University of Reading

Institute of Education

An action research project to promote a 21st-century adult learning environment in a Phase 1 military training unit

By Jill Matterface

Thesis for the degree of Doctor of Education

Student No. 23864570

June 2021

Abstract

An action research project to promote a 21st-century adult learning environment in a Phase 1 military training unit

By Jill Matterface

This study, an action research project to promote a 21st-century adult learning environment in a Phase 1 military training unit, encompasses a Reconnaissance Phase and one extended action research cycle. During the reconnaissance phase, the data collected from an online questionnaire of 360 cadets indicated there where three principal barriers to an andragogical approach: how the cadets were taught, what they were taught and their relationship with the instructors. These findings were verified through a draw and write exercise and a subsequent focus group of a stratified sample of 20 cadets.

The first action research cycle focused on a cohort of six instructors undertaking initial training. The data collected from a draw and write exercise and semi-structured interviews indicated that the skills identified were not aligned with those required for the successful implementation of an adult learning environment. The data appeared to suggest that an individual's educational journey and time served in the Armed Forces influence their epistemological and pedagogical belief system.

The intervention aimed to allow the pre-service instructors to explore their belief systems. The data collected in this session indicated that it is possible to influence an individual's pedagogical and epistemological beliefs by exploring biases and inconsistencies. During the session, the instructors highlighted areas for improvement in their training. Using a combination of this data and literature, I created a framework illustrating the knowledge and skills required to foster an adult learning environment.

I chose to extend the first research cycle and continue to work with the existing cohort of instructors. This phase of the research took place, three months after the instructors had begun their new roles. The intention was to see whether their views on the instructor's role and an adult learning environment had changed after a term in the role of an instructor. The data gathered indicated that these views had become more complex: the participants used the instructor knowledge and skills framework to identify the areas in which they felt underprepared. I updated the framework to reflect their comments and had it peer-reviewed by a stratified sample of experienced instructors.

This research indicates that the promotion of a 21st-century adult learning environment in a Phase 1 military unit will require changes across multiple domains, including improving knowledge management and cadet-instructor relationships, upskilling instructors, adjusting the curriculum, and staffing structures and reviewing operating procedures. To help navigate this process, I articulated my findings through the lens of Kotter's (1996) eight-step change process, adapted to illustrate the eight steps that I would recommend the college undertake to promote an adult learning environment.

Contents

Appendices

List of Figures

List of tables

Declaration of authorship

I confirm that this is my own work and the use of all material from other sources has been

properly and fully acknowledged.

Throughout the writing process I used the proofreading software Grammarly.

Jill Matterface

Acknowledgements

I would like to express my gratitude to Professor Harris and Dr Taggart for their support and guidance throughout the process.

I wish to acknowledge the support of my parents, Sam and Joanna, thank you.

Finally, I must thank my husband Ben and my son Alfred. Thank you for giving me the time to complete this and for being my inspiration to keep going.

Chapter 1 – Context

This chapter aims to introduce you to the author, the context in which this research took place, key terminology, and the report's structure.

1.1 Introduction

In January 2018, whilst selecting my thesis topic, I accepted a job as an educational consultant at a military educational establishment on a newly formed team working on Project Mercury, with the remit to review the establishment's organisational culture, course content and pedagogy and implement the recommendations. My area of responsibility was to design and implement a learning strategy which the senior leadership had requested should incorporate Outcome-Based Education (OBE). OBE requires that the curriculum, instruction, and assessment should focus on the knowledge, competence and qualities needed by the cadets to be productive in the next stage of their training or work (Spady, 1994). OBE represents a paradigm shift from the current, didactic, teacher-centred approach.

Under the existing model, cadets must attend all lessons, irrespective of their prior experience. This mix of backgrounds often results in complex lesson dynamics; for example, instructors regularly require cadets who have never held a weapon to reach the same standard, within the same time frame, as a peer with ten years of experience. To successfully implement OBE, I would have to dismantle this process and design a framework that allowed the instructors to create bespoke learning pathways for all cadets, regardless of their age, academic background, or previous experience.

1.2 Initial research questions

Below are the initial research questions which I set at the start of the action research process. As I analysed the data, additional questions emerged organically. I have recorded these further questions at the point in the research process at which they materialised. The research questions below apply to the reconnaissance phase.

1. At present, is there an adult learning environment at the college?

2. What barriers, if any, are currently in place to stop the cadets learning as they report they want to learn?

3. If necessary, how do I begin to remove these barriers to promote an adult learning environment?

1.3 Thesis structure

One of the most complex elements of this doctorate has been structuring the thesis. Herr and Anderson (2005) described the process of action research as designing a plane while flying it; when I came across this description, I immediately identified with it – it succinctly summed up my experience. I lived in a constant state of flux, with changing fields, questions, and priorities (Lewis, 2007). Much of the process felt like torment but there were elements of delight when I made a discovery or concluded, and a number of these were interlinked.

To record this experience in the format of a standard research report would feel inauthentic and fail to capture the process as it unfolded and the messiness that it entailed (Harris, 2010). The standard structure of a formal thesis comprises defined sections providing information on methodology, findings, discussion, and conclusion following a traditional model and written in the third person. This format does not lend itself to illustrating the cyclical, emancipatory, collaborative (Kemmis & McTaggart,1988; Lewis, 2007) and participatory

(Holter & Frabutt, 2012; Mills, 2011) nature of action research. At each stage of the action research cycle, considerations arose relating to data collection, analysis, and reflection, and I felt compelled to record these in a style that reflected this iterative approach. I have, therefore, chosen to present this thesis in a way that reflects how the research unfolded, adopting Levin and Martin's (2008) gradual learning approach. This approach conveys the incremental nature of learning in action research, identifying significant incidents, lessons learnt, and actions taken. This gradual learning approach allowed me to shift from a traditional linear approach to a cyclical spiral of reflection that creates new conceptual insights (Harris, 2010).

I looked to the literature to find a template in which I could order my thoughts, allowing an authentic but coherent narrative. Authors including Phillips and Pugh (2005) offered elaborate alternative thesis structures (Murray, 2002) that provided support but did not accommodate personal involvement or the use of the first person (McNiff, 2007). McNiff (2007) offered an alternative structure aligned with my constructivist positioning (Creswell, 2013) which uses the action plan questions to structure an action research report (McNiff & Whithead, 2005). As I began to place report sections under these questions, I found that my writing gained clarity and structure. These questions, thus, formed the backbone for the design of this report.

1.4 Terminology

Before elaborating on the professional context of this study, it is essential to clarify the terms used throughout this report.

Phase 1 training

Military training is divided into three phases: Phase 1 introduces individuals to military life so that they can perform in a variety of unfamiliar, stressful, and often dangerous military situations (The Defence Committee, 2005). It aims to "inculcate an understanding of the Armed Forces and

3

the demands they place on the individual […] developing, on an ongoing basis, mentally and physically robust individuals who have the flexibility to cope with the range of challenges they may face" (The Defence Committee, 2005, p.55).

Each of the three-Armed Forces conducts its own Phase 1 training, which varies in length between 10 and 44 weeks. The RAF operates two types of Phase 1 training, taught at separate military colleges known as "Phase 1 training units". Recruits joining the non-commissioned ranks complete a 10-week Phase 1 course, while those joining as a Commissioned Officers undertake 24 weeks of training. Upon completion of Phase 1 training, recruits' transition to Phase 2, which introduces them to the foundational skills of their area; for example, a pilot would learn to fly a training aircraft during Phase 2 training. When they reach Phase 3, they learn to fly a combat aircraft and transition to a frontline squadron. I have chosen to conceal the name of the educational establishment but, for the ease of the reader, from this point onwards, I will refer to it as "the College".

Instructor

Throughout this report, I will use the term 'instructor', as used by the college to describe its teaching staff. The Ministry of Defence (MoD) rebranded the term 'instructor' to 'Defence Trainer' in 2013, but the college is yet to transition with its terminology. Instructors at the college were specialists in a military field (for example, intelligence) who were taking a sabbatical from their primary role to teach at the college. Each of the Armed Forces has educational specialists, known as 'Training Officers', whose professional role is to advise on education and training. Apart from myself, Training Officers do not feature in this research.

Cadet

The term 'cadet' refers to the students residing at the college. While undertaking the course, cadets hold the rank of Officer Cadet and are called by their rank and surname (for example, Officer Cadet Matterface). In informal conversations, instructors and cadets shorten this to "cadet".

Adult learning environment

This section will explore some of the critical theories and seminal texts relating to adult learning and contextualise them to the college.

What is a learning environment?

Definitions of a "learning environment" are many and varied but the description most relevant to this research relates to the diverse physical locations, contexts and cultures in which cadets learn (The Glossary of Education Reform, 2013). As discussed previously, my initial research topic explored beliefs, perceptions, and intentions around the use of online learning in a military educational setting. Through this short exploration, I uncovered my prejudices of what I thought of as a learning environment: I had placed a heavy internal weighting on physical and technological components rather than the broader and, at times, less tangible elements of culture and strategy. As a result of this reflection, I set out to find a framework for an all-encompassing learning environment. The model that I felt offered the most holistic view of the components of a learning environment was Bates' (2014) model (refer to figure 2) of a learning environment from a teacher's perspective.

I was drawn to this model as it acknowledged the elements of a learning environment over which a teacher has no control but must consider, such as learner characteristics, it also acknowledges the importance of culture which, for me, is critical. Culture is notoriously hard to

define, as seen in the Merriam-Webster dictionary, which includes six definitions of culture, the most relevant of which in this context is "the customary beliefs, social forms, and material traits of a racial, religious, or social group" (Merriam-Webster, 2020). The culture in a military educational setting is unlike anywhere else, due to its hierarchical organisational structure, rules (Redmond et al., 2015) and the unique nature of its training: preparing cadets to bear arms and lay down their lives if required.
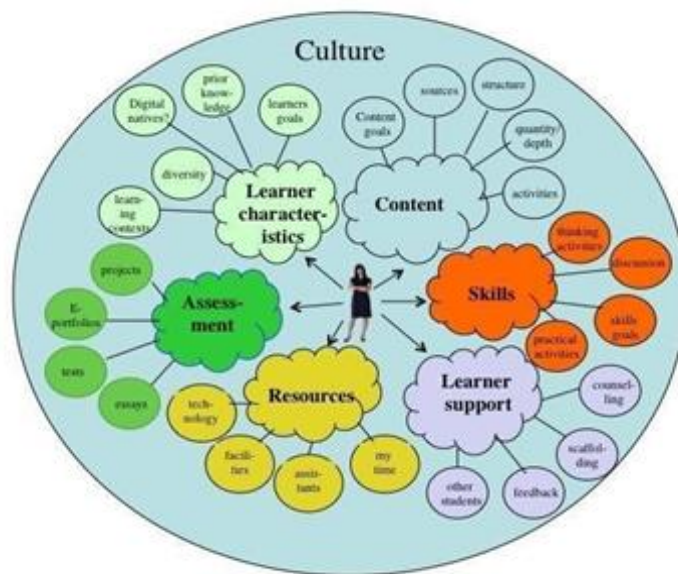
Figure 2 – Bates (2014) Model of a learning environment from a teacher's perspective.

What is an adult learning environment?

Defining adult learning has preoccupied scholars and practitioners since the founding of adult education as a professional field in the 1920s (Merriam & Gernier, 2019). Yet, to date, there is still not a universally accepted, definitive answer, theory or model that thoroughly explains how adults learn. Instead, a patchwork of theories, principles and models has developed, which together illustrate the diversity of research around adult learning. Initial investigations of adult

education focused on proving whether adults could learn. As a result, such research was often behaviouristic in design (Merriam & Gernier, 2019). They deduced insights from extrapolating the results from research with children or placing adults in the same conditions as children. Once researchers had established that adults could learn, a paradigm shift took place, distinguishing learning in childhood from learning as an adult.

The literature on adult learning refers to three types of learning environments: pedagogical, andragogical and heutagogical. In pedagogical settings, individuals rely on the teacher to design the complete learning journey and determine what knowledge is required, how they should learn it, and whether it has been learnt (Knowles, 1980). A pedagogical environment places a low value on the cadet's previous life experiences, focusing on transmittal techniques, such as lectures, assigned readings and presentations (Knowles, 1980). A pedagogical approach assumes that a cadet will only learn if knowledge is controlled and introduced at specific stages or ages and that cadets' are motivated to learn by external pressures such as fear of failure. This external motivation allows educators to coerce cadets to conform (Knowles, 1980).

In contrast, in andragogical or adult centred approaches, the teacher is a guide. There is an underlying assumption that adult learners have a "deep psychological need to be self-directing" (Knowles, 1980, p.43). An andragogical environment acknowledges knowledge acquired outside the classroom, enabling cadets to synthesise information from previous experiences with concepts to which they relate, accelerating the learning process. This approach assumes that a cadet must understand the material to complete a job or task. This need drives the teacher to emphasise what the learner needs to know (Knowles, 1980), linking the requirement to learn to the cadet's reasons for undertaking the learning. In an andragogical approach, knowledge gained should be timely and relate directly to the cadet's life. This approach is fostered by mutual

respect between both parties, creating a climate of mutual trust and an atmosphere of collaboration and psychological safety (Merriam & Bierema, 2014).

Knowles concept of Andragogy is one of the most widely cited within adult learning literature (Jarvis, 2012; Savicevic, 2008). He originally proposed four assumptions of how adults learn, but he added a fifth and sixth (Knowles, 1984). He advocated for these assumptions to act as foundations when designing educational programs for adults. Although his work gained prominence in the field, it has been criticised (Youde 2018). Brookfield (1986) and Hartee (1984) argue that there is a lack of empirical evidence to support his assumptions, whilst others say that Knowles provides a premise to explore adult learning and not a theory, nor does it consider how learning occurs (Jarvis, 2012; Grace, 1996). Hartree (1984) observed that it was not clear whether Knowles had presented a theory of learning or teaching theory.

The literature highlighted several concerns which relate to this research. First, Knowles concept of Andragogy assumes that the students have a bank of experience accumulated over their lifetime and can apply it to lessons (McGrath, 2009). This assumption may not be the case for IOT as students may not have previous experience in areas unique to the military, such as firing a weapon. However, Knowles acknowledged this failure in his later works by noting that pedagogical strategy is appropriate, at least as a starting point, when entering a content area with which an individual is less familiar (Knowles et al., 1998).

Lee (2003) and Alfred (2000) argued that Knowles assumptions overgeneralised the characteristics of a group of learners as those of all adult learners. Therefore, it effectively silenced and marginalised various social groups. The student population on IOT is so diverse that over generalising could disadvantage a large proportion of students. Knowles vision of Andragogy also presents the individual learner as autonomous, free and growth orientated

(McGrath, 2009). However, a member of the Armed Forces, regardless of rank, will never be truly independent. As a student, IOT makes this very clear due to the overt hierarchical rank structure imposed by the instructors. A further criticism is that Knowles assumptions focus on the individual learner, and the sociohistorical context in which learning takes place is not acknowledged (Grace, 1996; Pearson & Podeschi, 1997;). Linked to this, Grace (1996) highlighted that Knowle's assumptions showed a lack of social consideration and viewed the adult learner and the educational process in which they are participating in isolation, ignoring constraints of social structure (Jarvis, 1985). Therefore, Therefore, I must consider the unique sociohistorical and cultural lens of IOT and the armed forces as they dominate cadets' behaviours while at the College and beyond.

A third, commonly referenced learning strategy is heutagogy, defined by Hase and Kenyon (2007) as the study of self-determined learning. This approach applies a holistic approach to developing learner capabilities, with learning seen as an active and proactive process and learners as "the major agent in their learning, which occurs due to personal experiences" (Hase & Kenyon, 2007 p.112). In heutagogy, the instructor facilitates the learning process by providing guidance and resources but entirely relinquishes ownership of the learning path and strategy to the learner, who negotiates what will be studied and how (Eberle, 2009).
As members of the Armed Forces are increasingly required to creatively apply skills and competencies to new situations in an ever-changing, complex world (Blaschke, 2012), it could be argued that neither pedagogical nor andragogical educational methods are sufficient to prepare military learners to thrive. A more self-directed and self-determined approach is advisable (Peters, 2001). While it may be logical to define a 21st-century military adult learning environment in line with heutagogy, I need to account for the unique cultural and safety

constraints. I must also acknowledge the number of high-risk activities in which cadets at the College participate, for example, learning to fire weapons. Therefore, it would be naive to assume that all lessons could adopt a genuinely autonomous approach.

Given the above, I have chosen to define an adult learning environment as an all-encompassing environment (Bates, 2014) underpinned by an andragogical, teacher-directed to cadet-directed continuum which uses Knowles (1984) model as a framework for practice, rather than a process of adult learning (Taylor & Laros, 2014). It is essential to be flexible when applying the Andragogical model, and the context drives the teaching and learning strategies to be adopted (Knowles, 1984). It should be an environment where all cadets must feel accepted, respected, and supported (Knowles, 1980). Where appropriate, learners should be involved in as many aspects and decisions as possible (Houle, 1996). The ideal would be that all lessons are self-directed using OBE, but this is likely a long-term aspiration given the hypothesised starting point.

1.5 The educational establishment

The college offers a portfolio of residential courses, but this research solely focuses on Initial Officer Training (IOT) which qualifies individuals as Commissioned Officers. The cadets spend 24 weeks undertaking lessons in a wide range of subjects, including leadership, teamwork, written and verbal communication, and air and space power studies (Royal Air Force, 2017). They eat, sleep and train together on-site, and are graded on their academic ability, physical and mental robustness, moral courage, and ability to live in austere conditions and lead and manage a team. The IOT course consists of three eight-week terms. The first focuses on military skills, such as firing a rifle and living in field conditions; the second focuses on military academic subjects and advanced leadership theory, and the third term prepares the cadets for transition into

military life as a Commissioned Officer. A maximum of 120 cadets are admitted to each course and three courses are in residence at any one time. The lessons are taught by serving military personnel, civil servants, university lecturers and specialist contractors, while pastoral and duty-of-care responsibilities are undertaken by military staff. The IOT course is categorised as Higher Education as, on graduation, the cadets are awarded a Chartered Management Institute (Level 5) Diploma in leadership and management. However, unique to the military, they are also granted a Queen's Commission, corresponding military rank, and transition into the military as officers. As well as cadets commissioned by the UK Armed Forces, the college trains international military cadets from 28 other nations who, after graduation, return to their own countries to serve in their respective Armed Forces.

1.6 The dual purpose of this research

The inspiration to undertake this research arose from two interwoven experiences. The first was my own experience of completing the IOT course as a cadet: I did not enjoy the experience and, 11 years later, I still believe that undertaking the training harmed me both professionally and personally. I was 24 years old when I started IOT, two years older than the average cadet. I studied Physical Education at university, and on completion of my degree, I taught for two years in a secondary school. Before joining the RAF, I was an independent young professional. According to my RAF recruitment interview feedback, I successfully demonstrated confidence and leadership qualities; yet, on enrolment, it seemed to me that the RAF stripped me of these. I felt discouraged and punished for thinking freely or displaying any autonomy, independence or personality. For example, I was ordered not to use PowerPoint to give a presentation: as I had not completed the IOT PowerPoint lesson, I was not qualified to use it. When I tried to explain that I had been a teacher, the staff gave no credit to my previous knowledge.

I was encouraged to rebuild my persona and suppress the knowledge and skills I had gained previously. This process is often referred to in military circles as breaking a civilian down to recreate them as a soldier; in psychology, it is known as attack therapy. I felt that staff infantilised my fellow cadets and myself; the course appeared to have an underpinning parent-child pedagogy (Knowles, 1980). This approach was alien to me, as my secondary school and my university had fostered an andragogical, independent, lifelong learning approach. Even the school I had taught in, which was renowned for its poor pupil behaviour and lack of resources, encouraged an open and supportive adult learning environment for both pupils and staff. At the time, I felt that IOT should have helped me understand my position within the organisation and profession that I was joining. Instead, having to rote-learn technical information with no background, supporting material or context was both confusing and frustrating. I failed several crucial exams as I struggled to grasp technical concepts taught in an alien and often intimidating environment. Questions were discouraged, as was independent thinking, and the staff punished any display of creativity or innovation. For example, one of the exams involved a form of leadership problem-solving but required a set formula to be followed. Completing the task using original thinking or straying from the designated criteria would result in failing the mission.

To my horror, the experience culminated in my Commanding Officer stating in my final report that, "Black [my maiden name] has struggled with the pace of academics, and all indicators are that she will not cope with the academic rigours of life as an RAF Officer. I question how she functioned as a teacher." This experience and these comments had a detrimental effect on my confidence going into my next training stage and for years afterwards. I joined the IOT course as a confident, articulate, outgoing individual who was not afraid to

participate in professional and social discussions and relished the opportunity to find innovative solutions to the problems that life threw at me; I gradually came to lack confidence in both professional and personal settings.

The second experience was revisiting these emotions eight years later, when given a senior leadership role in a team tasked with redesigning IOT. I quickly discovered that the delivery methods and content did not seem to have progressed since my time as a cadet. Years later, I still felt uncomfortable with the College's underlying learning philosophy. During this period, I had studied for a master's degree and had become familiar with the then-popular concept of digital immigrants and digital natives (Prensky, 2001). I reflected that I had been one of the first waves of millennials to go through this college. Had this lens, coupled with my background as a qualified teacher, given me a different perspective? Had it resulted in a set of frustrations unique to me, or did others also experience these? My critical frustration was that the course felt as though it had been designed and delivered for a previous generation. An internal alarm bell began to ring I was about to inflict on others what had been inflicted on me if I did not establish how the cadets wanted to learn. I did not want to be part of history repeating itself; therefore, I chose to complete this research parallel to my professional role. Given the above, this research had a dual purpose: it was, firstly, a journey of self-emancipation to discover whether others shared the frustrations that I had felt while studying at the College and, secondly, a professional exploration of praxis and practice.

Chapter 2 – Research approach

In this chapter, I aim to illustrate my positioning and how it influenced my choice of research philosophy.

2.1 Personal positioning

I spent the eight years between starting my IOT and undertaking this research exploring my positioning through professional practice as a military educational specialist and through study – for my master's degree and this doctorate. Through this professional and academic journey, I have become acutely aware of where my values lie and how they played a part in inspiring me to undertake this research. This positioning shapes the research paradigm; it is the conceptual lens through which I look at the world, and it fundamentally shaped my approach (Marsh & Stoker, 2002).

The concept of the research paradigm is one that many researchers find problematic to articulate (Kivunja & Kuyini, 2017) due to a lack of clarity around the term (Lincoln & Guba, 1985). The term paradigm has evolved since Thomas Kuhn (1962) first used it to mean a philosophical way of thinking and has come to describe a researcher's worldview (Mackenzie & Knipe, 2006), reflecting the researcher's beliefs about the world that they live in, or want to live in (Lather, 1986). Identifying a research paradigm in social sciences is further complicated by the volume of recognised research paradigms in the literature (Charmaz et al., 2000; Creswell, 2013; Morgan, 2007). For example, Denzin and Lincoln (2011) identify six paradigms: constructivism, interpretivism, feminism, positivism, post-positivism and critical theory, while Creswell (2013) defines four paradigms: post-positivism, participatory/advocacy, social constructivism and pragmatism and Guba and Lincoln (1994) synthesised scientific paradigms into four categories: positivism, realism, critical theory, and constructivism.

This lack of clarity has not daunted me, as the research I have conducted in the years building up to this thesis has allowed me to explore how I view the world, and I am comfortable straddling several paradigms. I have concluded that the lens through which I see the world is strongly interpretive. I acknowledge that I have spent the last 11 years working for a hierarchical organisation which thrives on statistics. Therefore, I also show signs of vocational habitus, gravitating towards positivist research methodologies, as I know they will be well received within the Armed Forces.

My natural interpretive lean has driven me in this study to seek to understand the subjective world of human experience that is learning (Lincoln & Guba, 1985). Throughout, I have aimed to understand and interpret the thinking of the research subjects – the meaning they were making of the learning context – while fully accepting and embracing the multiple realities of the situation studied (Chalmers et al., 2009). This view of various, socially constructed realities (Bogdan & Biklen, 1998) is unfamiliar in military education, where cadets and instructors conform to a rigid set of behaviours and outcomes, despite coming into the organisation from diverse backgrounds. During this research, my different approach made me at odds with the establishment: I was interested in researching and recording a subjective, relativistic social world, rather than an absolute, measurable, external reality evaluated in terms of facts (Fadhel, 2002). I naturally struggle with this latter approach to education as it excludes notions of freedom, moral responsibility and choice that should be woven through learning (Nesfield-Cookson, 1987). However, I have always maintained that I do not need to be confined by the social reality made available to me by other participant actors (Hayes & Rex, 1974).

Despite my social conditioning in a more positivist approach, my natural interpretive lens encouraged me to select a range of techniques to explore how individuals create, modify, and

interpret the world in which they find themselves. These were more qualitative, discursive, and idiographic in approach (Marsh & Stoker, 2002). I am comfortable acknowledging that I live in a world of multiple realities; social actors move among these multiple realities with ease (Morgan & Burrell, 2016), abiding by the game's rules in each world. These methods fit more naturally with knowledge transfer as they concentrate on the action taking place in a classroom while still preserving the integrity of the situation.

I appear to view the world through a critical realist lens (Bhaskar, 1998). At the start of this research, I would have categorised myself as having a constructivist approach, but as I progressed through the action research process, I found myself leaning into realism. This approach advocates that abstract thing are born from individuals' minds but exist independently of anyone (Magee 1985). In other words, participants' perceptions are explored as they provide a window onto a reality beyond those perceptions (Stake, 1995). Thus, research is concerned with the extrinsic reality discerned through participants' perceptions (Healy & Perry, 2000). It uses mixing of qualitative and quantitative approaches to promote understanding of reasons for the complexity of the reality and not to translate it (Sobh and Perry, 2006). It is used as a basis for the analysis of complex phenomenon for theorising the interplay of structures, culture, and agency (Wikgren, 2005).

Regardless of the ontological or epistemological stance adopted, validity and reliability are essential in conducting any research, although their different meanings in the qualitative and quantitative analysis should be acknowledged. In qualitative research, the primary principles of validity include a full description of the researcher's place in the world (Lincoln & Guba, 1985). The very nature of social science is at stake in the debate on objectivity. Scholars frequently debate that the humanities and social and behavioural sciences use less credible methodologies

than the natural sciences (Statham, 2013). The underlying assumption in these claims is that social sciences should regard natural sciences as a role model and should precisely follow their methodology. This assumption fails to consider the differences in the subject matter researched. While natural sciences study the innate matter of all kinds, human sciences study meaningful phenomena such as social interactions, attitudes, and experiences (Statham, 2013). Thus, the line of demarcation runs not precisely between the natural sciences and social sciences but, rather, between those areas of scientific inquiry that include human beliefs, intentions, and motives and those that do not (Haack, 2007).

These concepts are further complicated when researching the realism paradigm. For example, when analysing the literature on validity and reliability in this paradigm, literature appeared sparse. Still, I found Healy and Perry's (2000) criteria for judging realism research which I used as a guide. The first step in their process is to assess if the world under investigation is ontologically appropriate (Healy & Perry, 2000). Realism does not deal in clean-cut laboratory boundaries; it acknowledges fuzzy boundary systems (Bhaskar, 1979, Yin, 1994). It treats the social world as an open system which rather than applying scientific laws, acknowledges, names, and describes broad, generative mechanisms that operate in the world (Bhaskar, 1979; Perry et al., 1996).

Their second quality is contingent validity, which assesses the generative mechanisms used within the research and if they align to the context. Realism is neither value-laden nor value-free. Therefore, realist researchers must be value aware (Healy & Perry, 2000). They accept that there is a real-world to discover, even if it is imperfect. The third criterion is the multiple perceptions of participants. A participant's reality is not a reality. Instead, it is a participant's perception that a picture of reality can be triangulated (Healy & Perry, 2000). This

creates multiple perceptions, which the researcher can align with the mechanisms used and the research context. The fourth criterion is methodological trustworthiness, which refers to estimating the degree to which a measurement is free of random or unstable error (Emory and Cooper, 1991). The penultimate criteria are analytical generalisation which relates to theory building. Given the complexity of a realist's world, research must be theory-building rather than testing. This criterion does not mean that a theory is not tested; merely that theory must be built and confirmed or disconfirmed before its generalisability to a population can be tested (Yin, 1994).

2.2 Action research as an underpinning research philosophy

When selecting a research philosophy, I sought an approach that complemented my interpretative positioning and allowed me to explore personal and social change (McNiff, 2013) within my professional context. A traditional scientific research approach based on unilateral control, seeking to develop detailed disembodied knowledge (Torbet, 1979), was not therefore an option. As I aimed to explore the empirical, theoretical, social and cultural understandings within my social construct, I required a medium that could uncover any illuminating, significant social or cultural issues alongside the principal figures' value assumptions (Torbet, 1979) whilst attempting to effect positive change (Holter & Frabutt, 2012; Mills, 2011). The above requirements led me to adopt an action research approach, as the literature identified it as a systematic enquiry process that sought to improve social issues and practices (Bogdan & Biklen, 1992).

What is action research?

Action research is a self-reflective enquiry undertaken by participants in social situations to improve their practices, their understanding of these practices, and the circumstances in which

these occur (Carr & Kemmis, 1986). It can provide a lens through which to interrogate bias and promote opportunities for self-consciousness reflection (Cook, 2018) while serving as a mechanism for educators to engage in data-driven decision-making. It challenges traditional social science by moving beyond reflective knowledge, created by outside experts sampling variables, to active theorising and data collection by people inside an organisation.

Action research in education involves studying a situation to understand and improve its quality (Johnson, 2012). It can provide practitioners with new knowledge and understanding to improve education practices or resolve significant problems in the classroom (Stringer, 2010). Practitioners lead action research in their practice and, thus, experience is gained through action and for action. It is an empirical process of interactive enquiry that balances problem-solving activities in a collaborative context with data-driven analysis to explore underlying causes, enabling future predictions of personal and organisational change (Draper, 2001).

Historically, the term action research has been associated with Kurt Lewin, but several authors have offered alternative constructs. While they all agree that it is a stepped process – (Mertler, 2012) consisting of planning, acting on the plan, developing an action plan and reflecting on the process – they offer alternative views of how to layer these steps. Lewin and Kemmis's framework is based on a spiralling, cyclical process (Eysenck & Lewin, 1952; Kemmis & McTaggart, 1988) while Calhoun and Wells chose to describe it as a research cycle (Calhoun, 1994; Wells, 1994), Stringer chose a helix (Stringer & Brauer, 1994) and McNiff and Whithead (2009) developed an action research cycle with complementary question sets.

Regardless of the lexicon chosen to describe the process, it is always dynamic and collaborative (Hine, 2013). Through repeated cycles of planning, observing, and reflecting, individuals and groups engaged in action research should be able to see, intervene and

implement the changes required for social improvement (Hine, 2013). This process can result in greater professional empowerment in classrooms or schools. It holds the potential to disrupt cherished theories and nudge educators to challenge thinking and develop an approach in practice. Recognising the theories governing our actions helps to understand those actions better and develop them according. I found this particularly useful, as the military prides itself on its tradition and uniformity. The action research process allowed me to challenge and question specific processes and procedures constructively and gave me the unique opportunity to view the College – and the process of imparting and acquiring knowledge – through the lens of a cadet and instructor.   There are multiple interpretations of the Action Research Cycle. To frame this research, I used Ferrance (2000) interpretation which incorporates six steps to each cycle. The diagram below illustrates the cycles I completed.
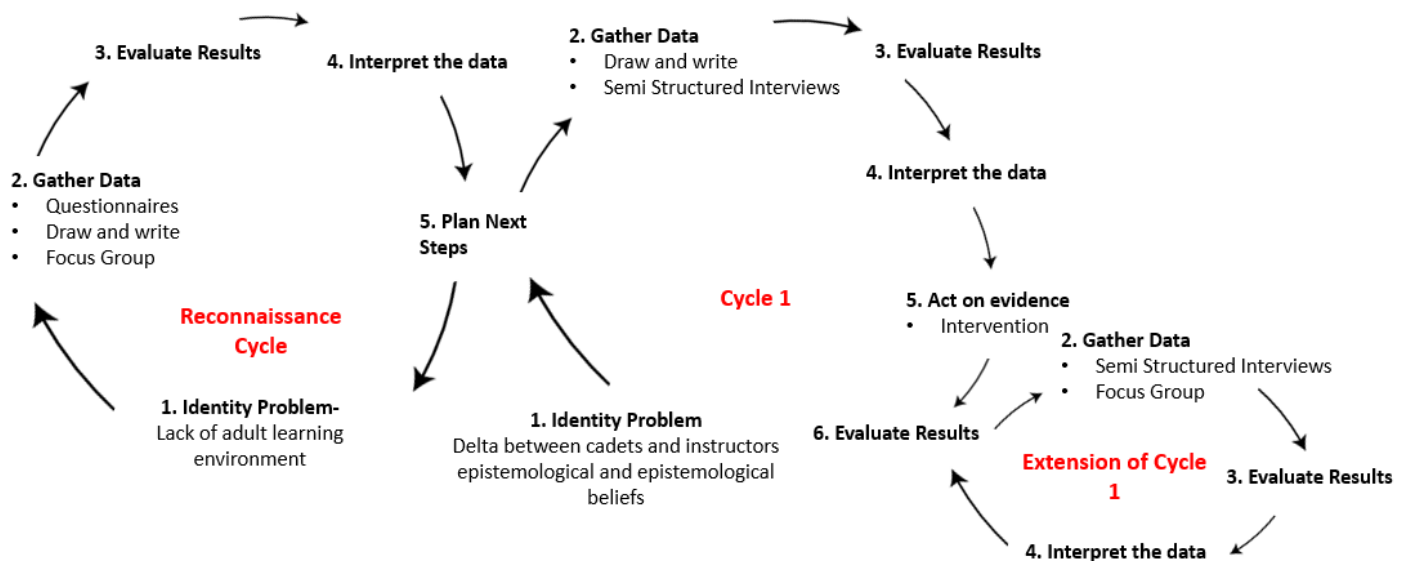
Figure 1- Illustration of the Action Research Cycle, as applied in this research

Criticisms of action research

The field of action research is not without its critics (Newton & Burgess, 2008), many of whom focus on the validity of the results generated. Many qualitative researchers, including myself, choose to reject the validity concept, as its quantitative origins conflict with constructivist epistemologies (Feldman, 2007). I view knowledge as situationally specific and socially constructed, with many plausible truths corresponding to the many prior assumptions (Huberman, 1996). Homayoun and Moghaddam (2007) suggest that validity refers to the reasons we have for believing claims of truth. In turn, I view the concept of validity as highly dependent on the nature of the information generated. Those who reject validity tend to seek alternatives to indicate the quality of their work (Feldman, 2007). Constructivist researchers focus on alternative conceptualisations, including the quality of the results of the report. Stringer (2010) even suggested that individuals could evaluate the efficacy of action research projects on emotional terms.

An alternative concept to validity, to which I subscribe, follows a middle road between naive realism and constructivism, and indicates that it is possible to construct knowledge about the world. This concept generates knowledge that can be peer-reviewed to evaluate how well it corresponds to reality (Feldman, 2007). Scrutiny leads to coherence and this, in turn, leads to incorporation into a body of knowledge. I would not question how to develop a reflective science of action but, rather, how to create a genuinely well-informed action process (Draper, 2001). These views often lead me to straddle critical and pragmatic paradigms.

One of the central criticisms of action research in an education setting concerns outcomes. Cordingley (1999) suggests that teachers are attracted to action research as they prefer practical research issues, yet there is often a mismatch between the problems identified as critical

21

to teachers and the use of emancipatory action research to explore these. Emancipatory research aims not only to effect technical and practical improvement but to transform the researcher's consciousness and increase their ability to create grounded theory (Corbin & Strauss, 1998). An alternative lens through which to examine this is, as Whitehead describes it, the "living I" (Whitehead, 1989), where the practitioner-researcher positions themselves so that an action research paper becomes a report of their ongoing action research into their own learning as they continue to make sense of their work (McNiff, 2007). I have adopted Whitehead's (1989) approach and selected a research topic that aligns with my interests and professional role. Therefore, this research is an exploration of the "living I" as it acknowledges the internal tension between values and how they are enacted in practice.

2.3 Ethical considerations

When planning the methodology, I had to acknowledge and mitigate several potential ethical dilemmas connected to collecting data within my workplace (McNiff, 2013) and the added complexities of conducting research within a hierarchical Armed Force. Ethics should always be central to educational research but, unlike a traditional research approach where ethics are generally considered only when planning the methodology, I had to ensure that I reconsidered this aspect at every stage, as new considerations emerged due to the pragmatic and fluid nature of action research (McNiff, 2013).

Ethical considerations associated with insider research

Whilst conducting the research, I maintained my professional role at the College (Holian & Coghlan, 2013) and, therefore, I held a dual position (Mercer, 2007). To maintain ethical integrity, I had to be mindful of past, present and future roles and relationships. I also had to

consider the roles, positions and intentions of the participants, co-researchers, gatekeepers of the organisation, and internal and external stakeholders (Holian & Coghlan, 2013) and sought to understand, mitigate or resolve any conflicts jointly (Holian & Coghlan, 2013). When researching duality, I came across Merton's (1972) work on the two opposing positions on duality: outsider and insider doctrine.

The outsider doctrine asserts that only the neutral outsider can accurately account for human interaction because they possess the appropriate degree of distance and detachment from the research subjects. A stranger can survey conditions with less prejudice (Turner, 1975). Dimmock and Walker (2005) noted that participants may be more willing to talk honestly to a detached outsider than to someone intimately bound up with the institution's life and, thus, enmeshed in its power relations. Merton (1972) indicated that a group's customs could overly influence the insider, who may remain ignorant and mistake error for truth. In contrast, Griffiths and Grant (1985) indicated that insiders have a better initial understanding of the social setting because they know the context, understand the subtle and diffuse links and can better assess the implications of following particular avenues of enquiry.

I agree with those authors, including Herr and Anderson (2005), Labaree (2002) and Surra and Ridley (1991), who reject the insider/ outsider dichotomy in favour of a continuum. I consider that the two abstractions and endpoints exist conceptually rather than factually (Christensen & Dahl, 1997) and that the boundaries between the two are permeable (Merton, 1972) and highly unstable (Mullings, 1999), with the result that we are all both insiders and outsiders (Deutsch, 1981). Regardless of insider or outsider status (Merton, 1972), identities are always relative, situational, and contingent (DeVault, 1999). For this research, being an insider was vital, as the military and Phase 1 training have many unique traditions and customs that

would have been difficult for an outsider to interpret. The only respect in which I felt that being an insider was a marginal disadvantage was in balancing the potential power dynamic between myself and the cadets. I do, however, acknowledge that this ability depends partly on the researcher's relationships with the participants.

I worked for the College both before and while I was conducting this research but had no regular contact with the cadets or instructors. Therefore, I would class myself on the outskirts of the insider continuum. As situations, values and different statuses emerged, the separation lines shifted (Merton, 1972), and I negotiated them. Humans cannot easily be categorised simply as insiders or outsiders, as individuals within a group will not all share the same perceptions (Holian & Coghlan, 2013) or lived experiences. Hawkins & Catalano (1990) suggested that those researching within their own institution will have more impact than an outside consultant, and I felt this accurately described my experiences during the process, in which integrity and the articulation of expertise were central (Holian & Coghlan, 2013). Brydon-Miller and Maguire (2009) argued that, before entering a research setting, the researcher should critically examine themselves as an individual to analyse their core values. I followed this advice when preparing my positioning statement, and it proved invaluable when I found myself uncovering actions that challenged my personal beliefs.

I found conducting insider research to be like wielding a double-edged sword and agree with Hawkins and Catalano (1990), who found that the advantages initially held by insider researchers in terms of knowledge of the organisation and culture can be lost in their myopia and inability to make the familiar strange. At times, I had to consciously step back and ask myself why certain events were happening, rather than apply previous knowledge. As my research progressed, I found myself experiencing increasing cognitive dissonance with the College, as my

results started to challenge my personal beliefs (I expand on this in Chapter 4). At certain points, this made my primary role more complicated, but the process forced me to assess my beliefs. As a result, I am more confident and self-assured in what I stand for as a professional educator.

Power dynamics

Action research projects, like this one, undertaken for professional development, can raise complex questions relating to power (Parsons et al., 2006) in terms of who or what is being developed, and by whom, and – most importantly – whose interests must be established (Noffke, 1997). In the wrong hands, action research can lead to individuals feeling co-opted into the latest in-service scheme by a "top-down" autocratic reform movement (Cochran-Smith & Lytle, 2000). Therefore, I had to be vigilant lest my enthusiasm and well-meaning commitment to learning and teaching initiatives led in any way to staff feeling coercion (McNiff, 2013).

Power dynamics were carefully considered throughout the data collection process: I was very conscious that I could inadvertently influence the behaviour of cadets or staff as I hold a higher rank than the instructional staff with whom cadets interact daily. It is not uncommon for cadets to alter their behaviour to influence more junior instructors than myself. Therefore, I had to consciously create an open and honest environment: I did not want to influence the results or behaviour of others due to my primary role in management (Holian & Coghlan, 2013), nor did I want participants to tell me what they thought I wanted to hear to seek personal approval or avoid rejection (French & Raven, 1968). The literature indicates that peer pressure, role modelling and links to the positive or negative power of third parties may all influence results (Holian & Coghlan, 2013).

Having conducted insider research in several military settings, I have experienced the pitfalls that rank can create. In the past, I tried to disguise my primary role by sending research emails via the university email system and conducting research in civilian clothing. Inevitably, someone in the group knew of my role in the military, which created an uncomfortable dynamic as they were unsure how to address me. Therefore, I have learnt from experience that a policy of openness and transparency creates the most conducive research environment. To create this environment, I explained that my research lay outside my day-to-day role and was open about my rank. I wore civilian clothing to disassociate myself from my status, made clear that I wanted to be addressed by my given name and Ma'am and I reiterated that I was not in their chain of command. I took time to consider the research environment and instruments to encourage the participants to disassociate themselves from military protocol. In my meetings with staff and cadets, I placed sweets and books on the desk to get them talking and chose the draw and write process as it allowed them to communicate more spontaneously, using a method other than formal language. This approach worked well with both staff and cadets, which will be described in chapter four.

Ethical codes of conduct and guidelines

I adhered to the British Ethical Research Association (BERA) (2018) ethical guidelines for educational research throughout this research. NcNiff (2013) divides this ethical code of conduct into three fundamental principles: voluntary informed consent, privacy, and protection from harm. For ease of illustration, I have structured this section under the same headings.

Informed consent

Following the BERA (2018) guidelines, I sent all potential participants an information sheet with the invitation to take part in the research. The sheet outlined the research aims, expected duration of the research, a description of what was involved and what use would be made of the findings (McNiff, 2013). It also contained information on the participants' right to withdraw at any time and confirmation that all participants would not be identifiable. I gave those participating in the interviews an additional information sheet detailing how the audio recordings would be stored and a signature section to give informed consent. In line with the BERA (2018) code of ethics, I invited participants to ask questions before, during and after the research sessions. The information sheet and invitation to participate can be found in Appendices A and B.

Privacy

The terms anonymity and confidentiality are frequently confused, and the BERA (2018) guidelines use 'privacy' to cover both. Anonymity refers to concealing the identity of the participants, while confidentiality covers who has the right to access the participants' data. In the UK, this is governed by the Data Protection Act (2018) (Data Protection Act, 2018), the requirements of which I met, following the fundamental principle that no individual would be identifiable and no information attributable to any individual.

Protection from harm

BERA states that "All social science should aim to maximise benefit and minimise harm" (BERA, 2018, p.4). All research should balance the aspirations of the research with societal concerns, institutional expectations, and individual rights (BERA, 2018). This research did not

involve minors or vulnerable adults in traditional educational terms. A power differential existed but as described, I mitigated this where possible. This research involved no activities which could cause physical harm. As described in Chapter 4, the cadets disclosed information that indicated that they may have been subjected to inappropriate behaviour, and this information was passed to the college safeguarding team.

Chapter 3 - Literature review

This chapter aims to introduce the fundamental theories which underpinned this research. I have structured the literature view through two interwoven theoretical lenses: systematic approaches to learning and theories and models associated with educational change. Systematic approaches to learning provide a framework for understanding how the Armed Forces could adapt their knowledge management, and theories related to change illustrate how militaries could learn to adapt (Jervis, 2019; Lebovic, 1995; Senge, 1990). I have also explored the characteristics that make the Armed Forces unique and, at times, constitutionally cautious regarding change (Hasselbladh & Ydén, 2019). Before embarking on the literature review, I will contextualise the macro and micro-level factors that have influenced the College's decision to consider a shift in its underpinning educational philosophy, given the findings of Wong and Chi-Keung Cheung (2009), which indicated that micro and macro-level factors drive educational change. Macro-level changes refer to global influences and national or regional cultural, economic, and political dynamics, while micro-level factors are the outcome of social interactions between individuals or educators.

To gain a competitive advantage in the next conflict, current techniques for leveraging physical and financial resources may no longer be sufficient (Shin et al., 2017). In a fast-paced, constantly changing and complex Future Operating Environment (FOE), the most financially viable solution is dependent on effective knowledge management (Hamel & Prahalad, 1994) and the Armed Forces will, thus, be required to shift to a more effective utilisation of knowledge-based capital (Shin et al., 2017). With the aim of initiating this shift, the College established the Project Mercury team to redesign its course material and learning philosophy to support the transition from a didactic approach to an andragogical or adult learning approach that supports

Objective-Based Learning (OBE). This transition will require change on several levels. Project

Mercury is an educational change project, but it will also involve changes in the college

structure, staff training and course content to allow the OBE approach to flourish.

3.1 The requirement for educational change in a military context

One of the desired outcomes for Project Mercury was a course design that prepares cadets for the

evolving context of 21st-century warfare. This section aims to illustrate this context and the

challenges currently facing the Armed Forces. Traditional national influences are diminishing,

and new adversaries are emerging in the form of individuals or organisations not allied to a

particular country or state. These non-state actors threaten the stability of the rules-based

international order (Ministry of Defence (MoD), 2017). These changes in the international order

have rekindled the debate about the character of war and conflict and whether it is undergoing a

fundamental shift (German, 2019). The apparent transformation of warfare is nothing new – one

of its enduring features over the centuries has been its state of flux – but what is new is the pace

of this change, accelerated by an ongoing technological and communications

revolution (German, 2019).

A logical solution would be the purchase of new and emerging technologies. The UK's

ability to procure these has traditionally provided it with a comparative advantage, but this

ability has been eroded by austerity measures. The MoD has acknowledged that the financial

resources needed to defend against a plethora of threats, while preparing for contingent warfare

and attempting to remain a global political player, far exceeds the current and

forecasted Defence budget (MoD, 2013). Therefore, under current planning assumptions (MoD,

2013), a dynamic, agile, well-prepared, and flexible workforce represents the best chance of

securing a competitive edge in any future conflict (O'Neill, 2015). The MoD will have to exploit

new technologies whilst identifying new ways of increasing human capital (Schatz et al.,

2017). The Chief of the Air Staff publicly acknowledged this necessity in his Strategy for

Delivering a World Class Air Force, in which he stated that the workforce will need to be agile,

adaptable, and capable (Royal Air Force, 2017). Recruiting, developing, and retaining a high-

quality military and civilian workforce will be essential for success in war (The Department of

Defense of the United States of America, 2018) but this will require

significant organisational and educational reform (Mattis, 2019). A key enabler to the success of

the UK Armed Forces during the next conflict will be access to a continuum of holistic, lifelong,

Professional Military Education (PME) for all ranks, promoting the effective utilisation of

knowledge-based capital (Shin et al., 2017).

The evolving role of PME in preparing for complex conflicts

PME is the term used by the Armed Forces of the UK and its allies to describe the professional

training and development that personnel receive to prepare them for their current or next level of

responsibilities (Kaurin, 2017), encompassing intellectual, moral and social instruction in the

military profession (Australian Defence Force, 2017). In civilian terms, PME is

a formalised professional development pathway, and the IOT course is the first module in what

should be a lifelong learning journey for a Commissioned Officer. Given the importance of

PME, urgent questions have been raised on both sides of the Atlantic about how it should be

delivered for maximum impact (Morgan-Owen, 2018). Several of the UK's closest allies and

partners have emphasised its importance by including it in Defence Strategy and capstone

doctrines.

The United States of America (USA) has placed PME at the heart of its

National Defense Strategy (NDS), which pledges to emphasise intellectual leadership, military

professionalism and the art and science of warfighting (Department of Defense, USA, 2018). Each service has included PME in its capstone documents, which provide a blueprint for the pursuit of innovation in learning with support from science and technology partners. The Australian Defence Force (ADF) has formally acknowledged the future role of PME by including it in its Future Operating Environment 2035 (Australian Defence Force, 2017), which states that a demonstrable investment in PME is required to meet future challenges and gain an intelligence advantage. To this end, the ADF has stated that it will design, fund, and deliver a coherent strategy for PME.

In stark contrast, the UK's PME system appears to have no outward intention to change (Thornton, 2019). UK Defence documents, comparable to the USA NDA, make no mention of the role of PME or of the capabilities and qualities that the UK military requires of its personnel. Since 2015, two strategic documents have been published by the UK Government in which PME could have been incorporated: The National Security and Capability Review (HM Government, 2015) and Mobilising, Modernising and Transforming Defence (MoD, 2018) and neither makes formal reference to PME. The RAF Strategy, published in 2017, discusses the need to deliver personnel for a Next Generation Air Force (Royal Air Force, 2017), but does not detail how it will achieve this. In December 2019, the RAF began to acknowledge the importance of training by referencing it as one of the core themes of Astra, an internal campaign to build the next generation RAF (Wigston, 2019). However, the campaign is still in its embryonic stages. While no country has found a comprehensive solution, a trend has emerged in military education, with several of the UK's allies adopting an Objective-Based Education approach to PME.

The tension between traditional PME and the chaos of war

There is an ever-increasing tension between this highly regulated approach to military education and the realities of executing large-scale violence as the ultimate tool of sovereign nation-states in complex and dynamic operating environments (Barkawi & Brighton, 2011). Since early modern times, military organisations have forcibly guided and directed the social cognition of their officers and troops (Foley, 2012; Rosen, 1988). Formal military training and education are based upon reproducing sameness and approaching tasks in a predictable and calculable manner (Kallinikos, 2004). Such training is usually highly regulated, formalised and intended to produce knowledge and practices that are robust and relevant for a specific mission (Hasselbladh & Ydén, 2019). A variety of reproducing mechanisms support the military education system, ranging from individual socialisation to shaping an occupational mindset and impersonal structural conditions (Perrow, 1986; Simon, 1997). Military educational establishments generally impose strong values and practices, underpinned by impersonal structural conditions (van Creveld, 1985). Organisational members are socialised to adopt specific criteria regarding relevance, professional vocabularies and the standard operating procedures that constitute their professional identity (Kärreman & Alvesson, 2004; Simon, 1997). As a result of these strict boundaries, those embarking on a military career often regret that past experiences and new approaches are often dismissed and side-lined by unresponsive and unknowing senior officers (Hasselbladh & Ydén, 2019).

Military organisations that cope with uncertainty and unpredictability appear to display cross-cultural traits honed over generations (Barkawi & Brighton, 2011; Levy, 1986). While the technocratic approach to problem-solving found in all bureaucratic organisations can be characterised as representing a logic of internal cooperation, the military displays a conflict between a desire to impose logic and the need to cope with the unpredictability of

33

conflict (Boëne, 1990). The military imposes a repertoire of standard operating procedures (King, 2013) in a quest to make the battlefield as comprehensible as possible (Hasselbladh & Ydén, 2019). The danger and turmoil of the battlefield are rendered familiar and predictable (Di Schiena et al., 2013; Schmitt, 2017; Shulman, 2019). Formal organisation implies that perceived uncertainties can be treated as certainties, rather than relying on a web of material, cognitive and social practices (Cooper, 1986; Kallinikos, 2007). The current education system attempts to impose a bureaucratic order on the chaos of battle (Hasselbladh & Ydén, 2019).

Yet, when troops encounter phenomena for which they have not been trained, they will be expected to learn through personal experience. How well individuals learn is contingent on several different factors, including previous knowledge, training and education, all of which may help or hinder them. We can expect other people to interpret events differently and often incorrectly, dependent on their previously held beliefs, assumptions, and worldviews (Allison, 1999).

3.2 The Armed Forces as a Learning Organisation

"Systems approach" or "systems thinking" is considered the cornerstone of knowledge management theories. The term stems from the general system theory created by Von Bertalanffy, (1938) and represents an interdisciplinary practice that describes how systems with multiple components interact. There are two basic systems: open and closed. Closed systems do not interact with the external environment, limiting the ability to learn (Portfelt, 2006), while open systems (Argyris & Schön, 1997; Senior & Swailes, 2010) interact with the environment and scan the external horizon to find changes (Birnbaum, 1988).

34

Organisations learn irrespective of whether they apply open or closed systematic learning approaches; however, they are not equally effective (Basten & Haamann, 2018). As a result, organisations are increasingly relying on open systematic approaches to learning in order to modify management information and positively impact performance (Cheng et al., 2014). Organisational Learning (OL) and Learning Organisation (OL) are the two dominant open approaches (Crossan et al., 1999; Schneider et al., 2002). This section will explore the theoretical and practical implications of the two approaches, distinguish between them and explore their potential role in helping the Armed Forces to better exploit knowledge management.

What is Organisational Learning?

The literature abounds with definitions of OL: Chiva, Ghauri and Alegre (2014) define it as the process through which organisations change or modify their mental models, rules, procedures or knowledge, and maintain or improve their performance. Argyris (1977) defines organisational learning as the detection and correction of errors, during which individuals act as agents for the organisation. Huber (1991) considers four constructs to be integrally linked to organisational learning: knowledge acquisition, information distribution, information interpretation and corporate memory.

What is a Learning Organisation?

In contrast, Senge (1990) defined an LO as a group of people continually enhancing their capacity to create what they want to make. Malhotra (1996) described an LO as an organisation with an ingrained philosophy for anticipating, reacting, and responding* to change, complexity, and uncertainty. A LO comprises members focused on the creation, accumulation and sharing of knowledge; these members' efforts increase the organisation's ability to adapt and innovate to gain a competitive advantage (Garvin, 2003; Pedler et al., 1991; Senge, 1990; Watkins

35

& Marsick, 1993). A continuous inflow of new experiences and knowledge keeps

the organisation dynamic and prepared for change (Santos-Vijande et al., 2012). It also

encourages people to learn and develop in a more innovative environment (Hurley & Hult,

1998). In the most optimistic descriptions, the learning organisation is regarded as a natural

extension of the human propensity to continuously learn, develop and adapt (Hasselbladh &

Ydén, 2019). Academic scholars see formal learning as influenced by circumstances that extend

far beyond the individual (Blackler, 1995). Even if learning processes are nested in social

exchange and interaction (O'Toole & Talbot, 2011), their outcomes remain tied to the context of

their inception unless they pass the scrutiny and evaluations of the formal organisation. Senge

(1990), therefore, argues that the role of a leader in an LO is that of teacher, designer and

steward, able to build a shared vision and challenge the organisation's dominant mental model.

Such leaders are responsible for building organisations where people can continually expand

their capabilities to shape their future; leaders are accountable for learning.

Leaders create a shared vision and a common understanding of collective learning while

supporting the mission (Freeman & Calton, 2020). This vision allows the organisation to align its

capabilities, exchange knowledge and leverage diverse perspectives to enhance its efficiency and

effectiveness (Freeman & Calton, 2020). In an LO, leaders nurture cultures dedicated to

excellence, ethical behaviour and knowledge-sharing. As a result, individuals are motivated to

contribute to their goals (Shin et al., 2017). Mature learning organisations capitalise on the

knowledge of all their members to find new ways (DiBella, 2010) to adapt rapidly to evolving

environments. Senge popularised the concept of an LO and identified five key characteristics of

OL: systems thinking, personal mastery, team learning, mental modes, and shared vision (Fulmer

& Keys, 1998). His conceptual framework allows businesses to be studied as bounded

objects (Senge, 1990). Businesses use this thinking method when assessing the company and develop information systems to measure the performance of its various components (Argyris, 1999).

