should investigate firefighter training from the perspective of recruit instructors – to identify their beliefs and experiences in relation to recruit training. There needs to be a concerted effort to attract instructors who will be role models and champions for progressive learning approaches. However, attitude alone is not sufficient – it is also critical that instructors possess mandatory qualifications and adequate training to enable a progression from skilled firefighters to skilled trainers. On-the-job training for instructors serves little more than to replicate the current culture and the way in which instructors themselves were taught as recruits. Under current Registered Training Organisations (RTOs) Standards in Australia, trainers and assessors must hold a TAE40116 Certificate IV in Training and Assessment qualification

(Australian Skills Quality Authority, 2021). This qualification ensures trainers and assessors are adequately equipped to train adult learners. Furthermore, professional development in vocational training, learning and assessment, as also mandated under the RTO Standards, will need to become part of an ongoing commitment to workforce development. This sentiment is echoed by Shipton (2009) who suggests that police teachers are unlikely to utilise teaching approaches that extended beyond their current teaching beliefs and, subsequently, need to be supported to expand their understanding of learning and teaching.

6.2.1 Recommendations

This study makes the following recommendations for a reformed recruit firefighter training program within the Queensland Fire and Emergency Service. These recommendations are readily applicable to other fire service organisations that currently utilise a paramilitaristic training approach.

1. A reformed training program should consider applying the andragogical principles of self-concept, experience, readiness to learn, learning orientation and motivation within a paramilitary framework. The paramilitary framework should reflect existing organisational values or values specifically refined for recruit training. A proposed framework is illustrated in *Appendix 6: Reformed recruit firefighter training framework for the Queensland Fire and Emergency Service*.
2. The andragogical principles should be applied in a deliberate, systematic and contextualised manner. It should support training for both adaptability and routinisation. It should reflect a modern leadership model of command in operations and moderate learner-centric approaches in non-operational situations.
3. While not recommended in immediate training reform, future iterations may consider a rebranding of the paramilitary framework to instead reflect a framework for high-performance teams.
4. A clear organisational identity is critical – as it will delineate the parameters of reformed firefighter training. The identity should be

driven by a strong vision for a modern fire and emergency service organisation.

5. A reformed program should be developed utilising an evidence base and best practice. It will require extensive environmental scanning of existing training programs within high-reliability professions – namely fire services, police departments and the military, both nationally and internationally. This diligence process will be a time-consuming, but nonetheless, critical step.
6. A partnership with higher education is highly recommended to advance collaboration and research innovation. There is a significant opportunity to produce a leading-edge reformed training program that contributes to academia in this under-researched field. For example, a partnership approach has been successfully implemented between the New South Wales Police Force and Charles Sturt University for the implementation of reformed police training.
7. There should be a significant and sustained commitment to building training capacity within the organisation. Training capacity should start with a shared vision of best practice training that emanates through all levels of the organisation.
8. Instructors should possess mandatory qualifications, industry skills, current knowledge and ongoing professional development to comply with RTO Standards. This would incorporate train-the-trainer packages, moderation and validation activities, mentoring programs and diversity guidance. Professional development for instructors should be planned, documented and ongoing.
9. A recruitment strategy should be developed to attract a capable instructor workforce. The strategy should consider working in collaboration with Officer Development programs to instigate mandatory recruit instructor appointments as part of rank progression.

6.3 FINAL REMARKS

Recruit firefighter training as it is currently delivered within the Queensland

Fire and Emergency Service needs reform. This study advocates for a blended approach to the training of recruits in which adult learning principles are applied within a paramilitary framework. The blended approach, which supports training for both adaptability and routinisation, reflects a modern leadership model whereby command is utilised during operations and a learner-centric approach is applied in non-operational periods. The reformed program recommended within this study could address many unanswered gaps in current practice, including relevancy to the broadening firefighter role, flexibility to meet the diversifying workforce profile and better accordance with organisational values. However, reform challenges long-established organisational and occupational traditions. It will endure resistance from traditionalists and attract discreet support from the progressivists. It will require an epic reorientation of fire service vision and identity (Belur et al., 2020). Identity needs to accord with a commitment to the pursuit of integrity, innovation and best practice. Nearly 20 years ago, Baigent (2003, p.2) predicted that “change will be painfully slow if the next generation of firefighters follow past patterns and are expected to ‘fit into’ the existing dynamics of the workplace”. This prediction has proved remarkably accurate – with the Queensland Fire and Emergency Service still heavily reliant on a paramilitary instructional philosophy. It is most definitely time for recruit firefighter training to embrace leading-edge, best practice approaches that meet the needs of a progressive profession.