The difference between Organisational Learning and a Learning Organisation

Several authors have described their interpretation of the differences between OL and an LO. Garvin (1993) indicated that the difference focused on how information is transferred: knowledge is shared between individuals in an LO but between individuals and the organisation in OL. I found Ortenbald's (2013) analogy of a storehouse illustrated the concepts most clearly. He described OL as a storehouse, whereby knowledge transfers from individuals to the organisation, which acts as a store. In contrast, he conceptualised an LO as an idea-house, as knowledge transfers from an individual to an individual, whilst the organisation serves as a host to cultivate it (Ortenbald, 2013). From my experience of the College as a cadet, and my initial discussions with current instructors and cadets while formulating my initial research questions, I had hypothesised that the college neither applied the principles of OL nor operated as an LO, due to the lack of meaningful interactions between instructors and cadets and the didactic approach taken to knowledge delivery. I aimed to establish whether this hypothesis was correct in the reconnaissance phase.

Impact of leadership in organisational knowledge creation

Theoretical and empirical contributions have concluded that leadership plays a significant role in the sharing, creation and capture of knowledge as well as the successful implementation of knowledge management (Bryant, 2003; Lakshman, 2007; Politis, 2001; Srivastava et al., 2006; Zárraga & Bonache, 2003; Chourides et al., 2003; Liebowitz, 1999). Throughout this research I have, therefore, viewed the process of instruction through the more traditional lens of

37

knowledge delivery and instructor and as a leadership function. In leadership theory,

the organisational context for knowledge is referred to as "Ba", the Japanese term for "Place". Ba

is a shared space for interaction that can be physical, mental, or virtual (Lakshman,

2007). Knowledge is situated within its social, historical, or cultural context (Nonaka et al.,

2001) and is moderated by knowledge assets – organisation-specific resources that are

indispensable in creating value for the organisation (Boisot, 1998; Nonaka et al., 2000; Teece,

1998) and represent inputs, outputs, and moderating factors of how Ba functions as a platform to

process knowledge. They can include explicit knowledge – such as images, symbols, and

packaged documents – and implicit knowledge, such as routines, values, and norms. In the

context of this research, Ba is the College, and the RAF is the broader organisational context but,

given the nature of Phase 1 training, explicit and implicit knowledge tends to be magnified by

the instructors. Therefore, the College has a more traditional organisational culture than a

frontline unit.

A traditional approach to organisational leadership focuses on leadership as a central

activity, exercised by the privileged few in an organisation's upper echelons (Gourlay, 2006;

Lado & Wilson, 1994). However, one school of thought indicates that a shift towards a more

distributed leadership approach is warranted, one which will challenge the traditional methods of

control (Burr, 1998). A distributed approach will require new divisions of labour,

interdependences and coordination between tasks, extensive use of technology and multiple team

practices that shape knowledge-intensive work (Gronn, 2002). Distributed leadership challenges

the conventional model of a central leader exerting influence over their followers to achieve a

specific outcome Drath et al. (2008). In this context, leadership becomes the outcome of

cooperation between individuals, manifested in a shared direction, the alignment of

their behaviour and their mutual commitment. Leadership then becomes embedded in practice rather than an exogenous force or an independent or intervening variable (Spillane et al., 2004). The literature indicates that practitioners' beliefs about leadership impact their leadership style and mental modes (Drath et al. 2008; Goh, 2002; Rosen et al., 2007), suggesting that beliefs shape individuals' ideals of leadership. Focusing on leadership beliefs is useful in theorising and empirical research, as beliefs can be expressed and examined and indicate a behavioural disposition in specific situations.

Behavioural leadership theory focuses on how leaders behave; it is a style theory and suggests that individuals can acquire leadership skills through learned behaviour (Western Governors University, 2020). Senior leaders within an organisation can affect knowledge-sharing either positively or negatively (Yang, 2007) by their behaviour towards others within the organisation. Styles involving strict policies and procedures can be less supportive of knowledge-sharing than those emphasising human interaction, affiliation, morale, cohesion, workplace harmony and workplace harmony (Yang, 2007). Most of the literature on leadership and organisational knowledge acknowledges that one specific style may not be the most appropriate approach and focuses on broader leadership action. Gratton et al. (2007) argue that, to improve the flow of knowledge, leadership styles must vary according to the issues and problems that arise as the team approaches a deadline. Kodama (2005a) advocates a dialectical leadership model that switches between forceful, servant, strategic and creative leadership, depending on the business situation.

The most frequently mentioned style in the literature is role-modelling which represents the adoption of knowledge practices, encouraging followers whilst initiating and supporting their efforts (Bell DeTienne et al., 2004; Eppler & Sukowski, 2000; Goh, 2002). Role-modelling

activities include sharing knowledge openly, taking time for critical reflection processes and documenting important insights (Eppler & Sukowski, 2000). These theories focus on leadership roles that fit a broad set of situations. A situational approach seems inevitable within the interplay of process, context, knowledge assets and leadership. An alternative lens through which to examine leadership styles is that of contingency theory; this opposes a static view by demonstrating the interactions between situations, followers, and leaders (Fiedler & Garcia, 1987), showing how situations affect the effectiveness of leadership styles.

A further research strand within leadership theory focuses on strategic leadership (Bollinger & Smith, 2001; Bontis & Fitz-enz, 2002; Skyrme & Amidon, 1997). This set of theories illustrate how leaders impact organisational effectiveness by formulating strategy, vision and mission, and by fostering a corporate culture (Lakshman, 2007). Strategic leadership requires motivation, inspiration, and empowerment to aid knowledge creation. Pan et al. (1998) proposed a list of strategic leadership requirements positively positioned towards knowledge-sharing and developing an environment conducive to knowledge-creation, which included role-modelling, support of the organisational culture and the creation of a managerial mindset. Similarly, Rosen et al. (2007) included leadership tasks such as role-modelling, articulation of the vision, clarification of leaders' expectations, recognition, and rewards. The final strand of leadership theories that I will explore is that of transactional and transformational leadership theories that focus on leader-follower exchanges in the form of benefits, rewards and self-interest. Transformational leadership is more strongly related to knowledge acquisition than transactional leadership Politis, (2001). This approach emphasises followers' motivation and inspiration to give their best for the organisation (Bass, 1990; Burns, 1978). Kelloway & Barling (2000) identify the positive effect of transformational leadership on

knowledge development and acquisition and on advantageous conditions such as commitment and trust. Srivastava et al. (2006) analysed the effects of empowering leadership on followers' knowledge-sharing during transformational leadership. Their results demonstrated that empowerment is positively related to knowledge-sharing and team efficacy, both of which relate positively to performance. Gagne (2009) hypothesises that transformational leadership satisfies followers' needs for autonomy, competence and relatedness, which are important for effective knowledge creation (Nonaka, 1994). In a similar vein, Goh (1998) proposes a mix of strategic and what he terms 'shared' leadership that involves empowering followers, showing a strong commitment to the organisation and encouraging a culture of experimentation.

Two critical components of transformational leadership are empowerment and trust. Empowerment relates to the concept of autonomy in the organisation, elaborated, for example, in work on self-managed teams (Sarker et al., 2009). Some authors also consider trust and a high degree of care among organisational members to be essential in enabling knowledge-creation and recognise the role of leaders in fostering these values (Bell DeTienne et al., 2004; Bollinger & Smith, 2001; Gagne, 2009; Goh, 2002; Holsapple & Joshi, 2000; Huang et al., 2008; Zárraga & Bonache, 2003). Transformational leadership fosters trust, team cohesion, commitment and motivation (Gagne, 2009).

The impact of Learning Organisation theory on the Armed Forces
The concept of the LO has not had as substantial an impact on the discourse of modern military organisations as it has on business enterprise (Di Schiena et al., 2013; Schmitt, 2017; Visser, 2016). However, recent scholarship on military learning demonstrates that well-organised learning processes can provide an essential means to introduce disruptive thought to militaries and challenge existing orthodoxies (Catignani, 2014; Foley et al., 2011; Marcus, 2019;

Serena, 2011). Well-organised lessons also provide an opportunity to ensure that learning does

not remain siloed within communities of practice but can be disseminated across the

broader organisation where appropriate (Kollars et al., 2016). Making the LO concept relevant

and applicable to military organisations requires context-adaptable models and guidance that

account for the unique constraints, requirements, cultures, and missions (Örtenblad, 2013). The

literature on military change demonstrates that variables such as the relationship to

the organisational culture, hierarchical management structure and the unique nature of

conducting a war can create unique tensions and powerful impediments to the integration of new

knowledge (Davidson, 2010; Farrell, 2005; Posen, 1984; Rosen, 1991). In this section, I will

explore the tensions that are relevant to this research.

Pedagogical approaches to systems thinking in a military context
A generation ago, military colleges were expected to equip cadets with the skills needed for their

entire military career but, in a 21st-century environment, cadets must acquire the skills to thrive

in a rapidly changing environment and carry out jobs that do not yet exist (Kools & Stoll,

2017), whilst preparing for "a war" rather than "the war." The skills that cadets will need to

contribute effectively to both military and civilian society are changing constantly, but neither

the civilian nor the military school system is keeping pace. Most military colleges look much as

they did a generation ago, and instructors are not developing the practices or skills required to

meet the diverse needs of today's learners (Schleicher, 2012). Instead, they are being urged to

learn fast and become "knowledge workers" to address the growing pressures of a rapidly

changing environment (Scheicher, 2012).

To meet these challenges, a growing body of scholars and educators has urged for both

civilian and military colleges to be reconceptualised as "learning organisations" (Giles &

Hargreaves, 2006; Senge, 2012; Fullan, 1995; Schlechty, 2009; Silins et al., 2002). Increasing numbers of organisational scholars have concluded that an OL capacity will be the only sustainable competitive advantage in the future (Ortenbald, 2001; Yang, Watkins & Marsick, 2004). The reconfiguration of traditional educational establishments into LOs will require the role of the cadet to be re-thought, and instructors to learn from the world around them and apply these lessons to new situations to keep pace with the ever-changing context of education (Stoll et al., 2003).

It could be argued that viewing a military college as a community would help to transform it into an LO. Westheimer (1999) highlights five commonly identified features of a community: shared beliefs and understandings, interaction and participation, interdependence, concern for the individual and minority views, and meaningful relationships. Developing an environment of interpersonal caring, which permeates the life of teachers, schools and school leaders, would allow a school to become a professional learning community, with an emphasis on mutually supportive relationships and the development of shared norms and values (Louis et al, 1995). For a community to flourish, there must be a presence and development of trust (Bryk & Schneider, 2002).

There are a growing body of literature aims to provide operational guidance, processes, strategies and structures that would enable the College to become an LO (Giles & Hargreaves, 2006; Fullan 1995; Strain, 2000). Senge (2012) has inspired scholars to develop and assess academic institutions as LOs using five disciplines (Johnston & Caldwell, 2001; Hamzah et al, 2011; Moloi et al, 2006) while Sillins, Mulford & Zarins (2002) provide a more holistic approach and indicate that academic institutions must use environmental scanning, develop shared goals, establish collaborative learning and teaching environments, encourage initiative

43

and risk-taking, recognise and reinforce good work and provide continuous professional development.

Dufour (1997) suggested that attention should be devoted to shaping human resources policies and procedures to facilitate peer learning and collaboration amongst colleagues. He emphasised the importance of strategic leadership in creating such conditions. Marsick et al. (1999) suggest seven action imperatives that can be interpreted as prerequisites for becoming LOs, whilst other scholars highlight the importance of networked learning and collaboration across boundaries, sharing and creating knowledge with a range of partners (Bowen et al., 2006; Schlechty, 2009). Studies have shown that adopting a learning organisational approach can have a positive effect on learners' outcomes (Bowen et al., 2006; Klassen & Chiu, 2010; Silins & Mulford, 2004) and found a positive relationship between cadet outcomes and the setting of a shared LO vision for teaching and learning (Leithwood & Day, 2007; Silins & Mulford, 2003). When instructors focused on the development of a unified culture, promoting an LO approach, this positively influenced cadet outcomes (Leithwood & Day, 2007; Robinson & Taylor, 2007).

One theoretical approach which can be applied to military learning is that of single- and double-loop learning, which originated from Argyris and Schon's theory of action (Argris & Schon, 1978) that sees people as agents or change designers. The theory posits that agents make sense of the contexts within which they function by constructing mental representations to design their actions (Greenwood, 1997). It follows, thus, that agents do not act by chance, but are responsible for the design of their actions (Argyris, 1985). Agents can respond in two ways when faced with a problem to overcome. The first approach is to search for other means to achieve the same end, that is, to change the actions while intending to reach the same outcomes. This process is known as single-loop learning (Argyris, 1985); it alters individuals' action strategies but leaves

the values of a theory of action unchanged (Argyris & Schön, 1996). Double-loop learning occurs when the agent looks for alternatives by examining the appropriateness of their actions. It involves reflection on values and norms, including the social structures that were instrumental in their development, to render them meaningful (Greenwood, 1997). Double-loop learning involves two feedback loops that connect the observed effects with the strategies and values served (Basten & Haamann, 2018). Schon (1983) and Argris (1985) found that double-loop learning is essential in creating desirable social worlds since their outcome hinges on the redesign of social structures and human action.

A teaching and learning philosophy gaining worldwide attention and rapidly becoming the most well-known systematic approach to curriculum reform is OBE (Wang, 2011). The transition to OBE indicates a shift from a traditional, teacher-centred philosophy to an educational model in which the curriculum, pedagogy and assessment are all focused on cadet learning outcomes (Iloanya, 2019). The entire educational system is, thus, focused on what cadets need to be able to do and know at the end of their learning experience (Wang, 2011). OBE aims to encapsulate learning outcomes in terms of the knowledge, skills, attitudes, and values that match the immediate social, economic and cultural environment. It ensures that the cadets have the experience, competence and qualities needed to succeed after leaving the training college (Iloanya, 2019). It is presumed that assessment will involve integrating knowledge, skills and values in the context of authentic, performance-based assessment strategies (Tuning Africa Project, 2014).

OBE is a paradigm shift from the traditional academic approach currently implemented at the College, which emphasises memorisation and recall. It is grounded in the principle that teachers are change agents, tasked with imbuing cadets with higher-order, problem-solving skills

45

(Rogers, 1995). Teachers become both classroom researchers and expert collaborators in teaching and learning (Apple, 2011; Devlin-Foltz, 2010), formulating learning outcomes for each lesson to determine what the learner must achieve in that session (Spady, 1994). OBE requires teachers to empower cadets to learn at their own pace and according to their capabilities (Iloanya, 2019). To facilitate this type of learning, teachers must know and understand how each cadet learns. Given the considerable shift in emphasis, some practising teachers who trained using more traditional, teacher-centred education methods may find OBE challenging to implement without upskilling (Iloanya, 2019). The lived reality of implementing this change in a military college could be still more challenging, given that the instructors receive limited training in instructional techniques and work within a hierarchical structure steeped in tradition and protocol.

Despite the challenges, the US Military has successfully adopted OBE. Having acknowledged the need to grow adaptable professionals who can solve complex problems and exercise sound judgement to complete missions in high-risk, high-consequence environments (Vandergriff, 2010), US military colleges have adjusted their approach to ensure that they develop soldiers who can think and behave adaptively amid uncertainty (Wagner, 2010). To this end, the US Military Academy adopted OBE and, over three years, overhauled both the regular and reserves' training to create an interactive learning environment to encourage cadets to solve problems in a complex and realistic environment. As a result, the US Academy reported that the cadets and instructors achieved a higher degree of competency than in traditional task-based training approaches, and the instructors gained a better understanding of the trainees' true competence (Borce, 2012).

The US Academy acknowledged that the successful implementation of OBE required instructors to have higher levels of instructional expertise and to leverage their full capability to adapt to new challenges. Instructors also needed to maintain a positive attitude, conducive to building trust and confidence in their cadets, but OBE helped the instructors to move cadets' learning activity purposefully and systematically towards a threshold of failure, challenging them whilst ensuring success, to build confidence and initiative. The instructors reported that they had to go beyond tactical and technical skills, developing cognitive training skills such as confidence and initiative (Oskey, 2015). The successful implementation of OBE placed a more significant burden of professionalism, accountability and need for prior knowledge on the cadets' shoulders and required more guidance but less formal input from the instructor (Oskey, 2015). Individuals developed while conducting military tasks rather than in a traditional classroom and, as a result, the US found that the cadets' competence in tangible skills such as marksmanship increased, as did intangible attributes such as creativity and judgement (Borce, 2012).

To successfully implement OBE, it is important to recognise how knowledge is generated. Organisational knowledge theory depicts a dynamic process, involving both tacit and explicit knowledge, that makes available and amplifies knowledge created by individuals, crystalising it and connecting it with an organisation's knowledge system (Nonaka et al., 2000). Explicit knowledge can be articulated, codified and communicated using symbols or language, often collated in documents. Tacit knowledge is highly personal, rooted in an individual's commitment to a specific context (Nonaka, 1991). The creation of organisational knowledge can be depicted as a spiral that continuously repeats in four phases (Nonaka, 1991; Nonaka & Konno, 1998). Stage 1 includes socialisation and the sharing of tacit knowledge among individuals, while Stage 2 is the externalisation of this knowledge: it requires tacit knowledge to

be expressed and translated into forms that others can understand (Nonaka & Konno, 1998), thus transforming highly individualised professional learning into an explicit form. In Stage 3, bodies of explicit knowledge are categorised, combined, sorted, and recombined and, in Stage 4, explicit knowledge is internalised and converted into the organisation's tacit knowledge bank (Nonaka & Konno, 1998).

Garvin (1993) developed a model which translates well to educational settings, with its practical focus (Easterby-Smith, 1990). He identified five building blocks that, if present in an organisation, provide the foundations required to master effective organisational knowledge: systematic problem-solving, experimentation, learning from past experiences, learning from others and transferring knowledge. These blocks were predicated on organisations providing a climate that facilitates the learning of individuals and managers or, in the context of the College, instructors, acting as coaches instead of directors (McGill and Slocum, 1993; Pedler et al., 1991; Senge, 1990).

3.3 The militaries' adaption to educational change

The description of educational change that I decided to adopt was the intention to alter educational goals and improve how cadets are taught and assessed and/or how educational functions are organised, regulated, governed, and financed (Duke, 2004). This description encompasses most of the education process tasks under consideration by Project Mercury whilst also acknowledging a holistic approach to reviewing how education is delivered. Educational change has, until recently, shared many characteristics of other forms of change but remained distinct due to the lag between economic, social, and cultural change on the one hand and change in schools on the other (Wong & Chi-Keung Cheung, 2009). However, the COVID-19 crisis has undoubtedly disrupted the operation of millions of educational establishments, including most Armed Forces

training establishments promoting innovation and institutional self-examination. It has long been accepted that the most critical factor in the educational change process is innovation and early models, like that of Burkman (1987) reinforced this assumption. More recent literature indicates that understanding and appreciating the environment into which the innovation is being introduced will positively impact the change process (Rodgers, 1995). Berman (1974) published a framework of quantifiable demographic characteristics affecting the school environment; however, this largely ignored the organisational, structural, motivational, and environmental aspects of the change process.

Ely et al. (1990) published a more rigorous set of environmental conditions to promote change, which has since been refined to cover the implementation of educational technology in various contexts. This approach acknowledges that the characteristics of change are not the only factors that influence its adoption; the environment in which the change is desired can play an equal role in determining its success. Ely identified eight conditions to be viewed as guidelines for successful implementation rather than hard and fast rules; they are not realistically achievable for all innovations in all environments (Ely et al., 1990). Ely's conditions have since been successfully used by several studies to assess change conditions, including those by Haryono (1990) and Kaufman and Paulston (1992).

Many change process models exist, including Havelock and Zlotolow's (1995) guide, which provides a framework for the change agent to follow in the form of "seven ideas in a circle". This model has been validated and developed, including Freidus and Grose's (1998) perspective of the new change agent in curriculum change. These models are helpful but, while I acknowledge that they could provide a guide on which to base a change project, I found

them very prescriptive; they do not recognise the fluid nature of educational change or acknowledge the individuals involved in the process.

The two models I found most useful were Lewin's (1951) three-step change model and Kotter's (1996) eight steps to change. The latter framework is straightforward (Kang et al. 2020) and provides practical, tangible advice on, for example, creating a vision and communicating it whilst acknowledging the individuals involved in the change process. Lewin's (1951) three-step change model – unfreeze, change, refreeze – appealed to me as the Armed Forces, like so many large organisations, tend to implement a plethora of changes without stopping to evaluate their impact. The social science approach to change in both models can be applied to any form of organisational change as their simple diagrammatic forms are easy to follow for all stakeholders.

Change disturbs the status quo; therefore, those planning the strategies for change must understand the cultural and social nuances which may impede the process (Ellsworth & Ellsworth, 2010). Despite the negative connotation of the word "barriers", understanding them and their causes can be a powerful tool and even a positive indicator. Most studies relating to barriers to change focus on overcoming already evident barriers, rather than exploring their root causes. Of the many existing models in this area, the most detailed is that of Zaltman and Duncan's (1977) strategies for planned change, which identifies 18 attributes and conditions which could potentially hinder change, grouped into four principal categories: "cultural, social, organisational and psychological barriers" (p. 61). This model can be used as a diagnostic tool to identify the root causes of resistance, thus supporting the design of meaningful and effective interventions. Barriers to change are often ignored by change agents, who prefer to trust that obstacles will not pose a problem if a change is implemented effectively. Acknowledging

50

and researching current barriers can enable constructive feedback, which, if acted upon, can lead to a meaningful change process with time for issues to be addressed (Ellsworth & Ellsworth, 2010).

Scholars of military innovation highlight three overlapping elements to explain why militaries often fail to adapt to change: organisational theory, bureaucratic politics, and organisational culture (Allison, 1999; Halperin, 1974). Organisational theory sees military organisations as highly resistant to change (Avant, 1993; March & Olsen, 1983). For organisational theorists, militaries resist innovation because of structural systems, norms and standard operating procedures that together focus behaviour on particular outcomes. The literature indicates that one of the key issues with the current military structural system is that rigid, hierarchical organisational structures can be a significant impediment to the generation and management of new knowledge (Snyder, 2016). A hierarchical structure tends to simplify and specialise learning tasks, decreasing the organisations' capacity to adapt their behaviour over time (Levinthal & March 1993). The current modus operandi is a highly functional mechanism to ensure organisational stability and robust performance (Du Gay, 2000; Kallinikos, 2004; Perrow, 1986). It is maintained through the formalisation and standardisation of structural control mechanisms (Hasselbladh & Ydén, 2019), but can stifle innovation and cause paralysis through over-analysis (Burr, 1998). Innovation is inherently untidy and cannot be controlled or managed through a rigidly centralised system (Burr, 1998); nevertheless, efforts to eliminate such messiness are made when a rigid hierarchy is imposed upon the process (Watts & Murray, 1996).

A potential solution is to develop a context adapted, LO model which functions within the constraints posed by hierarchical organisational structures. For example, a flattened

communication structure allows all members to voice their ideas and share their knowledge in time and rank permissive settings (Freeman & Calton, 2020). This approach resists the temptation to provide all the answers, instead encouraging solutions to come from all ranks (Schein, 2004). The literature also indicates that a flattened communication structure enhances information flow during challenging periods, allowing for open dialogue and knowledge-sharing vertically, horizontally, or diagonally across the hierarchy (Kodama, 2017). At present, the rigid hierarchical rank structure that defines the military encourages a one-way flow; by flattening communication structures and building an organisational culture where every member is encouraged to share their ideas and knowledge, military LOs could maximise their intellectual capital (Freeman & Calton, 2020). Pairing intellectual capital with an understanding of the external environment could guide behavioural changes, enabling the adaptability required to maintain effectiveness in dynamic operational environments (DiBella, 2010). Phase 1 training is designed to teach the cadets how the hierarchical system operates. In the initial stages of the course, organisational and cultural customs – such as cadets sitting to attention when an officer walks into a room – are implemented to over-exaggerate the rank system. These are often relaxed as the course progresses.

A further organisational issue that challenges a sustained LO culture is the frequent rotation of military leaders, who tend to change assignments every two to three years, bringing shifts in vision, norms and expectations which can cause the organisation to regress and revert to military cultural norms, such as hierarchical communication structures and deferring to authority (Freeman & Calton, 2020). When the organisational culture and new practices are established, this rotation may become an advantage, as leaders arriving at a new team will bring their ideas and diverse experiences (Freeman & Calton, 2020). However, to enable this, the

organisation will need to communicate the value of learning by modelling learning behaviours, rewarding others' learning behaviour and establishing an atmosphere where individuals are empowered to communicate and share their knowledge (Freeman & Calton, 2020). The clear communication of these values would allow leaders to promote knowledge-sharing using the established channels and processes. It would support continuous improvement, enable a shift towards cultural norms that facilitate rapid learning and help all members of the enterprise understand what it takes to become an LO and the benefits associated with doing so (Schein, 2004). At the College, the commissioned cadet spends on average no more than 18 months in an instructional role.

An organisational culture emerges from these routines that reinforce norms, resulting in a distinct entity with its own identity and momentum (Avant, 1993). In this model, even when actors within a military organisation desire a change in strategy or doctrine, structural mechanisms are likely to mitigate against it (Davidson, 2010). The literature on organisational culture uses different terms with slightly different emphases to describe the same phenomenon. Kier (1995) defines organisational culture as the set of basic assumptions and values that shape shared understandings and through which these meanings are expressed, affirmed, and communicated to an organisation's members. Other scholars focus on instructional memory, the conventional wisdom of an organisation concerning its tasks and missions (Freedman et al., 2004). Builder (1989) presents the theory of organisational personality, a face that individuals can remember, recall and apply when evaluating future behaviour. An Armed Forces culture is its personality and reflects its values, philosophy, norms, and unwritten rules. The culture has a powerful effect in creating common underlying assumptions that guide behaviour and how information is processed (Stroup, 1996). The Armed Forces' culture can be a strength: its

camaraderie and esprit de corps help individuals through challenging times. However, the same culture may also be a liability if it becomes inappropriate or outdated and no longer contributes to the organisation's goals (Stroup, 1996). This culture is the product of interactions over millennia and the quest to fulfil tasks in chaotic and lethal environments (Hasselbladh & Ydén, 2019). In Phase 1 training, the culture of the Armed Forces and the role of the Commissioned Officer are often over-exaggerated, using cultural nuances specific to the College that are designed to allow the cadets to become comfortable with their rank and standing but often fail to translate to the wider Armed Forces.

Bureaucratic politics theory views the military as an amalgam of various subgroups and branches, as just one agency among others within government (Altfeld & Miller, 1984), with individual viewpoints within the organisation depending on role. Leaders of large organisations seek to promote the importance of their organisation and to preserve its organisational essence, that is, the dominant group's view of what the organisation's mission and capabilities should be (Rosati, 1981). In this model, roles and missions that challenge the essence are likely to be rejected unless they are seen to enhance the importance and influence of the organisation (Davidson, 2010).

Burr (1998) identified two factors that prevent militaries from adopting change: the imperative to maintain readiness levels, and the culture: militaries cannot take time out to redesign themselves for the future, nor can they pursue the more straightforward option of starting a new with a clean slate. They must transform what they have (Sullivan, 1996). Burr also identified that militaries are conservative and, therefore, generally resistant to change. Their culture is embodied in a proud heritage and revered traditions (Burr, 1998), with senior personnel often remembering the way the military was, rather than the way it is now. (Burr, 1998).

To overcome these barriers, Burr recognised that any military change strategies must address three interdependent factors: people, culture and the power of vision. He applied an extension of the Clausewitizian concept of the remarkable trinity to understand the powerful effects of interacting forces (Burr, 1998; von Clausewitz, 1989). In the context of military change, he identified that organisational culture, human factors (people), and the power of vision form a trinity in achieving positive change through their interaction. Sustaining the trinity requires balancing the vision while simultaneously addressing individuals' fears and resistance (Burr, 1998). Leaders control the swing of the trinity through the creation of a shared vision and an appropriate atmosphere to manage emotions, reassuring the organisation that core values are not being challenged and providing a psychological safety net.

When managing the trinity, the vision engenders an understanding of what the destination looks like and suggests a strategy for attaining it; it establishes goals and a purpose. The vision clarifies the direction in which an organisation needs to move (Kotter, 2007) and a shared vision is vital in providing a focus and energy for learning. This learning only occurs when people are striving to accomplish something important to them; without significant and credible communication, the hearts and minds of the troops will never be captured (Kotter, 2007).

resistance (Burr, 1998). Leaders control the swing of the trinity through the creation of a shared

vision and an appropriate atmosphere to manage emotions, reassuring the organisation that core

values are not being challenged and providing a psychological safety net.

When managing the trinity, the vision engenders an understanding of what the destination

looks like and suggests a strategy for attaining it; it establishes goals and a purpose. The vision

clarifies the direction in which an organisation needs to move (Kotter, 2007) and a shared vision

is vital in providing a focus and energy for learning. This learning only occurs when people are

striving to accomplish something important to them; without significant and credible

communication, the hearts and minds of the troops will never be captured (Kotter, 2007). Within

the context of this research, the critical interlocking feature of the three elements of the trinity is

the instructors. They uphold and promote the culture of the College, carry out the hierarchy's

vision for the College and are responsible for the welfare and development of the cadets.

According to Schein (1992), culture is reflected by those elements of the most stable and least

malleable organisation. In this context, this is the body of instructors. Achieving an

organisational learning culture in an educational establishment requires frequent and deliberate

adjustments of classroom practice in response to new ideas rather than major strategic

reorientations (Crossan & Berdrow, 2003). Whilst all stakeholders in an educational

establishment should be actively seeking to improve both the content of and rate at which

organisational learning occurs (Louis & Gordon, 2006), the lived reality is these changes will

have to be driven by the instructors.

A significant line of research has emerged about the role of trust and respect among

instructors and students, influencing both improvements in school practices and student learning.

A large-scale longitudinal study conducted by Bryk & Schneider (2002) confirmed that the

56

relationship between shared organisational shared norms and values and trust is vital within an educational setting. Research also suggests that instructors' trust in the College hierarchy is associated with student achievement (Hoy et al., 2006; Tschannen-Moran & Hoy, 1998). Research has begun to highlight the actions that leaders take which positively or negatively alter the culture in a school impact on student performance (e.g., Bryk & Schneider, 2002; Hoy, Smith, & Sweetland, 2002; Tarter, Bliss, & Hoy, 1989). The instructors must balance gaining the trust and confidence of the hierarchy while maintaining the cadets' trust and respect.

Conclusion

In summary, the college is about to embark on a period of profound educational change. It must prepare the cadets for a complex, unstable and uncertain environment (MoD, 2017) and the most financially viable solution hinges on achieving effective knowledge management (Hamel & Prahalad, 1994). To this end, the college has chosen to affect a paradigm shift in its underpinning educational philosophy, transitioning from a traditional didactic approach to an underpinning philosophy of OBE. This shift poses a significant challenge in the form of numerous potential structural and cultural barriers. Therefore, my intervention is necessary to identify and remove these barriers and promote an adult learning environment.

Chapter 4 – The reconnaissance Cycle

Chapter four starts with the articulation of the concerns which I had going into the reconnaissance phase and the evidence which supported these. It then outlines the research methods I chose to use, the data collected, and the conclusions I drew.

4.1 Initial concerns

At the start of this research, I had two interlinking concerns. The first was born out of my time as a cadet: I felt the underpinning learning environment at the college was didactic and focused on standardisation and conformity (Robinson, 2007). After reflecting on my time on IOT, I felt that this pedagogical – or child-focused – teaching model was detrimental to my learning journey and I was concerned that, if the same model was still applied, others may have a similarly negative experience. My second concern related to Project Mercury's task: to redesign IOT using an Outcomes Based Education (OBE) model, which aims to foster higher order thinking skills, including critical thinking, problem-solving, research, collaboration, and communication (Rice, 2011). To achieve this, teachers must empower cadets to learn at their own pace and according to their capabilities (Iloanya, 2019). Success would require a shift from a content-based to a cadet-focused approach and a supportive adult learning environment. This would require a shift in the people, culture, and power of vision trilogy. It would require the people to become more empowered, which in turn would require a significant shift in culture. I feared that, while the project team would be designing new teaching content that would, in theory, educate military officers to thrive in the fourth industrial revolution, the learning environment might not effectively support the content. To use an aircraft analogy, I was afraid that we were trying to build a state-of-the-art, F-35 Lightning aircraft using a Spitfire engine.

58

4.2 Evidence to support my concerns

Before finalising the initial research questions, I analysed and triangulated all available internal and external reports to identify any trends or areas for concern. This section details my findings.

Ofsted reports

The Ministry of Defence (MoD) training system was not subject to external scrutiny until four soldiers died in suspicious circumstances between 1995 and 2002 at the Princess Royal Barracks, Deepcut. Following the public outcry around the details of the deaths, Nicholas Blake QC was commissioned to investigate the circumstances of the deaths and the MoD training system. His report, published in 2006, recommended regular external inspections to ensure that the recruits' welfare and officers' duty of care were of an appropriate standard. As a result, the Adult Learning Inspectorate (ALI) and, subsequently, Ofsted now carry out an annual inspection of a sample of Phase 1 and 2 training establishments. Ofsted last inspected the College in 2015 (Ofsted, 2016), and awarded it Grade 1. On the surface, this would indicate that there are no problems. However, it is worth noting that MoD Ofsted inspections do not assess teaching and learning standards but focus solely on the duty of care. Each year the MoD inspection team provides a summary of their key observations and these are used as a framework for an internal audit of the College's policies and procedures. My key observations from these reports are detailed below.

Selection and training of instructors

In 2005 the ALI observed that most instructors were recommended for their instructional roles without their commanding officer ever having seen them instruct; fewer than half had any relevant instructional background before taking up their post (ALI, 2005). The ALI recommended a more robust selection process and the introduction of a training programme

alongside a rigorous programme of continuous professional development (CPD) for instructors (ALI, 2005; ALI, 2007). At present, the selection system at the College does not require instructors to teach a lesson or deliver a brief as part of their selection interview.

In 2005 the ALI recommended that instructors undertake CPD and regular performance appraisals, (ALI, 2005). Ofsted reiterated this recommendation in 2011 but continued to observe an absence of well-planned instructor CPD across MoD establishments. The same recommendation was repeated in subsequent reports (Ofsted, 2011; Ofsted, 2012; Ofsted, 2013; Ofsted, 2014). Ofsted formally recommended that units develop a system of observations and monitoring to provide quality developmental feedback to instructors (Ofsted, 2013) and that instructors should receive a wide range of CPD opportunities to develop their skills beyond the minimal defence instructional qualification, the Defence Train the Trainer (DTTT) course. To date, the College has not implemented a formal CPD programme or regular performance-based observations.

The Blake QC Report (Blake, 2006) highlighted several failures in instructor training and prompted a military instructional training course to be designed; as a result, all Phase 1 instructors must complete the DTTT course. This course is externally accredited as a Level 3 Award in Education and Training, or Level 4 if the instructor completes 60 hours of formal recorded teaching and a substantial amount of mentoring and guidance in the workplace. The DTTT course provides instructors with a very formulaic set of instructional techniques, advocating a 'sage on the stage' approach, as opposed to the 'guide on the side' approach promoted in OBE. OBE requires instructors to actively encourage cadets to construct knowledge in their minds (Olusegun, 2015), which is a paradigm shift in the instructional skill set needed. This may prove a challenge, as instructors in an OBE setting are expected to understand how

cadets learn, how to teach effectively to ensure that learning takes place and how to include aspects of pedagogical content knowledge that incorporate language. If the college is to successfully implement OBE, it must upskill its instructors. They will be required to reflect on their practice by questioning themselves and their strategies and will become expert learners (Olusegun, 2015) rather than expert transmitters and controllers; however, this potentially presents a considerable challenge for instructors who have had only two weeks' formal training in instructional techniques. The stark reality is that instructors will be asked to teach using a cadet-centred approach with the same qualifications as a teaching assistant.

Sharing of good practice and knowledge

The ALI recommended the implementation of mechanisms to share best practice (ALI, 2005; ALI, 2007). They also observed limited processes for sharing knowledge with other establishments across the MoD, especially in best practice areas (ALI, 2005; ALI, 2007). A further four Ofsted reports (Ofsted, 2012; Ofsted, 2013; Ofsted, 2016; Ofsted, 2017) recommended a more comprehensive approach to sharing good practice, innovation, and knowledge across the MoD training community. To date, no mechanism for sharing best practice or knowledge has been implemented at the College or across the MoD. The sharing of best practice could be an advantage when implementing OBE: instructors will have to be expert classroom researchers and collaborators (Devlin-Foltz 2010) and such sharing could encourage a clear vision of what good teaching looks like, along with the opportunity to experience, demonstrate and promote a knowledge of curriculum that embodies good professional practice. One way of seeing this materialise could be to ensure that instructors can share ideas in an open community of practice and structured supervision (Iloanya, 2014).

Making and responding to complaints

The Blake QC report (Blake, 2006) noted that an MoD training unit's efficiency depended on mutual trust between cadets and their instructors. The abuse of power destroys that trust; therefore, a training establishment should have a transparent reporting system for complaints and address them through prompt and thorough investigation (Blake, 2006). The Cadet Survey, however, indicated that only 44% of cadets felt that the College had handled their complaints fairly (MoD, 2018). The main reason, cited by 71% of qualitative responses, was that cadets believed that making a complaint would cause them problems on the course. Other reasons cited included that complaining negatively impacted career progression, and that people who complain were considered troublemakers. There is no direct correlation between OBE and making a complaint, but OBE is a learner-centred approach that relies on a more humanist, constructivist approach (Lambert & McCombs, 1998). It requires "teacher empathy, unconditional positive regard, genuineness, non-directivity and the encouragement of critical thinking" (Cornelius-White, 2007, p114). If cadets feel they cannot be open about their experiences, the current cadet-teacher relationship may require work before introducing OBE.

Potential barriers to learning

In 2017 the College management team commissioned a survey of newly graduated Junior Officers, their immediate line managers and the instructors who taught them. The results were used to determine whether the course required rewriting; a thematic analysis of the qualitative data illustrated several criticisms, indicating possible barriers to learning. The newly graduated officers stated that they were taught in a punitive and prescriptive way and felt that, while IOT should foster pride in achievements, it only punishes mistakes (22 Group, 2017). They stated that

training was too theoretical and outdated and that IOT does not inspire confidence, as questioning is not encouraged. They noted that handouts were of low quality and teaching techniques were outdated, with an over-reliance on PowerPoint. The exercises did not help them prepare for the situations they faced on leaving training and the instructors lacked credibility, resulting in a lack of pride for cadets, who did not feel like officers on graduation. Some of the cadets' comments were reflected in the remarks of instructors and senior leader, who agreed that more practical application was required, especially in interpersonal skills and self-awareness, and noted that critical thinking should be encouraged, as Junior Officers lacked confidence in their abilities and did not handle stressful situations well; nor could they find information for themselves once they graduated (22 Group, 2017).

For OBE to be successful, the instructors will have to create empowered, confident, self-motivated learners (Sharkey & Weimer, 2003). The power in the classroom must move from the instructor to the cadets (Gavrail-Jic, 2013), with the teacher no longer an undisputed figure of authority but a partner in learning, willing and able to step aside to let the cadets take the lead (Sharkey & Weimer, 2003). The instructor is there to connect cadets to resources, and to design activities and assignments that engage them (Gavrail-Jic, 2013). The survey, however, appears to indicate the opposite: from the cadets' perspective, the instructors are in sole control, the resources available are outdated and, as individuals, the instructors are not credible.

4.3 Establishing the initial research questions

The literature indicated that the topic and question researched must have sufficient depth to warrant thorough examination, as nothing shapes the path of research as much as the research topic and the questions that follow (Johnson & Christensen, 2012). Hubbard and Power (2003) advise that the research question must be manageable in terms of time required and budgetary

limitations (Fraenkel & Wallen, 2003) and be evaluated against practical considerations (Mertler & Charles, 2011) to establish research parameters (Schwalbach, 2003).

To frame the research questions and produce a hypothesis, I used the five-why-process for problem identification (Mertler, 2017) (see Figure 3), which helped me frame the research questions for the reconnaissance phase (see Figure 4) and link them directly back to my initial concern that the college did not have an adult learning environment. Therefore, I focused on establishing whether such a learning environment did exist. I chose to limit my sample set to the cadets undertaking IOT rather than the other college courses. This decision was driven purely by practicality: IOT is 24 weeks long, while the other courses last a maximum of 11 weeks. At any one time, there are three terms of IOT in residence, with a maximum of 120 cadets on each, giving me a potential research pool of 360 cadets, compared to a maximum of 50 on the other courses.

After identifying and defining the boundaries of the topic, the next stage was to engage in preliminary information gathering or reconnaissance (Mills, 2011). This stage involved taking the time to gather data using different techniques to identify the full extent of the situation (Elliott, 1991). To mitigate the power differential between the cadets and myself, I selected three research methods, gradually increasing personal contact to allow the cadets to become comfortable with the research process (Holian & Coghlan, 2013).
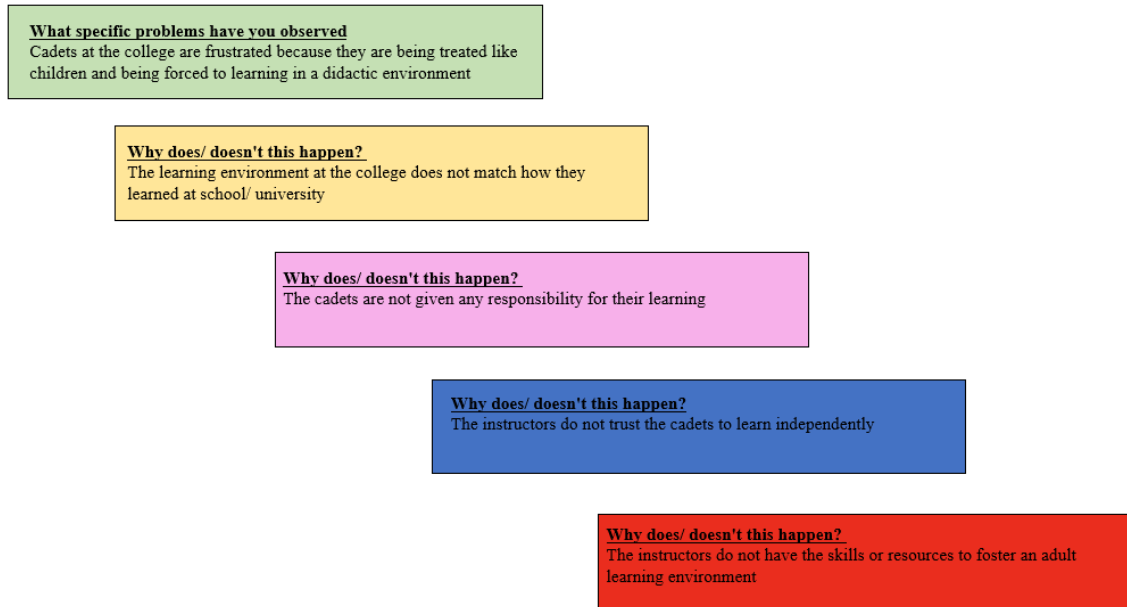
Figure 3 – Five 'why' problems for identification, adopted from Mertler's (2017) five-why-process for problem identification
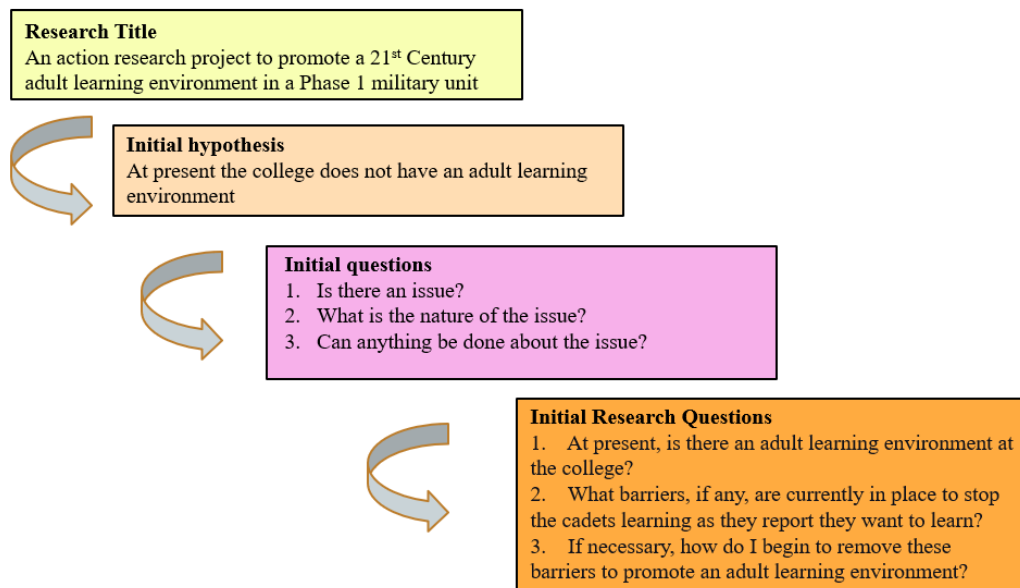
Figure 4 – Reconnaissance cycle research questions

4.4 Justification for the selection of the research methods

This section aims to illustrate why I selected the techniques used in the reconnaissance stage research.

Online Cadet Questionnaire

For the first data collection, I chose an online questionnaire which allowed me to access all the cadets in residence (Bowling, 2002). Using an online medium significantly increased my pool of participants (Ahern, 2005) and allowed me access at a distance (Wharton et al., 2003), thus minimising the power differential and providing an anonymous reporting method (Cantrell & Lupinacci, 2007). I sent each cadet an email with a link to the survey and a QR code, which allowed them to complete the survey on a PC or mobile phone, as response rates tend to be higher when researchers make it easy for people to participate (Roos, 2002). A direct link to the questionnaire can aid response rates (Cantrell & Lupinacci 2007). Distributing the survey in this format was quick and facilitated responses (Ahern, 2005; Beling et al. 2011). I did not employ a strategic sampling technique as I wanted to capture the whole cadet body.

I was clear in the invitation email that participation was optional and that individuals could opt out at any point in the process. I needed to allay any fears about confidentiality, as a lack of trust (Millar & Dillman, 2011) can lead to a lack of responses (Morrel-Samuels, 2003; Saewyc et al., 2004). I was conscious that individuals may misrepresent themselves online and adopt fictional identities to please the hierarchy (Whitehead, 2007) so, to combat this, I asked the cadets to be as open and honest with their responses as possible.

When constructing the questionnaire, I was conscious of the time pressure on cadets and, therefore, ensured it was as short as possible. Adopting the Likert scale for some responses made it quicker for the cadet to complete and rendered the coding less open to interpretation (Hasson & Arnetz 2005). I also included an option to insert free text on several questions as I wanted to

66

understand how cadets interpreted their learning experiences. The first section focused on the respondent's demographic information; some of the independent variables that shape individuals' identities. I included these separate variable questions in Section 1 to enable the demographic information to be compared to Section 2 responses to determine trends (Abdelal et al., 2009). Researchers have found that poorly worded sensitive questions can negatively affect survey outcomes by decreasing return rates (Tourangeau & Yan, 2007). Therefore, I articulated the questions to represent participants' identities; for example, when asking participants to identify their gender, I asked: "Which gender do you identify with?" rather than the more traditional question and included an "other" option for those who do not identify with a specific option.

I chose to focus the body of the questionnaire on two main areas: the cadet's perception of the existence of an adult learning environment, and any potential barriers to learning. I chose to include Knowles' (1980) principles of adult learning in the question description so that the cadets had a frame of reference for what an adult learning environment looks like. I piloted the questionnaire using a sample of 20 cadets in order to trial both the online system and the question set (Polit & Beck, 2006). I had a 100% response rate and held a small focus group to discuss the wording and layout. The pilot indicated that there were no significant issues with the system or questions. The only amendments made were to correct two minor grammatical errors. A copy of the questionnaire can be seen in Appendix C.

Draw and write technique

The second data collection method chosen was the draw and write technique. I have successfully used this technique on several occasions in a military setting and find it helpful to illuminate and simplify people's understanding of complex constructs (McWhirter, 2014). I have consistently found that asking members of the Armed Forces to express their opinions through drawing is

such a novelty that they become more open and forthcoming, and this outcome was confirmed in this context. I have found that draw and write exercises allow those who find it challenging to convey their feelings verbally to express their fears, emotions, feelings and thoughts through both art and text (Hill et al., 1996). The diagrams and images produced presented insights that were increasingly independent of discursive relations because the images created powerful alternative ways of understanding social relationships. During the draw and write process, I found that inviting a cadet to draw a picture and asking them to talk about it placed them in the role of an expert, conveying a message that I valued their thoughts (Rollins, 2005) and that they were safe to express them. The process offered an alternative form of communication for the cadets acting as source data, clarifying their meaning, and exploring the relationships between emerging concepts (Buckley & Waring, 2013).

I piloted the draw and write exercise with five IOT cadets who were injured and on a separate rehabilitation programme. They completed the task successfully, and the only changes required were grammatical amendments. The draw and write exercise and subsequent focus group took place over two days. On the first day, I met the cadets for half an hour to introduce myself and the research and to hand out the research information paperwork and draw and write packs. I was acutely aware that draw and write is not an egalitarian methodology, free from power gradients or independent of the cadets' culture or setting (Pridmore & Bendekow, 1995; Backett-Milburn, 1999). Therefore, I consciously adopted a relaxed and informal approach to reduce the power gradient and put them at ease. As with the previous draw and write exercises that I have conducted with Armed Forces personnel, as soon as the colouring pencils appeared, the participants relaxed and began openly arguing amongst themselves about who had the best set of colours. The cadets had 18 hours to complete the draw and write tasks and return them

68

anonymously to a designated drop-box. The task sheets for the draw and write exercise appear in Appendix D.

Critiques of the draw and write technique have focused on the positivist notions of validity and reliability. In qualitative research, these concerns are often described as credibility, neutrality, confirmability, consistency or dependability and transferability (Lincoln & Guba, 1989). As the purpose of a draw and write exercise is to understand or explain the respondent's perspective, these terms are more relevant (McWhirter, 2014). To ensure that I had interpreted the data accurately, I used the focus group to cross-check my interpretation of the information (Gabhainn & Kelleher, 2002) and used the same researcher who had conducted the blind analysis of the questionnaire data to confirm the applicability of the coding framework (McWhirter, 2014). The literature indicates that a greater awareness of the culture on the part of the researcher can help interpret the findings (McWhirter, 2014). As the second researcher and I have both been cadets and staff members at the College, we were able to decipher any cultural nuances.

Focus group

A focus group is a group of individuals selected and assembled by a researcher to discuss their personal experiences (Powell & Single, 1996). Focus groups originated in sociology (Merton & Kendall, 1946) and were initially used in market research but, more recently, they have become a powerful tool for exploring opinions and attitudes in the social sciences or related disciplines (Smithson, 2000). The literature indicates that the researcher can guide a focus group to become an organised discussion (Kitzinger, 1994), collective activity (Powell & Single, 1996), social event (Goss & Leinbach, 1996) or interaction (Kizinger, 1994) to obtain perceptions of a defined environment (Krueger, 1998).

I chose a focus group to complement the draw and write activity and I conducted it as an organised, semi-structured discussion. I opted for a focus group over group or individual interviews, as focus groups can generate data from the interactions between participants (Stokes & Bergin, 2006). The literature has shown that, when group dynamics are positive, participants can work alongside the researcher, taking the conversation in often unexpected directions (Sageo, 2012), and I found this to be accurate. Focus groups can help clarify and explore participants' views in ways that would be less easily achievable in an individual interview (Sageo, 2012) as participants can bounce ideas off one another and I also found this to be true. The extent to which participants know each other can be both an advantage and a disadvantage: a greater familiarity may facilitate more open responses or, in other cases, may close down dialogue (Williams & Katz, 2001). The cadets were a homogeneous group who had lived and worked together for nine months and I found them to be very open and honest with one another. They challenged each other's comments respectfully and showed a high level of emotional intelligence when discussing sensitive topics.

Focus groups can facilitate an exploratory approach (Vaughn et al., 1996), exploring individuals' knowledge and experiences, how they think and why (Kitzinger, 1994). This approach was invaluable when analysing the qualitative data gathered from both the questionnaires and drawing and writing exercise. The participants were able to review the data and give examples of where they had experienced some of the barriers to learning, thus independently generating new ideas and knowledge (Barnett, 2002). This process allowed me to observe how the cadets constructed this knowledge and expressed it through tone and body language (Barbour & Kitzinger,1999). I explained, expanded, and illuminated the findings and gained new understandings (Khan et al., 1991). This cross-referencing of the data allowed me to

triangulate, refine information and elicit new information about a topic by examining it from a new angle (Nassar-McMillian & Borders, 2002). This process allowed me to discuss and clarify answers to my initial hypotheses and generate new ones.

The reported advantages of using a focus group in an education setting are that the data can assist with programme development or evaluation, determining needs and assessing the effectiveness of a curriculum topic (Williams & Katz, 2001). Engaging a sample of the target population as participants can provide an efficient means of both programme development and adaptation. Focus group discussions can provide valuable insights into whether a programme or service has achieved the desired goals (Sageo, 2012). I found this to be the case: the cadets were able to talk me through their lived experience of subjects, how they flowed and how they were delivered. I reiterated that they were experts in their own experiences and invited them to make collaborative decisions on overcoming the barriers (Goss & Leinbach, 1996); both the cadets and I found this process powerful. At the end of the session, several cadets thanked me for allowing them to discuss their experiences; discovering that others had experienced the same issues had been cathartic.

The literature is divided on whether a focus group is conducive for eliciting information about sensitive topics. Some authors, such as Suyono et al. (1981) and Mack et al. (2005), suggest that focus groups may not be the best method of acquiring highly personal or confidential material. Conversely, Khan et al. (1991) indicate that they can be suited to subjects of a sensitive nature if conducted well. A group setting is not always ideal for encouraging free expression, as the group may inhibit discussion (Khan et al., 1991) or group norms may silence voices of dissent (Kitzinger 1994).

When planning the research methodology for the reconnaissance phase, I had not anticipated that we would be discussing sensitive topics. Once I received the draw and write data, I realised that the topics I needed to discuss could be sensitive, but I chose to continue, as the participants were a homogenous group (Vaughn et al., 1996). IOT is designed to bond cadets through adversity, so I assumed that the cadets would show an appropriate level of emotional intelligence when discussing the topics required. Throughout the focus group, it was apparent that they were articulate and comfortable talking about sensitive subjects, so much so that they disclosed a potential safeguarding issue.

A significant feature of focus groups is the role of the moderator who guides the conversation, ensuring that the conversation remains on topic and that no single voice is dominating (Sageo, 2012). I chose to moderate, but with minimal input as I wanted to ensure that the power differential remained neutral. I decided to stimulate the initial discussion and then step back and encourage as much interaction as possible. Participant exchanges are a critical feature highlighting their view of the world (Kitzinger, 1994); these interactions enabled participants to ask questions of one another and re-evaluate and reconsider their understanding of their specific experiences (Gibbs, 1997).

The venue should be convenient for participants and neutral, to avoid either negative or positive associations with a site or building (Powell & Single, 1996). Due to the cadets' lesson schedule, I could not take them to a neutral venue off-site, but I chose a room that was familiar to all and where the seating was configurable. This promoted an openness and willingness to talk, two factors vital to this focus group (Barnett, 2002). I intended to split the focus group into two halves, the first looking at barriers to learning and the second looking at how they would like to learn. I started the conversation by showing the cadets the coded barriers and sub-barriers I had

identified from the questionnaires and drawing and writing exercise. I also showed them a selection of pictures from the draw and write exercise, having previously gained permission from the group to show the images.

Before the session, I had written the five principal code headings on a whiteboard. I then invited the cadets to discuss each barrier in turn. To empower the group, I handed over control of the whiteboard pen to a willing volunteer who took notes. This worked well, as the cadet who was scribing began to act as a deputy moderator and relinquishing the role of scribe freed up my capacity to observe the room and moderate the discussions. I opened the conversation with the code I felt to be the least controversial – timetabling – and asked the cadets whether they could identify any issues they had experienced with learning flow. There was a five-second pause before one of the cadets said, "Ok, I will start this, let's face it, this place is a cloud of mismanagement." From that point onwards, the comments flowed freely. The focus group was due to run for 45 minutes, but the cadets asked to remain as they had a free period afterwards and wanted to continue. The meeting lasted an hour and a half, and the focus remained on barriers to learning. While I had initially been keen to cover both topics, the information that I received on the barriers was so powerful that I assessed I had sufficient data and did not want to stem the conversation.

I chose not to video record the focus group as I needed to build the cadets' trust, and videoing can be invasive (Barnett, 2002). I did not have the opportunity to run a pilot focus group due to the short interval between the return of the draw and write exercise and the live focus group. I did speak to several cadets on a one-to-one basis and asked their feelings on video and audio recording. Their unanimous response was that any form of formal record would raise suspicion and reduce the quality and honesty of answers. Instead, I chose to use an additional

researcher to observe and make notes of quotes, non-verbal reactions, and facial expressions

(Khan et al. 1991). For consistency, I used the researcher who had coded the previous data.

4.5 Coding of qualitative data

Questionnaire

Question 7 invited cadets to detail any barriers to an adult learning environment that they had

experienced at the college. This question generated a large volume of qualitative data; to make

sense of it, I had to select an appropriate analysis technique. A wide variety of literature

examines the assumptions underlying the analysis of qualitative data (Patton, 2002), much of

which is associated with specific approaches, such as grounded theory (Strauss & Corbin, 1998),

phenomenology (van Manen, 1990) or discourse analysis and narrative analysis (Potter &

Wetherell, 1987). However, some analytical approaches do not fit within one specific tradition

and are seen as falling within a critical realist epistemology (Miles & Huberman, 1994) and I

chose to adopt one such approach: open-axial inductive analysis. This form of coding allows the

researcher to reduce, organise, explore, and analyse the data to build theory (Lefebvre, 1991).

The use of inductive analysis is common in various qualitative data analyses. It is rooted in

grounded theory (Strauss & Corbin, 1998) and allows research findings to emerge from the

frequent, dominant, or significant themes inherent in the raw data, without the restraints imposed

by structured methodologies (Thomas, 2006).

Grounded Theory (Glaser & Strauss, 1967) was developed in response to criticism

directed at the lack of rigour in interpretive research (Denk et al., 2012). It was initially intended

as a systematic approach to the investigation of subjective perceptions of reality, providing

guidelines for systematic and reproducible data analysis including rigorous analytical procedures

(Goulding, 1998). As the theory developed, Glaser followed the original approach, maintaining

74

distance and independence from the study (Locke, 1996) while, in contrast, Strauss (1987) encouraged researchers to build their studies on existing knowledge gained from prior personal and professional experiences. As grounded theory methods evolved, some theorists started to depart from the original notion of pure inductive coding, arguing that researchers inevitably bring a previous theoretical stance and expertise to the coding process (Charmaz et al., 2000; Polkinghorne, 1995, Strauss & Corbin, 1998). It was this stance that drew me to the approach detailed by Miles and Huberman (1984), who advocate for the mass reduction of data in the first stage of the analysis by selecting, focusing, simplifying, abstracting and transforming the data that appear in written-up field notes or transcriptions (Miles & Huberman, 1984).

I took care to avoid overly simplistic or naïve interpretations based on assumptions (Grubs & Piantanida, 2010) and used a second researcher who holds a social science master's degree and who has been both a cadet and an IOT instructor to blind code the data in parallel to myself for convergence. These multiple interpretations, alongside the triangulation of data gathered from the draw and write exercise and the focus group, allowed me to ratify my coding system (Grubs & Piantanida, 2010). I began the coding by reading the text from start to finish. I considered the various meanings inherent in the data and identified and allocated a hierarchy of category codes (Thomas, 2006). This hierarchy was built on Strauss and Corbin's (1998) open-axial and selective organisation theory. Strauss refers to a core category in a behaviour pattern underlying a predetermined research question (Denk et al., 2012). Axial coding was performed by grouping similar concepts under the common category (Strauss & Corbin, 1998) of barriers to an adult learning environment. This open approach to coding was initially overwhelming, due to the sheer number of new codes. As the analysis progressed, similarities and differences amongst codes appeared, creating a more manageable number (Gioia et al., 2013).

Draw and write exercise

All 20 cadets selected to participate in this exercise completed it. Their comments and drawings were reviewed systematically for content and coded into categories according to the general meaning conveyed. With a few exceptions, the writing was analysed, rather than the images (Wetton & McWhirter, 1998). As this data was qualitative, I conducted an axial open-coding thematic analysis as for the questionnaire and analysed the qualitative comments alongside corresponding feedback from the questionnaire. This analysis followed recommendations made by Coffey and Atkinson (1996). The pictures were taken at face value and verified for content and meaning at the focus group; this approach avoided misinterpretation by reporting what the cadets had to say (Horstman et al., 2008) and not what I supposed them to have said. Where I analysed images, written words accompanying the drawing clarified it (Pridmore & Lansdown, 1997). As for the questionnaire, I asked a second researcher to blind analyse the data. For consistency, I used the same researcher who coded the questionnaires.

Focus group

During the focus group, the cadets noted on whiteboards the barriers they had experienced. They confirmed that my interpretation of the information provided to date was representative of the barriers they had experienced but asked for the code titles to be amended (as detailed in the results section). The whiteboard notes were coded using the same axial open-coding framework used for data from the draw and write session and the questionnaires. The qualitative data from the focus group was merged with the data collected previously and re-coded using the cadets' amendments. At the close of the focus group, I asked five questions and took a straw poll of the

answers. I had planned to ask only the first two questions; the additional questions emerged in the course of the session.

4.6 Reconnaissance phase results

In structuring this section, I have placed the data under the relevant research question. When reading the results section, you may wish to refer to the following Appendices:

Appendix	Title
E	Images of the cadets' notes from the focus group
F	The complete qualitative data set for the reconnaissance phase
G	Results from the focus group straw poll
H	Draw and write exercise returns
I	Coded data from the reconnaissance phase questionnaire
J	Image of the college wall drawing, drawn during the focus group

Table 1 – Relevant Appendices

Research questions

Q1: Is there an adult learning environment at the college?

Data collected from the reconnaissance phase questionnaire

When asked, "In your opinion, does the college currently have an adult learning environment?" 58% of all respondents answered no, and 42% answered yes. Whilst these percentages appear to be close, when the data is broken down into terms, there is a clear difference. In term one, 60% of cadets indicated that there was an adult learning environment compared with 60% in term two and 15% in term three.

77

Data collected from the focus group

When asked, "Do you feel there is currently an adult learning environment at the college?" 100%

of the correspondents answered no. The cadets from the focus group were in term three. When I

asked them why there was such a difference between the percentage of cadets that indicated

there was an adult learning environment in term one and term three, they indicated that it was

because in term one you expect the course to progress and that you would eventually be treated

like an adult. They indicated that this was not their experience.

Data collected from the draw and write exercise

Several pictures with qualitative data attached indicated the presence of barriers to adult learning.

I have included a selection below.

Figure 5 – Draw and write submission indicating that the college does not have a safe learning

environment.
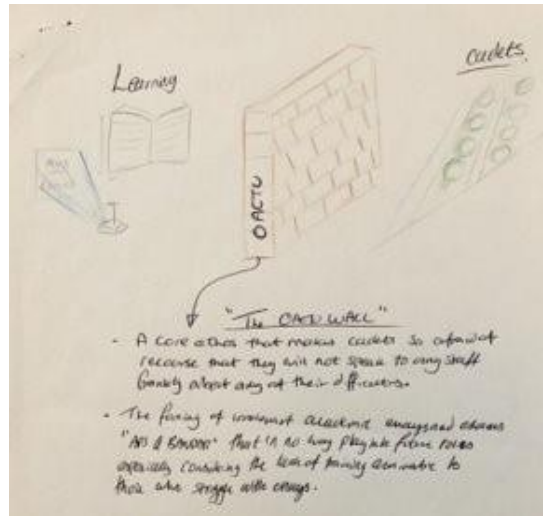
Figure 6 – Draw and write submission indicating that the cadets are afraid to speak openly.
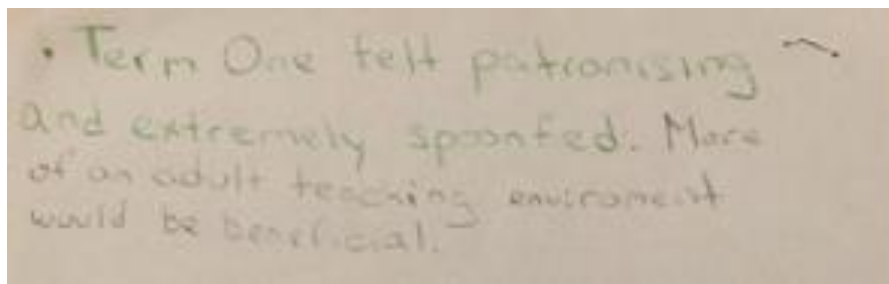
Figure 7 – Draw and write submission indicating that cadets felt patronised.

Q2: What barriers are currently in place (if any) to stop the cadets learning in the way in which they report they want to learn?

Data collected from the draw and write exercise and reconnaissance phase questionnaire

When I analysed the qualitative data from the draw and write exercise, five principal codes or

"barriers" emerged, each with a series of sub-codes. The barriers that emerged were timetabling,

staff, teaching methods, fear, and curriculum.
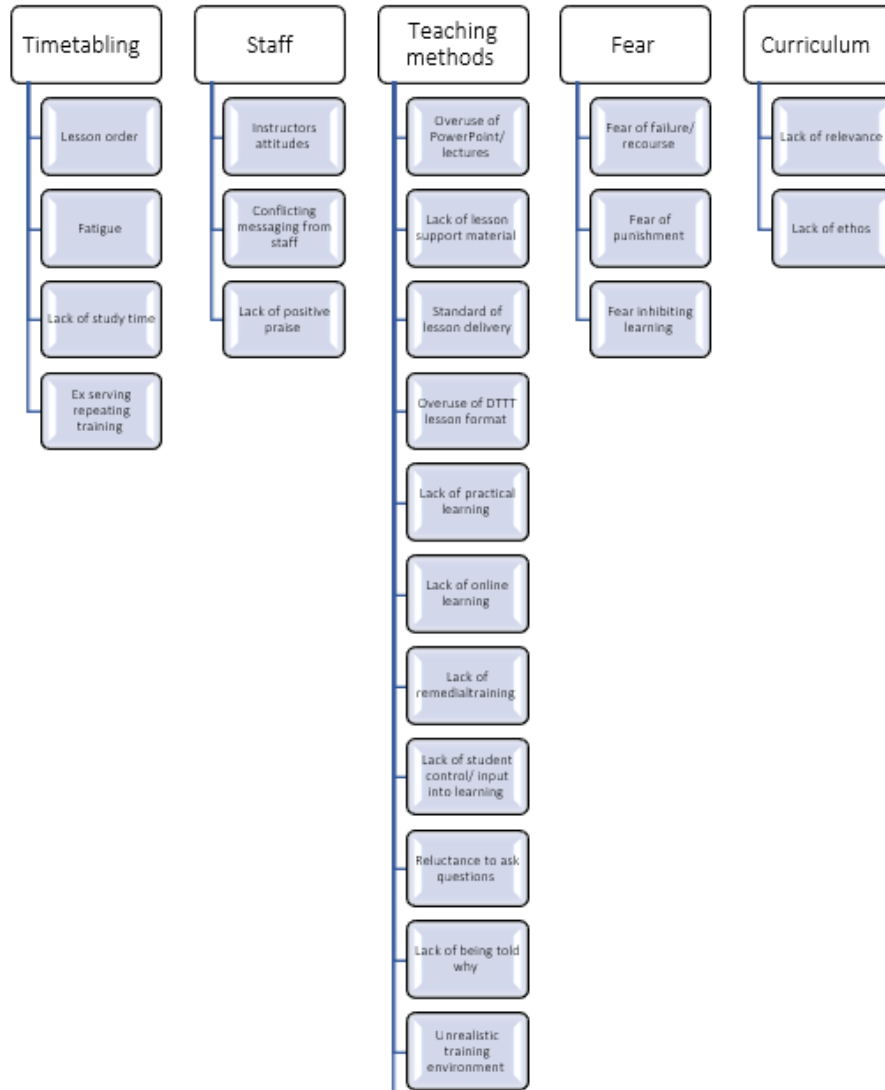
Figure 8 – Overview of the codes and sub-codes from the reconnaissance phase draw and write

exercise and questionnaire.

Data collected from the focus group

During the focus group, the cadets verified the data analysis from the questionnaire and draw and write exercise and acknowledged that it accurately represented their perception of the current barriers to learning. After discussing the main barriers in detail, they asked for the data to be re-coded under the following headings.
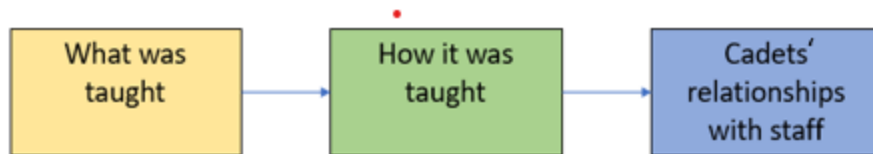
Figure 9 – Principal codes as identified by the cadets.

Reconnaissance phase discussion

In structuring this section, I have placed the relevant area of the discussion under the related research question.

Q1: Is there an adult learning environment at the college?

Three notable trends were observed in the quantitative data. Each is discussed below.

Trend 1- *In the reconnaissance phase questionnaire, 100% of all under 21-year-olds answered 'no'.*

Trend 2 - *100% of those aged 41 and upwards answered 'no'.*

Age is a significant factor in learning preferences and outcomes (Bamber & Tett, 2000; O'Donnell & Tobbell, 2007; Knowles, 1980; Montgomery & Groat, 1998). Most of the research in this area has focused on the use of technology over the last twenty years and indicates that those born after 1982 have grown up with technology (Hunter-Revell & McCurry, 2010) and are, therefore, more likely to feel comfortable learning in an interactive classroom environment, using technology, studying independently and multi-tasking (Corbin, 2017). They tend towards independence and autonomy (Corbin, 2017) and demonstrate an intolerance for traditional, lecture-style teaching (Carlson, 2005; McGlynn, 2005; Hunter-Revell & McCurry, 2010; Roehl et al., 2013), preferring participative and collaborative learning styles (Amir et al., 2001). Roehl et al. (2013) therefore urge that teachers should flip the classroom to accommodate active

81

learning, incorporating technology and learner-centred activities (Corbin, 2017). These theories may explain why 100% of under 21-year-olds felt that the College did not have an adult learning environment, particularly because, when this research took place, the College had no WIFI infrastructure or portable technology access. Previous research also indicates that older cadets who can draw on life experiences tend to be more independent learners (Corbin, 2017).

Trend 3- *There was a significant difference in results between the three terms: 60% of those in their first term thought the College had an adult learning environment, compared to only 15% in their third term.*

The first term is fast-paced and dynamic: cadets are expected to master kinaesthetic activities such as foot drill and weapons handling. As the terms progress, the practical aspects decrease and the academic content increases. This progression may account for the disparity between results.

Q2. What barriers are currently in place (if any) to stop the cadets learning in the way in which they report they want to learn?

The barriers to learning cited in the questionnaire appeared to align with those noted in the draw and write submissions. To verify this, I asked the focus group to review the five principal codes or barriers to learning – timetabling, staff, teaching methods, fear, and curriculum – and discuss the sub-themes which had emerged under each. When the cadets initially reviewed them, they agreed that they were representative of their experiences but, as the session progressed, they asked if the sub-themes could be simplified and regrouped. After much discussion and debate, they asked if they could also regroup the principal codes to what was being delivered, how it was

delivered, and the cadets' relationships with staff. Initially, I was taken aback by the simplicity of this suggestion, but I could envisage their experiences through their comments, and the themes flowed.

The cadets explained that the curriculum was outdated but they accepted this as it was under review. They acknowledged that it was frustrating but not excessively distracting and, as most of the cadets had not served in the military previously, they were not all aware that the information was incorrect. Those who had previous experience found it awkward as they had to 'unlearn' knowledge at times but, after initial frustration, they became sanguine. The cadets felt that the methods used by the instructors to deliver the lessons were frustrating, and teaching techniques felt outdated and repetitive. However, they doubted that more innovative teaching techniques would be effective until the staff's relationships with the cadets improved. They concluded that they could have taught themselves most of the course elements from books or the internet, but they could not learn how to function in the military without the guidance of a member of staff, and it was this element that they felt they lacked. We spent most of the session discussing how the cadets interacted with their instructors. I labelled the principal code related to these interactions as "staff", but the cadets asked me to change this to "cadets' relationship with the staff". During the discussion, I was taken aback by the rawness of some of the comments. The cadets related their experience to the image of the College wall from the draw and write exercise, and verbally expanded on it. As the discussion progressed, I suggested they could recreate the wall from their comments and the scribe wrote their words on the board. A copy of the original image can be found at Annex J. I have recreated it below.
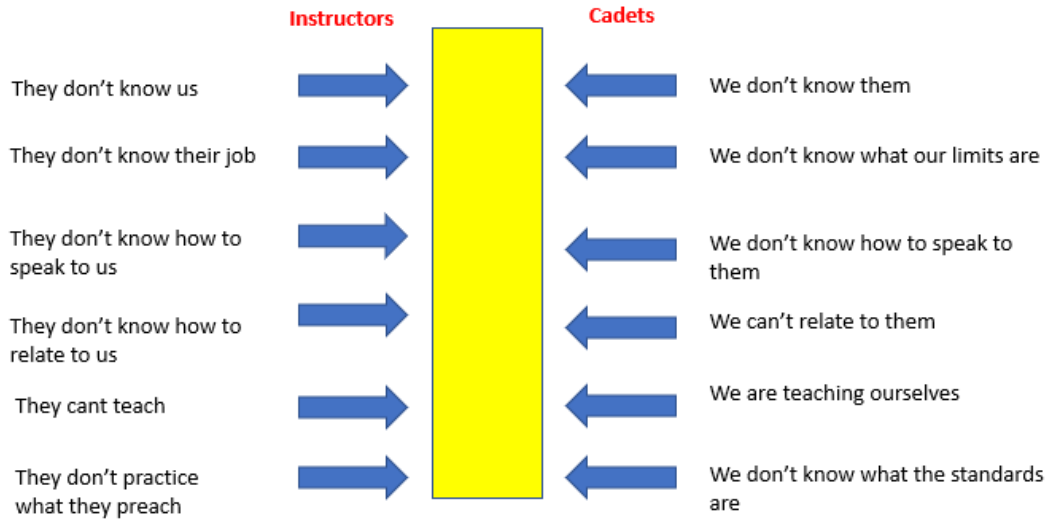
Figure 10 – The College wall

This drawing was a defining moment for me as I began to see the cadets' relationship with the staff through their eyes. I was transported back to my relationship with my Flight Commander, which was almost identical. The cadets' colourful and unemotive articulation was admirable, and I was impressed by their emotional intelligence in linking causes and effects. While the cadets were discussing the wall, I began to google the concept of psychological safety; I had read about it in leadership and management blogs and felt it aligned with the discussion. The concept has had a recent rebirth in business and organisational leadership (Edmondson & Lei, 2014). I pulled up two definitions from google on the smartboard, along with the images below, and gave a brief introduction.

*"Psychological safety […] is being able to show and employ one's self without fear of negative consequences for self-image, status or career." (*Kahn, 1990)

*"Psychological safety, the feeling that taking interpersonal risks will not result in embarrassment, ridicule, or shame, enables people to engage, connect, change and learn." (*Edmondson & Lei, 2014)

84

Figure 11 – The cycles of psychological danger and safety (Joseph 2016).

As I described the concept of psychological danger, I could see the body language in the room begin to change; some started to laugh and smile, and one turned around and said, "You have just summed up my time here in one concept." They began to discuss where the feeling of psychological danger had arisen and, after much debate, concluded that their inconsistent relationship with the staff resulted in psychological danger. The literature indicates that physiological safety is critical in a learning environment: individuals who feel psychologically safe share information and knowledge related to their work and focus on accomplishing team goals.

In contrast, members of a psychologically unsafe team are hesitant to voice their doubts, report errors or discuss critical issues (Edmondson & Lei, 2014). Research indicates that psychological safety is a crucial enabler of learning behaviours (Edmondson, 1999; Cannon & Edmondson, 2001, Kahn, 2001). When team members do not feel safe, learning opportunities decrease, team dynamics are inhibited, and team performance is undermined. Feeling psychologically safe may lessen barriers to engagement and allow individuals to freely exercise

85

their agency to activate and interact with the world around them (Wanless, 2016). When individuals feel psychologically safe, taking an interpersonal risk does not seem to pose an intolerable threat to their identity or sense of self (Edmondson & Lei, 2014); they are more likely to enact self-regulating strategies such as offering ideas, admitting and learning from mistakes, asking for help, engaging in learning opportunities, providing feedback to others and speaking up (Edmondson & Lei, 2014; Hirak et al., 2012, Holley & Steiner, 2005). When individuals do not feel psychologically safe, they may be disengaged from opportunities to learn and grow (Hamilton et al., 2004). Working or living in a psychologically unsafe environment may limit an individual's willingness to engage in experiences that would facilitate their development (Detert et al., 2011).

I closed the session with a summary of what we had discussed and asked the group which barrier they felt had the most significant impact on the learning environment. They unanimously agreed that it was their relationships with the staff. They acknowledged the existence of other barriers but stressed that psychological safety and the emergence of an adult learning environment would not occur until the cadet-staff relationship improved. The issue of psychological safety appears to straddle each of the elements of people, culture, and power of vision. To create a balance, the relationship between the instructors and cadets (people) will need to improve. This will require a change in culture and for it to be effective, it will require a shared vision of how they interact.

Conclusion

To reach my conclusions, I have answered the initial research questions.

Q1. Is there an adult learning environment at the College?

The triangulation of the data from the reconnaissance phase questionnaire, draw and write exercise and focus group indicate that there does not appear to be a consistent adult learning environment at the College. It appears to vary considerably across the terms.

Q2. What barriers, if any, are currently in place to stop the cadets learning in a way in which they report they want to learn?

The triangulation of the data from the reconnaissance phase questionnaire, draw and write exercise and focus group indicate that there are three key barriers to learning which encompass several sub-barriers. They are:

1. What is being delivered
2. How it was delivered
3. The cadets' relationships with the staff.

Q3. If required, how do I begin to remove any barriers to learning to aid the promotion of an adult learning environment?

The data from the reconnaissance phase indicated that the College did not have an adult learning environment and that multiple barriers existed which, if removed, could aid the development of an andragogical approach. I have chosen to outline the options for action in the literature review.

4.7 Validity of the results

Online questionnaire sample set

Learning occurs in an andragogical environment by relating new information to learners' lives (Akin & Akin, 2014). Therefore, the analysis of the cadets' statistical data was vital before making any recommendation to adopt an adult learning approach. Cadets must have the maturity and life experience to share responsibility for the learning process; therefore, understanding the cadet demographic is critical. To illustrate the demographics of the cadet population, I analysed the results against the relevant information from the College's statistical summary for the corresponding academic year. For comparison, I have also analysed them against statistics for UK Higher Education establishments. A breakdown of the results for the demographic questions 1–6 can be found in Appendix K.

I sent the questionnaire to 330 cadets and received 216 responses, equating to a 65% overall response rate. Following analysis of the demographic data, the sample appears to be representative of the cadet population in terms of age, qualifications, and previous military background, but not gender: the percentage of female respondents was significantly lower than the overall rate for the financial year. Analysis of the data shows that cadets on IOT are older and more qualified than their civilian equivalents at university. These statistical observations, coupled with the fact that over one-third of cadets have had significant experience within the organisation before attending this course, depict a mature, qualified, and experienced cadet body.

Draw and write and focus group sample sets

I asked for a quota sample of 20 cadets to participate in the draw and write and subsequent focus group exercise. The cadets came from a potential pool of sixty cadets who were on the same timetable rotation. I chose quota sampling as it is a non-probability equivalent of stratified random sampling (Lohr, 2010) and allowed me to divide the cadet population into subgroups, including individuals with key personal characteristics. This selection helped to ensure an adequate representation of all important subgroups in the sample (Górny & Napierala, 2016) but does not eliminate the possibility of underrepresentation of groups who were reluctant to participate (Kalton, 2011).

Selecting the quota sample did not require a sampling frame; instead, I chose the quota to replicate the structure of the studied population to ensure that the sample was representative (Bechhofer & Paterson, 2012). The breakdown of the quota I requested is shown in Appendix L. The allocation of cadets met the criteria set, with the exception of ethnic background requirements; therefore, the sample was representative of the cadet population in all aspects except ethnicity. The two cadets in the intake from a non-white background were in the opposite timetable rotation and, therefore, not available. Overall, the two population samples that I used for the reconnaissance phase were representative of the College population for that financial year.

4.8 Safeguarding issues

Several potential safeguarding issues arose during the reconnaissance phase. The draw and write images of a cadet with a knife and noose above their head raised immediate concerns, as did certain comments: "Being an officer cadet gives me a feeling of worthlessness" and "This is not a safe place to make mistakes." Given the sensitivity of the comments, I reflected on the BERA

(2018) guidelines which state that a disclosure should be made "if behaviour reported by participants is likely to be harmful to the participants or others" (BERA, 2018, p.25). Unsure where to turn, I took the images to my line manager, a safeguarding lead; she asked me to take them to our educational psychologist, who reviewed the pictures and comments and raised her concerns through the College's safeguarding chain of command.

During this process, I conducted the focus group, and the cadets reported several safeguarding issues, including inappropriate behaviour from a member of staff. In line with the safeguarding policy, I reported the allegations. As both incidents had been raised as a direct result of my research, the College's civilian Chief Operating Officer equivalent asked me to brief the Commandant (the equivalent of a CEO). This meeting placed me in an extremely awkward position, as I had to report the findings to both the Commandant, three ranks above me, and the head of the school, one rank above me, and whistle blow on several peers. This incident acutely highlighted the double-edged sword of insider research (Mercer, 2007).

My meeting with the Commandant was positive: he was very responsive to the sensitivities of my position and that of the cadets. He thanked me for my honesty and diligence and activated a campus climate assessment, for which he asked me to consult with the panel to write the questions. As a direct result of this assessment, several significant safeguarding issues were disclosed. The staff member about whom the cadets had made the allegation was investigated and removed from their job.

Chapter 5- Action Research Cycle 1

This chapter starts with views on how I thought I could improve the situation in action research cycle 1, the boundaries of what I could influence, and progresses to outline of the research methods used, data collected, and conclusions drawn.

5.1 What could I do to improve the situation?

The reconnaissance phase illustrated a disconnect between the cadets' reference frame for the cadet-instructor relationship and their lived reality. It also highlighted a disconnect between my pedagogical beliefs and those of the head of the school. Given this, I felt the next logical step was to explore the instructors' pedagogical and epistemological beliefs, as the literature indicated that an understanding of these was central to improving teachers' professional practice (Penso & Shoham, 2010).

I chose to take this approach as the literature suggests that beliefs serve as functions, distinct from teacher knowledge, and act as filters for interpreting classroom situations, frames for defining pedagogical problems and guides or standards for action (Fives & Buehl, 2012; Parares, 1992). Therefore, since instructors' beliefs influence their learning and working, understanding pre-service instructors' beliefs before they start their instructional training could be hugely beneficial (Schomner, 1998) and would allow the College to assess whether these beliefs align with its learning philosophy. In systems thinking, individuals' beliefs about leadership impact their style of leadership and mental modes (Drath et al. 2008; Goh, 2002; Rosen et al., 2007).

This knowledge could be useful during the transition to an OBE approach, which will require a paradigm shift in instructor education and CPD (Richardson, 2003). The College will have to develop a comprehensive training programme to give the instructors the knowledge and

skills they need to transition from facilitation. It is central to effective targeted teacher education to understand how pre-service teachers learn to teach, their views about teaching and how these views can be implemented or influenced (Coffee & Arkinson, 2013). Understanding instructors' beliefs would create opportunities to challenge pedagogical beliefs and allow pre-service teachers to develop new versions of firmly held truths (Schon, 1987).

Influencing instructors' pedagogical and epistemological beliefs may present a considerable challenge as the literature on "teacher change" indicates that these are gained over a long period. Desimone (2009) stated that for change to take place, practices and beliefs must become objects of reflection). As beliefs are implicit, teachers must be encouraged to talk and think about their practices (Freeman, 1991), explore potential inadequacies in their beliefs or practices and be given information on examining and exploring their existing knowledge and beliefs (Borko & Putman, 1996). CPD activities could provide this framework, along with learning studies (Pong et al., 2005) and action research projects (De Vries et al., 2008).

To help structure my thoughts I returned to the five-why-process for problem identification (Mertler, 2014). This exercise helped me to frame the research questions for Cycle 1 (see Figure 12) and link them directly back to my initial concerns.
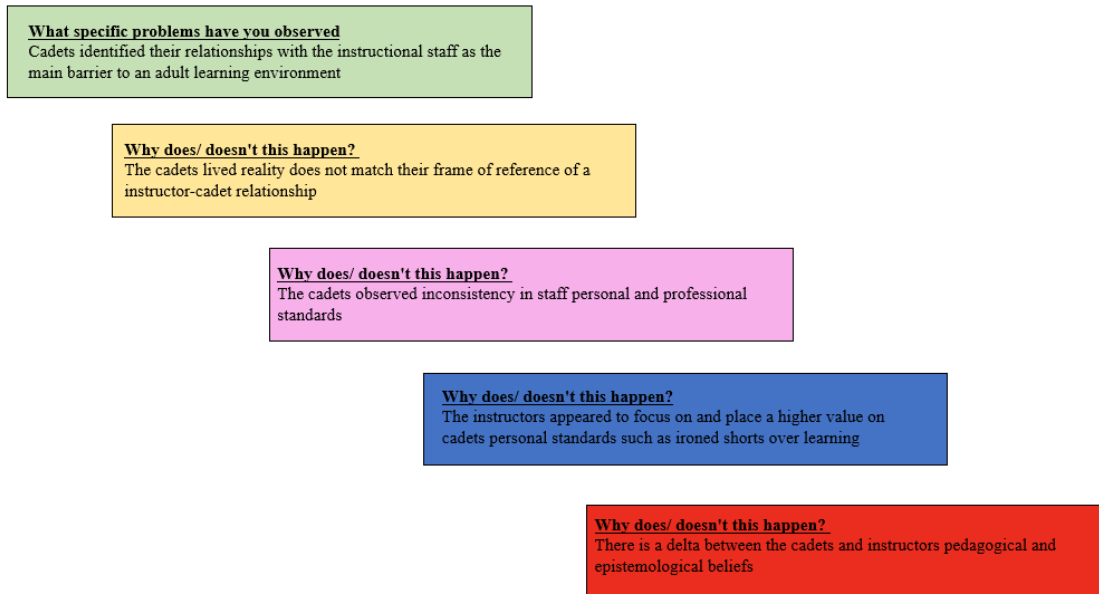
Figure 12- Cycle 1 five-why-process for problem identification.

5.2 Defining the boundaries of the topic

I chose to focus the Cycle 1 research on pre-service instructors who had just begun their

mandatory eight-week instructor induction package, known as the College Staff Induction

Course (CSIC). I chose this pool of instructors over the main body both for practical reasons and

due to their fresh perspective. The College had 120 instructors, split into four squadrons, all on

different shift rotations. The timetables were constantly changing, and it would, therefore, have

been difficult to gain consistent access to them. When I started Cycle 1 in March 2019, over two-

thirds of all instructors at the College were due to move to their next job before the introduction

of OBE in August 2020. Therefore, there would be minimal benefit in persuading them to

challenge their beliefs. I wanted to focus my efforts on those instructors at the start of their

journey as they would be implementing OBE.

The literature shows that, when exploring pedagogical and epistemological beliefs,

working with pre-service instructors is preferable. Teacher training can either reinforce or

challenge pedagogical beliefs and provides the opportunity for pre-service teachers to develop

new versions of firmly held truths in a process known as reframing (Schon, 1987). Exploring

their beliefs before they started the CSIC would allow me to come to know the individuals before

they were influenced by the organisational culture. For all the above reasons, I chose to focus

the Cycle 1 research on the pre-service instructors attending the CSIC.

5.3 Contextualisation of instructor selection and training at the college

This section contextualises the application process that instructors had to complete to join the

College staff and the subsequent induction package provided.

To apply for a college job, the applicant must ask their line manager to complete a

character reference. This reference must include confirmation that the manager perceives the

applicant to have the potential to undertake instructional duties. Once the College receives the

application, it completes a series of military background checks and invites the applicant to

attend a filter interview, consisting of a presentation and group discussion. At no point during the

process does a potential instructor have to deliver or facilitate a lesson. Having passed the filter

interview, all instructional staff are required to pass a compulsory, internal eight-week induction

package known as the College Staff Induction Course (CSIC). The CSIC consists of four phases:

Stage 1 consists of mandatory and health and safety inductions; Stage 2 includes rules,

regulations, ethos, core values and supporting paperwork; Stage 3 progresses onto practical

leadership, including observing practical assessments and conducting cadet debriefs, and the

final stage is the completion of the DTTT course.

During the course, the pre-service instructors are assessed on their performance and

potential, with their final grade determining their job role. Upon completing the assessed

elements and supporting workbook, they graduate with a Chartered Management Institute Level

5 Diploma in Leadership and Management and a Level 3 Diploma in Teaching and Learning. The CSIC is delivered by college instructors who have a minimum of one year of instructional experience. When this research took place, none of the delivery team had any additional civilian teaching qualifications.

5.4 How will I gather evidence of the situation as it develops?

This section presents the research questions and hypotheses that I developed for Cycle 1 and their rationale. It also details the data collection methods I employed.

Development of research questions

Question 1: *Do pre-service instructors believe an adult learning environment is currently present and appropriate at the college?*

Question 2: *What roles and responsibilities do pre-service instructors anticipate they will undertake?*

When creating these questions, I hoped that they would give me an insight into the pre-service instructors' epistemological and pedagogical beliefs and planned to use the data to inform the design of the intervention session. To accompany the research questions, I created a set of hypotheses derived from the literature and supported by my personal experience.

Development of hypotheses

Hypothesis 1: *If an individual has been educated using constructive philosophies, they will identify constructivist delivery methods and roles of a military instructor.*

Hypothesis 2: *If a pre-service teacher has been educated using traditional methods, they will predominantly identify transmission-based instructional roles.*

Hypotheses 1 and 2 are based on the findings of previous research that pre-service teachers' pedagogical views are shaped by their personal educational experiences and align closely with beliefs about knowledge, learning and how teachers teach (Ryan et al., 2009). Teachers' beliefs about learning and teaching develop during their time as a pupil and continue to evolve while they are trainee teachers and then teachers (Bolhuis & Voeten, 2001), ultimately becoming more robust (Murphy and Mason, 2014). By the time a teacher begins studying the art of teaching, they have already experienced thousands of hours as a pupil. Pre-service teachers imitate the behaviour they have observed or how they believe they learnt best (Lortie, 1975).

This concept is supported by the epistemological belief theory, which indicates that individuals' beliefs about the nature of knowledge and education influence how they learn and work in a professional context (Schomner, 1998). Teachers practise their beliefs, and these affect the cadets' beliefs (Pajares & Schunk, 2002); Lortie (1975) described this process as the apprenticeship of observation. In short, the research shows that teachers teach in the same way they were taught. If this is correct, pre-service instructors will begin their instructional career with a set of deep-seated beliefs about teaching and learning and will make strategic decisions supported by their own pedagogical interests or experience (Garrett, 2012).

Hypothesis 3: *Pre-service instructors who have worked in the Armed Forces for most of their career (15 years plus) will predominantly identify traditional transmission instructional roles*. Most of the military training is taught using traditional delivery methods. Therefore, I hypothesised that if individuals had spent 15 plus years in the military, their frame of reference and beliefs would reflect this.

Hypothesis 4: *Pre-service instructors who identity cadet orientated, constructivist instructor roles are more likely to identify instructor CPD as a role*.

96

This hypothesis was born out of the literature that indicated that a teacher's personal preference for traditional versus constructivist delivery methods influenced their professional engagement and collaboration. Becker and Riel (2000) discovered that those teachers who held constructivist views were more likely to engage in professional development collaboration. Although this study looked only at two forms of CPD – reflection and collaboration – the results suggest a positive relationship between cadet-orientated beliefs and participation in CPD (De Vries et al., 2014). This relationship was illustrated further in a large-scale study conducted by the OECD (2009) of 70,000 secondary education teachers across 24 countries which found that cadet orientation was positively associated with teachers' participation in CPD; in contrast, subject-matter orientation was negatively related to CPD participation. Vogels (2009) used a survey of 2,715 secondary school teachers and found a clear link between belief profiles and teachers' CPD.

Hypothesis 5: Pre-service instructors who have completed higher education are more likely to support an adult learning environment at the College.

Hypothesis 6: Pre-service instructors who have not completed higher education are more likely to support a pedagogical learning environment at the College.

Over the last ten years, I have mentored several Armed Forces personnel through HE and PGCE programmes. In all cases, I supported them through an initial period of frustration and cognitive dissonance, caused by the free-flowing and open-ended nature of HE. The mentees' consistent feedback was that they found it intimidating when asked to devise essay titles or conduct independent study, as PME courses usually provide a rigid structure. The critical thinking, problem-solving and analytical skills assumed to be essential attributes of HE graduates (Hussain et al., 2012) are often not valued in PME. According to Sobat (2003), the construction of new

knowledge should draw on cadets' prior experiences, enhancing their rationality and reasoning

skills and their ability to apply these in real situations. Again, these skills are frequently not

valued in PME. I have observed that, once such learners have completed their first essay, they

gain confidence, become comfortable with constructing new knowledge and embrace the

independent learning process (Xu, 2012; Hussain & Sultan, 2010). Given the above, I

hypothesised that they would have experienced an adult learning approach when undertaking HE

and would, therefore, be more likely to see the benefits of an adult learning environment at the

college.
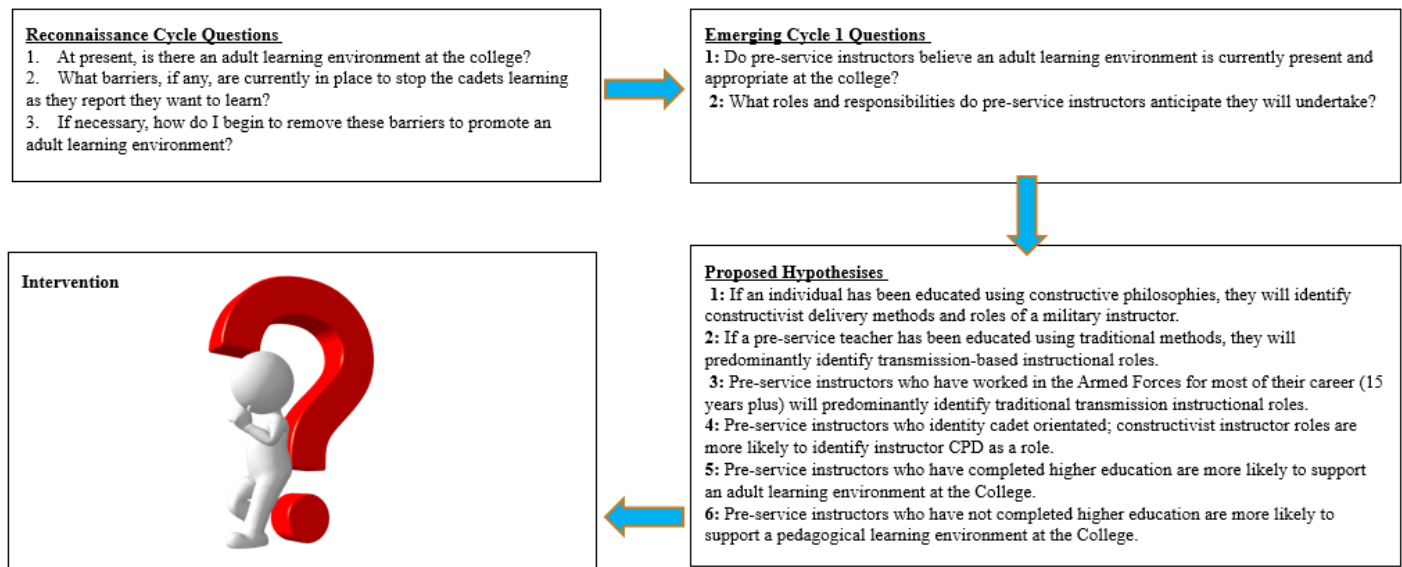
Figure 13- Overview of Cycle 1 research questions and hypotheses.

5.5 Data collection methods

Draw and write exercise

I chose to use a draw and write exercise as I acknowledged the potentially problematic nature of

depicting an instructor's multiple roles and responsibilities; this technique illuminates and

simplifies views of complex constructs (McWhirter, 2014). It also provides a non-threatening

platform for expression (Bradding & Horstman, 1999). To introduce myself and the proposed

research, I met the instructors on the first day of the CSIC to invite them to take part in the study

and gave them 24 hours to reflect. I returned on the following day, confirmed that they were

happy to participate and gave them a pack containing the draw and write task sheets, coloured

pens and paper. The task asked the pre-service instructors to illustrate the roles and

responsibilities they anticipated they would take on both inside and outside the classroom,

including any opinions or feelings they may have about these roles.

I gave them the option to illustrate these in any way in which they felt comfortable. I

collected the task sheets the following day, analysed the data, and conducted the interviews on

the fourth day of the course. Completing the steps in such close succession gave me minimal

time to analyse the data, but I found it effective as I had fewer preconceptions, which led to more

honest and open discussions. A copy of the draw and write task sheet can be found in Appendix

M.

Semi-structured interviews

Interviews fall into three main types – structured, unstructured or semi-structured – as well as

group interviews (Fontana & Frey, 2000). I chose to conduct semi-structured interviews and

asked the individuals a series of predetermined, open-ended questions (Jamshed, 2014). In

conducting previous research, I have found the combination of semi-structured interviews and

draw and write to be immensely powerful. The combination allows interviewees to provide

meaning in the draw and write whilst enabling me to ask a range of pre-set questions that touch

on critical themes (Rabionet, 2011). Asking an individual to draw a picture and then talk about it

places them in the position of the expert. If conducted well, the process should convey that the

participants' thoughts are valued (Rollins, 2005), breaking away from the standard format of military questionnaires.

When conducting previous research, I found semi-structured qualitative interviews invaluable; like night goggles, they allowed me to see elements not ordinarily on view and examine issues looked at but seldom truly seen (Rubin & Rubin, 2005). This research confirmed my previous experience. Towards the end of the interviews, when I had built a rapport with the pre-service instructors, I talked them through various scenarios and asked how they would react to them in order to gain an insight into their pedagogical beliefs. Scenarios involving enquiry processes can guide research into complex issues involving long range, dynamic processes in uncertain contexts by accommodating and comparing different perspectives (Alvesson & Sandberg, 2011). I found this helpful as it allowed me to explore how an individual approached different situations and why. A copy of the semi-structured interview questions can be found in Appendix N.

While qualitative interviews can be a powerful tool, they also bring potential difficulties and pitfalls (Hermanowicz, 2013). They may intrude into the social setting they are aiming to describe. The interview itself is an artificial situation, and the interviewer is not an invisible, neutral entity, but part of the interaction, and this may interfere with individuals' usual behaviour. This interference is known as the Hawthorne effect (Fontana & Frey, 2000). This is the process of individuals modifying their behaviour, when they know they are being watched. I attempted to avoid such distortion by asking open questions and stressing that there were no right or wrong answers. Conducting the interviews within the first three days of the course was helpful in this respect, as the pre-service instructors had not had sufficient time to become attuned to the organisational culture and could not give rehearsed answers. I avoided putting the interviewees

under time pressure, as a lack of time can create a feeling of additional weight on the interviewee (Myers & Newman, 2007). I scheduled each interview to last one hour but knew I only had twenty-five minutes of questions. This extra time allowed flexibility for the interviewee to digress onto other topics if they so wished.

I tried to make the individuals feel as comfortable as possible. I chose to record audio rather than video to allow for accurate analysis (Rabionet, 2011) without distracting or intruding and wore casual clothes rather than my uniform to neutralise the power differential. The literature indicates that balancing the power differential can be critical to the success or failure of interviews (Buchanan et al., 1988). Further pitfalls identified in the literature include that interviews can provide a large amount of data, at times too much (Scheurich, 1995), and that they are time-consuming, as they must be recorded, transcribed and coded (Robson, 2002). I would follow Robson (2002) and Ho (2006), who maintain that, although interviews are a powerful means of obtaining insights into an individual's perceptions, they should be used alongside other methods to provide in-depth information about participants' inner values and beliefs (Ho, 2006).

5.6 How will I ensure that any judgements I make are reasonably fair and accurate?

As in the reconnaissance phase, the qualitative comments on the draw and write pictures were reviewed systematically for content and coded into categories according to the general meaning conveyed. I analysed the writing rather than the images (Wetton & McWhirter, 1998) and carried out an open-axial thematic analysis, with the axis representing the instructor's roles and responsibilities. As in the reconnaissance phase, I began coding by reading the text from start to finish. I considered the various meanings inherent in the data and identified and allocated a hierarchy of category codes using Strauss and Corbin's (1998) open-axial, selective organisation.

101

Given the short interval between receiving the draw and write tasks and conducting the semi-structured interviews, I examined the data from both collection methods together and I have, therefore, recorded them in a joint discussion and conclusion. For consistency, I used the same researcher to blind analyse the data. A copy of the Cycle 1 draw and write pictures and the analysed comments from the pictures and semi-structured interviews can be found in Appendices O and P.

5.7 Interpreting the data

Once coding was complete, I came to a halt as I struggled to interpret it. I knew that I was missing something about the results, and I intuitively knew something in them was clashing with my positioning, but I could not identify it. Following their steer, I sought out a recognised framework for HE and FE teachers and came across the Education and Training Foundation (ETF). The ETF classes itself as the guardian of professional standards for the FE and HE sectors (ETF, 2014). In 2014, it published a set of professional standards, defining the professional standards required of teachers and tutors of post-16 learners, to underpin good teaching practice in the sector. I found these standards straightforward and user-friendly, expressed in accessible language. The standards are structured into three sections: professional values and attributes, professional skills, and knowledge and understanding (ETF, 2014). In a quest to discover what was missing, I began to place the codes identified in the data against the ETF's defined standards. I analysed the data codes for each pre-service instructor individually by transposing the codes they had identified onto the framework sections, and then transposed all the codes onto one set of standards which allowed me to see the whole picture immediately.

I acknowledge that an element of personal judgement was present when placing the codes under certain headings, as I could have placed several of them under multiple titles. To aid the

analysis, I placed the codes alongside the same researcher who had analysed them. This time, we repeated the process together, which allowed us to discuss any differences in opinion. At this stage, the situation became clear, and I realised what was missing: none of the instructors had identified lesson preparation or planning roles, and only one instructor had identified lesson delivery. I will go into more detail in the discussion of the results.

To analyse the data for hypotheses 1–4, I scoured the literature for published comparisons of constructivist and traditional approaches to act as a theoretical framework. This process proved to be more challenging than I had expected. Many published articles discuss constructivism and instructional techniques, and PowerPoints created for teacher training compare the two, but very few peer-reviewed published articles covered both. I decided to use Lobler's (2006) comparison table of transmission and constructivist approaches as my reference frame for the analysis. I completed this process collaboratively with my fellow researcher, working on the principle that a constructivist role or approach would allow cadets to construct or make their knowledge actively or independently, and enable the cadet's reality to be determined by their experiences (Elliott et al., 2000).

	Transmission approach	Constructivist approach
Knowledge	Transferable good	The end of a constructive process
Information	Good	Process
Teaching	Transferring knowledge	Supporting learning
Goal of education	Broad knowledge	Autonomy, the ability of self-governing
Role of learner	Passive consumer	Active producer
Role of teacher	Transmitter of content	Assistant of the learner
Task of tests	Test the learner	Test the teacher
Sources of information	Teacher, Textbooks	All sources available
Inducement for getting information	Curriculum	Student's demand
Who is governing the learning process?	Teacher	Student
Interaction between	Teacher, Student	Students
Activities	Listening, reading, memorizing	Doing, thinking, talking

Figure 14 – Comparison of transmission approach and constructivist approach (Lobler, 2006).
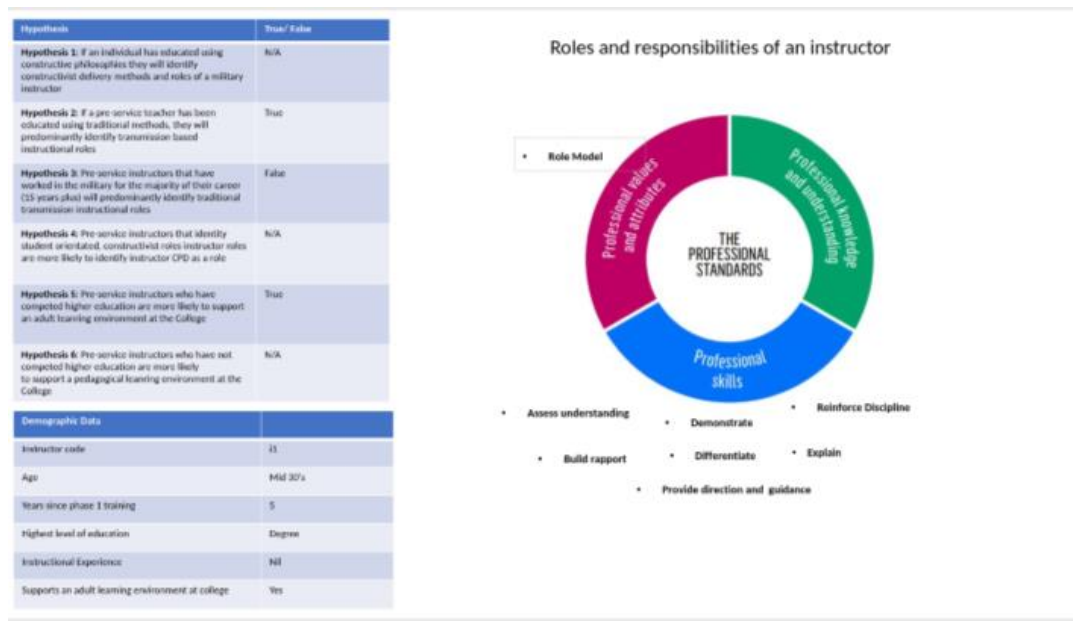
Figure 15 – Example of how I analysed the codes against the Professional Standards (Education and Training Foundation, 2014).

5.8 Results

In structuring this section, I have placed the findings under the appropriate research question or hypothesis. The supporting documents for this chapter can be found in the following Appendices:

Appendix	Title
Q	Overview of the pre-service instructors' demographic data
R	Transcription of a Cycle 1 interview
S	Combined coded data regarding the role and responsibilities of an instructor

T	Individual instructor data regarding the role and responsibilities of an instructor, mapped against the ETF professional standards for teachers and trainers in education and training (ETF, 2014)
U	A copy of the ETF professional standards for teachers and trainers in education and training (ETF, 2014)

Table 2 – Relevant Appendices

Question 1 – Do Pre-service instructors perceive there to be an adult learning environment at the College?

Five out of the six pre-instructors said that it was too early for them to tell, but they anticipated that there would be some form of adult learning environment. All five expected some form of cadet independence, where appropriate. One pre-service instructor, who had previous instructional experience, indicated that he did not believe that the College had an adult learning environment. He observed that he had been treated like a child on the CSIC and, therefore, doubted that the cadets would have an adult learning environment.

Question 2 – What roles and responsibilities do pre-service instructors anticipate they will undertake at the College?

When reviewing the results, I made three key observations. For brevity, I have outlined these below and will explore them further in the discussion.

Observation 1- Emphasis on the military instructor as a role model

The only role that all six instructors identified was modelling: during the interviews, they all discussed how important it was to be a role model and, when questioned on what they felt this meant, they all mentioned dress, deportment, and discipline. Yet, none of the instructors mentioned these attributes when asked to describe their instructional role model. They described

105

the impact that role model had on them in terms of their personal or professional success, not how they helped them maintain their dress standards. There appears to be a disconnect between their vision of the role model they aim to emulate and the role models who have influenced them.

Observation 2- No acknowledgement of the role of planning lesson material and little acknowledgement of the delivery of lesson material

When I placed the expected roles and responsibilities against the professional standards, I instantly saw what my tutors had noticed: none of the pre-service instructors had mentioned preparing for or planning a lesson. This surprised me, as I consider lesson planning to be central to the role of instructor. I then looked for the roles and responsibilities relating to knowledge transfer or development, and these were limited. While 50% of instructors had mentioned assessing knowledge and providing feedback, they did not mention knowledge development. It appeared that the instructors had acknowledged the process of building rapport, setting an example, discipline and assessment, but not the process of knowledge transfer or development.

Observation 3 – Limited acknowledgement of subject-matter expertise and limited acknowledgement of professional or pedagogical knowledge.

Only one instructor mentioned being a subject-matter expert. The same person was the only one to acknowledge the role of imparting knowledge, sharing relevant experience, and maintaining instructional knowledge through CPD. Interestingly this was the only participant with previous instructional expertise. Two other instructors mentioned completing CPD but in terms of maintaining weaponry skills and knowledge of current affairs.

Hypothesis 1: If an individual was educated using constructive philosophies, they will identify constructivist delivery methods and roles of a military instructor.

Three of the instructors identified that they had been taught using constructivist methodologies – in nursing training, yacht engineering and a MA in Leadership. All three identified a mix of traditional and constructivist approaches, but the majority were constructivist.

Hypothesis 2: If a pre-service teacher has been educated using traditional methods, they will predominantly identify transmission-based instructional roles.

Three of the instructors identified that they had been taught using pedagogical methodologies. All three identified a mix of traditional and constructivist approaches, but the majority were traditional.

Hypothesis 3: Pre-service instructors who have worked in the military for most of their career (15 years plus) and have not completed any form of higher education will predominantly identify traditional transmission instructional roles.

Two pre-service instructors had served for more than 15 years, and both identified predominantly traditional transmission instructional roles.

Hypothesis 4: Pre-service instructors that identity cadet orientated, constructivist instructor roles are more likely to identify instructor CPD as a role.

The three instructors who identified predominantly constructivist instructional roles also identified CPD as among the instructor's responsibilities. One instructor identified subject-matter CPD and two identified CPD on instructional technique.

Hypothesis 5: Pre-service instructors who have completed higher education are more likely to support an adult learning environment at the College.

Four pre-service instructors had completed higher level education, and all four supported an adult learning environment at the college.

Hypothesis 6: Pre-service instructors who have not completed higher education are more likely to support a pedagogical learning environment at the College.

The highest level of education for two of the pre-service instructors was GCSE. Neither supported an adult learning environment.

5.9 Discussion

The data collected would appear to support the hypothesise, but the sample size makes it difficult to generalise beyond this group of instructors. From the analysis, three key themes emerged, which appear to be connected when viewed through the lens of systems thinking. These are discussed in detail below.

The teacher as a role model

There appears to be a disconnect between the vision of a role model that the pre-service instructors aspire to emulate and the personal attributes and knowledge that they value in the people they consider role models. When describing their role as an instructional role model, they emphasised professional qualities such as upholding discipline and personal standards. Yet, in their accounts of their own role models, these attributes did not feature. Interestingly, in the focus group, the cadets discussed how the instructors enforced personal standards, such as dress standards, but did not display them. They noted the juxtaposition between the instructors'

enforcement of what appeared to be arbitrary personal standards while arriving at lessons unprepared and lacking professional and pedagogical knowledge.

The cadets openly admitted that they felt they had no positive role models but had learnt how not to treat people from observing the instructors' behaviour. Bandura (1965) argued that individuals generally adopt the standards exhibited by exemplary models of behaviour, but merely exposing the observer to actions will not ensure this process; in situations where behaviour is complex, repeated presentations are necessary. He also hypothesised that self-efficacy plays an essential role in knowledge and behaviour: role modelling is much more than imitative behaviour; it significantly influences the observer's behaviour (Bandura, 1991). The literature also suggests that unsuccessful individuals can motivate others by exemplifying the problems that lie ahead, emphasising the actions they should avoid (Aspinwall & Taylor, 1997), and this appears to be the case at the College.

There is a fascinating, ongoing debate in literature around the role of the teacher as a role model. Some believe that the most important lessons a teacher can deliver are moral lessons (Lickona, 2004), provided by encompassing these in their everyday lives. Others believe that the only moral obligation a teacher has is to develop a Socratic dialogue to illuminate moral reasoning structures, so that the cadets can justify their values from a universal and impartial perspective (Sanderse, 2013). This concept of moral role modelling was an aspect that I wanted to explore with the instructors: should an instructor be a role model or is their role to start the conversations on values and standards rather than enforce them?