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Appendices

Appendix 1: Invitation to participate in the research study

Dear firefighter,

A research study is being conducted to explore current practices of recruit firefighter training within Queensland Fire and Emergency Service. The study will also explore how closely the current program aligns with adult learning principles and the impact of the current teaching approach on the learner.

Currently, there is very limited existing research on recruit firefighter training. It is anticipated that this study will contribute to building an evidence-base which can inform future strategic direction of recruit firefighter training within Australia.

The study will interview QFES permanent firefighters that have completed the recruit training program within the previous 24 months.

The study is being undertaken by a research student from University of Southern Queensland. The research student is also a Firefighter within QFES. However, the study is being conducted independently from QFES – it is not a QFES project. QFES has granted permission, however, for the research study to invite firefighters to participate.

You are invited to participate in a confidential interview. The interview will be approximately 30-45 minutes and conducted either via Zoom or in-person, at your convenience. Your experiences will provide important insight into the training program.

Please note, participation is entirely voluntary. Your choice to participate in the study will remain strictly confidential. Should you choose to participate, you may withdraw at any time. The responses that you provide will remain strictly confidential. Further information will be provided on the measures that will be undertaken to guarantee your anonymity.

(A random sampling procedure has been utilised to select a potential sample of firefighters for the study– therefore not all your colleagues will have received an invitation, or they may receive an invitation at a later date).

Should you wish to participate, or simply to find out more information, please contact the research team via return email. Your response will remain completely confidential.

Hopefully, we will hear from you soon!

Kind regards,
Jodie

Appendix 2: Participant information sheet

Project details

PROJECT TITLE: An exploration of recruit firefighter training and adult learning principles

Human Research Ethics Approval Reference: H20REA312

Research Team contact details

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Description

This project is being undertaken as part of a Master of Professional Studies (Research). The purpose of this project is to explore current practices of recruit firefighter training within the Queensland Fire and Emergency Service (QFES). It will also explore how closely the current program aligns with adult learning principles and the impact of the current teaching approach on the learner.

In order to best serve the community, modern firefighters need access to high-quality, best-practice training. The recruit academy plays a critical role in shaping firefighters of the future. This project has been developed in response to divided opinions on how recruit firefighter training should be delivered.

Traditionally, recruit programs within Australia and internationally have been delivered utilising a paramilitaristic teaching style – which is characterised by regimentation, rote learning and authoritarian instructors. Many industry practitioners will insist that the paramilitaristic style is necessitated due to the unique nature of firefighting – which demands decisive, proficient responses to high-stress, life-dependent situations. However, research shows that this approach to training can have some negative effects on learning. Furthermore, from the perspective of an outsider, the paramilitaristic training approach could appear misaligned with organisational and societal values of respect, fairness and diversity.

Adult learning is a well-accepted, modern-day teaching approach. An adult learning approach values previous life experiences; it recognises that adults are autonomous, internally motivated and like to be respected; and it makes learning experiences relevant, practical and goal oriented. Research studies suggest that an adult learning approach can create deeper learning and promote essential non-technical skills, such as critical-thinking and judgement. Adult learning in police recruit training has been applied to varying extents in many police forces. Nevertheless, there is limited research on the applicability of adult learning principles to the discipline of firefighting. There is a stigma that the application of adult learning in recruit training will create ill-disciplined, subordinate and freelancing firefighters – therefore being unsuitable for a command and control environment.

Further research into the complex landscape of recruit firefighter training is desperately needed. This project is an exploratory study that will contribute to addressing this gap in knowledge.

Participation

The study will interview a randomly selected sample of QFES permanent firefighters that have completed the recruit training program within the previous 24 months.