I found the notion that instructors had set out to be role models interesting, as I have never considered myself a role model, nor aspired to become one. My intention has always been to be good at my job and I never felt the need to consider the impact I may have on others around

109

me. When reading about role modelling, I discovered the social psychology concept of the looking glass self (Cooley, 1902). Cooley used the analogy of a looking glass, or mirror, to illustrate that people shape their self-concept from how they imagine others see them (Yeung & Martin, 2003). He hypothesised that people imagine what they look like to others and then incorporate this image into their self-concept. Cooley used the looking glass image to express the idea that the image we create is primarily the product of how we perceive others view us. Three principal elements are involved in this process: the imagination of our appearance to the other person, the imagination of the judgement of that appearance, and subsequent pride or mortification (Cooley, 1902).

When I applied this concept to teacher training, it made me pause to think. Traditionally, teacher training programmes have focused on a particular set of teacher behaviours and the specific skills needed to achieve them (Kincheloe, 2012). As a result, existing pedagogical practices have a propensity to be self-perpetuating. The consequence of the failure of prospective teachers to be challenged, and their inability to reflect, has led them to teach in the same way that they have been taught (Christensen et al., 2014). I found this fascinating as I began to consider the mirror in which the pre-service instructors appear currently to be looking at themselves.

Given that the manner of delivering military training has not changed since the College opened in 1918, the instructors may be holding up a mirror to an instructor who took them through their Phase 1 training, and, for some, this took place over 20 years ago. I wondered whether we have reached a cultural tipping point, where cadets want more from an instructor than superficial personal attributes. They appear to value a different form of professionalism, more than the surface level of military professionalism, such as upholding dress regulations. This led me to consider whether an alternative mirror needs to be held up to the pre-service instructors

to see the comments that the cadets made about the instructors. I wondered whether they should know what the cadets expect of them, and whether the process needed to be more two-way, to even up the power gradient. I chose to pursue this in the intervention session, where I conducted an exercise on role modelling.

In systems thinking, role modelling takes on another meaning. Rather than focusing on personal attributes and upholding rules, role modelling represents the adoption of knowledge practices, encouraging followers whilst initiating and supporting their efforts (Bell DeTienne et al., 2004; Eppler and Sukowski, 2000; Goh, 2002). Role modelling activities through this lens include sharing knowledge openly, taking time for critical reflection and documenting important insights (Eppler and Sukowski, 2000). The instructor's role could be reenvisaged as a "Team Leader", who could then serve as a role model to coach team members to develop knowledge (Eppler and Sukowski, 2000). Role modelling would remain a leadership trait but, rather than adopting a purely behavioural approach, it would straddle behavioural, strategic and transformational strategies. From a strategic perspective, a team leader would motivate, inspire and empower to aid leadership creation (Gill, 2006). A transformational approach would encourage individuals to give their best for the organisation (Bass, 1990; Burns, 1987).

To aid the transition from "role model" to "team leader", empowerment, trust and care need to be present between the staff and cadets (Bell DeTienne et al., 2004; Bollinger & Smith, 2001; Gagne, 2009; Goh, 2002; Holsapple and Joshi, 2000; Huang et al., 2008; Zárraga & Bonache, 2003). The data from the reconnaissance phase, however, indicates that these areas require improvement; the cadets articulated that their relationship with the staff is the key barrier to achieving an adult learning environment. When I reflected on the cadets' comments, I realised that their frame of reference for an instructor aligns with a team leader role. Ironically, the

111

instructors' examples of role models also align with a team leader concept. Nevertheless, for some reason, a disconnect exists between the instructors' own frame of reference for a role model and the professional frame of reference they are emulating.

Lesson planning

As discussed previously, I was astonished to discover that none of the pre-service teachers cited lesson planning as part of the military instructor role. Even as an experienced teacher, I still prepare a detailed lesson plan, so I was intrigued that this was not a role they had anticipated. The primary function of planning is to provide cadets with clear opportunities to learn, and careful planning enables adjustments to the specific needs of a group (Bellon et al., 1992). When teachers adapt their plans in line with cadets' progress, there is a positive effect on learning (Berliner, 1988). Whilst content is conventionally the starting point of planning (Clark, 1989), activities appear to be considered by teachers as the most salient building blocks (Clark, 1989). Many authors have highlighted the importance of lesson planning as a base for reflecting on pedagogical techniques and sequencing (Villani & Pacca, 1990). The rigorous planning process is necessary, as teaching is complex and demands a conceptualisation of the part that both teacher and cadet will play in the instructional phase (Bellon et al., 1992). Knowledge derived from previous teaching experience determines how teachers plan their lessons (Aikenhead, 1984).

When considering lesson planning through the lens of OBE, it becomes more complex as the instructors will need to become more attuned to planning and managing learning environments (Malan, 2010). They will be required to understand the many issues surrounding how learners learn, how to teach effectively to ensure that learning takes place, and how to master aspects of pedagogical content knowledge that incorporate language, culture and

112

community contexts (Grossman et al., 1989). OBE requires that learners are empowered to learn at their own pace and according to their own capabilities. Therefore, it is the responsibility of teachers to know and understand every cadet and plan for their individual learning style (Iloanya, 2019). The instructors will need to acquire the relevant skills to construct and manage classroom activities efficiently, and continuously reflect on their professional practice to learn and improve (Ilonya, 2019). They will need to be expert facilitators, collaborators, and researchers (Gordon, 2003). Given the importance of lesson planning in delivering OBE, and the instructors' lack of awareness of this role, I chose to include the topic of lesson planning in the intervention to explore why they had not considered it part of the role.

Knowledge and its transfer into practice

The lack of awareness of lesson planning can be viewed through organisational knowledge, which comprises knowledge creation (Nonaka, 1994), knowledge adoption (Adler et al., 1999), knowledge distribution (Prahalad & Hamel, 1990) and knowledge review and revision (Crossan et al., 1999). The cadets' feedback indicates that the college is in a repetitive cycle of "knowledge distribution". Cadets sit in rows while a standardised PowerPoint presentation is delivered, with limited interaction. This distribution approach means that personal knowledge, which should move to group level and be interpreted in the organisational context (Nokaka and Takeuchi, 1995), is not exploited.

An essential task of the team leader or instructor is to facilitate interactions between organisational members so that the individual knowledge present in organisations is amplified and contributes to the knowledge base (Nonaka, 1994). When training to be a teacher, these interactions are included in the lesson planning, but military lessons are heavily standardised.

There may, therefore, be a perception that instructors inherit PowerPoint slides and only ever enact "knowledge distribution", hence the lack of acknowledgement of lesson planning. Instructors would be required to move from being "knowledge distributors" to "knowledge workers" (Scheicher, 2012, 2015).

When reflecting on the failure to acknowledge subject or pedagogical knowledge, I was reminded of Schulman's (1986) model of GPK and the concept of professionalism in teaching. The literature indicated that teachers need to be pedagogical professionals, irrespective of the subject taught and the educational setting, and base their everyday practice on a regularly updated, coherent and integrated knowledge base (Guerriero, 2017). I thought it self-evident that instructors should know the subject they are teaching and how to manage the classroom (Cochran-Smith, 2003), but this does not appear to be the case for the pre-service instructors. Shulman (1986) argued that teachers need to draw on this range of knowledge and weave it into coherent understandings and skills if they are to be competent to manage what McDonald (1992) terms the 'wild triangle' that connects learner, subject matter, and the teacher in the classroom.

Yet there is more to excellent teaching than knowledge. The knowledge relevant to managing specific classroom situations needs to be activated and transformed into practice (Koing et al., 2016). Effective teaching evolves a dynamic interplay of generic beliefs, skills and knowledge, and subject-specific competencies (Kunter et al., 2013; Blomeke et al., 2016). To achieve this, teachers need to notice, interpret, and react to essential classroom features (Sturmer and Seidel, 2015; Blomeke et al., 2016). I began to draw parallels between the cadets' comments on the instructors' apparent lack of knowledge and teaching skills and the pre-service instructors' lack of acknowledgement of a specialist body of knowledge or pedagogical skills.

5.10 Self-reflection on the professionalisation of instruction in the Armed Forces

While analysing the results, I wrestled with the concept of instruction as a separate profession within the Armed Forces. As a professional educator in the military, I have consistently found that military instructors who have a primary role, such as a pilot, devalue the professional duality required to instruct effectively. This devaluation has frustrated me for much of my career. As illustrated in previous chapters, effective instruction involves a dynamic interplay of generic beliefs, skills and knowledge and subject-specific competencies (Kunter et al., 2013; Scheerens & Blomeke, 2016). The literature also shows that it requires pedagogical professionalism, irrespective of the subject or teaching setting. Although different conceptualisations exist, developed frameworks and models overlap in terms of defined professional competence (Plowright & Barr, 2012).

The concept of teaching as a profession has been debated extensively, and inconclusively, in the literature. There are three main approaches to conceptualising professionalism. The first is a trait model that identifies professions by cross-referencing the potential profession's attributes against a list of desired characteristics (Johnson, 1972). Leicht and Fennell (2001) produced a list of traits that included knowledge, training, value to society, autonomy, client welfare, commitment, community and an ethics code. At face value, military instruction seems to match all these attributes. Another approach is to look for the recognised hallmarks of a profession which, according to Freidson (2001), are the members' ability to control their qualifications and membership criteria alongside their ability to manage and maintain the existence of a specialist body of knowledge. Freidson takes this notion of autonomy, further stating that a professional should be able to make decisions according to the clients' needs without interference or stakeholders (Freidson, 2001). Military instruction would not fall into this category as the MoD sets the professional qualifications.

115

Freidson (2001) identified a third model for identifying a profession, through the existence of a specialist body of knowledge; in what became known as Freidson's third logic, he suggested that the prerequisite for creating a profession for teachers was the identification of an organised body of knowledge. I became drawn to this third logic in Cycle 1. I can see that the cadets have high expectations of what they require from an instructor. I can also see that the instructors leave their primary military profession and step into the role of instructor with minimal training in comparison with civilian teachers and minimal prior experience. The situation is complicated further in that instructors at the college only remain in an instructional role for an average of two years. A potential solution offered in the literature is the concept of dual professionalism. The Institute for Learning (IfL) championed this concept to increase the "professionalism" of the further and higher education sector. A dual-professional in the FE Sector is qualified in their vocational or academic specialism and also a trained teacher and is committed to developing the skills and knowledge needed to support learning (Plowright & Barr, 2012). This theory aligns directly with Shulman's concept of pedagogical content knowledge.

Dual professionalism must be underpinned by a reliable CPD programme, facilitating both the subject matter and pedagogical content. The IfL promoted an underpinning CPD programme based on outputs rather than the inputs, such as attendance at workshops and lectures, used in traditional models. Many professional bodies have relied on input models since the 1980s; in contrast, an output-based approach would require the teacher to ensure that they have the necessary knowledge and expertise to fulfil their roles and responsibilities. This approach involves moving away from the traditional hours-based scheme which emphasises time spent on CPD activities.

116

Instead, teachers would be required to identify the skills they need to develop, decide on the necessary training and development, and then demonstrate that they are maintaining professional competence. The model is growing in popularity, and the impact of CPD has been seen to affect knowledge, attitudes, perceptions and even emotions (Freidman, 2013). As the name indicates, CPD can only take place if upskilling for a profession. According to definitions proposed by Johnson (1972) and Leitcht and Fennell (2001), military instruction could be classed as a profession. If a dual-professional approach can be encouraged through a robust CPD pathway, military instructors may view their instructional role with a renewed professional pride.

A complication of dual professionalism is that it combines pedagogical knowledge and specialist knowledge. It is a view of pedagogy that is divorced from the context of teaching; Eisner and Powell (2002) characterise this as a contrast between episteme and phronesis. The professional, in this view, cannot stand upon a body of knowledge, claiming expertise. Schon (1983) proposes a solution applicable in this case: the professionalism of practical experience. Knowledge-based personal activity can be developed by professionals through reflection-on-action after the event and being creative whilst using their knowledge in reflection-in-action during the activity.

When reflecting on instructional upskilling, I was drawn to a professional approach to military instruction that fused subject matter expertise, pedagogical knowledge, general pedagogical knowledge, content, and organisation culture. I liked the concept of contextual inclusion, but I was not comfortable with the hierarchical approach of putting pedagogical knowledge at the centre. I therefore reworked the model to reflect my findings. The model below demonstrates a fusion of the models of Shulman (1986) and Grossman (1990) whilst drawing on Schon's (1983) concept of practical knowledge. The central hub represents the outward skill of

117

practical experience which feeds the other five corners. This model begins to represent the multiple professional elements of 21st-century military instructors, where being a dual-professional is no longer sufficient. We are still moving into multi-professional realms where instructors will understand themselves, their organisational context and a teaching domain involving multiple forms of knowledge and skills.

In creating this model, I was reminded of the iceberg model developed by Grossman et al. (2002). This model has been adapted several times and has become a system thinking tool to represent patterns of behaviour and the supporting structures that underlie an event. I began to visualise a military instructor sitting on the iceberg with their overt practical skills and knowledge on display, anchored by the learning that has taken place below the surface to form understanding. A representation of these thoughts is shown below. Both models were designed as a catalyst to discuss the concept of multi-professional instructor skill sets during the intervention session.
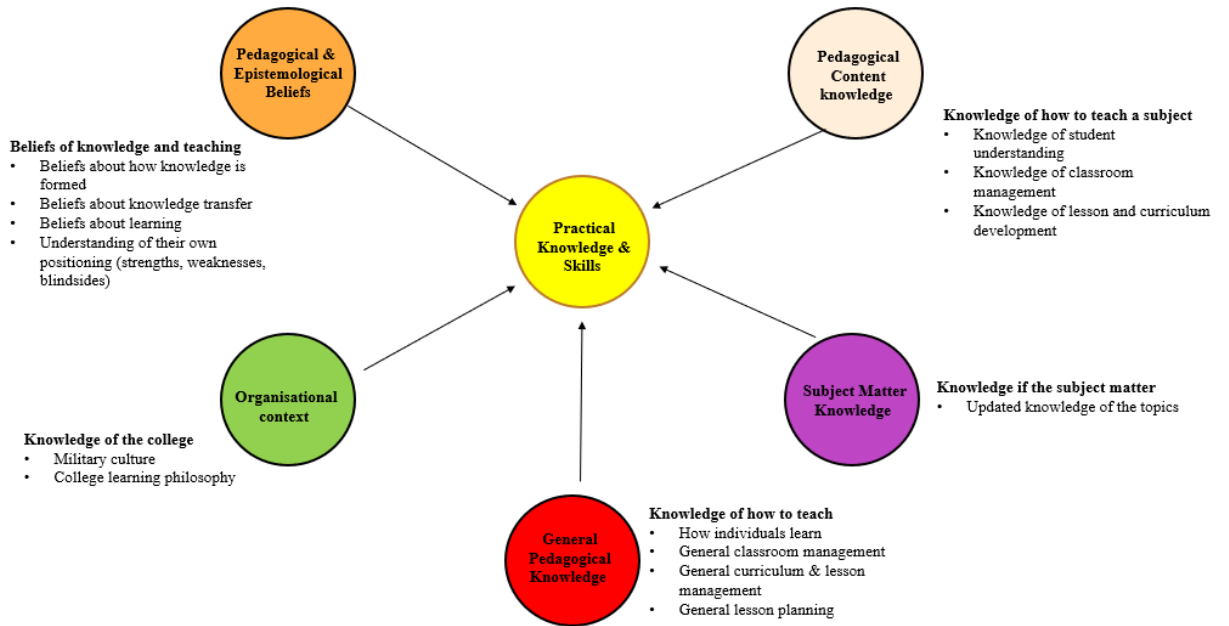
Figure 16 – Framework illustrating the knowledge and skills required to promote an adult learning environment in a Phase 1 military unit.
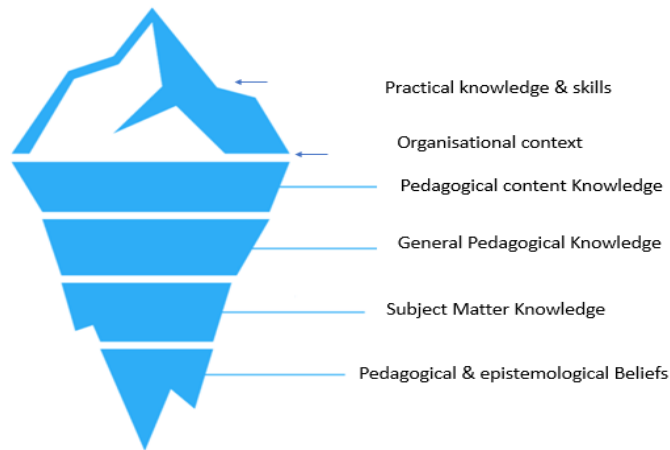
Figure 17 – Iceberg model representing the knowledge and skills required to promote an adult learning environment in a Phase 1 military unit.

5.11 Intervention

The purpose of an action research intervention is to test the current hypothesis, gain an insight

into the problem and, if possible, begin to resolve it (Elliott, 2001; Kember, 2000). To achieve

this, I conducted a two-hour interactive session with a cohort of pre-service instructors. Due to

their timetable, the session took place in the sixth week of their CSIC. When planning Cycle 1, I

had hoped to deliver it in the fourth week to allow them longer to reflect between cycles. In

hindsight, I think it was well-timed as, by this stage in the programme, they had a greater

contextual understanding of the college and had begun to reflect on the course content and the

potential gaps in their knowledge and skillsets. By the sixth week, they had completed the

College's mandated training material and were about to embark on the MoD-mandated

instructional techniques course, known as the Defence Train the Trainer (DTTT) Course. One of

the original cohorts of pre-service instructors sustained an injury on week two and was removed

from the course. She went home to recuperate and therefore could not take part in the remaining

elements of the research.

Aims of the session

To aid planning, I designed a set of aims for the session. This section aims to illustrate the

thought process behind each.

Aim 1 – Challenge the pre-service instructors' pedagogical and epistemological beliefs.

Piagetian theory (Piaget, 1954) suggests that a powerful way to challenge beliefs is to ask

individuals to compare their views with others to create dissonance. The literature indicated that

asking pre-service instructors to compare their past experiences with contrasting experiences and

the literature might highlight internal inconsistencies. These inconsistencies should, in turn,

120

prompt dissonance as the inconsistencies in opinions expressed become a catalyst for promoting

cognitive change (Grieve, 2009) and altering the individual's belief system (Festinger, 1957).

Given all the above, I designed several activities to challenge epistemological and pedagogical

beliefs, including the role of the instructor and cadets in an adult learning environment, the

implications of role modelling, the formation and transfer of knowledge and the concept of

military instruction as a separate professional skill set.

Aim 2 – Create an adult learning environment to allow the pre-service instructors to experience a constructivist approach to teaching.

Three out of the six pre-service instructors indicated that they had never experienced an adult

learning environment, and none had experienced it within a military context. Given this, I hoped

to provide them with a frame of reference. To this end, I designed a session that included

educational games and allowed them to engage with technology. I hoped that the experience

would reflect what the cadets on IOT might have encountered during their formal education.

Through these activities, I hoped to provide them with the platform to reflect on this experience

and consider how various generations within the cadet body may have had different learning

experiences and consequent expectations around learning (Holyoke & Larson, 2009).

Aim 3 – Encourage the pre-service instructors to consider the cadets' lived experiences.

When planning the session, I wanted to create an activity that exposed the pre-service instructors

to the cadets' comments about the instructional staff in order that they would consider the

potential impact of their behaviour. In HE, this process has become known as the cadet voice,

and there is a growing body of research that advocates for cadet voice initiatives (Fielding 2001;

Mitra, 2007). These have been shown to improve teachers' classroom practices (Cushman, 2000;

Kincheloe, 2007) and provide feedback on instructional styles, curriculum content assessment and other classroom issues (Rudduck, 2007).

Approach to session delivery

When planning the session, I wanted it to be as interactive as possible. I was aware that some participants might not be comfortable in a cadet-led learning environment, so I planned a steady progression of cadet participation. I initially adopted an enquiry-based approach, based on problem-based learning (Hakverdi-Can & Sonmez, 2012), and progressed to a cooperative learning approach where the pre-service teachers alternated roles as teacher and learner (Krych et al., 2005). I deliberately used resources not usually found in a military lesson, such as brightly coloured gel markers and multi-coloured playdough, to create a more relaxed and creative environment. I had all the resources set out on the desks before the instructors arrived, to make an initial impact. As they walked in, one of them smiled and said, "This is so refreshing to walk into something different." I also placed little packets of sweets on the desk to make them smile and break the ice; I wanted to demonstrate that learning does not have to be sterile and impersonal. I sent the instructors an email a week before the session, asking them to bring a tablet or smart device to work on during the lesson and, to aid this, I had a temporary Wi-Fi connection installed. The participants acknowledged the novelty of connecting to a network that was not as restricted as the standard military network; one commented, "It's so nice to be trusted. I almost feel like an adult." The lesson plan for the session appears in Appendix V.

How will I know if the intervention was a success?

I selected a set of quantifiable Key Performance Indicators (KPIs) to gauge the success of the intervention. I hoped that, with a clear and structured session, I would encourage at least half the

instructors to challenge their previously held assumptions and beliefs. The KPIs that I selected for the intervention session were as follows:

1. The extent to which pre-service instructors indicate that the session challenged their pedagogical and epistemological beliefs or values.

2. The extent to which pre-service instructors acknowledged the value of cadet feedback.

3. The extent to which pre-service instructors indicated that they should consider how cadets may want to learn, and how each generation may approach learning, when planning a session.

4. The extent to which instructors indicated that the college should have an adult learning environment.

5. The extent to which pre-service instructors acknowledged the practical subject matter and pedagogical knowledge required to undertake a military instructor's role.

6. All pre-service instructors added at least one new element to the draw and write diagram of their roles and responsibilities.

7. The extent to which instructors acknowledged the potential pitfalls of role modelling.

Participant feedback

I gave the participants a feedback form at the end of the session and asked them to return it within a week, to allow time for them to reflect and process the session. The comments were open-axial coded and analysed against the KPIs. After the session, I immediately recorded my observations in a reflection journal; I then reviewed them after examining the pre-service instructors' responses. A copy of a blank feedback form and coded results are available in Appendices W and X.

5.12 Intervention Results

I have structured this section by placing the data collected from the feedback forms alongside my observations. I decided to adopt this method rather than a more traditional format of presenting the data followed by a discussion, as I felt my comments added depth and context to the feedback.

KPI 1- Four out of the five pre-service instructors indicated that their pedagogical and epistemological beliefs or values had been challenged.

KPI 2- Three of the five pre-service instructors stated that instructors should consider cadet feedback. This suggests that this KPI was met.

Observation

I started the cadet feedback activity by discussing fear, and why the cadets may experience it. Following this, I showed the participants a selection of the draw and write pictures and qualitative comments and asked them to describe how they made them feel. They instantly linked their personal experiences on the CSIC to the cadets' experiences and could see where inconsistency in standards and lesson delivery could lead to fear. They discussed a lack of overarching documents detailing behavioural standards, customs and etiquette and a lack of clarity around their instructional role and the cadets' position. They observed that the lack of clear standards made them nervous, and they empathised with the cadets.

They discussed at length the benefit of being able to view the College through the eyes of a cadet and the benefits of having been introduced to generational theory, as they could now link some of the cadets' frustrations to how they may have learnt previously. They discussed Knowles' principles of andragogy and could see that the cadets' feedback linked back to the

124

absence of these principles in the College training. At the end of the session, two of the instructors thanked me for showing them the College through the cadets' eyes and all asked that the cadet comments be communicated to the main body of instructors. The Army Exchange Officer asked for the draw and write exercise to be repeated in the Army Phase 1 Training Unit as she felt the cadets' comments summarised her experience.

KPI 3- Three of the five pre-service instructors stated that they would consider the generational mix within the cadet body when planning a lesson. This suggests that this KPI was met.

Observation

When planning the generational theory activity, I pre-allocated the groups, as I wanted the participants to work with a partner of a similar age as far as possible. I then set them the task of researching their generation and the factors that influenced it. Being able to relate theory to personal experience created a platform for debate and discussion on theory versus lived reality. In parallel, I asked each group to create a playdough object representing a piece of technology from their generation. The group researching Generation X created a Walkman and talked about how it made them feel to walk around with portable music for the first time. The group studying Generation Y made a PlayStation symbol and discussed how gaming had shaped their generation. The group exploring Generation Z made a two-tier interconnecting structure in which the base layer represented the physical self and the roof the digital self.

Throughout the exercise, I observed that the pre-service instructor who believed that problem-solving and fun had no place in military education was smiling and laughing. When I asked him why he had chosen a PlayStation symbol, he said that gaming had shaped his generation. I asked him whether the Armed Forces capitalise on gaming skills, and he talked

about wargaming and problem-solving. We discussed the task itself, and I asked him whether he had enjoyed it. He instantly made the connection between my question and his earlier comments and realised that he had been looking through the lens of over twenty-five years of traditional military education. He immediately acknowledged his prejudice and was shocked by the realisation of how closed-minded he had been. This part of the session concluded with all the instructors agreeing that they had never considered the impact of their upbringing on how they might learn. They all acknowledged that they held prejudices against other generations, and all recognised that they might have to consider different types of learners when planning a lesson.

KPI 4 - Four out of the five pre-service instructors indicated that the college should have an adult learning environment. This suggests that this KPI was met.

Observation

I asked the pre-service instructors to watch Sir Ken Robinson's TED Talk on changing educational paradigms (Robinson, 2007) before they came to the session. I had it playing on the screen as they entered to spark conversation and interest, which worked more effectively than I had hoped: they immediately began to discuss the talk and relate it to their own educational experiences. This common ground allowed me to ease into their conversations and build a natural rapport. None of the participants had seen the talk previously or encountered generation theory, which created a level playing field to start the discussions. They all agreed that it had made them reflect on the instructor's role within the changing paradigm of PME. There was a unanimous acknowledgement that it had made them aware of how education is changing on a global level and it put the work of Project Mercury into the context of a worldwide shift in approach.

126

Following this discussion, I introduced Knowles' (1984) principles and assumptions regarding adult learning. This led to a difficult conversation: the group widely accepted that andragogy was appropriate for a civilian, HE establishment but two instructors struggled to envisage how these applied to PME and openly disagreed with the concept of self-directed learning in a military setting. One instructor stated that problem-solving and enjoyment could not align with military training and these views were reflected in his comments in the feedback form, where he noted, "Still think four principles of andragogy are not necessarily correct." The two individuals who struggled to envisage an adult learning environment were those who had been in the Armed Forces since they completed their GCSEs over twenty years ago and had not completed any further education outside of a military context. This observation made me reflect and note that we cannot assume that instructors will have a first-hand frame of reference for an adult learning environment when planning the OBE upskilling programme.

KPI 5- Overall, the participants agreed that the model was valid and acknowledged that it highlighted gaps in the training they had received. They emphasised that they had not received any refresher training on the core subjects. The Warrant Officers highlighted their concern that, as they do not complete IOT as a cadet and their leadership courses differ slightly, their knowledge may diverge. They all acknowledged that refresher training in the core subjects would have been beneficial and would help to standardise the cadet experience. When the discussion turned to military citizenship, the group was split. The Warrant Officers indicated that they were not comfortable with the College's rules and regulations as they had not attended as cadets. The Junior Officers were content that they were up to date with the core knowledge, and the Army Exchange Officer acknowledged that she was not familiar with RAF customs. They recognised that they had received no training in this area to date and would have liked an update.

The group challenged the terminology of a "Military culture" and suggested "Ethos and core values" as they felt that this aligned more closely with RAF language and was perhaps more palatable for the staff. I acknowledged this and have subsequently adjusted the wording on the diagram.

The participants suggested that the model would translate into a helpful framework for the CSIC and felt that it would make the course more focused. They found the course disjointed and had spent almost four weeks shadowing exercises and instructors, with no context and no knowledge of instructional techniques; teaching DTTT at the beginning would add context and clarity. After the cadet feedback session, the instructors asked that a layer be added to the draft model to represent clear terms of reference for the college's instructional roles. They felt that the cadets had highlighted a weakness in the system – a lack of clarity over expectations of staff roles on the part of both cadets and staff. The instructors further discussed that they had not observed any of the formal functions they were due to undertake, such as Leadership Instructors or Flight Commanders.

KPI 6- All pre-service instructors added at least one new element to the draw and write diagram of their roles and responsibilities. This suggests that this KPI was met.

Breakdown of codes

Additional roles of an instructor code	No. Instructors	% of instructors
Subject-matter expert	4	80
Facilitator	3	60

Coach/mentor	3	60
Setting personal standards through personal behaviour	3	60
Teaching	2	40
Planning lessons	5	100

Table 3: Overview of the additional roles and responsibility of an instructor

Observations

Knowledge transfer – Facilitator/teacher/mentor

I asked the pre-service instructors to write out all the different ways in which cadets and instructors gather information and in what format. During this conversation, I discovered that the pre-service instructors had not observed any lessons. They had no frame of reference for how cadets and instructors interacted in classes, or the curriculum content, or how the instructors prepared. They observed that this lack of discussion about lesson planning may explain why they had not mentioned lesson planning in their initial draw and write exercise.

KPI 7 –The extent to which the pre-service instructors acknowledged the potential pitfalls of role modelling.

Result

Three out of the five pre-service instructors noted that they would now consider how their behaviour affects cadets' standards. This percentage suggests that this KPI was met.

Observation

I asked the participants to describe their instructional role models. Their responses varied considerably and, as we discussed the differences, the participants acknowledged their individual biases and recognised the potential pitfalls of trying to impose differing personal standards. When asked how they might mitigate this, they unanimously agreed that a clear behavioural policy for staff and cadets would be of help. They knew that part of their role was to uphold the College's standards but, to date, they had seen no formal documentation providing guidance to follow.

5.13 Personal reflections on the session

Going into the session, I had hoped that the participants would gain benefits from it, but I was astonished by how much I learned through seeing the College from the perspective of a pre-service instructor. Up to this point, I had been a cadet, spent over a year analysing the course content and studied the CSIC content, but I had paid almost no attention to the pre-service instructors' lived experience. Viewing the CSIC from their perspective highlighted blind spots in how the College and CSIC operate.

5.14 Recommendations

During Cycle 1, I wrote down potential recommendations as they emerged. When I curated these, they naturally fell into three categories: operating procedures, cadet voice and additional course content.

Operating procedures

The College could implement a set of operating procedures to create clear standards concerning quality of learning, safety, expectations, and accountability (Ulla, 2018). It could also implement

a teaching and learning policy to promote best practice and set consistent standards, aiming to ensure that all cadets experience a high-quality learning environment. This policy should be communicated to all staff and cadets before they arrive at the college to set expectations.

The College could implement a whole-college behavioural management policy for both staff and cadets, containing a framework of policies and procedures that aim to prevent behaviour issues (Scott 2005). A standardised college behavioural approach should encourage staff and cadets to take responsibility for their own actions, develop positive relationships, create consistency and clarity, and provide a transparent corrective framework for the instructors to follow. A whole-college approach to behaviour can create a unified culture in terms of acceptable behaviour and provide logical guidance for staff members in managing cadet behaviour (Lyons et al., 2014). As a result, it may help alleviate stress and turnover (Richter et al., 2012) and contribute to the cadets' positive perception of the school climate (Zullig et al., 2011).

When designing these documents, the College should involve key stakeholders in the school community to ensure that all aspects of the organisational and College culture are captured (Sugai et al., 2009). A guidebook of military/College customs and etiquette could be linked to the behavioural policy and sent to staff and cadets before they arrive to manage their expectations from the beginning. The college could also implement terms of reference for cadets and staff that provide information on their respective roles and responsibilities. Again, these could be sent to potential instructors and cadets so that they are aware of what to expect during the interview process.

Increase the cadet voice

A substantial body of research documents the value of cadet voice initiatives in improving classroom practice (Niemi et al., 2015). These initiatives can range from the most basic – cadets' sharing their opinions on problems and potential solutions – to allowing cadets to collaborate with instructors to address the issues in their educational establishments (Mitra, 2007). In progressive cadet voice initiatives, cadets work together with teachers to discuss teaching and learning and are invited to provide feedback on instructional styles, curriculum content, assessment opportunities and other classroom issues (Rudduck, 2007). Research has found that cadets' academic grades improve when teachers construct their classrooms in ways that value the cadet voice, especially when cadets are given the power to work with their teachers to enhance the curriculum and instruction. This consultation process can also provide a better meta-cognitive understanding of cadets' learning, helping cadets to gain a stronger sense of their abilities and educating them about the differences between learning styles, multiple intelligences, and emotional intelligence (Mitra, 2004). Research has also found that an increased teacher focus on cadet experiences and learning styles also can increase cadets' interest in schoolwork and learning (Daniels et al., 2001).

The feedback from the cadets proved to be powerful for both myself and the pre-service instructors. It allowed us to view life at the college from their perspective, but this not a process that the College usually follows. At present, the college has an internal validation system that enables cadets to voice their opinions at the end of each term. However, the process is sterile, and there is little dialogue between the cadets and instructors on how they would like to learn or the changes they would like to see to improve the learning experience. As the course will undergo dramatic change, this could be a suitable point to seek the cadets' opinions on how they

would like to see the changes implemented. Such dialogue may encourage the cadets to take more ownership of decisions and improve cadet–instructor relationships.

Additional lesson content

The college should provide instructors with an upskilling package that takes them through the core subjects, customs, and etiquette. This would offer an opportunity both to update subject-matter expertise and introduce the cadets' curriculum to giving the pre-service instructors some context. Whilst some instructors will be familiar with the content, this package would allow the College to contextualise it. The sessions should refer to the College operating procedures, such as the teaching and learning strategy, so that instructors know what and how they will teach. While I acknowledge that content expertise is often linked to an understanding of teaching as the transmission of information, it does not guarantee the formation of interpersonal ties between teacher and cadets (Kember & Kwan, 2000). To promote such positive relationships, the CSIC must balance pedagogical content and content knowledge.

5.15 Cycle 1 conclusion

The College should also allow the pre-service instructors to explore generational theory in the CSIC. Instructors could forge opportunities to encouraging them to explore their personal beliefs and biases and linking this directly to the learning philosophy in today's working environment, where four different generations often work side by side (Polat et al., 2019). This multigenerational workforce brings different attitudes towards authority, the organisation and expectations regarding work, marriage, and family responsibility (Smola et al., 2002). Considering each generation's characteristics, work values and working methods, and the generational differences among teachers and cadets may influence the school culture (Paniale,

2013). This recommendation was born out of the feedback from the intervention, such as "I was interested in the potential new ways for adults to learn, particularly this new generation," and "The generational piece was worth some reflection." Teachers who understand how to handle such differences among their cadets will leverage the strengths of all generations. This understanding enables teachers and cadets to succeed in the classroom, build collaborative teams and help others better prepare for future challenges. The sessions should include discussions on role modelling and how different generations value different skill sets.

Whilst these appear to be three separate recommendations, when systems thinking and an OL perspective is adopted, links begin to form; the interconnecting factor is knowledge management. Teaching core subject matter on the CSIC is a form of organisational knowledge management. The feedback from cadets and instructors indicates that much of the knowledge introduced is implicit, which causes confusion and frustration. Comments such as "There is a lack of transparency on behalf of the flight staff" and "do as I say, not as I do" highlight the cadet's confusion and frustration. Suppose Nonaka's (1991) four steps of organisational management are applied. In that case, it becomes clear that the College needs to work through Stages 1–3 to allow all levels of management to socialise, share the tacit knowledge and externalise it in a form that others can understand (Nonaka & Konno, 1998). This process would allow knowledge to be sorted and categorised into bodies of explicit knowledge embedded in the organisation's "knowledge storehouse".

Overtly approaching knowledge management would require the College to apply a realist ontology that frames knowledge as existing independently of people and technology (McNamara et al., 2004). This epistemology views knowledge as a pre-given resource that organisations can produce at will (Yakhlef, 2002). The long-term goal is to foster an environment that portrays

134

organisational knowledge management as an interpretative, shifting and situated enterprise (Ciborra, 2002). The College may benefit from a period of knowledge setting, where explicit knowledge is clear, and this may begin to foster a more positive cadet–instructor relationship. In time, this storehouse of explicit knowledge would provide a foundation of knowledge for both the cadets and instructors, from which they could develop it into an ideas house. The College could create a role of Chief Knowledge Officer to initiate this process (Earl & Scott,1999).

Knowledge management can also be viewed as a cultural accomplishment centred on developing a set of shared organisational values and identities, facilitating interpersonal interactions and collaborations (Inkep, 1996). Introducing a robust set of operational procedures would help form a clear mechanistic organisational structure, ensuring that individuals clearly understand their job responsibilities and requirements (Kanten et al., 2015). Operating procedures may help to nurture a culture dedicated to excellence, ethical behaviour and knowledge sharing. In turn, this may motivate individuals to contribute their previous knowledge (Shin et al., 2017), allowing the organisation to capitalise on all its members' knowledge to derive new ideas (DiBella, 2010). Introducing a student voice mechanism may initiate a flatter communication culture, allowing all members to voice their views and share their knowledge in time and rank permissive settings (Freeman & Calton, 2020).

5.16 Further areas to explore

Several additional content areas could benefit from inclusion in the upskilling package, but I planned to clarify these once the pre-service instructors had completed the DTTT course. The potential areas were additional pedagogical content, generational learning theory, lesson observations and observations of their new role.

Chapter 6 – Extension to Action Research Cycle 1

I had initially planned to stop the cycle after the intervention and start a second cycle. However, when I reached the end of the intervention, several external and internal factors resulted in my decision to extend Cycle 1 and work with the same set of instructors. Due to factors outside the college's control, the next CSIC – due to start in July 2019 – was rescheduled for October. This delay would have extended my research by six months, and I was scheduled to move jobs over this period, which would have complicated research access. The second, and more pressing, factor was that I felt that I had not reached a conclusion, with several areas needing further exploration. At the point of the intervention, the pre-service instructors had not completed the final two weeks of the course; therefore, to validate my recommendations and clarify my observations, I felt I had to continue to work with the same research subjects. This chapter aims to illustrate the process I followed to extend action research loop one and the conclusions drawn.

6.1 What was the issue?

At the close of Cycle 1, I felt several areas required further exploration. The first concerned the instructors' perception of the existence of an adult learning environment at the College. I wanted to clarify whether they felt an adult learning environment existed after they had spent a term instructing, or whether they had observed any behaviours from staff or cadets which would lead them to believe that barriers currently existed that would preclude its development.

The second issue on which I wanted to seek clarity related to the role and responsibilities they were now undertaking: I wanted to know whether undertaking an instructional role had lived up to their preconceptions and, in turn, whether the CSIC had prepared them for their new roles. The third area concerned the cadets' voice and whether the newly qualified instructors felt that the College was currently listening to the cadets' feedback. During the intervention, the

instructors had indicated that the cadets' feedback had been valuable, and I wanted to clarify whether they had witnessed the cadets having the opportunity to give feedback. I particularly wished to explore a peer view of the framework for 21st-century military instructors' knowledge and skills, obtain feedback on whether they felt the content was accurate and, if not, offer the instructors the opportunity to recommend changes.

After a period of reflection and planning, I split the extension phase into two phases. The first focused on the pre-service instructors from Cycle 1 and aimed to clarify the points outlined above. The second phase focused on a cross-section of the most experienced instructors designing the new IOT course. I wanted to create an opportunity for them to peer review the framework to establish whether they felt it was accurate and to provide their comments. Peer review is a ubiquitous element of scholarly research quality assurance and assessment (Tennant et al., 2020) and, whilst I do not subscribe to the institutional norm of using formal peer review to legitimise my research (Rennie, 2003), I wanted the opportunity to be challenged by a group of peers. Phase 1 took place 12 weeks after the instructors graduated from the CSIC, to ensure that the instructors' experiences of CSIC and their first term teaching were fresh in their minds. Phase 2 took place after I had analysed the data from Phase 1.

6.2 What kind of data could I gather to show the situation as it was and as it developed?

The research questions I developed were as follows:

Question 1 - *Do the newly qualified instructors perceive there to be an adult learning environment at the college?*

Question 2 – Did the CSIC adequately prepare the newly qualified instructors for their new role?

Question 3 – *Do the pre-service instructors view the framework of 21st-century military instructors' knowledge and skills as accurate?*

Question 4 – *Does the college regularly solicit feedback from the cadets?*

Reconnisiance Cycle Questions
1. At present, is there an adult learning environment at the college?
2. What barriers, if any, are currently in place to stop the cadets learning as they report they want to learn?
3. If necessary, how do I begin to remove these barriers to promote an adult learning environment?

Emerging Cycle 1 Questions
1: Do pre-service instructors believe an adult learning environment is currently present and appropriate at the college?
2: What roles and responsibilities do pre-service instructors anticipate they will undertake?

Extension Cycle Questions
1. Do the newly qualified instructors perceive there to be an adult learning environment at the college?
2. Did the CSIC adequately prepare the newly qualified instructors for their new role?
3. Do the pre-service instructors view the framework of 21st-century military instructors' knowledge and skills as accurate?
4. Does the college regularly solicit feedback from the cadets?

Proposed Hypothesises
1: If an individual has been educated using constructive philosophies, they will identify constructivist delivery methods and roles of a military instructor.
2: If a pre-service teacher has been educated using traditional methods, they will predominantly identify transmission-based instructional roles.
3: Pre-service instructors who have worked in the Armed Forces for most of their career (15 years plus) will predominantly identify traditional transmission instructional roles.
4: Pre-service instructors who identity cadet orientated, constructivist instructor roles are more likely to identify instructor CPD as a role.
5: Pre-service instructors who have completed higher education are more likely to support an adult learning environment at the College.
6: Pre-service instructors who have not completed higher education are more likely to support a pedagogical learning environment at the College.

Intervention Aims
1 – Challenge the pre-service instructors' pedagogical and epistemological beliefs.
2 – Create an adult learning environment to allow the pre-service instructors to experience a constructivist approach to teaching.
3 – Encourage the pre-service instructors to consider the cadets' lived experiences.

Figure 18 – Illustration of the extension cycle questions.

Data collection methods

Phase 1 – Semi-structured interviews

When planning the extension cycle, I acknowledged that the research participants were no longer a homogeneous group of attempting to achieve a common goal of passing the CSIS. They had transitioned into their formal roles within the College and one of the participants was now line managing another, so the group dynamic had potentially changed. This change, coupled with the fact that I wanted to discuss personal beliefs and experiences, led me to conduct interviews rather than a focus group. I chose to record audio rather than video to allow for accurate analysis (Rabionet, 2011) without distracting or intruding. I also continued to wear casual clothes rather than my uniform to neutralise the power differential (Buchanan et al., 1988).

138

I chose a semi-structured format to structure the questions into the topics that I wanted to clarify from Cycle 1. An unstructured interview format would have entailed a risk of not eliciting information related to the issues or themes covered in the research questions under consideration (Rabionet, 2011). As in Cycle 1, I avoided putting the interviewees under time pressure, as a lack of time can create an additional burden (Myers & Newman, 2007) on the interviewee. I scheduled each interview to last one hour but knew that I only had twenty-five minutes of questions. This extra time allowed me to explore avenues that arose organically.

Phase 2 – Focus group

I conducted a focus group to peer review the theoretical framework. I identified a stratified sample of ten instructors from the Project Mercury team, who had a minimum of one year's instructional experience, and selected the participants from this team as they had seen the plans for the new course. They had worked extensively with the senior leadership team, who had set the vision for change and were acutely aware of the advantages and challenges of creating a course using OBE, as they had been addressing these issues daily. These instructors had not participated in any previous element of this research. Therefore, this was the first time they had seen any of the data collected.

I chose a focus group over individual semi-structured interviews as the literature indicated that individuals develop their thinking in interaction with other people when discussing a topic of interest (Britten et al., 1995). Group interaction plays an instrumental role in data production by creating a synergy that elicits rich details (Carey & Asbury, 2016), provoking agreement and disagreement (Greenbaum, 1998) and, as a result, stimulating a complete picture of attitudes. Focus group discussions are viewed as a means of eliciting participants' pre-existing, personal ideas and opinions, forming a window on participants' lives (Wilkinson, 2004). Focus

groups help researchers to understand people's beliefs, thoughts, and attitudes, and particularly how they can hold multiple viewpoints (Vermeire et al., 2002). This insight was critical as I wanted the participants to review the framework using their numerous lenses: all had been instructors at the college, but they had also undertaken additional roles, including flight and Squadron Commanders. At the time this focus group took place, they were designing the new course. I wanted them to discuss their experiences as cadets on IOT and CSIC, how these translated into lived experience and what CPD was available and hoped that they would test my blind spots and discuss whether they believed the framework was accurate.

I did consider the potential power differential within the group, as an imbalance can cause destructive behaviour amongst participants (Krueger et al., 2015), sabotage interactions and limit the data quality (Carey & Ashbury, 2012). However, I chose to conduct a focus group as these participants were part of a homogenous group and were more likely to be open as they perceive each other similarly (Carey & Ashbury, 2012). They had worked together for over a year, and I had participated in multiple debates about policy and structural changes which had been conducted openly and professionally. The literature shows that the participants' relation to the researcher/facilitator makes an essential contribution in creating a 'permissive environment' that encourages free-flowing conversation among the participants (Krueger & Casey, 2015). I had known several individuals for over five years, and, in that time, we had developed an open and honest relationship, so I felt confident that they would tell me the truth. I am also an experienced facilitator: I am confident with explicit control strategies through, for example, room layout, body language, seating positions, selective eye contact, interruption, and direct challenge (Krueger & Casey, 2015).

I conducted the focus group in uniform as everyone in the team was aware of the rank each holds and the responsibilities we have in our primary duties. While the session's primary focus was to review the theoretical framework, I began by providing an overview of the results collected to date and then invited the participants to discuss the Cycle 1 extension research questions. The purpose of this was twofold: I wanted to see the more experienced instructors' responses, and I hoped that the initial discussions would act as a form of icebreaker for the framework review. Going into the session, I was not expecting to use the data collected in the initial discussion. However, their insights were, at times, illuminating so, where appropriate, I have included their perspectives.

6.3 Phase 1 results

Coding of qualitative data

I audio-recorded the semi-structured interviews and the focus group and transcribed the recordings. As in the analysis of previous discussions, I began the coding by reading the text from start to finish, considering the various meanings inherent in the data and identifying and allocating a hierarchy of category codes (Thomas, 2006). This coding hierarchy was derived using open-axial and selective organisation (Strauss & Corbin, 1998).

Validity of the sample set

All the participants from Cycle 1 took part in the extension cycle. For Phase 2, I asked for a quota sample of ten instructors to participate in the focus group from a potential pool of 18 instructors on the Project Mercury team. This technique allowed me to divide the instructor population into subgroups and helped to ensure adequate representation of all important subgroups in the sample (Górny & Napierala, 2016). Selecting the quota sample did not require

141

a sampling frame, but I chose the quota to replicate the instructional population structure, to ensure the sample was representative (Bechhofer & Oaterson, 2012). The breakdown of the allocation I requested is shown below.

The instructors I received met the criteria; therefore, the sample was representative of the instructor population. It is worth noting that the sample contained two females, which equates to an over-representation compared to the main body of instructors, and 100% of the quota held a degree or equivalent qualification. This percentage also equates to an over-representation, but it

Minimum Quota	Notes
1 female	Representative of 10 % of the instructor body
3 previously serving airmen	Representative of the 30% of the instructor body
3 in the 31-40-year-old bracket	Representative of 30% of the instructor body
6 in the 41-50-year-old bracket	Representative of 60% of the instructor body
1 in the 50-year-old plus bracket	Representative of 10% of the instructor body
5 held a degree	Representative of 50% of the instructor body

Table 4 – Quota requested for the focus group

represents the Project Mercury team, as individuals were selected to rewrite the course due to their advanced educational and instructional background.

Results

In structuring this section, I have returned to the research questions to summarise the findings.

Question 1 – Do the newly qualified instructors perceive there to be an adult learning environment at the college?

Response	No. of Instructors
Yes	1
No	3
Undecided	1

Table 5 – Data collected for Research Question 1

Question 2 – Did the CSIC adequately prepare the newly qualified instructors for their new role?

Data

Prepared to undertake the new formal role

Response	No. Instructors
Yes	0
No	5
Undecided	0

Table 6 – Data collected for Research Question 2

Prepared to undertake the role of an instructor

Response	No. Instructors
Yes	1
No	4
Undecided	0

Table 7 – Data collected for Research Question 2

Question 3 – Do the newly qualified instructors view the theoretical framework of 21st-century military instructors' knowledge and skills as accurate?

100% of the newly qualified instructors indicated that they viewed it as an accurate

representation.

143

Question 4 – Does the college regularly solicit feedback from the cadets?

100% of the participants indicated that they had not seen any form of cadet feedback. Comments such as "I haven't seen an InVal (internal feedback form) yet," and "I don't even know what the cadet feedback process is" confirmed this.

6.4 Cycle 1 extension observations

Of the newly qualified instructors 60% indicated that they perceived there was not a Knowlesian "adult learning environment" as I had described, but a "military adult learning environment". When I asked them to clarify this, two instructors indicated that the power and authority gradient between staff and cadets was too great and this element was preventing the college from moving towards a Knowlesian approach commenting "while rank is involved, they may be adults but there will still be a power gradient.". One instructor indicated that a lack of free time was preventing the cadets from learning more autonomously, "They barley have time for dinner never mind free study," and one stated that too much pressure on the cadets prevented them from learning more creatively or independently, "The fear of not passing the course is stopping cadets from thinking independently".

The language used by the instructor who did feel that an adult learning environment existed was fascinating: "They (cadets) asked for advice and were given advice, and it all appeared to be open." Whilst this appears to be an improvement from my time at the college, it remains a more traditional knowledge approach. Interestingly, the two instructors who did see an adult learning environment or were undecided had both been Armed Forces instructors for over twenty years.

I asked all the newly qualified instructors, "Did the CSIC prepare you for your new role at the College." They all asked for the question to be split into two parts.

144

1. "Did the CSIC prepare you for the role at the College?"

2. "Did the CSIC prepare you for the role of a generic instructor?"

All participants indicated that the CSIC had not prepared them for their formal role at the College; 80% felt that this was primarily due to the minimal opportunity offered to integrate with the College staff. The instructors commented, "Have I had the chance to observe the role of the Flight Commander, no," and "we were kept apart from the main body of staff and not encouraged to integrate." They had observed the instructors assess cadets on exercise but had been intentionally kept separate when they were at the College. This lack of integration had resulted in a minimal frame of reference for the additional roles and responsibilities undertaken by instructors. 60% of the participants highlighted that the management told them of their new job on the final day of the course, giving no time to learn the position. The Warrant Officers were allocated a role teaching on a separate course about which they received no context or information, they commented that, "we haven't seen or been allowed to integrate with our course. I don't know what to expect when I get onto the Squadron".

When answering the question "Did the CSIC prepare you for the role of a generic instructor?" 60% of the participants said that it did not. They cited two key issues: the rigid nature and timings of the DTTT course and the fact that they were not allowed to observe a lesson. Instructors commented, "I haven't seen a lesson," and "I don't know how cadets interact in a lesson as I haven't seen one." On planning, 80% of the instructors indicated that the DTTT course gave them a framework to plan a lesson, but the instructors did not contextualise this to the college. One commented, "If you had no imagination or self-innovation, you could take a subject and make a lesson that would get the point across." I found this comment telling as it

145

reflected some of the cadets' comments on lesson delivery. Another instructor commented, "I am not sure how what we did on DTTT translates into a classroom when the cadets are staring at me."

6.5 Cycle 1 extension results

In structuring this section, I have placed the data collected during the focus groups and my observations under the research questions.

Does the college regularly solicit feedback from the cadets?

100% of the participants indicated that the only feedback they had seen from the cadets whilst planning the course was the Project Mercury Survey conducted in 2017.

Do the experienced instructors view the framework of 21st-century military instructors' knowledge and skills as accurate?

100% agreed that the framework was accurate but asked for several areas to be made more explicit for use as a handrail for CPD (detailed in the discussion).

6.6 Cycle 1 extension discussion

To facilitate the discussion, I talked the experienced instructors through each element of the framework and invited comments. The feedback was that 100% of the instructors felt it was an accurate representation of the knowledge and skills required and should be used to structure the new CSIC and CPD sessions but suggested several minor working changes. I highlighted that the cadets on the CSIC had had no access to the college curriculum or existing lesson plans. None of the experienced instructors was aware of this, and they agreed that this must change going forward. They were all interested by the observation and surprised that they had not been aware

of this. They commented that, "How have we not realised that before," and "why have we been holding this back."

All the participants agreed that the CSIC should teach subject matter knowledge and asked that I articulate subject matter topics within the framework to act as a handrail for planning CPD sessions. They discussed the merits of requiring instructors to sit similar exams to the cadets to ensure their credibility to teach the units and were split 60% to 40% in favour of pre-service instructors sitting exams. The participants identified a list of seven core topics, which I have included in the final framework, and agreed that the CSIC should teach GPK. They asked that I articulate additional points for a CPD framework, and these are included in the final framework.

The participants all agreed that the CSIC should cover organisational context but felt the bullet points should be more specific to increase organisational transparency. They suggested including the following items in the operating procedures: a college learning philosophy and policy, a college discipline procedure, organisational customs and etiquette, and cadet and instructor terms of reference. They agreed that this would increase transparency commenting, "If its laid down on paper, instructors and cadets will know what's expected," and "there should ne no surprises of deviations from these documents."

All agreed that the CSIC should teach pedagogical content knowledge but asked for additional points to act as a framework for CPD and requested content on how cadets interact with instructors (theory and lesson observation), "both sides need to know how to speak to each other." They highlighted the need for knowledge of behavioural management techniques (theory and lesson observation), lesson and curriculum development, and the need for a range of classes, including practical, theory, facilitation, and cadet-led classes.

147

All the participants agreed that the CSIS should teach practical knowledge, but asked if I could articulate additional points on the framework to act as a handrail for CPD. These included delivering lessons, behavioural management techniques, lesson planning, providing constructive feedback, upholding personal dress and deportment standards, and adhering to the college operating procedures. The participants identified several areas of additional content which they felt would be beneficial: 80% of the instructors indicated that TEL was discussed during DTTT, but not contextualised to the College or demonstrated. The use of modern technology and tools can increase cadet learning, cadet interactivity and the speed and transfer of knowledge (Raja & Nagasubramani, 2018).

For successful implementation, the College should acknowledge that not all instructors and cadets will be digitally literate. Digital literacy is the ability to use and create technology-based content, including finding and sharing information, answering questions, and interacting with others (Wayan Widana, 2020). There is a growing consensus on the importance of digital and media literacy for 21st-century teachers (Ranieri et al., 2018). Even in civilian education, teachers receive inadequate or no training about media and digital literacy, either in their initial or in-service education (Fernandez-Cruz & Fernandez-Diaz, 2016). If the College could increase the use of TEL, this may help increase cadet independence and enhance the promotion of an adult learning environment. At present, the college has no digital learning strategy. One of the instructors commented, "How can they have any credibility is they can't use the IT system." Other suggestions included demonstrations of smartboards (40%) and refresher package teaching (20%). When applying systems thinking, the use of technology is a critical enabler in organisational knowledge management. Knowledge management tools help capture knowledge; the appropriate storage and distribution of documents and resources can significantly increase

knowledge management (Choi et al., 2008). The higher the quality of the digital tools, the higher

the quality of the information, user satisfaction and organisational performance (Al-Qarioti,

2015).

Of the newly qualified instructors, 80% stated that it would have been beneficial to

receive core lesson content, specifically on leadership material. While they had had one lesson

on this, they would have valued more, and 60% indicated that it was challenging to contextualise

some of the topics without knowing how the cadets and instructors interacted with the material

during a lesson. This led to a further discussion on their lack of integration into college life. I was

struck by how isolated the pre-service instructors had been on the CSIC: they had minimal

contact with the main body of instructors, and their only contact with cadets was to assess them

on exercise. To qualify as an instructor, they taught their peers but did not deliver or observe any

lessons with cadets. For those who had not taught before, this left them with no frame of

reference for their role, the cadets' behaviour, or the curriculum, before they embarked on their

new role with no supervision. This process is the equivalent of PGCE students learning to teach

by delivering lessons to their peers and then teaching school pupils with no context of the school

or curriculum.