Your participation would involve an interview that will take approximately 30- 45 minutes of your time. The interview will take place via Zoom meeting or in-person at a date and time that is convenient to you.

Your experiences will provide important insight into the training program. Questions will include: Can you tell me about your recruit training experience? Do you think the teaching approach was appropriate for recruit firefighter training? What do you think works well with the training program? What could be improved? Should you not feel comfortable with a question, you can simply opt not to answer.

The interview will be audio and/or video recorded for transcription purposes. Should you not wish for the recording to occur, please advise the researcher.

The study is being undertaken by a research student from University of Southern Queensland. The researcher is a firefighter within QFES. However, the study is being conducted independently from QFES – it is not a QFES project. QFES has granted permission, however, for the research study to invite firefighters to participate.

Your participation in this project is entirely voluntary. If you do not wish to take part, you are not obliged to. If you decide to take part and later change your mind, you are free to withdraw from the project at any stage. You may also request that any data collected about you be withdrawn and confidentially destroyed. If you do wish to withdraw from this project, please contact the research team. Your decision whether you take part, do not take part, or to take part and then withdraw, will in no way impact your current or future relationship with your workplace or the University of Southern Queensland.

Expected benefits

It is expected that this project will contribute to a better understanding of recruit firefighter training practices. It will produce baseline data that can be used as an evidence-base to improve the way in which recruit firefighter training is delivered.

Risks

In participating in the study, there is a low risk that the interview may elicit repressed or traumatic memories. If required, participants will be supported to contact the Fire and Emergency Services Support Network on 1300 309 508 (office hours) or 1800 805 980 (24-hour counselling line).

Privacy and confidentiality

Your participation in the study will remain strictly confidential. The responses you provide will be treated as confidential, unless required by law. Data collected as a part of this project will be stored securely as per University of Southern Queensland's Research Data Management policy. Please note, interview transcription may be undertaken by an accredited third party. Your data will not be made available for any future research.

The responses you provide will be collated and used as part of findings in the research project. Your anonymity will always be maintained. Participants are encouraged to access the summary of results at the conclusion of the project. Results can be obtained by contacting the research team.

Consent to participate

We would like to ask you to sign a written consent form to confirm your agreement to participate in this project. Please return your signed consent form to the research team prior to participating in your interview.

Questions and further information

Should you have any further questions, or require any additional information about this project, please contact the research team.

Concerns or complaints

If you have any concerns or complaints about the ethical conduct of the project, you may contact the University of Southern Queensland Manager of Research Integrity and Ethics on (07) 4631 1839 or email researchintegrity@usq.edu.au. The Manager of Research Integrity and Ethics is not connected with the research project and can facilitate a resolution to your concern in an unbiased manner.

Thank you for taking the time to help with this research project.

Please keep this sheet for your information.

Appendix 3: Semi-structured interview guide

An exploration of recruit firefighter training and adult learning principles

Interview questions

RESEARCH QUESTIONS

RQ1 How closely does the current recruit firefighter training program within Queensland Fire and Emergency Service align with adult learning principles?

RQ2 How does the current recruit firefighter training approach impact on the learner?

RQ3 To what extent can the principles of adult learning be successfully applied to recruit firefighter training programs?

Introduction

- Thanks for meeting with me today.
- As you know, this study is looking at how closely the QFES aligns with adult learning principles and the impact the current approach has on the learner.
- I am conducting the study as a research student through USQ, however, I am also a firefighter.
- I want you to know that what you tell me will be fully confidential – I will not identify to anybody outside the research team that you have participated in the study. When the results are published, you will not be identifiable in any way.
- If it's okay with you, I'll audio record the interview so it can be transcribed later.
- Once we start, I'll ask you to confirm your consent to undertaking the interview and some basic background questions (like age, recruit course number, previous occupation). Then I'll ask some questions around how you found the recruit course training.
- Please answer these honestly (don't pre-empt what you think I might be looking for or be afraid to speak candidly).
- At the end, I'll ask if you have anything further you would like to add. If at any stage, you want to stop the interview, just let me know. Do you have any questions?

Background

- ☐ This interview is being conducted with participant X on date X.
- ☐ Participant X, can you confirm that you consent to participating in this interview.
- ☐ What is your age?
- ☐ What was your recruit course number?
- ☐ What was your previous occupation?