To aid the pre-service instructors' transition into college life, the College could adopt a

process like the Schools Direct approach in PGCE, which immediately immerses pre-service

teachers in school life (Jones, 2015). As a minimum, pre-service instructors should be allowed to

observe lessons and shadow peers undertaking pastoral roles. The CSIC timetable could be

designed to include a blend of theory, observation, and teaching, to enable the pre-service

instructors to analyse, reflect and grow (McIntrye et al., 1996). If possible, the DTTT should be

delivered at the start of the CSIC, to allow the pre-service instructors to absorb the information and observe more experienced instructors with a frame of reference.

Most instructors (60%) indicated that they would have liked more information on how to manage cadets presenting welfare issues, commenting "what do I do when someone comes with personal issues," and "One of the key roles of a Flight Commander is knowing where to signpost the cadets to help and I don't know how to help them". Cadets represent a cross-section of society, and, thus, bring a complex set of needs that can be magnified when away from their families. The instructors felt that it would have been beneficial to receive information on the College's operating procedure on welfare issues and examples of the types of issues that instructors have had to manage in the past, and 60% of instructors indicated a desire for more information on the RAF and the College's culture, customs and etiquette. As they had not attended the College as a cadet, they did not know what was expected of the cadets or staff.

Several newly qualified instructors were surprised by the volume of welfare-related issues they had addressed during their first term of teaching and reported that they had not felt prepared for these. In mainstream educational settings, this area is referred to as pastoral care; it reflects the concept of care and concern for the cadets' welfare within a learning environment that supports their physical, social, intellectual, emotional and spiritual development (Seary et al., 2020). While military training may appear to be opposed to care, the College must acknowledge that the cadets may present with many pastoral care issues, potentially more so than in higher education due to their age. The emotional intelligence perspective (Goleman, 1996) emphasises how vital pastoral care is for healthy development, possibly more important than academic development. Pastoral care is such a broad topic that it may be helpful to think about it at three different levels: whole school, targeted groups, and targeted individuals (Hearn

et al., 2006). It is also helpful to encourage instructors to think about pastoral care priorities in broad categories of health, emotions, relationships, employment, and citizenship.

Pastoral care links to the concept of a learning organisation as a community. Westheimer (1999) highlights five commonly identified features of a community: shared beliefs and understandings, interaction and participation, interdependence, concern for the individual and minority views and meaningful relationships. If the instructors could foster a community within the College that emphasised mutually supportive relationships, and developed shared norms and values (Louis et al., 1995), trust may begin to flourish (Bryk & Schneider, 2002). In turn, a school culture that promotes welfare may positively influence cadet outcomes (Leithwood & Day, 2007; Robinson & Taylor, 2007).

During the focus group, a lively debate developed around the professional status of military instructors. One of the participants highlighted that the College struggles to recruit instructors; it has not been viewed as a challenging role by the organisational hierarchy when individuals apply for promotion. Four participants recounted their experiences of using instructing for promotion during their time in the college, and all had encountered prejudice and misconception about the roles they had undertaken; effectively, they had volunteered for an emotionally and physically exhausting job and not been rewarded. After the focus group, I spoke to the head of college recruitment, who confirmed that this had been an issue for several years, and the College was attempting to mitigate these concerns. I found this observation interesting: there appear to be various layers in the dismissal of instructors' professional status: the newly qualified instructors felt that they were not treated as professionals when on the CSIS, while the more experienced instructors were not viewed as professionals by the rest of the organisation.

6.7 Recommendations

I have structured these into three categories: course content, welfare, and operational procedures.

Course content

The college could incorporate an additional module in the CSIC for those who are less confident in their IT skills. This uplift in digital literacy would allow them to become comfortable with the IT required using the digital infrastructure at the college. Pre-service instructors could also be given the opportunity to explore the theories behind integrating TEL in the classroom and the practical skills to use it effectively.

Welfare

The college could incorporate an additional module into the CSIS which explored welfare-related issues and how to deal with them.

Operational procedures

As part of its operating procedures, the College could implement a digital learning strategy. Educational establishments are encouraged to develop such strategies as they form the basis for strategic implementation plans that guide the planning, roll-out and monitoring of digital learning initiatives. The strategy should include a comprehensive digital learning plan which sets out the mission statement and actionable goals aligned to broader learning objectives. (Hanover Research, 2017). This document should be implemented at all levels so that everyone is aware of what to expect in TEL and should form the cornerstone for a more significant knowledge management strategy as TEL implementation progresses (Tham, 2019).

Integration of pre-service instructors into the College

The college could integrate pre-service instructors into the college prior to passing the CSIC. This would allow them to observe how cadets and instructors interact and allow them to observe the roles which they will undertake when qualified. This would add content to the CSIC and allow pre-service instructors to become comfortable in their new environment.

6.8 Cycle 1 extension conclusion

The extension to action research cycle 1 indicates that the newly qualified instructors would not class the current learning environment as andragogical. They viewed the learning environment as "an adult military learning environment", which they concluded would not align with Knowles' (1980) principles and assumptions of adult learning. The basis of their conclusion was that the cadets do not have the background in all subjects to be able to draw on relevant experiences and that they do not have freedom within the confines of the rank structure to be free autonomous. Comments like, "Since we're in the military environment, I thought it's difficult to apply some elements and stick to them, and "Still think 4 principles of andragogy are not necessarily correct to the military."

It highlighted that 3 out of 5 of the instructors had no frame of reference for an andragogical learning environment, and therefore were unable to visualise how it would work at the College. This observation highlights that a transition to an adult learning environment involves much more than redesigning the course material. It will require a complete transformation of the learning environment beyond that of the standard defence educational approach. Some instructors will have no frame of reference for this, and one of the critical elements will be implementing a robust instructor upskilling programme.

The literature indicates that some practising teachers who trained using more traditional, teacher-centred educational methods may find the realities of OBE challenging to implement without additional training (Iloanya, 2019). The data collected in the extension cycle indicated that this challenge may be further compounded as 80% the newly qualified instructors stated that they did not feel prepared to undertake their post-CSIC roles. Comments such as, "I did not get to observe my primary role," and, "I have yet to see a lesson in a classroom," highlighted the gaps on training.

If the current instructional training programme is not fit for purpose, bridging the OBE gap may be more complicated than I first thought. To aid the instructional upskilling package design, I updated the framework for the knowledge and skills required to promote an adult learning environment, to reflect the comments from the newly qualified and experienced instructors. This framework could be used as a handrail to reconstruct the CSIC.

To facilitate the transition to an adult learning environment, it appears that staff and cadets would benefit from a robust set of operating procedures so that both parties know what is expected of them through the transition and beyond. The data from the extension cycle also highlights the need to integrate pre-service instructors into life at the College during the CSIC to have greater exposure to their new role, the role of the cadet and how the two interact. In short, to promote an adult learning culture in a Phase 1 unit, the college needs to articulate the vision for an educational change programme, educate and upskill its instructors and integrate pre-service instructors during their training process – **Articulate, Educate and Integrate.**

Chapter 7 – Conclusion

This chapter aims to conclude the research, detail its contribution to knowledge and outline potential extension projects.

7.1 Conclusions drawn

The research title was, "An action research project to promote a 21st-century adult learning environment in a Phase 1 military unit." I chose to research this topic as, in the current fast-paced, changing, and complex FOE, the most financially viable solution to gaining the competitive advantage in the next conflict hinges on effective knowledge management (Hamel & Prahalad, 1994). To accommodate this change, the College will be required to shift to a more effective utilisation of its knowledge-based capital (Shin et al., 2017). To initiate this shift, the college created the Project Mercury Team, of which I was part, to undertake a paradigm shift in learning philosophy by transitioning from a didactic approach to an andragogical or adult approach that supports OBE.

For OBE to be effective, an all-encompassing adult learning environment must be present (Bates, 2014), underpinned by an andragogical, teacher-directed to cadet-directed, continuum (Knowles, 1984) to help the cadets feel accepted, respected, and supported (Knowles, 1980). This change should allow learners to be involved in as many aspects and decisions around their learning journey as possible (Houle, 1996). The data collected from the cadets indicated that the College does not have an adult learning environment. The data collected from the pre-service instructors suggest that the training provided by the College did not give them the skills they needed to undertake the role of a military instructor or its associated pastoral responsibilities. Given that the transition to OBE will require a more complex instructional skillset, the data collected has highlighted the importance of upskilling the instructional staff. However, upskilling

155

alone will not promote an adult learning environment; to improve knowledge management, a more holistic view of educational change may be required to capture comprehensively the human elements of change in a complex, hierarchical environment.

The data shows that, for an adult learning environment to flourish, the relationship between the staff and cadets will require improvement, which may entail a complex process of adjusting the instructors' pedagogical belief system. The data collected from the intervention session appears to illustrate that this may be possible but will require a clear vision for change and the ability to articulate – and, potentially more importantly, demonstrate – the role of the instructor in the adult learning environment. Not all military instructors have experienced this or can visualise it.

To structure my recommendations, I have chosen to return to educational change and system theory and articulate my findings through the lens of Kotter's (1996) eight-step change process. I have taken Quinn et al.'s (2012) framework for leading change in learning (see Figure 19), which adapted Kotter's eight-stage process to illustrate the eight steps I recommend the college undertake to help promote an adult learning environment.
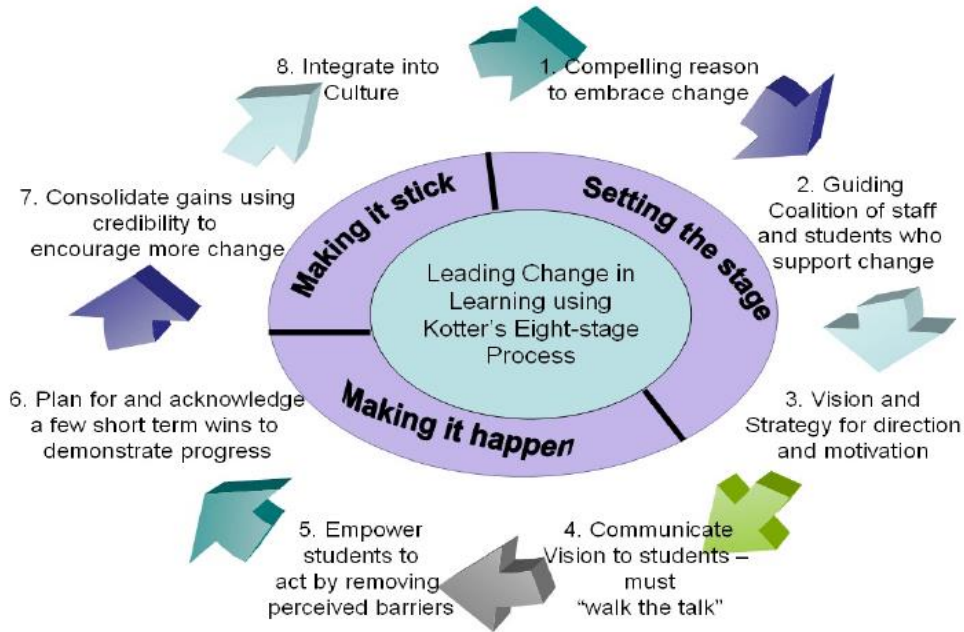
Figure 19 – Quinn et al. (2012) – Model for leading change in learning using Kotter's eight-stage process.
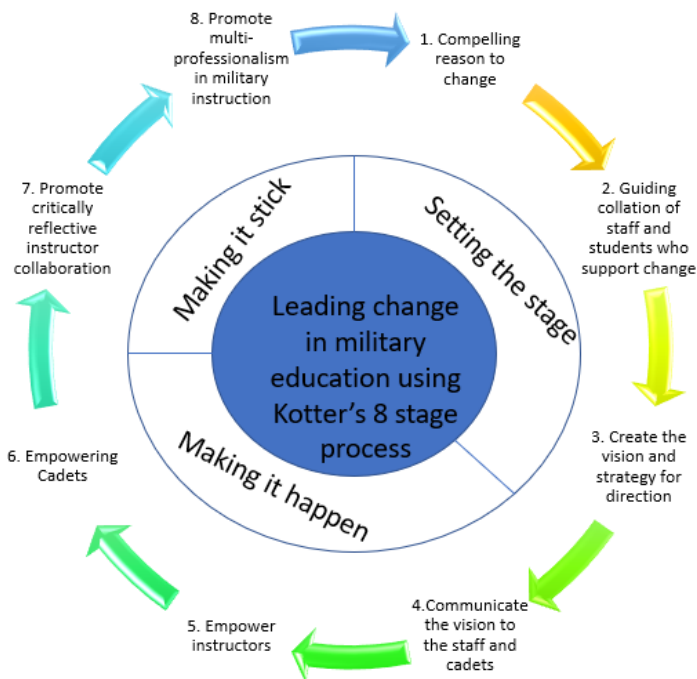
Figure 20- Eight steps to promoting an adult learning environment in a military phase 1 unit

157

Step 1 – Compelling reason to embrace change

Many macro and micro factors had led to the creation of the Project Mercury team and the aspiration to introduce an OBE learning philosophy and an adult learning environment. The UK's Armed Forces are currently enduring a period of profound change. They must compete to recruit talent in an already turbulent global recruitment market and train existing employees to work in a complex, unstable and uncertain environment (MoD, 2017). A logical solution would be the purchase of new and emerging technologies, which have traditionally provided the UK with comparative advantage, but the ability to make such purchases has been eroded due to austerity measures. Therefore, under current planning assumptions (MoD, 2013), a dynamic, agile and well-prepared, flexible workforce represents the greatest likelihood of securing a competitive edge in any future conflict (O'Neill, 2015).

To cultivate an agile, adaptable, and capable workforce (Royal Air Force, 2017), a demonstrable investment in PME is required to meet future challenges and gain an intellectual edge (Australian Defence Force, 2017). The College has acknowledged that it must prepare the new generation of commissioned officers for new literacies, competences, and ways of learning alongside traditional disciplines (Tan et al., 2017). It aspires to design a course in which the premium is no longer placed on cadets' acquisition of information but on their ability to analyse, synthesise, apply, solve problems, design solutions, and communicate effectively (Darling-Hammond et al., 2010). Whilst this academic view of change may be appreciated by some instructors, the majority will require a more realistic view of how and why the college has chosen to embrace an adult learning environment and OBE. Alongside the strategic level, the College management should allow instructors to explore how the different generations currently

in the workplace have learned and encourage them to consider these nuances when planning their lessons.

Step 2 – Create a coalition of staff and cadets to guide change

The College management and Project Mercury Team can advocate for the need for change; instructors will be the primary agents who enact it (Donnell & Gettinger, 2015). Despite having this crucial role, not all instructors will welcome or support the change (Bonner et al., 2020). Therefore, the College must select the initial coalition carefully, potentially using the lenses of teacher beliefs and theories of teacher agency. Educational reforms, such as the transition to OBE, represent a shift in teacher practice. These shifts are fuelled by structural supports, such as operational procedures and changes in knowledge, understanding and pedagogical beliefs (Bonner et al., 2020).

Research has shown that beliefs are more difficult to shift than practice or knowledge, but they appear to be the essential element in determining openness to change; therefore, when selecting an initial coalition, the College management team should consider the individuals' beliefs. The data from Cycle 1 appeared to align with the findings of Looi et al. (2014), that teachers' prior orientations affected their perception of a constructivist approach. The data indicated that those who had experienced an adult learning environment advocated for it and could visualise its benefits, but those who had not found it harder to imagine its implementation in a military setting.

The intervention session results showed that encouraging instructors to explore their beliefs and prejudices allowed them to see their blind spots, and these became clear in discussions on adult learning theory and how different generations learn. The College management team could initially select those individuals whose epistemological beliefs align

159

with andragogy and then begin the process of education with those whose beliefs do not align. Teachers' beliefs could also be considered and explored in the instructor recruitment process. Whilst beliefs are a sensitive subject, the College may consider discussing adult learning theory and practice with individuals during the interview process. If applicants are opposed to constructivist techniques, the College may need to consider whether they are the right fit to implement and advocate for an adult learning environment.

The second lens through which to select the coalition is teacher agency. Agency provides a lens through which to view relationships between teachers, professional beliefs, backgrounds, intentions, goals and perceived ability to work and sustain educational reform (Biesta et al., 2015). Teachers who believe they can make choices (Pajares, 2012) and control their practice (Ketelaar et al., 2012) are more likely to act towards the outcomes they desire (Malmbery & Hagger, 2009). When the actions expected under the reforms are incongruous with teachers' pre-existing agency beliefs, intentions and practices, teachers may express their agency through resistance (Terhart, 2013). The literature shows that a rich understanding of both previous beliefs and the new reform principles serves as a resource for teacher agent action (Bonner et al., 2020). Lai et al. (2016) found that sustained and in-depth attention to the intersections of personal and professional histories and changing cultural discourses appear to support agency. They found examples of Chinese teachers who had expressed agency by critically considering and adapting Western pedagogies in a way that allowed the integration, rather than the abandonment, of their previous practices and beliefs. They found that they could teach in a more traditional style while adapting to Western attitudes.

If Project Mercury can understand individuals' beliefs and find a way to empower instructors to encourage agency, they may find a way to blend the Armed Forces' traditions with

160

a more constructivist approach. When looking through the lens of agency lens, it could be argued that the guiding coalition could comprise both those supporting the changes and the more sceptical. If empowered to explore the potential options through agency, those that could potentially have used their agency to resist may become powerful change agents.

Step 3 – Create the vision and strategy for direction

This research aimed to promote an adult learning environment, which is a critical enabler of implementing OBE. In the reconnaissance phase, the cadets demonstrated the absence of an adult learning environment and cited their relationship with the staff as the main barrier to its development. Their comments suggested a disconnect between their frame of reference of an instructor and their lived reality; they described a "College wall" between them and the staff.

The data collected in Cycle 1 indicated that the pre-service instructors initially had a simplistic view of the role of the instructor which, in most cases, aligned with a more traditional or didactic approach for example. Most of the pre-service instructors agreed with the principles of an adult learning environment but could not visualise the mechanics of how it would work in a military environment for those who had not experienced an adult learning environment. In the extension cycle after one term's immersion in the College, the instructors defined the learning environment as an "adult military learning environment," which treated cadets like adults but did not allow them to learn independently.

When I articulated the vision of the Knowlesian adult learning environment that the College's management team has empowered Project Mercury to create for both the cadets and pre-service instructors, the cadets did not recognise it as being present at the college. Moreover, the instructors did not anticipate undertaking several vital roles, for example, lesson planning. Given these weaknesses, the articulation of the vision must be robust. Covey (1991) argued that

effective change begins with the end in mind. He indicated that individuals must understand their goals, value, and mission as the basis for everything they do. I think this is very pertinent in this change project as, under the current system, there appeared to be layers of confusion over the roles of the cadet and instructor, and the boundaries between them. In the reconnaissance phase, the cadets indicated that they had experienced inconsistencies in staff behaviour and standards, and a lack of transparency around the behavioural and attainment standards expected. The instructors in Cycle 1 and the extension cycle indicated that they were not provided with clear guidelines on cadet or staff behaviour, or clear guidance on upholding the ethos, core values and traditions of the College. When these findings are superimposed on the "college wall" diagram drawn by the cadets in the focus group, it becomes clear how the cracks in the relationships began to form. This, coupled with the fact that the CSIC did not allow pre-service instructors to observe the cadets in a classroom or pastoral setting, meant that the instructors were unsure of their role. As a result of this lack of experience, they upheld their own interpretation of behavioural policies.
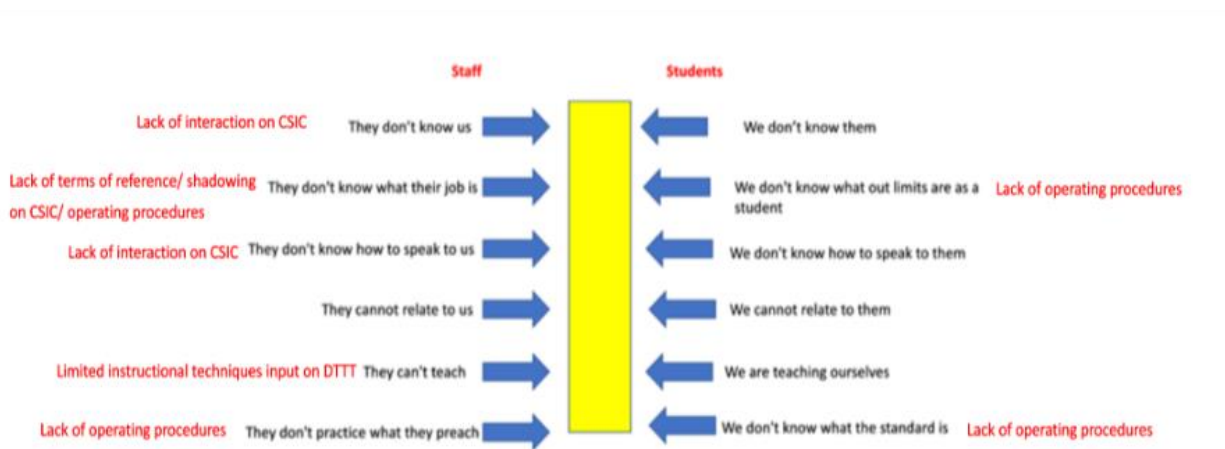
Figure 21 – College wall overlaid with observations from pre-service instructors

Senge (1990) identified a shared vision as one of the five principles of an LO in systems

thinking, fundamental to the future success of the organisation (Senge, 1990). A shared vision

through this lens infers that some reasoning, thinking, or inference takes place to create a pattern

or strategy for action to allow individuals to make sense of all the information that informs the

decision-making process (Hodgkinson, 2002). This definition is relatively mechanistic; other

authors have approached it from a more human perspective. Jones (1998) described a shared

vision as involving the hearts and minds of those who must execute and deliver it, whilst

Prahalad and Hamel (2007) saw it as the emotional commitment of individuals at the bottom of

an organisation to devote their lives to accomplishing a strategy.

Some of the confusion could be resolved by a set of comprehensive college operating

procedures. Whilst, on the surface, it seems perverse to recommend a set of guidelines and rules

for adults' behaviour, clear operational procedures would result in highly formalised,

standardised, centralised functions, ensuring that individuals clearly understand their job

responsibilities and requirements (Kanten et al., 2015). Although this may initially appear

counter-intuitive, after speaking to the cadets, I believe that clear boundaries would have a

considerable impact on leadership styles, trust, job satisfaction, knowledge management and

psychological safety (Mehrabi et al., 2013). Once certain boundaries became ingrained, there

may be scope to relax them to create a more organic structure.

The protocols could be designed together with the staff and cadets to develop a shared

vision and a common understanding of collective learning to support the mission (Freeman &

Calton, 2020). This reset would allow for the implementation of double-loop learning. A single

loop, resetting the organisation structure, would alter individuals' action strategies but would

leave the values behind the action unchanged (Argyris & Schön, 1996). A period of reflection

would allow the organisation and the individuals within it, at all levels, to reflect on values and norms, including social structures (Greenwood, 1998) and connect the observed effects of the structural change with the strategies and values served (Basten & Haamann, 2018), allowing for the redesign of social structures and human action (Schon, 1983, 1987).

The literature advocates the need to reiterate a coherent and consistently applied whole-school behaviour policy as the key to improving behaviour (Massey, 2011). When designing operating procedures, the literature suggests that the best results around behaviour management are achieved when senior management consider the views and contributions of all interested parties, increasing commitment to and engagement in the product (Clunies-Ross et al., 2008). Parry et al. (2013) echoed this, advocating for the engagement of all interested groups when developing whole-institution policy. Gibbs and Powell, (2012) suggested that training is essential for both staff and cadets; they found that managing disruptive behaviour is a principal concern for teachers and advocate for more extensive training to focus on negative and positive behaviour and how to address both. This approach could be of benefit as the cadets reported a lack of positive praise. Massey (2011) advocated both initial and ongoing training for teachers, which would enable them to become effective classroom managers.

These operating procedures should encompass more than discipline; they should also include a digital learning strategy, cultural aspects of the college and an assessment policy, so that the cadets are aware of the resources, policies, and procedures in place. The DfE (2011) indicate that a well-rounded and robust set of documents could aid discipline and establish a culture of respect and safety, with zero tolerance of bullying, clear boundaries, good pastoral care and early intervention to address problems. This transparency may initially be uncomfortable for the instructors, but a more even power balance between cadets and instructor

164

would be achieved if all the stakeholders in the learning process are informed and share the same vision.

The operating procedures should include clear terms of reference for the instructional staff and cadets. When accompanied by robust learning and behavioural strategies, these may help both parties to envision how their relationship should function. A clear outline of the expected behaviour of instructors may help break the cycle of instructor's role modelling outdated pedagogical practices (Goodland, 1990) and facilitate the transition of instructors from "knowledge distributors" to "knowledge workers" (Scheicher, 2019).

Step 4 – Communicate the vision to the staff and cadets

The data collected in Cycle 1 indicated that those who had not experienced an adult learning environment struggled to visualise it in a military setting, for example the Warranter Officer in my intervention lesson that couldn't relate to learning being fun. A robust set of operating procedures and a communications plan will help these individuals to navigate the mechanics that they may otherwise struggle to implement, if they have not seen how staff and cadets should interact. The College could work with academic partners or other Armed Forces, such as the United States Army, to record lessons or allow individuals to observe classes.

Step 5 – Empower instructors

During this process of educational change, the instructors will find themselves simultaneously both the subject and the agent of change (Piper et al., 2013). On the one hand, they have the task of implementing innovation and, on the other hand, they may be required to alter their own beliefs, attitudes, knowledge, skills and teaching practice. Educational change depends on what teachers do and think (Fullan, 2001); therefore, it is vital to consider the changes that the

165

instructors will experience in their teaching and learning processes and empower them to enact these before introducing any educational innovation (Ucan, 2016).

Empowering the instructors will require a two-pronged approach. The first will be designing a robust CPD programme to upskill legacy instructors. The college must consider teachers and their CPD in the implementation of any educational reform. During the CPD process, the College should encourage teachers to acquire a new understanding and beliefs regarding the potential of new teaching methods and materials in the cadets' learning, and to develop themselves professionally, socially, and personally (Ucan, 2016).

Whilst instructor development should be a conscious process in which educators constantly seek new ways and methods to improve their cadets' learning (Bell and Gilbert, 1996), no robust CPD programme has been in place at the college for some years; therefore, its implementation will be an innovation. This programme should align with educational policies and operational procedures to improve cadets' learning outcomes (Ucan, 2016). In time, in-service development, education and training, instructor development, professional development, staff development, career development and lifelong learning should become intertwined and be seen as standard practice at the College (Day & Sachs, 2004) to respond to the ever-changing needs of the cadets and staff (Swafford et al., 1997). The second element of empowering staff will be the initial staff training programme, as the data from this research indicated several issues with the current programme.

When reflecting on instructional upskilling, I used the data collected to create a framework illustrating the knowledge and skills required to promote an adult learning environment in a Phase 1 military unit. The framework was developed from a fusion of the models developed by Shulman (1986) and Grossman (1990), whilst drawing on Schon's (1983)

concept of practical knowledge. The central hub represents outward skills of practical experience, and this feeds the other five corners. This model begins to represent the multiple professional elements of 21st-century military instructors and could be used as a framework to develop the initial instructor training programme and subsequent CPD pathway.
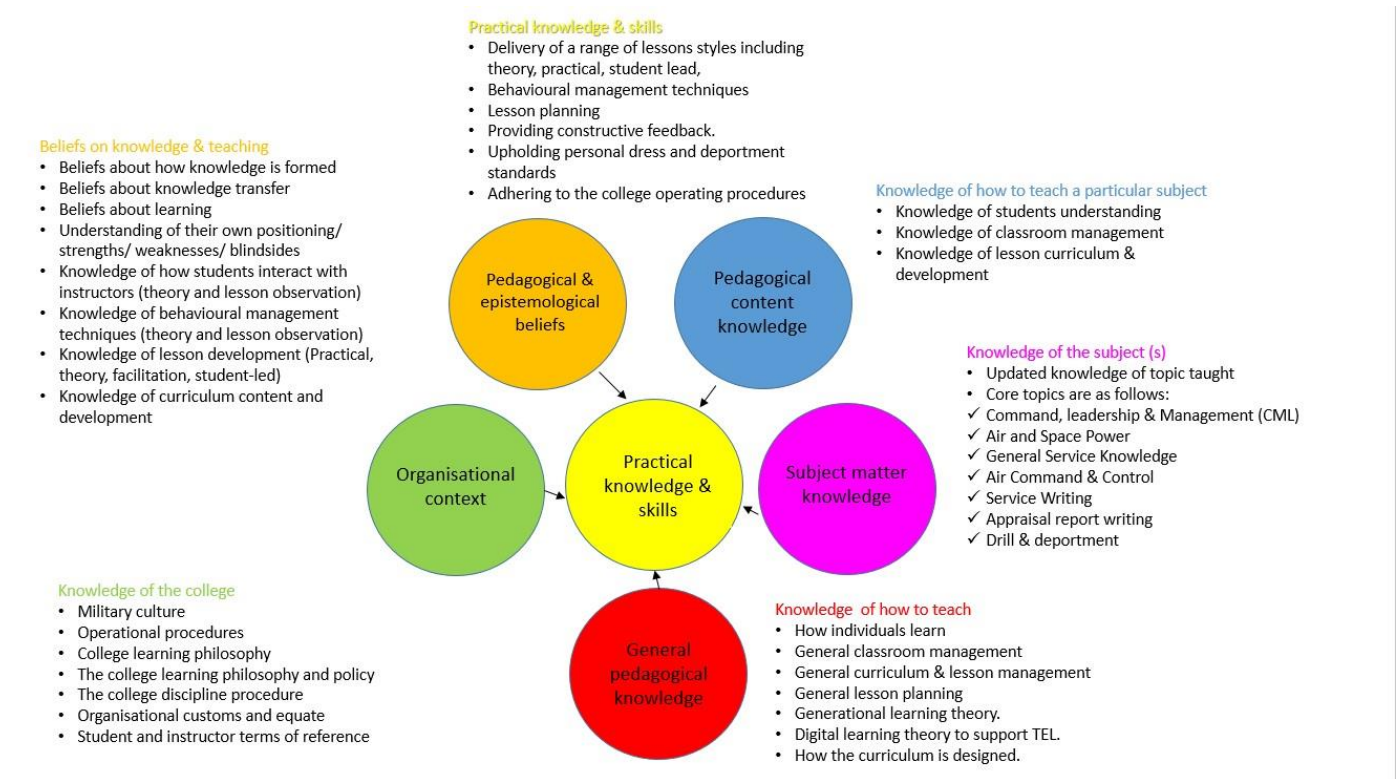
Figure 22 Framework illustrating the knowledge and skills required to promote an adult learning environment in a Phase 1 military unit.

Placing knowledge and skills at the centre of instructional training, underpinned by a substantial body of explicit knowledge, represents a paradigm shift in instructional training, but the College and cadets would benefit from a period of knowledge-setting, where explicit knowledge is made clear, and this may begin to foster a more positive cadet–instructor relationship. In time, this storehouse of explicit knowledge could provide a foundation for both the cadets and instructors to start exploring individually, and start the internalisation and

conversion of explicit knowledge, converting it into tacit organisational knowledge (Nonaka & Konno, 1998). To foster these conversations, trust – and a high level of care among organisational members – is essential to enable knowledge creation, as is a recognition of the role of leaders in promoting these values (Bell DeTienne et al., 2004; Bollinger & Smith, 2001; Goh, 2002; Holsapple & Joshi, 2000; Huang et al., 2008; Zárraga & Bonache, 2003).

Step 6 – Empowering Cadets

Many researchers have urged the need to empower cadets and listen to them more (Blossing, 2005; Fielding, 2001; Rose & Shevlin, 2010), especially when undertaking change initiatives related directly to their time in the classroom. Research has shown that involving learners in the change process and allowing them to voice their opinions or concerns (Rose & Shevlin, 2010) should decrease resistance to change (Giles, 2006). The cadets have a vast knowledge of the intricate workings of the College. From their thousands of interactions with staff and other cadets, they will have created a bank of observations on potential blind spots or opportunities that the Project Mercury team may not be aware of. As demonstrated in this research, the cadets have the maturity, skills and experience to review problematic situations and complicated relationships and provide solutions (Hamzah et al., 2010), but they need to be empowered and listened to (Blossing, 2005). At present, the college appears to deny the cadets the opportunity to develop responsibility, express their social maturity and shape their learning as social actors (Rudduck, Chaplain and Wallace, 1996), but would benefit from finding alternative ways to augment the cadet voice (Fielding, 2001).

In its modern interpretation, the cadet voice predominantly focuses on the design, facilitation and improvement of learning (Mitra, 2004). Interest in a school voice has re-emerged due to a call among progressive educators to review the structures, practices and values that

dominate schooling, which contrast sharply with how young people live today (Rudduck, 2007). The student voice offers teachers important insights into learning, teaching and education from different individuals and groups of expert witnesses (Flutter & Rudduck, 2004). It has the potential to challenge the passive role of cadets whilst redefining cadet–teacher relationships as a joint endeavour in learning (Fielding, 2001). Listening to and learning from cadets' voices requires a shift in how teachers engage with cadets and how they perceive their education (Ngussa et al., 2014). Teachers and cadets have reported that, when cadets are given a voice, their relationships, communication, and learning have improved. Cadets also expressed a more substantial commitment to education and developed a sense of identity as learners (Flutter & Ruddock, 2004).

The College could use the cadet voice to empower cadets in decision-making processes (Mitra & Gross, 2009). One method of augmenting the cadet voice in this specific area is through participatory design projects (Ngussa et al., 2014), and this could be a valuable tool for the Project Mercury team, who could involve the cadets in the design of documents and policies that directly affect them, such as behavioural policy. Their input could increase ownership and agency. Wolk (1998) argues that everyone has a voice; it is not something that can be given, but what we do with it – and to what degree – can be developed.

Project Mercury should carefully consider how it creates a psychologically safe environment in which to solicit opinions and generate an ongoing culture of promoting and listening to cadets' voices to communicate ideas and thoughts. Meaningful cadet involvement means validating and authorising cadets to represent their ideas, opinions, knowledge, and experiences. It can provide opportunities for the cadets to become active participants in their education, including making decisions about what and how they learn and how their learning is

169

assessed (Ngussa et al., 2014). In its most radical form, it can be a cultural shift that opens spaces and minds to the cadets' presence and power (Cook-Sather, 2006).   The introduction of the cadet voice may prompt a flatter communication culture, allowing all members to voice their views and share their knowledge in time and rank permissive settings (Freeman & Calton, 2020).

Step 7 – Promote critically reflective instructor collaboration

A school culture can be defined as the basic assumptions, norms, values, and cultural artefacts shared by school members, which influence their functioning at school (Maslowski, 2001). It strongly influences educational reform in either supporting or impeding the change process (Hennessy et al., 2005). The literature indicates that change is unlikely to be successfully implemented without a positive and collaborative school culture (Ucan, 2016). Cultural barriers, such as cultures of silence and individualism, prevent instructors from collaborating with their colleges. During this research, such barriers were observed when the CSIC prevented pre-service instructors from attending lessons or integrating into college life. This lack of collaboration hindered them from discussing or trying out new practice.

In implementing consistent educational change, collaboration is widely acknowledged to determine school development and successful innovation (Kelchterman, 2004). Bell and Gilbert (1996) suggest that teachers' personal, social and professional development should be considered to ensure that they value collaborative ways of working and initiate collaboration with colleagues. Fullan and Rincon-Gallardo (2016) argue that "social learning and shared meaning are at the centre of school and system success" (p49). This research appeared to indicate that a shared central system does not currently exist at the college: the cadets and staff are left to interpret various college policies and procedures, which has led to confusion and a lack of standardisation. If the college could promote a culture of collectivism that encouraged instructors

to discuss new practice and critically reflect on their instructional skills, it may find support from colleagues in helping to change pedagogical practices (Swafford, 1998).

Promoting a culture of "Team Learning" (Senge, 1990) may improve the individual and team knowledge and skills of both instructors and students (Senge, 2006). This process of gaining access to a larger pool of shared meaning, which cannot be achieved individually (Hedlund et al., 2015), may improve knowledge (Salas et al., 2008), communication skills, decision-making processes and the ability to manage pressure (Hedlund et al., 2015). Team learning is shaped by social influences such as attitudes and team and leadership behaviours (Hackman, 1990; Salanick & Pfeffer, 1978). It is driven by interpersonal perceptions and concerns, and a lack of trust will inhibit experimenting, admitting mistakes or questioning team practices (Hedlund et al., 2015).

Step 8 – Promote multi-professionalism in military instruction

During Cycle 1, the pre-service instructors reported that they were not treated as professionals whilst undertaking the CSIC. In the extension cycle, the experienced instructors said that the instructor's role is not valued as highly as it should be and not rewarded when individuals apply for promotion. To overcome these issues, the College could promote the instructor's role as a dual or multi-professional one. Implementing a robust initial instructional training programme – and a subsequent CPD programme – will highlight the plethora of skills and knowledge that an instructor must hone. In turn, these skills, and the individual's progress towards their mastery, could be articulated in individuals' annual reports. The United States Air Force has introduced a similar system that allows individuals to work towards the rank of Master Instructor. This prestigious qualification is bestowed on individuals who reach the highest level of military instruction.

The College could build a professional development pathway that incorporates civilian qualifications. Individuals could, thus, learn from the civilian education sector whilst achieving a recognised qualification, enhancing their commitment to their instructional role whilst increasing their professional status within the organisation. Thus, they may begin to view themselves as both a military and educational specialist.

In short, to overcome the potential barriers to an adult learning environment, the College must address the change progress through the eight steps illustrated above, whilst balancing the trinity of human factors: people, culture, and the power of vision (Burr, 1998; von Clausewitz, 1989). If the college leadership can balance the vision while simultaneously addressing the people's fears and their resistance (Burr, 1998), it will create a generation of clock-builders rather than time-tellers (Collin & Porras, 1994). Building a clock that continues to tell the time long after the current leader is gone is fundamental to a successful and enduring organisation. This is the very essence of a learning organisation and is what the military should strive to be.

7.2 Contribution to knowledge

This is the first time that Doctoral research been conducted at the College, and the recommendations and models produced will be used to help shape IOT going forward. This research has already had a positive impact: the information disclosed about the breach of safeguarding procedures triggered a climate assessment which identified several issues regarding cadet welfare; these have since been rectified. This research draws together several strands of literature on educational change theory, adult learning theory, pedagogical content knowledge, the changing nature of warfare, professional military education and systems theory. This research has provided several original contributions to understanding.

It is the first time that pre-service instructors pedagogical and epistemological beliefs have been explored within the context of this Armed Force. The exploration of pre-service instructors' beliefs has highlighted a disconnect between the more academic view of a Knowlesian adult learning environment and the current lived reality of a "military learning environment" and the following skills required to facilitate both. Project Mercury has used the data collected on the pre-service instructors' beliefs on the roles and responsibilities of an instructor and data collected on topics that the instructors felt they lack training in to create a new instructional training program. The framework illustrating the knowledge and skills required to promote an adult learning environment in Phase 1 military unit has been shown to both phase 1 and phase 3 training schools. It will inform the basis for their induction packages when they are redesigned later this year. These induction packages will explore the theory of adult learning, generational learning theory and opportunities for instructors to explore their beliefs system. This framework appears to be unique as there has not been a familiar framework developed for phase 1 training in the UK or its allies.

It is also the first time that adult learning has been researched within phase 1 training and the first time the draw and write technique was used within a phase 1 context to elicit an individual's beliefs. The data collected from this research has allowed the College hierarchy to view the training through the Cadets' eyes. It has highlighted a disconnect between the frame of reference of "adult learning" the Cadets held and those of the pre-service instructors. Understanding this disconnect through this research has allowed the Project Mercury team to better align the Cadet, College, and the instructor's vision of an adult learning environment by creating a robust learning philosophy. This is the first time a learning philosophy has been created for phase 1 training for this Armed Force.

The research with the cadets appears to align with Knowles' (1980) principles of adult learning. The cadets clearly articulated their desire to be involved in the learning process, and their previous experiences were relevant. They wanted the learning to relate to their new job role; they could problem-solve and had a desire to learn independently. The findings also appear to align with those of Merriam and Bierema (2014). They found that, for self-directed learning to occur, an andragogical environment must be present to create a psychological climate of mutual respect, trust and collaboration between the cadet and the teacher. Ilonya (2019) indicated that instructors would need to acquire an advanced skill set to efficiently construct and manage OBE classroom activities and continuously reflect on their professional practice to learn and improve. This research identified this to be true.

The Eight steps model to promote an adult learning environment in a military Phase 1 unit appears to be unique as there has not been a familiar framework developed for PME in the UK or its allies, incorporating educational change and Learning Organisational theory. It was shown to the Defence Academy, and they have asked to use it as a planning tool for their educational transformation program, Project Mars, which starts in August 2021. The findings of the research with the instructors also appear to align with work published previously by Shulman (1986), Grossman (1990) and Schon (1983) on the requirement for instructors to process practical knowledge, pedagogical and general pedagogical knowledge. The literature indicated that an understanding of instructors' pedagogical and epistemological beliefs would illustrate these mental representations and improve teachers' professional practice (Penso & Shoham, 2003). Moreover, beliefs serve as functions distinct from teacher knowledge and act as filters in interpreting classroom situations, frames for defining pedagogical problems and guides or standards for action (Fives and Buehl, 2012; Parares, 1992). Pre-service teachers' pedagogical

views are shaped by their personal, educational experiences and align closely with their beliefs about knowledge, how cadets learn and how teachers teach (Ryan et al., 2009). In this research, I found it true that those trained in an adult learning environment identified the constructivist roles and responsibilities of an instructor whilst those taught using more traditional methods identified more didactic elements.

Using the lens of systems theory to view the data, the data collected appeared to align with Senge's (1990) five organisational learning disciplines. The cadets identified a requirement for team learning, and the instructors identified a need for personal mastery in identifying the multiple additional skills needed to deliver OBE. When working with the instructors, I observed the numerous mental models they possessed. The data collected from the intervention appears to align with Piagetian theory (Piaget, 1957), which implies that a powerful way of challenging beliefs or mental modes is to ask individuals to compare their views with others to create dissonance. I fostered an environment that allowed pre-service instructors to challenge their assumptions; as Grieve (2009) suggested, creating dissonance, and holding a mirror up to the inconsistencies in their opinions became a catalyst for promoting cognitive change.

A further unique contribution of this research to knowledge in this sphere was discovering that the length of an individual's career in the Armed Forces appeared to influence their beliefs: those who had served 15 years or more seemed to identify with a more traditional approach. This research also found that those who had served 15 years or more in the military struggled to visualise an adult learning environment or how it could relate to military training. This finding has had a significant impact on the College's recruitment process. The recruitment interview now contains questions relating to adult learning and how cadets may expect to learn. An Educational Psychologist has designed a set of scenario-based questions to explore the

instructor's pedagogical belief system. If an instructor is successful but has not experienced an adult learning environment, the College will arrange for the instructor to visit a HE establishment to observe lessons.

7.3 Extension Projects

There are several extension projects which I would like to undertake post this research. The first would be to build an exercise into the instructor selection process which allowed potential instructors to explore their beliefs on adult learning and assess if they align with the college learning philosophy. This would allow both the potential instructors to assess if they are suitable for the role. The second extension project would be to work alongside the Defence Centre for Training Support, who design the DTTT course, to help them review and update the current course content. The models I have produced could be used as a framework for course development.

References

22 Group. (2017). *Project Mercury Survey, RAF, High Wycombe*

Abdelal, R., Herrera, Y. M., Johnston, A. I., & McDermott, R. (2009). Measuring identity: A guide for social scientists. In *Measuring Identity: A Guide for Social Scientists*. Cambridge University Press. https://doi.org/10.1017/CBO9780511810909

Adler, P. (2001). Market, Hierarchy, and Trust: The Knowledge Economy and the Future of Capitalism. *Organisational Science*, *12*(2).

Adult Learning Inspectorate. (2007). *Safer training Managing risks to the welfare of recruits in the British armed services*.

Adult Learning Inspectorate. (2005). *Safer training Managing risks to the welfare of recruits in the British armed services*.

Ahern, N. R. (2005). Using the Internet to conduct research. In *Nurse researcher*. https://doi.org/10.7748/nr.13.2.55.s7

Aikenhead, G. S. (1984). Teacher decision making: The case of prairie high. *Journal of Research in Science Teaching*, *21*(2). https://doi.org/10.1002/tea.3660210208

Akin, G. (2014). The Term of Andragogy and the Difference between Andragogy and Pedagogy. *Journal of Faculty of Educational Sciences*.

Alfred, M. V. (2000). The Politics of Knowledge and Theory Construction in Adult Education: A Critical Analysis from an Africentric Feminist Perspective. *Adult Education Research Conference*.

Allison, G. (1999). *Essence of Decision: explaining the Cuban Missile Crisis*. Longman.

Al-Qarioti, M. Q. A. (2015). The Impact of Knowledge Management on Organizational Performance: An Empirical Study of Kuwait University. *Eurasian Journal of Business and Management*, *3*(4), 36–54. https://doi.org/10.15604/ejbm.2015.03.04.004

Altfeld, M. F., & Miller, G. J. (1984). Sources of Bureaucratic Influence: Expertise and agenda control. *Journal of Conflict Resolution*, *28*(4). https://doi.org/10.1177/0022002784028004006

Alvesson, M., & Sandberg, J. (2011). Generating research questions through problematisation . *Academy of Management Review* , *36*(2), 247–271.

Amir, N., Freshman, M., Ramsey, B., Neary, E., & Brigidi, B. (2001). Thought–action fusion in individuals with OCD symptoms. *Behaviour Research and Therapy*, *39*(7). https://doi.org/10.1016/S0005-7967(00)00056-5

177

Andersen, S. M., & Cole, S. W. (1990). "Do I know you?": The role of significant others in general social perception. *Journal of Personality and Social Psychology*, *59*(3). https://doi.org/https://doi.org/10.1037/0022-3514.59.3.384

Apple, M. W. (2011). Global crises, social justice, and teacher education. *Journal of Teacher Education*, *62*(2). https://doi.org/10.1177/0022487110385428

Archer, M. S. (2012). *The Reflexive Imperative in Late Modernity*. Cambridge University Press. https://doi.org/10.1017/CBO9781139108058

Argyris, C. (1985). *Action Science, Concepts, methods, and skills for research and intervention*. Jossey-Bass.

Argyris, C. (1999). *On Organizational Learning* (2nd ed.). Blackwell Publishing.

Argyris, C., & Schön, D. A. (1978). *Organizational learning: A theory of action perspective*. Addison-Wesley.

Argyris, C., & Schön, D. (1996). *Organizational Learning II. Theory, Method, and Practice*. Addison-Wesley.

Argyris, C. (1977). Double loop learning in organizations correct errors. *Harvard Business Review*, *September*.

Aspinwall, L. G., & Taylor, S. E. (1997). A stitch in time: Self-regulation and proactive coping. *Psychological Bulletin*, *121*(3). https://doi.org/10.1037/0033-2909.121.3.417

Australian Defence Force. (2017). *Evolving an Intellectual Edge*.

Avant, D. D. (1993). The Institutional Sources of Military Doctrine: Hegemons in Peripheral Wars. *International Studies Quarterly*, *37*(4). https://doi.org/10.2307/2600839

Backett-Milburn, K. (1999). A critical appraisal of the draw and write technique. *Health Education Research*, *14*(3). https://doi.org/10.1093/her/14.3.387

Baier, F., Decker, A., Voss, T., Kleickmann, T., Klusmann, U., & Kunter, M. (2019). What makes a good teacher? The relative importance of mathematics teachers' cognitive ability, personality, knowledge, beliefs, and motivation for instructional quality. *British Journal of Educational Psychology*, *89*(4). https://doi.org/10.1111/bjep.12256

Baldwin, M. W. (1992). Relational schemas and the processing of social information. *Psychological Bulletin*, *112*(3). https://doi.org/10.1037/0033-2909.112.3.461

Bamber, J., & Tett, L. (2000). Transforming the Learning Experiences of Non-traditional Students: A perspective from higher education. *Studies in Continuing Education*, *22*(1). https://doi.org/10.1080/713695715

Bandura, A. (1991). Social cognitive theory of self-regulation. *Organizational Behavior and Human Decision Processes*, *50*(2). https://doi.org/10.1016/0749-5978(91)90022-L

Bandura, A. (1965). Influence of models' reinforcement contingencies on the acquisition of imitative responses. *Journal of Personality and Social Psychology*, *1*(6). https://doi.org/10.1037/h0022070

Barbour, R., & Kitzinger, J. (1999). *Developing Focus Group Research*. SAGE Publications Ltd. https://doi.org/10.4135/9781849208857

Barkawi, T., & Brighton, S. (2011). Powers of War: Fighting, Knowledge, and Critique. *International Political Sociology*, *5*(2). https://doi.org/10.1111/j.1749-5687.2011.00125.x

Barnett, J. M. (2002). Focus Groups Tips for Beginners. TCALL Occasional Research Paper No . 1. *Texas Centre for Adult Literacy and Learning*.

Bass, B. M. (1990). From transactional to transformational leadership: Learning to share the vision. *Organizational Dynamics*, *18*(3), 19–31. https://doi.org/10.1016/0090-2616(90)90061-S

Basten, D., & Haamann, T. (2018). Approaches for Organizational Learning: A Literature Review. *SAGE Open*, *8*(3), 215824401879422. https://doi.org/10.1177/2158244018794224

Basten, D., & Haamann, T. (2018). Approaches for Organizational Learning: A Literature Review. *SAGE Open*, *8*(3). https://doi.org/10.1177/2158244018794224

Bates, T. (2014). *Learning environments: a critical component of the design of online teaching*. Www.Tonybates.Ca.

Bechhofer, F., & Paterson, L. (2012). Principles of research design in the social sciences. In *Principles of Research Design in the Social Sciences*. https://doi.org/10.4324/9780203136720

Becker, H. J., & Riel, M. M. (2000). Teacher Professional Engagement and Constructivist-Compatible Computer Use. In *Irvine: University of California, Centre for …*.

Beling, J., Libertini, L. S., Sun, Z., Masina, V. M., & Albert, N. M. (2011). Predictors for electronic survey completion in healthcare research. *CIN - Computers Informatics Nursing*. https://doi.org/10.1097/NCN.0b013e3182065fbb

Bell DeTienne, K., Dyer, G., Hoopes, C., & Harris, S. (2004). Toward a Model of Effective Knowledge Management and Directions for Future Research: Culture, Leadership, and CKOs. *Journal of Leadership & Organizational Studies*, *10*(4), 26–43. https://doi.org/10.1177/107179190401000403

179

Bell, B., & Gilbert, J. (1996). *Teacher Development: A Model from Science Education*. Falmer Press .

Bellon, J., Bellon, E. ., & Blank, M. A. (1992). *Teaching from a Research Knowledge Base*. Macmillan.

Berliner, C. (1988). *The Development of Expertise in Pedagogy* . American Association of Colleges for Teacher Education.

Berman, P. (1974). *Federal Programs Supporting Educational Change: Berman, P., Implementing and sustaining innovations*.

Bhaskar, R. 1998. *The Possibility of Naturalism: A Philosophical Critique of the Contemporary Human Sciences (Critical Realism: Interventions)*. London: Routledge.

Biesta, G., Priestley, M., & Robinson, S. (2015). The role of beliefs in teacher agency. *Teachers and Teaching*, *21*(6). https://doi.org/10.1080/13540602.2015.1044325

Birnbaum, R. (1988). *How Colleges Work. The Cybernetics of Academic Organisation and Leadership*. Jossey-Bass Publishers.

Blackler, F. (1995). Knowledge, Knowledge Work and Organizations: An Overview and Interpretation. *Organization Studies*, *16*(6). https://doi.org/10.1177/017084069501600605

Blake, N. (2006). *A review of the circumstances surrounding the deaths of four soldiers at Princess Royal Barracks, Deepcut between 1995 and 2002*.

Blaschke, L. M. (2012). Heutagogy and lifelong learning: A review of heutagogical practice and self-determined learning. *The International Review of Research in Open and Distributed Learning*, *13*(1). https://doi.org/10.19173/irrodl.v13i1.1076

Blossing, U. (2005). Should Pupils be Able to Make Decisions About School Change? *Journal of Educational Change*, *6*(4). https://doi.org/10.1007/s10833-005-4178-z

Boëne, B. (1990). How 'unique' should the military be? A review of representative literature & outline of a synthetic formulation. *European Journal of Sociology*, *31*(1). https://doi.org/10.1017/S0003975600005956

Bogdan, R. C., & Biklen, S. K. (1992). *Qualitative Research for Education: An Introduction to Theory and Methods*. Allyn and Bacon.

Bogdan, R., & Biklen, S. (1998). *Qualitative Research for Education: An introduction to theories and methods*. Allyn and Bacon, Inc.

Boisot, M. H. (1998). *Knowledge Assets*. Oxford University Press.

Bolhuis, S., & Voeten, M. J. M. (2001). Toward self-directed learning in secondary schools: What do teachers do? *Teaching and Teacher Education*. https://doi.org/10.1016/S0742-051X(01)00034-8

Bollinger, A. S., & Smith, R. D. (2001). Managing organizational knowledge as a strategic asset. *Journal of Knowledge Management*, *5*(1), 8–18. https://doi.org/10.1108/13673270110384365

Bonner, S. M., Diehl, K., & Trachtman, R. (2020). Teacher belief and agency development in bringing change to scale. *Journal of Educational Change*, *21*(2). https://doi.org/10.1007/s10833-019-09360-4

Borce, L. (2012). *Outcomes Based Training and Education: in the Department of Military Instruction, United States Military Academy* . United States Military Academy .

Borko, H., & Putman, R. (1996). Learning to teach. In D. Berliner & R. Calfee (Eds.), *Handbook of educational psychology* (1st ed., pp. 673–708). MacMillan.

Bowen, G. L., Rose, R. A., & Ware, W. B. (2006). The Reliability and Validity of the School Success Profile Learning Organization Measure. *Evaluation and Program Planning*, *29*(1), 97–104. https://doi.org/10.1016/j.evalprogplan.2005.08.005

Bowling, A. (2002). *Research methods in health*. Open University Press.

Bradding, A., & Horstman, M. (1999). Using the write and draw technique with children. *European Journal of Oncology Nursing*. https://doi.org/10.1016/S1462-3889(99)80801-1

Bridges, D. (1999). Educational Research: pursuit of truth or flight into fancy? *British Educational Research Journal*, *25*(5). https://doi.org/10.1080/0141192990250503

British Educational Research Association (BERA). (2018). *Ethical Guidelines for Educational Research* .

Britten, N., Jones, R., Murphy, E., & Stacy, R. (1995). Qualitative research methods in general practice and primary care. *Family Practice*, *12*(1). https://doi.org/10.1093/fampra/12.1.104

Brookfield, S. D. (1986). *Understanding and facilitating adult learning*. Jossey-Bass.

Bryant, S. E. (2003). The Role of Transformational and Transactional Leadership in Creating, Sharing and Exploiting Organizational Knowledge. *Journal of Leadership & Organizational Studies*, *9*(4), 32–44. https://doi.org/10.1177/107179190300900403

Brydon-Miller, M., & Maguire, P. (2009). Participatory action research: contributions to the development of practitioner inquiry in education. *Educational Action Research*, *17*(1). https://doi.org/10.1080/09650790802667469

Bryk, A., Camburn, E., & Louis, K. S. (1999). Professional Community in Chicago Elementary Schools: Facilitating Factors and Organizational Consequences. *Educational Administration Quarterly*, *35*(5), 751–781. https://doi.org/10.1177/0013161X99355004

Bryk, A., & Schneider, B. (2003). Trust in Schools: A Core Resource for School Reform. *Educational Leadership*, *60*(6).

Buchanan, D., Boddy, D., & McCalman, J. (1988). Getting in, getting on, getting out and getting back. In *Doing Research in Organizations* (pp. 137–155). Routledge .

Buckley, C. A., & Waring, M. J. (2013). Using diagrams to support the research process: Examples from grounded theory. *Qualitative Research*, *13*(2), 148–172. https://doi.org/10.1177/1468794112472280

Builder, C. (1989). *The Masks of War: American Military Styles in Strategy and Analysis: A RAND Corporation*. The Johns Hopkins University Press.

Burkman, E. (1987). Factors Affecting Utilization. In R. Gagne (Ed.), *Instructional technology: Foundations*. Lawrence Erlbaum.

Burns, J. (1987). *Leadership*. HarpPerenM.

Burns, T., & Stalker, G. (1961). *The management of innovation*. Tavistock.

Burr, R. (1998). *Leading Change: The Military as a Learning Organization* [Marine Corps University]. https://www.semanticscholar.org/paper/Leading-Change%3A-The-Military-as-a-Learning-Burr/8fbaff362e1ff149469148f5dbc46693adc741b9

Calhoun, C. (1994). *Social Theory and the Politics of Identity* (1st ed.). Blackwell Publishers .

Cambridge Assessment International Education Teaching and Learning Team. (2020). *Getting started with Peer Observation*. Www.Cambridge-Community.Org.Uk/.

Cannon, M. D., & Edmondson, A. C. (2001). Confronting failure: antecedents and consequences of shared beliefs about failure in organizational work groups. *Journal of Organizational Behavior*, *22*(2). https://doi.org/10.1002/job.85

Cantrell, M. A., & Lupinacci, P. (2007). Methodological issues in online data collection. *Journal of Advanced Nursing*. https://doi.org/10.1111/j.1365-2648.2007.04448.x

Carey, M., & Asbury, J. (2012). *Focus Group Research*. Left Coast Press.

Carey, M. A., & Asbury, J.-E. (2016). *Focus Group Research*. Routledge. https://doi.org/10.4324/9781315428376

Carlson, S. M. (2005). Developmentally Sensitive Measures of Executive Function in Preschool Children. *Developmental Neuropsychology*, *28*(2). https://doi.org/10.1207/s15326942dn2802_3

Carr, W., & Kemmis, S. (1986). *Becoming critical: Education, knowledge and action research*. Falmer.

Catignani, S. (2014). Coping with Knowledge: Organizational Learning in the British Army? *Journal of Strategic Studies*, *37*(1). https://doi.org/10.1080/01402390.2013.776958

Chalmers, D., Manley, D., & Wasserman, R. (2009). *Metametaphysics: New Essays On The Foundations Of Ontology*. Oxford University Press .

Charmaz, K., Denzin, N. K., & Lincoln, Y. S. (2000). Grounded theory: objectivist and constructivist methods. In *Handbook of qualitative research*.

Cheng, H., Niu, M. S., & Niu, K. H. (2014). Industrial cluster involvement, organizational learning, and organizational adaptation: An exploratory study in high technology industrial districts. *Journal of Knowledge Management*, *18*(5). https://doi.org/10.1108/JKM-06-2014-0244

Chicoine, D. (2004). Ignoring the Obvious: A Constructivist Critique of a Traditional Teacher Education Program. *Educational Studies*, *36*(3). https://doi.org/10.1207/s15326993es3603_4

Chiva, R., Ghauri, P., & Alegre, J. (2014). Organizational Learning, Innovation and Internationalization: A Complex System Model. *British Journal of Management*, *25*(4). https://doi.org/10.1111/1467-8551.12026

CHOI, B., POON, S., & DAVIS, J. (2008). Effects of knowledge management strategy on organizational performance: A complementarity theory-based approach. *Omega*, *36*(2), 235–251. https://doi.org/10.1016/j.omega.2006.06.007

Chourides, P., Longbottom, D., & Murphy, W. (2003). Excellence in knowledge management: an empirical study to identify critical factors and performance measures. *Measuring Business Excellence*, *7*(2), 29–45. https://doi.org/10.1108/13683040310477977

Christensen, L., Burke Johnson, R., & Turner, L. (2014). *Research Methods, Design, and Analysis*. Pearson Education.

Ciborra, C. (2002). *The Labyrinths of Information: Challenging The Wisdom of Systems*. Oxford University Press.

Claessens, L., van Tartwijk, J., Pennings, H., van der Want, A., Verloop, N., den Brok, P., & Wubbels, T. (2016). Beginning and experienced secondary school teachers' self- and

student schema in positive and problematic teacher–student relationships. *Teaching and Teacher Education*, *55*. https://doi.org/10.1016/j.tate.2015.12.006

Claessens, L., van Tartwijk, J., Pennings, H., van der Want, A., Verloop, N., den Brok, P., & Wubbels, T. (2016). Beginning and experienced secondary school teachers' self- and student schema in positive and problematic teacher-student relationships. *Teaching and Teacher Education*. https://doi.org/10.1016/j.tate.2015.12.006

Clark, R. E. (1989). When Teaching Kills Learning: Research on Mathemathantics. In H. Mandl, E. De Corte, N. Bennett, & H. Friedrich (Eds.), *Learning and instruction. European Research in an International Context* (Vol. 2). Pergamon.

Clunies-Ross, P., Little, E., & Kienhuis, M. (2008). Self-reported and actual use of proactive and reactive classroom management strategies and their relationship with teacher stress and student behaviour. *Educational Psychology*, *28*(6), 693–710. https://doi.org/10.1080/01443410802206700

Coffey, A., & Atkinson, P. (1996). *Making sense of qualitative data: Complementary research strategies*. Sage Publications.

Cole, N. S. (1990). Conceptions of Educational Achievement. *Educational Researcher*, *19*(3). https://doi.org/10.3102/0013189X019003002

Collin, J., & Porras, J. (1994). *Built To Last: Successful Habits of Visionary Companies*. Harper Business.

Cook, T. (2018). Celebrating, interrogating and critiquing action research: theories and practices across continents, countries and contexts. *Educational Action Research*, *26*(5). https://doi.org/10.1080/09650792.2018.1539319

Cook-Sather, A. (2006). Sound, Presence, and Power: "Student Voice" in Educational Research and Reform. *Curriculum Inquiry*, *36*(4). https://doi.org/10.1111/j.1467-873X.2006.00363.x

Cooley, C. (1902). *Human Nature and the Social Order*. Scribner's.

Cooper, R. (1986). Organization/disorganization. *Social Science Information*, 299–335.

Corbin, A. (2017). Assessing differences in learning styles: Age, gender and academic performance at the tertiary level in the Caribbean. *Caribbean Teaching Scholar* , 67–91.

Cordingley, P. (1999). Constructing and critiquing reflective practice1. *Educational Action Research*, *7*(2). https://doi.org/10.1080/09650799900200089

Cornelius-White, J. (2007). Learner-Centered Teacher-Student Relationships Are Effective: A Meta-Analysis. *Review of Educational Research*, *77*(1). https://doi.org/10.3102/003465430298563

Covey, S. R. (1991). *Principle-centered leadership*. Summit Books.

Creswell, J. (2013). Qualitative, quantitative, and mixed methods approaches. In *Research design*.

Crossan, M. M., & Berdrow, I. (2003). Organizational learning and strategic renewal. *Strategic Management Journal*, *24*(11), 1087–1105. https://doi.org/10.1002/smj.342

Crossan, M. M., Lane, H. W., & White, R. E. (1999). An organizational learning framework: From intuition to institution. *Academy of Management Review*, *24*(3). https://doi.org/10.5465/AMR.1999.2202135

Cushman, K. (2000). Students solving community problems: Serious learning takes on a new look. *Challenge Journal: The Journal of the Annenbery Challenge* , *4*(1).

Daniels, D. H., Kalkman, D. L., & McCombs, B. L. (2001). Young children's perspectives on learning and teacher practices in different classroom contexts: Implications for motivation. *Early Education and Development*, *12*(2). https://doi.org/10.1207/s15566935eed1202_6

Danzfuss, T. . (2012). *The Impact of Organizational Structure on the Performance of Virtual Teams*. University of Pretoria.

Darling-Hammond, L., & Adamson, F. (2010). *Beyond basic skills: The role of performance assessment in achieving 21st century standards of learning* . Stanford University.

Davidson, J. (2010). Lifting the fog of peace: How Americans learned to fight modern war. In *Lifting the Fog of Peace: How Americans Learned to Fight Modern War*. https://doi.org/10.5860/choice.48-5367

Day, C., & Sachs, J. (2004). Professionalism, Performativity and Empowerment: Discourses in the Politics, Policies and Purposes of Continuing Professional Development. In C. Day & J. Sachs (Eds.), *International Handbook on the Continuing Professional Development of Teachers*. Open University Press.

Day, C., & Leithwood, K. (2007). *Successful Principal Leadership In Times Of Change* (C. Day & K. Leithwood (eds.)). Springer Netherlands. https://doi.org/10.1007/1-4020-5516-1

De Vries, S., & Beijaard, D. (2008). Learning in the context of co-creation of educational process. In J. Ax & P. Ponte (Eds.), *Critiquing praxis*. Sense.

De Vries, S., Van De Grift, W. J. C. M., & Jansen, E. P. W. A. (2014). How teachers beliefs about learning and teaching relate to their continuing professional development. *Teachers and Teaching: Theory and Practice*. https://doi.org/10.1080/13540602.2013.848521

Denk, N., Kaufmann, L., & Crater, C. (2012). Increasing the rigour of grounded theory research- a review of the SCM literature. *International Journal of Physical Distribution and Logistics Management* , *42*(9), 742–763.

Denzin, N., & Lincoln, Y. (2011). *The SAGE Handbook of Qualitative Research* (4th ed.). SAGE Publications .

Desimone, L. M. (2009). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. *Educational Researcher*. https://doi.org/10.3102/0013189X08331140

Detert, J. R., & Edmondson, A. C. (2011). Implicit voice theories: Taken-for-granted rules of self-censorship at work. *Academy of Management Journal*. https://doi.org/10.5465/AMJ.2011.61967925

Devlin-Foltz, B. (2010). Teachers for the global age: A call to action for funders. *Teaching Education*, *21*(1). https://doi.org/10.1080/10476210903467032

DfE. (2011). *The Importance of Teaching: Schools White Paper*.

Di Schiena, R., Letens, G., Van Aken, E., & Farris, J. (2013). Relationship between Leadership and Characteristics of Learning Organizations in Deployed Military Units: An Exploratory Study. *Administrative Sciences*, *3*(3). https://doi.org/10.3390/admsci3030143

DiBella, A. (2010). Can the US Army become a learning organisation: a question re-examined. *Joint Forces Quarterly*, *56*, 117–122.

Dimmock, C., & Walker, A. (2005). Educational leadership: Culture and diversity. In *Educational Leadership: Culture and Diversity*. https://doi.org/10.4135/9781446247143

Donnell, L. A., & Gettinger, M. (2015). Elementary school teachers' acceptability of school reform: Contribution of belief congruence, self-efficacy, and professional development. *Teaching and Teacher Education*, *51*. https://doi.org/10.1016/j.tate.2015.06.003

Draper, P. (2001). Handbook of Action Research - Participative Inquiry and Practice</i> edited by Peter Reason and Hilary Bradbury Sage, London, 2001, 509 pages, £69·00, ISBN 0 761 96645   5. *Journal of Advanced Nursing*, *34*(4). https://doi.org/10.1046/j.1365-2648.2001.0668a.x

Drath, W. H., McCauley, C. D., Palus, C. J., Van Velsor, E., O'Connor, P. M. G., & McGuire, J. B. (2008). Direction, alignment, commitment: Toward a more integrative ontology of leadership. *Leadership Quarterly*, *19*(6). https://doi.org/10.1016/j.leaqua.2008.09.003

Du Gay, P. (2000). *In praise of bureaucracy—Weber, organization, ethics.* Sage.

Dufour, J.-M. (1997). Some Impossibility Theorems in Econometrics With Applications to Structural and Dynamic Models. *Econometrica*, *65*(6), 1365. https://doi.org/10.2307/2171740

Duke, D. (2004). *The challenges of educational change*. Pearson/Allyn and Bacon.

Earl, M., & Scott, I. (1999). What Is a Chief Knowledge Officer? *MIT Sloan Management Review*, *40*(2).

Easterby-Smith. (1990). Creating a Learning Organization. *Personnel Review*, *19*(5), 24–28.

Eberle, J. (2009). Heutagogy: What your mother didn't tell you about pedagogy and the conceptual age. *8th European Conference on eLearning 2009, ECEL 2009*.

Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*. https://doi.org/10.2307/2666999

Edmondson, A. C., & Lei, Z. (2014). Psychological Safety: The History, Renaissance, and Future of an Interpersonal Construct. *Annual Review of Organizational Psychology and Organizational Behavior*, *1*(1), 23–43. https://doi.org/10.1146/annurev-orgpsych-031413-091305

Edmondson, A. C., & Lei, Z. (2014). Psychological Safety: The History, Renaissance, and Future of an Interpersonal Construct. *Annual Review of Organizational Psychology and Organizational Behavior*. https://doi.org/10.1146/annurev-orgpsych-031413-091305

Education and Training Foundation. (2014). *Achieving professional potential. Professional standards for teachers and trainers in education and training*. https://www.et-foundation.co.uk/supporting/support-practitioners/professional-standards/

Eisner, E., & Powell, K. (2002). Special Series on Arts-Based Educational Research. *Curriculum Inquiry*, *32*(2). https://doi.org/10.1111/1467-873X.00219

Elliott, J. (2001). *Action research for educational change*. Open University Press.

Elliott, J. (1991). Action research for educational change. In *Developing teachers and teaching*.

Elliott, S. N., Travers, J. F., Kratochwill, T. R., & Littlefield Cook, J. (2000). Educational psychology: Effective teaching, effective learning. In *Educational psychology: Effective teaching, effective learning*.

Ellsworth, R. B., & Ellsworth, J. B. (2010). Editorial: Special issue on spirituality, mental health and wellbeing. *International Journal of Applied Psychoanalytic Studies*, *7*(2). https://doi.org/10.1002/aps.244

Ely, K., Boyce, L. A., Nelson, J. K., Zaccaro, S. J., Hernez-Broome, G., & Whyman, W. (2010). Evaluating leadership coaching: A review and integrated framework. *The Leadership Quarterly*, *21*(4). https://doi.org/10.1016/j.leaqua.2010.06.003

Emory, W., & Cooper, D. (1991). *Business Research Methods*. Irwin.

Eppler, M., & Sukowski, O. (2000). Managing team knowledge: core processes, tools and enabling factors. *European Management Journal*, *18*(3).

Eysenck, H. J., & Lewin, K. (1952). Field Theory in Social Science. *The British Journal of Sociology*. https://doi.org/10.2307/586914

Fadhel, K. (2002). Positivist and Hermeneutic Paradigm, A Critical Evaluation under their Structure of Scientific Practice. *The Sosland Journal*, *21*(28).

Farrell, T. (2005). World culture and military power. *Security Studies*, *14*(3).

Feldman, R. (2007). Parent–Infant Synchrony. *Current Directions in Psychological Science*, *16*(6). https://doi.org/10.1111/j.1467-8721.2007.00532.x

Festinger, L. (1957). *A Theory of cognitive dissonance*. Stanford University Press.

Fielding, M. (2001). Students as Radical Agents of Change. *Journal of Educational Change*, *2*(2). https://doi.org/10.1023/A:1017949213447

Fielding, M. (2001). Beyond the Rhetoric of Student Voice: new departures or new constraints in the transformation of 21st century schooling? *FORUM*, *43*(2). https://doi.org/10.2304/forum.2001.43.2.1

Fielding, M. (2001). Students as Radical Agents of Change. *Journal of Educational Change*, *2*(2). https://doi.org/10.1023/A:1017949213447

Fives, H., & Buehl, M. M. (2012). Spring cleaning for the "messy" construct of teachers' beliefs: What are they? Which have been examined? What can they tell us? In *APA educational psychology handbook, Vol 2: Individual differences and cultural and contextual factors*. American Psychological Association. https://doi.org/10.1037/13274-019

Flutter, J., & Rudduck, J. (2004). *Consulting Pupils: What's in It for School*. Routledge Falmer.

Foley, R. T. (2012). A Case Study in Horizontal Military Innovation: The German Army, 1916-1918. *Journal of Strategic Studies*, *35*(6). https://doi.org/10.1080/01402390.2012.669737

Foley, R. T., Griffin, S., & McCartney, H. (2011). "Transformation in contact": Learning the lessons of modern war. *International Affairs*, *87*(2). https://doi.org/10.1111/j.1468-2346.2011.00972.x

Fontana, A., & Frey, J. H. (2000). The interview: From structured questions to negotiated text. In N. Denzin & Y. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 645–672). Sage.

Fraenkel, J. K., & Wallen, N. E. (2003). *How to design and evaluate research in education*. The McGraw-Hill Company.

Freedman, L., Nagl, J., & Joes, A. J. (2004). Counterinsurgency Lessons from Malaya and Vietnam: Learning to Eat Soup with a Knife. *Foreign Affairs*, *83*(6). https://doi.org/10.2307/20034161

Freeman, S. (1991). Group Facilitation of the Grieving Process With Those Bereaved by Suicide. *Journal of Counseling and Development*, *69*(4). https://doi.org/https://doi.org/10.1002/j.1556-6676.1991.tb01515.x

Freeman, T. E., & Calton, M. A. (2020). Building military learning organizations: many birds, one stone. *Learning Organization*. https://doi.org/10.1108/TLO-12-2019-0181

Freidson, E. (2001). *Professionalism*. University of Chicago Press.

Freidus, H., & Grose, C. (1998). *Implementing Curriculum Change: Lessons from the Field*.

Friedman, A. L. (2013). Continuing professional development: Lifelong learning of millions. In *Continuing Professional Development: Lifelong Learning of Millions*. https://doi.org/10.4324/9780203806166

Fullan, M. (2001). *The new meaning of educational change* (Vol. 3). Teacher College Press.

Fullan, M., & Rincón-Gallardo, S. (2016). Developing high quality education in Canada: the case of Ontario. In F. Adamson, B. Astrand, & L. Darlng-Hammond (Eds.), *Global Education Reform: How Privatization and Public Investment Influence Education Outcomes*. Routledge.

Fullan, M. (1995). The school as a learning organization: Distant dreams. *Theory Into Practice*, *34*(4), 230–235. https://doi.org/10.1080/00405849509543685

Fuller, F., & Brown, O. (1975). Becoming a teacher. In K. Ryan (Ed.), *Teacher Education (74th Yearbook of the National Society for the Study of Education.* (Vol. 2). University of Chicago Press.

Fulmer, R. M., & Keys, J. B. (1998). A conversation with Peter Senge: New developments in organizational learning. *Organizational Dynamics*, *27*(2). https://doi.org/10.1016/s0090-2616(98)90022-5

Gabhainn, S. N., & Kelleher, C. (2002). The sensitivity of the draw and write technique. *Health Education*, *102*(2), 68–75. https://doi.org/10.1108/09654280210418992

Gagné, M. (2009). A model of knowledge-sharing motivation. *Human Resource Management*, *48*(4), 571–589. https://doi.org/10.1002/hrm.20298

Garvin, D. A. (1993). Building a learning organization. Harvard Business Review. *Harvard Business Review*, *71*, 78–91.

Gavrila-Jic, A. (2013). Towards a learner centred approach to teaching English. *PROFESSIONAL COMMUNICATION AND TRANSLATION STUDIES, 6*(1–2).

German, T. (2019). Introduction: Re-visioning war and the state in the twenty-first century. In *International Affairs*. https://doi.org/10.1093/ia/iiz119

Gibbs, A. (1997). *Focus Groups,” Social Research Update Issue 19*.

Giles, C. (2006). Sustaining Secondary School Visions Over Time: Resistance, Resilience and Educational Reform. *Journal of Educational Change*, *7*(3).

Giles, C., & Hargreaves, A. (2006). The Sustainability of Innovative Schools as Learning Organizations and Professional Learning Communities During Standardized Reform. *Educational Administration Quarterly*, *42*(1), 124–156. https://doi.org/10.1177/0013161X05278189

Gill, R. (2006). *Theory and practice of leadership*. Sage Publications Ltd.

Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking Qualitative Rigor in Inductive Research. *Organizational Research Methods*. https://doi.org/10.1177/1094428112452151

Glaser, B. G., & Strauss, A. L. (1967). Grounded theory The discovery of grounded theory. In *International Journal of Qualitative Methods*.

Goh, S. C. (2002). Managing effective knowledge transfer: an integrative framework and some practice implications. *Journal of Knowledge Management*, *6*(1), 23–30. https://doi.org/10.1108/13673270210417664

Goleman, D. (1996). *Emotional Intelligence: Why it can matter more than IQ*. Bloomsbury .

Goodland, J. (1990). *Teachers for our nation's schools*. Jossey Bass.

Gordon, T. (2003). *Teacher effectiveness training* . Three river press .

Górny, A., & Napierała, J. (2016). Comparing the effectiveness of respondent-driven sampling and quota sampling in migration research. *International Journal of Social Research Methodology*. https://doi.org/10.1080/13645579.2015.1077614

Goss, J. D., & Leinbach, T. R. (1996). Focus groups as alternative research practice: Experience with transmigrants in Indonesia. *Area*, *28*(2). https://doi.org/10.2307/20003647

Goulding, C. (1998). Grounded theory: The missing methodology on the interpretivist agenda. *Qualitative Market Research: An International Journal*, *1*(1), 50–57. https://doi.org/10.1108/13522759810197587

Gourlay, S. (2006). Conceptualizing Knowledge Creation: A Critique of Nonaka's Theory. *Journal of Management Studies*, *43*(7), 1415–1436. https://doi.org/10.1111/j.1467-6486.2006.00637.x

Grace, A. P. (1996). Striking a critical pose: andragogy -- missing links, missing values. *International Journal of Lifelong Education*, *15*(5), 382–392. https://doi.org/10.1080/0260137960150506

Gratton, L., Voigt, A., & Erickson, T. (2011). Bridging fault lines in diverse teams. *IEEE Engineering Management Review*, *39*(1), 80–90. https://doi.org/10.1109/EMR.2011.5729976

Greenwood, J. (1998). The role of reflection in single and double loop learning. *Journal of Advanced Nursing*, *27*, 1040–1053.

Grieve, A. M. (2009). Teachers' beliefs about inappropriate behaviour: Challenging attitudes? *Journal of Research in Special Educational Needs*, *9*(3). https://doi.org/10.1111/j.1471-3802.2009.01130.x

Grossman, P. (1990). *The making of a teacher: Teacher knowledge and teacher education*. Teacher College Press.

Grossman, P. L., & Stodolsky, S. S. (1995). Content as Context: The Role of School Subjects in Secondary School Teaching. *Educational Researcher*, *24*(8). https://doi.org/10.3102/0013189X024008005

Grossmann, K., Grossmann, K. E., Fremmer-Bombik, E., Kindler, H., Scheuerer-Englisch, H., & Zimmermann, and P. (2002). The Uniqueness of the Child-Father Attachment Relationship: Fathers' Sensitive and Challenging Play as a Pivotal Variable in a 16-year Longitudinal Study. *Social Development*, *11*(3), 301–337. https://doi.org/10.1111/1467-9507.00202

Grubs, E., & Piantandia, M. (2010). Grounded Theory in Genetic Counselling Research: An Interpretive Perspective. *J Genet Counsel*, *19*(1).

Guba, E., & Lincoln, Y. (1994). Competing paradigms in qualitative research. In N. . Denzin & Y. Lincoln (Eds.), *Handbook of qualitative research*. SAGE Publications.

Haack, S. (2007). *Defending Science, Within Reason: Between Scientism and Cynicism*. Prometheus Books.

Hackman, J. R. (1990). *Groups that work (and those that don't)*. Jossey-Bass.

Hakverdi-Can, M., & Sönmez, D. (2012). Learning how to design a technology supported inquiry-based learning environment. *Science Education International*, *23*(4).

Hall, E., & Moseley, D. (2005). Is there a role for learning styles in personalised education and training? *International Journal of Lifelong Education*, *24*(3). https://doi.org/10.1080/02601370500134933

Halperin, M. (1974). *Bureaucratic Politics and Foreign Policy* (2nd ed.). Brookings Institution.

Hamel, G., & Prahalad, C. (1994). *Competing for the Future*. Harvard Business Review. https://hbr.org/1994/07/competing-for-the-future

Hamilton, S. F., Hamilton, M. A., & Pittman, K. (2004). Principles for youth development. In *The Youth Development Handbook: Coming of Age in American Communities*. https://doi.org/10.4135/9781452232560.n1

Hamre, B. K., & Pianta, R. C. (2001). Early Teacher-Child Relationships and the Trajectory of Children's School Outcomes through Eighth Grade. *Child Development*, *72*(2). https://doi.org/10.1111/1467-8624.00301

Hamzah, M. I., Ismail, A., & Embi, M. A. (2010). The Importance of Student's Views Regarding Educational Change. *Procedia - Social and Behavioral Sciences*, *7*. https://doi.org/10.1016/j.sbspro.2010.10.100

Hanover Research. (2017). *Best practice in building a digital learning environment* .

Hartree, A. (1984). Malcolm Knowles' theory of andragogy: A critique. *International Journal of Lifelong Education*, *3*(3), 203–210.

Harris, R. (2010). *An action research project to promote the teaching of culturally and ethically diverse history on a secondary Postgraduate Certificate of Education history course*. University of Southampton .

Haryono, A. (1990). *Lecturer's perceptions of the conditions that facilitate the adoption and implementation of an instructional innovation introduced through a training program in higher education in Indonesia*. Syracuse University .

Hase, S., & Kenyon, C. (2007). Heutagogy: A child of complexity theory. *Complicity: An International Journal of Complexity and Education, 4*(1), 111–119.

Hasselbladh, H., & Ydén, K. (2019). Why Military Organizations Are Cautious About Learning? *Armed Forces and Society*, *46*(3). https://doi.org/10.1177/0095327X19832058

Hasson, D., & Arnetz, B. B. (2005). Validation and Findings Comparing VAS vs. Likert Scales for Psychosocial Measurements. *International Electronic Journal of Health Education*.

Havelock, R. G., & Zlotolow, S. (1995). *The Change Agent's Guide. Second Edition*. Educational Technology Publications, Inc.

Hawkins, J. D., & Catalano, R. F. (1990). Broadening the Vision of Education: Schools as Health Promoting Environments. *Journal of School Health*, *60*(4). https://doi.org/10.1111/j.1746-1561.1990.tb05433.x

Hayes, J., & Rex, J. (1974). Discovering Sociology: Studies in Sociological Theory and Method. *British Journal of Educational Studies*, *22*(1). https://doi.org/10.2307/3119976

Healy, M., & Perry, C. (2000). Comprehensive criteria to judge validity and reliability of qualitative research within the realism paradigm. *Qualitative Market Research: An International Journal*, *3*(3), 118–126.

Hearn, L., Campbell-Pope, R., House, J., & Cross, D. (2006). *Pastoral Care in Education* .

Hedlund, E., Börjesson, M., & Österberg, J. (2015). Team Learning in a Multinational Military Staff Exercise. *Small Group Research*, *46*(2), 179–203. https://doi.org/10.1177/1046496414568462

Henschke, J. A. (1998). Modeling the preparation of adult educators. *Adult Learning*, *9*(3), 11–14.

Hermanowicz, J. C. (2013). The Longitudinal Qualitative Interview. *Qualitative Sociology*, *36*(2). https://doi.org/10.1007/s11133-013-9247-7

Herr, K., & Anderson, G. L. (2005). *The action research dissertation: A guide for students and faculty*. Sage Publications.

Hill, M., Laybourn, A., & Borland, M. (1996). Engaging with primary-aged children about their emotions and well-being: Methodological considerations. *Children and Society*. https://doi.org/10.1111/j.1099-0860.1996.tb00463.x

Hine, G. S. C. (2013). The importance of action research in teacher education programs. *Issues in Educational Research*, *23*(2 SPL).

Hirak, R., Peng, A. C., Carmeli, A., & Schaubroeck, J. M. (2012). Linking leader inclusiveness to work unit performance: The importance of psychological safety and learning from failures. *Leadership Quarterly*. https://doi.org/10.1016/j.leaqua.2011.11.009

Ho, R. (2006). *Handbook of Univariate and Multivariate Data Analysis and Interpretation with SPSS*. Chapman and Hall/CRC. https://doi.org/10.1201/9781420011111

Hodgkinson, H. (2002). Demographics and Teacher Education. *Journal of Teacher Education*, *53*(2), 102–105. https://doi.org/10.1177/0022487102053002002

193

Holian, R., & Coghlan, D. (2013). Ethical Issues and Role Duality in Insider Action Research: Challenges for Action Research Degree Programmes. In *Systemic Practice and Action Research*. https://doi.org/10.1007/s11213-012-9256-6

Holley, L. C., & Steiner, S. (2005). Safe space: Student perspectives on classroom environment. *Journal of Social Work Education*. https://doi.org/10.5175/JSWE.2005.200300343

Holsapple, C. W., & Joshi, K. D. (2000). An investigation of factors that influence the management of knowledge in organizations. *The Journal of Strategic Information Systems*, *9*(2–3), 235–261. https://doi.org/10.1016/S0963-8687(00)00046-9

Holter, A. C., & Frabutt, J. M. (2012). *Action research in Catholic schools: A step-by-step guide for practitioners* (2nd ed.). Alliance for Catholic Education Press.

Holyoke, L., & Larson, E. (2009). Engaging the adult learner generational mix. *Journal of Adult Education*, *38*(1).

Homayoun, H., & Moghaddam, B. (2007). NMDA Receptor Hypofunction Produces Opposite Effects on Prefrontal Cortex Interneurons and Pyramidal Neurons. *Journal of Neuroscience*, *27*(43). https://doi.org/10.1523/JNEUROSCI.2213-07.2007

Horstman, M., Aldiss, S., Richardson, A., & Gibson, F. (2008). Methodological issues when using the draw and write technique with children aged 6 to 12 years. *Qualitative Health Research*. https://doi.org/10.1177/1049732308318230

Houle, C. . (1996). *The Design of Education*. Jossey-Bass Inc.

Howey, K. R., & Grossman, P. L. (1989). A Study in Contrast: Sources of Pedagogical Content Knowledge for Secondary English. *Journal of Teacher Education*, *40*(5). https://doi.org/10.1177/002248718904000504

Howey, K. R., & Grossman, P. L. (1989). A Study in Contrast: Sources of Pedagogical Content Knowledge for Secondary English. *Journal of Teacher Education*, *40*(5). https://doi.org/10.1177/002248718904000504

Hoy, W. K., Tarter, C. J., & Hoy, A. W. (2006). Academic Optimism of Schools: A Force for Student Achievement. *American Educational Research Journal*, *43*(3), 425–446. https://doi.org/10.3102/00028312043003425

Hoy, W. K., Smith, P. A., & Sweetland, S. R. (2002). The Development of the Organizational Climate Index for High Schools: Its Measure and Relationship to Faculty Trust. *The High School Journal*, *86*(2), 38–49. https://doi.org/10.1353/hsj.2002.0023

Huang, Q., Davison, R. M., & Gu, J. (2008). Impact of personal and cultural factors on knowledge sharing in China. *Asia Pacific Journal of Management*, *25*(3), 451–471. https://doi.org/10.1007/s10490-008-9095-2

Hubbard, R. S., & Power, B. M. (2003). *The art of classroom inquiry: A handbook for teacher-researchers*. Heinemann.

Huber, G. P. (1991). Organizational Learning: The Contributing Processes and the Literatures. *Organization Science*, *2*(1). https://doi.org/10.1287/orsc.2.1.88

Huberman, M. (1996). A critical perspective on the use of templates as evaluation tools. *New Directions for Evaluation*, *1996*(72). https://doi.org/10.1002/ev.1052

Hunter Revell, S. M., & McCurry, M. K. (2010). Engaging Millennial Learners: Effectiveness of Personal Response System Technology with Nursing Students in Small and Large Classrooms. *Journal of Nursing Education*, *49*(5). https://doi.org/10.3928/01484834-20091217-07

Hurley, R. F., & Hult, G. T. M. (1998). Innovation, market orientation, and organizational learning: An integration and empirical examination. *Journal of Marketing*, *62*(3). https://doi.org/10.2307/1251742

Husain, H., Mokri, S. S., Hussain, A., Samad, S. A., & Majid, R. A. (2012). The Level of Critical and Analytical Thinking Skills among Electrical and Electronics Engineering Students, UKM. *Asian Social Science*, *8*(16). https://doi.org/10.5539/ass.v8n16p80

Hussain, I., & Sultan, S. (2010). Analysis of procrastination among university students. *Procedia - Social and Behavioral Sciences*, *5*. https://doi.org/10.1016/j.sbspro.2010.07.385

Iloanya, J. (2019). Preparing the 21st Century Teacher for the Implementation of Outcomes-Based Education: The Practical Reality. *American Journal of Educational Research*, *7*(7). https://doi.org/10.12691/education-7-7-2

Iloanya, J. (2014). Quality Teacher Education in Botswana: A Crucial Requirement for Effective Teaching and Learning. *Literacy Information and Computer Education Journal*, *Special 3*(1). https://doi.org/10.20533/licej.2040.2589.2014.0232

Inkpen, A. C. (1996). Creating Knowledge through Collaboration. *California Management Review*, *39*(1), 123–140. https://doi.org/10.2307/41165879

Izham, M., Hamzah, M., Fuziah, M., & Nordin, N. (2011). School as Learning Organisation: The Role of Principal's Transformational Leadership in Promoting Teacher Engagement. *World Applied Sciences Journal*, *14*.

Jamshed, S. (2014). Qualitative research method-interviewing and observation. *Journal of Basic and Clinical Pharmacy*, *5*(4). https://doi.org/10.4103/0976-0105.141942

Jarvis, P. (1985). *The Sociology of Adult and Continuing Education*. Croom Helm.

Jarvis, P. (2012). *Teaching, Learning and Education in Late Modernity*. Routledge.

Jervis, R. (2019). Perception and Misperception in International Politics. In *Perception and Misperception in International Politics*. https://doi.org/10.2307/j.ctvc77bx3

Johnson, A. P. (2012). Action Research As Master ' S Thesis. *A Short Guide to Action Research (4th Ed)*.

Johnson, B., & Christensen, L. (2012). *Educational Research, Qualitative, Quantitative and Mixed Approach* (4th ed.). SAGE Publication.

Johnson, T. (1972). *Professions and Power*. Palgrave Macmillan.

Johnston, C., & Caldwell, B. (2001). Leadership and organisational learning in the quest for world class schools. *International Journal of Educational Management*, *15*(2), 94–103. https://doi.org/10.1108/09513540110383827

Jones, H. (1998). *Making it happen* (Fontana).

Joseph, L. (2016). *Is your team in "psychological danger"?* World Economic Forum. https://www.weforum.org/agenda/2016/04/team-psychological-danger-work-performance/

Kahn, W. A. (2001). Holding Environments at Work. *The Journal of Applied Behavioral Science*, *37*(3). https://doi.org/10.1177/0021886301373001

Kallinikos, J. (2007). *The consequences of information: Institutional implications of technological change*. Edward Elgar.

Kallinikos, J. (2004). The Social Foundations of the Bureaucratic Order. In *Organization* (Vol. 11, Issue 1). https://doi.org/10.1177/1350508404039657

Kalton, G. (2011). Nonprobability Sampling. In *Introduction to Survey Sampling*. https://doi.org/10.4135/9781412984683.n13

Kang, S. P., Chen, Y., Svihla, V., Gallup, A., Ferris, K., & Datye, A. K. (2020). Guiding change in higher education: an emergent, iterative application of Kotter's change model. *Studies in Higher Education*. https://doi.org/10.1080/03075079.2020.1741540

Kanten, P., Kanten, S., & Gurlek, M. (2015). The Effects of Organizational Structures and Learning Organization on Job Embeddedness and Individual Adaptive Performance. *Procedia Economics and Finance*, *23*, 1358–1366. https://doi.org/10.1016/S2212-5671(15)00523-7

Karmas, C. (2011). School to Work: Using Active Learning to Teach Business Writing. *Online Submission*, *8*(3).

Kärreman, D., & Alvesson, M. (2004). Cages in Tandem: Management Control, Social Identity, and Identification in a Knowledge-Intensive Firm. *Organization*, *11*(1). https://doi.org/10.1177/1350508404039662

Kaurin, P. (2017). *Professional Military Education: What Is It Good For?* Realcleardefense.Com.

Kelchtermans, G. (2004). CPD for professional renewal: moving beyond knowledge for practice. In C. Day & J. Sachs (Eds.), *International Handbook on the Continuing Professional Development of Teachers*. Open University Press.

Kelloway, E. K., & Barling, J. (2000). Knowledge work as organizational behavior. *International Journal of Management Reviews*, *2*(3), 287–304. https://doi.org/10.1111/1468-2370.00042

Kember, D. (2000). *Action learning and action research; Improving the quality of teaching and learning*. Kogan Page .

Kember, D., & Kwan, K. P. (2000). Lecturers' approaches to teaching and their relationship to conceptions of good teaching. *Instructional Science*, *28*(5). https://doi.org/10.1023/A:1026569608656

Kemmis, S., & McTaggart, R. (1988). *The action research planner (3rd ed.)*. Deakin University.

Ketelaar, E., Beijaard, D., Boshuizen, H. P. A., & Den Brok, P. J. (2012). Teachers' positioning towards an educational innovation in the light of ownership, sense-making and agency. *Teaching and Teacher Education*, *28*(2). https://doi.org/10.1016/j.tate.2011.10.004

Khan, M. E., Anker, M., Patel, B. C., Barge, S., Sadhwani, H., & Kohle, R. (1991). The use of focus groups in social and behavioural research: Some methodological issues. In *World Health Statistics Quarterly* (Vol. 44, Issue 3).

Kier, E. (1995). Culture and Military Doctrine: France between the Wars. *International Security*, *19*(4). https://doi.org/10.2307/2539120

Kincheloe, J. (2007). Clarifying the purpose of engaging students as researchers . In D. Thiessen & A. Cook-Sather (Eds.), *International handbook of student experience in elementary and secondary school*. Springer .

Kincheloe, J. L. (2012). Teachers as Researchers: Qualitative inquiry as a Path to Empowerment. In *Teachers as researchers: qualitative inquiry as a path to empowerment*.

King, A. (2013). *The combat soldier. Infantry tactics and cohesion in the twentieth and twenty-first centuries*. OUP.

Kitzinger, J. (1994). The methodology of Focus Groups: the importance of interaction between research participants. *Sociology of Health & Illness*, *16*(1). https://doi.org/10.1111/1467-9566.ep11347023

Kivunja, C., & Kuyini, A. B. (2017). Understanding and Applying Research Paradigms in Educational Contexts. *International Journal of Higher Education*, *6*(5). https://doi.org/10.5430/ijhe.v6n5p26

Klassen, R. M., & Chiu, M. M. (2010). Effects on teachers' self-efficacy and job satisfaction: Teacher gender, years of experience, and job stress. *Journal of Educational Psychology*, *102*(3), 741–756. https://doi.org/10.1037/a0019237

Knowles M. (1988). *The adult learner*. Gulf.

Knowles, M. (1984). *The Adult Learner: A Neglected Species* (3rd ed.). Gulf Publishing.

Knowles, M. (1980). The Modern Practice of Adult Education. *Business*.

Knowles, M. S., Elwood, R., Holton, R. I., & Swanson, A. (1998). *The Adult Learner: The Definitive Classic in Adult Education and Human Resource Development* (5th ed.). Heinemann.

Kodama, M. (2017). Corporate Innovation Based on Holistic Leadership: A Case Study of SoftBank. In *Developing Holistic Leadership*. https://doi.org/10.1108/978-1-78714-421-720171007

Kok, J. A. (2004). Framework for managing knowledge in an enterprise to gain competitive advantage. *SA Journal of Information Management*, *6*(4). https://doi.org/10.4102/sajim.v6i4.351

Kollars, N. A., Muller, R. R., & Santora, A. (2016). Learning to Fight and Fighting to Learn: Practitioners and the Role of Unit Publications in VIII Fighter Command 1943–1944. *Journal of Strategic Studies*, *39*(7). https://doi.org/10.1080/01402390.2016.1214577

König, J., Lammerding, S., & Nold, G. (2016). Teachers' Professional Knowledge for Teaching English as a Foreign Language: Assessing the Outcomes of Teacher Education. *Journal of Teacher Education*, *67*(4).

Kools, M., & Stoll, L. (2017). *What Makes a School a Learning Organisation?* (OECD Educational Working Papers).

Korthagen, F. A. J. (1999). Linking Reflection and Technical Competence: the logbook as an instrument in teacher education. *European Journal of Teacher Education*, *22*(2–3). https://doi.org/10.1080/0261976899020191

Kotter, J. P. (1996). *Leading change*. Harvard Business School Press.

Kotter, J. P. (2007). Leading change: Why transformation efforts fail. In *Harvard Business Review* (Vol. 85, Issue 1). https://doi.org/10.1007/978-1-137-16511-4_7

Krueger, R. (1998). *Analyzing & Reporting Focus Group Results*. SAGE Publications, Inc. https://doi.org/10.4135/9781483328157

Krueger, R. A., & Casey, M. A. (2015). Focus groups: A practical guide for applied research 5th Edition. *Focus Groups: A Practical Guide for Applied Research*.

Krych, A. J., March, C. N., Bryan, R. E., Peake, B. J., Pawlina, W., & Carmichael, S. W. (2005). Reciprocal peer teaching: Students teaching students in the gross anatomy laboratory. *Clinical Anatomy*, *18*(4). https://doi.org/10.1002/ca.20090

Kuhn, T. . (1962). *The Structure of Scientific Revolutions* (1st ed.). University of Chicago Press.

Kunter, M., Klusmann, U., Baumert, J., Richter, D., Voss, T., & Hachfeld, A. (2013). Professional competence of teachers: Effects on instructional quality and student development. *Journal of Educational Psychology*, *105*(3). https://doi.org/10.1037/a0032583

Laio, C., Li, Z., & Gong, Y. (2016). Teacher agency and professional learning in cross-cultural teaching contexts: Accounts of Chinese teachers from international schools in Hong Kong. *Teaching and Teacher Education*, *54*. https://doi.org/10.1016/j.tate.2015.11.007

Lakshman, C. (2007). Organizational knowledge leadership: a grounded theory approach. *Leadership & Organization Development Journal*, *28*(1), 51–75. https://doi.org/10.1108/01437730710718245

Lakshman, C. (2007). Organizational knowledge leadership: A grounded theory approach. *Leadership and Organization Development Journal*, *28*(1). https://doi.org/10.1108/01437730710718245

Lambert, N., & McCombs, B. (1998). *How students learn: Reforming schools through learner-centered education.* (N. M. Lambert & B. L. McCombs (eds.)). American Psychological Association. https://doi.org/10.1037/10258-000

Lather, P. (1986). Research as Praxis. *Harvard Educational Review*, *56*(3). https://doi.org/10.17763/haer.56.3.bj2h231877069482

Lebovic, J. H. (1995). How Organizations Learn: U.S. Government Estimates of Foreign Military Spending. *American Journal of Political Science*, *39*(4). https://doi.org/10.2307/2111659

Lee, M. (2003). A critical analysis of andragogy: The perspective of foreign-born learners. *Adult Learning Theory: A Primer*, 11-16.

Lefebvre, H. (1991). The Production of Space. In *The production of space*. Basil Blackwell . https://doi.org/10.2307/490789

Leicht, T., & Fennell, M. (2001). *Professional Work: A Sociological Approach*. Wiley.

Levin, M., & Martin, A. W. (2007). The praxis of educating action researchers: The possibilities and obstacles in higher education. *Action Research*, *5*(3). https://doi.org/10.1177/1476750307081014

Levinthal, D. A., & March, J. G. (1993). The myopia of learning. *Strategic Management Journal*, *14*(S2), 95–112. https://doi.org/10.1002/smj.4250141009

Levy, J. S. (1986). Organizational Routines and the Causes of War. *International Studies Quarterly*, *30*(2). https://doi.org/10.2307/2600676

Lewin, K. (1951). *Field Theory in Social Science*. Harper and Row.

Lewis, M. E. (2007, April). Developing and practicing participatory action research (PAR) pedagogy in a NYC high school greenhouse project: An insider's narrative inquiry. *Presentation at the AERA Annual Meeting*.

Liao, C., Chuang, S. ., & To, P. L. (2011). How Knowledge Management Mediates The Relationship Between Environment and Organizational Structure. *Journal of Business Research*, *64*.

Lickona, T. (2004). *Character Matters: How to Help Our Children Develop Good Judgment, Integrity, and Other*. James Bennett Pty Ltd.

Liebowitz, J. (1999). Key ingredients to the success of an organization's knowledge management strategy. *Knowledge and Process Management*, *6*(1), 37–40. https://doi.org/10.1002/(SICI)1099-1441(199903)6:1<37::AID-KPM40>3.0.CO;2-M

Lincoln, Y., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage.

Lincoln, Y. S., & Guba, E. G. (1989). Judging the quality of case study reports. In *International Journal of Qualitative Studies in Education* (Vol. 1). SAGE Publications.

Lincoln, Y., & Guba, E. G. 1990. "Judging the Quality of Case Study Reports. Qualitative Studies in Education." *Qualitative Studies in Education* 3 (1).

Lindquist, J. (1978). Social learning and problem-solving strategies for improving academic performance. *New Directions for Institutional Research*, *1978*(20). https://doi.org/10.1002/ir.37019782004

Löbler, H. (2006). Learning entrepreneurship from a constructivist perspective. *Technology Analysis & Strategic Management*, *18*(1). https://doi.org/10.1080/09537320500520460

Lohr, A. L. (2010). *Sampling design and analysis*. Cengage Learning.

Looi, C. K., Sun, D., Seow, P., & Chia, G. (2014). Enacting a technology-based science curriculum across a grade level: The journey of teachers' appropriation. *Computers and Education*, *71*. https://doi.org/10.1016/j.compedu.2013.10.006

Lortie, D. (1975). *Schoolteacher: A Sociological Study*. University of Chicago Press.

Louis, K. S., & Gordon, M. F. (2006). *Aligning student support with achievement goals: The secondary school principal's guide*. Corwin Press.

Louis, K. ., Kruse, S., & Bryk, A. . (1995). Professionalism and community: What is it and why is it important in urban schools? In K. Louis & S. Kruse (Eds.), *Professionalism and community: Perspectives on reforming urban schools*. Corwin.

Lyons, G., Ford, M., & Slee, J. (2014). *Classroom Management: Creating Positive Learning Environments*. Cengage Learning.

Mackenzie, N., & Knipe, S. (2006). Research dilemmas: Paradigms, methods and methodology. *Issues in Educational Research*, *16*(2).

Magee, B. (1985). *Popper*. Fontana.

McGrath, V. (2009). Reviewing the Evidence on How Adult Students Learn: An Examination of Knowles' Model of Andragogy. *Adult Learner: The Irish Journal of Adult and Community Education*.

Malan, S. (2010). The "new paradigm" of outcomes-based education in perspective. *Journal of Family Ecology and Consumer Sciences /Tydskrif Vir Gesinsekologie En Verbruikerswetenskappe*, *28*(1). https://doi.org/10.4314/jfecs.v28i1.52788

Malhotra, N. K. (1996). The impact of the academy of marketing science on marketing scholarship: An analysis of the research published in JAMS. *Journal of the Academy of Marketing Science*, *24*(4). https://doi.org/10.1177/0092070396244001

Malmberg, L.-E., & Hagger, H. (2009). Changes in student teachers' agency beliefs during a teacher education year, and relationships with observed classroom quality, and day-to-day experiences. *British Journal of Educational Psychology*, *79*(4). https://doi.org/10.1348/000709909X454814

March, J. G., & Olsen, J. P. (1983). The New Institutionalism: Organizational Factors in Political Life. *American Political Science Review*, *78*(3). https://doi.org/10.2307/1961840

Marcus, R. D. (2019). Learning 'Under Fire': Israel's improvised military adaptation to Hamas tunnel warfare. *Journal of Strategic Studies*, *42*(3–4). https://doi.org/10.1080/01402390.2017.1307744

Marsh, D., & Stoker, G. (2002). *Theories and methods in political science*. Palgrave.

Marsick, V. J., Volpe, M., & Watkins, K. E. (1999). Theory and Practice of Informal Learning in the Knowledge Era. *Advances in Developing Human Resources*, *1*(3), 80–95. https://doi.org/10.1177/152342239900100309

Maslowski, R. (2001). School Culture and School Performance: An Explorative Study into the Organizational Culture of Secondary Schools and their Effects. In *Twente University Press* (Issue January).

Massey, A. (2011). *Best Behaviour School discipline, intervention and exclusion*.

Mattis, J. (2019). *Call Sign Chaos: Learning to Lead*. Random House.

McGill, M. E., & Slocum, J. W. (1993). Unlearning the organization. *Organizational Dynamics*, *22*(2), 67–79. https://doi.org/10.1016/0090-2616(93)90054-5

McGlynn, A. P. (2005). Teaching millennials, our newest cultural cohort. *Education Digest: Essential Readings Condensed for Quick Review*, *71*(4).

McNamara, C., Baxter, J., & Chua, W. F. (2004). Making and managing organisational knowledge(s). *Management Accounting Research*, *15*(1), 53–76. https://doi.org/10.1016/j.mar.2003.09.001

McNiff, J. (2000). *Action Research in Organisations*. Routledge.

McNiff, J. (2017). *Action Research: All you need to know* (1st ed.). Sage .

McNiff, J. (2013). *Action Research: Principles and Practice*. Routledge.

McNiff, J., & Whitehead, J. (2009). Writing an action research proposal. In *Doing and writing action research*.

McNiff, J., & Whithead, J. (2005). *Action Research for Teachers: A Practical Guide*. David Fulton Publishers.

McNiff, S. (2007). Empathy With the Shadow: Engaging and Transforming Difficulties Through Art. *Journal of Humanistic Psychology*, *47*(3). https://doi.org/10.1177/0022167807302181

McWhirter, J. (2014). The draw and write technique as a versatile tool for researching children's understanding of health and well-being. *International Journal of Health Promotion and Education*. https://doi.org/10.1080/14635240.2014.912123

Mehrabi, J., Jadidi, M., Allameh Haery, F., & Alemzadeh, M. (2013). The Relationship between Organizational Commitment and Organizational Learning (Boroojerd Telecommunication

Company as Case Study). *International Journal of Academic Research in Business and Social Sciences*, *3*(1).

Mercer, N. (2007). *Dialogue and the Development of Children's Thinking*. Routledge. https://doi.org/10.4324/9780203946657

Merriam, S. B., & Bierema, L. L. (2014). *Adult learning: Bridging theory and practice*. Jossey-Bass.

Merriam, S. . (2001). Andragogy and Self-Directed Learning: Pillars of Adult Learning Theory. *Special Issue: The New Update on Adult Learning Theory*, *2001*(89).

Merriam, S. ., & Gernier, R. .(2019). *Qualitative Research in Practice: Examples for Discussion and Analysis* (2nd ed., Vol. 2). Jossey Bass.

Merriam-Webster Dictionary. (2020). *Culture*. Www.Merriam-Webster.Com.

Mertler, C. (2014). *Action Research: Improving Schools and Empowering Educator*. Sage .

Mertler, C. (2017). Action Research: Improving Schools and Empowering Educators. In *Action Research: Improving Schools and Empowering Educators*. https://doi.org/10.4135/9781483396484

Mertler, C. A. (2012). *Action research: Improving schools and empowering educators* . Thousand Oaks, CA.

Mertler, C. ., & Charles, C. M. (2011). *Introduction to educational research*. Pearson Education.

Merton, R. C. (1972). An Analytic Derivation of the Efficient Portfolio Frontier. *The Journal of Financial and Quantitative Analysis*, *7*(4). https://doi.org/10.2307/2329621

Merton, R. K., & Kendall, P. L. (1946). The Focused Interview. *American Journal of Sociology*, *51*(6). https://doi.org/10.1086/219886

Miles, M., & Huberman, A. (1984). Drawing Valid Meaning from Qualitative Data: Toward a Shared Craft. *Educational Researcher*, *13*(5). https://doi.org/10.3102/0013189X013005020

Miles, M., & Huberman, M. (1994). *Qualitative Data Analysis* (2nd ed.). Sage .

Millar, M. M., & Dillman, D. A. (2011). Improving response to web and mixed-mode surveys. *Public Opinion Quarterly*. https://doi.org/10.1093/poq/nfr003

Mills, G. E. (2011). *Action research: A guide for the teacher researcher*. Pearson.

Ministry for Defence. (2013). *Reserves In The Future Force 2020: Valuable And Valued*.

Ministry of Defence. (2018). *UK Regular Armed Forces Continuous Attitude Survey Results 2018*.

Ministry of Defence. (2018). *Mobilising, Modernising & Transforming Defence A report on the Modernising Defence Programme*.

Mitra, D. (2004). The Significance of Students: Can Increasing 'Student Voice' in Schools Lead to Gains in Youth Development. *Teachers College Record*, *106*(4).

Mitra, D. . (2007). Student voice in school reform: from listening to leadership. In D. Thiessen & A. Cook-Sather (Eds.), *International Handbook of Student Experience in Elementary and Secondary School* (pp. 727–744). Springer.

Mitra, D. L., & Gross, S. J. (2009). Increasing Student Voice in High School Reform. *Educational Management Administration & Leadership*, *37*(4). https://doi.org/10.1177/1741143209334577

Moloi, K. C., Gravett, S. J., & Petersen, N. F. (2009). Globalization and its Impact on Education with Specific Reference to Education in South Africa. *Educational Management Administration & Leadership*, *37*(2), 278–297. https://doi.org/10.1177/1741143208100302

Montgomery, S., & Groat, L. (1998). Student learning styles and their implications for teaching. In *Occasional paper* (Vol. 10).

Morgan, D. L. (2007). Paradigms Lost and Pragmatism Regained. *Journal of Mixed Methods Research*, *1*(1). https://doi.org/10.1177/2345678906292462

Morgan, G., & Burrell, G. (2016). *Sociological Paradigms and Organizational Analysis*. Heinemann Educational Books .

Morgan-Owen, D. (2018, July 25). *Approaching a fork in the road: Professional military education and military learning* . Warontherocks.Com.

Morrel-Samuels, P. (2003). Web surveys' hidden hazards: Companies replacing paper surveys with Web-based versions that can dangerously distort the results. In *Harvard Business Review*.

Mulford, B., & Silns, H. (2003). Leadership for Organisational Learning and Improved Student Outcomes—What Do We Know? *Cambridge Journal of Education*, *33*(2), 175–195.

Murphy, P., & Mason, L. (2014). Changing knowledge and beliefs. In *Handbook of educational psychology* (pp. 305–324). Lawrence Erlbaum Associates.

Murray, E. (2002). Challenges in educational research. *Medical Education*, *36*(2). https://doi.org/10.1046/j.1365-2923.2002.01155.x

Myers, M. D., & Newman, M. (2007). The qualitative interview in IS research: Examining the craft. *Information and Organization*, *17*(1). https://doi.org/10.1016/j.infoandorg.2006.11.001

Nassar-McMillan, S. C., & Borders, L. D. (2002). Use of Focus Groups in Survey Item Development. *The Qualitative Report*, *7*(1).

Nesfield-Cookson, B. (1987). *William Blake: Prophet of Universal Brotherhood*. Crucible .

Newton, P., & Burgess, D. (2008). Exploring Types of Educational Action Research: Implications for Research Validity . *International Journal of Qualitative Methods*, *7*(4).

Ngussa, B. M., & Makewa, L. N. (2014). Student Voice in Curriculum Change: A Theoretical Reasoning. *International Journal of Academic Research in Progressive Education and Development*, *3*(3). https://doi.org/10.6007/IJARPED/v3-i3/949

Nielsen, S. C. (2010). *An army transformed: The U.S. army's post-Vietnam recovery and the dynamics of change in military organizations.* (The Letort Papers).

Niemi, R., Kumpulainen, K., & Lipponen, L. (2015). Pupils as active participants: Diamond ranking as a tool to investigate pupils' experiences of classroom practices. *European Educational Research Journal*, *14*(2). https://doi.org/10.1177/1474904115571797

Nonaka, I. (1991). The Knowledge-creating company. *Harvard Business Review*, *5*(1).

Nonaka, I. (1994). A Dynamic Theory of Organizational Knowledge Creation. *Organization Science*, *5*(1). https://doi.org/10.1287/orsc.5.1.14

Nonaka, I. (2001). The knowledge-creating company. In *Harvard Business Review* (Vol. 85, Issues 7–8).