Training experience

- ☐ Overall, would you rate your recruit training as a positive, neutral or negative experience?

An exploration of recruit firefighter training and adult learning principles

Interview questions

Paramilitary characteristics

- ☐ How did you refer to your instructors – was it by their rank (SO), title (Mr or Sir) or first name (Joe)?
- ☐ Were you required to do marching? How did you feel about marching?
- ☐ Was your training ever referred to as a "game"?
- ☐ Did the training make you feel anxious and scared? Or competent and empowered?
- ☐ What was your previous occupation?
- ☐ What happened if you made a mistake or error?
- ☐ If your performance was not at the competent level, how did the academy manage it?

Adult learning characteristics

- ☐ Do you feel that recruit training was a supportive learning environment?
- ☐ Were your experiences in life valued or drawn upon?
- ☐ Were you encouraged to use problem solving? Or was following procedures most important?
- ☐ Were your instructors good role models? How?
- ☐ Were you able to have input into your learning needs?
- ☐ Did you feel like you had to fit a certain stereotype to be accepted by your instructors?
- ☐ Was diversity valued?
- ☐ Were there any instances of bullying?

Impact on learning

- ☐ Did the teaching approach meet your learning needs?
- ☐ Why do you think the teaching approached was used? (ie obedience/ discipline/ power/ tradition)

Adult learning

- This study is exploring whether a different teaching approach could be used for recruit training.
- Adult learning is a well-established teaching approach that recognises adults have distinct learning needs.
- It suggests that adults:
  - need to know why they need to learn something;
  - learn through doing and approach learning as problem-solving, not memorisation;
  - learn best when the topic of immediate value and relevancy;
  - have a wealth of previous experience;
  - want a degree of autonomy or input into their learning;
  - want respect in the learning process; and adults are largely internally motivated, don't need to be threatened with punishments.

- ☐ Do you think these principles could be successfully used in recruit firefighter training? How? What ways?

An exploration of recruit firefighter training and adult learning principles

Interview questions

Validation

- ☐ How well did recruit training prepare you for your role on-shift?
- ☐ Did training equip you with a thorough understanding of concepts or just a basic understanding?
- ☐ What do you think should be delivered that is currently not on the course? What was missing from the course?
- ☐ Can you suggest 2 things you think should be done to improve the recruit training course?

Conclusion

- ☐ Did you have anything further to add?

- That brings us to the end of the interview. Thanks again for your time. I greatly appreciate it.

Appendix 4: Detailed data collection timelines

Date	Activity
9/3/21	**Phase One: Invitation sent to 30 personnel**
15/3/21	R1 interview conducted (in-person)
18/3/21	R2 Interview conducted (in-person) – convenience sample
18/3/21	R3 Interview conducted (Zoom)
18/3/21	R4 Interview conducted (in-person) – convenience sample
21/3/21	R5 Interview conducted (in-person)
22/3/21	**Phase Two: Invitation sent to 19 personnel**
24/3/21	R6 Interview conducted (in-person)
24/3/21	R7 Interview conducted (Zoom)
25/3/21	**Phase Three: Invitation sent to 21 personnel**
25/3/21	R8 Interview conducted (telephone)
25/3/21	R9 Interview conducted (telephone)
29/3/21	R10 Interview conducted (telephone)
9/4/21	**Phase Four: Invitation sent to 29 personnel**
12/4/21	R11 Interview conducted (telephone)
13/4/21	R12 Interview conducted (Zoom)
13/4/21	R13 interview conducted (telephone)
14/4/21	R14 interview conducted (telephone)
16/4/21	R15 interview conducted (Zoom)
20/4/21	R16 interview conducted (telephone)

Appendix 5: Comparison of target population and study sample

	Target population	Study sample
Number of personnel	282	16
Recruit courses (RC)	RC103B through to RC113B	RC 104B, RC105T, RC106B, RC107T, RC108B, RC109B, RC110T, RC113B
Gender breakdown	256 males (90%) 34 females (10%)	13 males (81%) 3 females (19%)

Appendix 6: Reformed recruit firefighter training framework for the Queensland Fire and Emergency Service