Nonaka, I., & Konno, N. (1998). The Concept of "Ba": Building a Foundation for Knowledge Creation. *California Management Review*, *40*(3), 40–54. https://doi.org/10.2307/41165942

Nonaka, I., Toyama, R., & Konno, N. (2000). SECI, Ba and Leadership: A Unified Model of Dynamic Knowledge Creation. *Long Range Planning*, *33*(1). https://doi.org/10.1016/S0024-6301(99)00115-6

O'Donnell, V. L., & Tobbell, J. (2007). The Transition of Adult Students to Higher Education: Legitimate Peripheral Participation in a Community of Practice? *Adult Education Quarterly*, *57*(4). https://doi.org/10.1177/0741713607302686

OECD. (2009). Creating Effective Teaching and Learning Environments. In *Talis*. https://doi.org/10.1787/9789264068780-en

Ofsted. (2017). *Welfare and duty of care in Armed Forces initial training Ofsted's report to the Minister for Defence People and Veterans*.

Ofsted. (2016). *Welfare and duty of care in Armed Forces initial training Ofsted's report to the Minister for Defence People and Veterans*.

Ofsted. (2015). *Welfare and duty of care in Armed Forces initial training Ofsted's report to the Minister for Defence People and Veterans*.

Ofsted. (2014). *Welfare and duty of care in Armed Forces initial training Ofsted's report to the Minister for Defence People and Veterans*.

Ofsted. (2013). *Welfare and duty of care in Armed Forces initial training Ofsted's report to the Minister for Defence People and Veterans*.

Ofsted. (2012). *Welfare and duty of care in Armed Forces initial training Ofsted's report to the Minister for Defence People and Veterans*.

Ofsted. (2011). *Welfare and duty of care in Armed Forces initial training Ofsted's report to the Minister for Defence People and Veterans*.

Ofsted. (2016). *Welfare and duty of care in Armed Forces initial training Ofsted's report to the Minister for Defence People and Veterans*.

Ogilvie, D. M., & Ashmore, R. D. (1991). Self-with-other representation as a unit of analysis in self-concept research. In R. . Curtis (Ed.), *The relational self: Theoretical convergences in psychoanalysis and social psychology* (pp. 282–314). The Guilford Press.

Olusegun, S. (2015). Constructivism Learning Theory: A Paradigm for Teaching and Learning. *IOSR Journal of Research & Method in Education Ver. I*, *5*(6). https://doi.org/10.9790/7388-05616670

O'Neill, J., Beauvais, L. ., & Scholl, R. . (2001). The Use of Organizational Culture and Structure to Guide Strategic Behavior: An Information Processing Perspective. *The Journal of Behavioral and Applied Management*, *2*(2).

O'Neill, P. (2015). Delivering flexibility through people: Harnessing Human Capability. *Air Power Review*, *18*(1), 66–89.

Ortenblad, A. (2013). *Handbook of Research on the Learning Organization: Ada[tion and Context*. Edward Elgar Press.

Örtenblad, A. (2001). On differences between organizational learning and learning organization. *The Learning Organization*, *8*(3), 125–133. https://doi.org/10.1108/09696470110391211

Oskey, L. (2015). *Outcomes Based Training and Education as the Army Teaching Methodology*. United States Army War College .

O'Toole, P., & Talbot, S. (2011). Fighting for knowledge: Developing learning systems in the Australian Army. *Armed Forces and Society*, *37*(1). https://doi.org/10.1177/0095327X10379731

Pajares, F., & Schunk, D. H. (2002). Self and self-belief in psychology and education: A historical perspective. In *Self and self-belief in psychology and education: A historical perspective* (Aronson, J). Academic Press.

Pajares, M. F. (1992). Teachers' Beliefs and Educational Research: Cleaning Up a Messy Construct. *Review of Educational Research*. https://doi.org/10.3102/00346543062003307

Pan, S. L., & Scarbrough, H. (1998). A Socio-Technical View of Knowledge Sharing at Buckman Laboratories. *Journal of Knowledge Management*, *2*(1), 55–66. https://doi.org/10.1108/EUM0000000004607

Parares, J. (1992). Teachers' Beliefs and Educational Research: Cleaning Up a Messy Construct. *Review of Educational Research*, *62*(3). https://doi.org/https://doi.org/10.3102/00346543062003307

Parry, D., & Taubman, D. (2013). *UCU Whole College Behaviour Management: Final Report*.

Patton, M. Q. (2002). Two Decades of Developments in Qualitative Inquiry: A Personal, Experiential Perspective. *Qualitative Social Work*, *1*(3). https://doi.org/10.1177/1473325002001003636

Paulston, R., & Kaufman, C. (1992). Cuba. In P. Cookson, A. Sadovnik, & S. Semel (Eds.), *International handbook of educational reform* (pp. 85–99). Greenwood Press.

Pearson, E. M., & Podeschi, R. L. (1999). Humanism and Individualism: Maslow and his Critics. *Adult Education Quarterly*, *50*(1), 41–55. https://doi.org/10.1177/07417139922086902

Pedler, M., Burgogyne, J., & Boydell, T. (1997). *The Learning Company: A strategy for sustainable development* (2nd ed.). McGraw-Hill.

Pedler, M., Burgoyne, J., & Boydell, T. (1991). *The Learning Company: A Strategy: A Strategy for Sustainable Development*. McGraw-Hill Education.

Penso, S., & Shoham, E. (2003). Student teachers' reasoning while making pedagogical decisions. *European Journal of Teacher Education*, *26*(3). https://doi.org/10.1080/0261976032000128166

Perrow, C. (1986). *Complex organizations—A critical essay*. Random House.

Perry, C., Reige, A., & Brown, L. (1996). Realism's role among scientific paradigms in marketing research. *Irish Marketing Review*.

Peters, O. (2001). *Learning and teaching in distance education. Analyses and interpretations from an international perspective* (2nd ed.). Kogan Page.

Phillips, E., & Pugh, D. . (2005). *How to Get a PhD-A handbook for students and their supervisors* (4th ed.). McGraw-Hill Education.

Piaget, J. (1954). *The construction of reality in the child.* Basic Books. https://doi.org/10.1037/11168-000

Pianta, R. C., Hamre, B., & Stuhlman, M. (2003). Relationships between teachers and children. In W. . Reynolds & Miller. G.E (Eds.), *Handbook of psychology: Educational psychology* (Vol. 7).

Piper, H., Satterthwaite, J., & Sikes, P. (2013). Changing the Discourse of Education. *Power and Education*, *5*(1). https://doi.org/10.2304/power.2013.5.1.1

Plowright, D., & Barr, G. (2012). An integrated professionalism in further education: a time for phronesis? *Journal of Further and Higher Education*, *36*(1), 1–16.

Polit, D. F., & Beck, C. T. (2006). Essentials of nursing research: methods, appraisal, and utilization. In *Philadelphia, Pa. : Lippincott Williams & Wilkins*. Lippincott Williams & Wilkins. https://doi.org/10.1017/CBO9781107415324.004

Politis, J. D. (2001). The relationship of various leadership styles to knowledge management. *Leadership & Organization Development Journal*, *22*(8), 354–364. https://doi.org/10.1108/01437730110410071

Polkinghorne, D. E. (1995). Narrative configuration in qualitative analysis. *International Journal of Qualitative Studies in Education*. https://doi.org/10.1080/0951839950080103

Pong, S., Hao, L., & Gardner, E. (2005). The Roles of Parenting Styles and Social Capital in the School Performance of Immigrant Asian and Hispanic Adolescents*. *Social Science Quarterly*, *86*(4). https://doi.org/10.1111/j.0038-4941.2005.00364.x

Portfelt, I. S. (2006). The University; A Learning Organization?: An Illuminative Review Based on System Theory. In *Karlstad University Studies*.

Posen, B. (1984). *The sources of military doctrine: France, Britain and Germany between the World Wars.* Cornell University Press.

Potter, J., & Wetherell, M. (1987). *Discourse and Social Psychology Beyond Attitudes and Behaviour*. Sage Publications UK .

Powell, R. A., & Single, M. (1996). Methodology matters-V: Focus groups. *International Journal for Quality in Health Care*, *8*(5).

Prahalad, C. K., & Hamel, G. (2007). Strategy as a field of study: Why search for a new paradigm? *Strategic Management Journal*, *15*(S2), 5–16. https://doi.org/10.1002/smj.4250151002

Prensky, M. (2001). Digital Natives, Digital Immigrants Part 1. *On the Horizon*. https://doi.org/10.1108/10748120110424816

Pridmore, P. J., & Lansdown, R. G. (1997). Exploring children's perceptions of health: Does drawing really break down barriers? *Health Education Journal*. https://doi.org/10.1177/001789699705600302

Pridmore, P., & Bendelow, G. (1995). Images of health: Exploring beliefs of children using the 'draw and write' technique. *Health Education Journal*. https://doi.org/10.1177/001789699505400410

Quinn, D., Amer, Y., Lonie, A., Blackmore, K., Thompson, L., & Pettigrove, M. (2012). Leading change: Applying change management approaches to engage students in blended learning. *Australasian Journal of Educational Technology*, *28*(1). https://doi.org/10.14742/ajet.881

Rabionet, S. E. (2011). How I learned to design and conduct semi-structured interviews: An ongoing and continuous journey. *Qualitative Report*, *16*(2).

Raja, R., & Nagasubramani, P. C. (2018). Impact of modern technology in education. *Journal of Applied and Advanced Research*, *3*(S1). https://doi.org/10.21839/jaar.2018.v3is1.165

Ranieri, M., Bruni, I., & Kupiainen, R. (2018). Digital and Media Literacy in Teacher Education: Findings and Recommendations from the European Project e-MEL. *ITALIAN JOURNAL OF EDUCATIONAL RESEARCH*, *0*(20).

Rennie, D. (2003). Editorial peer review: its development and rationale. *Peer Review in Health Sciences*.

Rice, E. (2011). Reframing Student Outcomes to Develop 21st Century Skills. In *Knowledge Brief*.

Richardson, V. (2003). Constructivist Pedagogy. *Teachers College Record*, *105*(9). https://doi.org/10.1046/j.1467-9620.2003.00303.x

Richardson, V. (1998). How teachers change: What will lead to change that most benefits student learning? *NCSALL Focus on Basics*.

Richter, M. M., Lewis, T. J., & Hagar, J. (2012). the relationship between principal leadership skills and school-wide positive behavior support: An exploratory study. *Journal of Positive Behavior Interventions*, *14*(2). https://doi.org/10.1177/1098300711399097

Rincón-Gallardo, S., & Fullan, M. (2016). Essential features of effective networks in education. *Journal of Professional Capital and Community*, *1*(1), 5–22. https://doi.org/10.1108/JPCC-09-2015-0007

Robinson, C., & Taylor, C. (2007). Theorizing student voice: values and perspectives. *Improving Schools*, *10*(1), 5–17. https://doi.org/10.1177/1365480207073702

Robinson, K. (2007). Sir Ken Robinson: Do schools kill creativity? In *TED Talks*.

Robson, C. (2002). *Real World Research: A Resource for Social Scientists and Practitioner-Researchers*. Blackwell Publishers Ltd.

Rodgers, E. (1995). *Diffusion of Innovation* (4th ed.). The Free Press.

Roehl, A., Reddy, S. L., & Shannon, G. J. (2013). The Flipped Classroom: An Opportunity to Engage Millennial Students Through Active Learning Strategies. *Journal of Family & Consumer Sciences*, *105*(2). https://doi.org/10.14307/jfcs105.2.12

Rogers, K. B. (2007). Lessons learned about educating the gifted and talented: A synthesis of the research on educational practice. In *Gifted Child Quarterly* (Vol. 51, Issue 4). https://doi.org/10.1177/0016986207306324

Rollins, J. A. (2005). Tell me about it: Drawing as a communication tool for children with cancer. *Journal of Paediatric Oncology Nursing*. https://doi.org/10.1177/1043454205277103

Roos, M. (2002). Methods of internet data collection and implications for recruiting respondents. *Statistics Journal of the United Nations, 19*(3).

Rosati, J. A. (1981). Developing a Systematic Decision-Making Framework: Bureaucratic Politics in Perspective. *World Politics*, *33*(2). https://doi.org/10.2307/2010371

Rose, R., & Shevlin, M. (2010). *Count me in! Ideas for Actively Engaging Students in Inclusive Classroom*. Jessica Kingsley Publishers.

Rosen, B., Furst, S., & Blackburn, R. (2007). Overcoming Barriers to Knowledge Sharing in Virtual Teams. *Organizational Dynamics*, *36*(3), 259–273.

Rosen, S. P. (1988). New Ways of War: Understanding Military Innovation. *International Security*, *13*(1).

Rossett, A., & Morse, K. (1986). Andragogy in Action, by Malcom S. Knowles & Associates. *Journal of Instructional Development*, *8*(3), 30–30. https://doi.org/10.1007/BF02906267

Royal Air Force. (2017). *Royal Air Force Strategy: Delivering a World Class Air Force* .

Rubin, H., & Rubin, I. (2005). *Qualitative Interviewing (2nd ed.): The Art of Hearing Data*. SAGE Publications, Inc. https://doi.org/10.4135/9781452226651

Rudduck, J. (2007). Student Voice, Student Engagement, and School Reform. In *International Handbook of Student Experience in Elementary and Secondary School* (pp. 587–610). Springer.

Rudduck, J., Chaplain, R., & Wallace, G. (1996). *School Improvement: What Can Pupils Tell Us? (Quality in Secondary Schools and Colleges Series)*. David Fulton Press.

Rudduck, J. (2007). Student Voice, Student Engagement, And School Reform. In *International Handbook of Student Experience in Elementary and Secondary School*. Springer Netherlands. https://doi.org/10.1007/1-4020-3367-2_23

Ryan, M., Carrington, S., Selva, G., & Healy, A. (2009). Taking a 'reality' check: Expanding pre-service teachers' views on pedagogy and diversity. *Asia-Pacific Journal of Teacher Education*, *37*(2). https://doi.org/10.1080/13598660902804303

Saewyc, E. M., Bauer, G. R., Skay, C. L., Bearinger, L. H., Resnick, M. D., Reis, E., & Murphy, A. (2004). Measuring sexual orientation in adolescent health surveys: Evaluation of eight school-based surveys. *Journal of Adolescent Health*. https://doi.org/10.1016/j.jadohealth.2004.06.002

Salancik, G. R., & Pfeffer, J. (1978). A social information processing approach to job attitudes and task design. In *Administrative science quarterly* (Vol. 23, Issue 2). https://doi.org/10.2307/2392563

Salas, E., DiazGranados, D., Klein, C., Burke, C. S., Stagl, K. C., Goodwin, G. F., & Halpin, S. M. (2008). Does team training improve team performance? A meta-analysis. *Human Factors*, *50*(6). https://doi.org/10.1518/001872008X375009

Sanderse, W. (2013). The meaning of role modelling in moral and character education. *Journal of Moral Education*, *42*(1). https://doi.org/10.1080/03057240.2012.690727

Santos-Vijande, M. L., López-Sánchez, J. Á., & Trespalacios, J. A. (2012). How organizational learning affects a firm's flexibility, competitive strategy, and performance. *Journal of Business Research*, *65*(8). https://doi.org/10.1016/j.jbusres.2011.09.002

Savicevic, D. (2008). Convergence or divergence of ideas on andragogy in different countries. *International Journal of Lifelong Education*, *27*(4), 361–378. https://doi.org/10.1080/02601370802051504

Schatz, S., Fautua, D., Stodd, J., & Reitz, E. (2017). The Changing Face of Military Learning. *The Changing Face of Military Learning*, 78–91.

Scheerens, J., & Blömeke, S. (2016). Integrating teacher education effectiveness research into educational effectiveness models. *Educational Research Review*, *18*. https://doi.org/10.1016/j.edurev.2016.03.002

Schein, E. (2004). *Organizational Culture and Leadership*. Jossey Bass.

Schein, E. (1997). Leadership and Organizational Culture. In R. Beckhard, M. Goldsmith, & F. Hesselbein (Eds.), *The Organization of the Future, Drucker Foundation*. Jossey-Bass Publishers.

Scheurich, J. J. (1995). A postmodernist critique of research interviewing. *International Journal of Qualitative Studies in Education*, *8*(3). https://doi.org/10.1080/0951839950080303

Schlechty, P. C. (2009). *Leading for Learning*. Jossey-Bass. https://doi.org/10.1002/9781118269497

Schleicher, A. (2012). *Preparing Teachers and Developing School Leaders for the 21st Century: Lessons from around the World*. Organisation for Economic Cooperation and Development.

Schleicher, A. (2019). *Schools for 21st-Century Learners: Strong Leaders, Confident Teachers, Innovative Approaches* (International Summit on the Teaching Profession). OECD. https://doi.org/10.1787/9789264313873-en

Schmitt, O. (2017). French Military Adaptation in the Afghan War: Looking Inward or Outward? *Journal of Strategic Studies*, *40*(4). https://doi.org/10.1080/01402390.2016.1220369

Schneider, K., Von Hunnius, J. P., & Basili, V. R. (2002). Experience in implementing a learning software organization. *IEEE Software*, *19*(3). https://doi.org/10.1109/MS.2002.1003453

Schommer, M. (1998). The influence of age and education on epistemological beliefs. *British Journal of Educational Psychology*, *68*(4). https://doi.org/10.1111/j.2044-8279.1998.tb01311.x

Schommer, M. (1998). The influence of age and education on epistemological beliefs. *British Journal of Educational Psychology*, *68*(4). https://doi.org/10.1111/j.2044-8279.1998.tb01311.x

Schon, D. (1983). *The Reflective Practitioner: How Professionals Think in Action*. Basic Books .

Schön, D. . (1983). *The reflective practitioner: how professionals think in action*. Ashgate.

Schön, D. (1987). Educating the Reflective Practitioner. *Educating the Reflective Practitioner*.

Schwalbach, E. (2003). *Value and Validity in Action Research: a guidebook for reflective practitioners*. Scarecrow Press.

Scott, B. (2005). Getting to the Heart of the Matter: Examining the Efficacy of a Whole-School Approach to Behaviour Management. *Kairaranga*, *6*(1).

Seary, K., & Willans, J. (2020). Pastoral Care and the Caring Teacher – Value Adding to Enabling Education. *Student Success*, *11*(1). https://doi.org/10.5204/ssj.v11i1.1456

Senge, P. (1990). *The fifth Discipline: The Art and Practice of the Learning Organization*. Doubleday Currency.

Senge, P. (2012). *Schools That Learn (Updated and Revised): A Fifth Discipline Field book for Educators, Parents, and Everyone Who Cares about Education*. Currency.

Senior, B., & Swailes, S. (2010). Managing Organisational Change. In *SOAS*. University of London.

Serena, C. C. (2011). A revolution in military adaptation: The US Army in the Iraq War. In *A Revolution in Military Adaptation: The US Army in the Iraq War*. https://doi.org/10.1080/13876988.2012.687624

Serenko, A., Bontis, N., & Hardie, T. (2007). Organizational size and knowledge flow: A proposed theoretical link. *Journal of Intellectual Capital*, *8*(4). https://doi.org/10.1108/14691930710830783

Sharkey, S., & Weimer, M. (2003). Learner-Centred Teaching: Five Key Changes to Practice. *Teaching Sociology*, *31*(2). https://doi.org/10.2307/3211318

Shin, H. W., Picken, J. C., & Dess, G. G. (2017). Revisiting the learning organization: How to create it. *Organizational Dynamics*, *46*(1). https://doi.org/10.1016/j.orgdyn.2016.10.009

Shulman, L. (1986). Those Who Understand: Knowledge Growth in Teaching. *Educational Researcher*, *15*(2). https://doi.org/10.3102/0013189X015002004

Shulman, L. S. (1986). Those Who Understand: Knowledge Growth in Teaching. *Educational Researcher*. https://doi.org/10.3102/0013189X015002004

Silins, H. C., Mulford, W. R., & Zarins, S. (2002). Organizational Learning and School Change. *Educational Administration Quarterly*, *38*(5), 613–642. https://doi.org/10.1177/0013161X02239641

Silins, H., & Mulford, B. (2004). Schools as Learning Organisations - Effects on Teacher Leadership and Student Outcomes. *School Effectiveness and School Improvement*, *15*(3–4), 443–466. https://doi.org/10.1080/09243450512331383272

Simon, H. A. (1997). *Administrative behaviour: A study of decision-making processes in administrative organization*. Free Press.

Smithson, J. (2000). Using and analysing focus groups: Limitations and possibilities. *International Journal of Social Research Methodology*, *3*(2).

Smola, K. W., & Sutton, C. D. (2002). Generational differences: Revisiting generational work values for the new millennium. *Journal of Organizational Behaviour*, *23*, 363–382.

Snyder, J. (2016). *Learning organization models and their application to the US Army*.

Sobh, Rana, and Chad Perry. 2006. "Research Design and Data Analysis in Realism Research." *European Journal of Marketing* 40 (11/12): 1194–1209.

Sobat, T. (2003). Observations of constructivist teaching: A comparison of methods used in introductory and advanced instruction. *Transactions of ID*, *705*(1), 1–8.

Spady, W. G. (1994). Outcome-Based Education: Critical Issues and Answers. In *Journal of Adolescent Health Care* (Vol. 7, Issue 1). ERIC Clearinghouse.

Spilt, J. L., Koomen, H. M. Y., & Thijs, J. T. (2011). Relationships, Teacher Wellbeing: The Importance of Teacher–Student. *Educational Psychology Review*, *23*.

Srivastava, A., Bartol, K. M., & Locke, E. A. (2006). Empowering Leadership in Management Teams: Effects on Knowledge Sharing, Efficacy, And Performance. *Academy of Management Journal*, *49*(6), 1239–1251. h

Stake, R.. (1995). *The Art of Case Study Research*. Thousand Oaks, CA.

Starkey, L. (2010). Teachers' pedagogical reasoning and action in the digital age. *Teachers and Teaching*, *16*(2).

Statham, G. (2013). Mental Causation and Ontology, by Gibb S. C., Lowe E.J., and Ingthorsson R. D. (eds). *Australasian Journal of Philosophy*, *91*(4).

Stokes, D., & Bergin, R. (2006). Methodology or "methodolatry"? An evaluation of focus groups and depth interviews. *Qualitative Market Research*, *9*(1).

Stoll, L., Fink, D., Earl, L., & Earl, L. (2003). *It's about Learning (and It's about Time)*. Routledge.

Strain, M. (2000). Schools in a Learning Society. *Educational Management & Administration*, *28*(3), 281–298. https://doi.org/10.1177/0263211X000283004

Strauss, A & Corbin, J. (1998). *Basics of Qualitative Research*. Sage.

Strauss, A. L. (1987). *Qualitative Analysis for Social Scientists*. Cambridge University Press. https://doi.org/10.1017/CBO9780511557842

Stringer, C., & Brauer, G. (1994). Methods, Misreading, and Bias. *American Anthropologist*, *96*(2). https://doi.org/10.1525/aa.1994.96.2.02a00080

Stringer, E. (2010). Action Research in Education. In *International Encyclopaedia of Education*. Elsevier. https://doi.org/10.1016/B978-0-08-044894-7.01531-1

Stroup, T. (1996). Leadership and Organizational Culture: Actions Speak Louder than Words. *Military Review*, *1*.

Stürmer, K., & Seidel, T. (2015). Assessing Professional Vision in Teacher Candidates. *Zeitschrift Für Psychologie*, *223*(1). https://doi.org/10.1027/2151-2604/a000200

Sugai, G., & Horner, R. . (2009). Responsiveness-to-intervention and School-wide Positive Behavior Supports: Integration of Multi-tiered System Approaches. *Exceptionality*, *17*(4). https://doi.org/10.1037/11886-000

Sullivan, G. (1996). *The Collected Works of the Thirty-second Chief of Staff, United States Army, June 1991- June 1995*. US Department of the Army.

Swafford, J., Maltsberger, A., Button, K., & Furgerson, P. (1997). Peer Coaching for Facilitating Effective Literacy Instruction. In K. Kinzer, K. Hinchman, & D. Leu (Eds.), *Inquiries in Literacy Theory and Practice*. National Reading Conference.

Swafford, J. (1998). Teachers supporting teachers through peer coaching. *Support for Learning*, *13*(2), 54–58. https://doi.org/10.1111/1467-9604.00058

Tarter, C. J., Bliss, J. R., & Hoy, W. K. (1989). School Characteristics and Faculty Trust in Secondary Schools. *Educational Administration Quarterly*, *25*(3), 294–308. https://doi.org/10.1177/0013161X89025003005

Taylor, E. W., & Laros, A. (2014). Researching the Practice of Fostering Transformative Learning. *Journal of Transformative Education*, *12*(2), 134–147. https://doi.org/10.1177/1541344614548589

Teece, D. J. (1998). Research Directions for Knowledge Management. *California Management Review*, *40*(3), 289–292. https://doi.org/10.2307/41165957

Tennant, J. P., & Ross-Hellauer, T. (2020). The limitations to our understanding of peer review. *Research Integrity and Peer Review*, *5*(1). https://doi.org/10.1186/s41073-020-00092-1

Terhart, E. (2013). Teacher resistance against school reform: reflecting an inconvenient truth. *School Leadership & Management*, *33*(5). https://doi.org/10.1080/13632434.2013.793494

Tham, M. (2019, April 11). *Why A Digital Learning Strategy Is Crucial for Success*? Elearningindustry.Com.

The Defence Committee. (2005). *Duty of Care. Third Report of Session 2004–05*.

The Department of Defense of the United States of America. (2018). *Summary of the 2018 National Defense Strategy of the United States of America.*

The glossary of educational reform. (2013, August 28). *Learning Environment.* Www.Edglossary.Org.

Thomas, D. R. (2006). A General Inductive Approach for Analyzing Qualitative Evaluation Data. *American Journal of Evaluation*. https://doi.org/10.1177/1098214005283748

Thornton, R. (2019). *Professional Military Education in the United Kingdom: An Asset Ignored*. Defence In Depth: Research from the Defence Studies Department, King's College London.

Torbet, J. (1979). Neutron scattering study of the solution structure of bacteriophages Pf1 and fd. *FEBS Letters*, *108*(1). https://doi.org/10.1016/0014-5793(79)81179-5

Tourangeau, R., & Yan, T. (2007). Sensitive questions in surveys: Consequences of asking sensitive questions. *Psychological Bulletin*, *133*, *859–883*, 859–883.

Tuning Africa Project. (2014). *Tuning and Harmonisation of Higher Education: The African Experience*. University of Deusto, Nuffic/ Tuning Association.

Turner, J. H. (1975). Marx and Simmel Revisited: Reassessing the Foundations of Conflict Theory. *Social Forces*, *53*(4). https://doi.org/10.2307/2576477

Tschannen-Moran, M., & Hoy, W. (1998). Trust in schools: a conceptual and empirical analysis. *Journal of Educational Administration*, *36*(4), 334–352. https://doi.org/10.1108/09578239810211518

Ucan, S. (2016). The role of continuous professional development of teachers in educational change: A literature review. *Harran Education Journal*, *1*(1). https://doi.org/10.22596/2016.0101.36.43

Ulla, S. (2018, March). *Importance of Policies in School Education Ecosystem*. Linkedin.Com.

van Creveld, M. (1985). *Command in war*. Harvard University Press.

216

Van Manen, M. (1990). *Researching lived experience: Human science for an action sensitive pedagogy*. Althouse Press.

Vandergriff, D. (2010). Today's Training and Education (Development) Revolution: The Future is Now. *The Land Warfare Papers, 76*.

Vaughn, S., Schumm, J. S., & Sinagub, J. (1996). *Focus Group Interviews in Education and Psychology*. SAGE Publications, Inc. https://doi.org/10.4135/9781452243641

Veisi, M., Veisi, K., & Hasanvand, H. (2012). The Effect of Organizational Culture on Organizational Structure (Case Study of Refah Banks Branches in Kermanshah City). *Journal of Basic and Applied Scientific Research*, *2*(4).

Villani, J., & Pacca, J. Van. (1990). Spontaneous reasoning of graduate students. *International Journal of Science Education*, *12*(5). https://doi.org/10.1080/0950069900120510

Visser, M. (2016). Organizational learning capability and battlefield performance: The British Army in World War II. *International Journal of Organizational Analysis*, *24*(4). https://doi.org/10.1108/IJOA-09-2014-0802

Vogels, R. (2009). *Happy to be teaching? Secondary teachers on their work*. Sociaal en Culturell Planbureau.

Von Bertalanffy, L. (1938). A QUANTITATIVE THEORY OF ORGANIC GROWTH (INQUIRIES ON GROWTH LAWS. II). *Human Biology*, *10*(2).

von Clausewitz, C. (1989). *On War* (M. Howard & P. Paret (eds.)). Princeton University Press.

Voss, C., Johnson, M., & Godsell, J. (2015). Revisiting case research in Operations Management. *EurOMA 2015*.

Wagner, T. (2010). *The Global Achievement Gap: Why our best schools don't teach the new survival skills our children need - and what we can do about it.* Basic Books.

Wang, L. (2011). Designing and implementing outcome-based learning in a linguistics course: A case study in Hong Kong. *Procedia - Social and Behavioural Sciences*, *12*. https://doi.org/10.1016/j.sbspro.2011.02.004

Wanless, S. B. (2016). The Role of Psychological Safety in Human Development. *Research in Human Development*. https://doi.org/10.1080/15427609.2016.1141283

Watkins, K. E., & Marsick, V. J. (1993). Sculpting the learning organization: Lessons in Art and Science of Systemic Change. *Eric Ed365852*, *6*(4).

Watts, B., & Murray, W. (1996). Military Innovation in Peacetime. In A. Millett & M. Williamson (Eds.), *Military Innovation in the Interwar Period*. Cambridge University Press.

Wayan Widana, I. (2020). The Effect of Digital Literacy on the Ability of Teachers to Develop HOTS-based Assessment. *Journal of Physics: Conference Series*, *1503*.

Weinstein, C. (1998). "I want to be nice, but I have to be mean": Exploring prospective teachers' conceptions of caring and order. *Teaching and Teacher Education*, *14*(2).

Wells, F. O. (1994). Management of research misconduct-in practice. *Journal of Internal Medicine*, *235*(2). https://doi.org/10.1111/j.1365-2796.1994.tb01044.x

Wentzel, K. R. (2003). Sociometric Status and Adjustment in Middle School: A Longitudinal Study. *The Journal of Early Adolescence*, *23*(1). https://doi.org/10.1177/0272431602239128

Westheimer, J. (1999). Communities and Consequences: An Inquiry into Ideology and Practice in Teachers' Professional Work. *Educational Administration Quarterly*, *35*(1), 71–105.

Wetton, N. ., & McWhirter, J. . (1998). Image Based Research and Curriculum Development in Health Education. In J. Prosser (Ed.), *Image Based Research- A Source Book for Qualitative Researchers* (pp. 263–283). Farmer Press.

Wharton, C. M., Hampl, J. S., Hall, R., & Winham, D. M. (2003). PCs or paper-and-pencil: Online surveys for data collection. *Journal of the American Dietetic Association*.

Whitehead, J. (1989). Using a living theory methodology in improving practice and generating educational knowledge in living theories. *Educational Journal of Living Theories*, *1*(1).

Whitehead, L. (2007). Methodological and ethical issues in Internet-mediated research in the field of health: An integrated review of the literature. *Social Science and Medicine*.

Wigston, M. (2019). *Report on Inappropriate Behaviours*.

Wikgren, Marianne. 2005. "Critical Realism as a Philosophy and Social Theory in Information Science?" Edited by Birger Hjørland. *Journal of Documentation* 61 (1): 11–22.

Wilkinson S. (2004). Focus group research. In Silverman D (Ed.), *Qualitative Research: Theory, Method, Practice*. Sage.

Williams, A., & Katz, L. (2001). The use of focus group methodology in education: Some theoretical and practical considerations. *International Electronic Journal for Leadership in Learning*, *5*.

Wolk, S. (1998). *A Democratic Classroom*. Heinemann.

Wong, P., & Chi-Keung Cheung, A. (2009). Managing the process of an educational change. *International Journal of Educational Management*, *23*(1).

Wrench, A., & Garrett, R. (2012). Identity work: stories told in learning to teach physical education. *Sport, Education and Society*, *17*(1).

Wubbels, T., Brekelmans, M., den Brok, P., Wijsman, L., Mainhard, T., & Van Tartwijk, J. (2014). Teacher-student relationships and classroom management. In *Handbook of Classroom Management*.

Xu, L. (2012). The role of teachers' beliefs in the language teaching-learning process. *Theory and Practice in Language Studies*, *2*(7). https://doi.org/10.4304/tpls.2.7.1397-1402

Yakhlef, A. (2002). Towards a discursive approach to organisational knowledge formation. *Scandinavian Journal of Management*, *18*(3), 319–339.

Yang, B., Watkins, K. E., & Marsick, V. J. (2004). The construct of the learning organization: Dimensions, measurement, and validation. *Human Resource Development Quarterly*, *15*(1), 31–55.

Yeung, K.-T., & Martin, J. L. (2003). The Looking Glass Self: An Empirical Test and Elaboration. *Social Forces*, *81*(3).

Yin, R. . (1994). *Case Study Research*. SAGE Publications.

Youde, A. (2018). Andragogy in blended learning contexts: effective tutoring of adult learners studying part-time, vocationally relevant degrees at a distance. *International Journal of Lifelong Education*, *37*(2), 255–272.

Zaltman, G., & Duncan, R. (1977). *Strategies for Planned Change*. Wiley.

Zárraga, C., & Bonache, J. (2003). Assessing the team environment for knowledge sharing: an empirical analysis. *The International Journal of Human Resource Management*, *14*(7), 1227–1245.

Zullig, K. J., Huebner, E. S., & Patton, J. M. (2011). Relationships among school climate domains and school satisfaction. *Psychology in the Schools*, *48*(2).

Ministry of Defence. (2017). *Joint Concept Note 1/17 Future Force Concept*. https://www.mendeley.com/viewer/?fileId=1d245d7d-3b6d-f1e5-2d02-2c5a4574c277&documentId=cca9fde2-6bf3-36a9-ab69-e8a7dd33b0f2

Appendices

Appendix A   Research information sheet

Student:	Jill Matterface
Email:	j.matterface@pgreading.ac.uk
Supervisor:	Dr Geoff Taggart
Email:	g.taggart@reading.ac.uk

University of Reading

Head of Establishment information sheet

I would like to invite you to take part in a research study to promote an andrological approach to learning in a military phase one environment.

What is the study?
This research will form the basis of a thesis for a Doctorate in Education which I am undertaking at the Institute of Education, University of Reading.

Why has OACTU been chosen to take part?
OACTU has been invited to take part in the project as the data collected will be used to help inform the learning strategy and subsequent leaning resources for the Project MERCURY rewrite.

Does OACTU have to take part?
It is entirely up to you whether you give permission for the establishment to participate. You may also withdraw your consent to participation at any time during the project, by contacting me at the email address above.

What happens if I change my mind about taking part?
You can change your mind at any time without any repercussions. If choose to and subsequently change your mind you may withdraw at any time during the project by contacting myself or my supervisor on the above email addresses.

What will happen if you agree to your establishment taking part?
With your agreement, participation would involve all students completing a questionnaire and a Small selection of students taking part in a recorded interview.

What are the advantages of taking part?
The data collected during this research will be used to help inform the learning strategy and subsequent leaning resources for the Project MERCURY rewrite.

What are the risks of taking part?
The information given will remain confidential and will only be seen by myself and my supervisor. OACTU and individuals will not be identified in the final report. Some of the responses will be used in anonymised form.

What will happen to the data?
Data collected will be held in strict confidence and no names will be used in this study or any subsequent publications. The records of this study will be kept private and there will be no identifying links to you in the study. Records will be stored securely in a locked filing cabinet and on a password-protected computer and myself and my supervisor will have access. The data will be destroyed securely after 5 years. The data will be presented in my final report and potentially in subsequent academic publications.

Who has reviewed the study?
This application has been reviewed following the procedures of the University Research Ethics Committee and has been given a favourable ethical opinion for conduct. The University has the appropriate insurances in place. Full details are available on request

Where can I get further information?

If you would like further information, please contact Jill Matterface on 07929011997 or email: j.matterface@pgreading.ac.uk.

222

Student:	Jill Matterface
Email:	j.matterface@pgreading.ac.uk
Supervisor:	Dr Geoff Taggart
Email:	g.taggart@reading.ac.uk

University of Reading

What happens if something goes wrong?

In the unlikely case of concern or complaint, you can contact Dr Geoff Taggart at University of Reading by phone on 01183782643 or by email on g.taggart.ac.uk.

Thank you for your time. Please complete the attached consent form if you wish to participate.

Yours Sincerely,

Jill Matterface

Appendix B   Form to gain permission to record interviews.

Project title:

An action research project to promote a 21st century adult learning environment in a Phase 1 military training unit.

Consent Form

- I have read the Information sheet about the project.
- I understand what the purpose of the project is and what you want me to do. All my questions have been answered.
- I agree to take part in this project.
- I understand that it is my choice to help with this project and that I can stop at any time, without giving a reason and that it will not have any effect on my grades or career.
- I have received a copy of this Consent Form and Information Sheet.

Please tick as appropriate:

- I consent to participating in an interview. ☐
- I consent to the interview being recorded. ☐
- I consent to the use of anonymised draw and writes in subsequent publications ☐
- I consent to the use of anonymised quotes in subsequent publications. ☐

Signed:

Dated:

225

Appendix C   Copy of the reconnaissance phase questionnaire

OACTU Trainee Survey

Age

1. Please select which of the following best describes your age group:

☐	Under 21
☐	21-30
☐	31-40
☐	41-50
☐	51-60
☐	60+

Gender

2. Please select which gender you identify with:

☐	Male
☐	Female
☐	Other

Ethnicity

3. Please select which ethnic group you identify with:

☐	White
☐	Mixed/ multiple ethnic groups
☐	Asian/ Asian British
☐	Black/ African / Caribbean/ Black British
☐	Other

Education

4. Please select the highest level of qualifications you have attained:

☐	A-Level or equivalent (VCE's/ Higher School Certificate/ Diploma)
☐	Degree or equivalent (BA, BSc, Level 6 Award, Level 6 Certificate, Level 6 Diploma, Level 6 NVQ)

	Postgraduate Degree or equivalent (MA, MBA, Level 7 Award, Level 7 Certificate, Level 7 Diploma, Level 7 NVQ)
	Other (please specify):

Previous Military Service

5. Please detail below the number of years' service you have completed in the military. Please do not include any time in the University Air Squadron or Air Cadets but do include any time which you may have spent as a Full-Time Reservist.

Adult Learning Environment

6. In your opinion, does OACTU currently have an adult learning environment?
The principles of an adult learning environment can be defined as.

- Adults are involved in the planning and evaluation of their instruction
- Experience (including mistakes) provides the basis for the learning activities
- Problem centred rather than content orientated
- Subjects have immediate relevance and impact on their job or lives

	Yes
	No

Current Barriers to Learning

7. Do you feel there are any barriers, currently in place at OACTU which stop you from learning the way in which you would like to?

	Yes
	No

8. If appropriate, please detail any barriers to learning. Please give as much detail as possible.

Appendix D   Reconnaissance phase draw and write task sheet

Draw and Write Exercise

In this pack you should find a packet of colouring pencils and a sheet of paper entitled "Current barriers to Learning." On this sheet of paper please illustrate the following:

Current barriers to Learning
Please illustrate any barriers which you perceive are in place at OACTU that would hinder your ideal learning environment. Please feel free to illustrate this in a medium you feel comfortable. Please be as open, honest, and creative as possible.

Please feel free illustrate your thoughts through any medium which you feel comfortable with. There are some examples below, but these are not exhaustive. Please feel free to be as creative, imaginative, and colourful as you wish.

My working definition of learning environment is as follows.

"Learning environment can refer to an educational approach, cultural context, or physical setting in which teaching, and learning occur"

Please do not constrain your thinking to the physical, cultural, local, or organisational constraints which may currently be in place. Please think outside the box and be honest with your feedback. Examples of how you could illustrate your ideal learning environment:
- Bullet points
- Flow diagram
- Drawing
- Poem
- Song
- Spider diagram
- A list

Thank you for taking the time to complete this piece of research.

Kind Regards,

Jill Matterface

Page Break

230

Appendix E	Pictures of the cadets' notes from the focus group

"Judging a fish to climb up a tree"
intimidates cadets "Or Greyman".

Curriculum

-into change
can't question
it.

What

'Course reputation'.

- Relevance?
- what is aim HQ?
- consistent FP into realistic

Would dog what is he
standard?
CD
JMCl - more valuable
no cumulative build.

Structured
to teachers
skill at aims

"Fear"
- lack of trust - it won't bite me
- Promises of confidentiality - Broken.
- Staff fuck up & cadets get it in the neck.
- foundation of chop culture.
- Single cadets out
- Targets on back.
  Because
- Who would look at this poorly?
- loose support structure
- NOA abused.
- DAY (only time you hear you not pass.
- NOA - cadets don't need to know.
- Not for foot parade - NOA or foodparade

How it is delivered

- Consistency across board.
- Duty cadet orders out of date
  & between OSMs
- All SOMs different - credibility
- Staff behaviour

inspection
- Told everyday of Term 2.
- Practice to 'stand up to stand down'
- Don't go to the padre. - fucks with
  time table.

outsourcing

ECV - lack of qualities not
like to Rise - chatty
- creates fear.

remedial
- lack - Delta 2.
- no training for boarder.
- entry GCSE english.
- Nigel to get remedial -
- Resubmissions poor timing
- Resubmission take 6 hours

Relationships.

- need credibility

Term 3 - Still naughty school kids?
- lack of transition
- Staff to people ration - Don't have time
- no relationships,
- 'God complex'   Joke about mental
                    Health.
- Sexism.
+ve Praise for getting things - female.
Bigger tits or smaller shirt?
- gives weight - Chocolate bars chucked at
  people 'You need a bigger belt'
- Preferential treatment
- Don't be proud of Term 1?
- Personal attacks
- use young boy voice

lack of weekends - staff
communication
- menial tasks - gardening
- what for?

- Ex-rancers don't do ASOW back to MAC
- lack of change culture.

232

"Cloud of mismanagement"
- Airmens
careers - taught
Curriculum
by x rank's

- Transparency - what do I need to Pass?
- is it relevant? BANC.
- Past v future? - no Org.
- knowledge focused?
  what is this place?
- Center for leadership? - not my
- management v leadership? brief.
- what is a Jo?
- Does the organisation know what it wants?
- Terms not equal/clear boundaries?
- Protocals vers treated.
- Curriculum Jumbled leadership doesn't build.
- Timetabling.
- Assessment? Clear off. qualities
  - subjective assessments.
- You have to fail to get a scope of a Jo - Delta.
- lack of realism in ass. Too FP focused.
- DE - not role related. but not your Job? or experience?

HOW.
- lack of remedial? 24hrs to retesting.
- You don't know where you stand? 1-1 feedback.
- OTMIS - not a clear reflection of the Situation
- what is an NOA?
- Hide weaknesses? Risk of recourse.
- lack of acknowledgement of experience.

leadership policy - WHAT
WHEN - poor.

Staff want you to be good

"Nothing like the real thing.

tve vibe. at ITM.

You are lower than me.

Halton far out shipped here.

Just a number
- sausage factory.

Relationships
- Staff -
- best of the best)
- location
- lack of passion.
- lack of role model.
- lack of moral corage - can't stand up for what is right.
- BANC - Different atmosphere - tve learning env.
- lack of mentoring
- Positive Praise
- systems Poising staff
Treated like adults -
- credible - one's
- Passionate
- want to be tee
- instructors not matched to specialisms.
- "My fault your problem?"
- Yours slut' as a cadet?
- Doubting your ability
- false view of what the RAF is
- Practice what you preach?
- If you make it?
- How not to be another?

tve reinforcement - wrong staff?

- ve role modeling

generational change

Appendix F - The complete qualitative data set for the reconnaissance phase

Barriers identified by the students in the reconnaissance questionnaire

Timetabling	Reported
Lack of flow	
The programme can be very disorganised which makes it difficult to keep track of what we are supposed to have learned and prepare effectively for tests we are presented with	Questionnaire
There also seems to be very little co-ordination between departments meaning that we can never be sure how to use our time effectively as each department will be telling us to 'revise X' in our spare time.	Questionnaire
I was proud to get a place on IOT however the course is in short broken and I have genuinely questioned if I have made the right choice coming from the ranks. The course lacks any order, with DW and CID spread throughout when they should be moved further to the right. The leadership development phase is just a few lectures and a couple of fixed exercises. There is clearly no capacity to develop the entire 120+ cadets and the intake should be smaller.	Questionnaire
There is capacity to move and streamline the course further however as we had 3 weeks off at the end of term 1 and term 2 week 7 has been populated with Army, Navy and Flight Safety briefs, clearly something we will not need until term 3, when it won't be forgotten as we have more pertinent things to worry about, such as BANDAR and the APS exam.	Questionnaire
In correct programming. Irrelevant lessons in term 2 that could easily be moved to the last week of the term after the exam or into term 3 to allow more time for exam preparation.	Questionnaire
Unrealistic timetable in T1 Vs Lots of free time during end of T2	Questionnaire
The Term 1 CID is misplaced as it comes at a time when the level of academics is difficult to retain. I feel it would be better suited to term 2 when the militarisation phase has concluded	Questionnaire
The most predominant barrier is the time restriction - Terms 1 and 2 are so busy and fast paced there is not adequate time for reflection or revision. OACTU presents (to a DE) a linear curriculum, with very little repetition of content (mainly the PBS aspect of the course, the leadership section does appropriately reuse content)	Questionnaire
There are a number of barriers - not least the poor timetabling of the course as a whole (for example, CESR and BVP lessons in Terms 1 and 2 respectively, when the mind is on passing other critical elements of the course. The majority of those lessons belong in Term 3.	Questionnaire
Everything is very rushed	Questionnaire
Time and learning environment.	Questionnaire
Menial tasks are prioritised over the learning of material. For example, inspections during Bandar and APS study periods.	Questionnaire
Lots of "free periods" that are just clear fillers	Draw & Write No.9

Time fillers where more productivity could take place	Draw & Write No.4
Regiment: Not enough time for remedial/ extra training	Draw & Write No.13
Repetition	
Unnecessary education & repetition: Many things are re-taught instead of checking understanding	Draw & Write No.13
Duplication in the course made people switch off	Draw & Write No.21
We had lessons on similar subjects e.g. 3 column formats taught on leadership lessons and BAWC but was more useful and clearer on BAWC	Draw & Write No.1
Time constraints	
Occasionally the pace of the course means that topics are sometimes rushed and/or disjointed. This sometimes results in cramming and in the worst cases not enough time spent to fully appreciate the details behind what it is and why we do it.	Questionnaire
Time, the term feels very rushed with too many subjects crammed into one day. Leaving very little time to properly digest and understand the lesson fully.	Questionnaire
Time, lessons can become very rushed.	Questionnaire
Time restraints	Questionnaire
Time is a huge constraint at OACTU. The course is now too short for skills to be developed fully.	Questionnaire
Time restraints	Questionnaire
There is a lack of time given to actually put into practise some of the learnings; for example, verbal communication.	Questionnaire
The delivery time for PBS lectures is too short at times, with the lecturer often going off topic, leaving little time to cover the assessable content.	Questionnaire

Fatigue	**Reported**
Fatigue	Questionnaire

Lack of sleep leads to people falling asleep in lectures	Questionnaire
Lack of sleep. This does not create a constructive learning environment.	Questionnaire
Condition of cadets being fatigued during lectures does not help.	Questionnaire
Course length and content makes a lack of sleep common. This combined with unfavourably hot rooms means people usually fall asleep in class, or if they're not asleep a large amount are too tired to learn and enjoy the course content.	Questionnaire
Sleep deprivation (I understand it purpose in teaching us self-managements skills, but it's hard to focus on the content),	Questionnaire
Being so tired that I fall asleep in academic lectures	Questionnaire
Having to process complex academic information on four hours sleep	Questionnaire
Lack of sleep. OACTU appear to value inspections and menial tasks over learning	Questionnaire
Fatigue	Questionnaire
Not enough sleep to allow us to learn the information required	Questionnaire
Trying to academically educate us while beasting us basically term 1 protocol (inspections mainly) did not have as much affect as possible. I slept through a lot of classes. I was genuinely interested in because I didn't have proper sleep.	Draw & Write No.6

Lack of time for consolidation/ reflection	Reported
Need more time to study.	Questionnaire
Time to Revise in the evenings.	Questionnaire
The nature of the course means that there is time pressure on learning all theory. When this is mixed in with the generic tasks, committee tasks and other lessons that we need to complete, the time left over for personal or collaborative revision is minimal.	Questionnaire

Time pressure; no reflection periods	Questionnaire
Time constraints mean I cannot consolidate knowledge	Questionnaire
Significant time restraints, to reflect, consolidate and prepare	Questionnaire
The only barrier I currently feel there is to my learning is the amount of time I must study. I like to take time on my own to read through material and think about the subject. All the way through term two we have been on inspection every day. This takes up a lot of time at night and in the morning, reducing the time I must study. In my opinion, every effort should be made to allow students to study what is being taught, but this does not happen at OACTU.	Questionnaire
There is insufficient time to properly revise after each lecture and consolidate notes. Instead forcing us to have to cram a week before the APS exam, this is not learning but instead a test on knowledge retention. Had I learnt it I should be able to recall the information months/years from now.	Questionnaire
As an individual, I value a quiet place where I can reflect and solidify the knowledge, I've acquired that day. If there was an allocated time slot more regularly in which we were tasked with consolidating our understanding and perhaps even writing a 100-word summary of that lesson, then I believe that would be useful. It would award the learners with a peace of mind that they are absorbing the information and it would award the instructor with a greater awareness of where the learners are at in terms of their capacity for absorption and comprehension.	Questionnaire
Allow SCD periods to be used for self-study instead of forcing lessons to fill the time.	Questionnaire
No self-study, lots of lectures - often at ineffective times in the day/week	Questionnaire
Not enough free time to reflect on the knowledge we acquire. This applies more in the first and second terms of the course. The third term we are given the time to reflect and these aids learning.	Questionnaire

Ex-serving repeating training	Reported
De's and ex-rankers should be separated more. The ex-rankers carried DE's through, while the DR's benefited from the ex-rankers mutually earned respect from DS. The ex-rankers also spent lots of time in pointless classes.	Draw & Write No.6
What do ex rankers learn by doing term 1?	Draw & Write No.5
Current serving repeating learning they've already done	Draw & Write No.4

Having 12 years' experience in the military with many operational tours, but still getting put in a cramped classroom to learn rifle drill etc. This puts the regiment instructors at a disadvantage, and the DE cadets who need help and attention and time. It just seems pointless for MOD1 in date personnel to be there. The same applies to pretty much all of term 1.	Draw & Write No.19

Staff	Reported
Instructors attitudes	
Cadet faff, Instructors acting upon rumour and not fact, some instructor attitudes (To both the wider Air Force and how they interact with Cadet's)	Questionnaire
Individual egos of some instructors-namely Flt Lt Campbell, Flt Lt King and Flt Lt Ear	Questionnaire
There is a lack of transparency on behalf of the flight staff. For instance, often there has been no actionable feedback and then the individual has been recoursed leading to mistrust from the cadets and confusion as to what they did wrong. There is a widely held belief that there is no standardisation between either flight staff or Sqns. This was clear on Ex VE and was picked up across the whole Sqn of cadets.	Questionnaire
Constant threat of re-course with any actions which could be deemed as negative by the staff.	Questionnaire
I feel the DS make or break an environment and selecting the right people for the job is essential, i feel this could be questioned at times.	Questionnaire
Some staff unintentionally put a barrier between you and them which makes them unapproachable	Questionnaire
The parent/child relationship set by staff	Questionnaire
As an Off Cdt there is a feeling of worthlessness. I feel, when i am correct, individuals in power will not stand up for me and rebut will not stand up for me	Questionnaire
I feel that with a lot of experience, I was dumbed down and that the instructors would only ask for my experience or acknowledge it when it suited or made their lives easier. This course has almost removed the confidence in my ability and already established style of leadership and command and control.	Questionnaire
The LTF have generally been very good and have delivered lessons very well, as have the Regt Staff.	Questionnaire
Similarly, the level of scrutiny on DW tasks is exasperating. Particularly when your own Flight Staff make mistakes on written work, like any human being would do	Questionnaire

239

Some of the most learning I have done/had on this course has been when I am away from OACTU - namely on Care in Leadership, Grantown/Crickhowell, and BAWC. The difference is the 'grown up' atmosphere which exists outside OACTU.	Questionnaire
I am about to go into the wider RAF and feel more hesitant around officers than I did before starting IOT, after 12 years' service. There needs to be a military discipline component to training, yes but in terms of barriers to learning, the atmosphere needs to change.	Questionnaire
Overhanging knowledge that the staff hold power over you	Questionnaire
I feel like sometimes opinions aren't welcome by instructors, they could be used as an effective learning tool.	Questionnaire
Inconsistent instructors make the quality of lessons very random, and eventually sets a precedent of whether you will gain much from the lessons.	Questionnaire
Finally, there seems to be a very heavy reliance on re-coursees and ex-rankers to teach the rest of the cadets' basic skills and guide us through various parts of the course. Whilst I understand that their experiences are extremely valuable, it seems like the burden on them can sometimes be too great and that they are used as a substitute for the lack of contact time we have with staff or for gaps in the information we are given.	Questionnaire
Some instructors are aware that the course content is out-dated and not relevant to the course and regularly articulate it to cadets. The course content needs to be evaluated to determine it's value throughout IOT.	Questionnaire
Instructors at OACTU have a god complex	Questionnaire
We have been treated as less than human by our instructional staff and they will be our peers in a few months	Questionnaire
If the instructors on front line squadrons displayed the attitudes that the instructors here have shown they would be 24 hour posted	Questionnaire
Unapproachable "god-like" DS	Draw & Write No.9
Treated like adults but spoken to like children	Draw & Write No.5
Here are some staff who behave in a very poor/unprofessional manner and seem to patronise students	Questionnaire
No trust for DS	Draw & Write No.21
Unrealistic goal set by DS	Draw & Write No.21

240

Role models: Open, honest, understanding, common sense, justifiable, logistical, consistent. This is preached but then not demonstrated in many cases	Draw & Write No.13
Remove the term "deal with ambiguity" as it is misused by staff who use it instead of "we haven't' thought that far ahead"	Draw & Write No.14
Term one felt patronising and extremely spoon fed because of the staff . More of an adult learning environment would be beneficial	Draw & Write No. 20
Sometimes rank gets in the way of learning.	Questionnaire
Conflicting messaging from staff	
Leads to "do as I say, not as I do" which is a very poor mentality	Draw & Write No.13
Saying one thing & doing another. Mixed contradicting messages from DS = confusing = frustrating	Draw & Write No.19
Staff need to practice what they preach	Draw & Write No.18
"Do as I say not as I do" attitude is prevalent	Draw & Write No.21
Another issue is when some instructors do not practice what they preach, which just displays hypocrisy which is bad, especially in a Phase 1 environment.	Questionnaire
A constant do as I say and not as I do attitude from the staff is exasperating	Questionnaire
I have found that some staff have a 'do as I say not as I do' attitude - I've seen lessons which have gone wrong, which for Off Cdts would have resulted in a D grade, but instructors can make these errors and we sit and watch.	Questionnaire
Lack of positive praise	
We graduate in two weeks and we have not had received one piece of positive praise	Questionnaire

We have received no positive praise. We were told to not be proud of passing term 1 as we were only 1/3 of the way through	Questionnaire
We are all human, a simple good morning or small element of positive praise would be very welcome	Questionnaire
I have heard so many negative comments from the staff about our performance that I am not starting to believe it.	Questionnaire
It has now become a running joke within the cadets that, "we are the worst squadron we have ever had" because that is all we keep getting told but never told how to improve	Questionnaire
In 26 weeks we must have done at least one thing right to be given some sort of positive praise, but it appears not	Questionnaire
The negativity, i feel there needs to be more positive praise, and not just focus on areas for development. At times we have felt, we can do nothing right, even though we have all passed elements of the course.	Questionnaire
More positive reinforcement is good for learning.	Questionnaire
An environment where positive feedback and a well done are allowed!!!	Draw & Write No.15
Lack of positive praise	Draw & Write No.4
Try giving some positive praise feedback occasionally	Draw & Write No.21
Give positives- People need to know what is going well, here we just get negatives	Draw & Write No.21

Teaching Methods	Reported
Overuse of PowerPoint/ Lecturing	
The design of many of the PowerPoints is outdated, (poor colour contrasts for example) making it harder to concentrate.	Questionnaire
Too much of a focus on PowerPoint presentations when we already have all that information in our aide memoirs. Practical lessons with the booklets for revision would be a better use of time and create a better learning environment	Questionnaire

242

Some lessons are too PowerPoint driven. I have seen instructors distracted by this rather than giving us a good rounded understanding of the topic. I feel that there should be content that that should be taught with room for the instructor to fill for a rounded understanding of the topic.	Questionnaire
All lessons are lectured and I do not personally gain anything from a lecturer reading out a PowerPoint that i can read - make my own notes on and learn at a pace i can keep up with and not the 1 hr 20 mins a lesson is given.	Questionnaire
Furthermore, a lot of lessons (mainly LTF, WC, BAWC & ESK) became very predictable, with a PowerPoint, then group work on a whiteboard before moving back to the PowerPoint, this predictable lesson plan made it very boring and made learning much harder.	Questionnaire
Too reliant on PowerPoints.	Questionnaire
The structure of lessons - they are very power point heavy and lack true interaction which would stimulate discussion and thus better understanding of the topic areas	Questionnaire
Power point lectures are good for delivery of information, but reading verbatim off the power point, which in some cases has happened, its merely a memory exercise and no actual learning takes place.	Questionnaire
Endless low-quality PowerPoint presentations.	Questionnaire
Also, the overuse and misuse of PowerPoint presentations, which are standardised and often several years old, this does not allow the trainers to deliver the lessons in their own manner and to their own strengths, even highlighted by trainers explaining that they would far prefer to deliver the lesson in a different location, in a different manner.	Questionnaire
Stuck to DTTT, the solution to presentations is not just PowerPoint and breaking into groups every 15 mins to use white boards.	Questionnaire
Being lectured at a lot using PowerPoint is not the ideal way to learn	Questionnaire
Death by PowerPoint	Draw & Write No.4
Too PowerPoint heavy at times. Group discussions can work better (small groups)	Draw & Write No.1
Death by PowerPoint	Draw & Write

243

	No. 2
Death by PowerPoint. More interactive learning	Draw & Write No.18
Too many lectures	Draw & Write No.4
Lack of lesson support material	
The course material is too hard to get hold of in any format other than paper based. Making electronic notes is discouraged.	Questionnaire
Rote learning from an aide memoire. I appreciate it is there to help and consolidate the lessons, but ensuring that each student makes their own notes, and then have the presentations available online to reference and refer to would make a lot more sense.	Questionnaire
Only PBS and WC provided the lecture slides before the lecture. As a slow writer, getting the slides before the lecture helps. In all other lectures, I spent more time writing notes, struggling to comprehend / absorb what the instructor was teaching. It would be much more beneficial to receive all lecture slides / notes before lessons so you can get an rough understanding before, then only need to annotate / add extra information, which will allow the learner more focus to truly listen and absorb what is being said.	Questionnaire
Standard of lesson delivery	
Possibly better taught lessons. Most are very good, and the practical sides benefit me a lot but coming from a teaching degree background I could see many benefits some of the theory lessons could improve through means of better teaching techniques.	Questionnaire
PBS content is does not apply the VARK principles or conform to the PAR teaching model. Forcing cadets to present their oral communications assessment using handwritten notes seems unnecessary and is challenging for some.	Questionnaire
Poor standard of teaching from both leadership and WC tutors.	Questionnaire
The teaching style and capability of the staff varies dramatically meaning that some cadets have an entirely different experience to others, this has a dramatic effect on their ability to learn and improve	Questionnaire

Whilst OACTU delivers different lessons using different styles I believe that there is potential for students to be put into specific groups depending on their learning style (e.g.- A kinaesthetic learner would be disadvantages if the day of learning involved all day of PowerPoint).	Draw & Write No.7
The non-military lectures don't seem to be able to pitch lectures @ the correct level	Draw & Write No.21
Overuse of DTTT lesson format	
I am so sick and tired of break into 3 groups, put your thoughts on a white board. A STTT theme which has scripted nearly every leadership and other lesson we have had. Ultimately a few people input what goes onto the board and the rest of the group wait until the exercise is over	Draw & Write No.19
All LFT lesson followed exactly the same format of intro-whiteboard exercises-lecture. Which became tiresome	Draw & Write No.21
Too many break into 3 groups and write on a flip chart lessons. We could see it coming a mile off	Questionnaire
Lack Practical Learning	
More practical learning. The balance was not right between practical and theory	Questionnaire
There is very little practical teaching and student activity apart from Q&As	Questionnaire
sometimes the balance of theory and practical could be more equal	Questionnaire
Online Learning	
This course would hugely benefit from MOODLE content on DLP.	Questionnaire
No Virtual Learning Environment	Questionnaire
The pass or fail element to certain aspects of the recourse, doesn't encourage me to want to learn it forces me too.	Questionnaire
There also needs to be an OACTU led InVal process from the start of the course; having a cadet led 'course critique' is not suitable. Also, DSAT compliance requires there to be a formative assessment for Bandar and the APS exam? All the aforementioned said, the instructors do all they can with the time and resources that they have. Thank you for the opportunity to voice my opinion.	Questionnaire
Term 2 learning environment was ok, certain aspects could be done online	Draw & Write No. 20

In a time when technology is so important, we seem to be far behind. It is going to be so important for our job, yet there is a lack of it. Mabey some education on technology would be worthwhile	Draw & Write No.13
Lack of remedial training	
Furthermore, there needs to be a structured remedial package for Bandar failures, much like the APS exam failures and Delta packages for leadership. Currently there is no remedial training for Bandar failures. A recourse to the beginning of term 2 with a full rewrite is inefficient and a waste of resources.	Questionnaire
No compulsory packages to assist learning when the individual struggles e.g. Bandar (There is no help if someone were to fail, they either get limited advice and carry on or are put back onto another squadron with no help on the essay and are expected to redo every part of the term)	Questionnaire
Not enough support for Bandar	Draw & Write No.4
Time to research. APs = Bandar. There is little time to study and learn how to conduct critical analysis; this is because term 2 is too compressed. If you fail this as aspect the remedial is not fit for purpose. It does not exist.	Draw & Write No.14
Lack of student control/ input into learning	
I believe that if cadets were genuinely approached for feedback it would be far more constructive than expected and could be of benefit to OACTU in the improvement of the course. Cadets also do not have much control over how/where we learn, some lesson content could be better learnt with student led lessons and collaboration amongst cadets, followed by delivering/explaining/presenting this content to the trainers for review/discussion	Questionnaire
Little emphasis is placed on self-study for much of the course, we are given pretty good handouts from our staff but I feel that our knowledge and understanding of quite a few topics, particularly the theories of leadership is not tested while we are in the classroom and if it is, it is done on a room wide level where at least one cdt will know the answer and the class moves on leaving some learners behind. I think it would be a good idea to have some smaller non-graded, non-otmis tests through the course to just cover what we have learned and what we are expected to know.	Questionnaire
Reluctance to ask questions	
Often, the instructors are also the staff that are assessing you. This creates a environment where people are afraid to ask questions	Questionnaire
Aspects of Regt Trg, although far better than in previous years there is often still a military approach that a Cadet does not have any 'right' to an opinion or the 'voice' to challenge or feedback on the training delivery... this was even highlighted when a Trainer reminded cadets to be careful what they put on feedback forms.	Questionnaire
The environment at OACTU does not encourage us to ask questions so we walk away from lessons with a lot of questions which we wished we could ask but were too scared to	Questionnaire

Questions are not welcomed and often frowned upon	Questionnaire
If you ask a question in a lesson the instructors make you feel small and stupid	Questionnaire
Cadets will not always be as forthcoming with their opinions, thoughts and experiences because they feel they are constantly being assessed.	Questionnaire
Learning environments need to be flexible and responsive to the needs of the individual. Individuals should be welcomed and encouraged to ask questions and should not be made to feel intimidated by a blunt response. However, occasionally a blunt response is necessary, but explanations should always be provided for decisions that are made by instructors. Accountability	Questionnaire
Lack of being told why	
I get that this is the military and we will have to do things we don't want to do but an explanation as to why would have often helped	Questionnaire
If you are going to ask me to do something, tell me why	Questionnaire
Tell me why I need to know something other than "because"	Questionnaire
I am an adult, I would like to know why I am being asked to do things. It would really help to contextualise the experience	Questionnaire
Explain to me like an adult why I need to do something or why I need to know it	Questionnaire
As an ex-ranker I often knew why I had to do something because of my experience and I often had to put things into context for my flight. If the staff had done this, it would have been a much more powerful learning experience	Questionnaire
Other comments	
Phase 1 attitude, is it a course? I believe its 6 months of phase 1.	Questionnaire
1 - assessing a potential JO shouldn't be based on grades but rather a general impression of their suitability and competence. A record and paper trail are good and provides a body of evidence to support decisions when required, but i believe in practice it changes the focus of the course too much and reduces the quality of training. 2- the term subjective is used too much in training as a get out of jail card. it's become a bit of an inside joke when discussing things. whilst things are situational, without specifically outlines situations and the ideal judgement / decisions / actions for them, then learning deteriorates to 'it depends, just make the correct decision and that will change based upon stuff' which offers absolutely no benefit or development of someone's analytical and reasoning skills. you're telling people to think and assess situations, acknowledging its hard and changes, but doing so without giving any examples of good/bad decision making and why it was suitable/not.	Questionnaire

247

Using common sense approaches rather than sticking rigidly to post situations and leadership styles	Draw & Write No. 1
More efforts need to be taken to put people into stretch e.g. applying pressure to cadets during early stages of training to establish who is mentally robust enough	Draw & Write No.18
Constantly being assessed even when learning the skill	Draw & Write No.17
Get rid of OTMIS. Tis appears to be nothing but a paper exercise which imposes a set of hand cuffs on flight commanders + Dep FC's ability to make common sense decisions	Draw & Write No.14
Vulnerable adult? Really. I am a 36-year-old former Flight Sergeant with 2 children. I am not a vulnerable adult and should not be treated as such.	Draw & Write No.14
Unrealistic training environment	**Reported**
Environment not reflective of the real environment	Draw & Write No. 16
Some of the exercises bear little resemblance to life outside of Phase 1 and are therefore difficult to buy into.	Questionnaire
Unrealistic exercises	Draw & Write No. 4
Discouraging Individuality	**Reported**
Embrace people's individual styles especially in leadership/ Don't try and make every junior officer fit in the "Cranwell Mould"	Draw & Write No. 1
Work harder to remove the grey man	Questionnaire

248

Fear	Reported
Fear of failure/ recourse	
Pressure and fear of the staff/recoursing	Questionnaire
Fear of failing/making mistake/being re-course	Questionnaire
The risk and fear of significant consequences such as recourse discourages open questioning and a more in-depth involvement in the learning taking place	Questionnaire
Fear of failure, being misunderstood	Questionnaire
People are so scared to fail at OACTU in case they get recoursed, that they never deviate from what they are told. This potentially forces people into learning a way which isn't beneficial to them, making learning a slower and harder process than is possible.	Questionnaire
The OACTU Wall: A core ethos that makes cadets so afraid of recourse that they will not speak to any staff frankly about any of their difficulties	Draw & Write No. 16
Recourse fear	Draw & Write No. 4
Fear of failure/ recourse	Draw & Write No. 2
A "Go to" member of staff for advice, without fear of being marked down/ judged	Draw & Write No.17
Fear of punishment	
Fear of punishment	Questionnaire
Fear of punishment inhibits freedom. There is fear to stick head above the parapet because there is a risk involved, and punishment is often involved. Punishment is NOT conducive to a positive learning environment	Questionnaire
There's also a poor environment that punished mistakes that are made. People are afraid to get things wrong, yet the majority of learning is done after making mistakes.	Questionnaire

NOA's, ECV's, the recourse culture, cadets don't feel they can speak up and fully interact due to fear of retribution.	Questionnaire
Further to this it seems that there is a punishment culture as when staff or results are questioned an immediate NOA/ECV is issued, teaching nothing as there seem to be dished out for fun at times. We have been told that there is no fixed way to lead, however it seems that if we do not strictly lead a certain way we will fail Ex VE and other parts of the course.	Questionnaire
Constant fear of repercussions. Although they say it's a safe place to make mistakes	Draw & Write No.21
Claim "mistakes are ok" yet when they happen, punishment occurs, sometimes severely	Draw & Write No.13
Fear inhibiting learning	
The environment surrounding the RTF Exercise phases instil fear within the Squadron, which can act as a barrier to individuals learning.	Questionnaire
The way in which some lessons/ lectures are delivered with force inhibits me from learning. I feel I am doing things through fear rather than wanting to actually learn, this does not create a safe environment to make the most from learning.	Questionnaire
The constant pressure and fear to 'keep your head down' can allow for a disengaging lesson due to people not having the confidence to express their opinions and feeling as though they need to remain professional.	Questionnaire
Often in the lessons where the instructor made us feel at ease, the participation levels and enthusiasm was significantly improved. For me, a relaxed, comfortable environment where you can have the confidence to debate and appropriately question is where people learn more. It is essential that cadets feel at ease to express their knowledge in front of instructors without the fear of judgement or risk of their opinions hindering future, and perhaps unrelated, assessments in the remainder of the course.	Questionnaire
I believe that there is a built-in fear culture that pushes cadets to be risk averse, keep heads down, and be the 'grey man'. There is a base assumption that if a cadet is not doing something the way it is usually done, or the way others are doing it then they are doing something wrong. Subsequently, it is absolutely viewed as safer by cadets to do whatever the majority are doing, whether good or bad, rather than what an individual might feel is right. It is a self-propagating culture that starts with the staff in term 1 and snowballs to the cadets, I think for learning to improve this needs to be addressed. Perhaps by more clearly vocalising the purposes of each term. It is understood that term 1 is for militarisation, and it is understood the need for uniformity and teamwork in that phase. But the purpose of IOT is to develop us into leaders and as such I believe that there should be a conscious, strongly asserted and re-asserted change in term 2 towards more free decision making.	Questionnaire
The fear of taking risks and making mistakes. This can sometimes be the most effective way of learning.	Questionnaire
The fear of being watched so closely all the time. It prevents people from saying what they really think/ feel about topics in group discussions and this prevents the kind of open, intellectual discussion which people benefit from.	Questionnaire
The rank of the Trainer, with IOT being a course to train and develop new Junior Officers it is known that cadets are monitored/assessed at all time thefore fear inhibits learning	Questionnaire

Fear of disapproval from commander.	Questionnaire
I feel that we are under constant scrutiny from Flight Staff, fearing that any actions or comments out of place may be misinterpreted and blown out of proportion on OTMIS.	Questionnaire
With some RAF Regiment instructors, the learning environment that they create, based on fear can sometimes hinder my learning experience.	Questionnaire
Humiliation of being wrong	Draw & Write No. 2
Fear of failure- negative affect on learning	Draw & Write No. 2

Issues with curriculum	Reported
Lack of relevance	
Air Power Overload- What is relevant? Focus on military history and not recent Ops. Future conflicts?	Draw & Write No. 5
More AT in carousel? Why?	Draw & Write No. 5
1.5 hours on SJARs??	Draw & Write No. 5
The forcing of irrelevant academic essays and exams "APS & Bandar" that in no way play into future roles especially considering the lack of training available to those who struggle with essays	Draw & Write No.16
Bandar-perhaps two or three 1000-word essays throughout the term we can improve upon, rather than one pass/ fail	Draw & Write No. 6
Teach & expose cadets to crisis management	Draw & Write No.18

So much CID Air Power history relating to things like the issues in WW2 with Air-maritime integration etc, but one 1 hour 20 lesson on COIN. COIN is what we have been doing for years and is so relevant and current. There has been so much focus on history but not on recent Ops. I explained Op Herrick to a DE in week 4 of term 3 and he didn't know anything about it! If OACTU is delivering credible officers I think much more content should focus on recent Ops which most of the RAF have been on. The cultural context is dated.	Draw & Write No.19
"AT" not really "AT". Call it something different.	Draw & Write No.17
Lack of ethos	
More militarisation and ethos building	Draw& Write No. 6
More esprit de corps!! We do not instil enough	Draw & Write No.10

252

Appendix G   Results from the focus group straw poll

Results from the focus group straw poll.

Question	Responses		%	
	Yes	No	Yes	No
Do you feel that there is currently an adult learning environment?	0	20	0	100
Do you feel there are currently any barriers to learning in place?	0	20	0	100
Do you currently have a member of staff that you can speak to without fear?	0	20	0	100
Would you prefer to learn in an adult learning environment?	20	0	100	0
Do you feel physiologically safe at the college?	0	20	0	100

Appendix H   Coded data from reconnaissance phase questionnaire

Powerpoint
- Too powerpoint heavy at times. Group discussions on work better (small groups)

Mentoring
- Use mentoring more than assessing. Build confidence and understanding

Streamline Lessons
- We had lessons on similar subjects e.g. 3 column formats taught on Leadership Lessons + BALC but was more useful and clearer on BALC.

LEARNING

Individuality
- Embrace people individual styles especially in leadership. Don't try to make every Junior Officer fit the "Cromwell Mould"

Common Sense
- Using more common sense approaches rather than sticking rigidly to past situations and leadership styles.

Military Culture
- Military culture needs to stay, standards, timekeeping etc. need to be pushed - even if the course becomes more like a university course.

Make certain things more relaxed
- e.g. Phys - relax the environment, people will work harder, enjoy it more and carry on the work after the course.

257

e.g =

<u>First aid test</u>

0 = all sessions
1-5 = must attend X sessions
6-10 = must attend X-2 sessions
All must attend Z, y, w sessions → Initiation/stipulations

Pre-test

→ This would have to be taken on in the militarisation.

TERM 1

- More instructor led.
- Introduce 'free' learning.
- Re-test knowledge and use to assess.
- Shorts military - true is **needed**

TERM 2

- 'Free' Learning
- Clearly communicate end goals
- Show removal for progress
- Open seminars/workshops

TERM 3

- Give choice in further learning, what topics interest.
- Allow time/activity to develop ethos + culture (cultivate it more to be in RAF)
- Relevant future role training.

- Typical day?
- I messed up my preshortening, going to the gym session with PTIS
- Don't fully understand "control of the air" access) the 'core skills' they include and practise with gritted online.
- Drill
- Get the next PTIS lecture I have got to go to etc.

e.g. APS exam
- You need to answer X questions on y topics in Z manner.
- You must present about y on X date

Term Three

<u>+ves</u>
- BAWC
- AT - dealing with real risk and crisis management

<u>-ves</u>
- time fillers where more productivity could take place

<u>how to improve?</u>

- more work experience
- visits to units + branches
- talks from veterans
- talks with current Junior Offices

④

Team 1

- What do ex-rankers
  learn by doing term 1?
- Can they be doing APS or using
  time better?
- Treated like adults but spoken to like children

Team 2

REGIMENT ✗
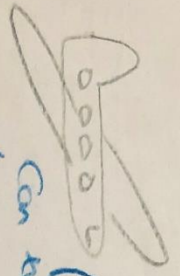
AIR POWER - OVERLOAD!!!
- What is relevant? Focus is on Military @ History
  but not present ops

- FUTURE CONFLICTS -- ???

Can there be PRECAUSES?
(Can we go to Shrivenham?)

Team 3
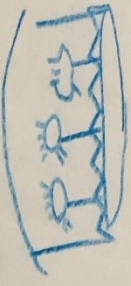
- CAROUSEL

- Unit visits?
- More AT? - Why?
- Lots of "free periods" that are just
  Career Afters
- 1,5 hours on STABs ??

Plans are off but
not ready.

5

Phase 1 Training

Term 1

DE's and ex-rankers should be separated more. The ex-rankers carried DE's through, while the DE's benefitted from the ex-rankers mutually earned respect from DS. The ex-rankers also spent lots of time in pointless classes. More militarisation + ethos building.

Term 2

Trying to academically educate us while boosting us with basically term 1 protocols (inspections mainly) did not have as much affect as possible. I slept through a lot of classes I was genuinely interested in because I didn't have proper sleep.

Bandow - perhaps two or three 1,000 word essays throughout the term we can improve upon, rather than one pass/fail.

Term 3

Good. No major points except perhaps include a Sqn visit.

VISUAL LEARNING

AUDITORY LEARNING

BLAH BLAH BLAH
BLAH
BLAH BLAH

BLAH BLAH
BLAH

KINESTHETIC LEARNING

- WHILST OACTU DELIVERS DIFFERENT LESSONS USING DIFFERENT STYLES I BELIEVE THERES POTENTIAL FOR STUDENTS TO BE PUT INTO SPECIFIC GROUPS DEPENDING ON THEIR LEARNING STYLE.

(eg. A KINESTHETIC LEARNER WOULD BE AT A DISADVANTAGE IF THE DAY OF LEARNING INVOLVED ALL DAY POWERPOINT)

RECOURSE

Will this person push themselves into the position where they might make a mistake, or just try and get out of the way of danger?

becomes...

THE GREAT
OACTU
HOOP JUMP

DW   BANDAR   VE   PBS EXAM

FINISH

Now I'm an officer!

NEW JUNIOR OFFICER
: FRESH FROM CRANWELL TO A UNIT NEAR YOU!

- Hello, I'm here to help as a new JO!

- Can you help with these SJARs?

- Never seen one but I'll try!

- perhaps another day sir...

- Would you like my SMEAC brief now?

263

D.S.

- Unrealistic, synthetic trg environment where leadership is 'tested.'
- Unapproachable, "god-like" D.S.

+ Realistic air warfare training

"Don't Worry: This is a safe environment to make mistakes"

- Believe What You Preach!
- We should be having a conversation and not shy away from experience
- More Discussion and Encouragement to Think & Develop Ideas
- More Esprit De Corps! We do not instil enough Identity
- An Environment Where Positive Feedback and a 'Well Done' are Allowed!

265

LEARNING

Central bubble: **LEARNING**

RULES & STANDARDS
- STRESS
  - A GOOD AMOUNT FOR ADRENALINE & MOTIVATION
- MORE OF 'JUST' CULTURE
- MILITARY 'CULTURE'

NOT REFLECTIVE OF REAL TIME ENVIRONMENT
- FALSE EXPECTATIONS

(phone crossed out)
- DISTRACTION
  - IOT IS A GOOD EXCUSE TO NOT USE PHONE AS MUCH
- OWN RESEARCH IN SPARE TIME
  - GOOD TOOL IF USED CORRECTLY
- NOT IN THE CLASSROOM

JOHN ADAIR
- THERE ARE OTHER THEORIES & AGENT LEADERS...
  - GETS MONOTONOUS / BECOMES A BORE
- READING ARTICLES

RESEARCH
- UTILISE THE LIBRARY FOR MORE THAN EAN D/B - TO AN AWESOME RESOURCE
- READING AROUND THE SUBJECT
- WORKING AT MY OWN PACE

GROUP DISCUSSIONS
- GROUP DEBATES
  - TALKING AROUND THE SUBJECT
- VERBAL COMMS
- GAINING OTHER VIEWS/ PERSPECTIVE

AVOID BOREDOM
- VARIETY OF LEARNING STYLES & TASKS
- EASY TO PREDICT LESSON PLANS.

Mostly RTE

Start — INFO — INFO — PRACTICAL TEST — finish

(First draft) (rigid) → Might love to be more like this for those → (C13 RN)

INITIAL TEST

Test initial knowledge!
→ and actually use to adjust future learning.

(PBS) (LTE)

INFO
lecture
ref-intend

PRACTICAL
present
essay
exam

ACCESS "INFO

Reflect

chance to practice weaknesse)

'remedial'
analysis
peer learning/feedback

TEST

TEST – REFLECT

Current

move toward this

Can be modular. Flexibility. Don't get the alignment ex- values to go do little drill. Don't get metrics to learn CPR again.

(2)

Technological component
In a time when technology is so important, we seem to be so far behind. It is going to be so important for our job, yet there is a lack of it.
Maybe some education on technology would be worthwhile.

Use more tech.

Lots of sore feet

any times things are re-taught instead of checking understanding

unnecessary education & repetition

more self research? then need to groups to consolidate

doing things to "pass time"

written/comms should focus more 2) on academic side

everything needs to be done for a reason

Can we justify each lesson?

Learning

ideal conditions

Beginners — Have enough time for remedial/extra training

CPT was very beneficial

Much more interactive & practical vs removed of course

this is preached, but then not demonstrated in many cases — leads to 'do as I say, not as I do' which is a very poor mentality

Claim 'mistakes are ok', yet when they happen, punishment occurs. Sanctions scrutiny

Not sure where you stand as course develops

(3.)

Staff — Inconsistent staff

mostly open to questioning which really improves how effectively we learn (LTF very good at this)

ROLE
MODELS
OPEN
HONEST
UNDERSTANDING
COMMON
SENSE
JUSTIFIABLE
LOGICAL
CONSISTENT

More Decisive Edge style exercises to learn by doing. EAW problems across more levels of command. Rotate round CAOC → EAW → Sqn.

Remove the term "Deal with the ambiguity" as it is misused by staff who use it instead of "we haven't thought that far ahead."

Work harder to remove the grey man. More contact with Flight Staff in term 2 to open cadets up to more scrutiny.

- Common sense being the focal point of learning rather than slavishly tied to limited leadership models adopted by the RAF. Use modern examples if you must.
- The realisation of the prospective JO that the troops under their command are the most important part of their job. Rather than the individual as the focus.

- Use SME's around the Unit to give briefs rather than just OACTU Staff.

- More emphasis on creating flight + sqn ethos. Creates more buy-in by cadets and helps to drive standards.

- More time devoted to creating pride in each cadet. Be it pride in their trade, the RAF, the British military. Currently this is paid lip service in Term 1, then not highlighted again. Especially disappointing as it's RAF 100, a big opportunity has been missed.

- More reference to RAF history in leadership lessons, etc. Have 100 years of history. It should be a part of every single day at Cranwell.
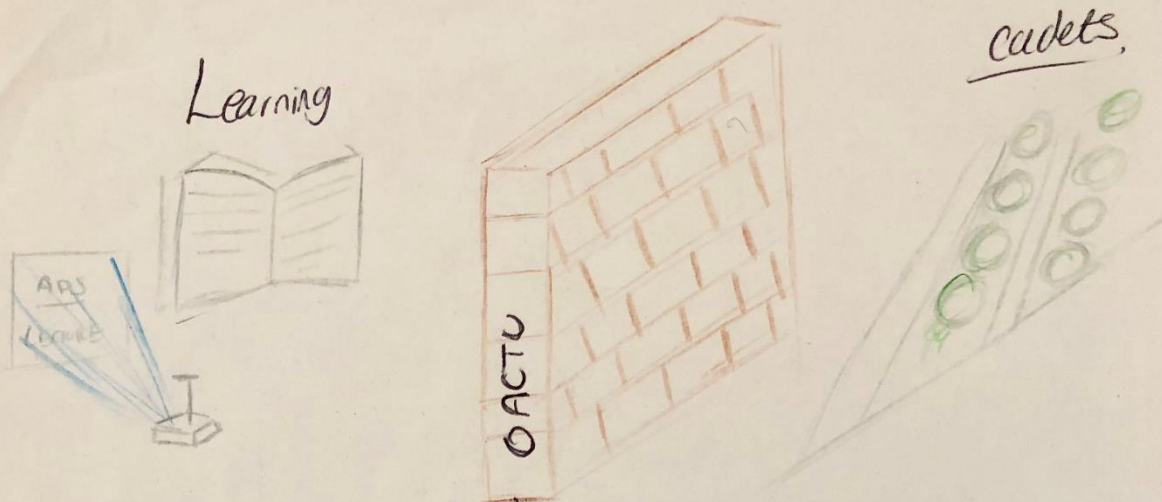
2

Learning

cadets.

OACTU

"The OACTU WALL"

- A core ethos that makes cadets so afraid of recourse that they will not speak to any staff frankly about any of their difficulties.

- The forcing of irrelevant academic essays and exams "APS & BANDAR" that in no way play into future roles especially considering the lack of training available to those who struggle with essays.

FS BOWYER

APPROACH — RTF
VARIETY OF TEACHING TOOLS { VISUAL, VERBAL, KINESTHETIC

'AT' NOT REALLY 'AT', CALL IT SOMETHING DIFFERENT

ENABLERS
RIGHT BALANCE BETWEEN THEM
USE OF PEOPLE'S EXPERIENCE
BENEFITS BOTH

REFLECTION OF IOT

BARRIERS
CONSTANTLY BEING ASSESSED EVEN WHEN LEARNING THE SKILL.
MIXED / CONTRADICTING MESSAGES
SAYING ONE THING & DOING ANOTHER
FROM DS = CONFUSING + FRUSTRATING
'SHARK INFESTED CUSTARD'
DAY AT PHASE 2 / POSTING BASE

SUGGESTIONS
A 'GO TO' MEMBER OF STAFF FOR ADVICE, WITHOUT FEAR OF BEING MARKED DOWN / JUDGED
MORE BANC / DECISIVE EDGE ACTIVITIES; LEARNING RAF SPECIFIC SKILLS WHILST PRACTISING LEADERSHIP.
4 WEEK DE STARTER TERM FOR FIRST AID, WEAPONS HANDLING, CBRN, DRILL, ETC

EXAMPLES (OF GOOD + BAD)
SUPPORT FROM EX-RANKERS
REST JOIN.
BEING MOVED TO SUB-STANDARD ACCOMODATION IN TERM 2 WITH 24 HRS NOTICE
IN TERM 1
SUPPORT IN EVENINGS LEARNING ABOUT UNIFORM ETC.
TOLD ITS AN AMNESTY THEN AMNESTY SETTING
ECV

⑰

Your Ideal Military Learning Environment

Please reflect on your time at OACTU and illustrate on the blank page, how you would change the learning environment to enhance your learning experience.

Please feel free illustrate your thoughts through any medium which you feel comfortable with. There are some examples below but these are not exhaustive. Please feel free to be as creative, imaginative and colourful as you wish.

My working definition of learning environment is as follows;

"Learning environment can refer to an educational approach, cultural context, or physical setting in which teaching and learning occur"

Please do not be constrain your thinking to the physical, cultural, local or organisational constraints which may currently be in place. Please think outside the box and be honest with your feedback.

Examples of how you could illustrate your ideal learning environment:

- Bullet points
- Flow diagram
- Drawing
- Poem
- Song
- Spider diagram
- A list

Thank you for taking the time to complete this piece of research.

Kind Regards,

Jill Matterface

- More efforts need to be taken to put people into stretch. e.g. applying pressure to cadets during the early stages of learning to establish who is mentally robust enough.

- Teach & expose cadets to crisis management

- Death by PowerPoint - more interactive learning.

- Give Positives - People need to know what is going well, here we just get negatives.

- Staff need to practise what they preach

What has frustrated me?

- Having 12 years experience in the military with many operational tours but still getting put in a cramped classroom to learn rifle drills etc. This puts the Regiment instructors at a disadvantage, and the DE Cadets who need help and attention and time, but it just seemed so pointless for MOD, in date personnel to be there. The same applies for pretty much all of Term 1.

- I am so sick and tired of 'break into 3 groups put your thoughts on a whiteboard.' A DTTT theme which has scripted nearly every leadership and other lesson we've had. Ultimately, a few people input what goes onto the board and the rest of the group wait until the exercise is over.

- So much CID Air Power History relating to things like the issues in WW2 with Air-Maritime integration etc, but one 1hr 20 lesson on COIN. COIN is what we have been doing for years and is so relevant and current. There has been so much more focus on history but not on recent Ops. I explained Op Herrick to a DE in week 4 of Term 3 and he didn't know anything about it! If OACTU is delivering credible Officers I think much more content should focus on recent Ops which most of the RAF have been on. The cultural context is dated.

- Term One felt patronising and extremely spoonfed. More of an adult teaching enviroment would be beneficial.

- Term 2 learning enviroment was OK, certain aspects can be done online.

- Term 3 learning enviroment was goo overall, i.e. BAWC.

Appendix I   Coded data from reconnaissance phase questionnaire

Barriers identified by the students in the reconnaissance questionnaire

Timetabling	Reported
Lack of flow	
The programme can be very disorganised which makes it difficult to keep track of what we are supposed to have learned and prepare effectively for tests we are presented with	Questionnaire
There also seems to be very little co-ordination between departments meaning that we can never be sure how to use our time effectively as each department will be telling us to 'revise X' in our spare time.	Questionnaire
I was proud to get a place on IOT however the course is in short broken and I have genuinely questioned if I have made the right choice coming from the ranks. The course lacks any order, with DW and CID spread throughout when they should be moved further to the right. The leadership development phase is just a few lectures and a couple of fixed exercises. There is clearly no capacity to develop the entire 120+ cadets and the intake should be smaller.	Questionnaire
There is capacity to move and streamline the course further however as we had 3 weeks off at the end of term 1 and term 2 week 7 has been populated with Army, Navy and Flight Safety briefs, clearly something we will not need until term 3, when it won't be forgotten as we have more pertinent things to worry about, such as BANDAR and the APS exam.	Questionnaire
In correct programming. Irrelevant lessons in term 2 that could easily be moved to the last week of the term after the exam or into term 3 to allow more time for exam preparation.	Questionnaire
Unrealistic timetable in T1 Vs Lots of free time during end of T2	Questionnaire
The Term 1 CID is misplaced as it comes at a time when the level of academics is difficult to retain. I feel it would be better suited to term 2 when the militarisation phase has concluded	Questionnaire
The most predominant barrier is the time restriction - Terms 1 and 2 are so busy and fast paced there is not adequate time for reflection or revision. OACTU presents (to a DE) a linear curriculum, with very little repetition of content (mainly the PBS aspect of the course, the leadership section does appropriately reuse content)	Questionnaire
There are a number of barriers - not least the poor timetabling of the course as a whole (for example, CESR and BVP lessons in Terms 1 and 2 respectively, when the mind is on passing other critical elements of the course. The majority of those lessons belong in Term 3.	Questionnaire
Everything is very rushed	Questionnaire
Time and learning environment.	Questionnaire
Menial tasks are prioritised over the learning of material. For example, inspections during Bandar and APS study periods.	Questionnaire
Lots of "free periods" that are just clear fillers	Draw & Write No.9

Time fillers where more productivity could take place	Draw & Write No.4
Regiment: Not enough time for remedial/ extra training	Draw & Write No.13
Repetition	
Unnecessary education & repetition: Many things are re-taught instead of checking understanding	Draw & Write No.13
Duplication in the course made people switch off	Draw & Write No.21
We had lessons on similar subjects e.g. 3 column formats taught on leadership lessons and BAWC but was more useful and clearer on BAWC	Draw & Write No.1
Time constraints	
Occasionally the pace of the course means that topics are sometimes rushed and/or disjointed. This sometimes results in cramming and in the worst cases not enough time spent to fully appreciate the details behind what it is and why we do it.	Questionnaire
Time, the term feels very rushed with too many subjects crammed into one day. Leaving very little time to properly digest and understand the lesson fully.	Questionnaire
Time, lessons can become very rushed.	Questionnaire
Time restraints	Questionnaire
Time is a huge constraint at OACTU. The course is now too short for skills to be developed fully.	Questionnaire
Time restraints	Questionnaire
There is a lack of time given to actually put into practise some of the learnings; for example, verbal communication.	Questionnaire
The delivery time for PBS lectures is too short at times, with the lecturer often going off topic, leaving little time to cover the assessable content.	Questionnaire

Fatigue	**Reported**
Fatigue	Questionnaire

Lack of sleep leads to people falling asleep in lectures	Questionnaire
Lack of sleep. This does not create a constructive learning environment.	Questionnaire
Condition of cadets being fatigued during lectures does not help.	Questionnaire
Course length and content makes a lack of sleep common. This combined with unfavourably hot rooms means people usually fall asleep in class, or if they're not asleep a large amount are too tired to learn and enjoy the course content.	Questionnaire
Sleep deprivation (I understand it purpose in teaching us self-managements skills, but it's hard to focus on the content),	Questionnaire
Being so tired that I fall asleep in academic lectures	Questionnaire
Having to process complex academic information on four hours sleep	Questionnaire
Lack of sleep. OACTU appear to value inspections and menial tasks over learning	Questionnaire
Fatigue	Questionnaire
Not enough sleep to allow us to learn the information required	Questionnaire
Trying to academically educate us while beasting us basically term 1 protocol (inspections mainly) did not have as much affect as possible. I slept through a lot of classes. I was genuinely interested in because I didn't have proper sleep.	Draw & Write No.6

Lack of time for consolidation/ reflection	Reported
Need more time to study.	Questionnaire
Time to Revise in the evenings.	Questionnaire
The nature of the course means that there is time pressure on learning all theory. When this is mixed in with the generic tasks, committee tasks and other lessons that we need to complete, the time left over for personal or collaborative revision is minimal.	Questionnaire

Time pressure; no reflection periods	Questionnaire
Time constraints mean I cannot consolidate knowledge	Questionnaire
Significant time restraints, to reflect, consolidate and prepare	Questionnaire
The only barrier I currently feel there is to my learning is the amount of time I must study. I like to take time on my own to read through material and think about the subject. All the way through term two we have been on inspection every day. This takes up a lot of time at night and in the morning, reducing the time I must study. In my opinion, every effort should be made to allow students to study what is being taught, but this does not happen at OACTU.	Questionnaire
There is insufficient time to properly revise after each lecture and consolidate notes. Instead forcing us to have to cram a week before the APS exam, this is not learning but instead a test on knowledge retention. Had I learnt it I should be able to recall the information months/years from now.	Questionnaire
As an individual, I value a quiet place where I can reflect and solidify the knowledge, I've acquired that day. If there was an allocated time slot more regularly in which we were tasked with consolidating our understanding and perhaps even writing a 100-word summary of that lesson, then I believe that would be useful. It would award the learners with a peace of mind that they are absorbing the information and it would award the instructor with a greater awareness of where the learners are at in terms of their capacity for absorption and comprehension.	Questionnaire
Allow SCD periods to be used for self-study instead of forcing lessons to fill the time.	Questionnaire
No self-study, lots of lectures - often at ineffective times in the day/week	Questionnaire
Not enough free time to reflect on the knowledge we acquire. This applies more in the first and second terms of the course. The third term we are given the time to reflect and these aids learning.	Questionnaire

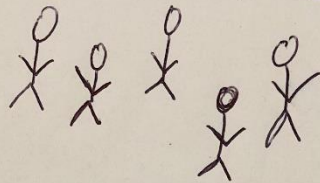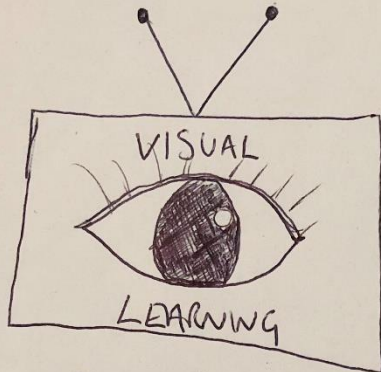| Ex-serving repeating training	Reported
De's and ex-rankers should be separated more. The ex-rankers carried DE's through, while the DR's benefited from the ex-rankers mutually earned respect from DS. The ex-rankers also spent lots of time in pointless classes.	Draw & Write No.6
What do ex rankers learn by doing term 1?	Draw & Write No.5
Current serving repeating learning they've already done	Draw & Write No.4

Having 12 years' experience in the military with many operational tours, but still getting put in a cramped classroom to learn rifle drill etc. This puts the regiment instructors at a disadvantage, and the DE cadets who need help and attention and time. It just seems pointless for MOD1 in date personnel to be there. The same applies to pretty much all of term 1.	Draw & Write No.19

Staff	Reported
Instructors attitudes	
Cadet faff, Instructors acting upon rumour and not fact, some instructor attitudes (To both the wider Air Force and how they interact with Cadet's)	Questionnaire
Individual egos of some instructors-namely Flt Lt Campbell, Flt Lt King and Flt Lt Ear	Questionnaire
There is a lack of transparency on behalf of the flight staff. For instance, often there has been no actionable feedback and then the individual has been recoursed leading to mistrust from the cadets and confusion as to what they did wrong. There is a widely held belief that there is no standardisation between either flight staff or Sqns. This was clear on Ex VE and was picked up across the whole Sqn of cadets.	Questionnaire
Constant threat of re-course with any actions which could be deemed as negative by the staff.	Questionnaire
I feel the DS make or break an environment and selecting the right people for the job is essential, i feel this could be questioned at times.	Questionnaire
Some staff unintentionally put a barrier between you and them which makes them unapproachable	Questionnaire
The parent/child relationship set by staff	Questionnaire
As an Off Cdt there is a feeling of worthlessness. I feel, when i am correct, individuals in power will not stand up for me and rebut will not stand up for me	Questionnaire
I feel that with a lot of experience, I was dumbed down and that the instructors would only ask for my experience or acknowledge it when it suited or made their lives easier. This course has almost removed the confidence in my ability and already established style of leadership and command and control.	Questionnaire
The LTF have generally been very good and have delivered lessons very well, as have the Regt Staff.	Questionnaire
Similarly, the level of scrutiny on DW tasks is exasperating. Particularly when your own Flight Staff make mistakes on written work, like any human being would do	Questionnaire

Some of the most learning I have done/had on this course has been when I am away from OACTU - namely on Care in Leadership, Grantown/Crickhowell, and BAWC. The difference is the 'grown up' atmosphere which exists outside OACTU.	Questionnaire
I am about to go into the wider RAF and feel more hesitant around officers than I did before starting IOT, after 12 years' service. There needs to be a military discipline component to training, yes but in terms of barriers to learning, the atmosphere needs to change.	Questionnaire
Overhanging knowledge that the staff hold power over you	Questionnaire
I feel like sometimes opinions aren't welcome by instructors, they could be used as an effective learning tool.	Questionnaire
Inconsistent instructors make the quality of lessons very random, and eventually sets a precedent of whether you will gain much from the lessons.	Questionnaire
Finally, there seems to be a very heavy reliance on re-coursees and ex-rankers to teach the rest of the cadets' basic skills and guide us through various parts of the course. Whilst I understand that their experiences are extremely valuable, it seems like the burden on them can sometimes be too great and that they are used as a substitute for the lack of contact time we have with staff or for gaps in the information we are given.	Questionnaire
Some instructors are aware that the course content is out-dated and not relevant to the course and regularly articulate it to cadets. The course content needs to be evaluated to determine it's value throughout IOT.	Questionnaire
Instructors at OACTU have a god complex	Questionnaire
We have been treated as less than human by our instructional staff and they will be our peers in a few months	Questionnaire
If the instructors on front line squadrons displayed the attitudes that the instructors here have shown they would be 24 hour posted	Questionnaire
Unapproachable "god-like" DS	Draw & Write No.9
Treated like adults but spoken to like children	Draw & Write No.5
Here are some staff who behave in a very poor/unprofessional manner and seem to patronise students	Questionnaire
No trust for DS	Draw & Write No.21
Unrealistic goal set by DS	Draw & Write No.21

282

Role models: Open, honest, understanding, common sense, justifiable, logistical, consistent. This is preached but then not demonstrated in many cases	Draw & Write No.13
Remove the term "deal with ambiguity" as it is misused by staff who use it instead of "we haven't' thought that far ahead"	Draw & Write No.14
Term one felt patronising and extremely spoon fed because of the staff . More of an adult learning environment would be beneficial	Draw & Write No. 20
Sometimes rank gets in the way of learning.	Questionnaire
Conflicting messaging from staff	
Leads to "do as I say, not as I do" which is a very poor mentality	Draw & Write No.13
Saying one thing & doing another. Mixed contradicting messages from DS = confusing = frustrating	Draw & Write No.19
Staff need to practice what they preach	Draw & Write No.18
"Do as I say not as I do" attitude is prevalent	Draw & Write No.21
Another issue is when some instructors do not practice what they preach, which just displays hypocrisy which is bad, especially in a Phase 1 environment.	Questionnaire
A constant do as I say and not as I do attitude from the staff is exasperating	Questionnaire
I have found that some staff have a 'do as I say not as I do' attitude - I've seen lessons which have gone wrong, which for Off Cdts would have resulted in a D grade, but instructors can make these errors and we sit and watch.	Questionnaire
Lack of positive praise	
We graduate in two weeks and we have not had received one piece of positive praise	Questionnaire

We have received no positive praise. We were told to not be proud of passing term 1 as we were only 1/3 of the way through	Questionnaire
We are all human, a simple good morning or small element of positive praise would be very welcome	Questionnaire
I have heard so many negative comments from the staff about our performance that I am not starting to believe it.	Questionnaire
It has now become a running joke within the cadets that, "we are the worst squadron we have ever had" because that is all we keep getting told but never told how to improve	Questionnaire
In 26 weeks we must have done at least one thing right to be given some sort of positive praise, but it appears not	Questionnaire
The negativity, i feel there needs to be more positive praise, and not just focus on areas for development. At times we have felt, we can do nothing right, even though we have all passed elements of the course.	Questionnaire
More positive reinforcement is good for learning.	Questionnaire
An environment where positive feedback and a well done are allowed!!!	Draw & Write No.15
Lack of positive praise	Draw & Write No.4
Try giving some positive praise feedback occasionally	Draw & Write No.21
Give positives- People need to know what is going well, here we just get negatives	Draw & Write No.21

Teaching Methods	Reported
Overuse of PowerPoint/ Lecturing	
The design of many of the PowerPoints is outdated, (poor colour contrasts for example) making it harder to concentrate.	Questionnaire
Too much of a focus on PowerPoint presentations when we already have all that information in our aide memoirs. Practical lessons with the booklets for revision would be a better use of time and create a better learning environment	Questionnaire

284

Some lessons are too PowerPoint driven. I have seen instructors distracted by this rather than giving us a good rounded understanding of the topic. I feel that there should be content that that should be taught with room for the instructor to fill for a rounded understanding of the topic.	Questionnaire
All lessons are lectured and I do not personally gain anything from a lecturer reading out a PowerPoint that i can read - make my own notes on and learn at a pace i can keep up with and not the 1 hr 20 mins a lesson is given.	Questionnaire
Furthermore, a lot of lessons (mainly LTF, WC, BAWC & ESK) became very predictable, with a PowerPoint, then group work on a whiteboard before moving back to the PowerPoint, this predictable lesson plan made it very boring and made learning much harder.	Questionnaire
Too reliant on PowerPoints.	Questionnaire
The structure of lessons - they are very power point heavy and lack true interaction which would stimulate discussion and thus better understanding of the topic areas	Questionnaire
Power point lectures are good for delivery of information, but reading verbatim off the power point, which in some cases has happened, its merely a memory exercise and no actual learning takes place.	Questionnaire
Endless low-quality PowerPoint presentations.	Questionnaire
Also, the overuse and misuse of PowerPoint presentations, which are standardised and often several years old, this does not allow the trainers to deliver the lessons in their own manner and to their own strengths, even highlighted by trainers explaining that they would far prefer to deliver the lesson in a different location, in a different manner.	Questionnaire
Stuck to DTTT, the solution to presentations is not just PowerPoint and breaking into groups every 15 mins to use white boards.	Questionnaire
Being lectured at a lot using PowerPoint is not the ideal way to learn	Questionnaire
Death by PowerPoint	Draw & Write No.4
Too PowerPoint heavy at times. Group discussions can work better (small groups)	Draw & Write No.1
Death by PowerPoint	Draw & Write

	No. 2
Death by PowerPoint. More interactive learning	Draw & Write No.18
Too many lectures	Draw & Write No.4
Lack of lesson support material	
The course material is too hard to get hold of in any format other than paper based. Making electronic notes is discouraged.	Questionnaire
Rote learning from an aide memoire. I appreciate it is there to help and consolidate the lessons, but ensuring that each student makes their own notes, and then have the presentations available online to reference and refer to would make a lot more sense.	Questionnaire
Only PBS and WC provided the lecture slides before the lecture. As a slow writer, getting the slides before the lecture helps. In all other lectures, I spent more time writing notes, struggling to comprehend / absorb what the instructor was teaching. It would be much more beneficial to receive all lecture slides / notes before lessons so you can get an rough understanding before, then only need to annotate / add extra information, which will allow the learner more focus to truly listen and absorb what is being said.	Questionnaire
Standard of lesson delivery	
Possibly better taught lessons. Most are very good, and the practical sides benefit me a lot but coming from a teaching degree background I could see many benefits some of the theory lessons could improve through means of better teaching techniques.	Questionnaire
PBS content is does not apply the VARK principles or conform to the PAR teaching model. Forcing cadets to present their oral communications assessment using handwritten notes seems unnecessary and is challenging for some.	Questionnaire
Poor standard of teaching from both leadership and WC tutors.	Questionnaire
The teaching style and capability of the staff varies dramatically meaning that some cadets have an entirely different experience to others, this has a dramatic effect on their ability to learn and improve	Questionnaire

Whilst OACTU delivers different lessons using different styles I believe that there is potential for students to be put into specific groups depending on their learning style (e.g.- A kinaesthetic learner would be disadvantages if the day of learning involved all day of PowerPoint).	Draw & Write No.7
The non-military lectures don't seem to be able to pitch lectures @ the correct level	Draw & Write No.21
Overuse of DTTT lesson format	
I am so sick and tired of break into 3 groups, put your thoughts on a white board. A STTT theme which has scripted nearly every leadership and other lesson we have had. Ultimately a few people input what goes onto the board and the rest of the group wait until the exercise is over	Draw & Write No.19
All LFT lesson followed exactly the same format of intro-whiteboard exercises-lecture. Which became tiresome	Draw & Write No.21
Too many break into 3 groups and write on a flip chart lessons. We could see it coming a mile off	Questionnaire
Lack Practical Learning	
More practical learning. The balance was not right between practical and theory	Questionnaire
There is very little practical teaching and student activity apart from Q&As	Questionnaire
sometimes the balance of theory and practical could be more equal	Questionnaire
Online Learning	
This course would hugely benefit from MOODLE content on DLP.	Questionnaire
No Virtual Learning Environment	Questionnaire
The pass or fail element to certain aspects of the recourse, doesn't encourage me to want to learn it forces me too.	Questionnaire
There also needs to be an OACTU led InVal process from the start of the course; having a cadet led 'course critique' is not suitable. Also, DSAT compliance requires there to be a formative assessment for Bandar and the APS exam? All the aforementioned said, the instructors do all they can with the time and resources that they have. Thank you for the opportunity to voice my opinion.	Questionnaire
Term 2 learning environment was ok, certain aspects could be done online	Draw & Write No. 20

In a time when technology is so important, we seem to be far behind. It is going to be so important for our job, yet there is a lack of it. Mabey some education on technology would be worthwhile	Draw & Write No.13
Lack of remedial training	
Furthermore, there needs to be a structured remedial package for Bandar failures, much like the APS exam failures and Delta packages for leadership. Currently there is no remedial training for Bandar failures. A recourse to the beginning of term 2 with a full rewrite is inefficient and a waste of resources.	Questionnaire
No compulsory packages to assist learning when the individual struggles e.g. Bandar (There is no help if someone were to fail, they either get limited advice and carry on or are put back onto another squadron with no help on the essay and are expected to redo every part of the term)	Questionnaire
Not enough support for Bandar	Draw & Write No.4
Time to research. APs = Bandar. There is little time to study and learn how to conduct critical analysis; this is because term 2 is too compressed. If you fail this as aspect the remedial is not fit for purpose. It does not exist.	Draw & Write No.14
Lack of student control/ input into learning	
I believe that if cadets were genuinely approached for feedback it would be far more constructive than expected and could be of benefit to OACTU in the improvement of the course. Cadets also do not have much control over how/where we learn, some lesson content could be better learnt with student led lessons and collaboration amongst cadets, followed by delivering/explaining/presenting this content to the trainers for review/discussion	Questionnaire
Little emphasis is placed on self-study for much of the course, we are given pretty good handouts from our staff but I feel that our knowledge and understanding of quite a few topics, particularly the theories of leadership is not tested while we are in the classroom and if it is, it is done on a room wide level where at least one cdt will know the answer and the class moves on leaving some learners behind. I think it would be a good idea to have some smaller non-graded, non-otmis tests through the course to just cover what we have learned and what we are expected to know.	Questionnaire
Reluctance to ask questions	
Often, the instructors are also the staff that are assessing you. This creates a environment where people are afraid to ask questions	Questionnaire
Aspects of Regt Trg, although far better than in previous years there is often still a military approach that a Cadet does not have any 'right' to an opinion or the 'voice' to challenge or feedback on the training delivery... this was even highlighted when a Trainer reminded cadets to be careful what they put on feedback forms.	Questionnaire
The environment at OACTU does not encourage us to ask questions so we walk away from lessons with a lot of questions which we wished we could ask but were too scared to	Questionnaire

Questions are not welcomed and often frowned upon	Questionnaire
If you ask a question in a lesson the instructors make you feel small and stupid	Questionnaire
Cadets will not always be as forthcoming with their opinions, thoughts and experiences because they feel they are constantly being assessed.	Questionnaire
Learning environments need to be flexible and responsive to the needs of the individual. Individuals should be welcomed and encouraged to ask questions and should not be made to feel intimidated by a blunt response. However, occasionally a blunt response is necessary, but explanations should always be provided for decisions that are made by instructors. Accountability	Questionnaire
Lack of being told why	
I get that this is the military and we will have to do things we don't want to do but an explanation as to why would have often helped	Questionnaire
If you are going to ask me to do something, tell me why	Questionnaire
Tell me why I need to know something other than "because"	Questionnaire
I am an adult, I would like to know why I am being asked to do things. It would really help to contextualise the experience	Questionnaire
Explain to me like an adult why I need to do something or why I need to know it	Questionnaire
As an ex-ranker I often knew why I had to do something because of my experience and I often had to put things into context for my flight. If the staff had done this, it would have been a much more powerful learning experience	Questionnaire
Other comments	
Phase 1 attitude, is it a course? I believe its 6 months of phase 1.	Questionnaire
1 - assessing a potential JO shouldn't be based on grades but rather a general impression of their suitability and competence. A record and paper trail are good and provides a body of evidence to support decisions when required, but i believe in practice it changes the focus of the course too much and reduces the quality of training. 2- the term subjective is used too much in training as a get out of jail card. it's become a bit of an inside joke when discussing things. whilst things are situational, without specifically outlines situations and the ideal judgement / decisions / actions for them, then learning deteriorates to 'it depends, just make the correct decision and that will change based upon stuff' which offers absolutely no benefit or development of someone's analytical and reasoning skills. you're telling people to think and assess situations, acknowledging its hard and changes, but doing so without giving any examples of good/bad decision making and why it was suitable/not.	Questionnaire

289

Using common sense approaches rather than sticking rigidly to post situations and leadership styles	Draw & Write No. 1
More efforts need to be taken to put people into stretch e.g applying pressure to cadets during early stages of training to establish who is mentally robust enough	Draw & Write No.18
Constantly being assessed even when learning the skill	Draw & Write No.17
Get rid of OTMIS. Tis appears to be nothing but a paper exercise which imposes a set of hand cuffs on flight commanders + Dep FC's ability to make common sense decisions	Draw & Write No.14
Vulnerable adult? Really. I am a 36-year-old former Flight Sergeant with 2 children. I am not a vulnerable adult and should not be treated as such.	Draw & Write No.14
Unrealistic training environment	**Reported**
Environment not reflective of the real environment	Draw & Write No. 16
Some of the exercises bear little resemblance to life outside of Phase 1 and are therefore difficult to buy into.	Questionnaire
Unrealistic exercises	Draw & Write No. 4
Discouraging Individuality	**Reported**
Embrace people's individual styles especially in leadership/ Don't try and make every junior officer fit in the "Cranwell Mould"	Draw & Write No. 1
Work harder to remove the grey man	Questionnaire

Fear	Reported
Fear of failure/ recourse	
Pressure and fear of the staff/recoursing	Questionnaire
Fear of failing/making mistake/being re-course	Questionnaire
The risk and fear of significant consequences such as recourse discourages open questioning and a more in-depth involvement in the learning taking place	Questionnaire
Fear of failure, being misunderstood	Questionnaire
People are so scared to fail at OACTU in case they get recoursed, that they never deviate from what they are told. This potentially forces people into learning a way which isn't beneficial to them, making learning a slower and harder process than is possible.	Questionnaire
The OACTU Wall: A core ethos that makes cadets so afraid of recourse that they will not speak to any staff frankly about any of their difficulties	Draw & Write No. 16
Recourse fear	Draw & Write No. 4
Fear of failure/ recourse	Draw & Write No. 2
A "Go to" member of staff for advice, without fear of being marked down/ judged	Draw & Write No.17
Fear of punishment	
Fear of punishment	Questionnaire
Fear of punishment inhibits freedom. There is fear to stick head above the parapet because there is a risk involved, and punishment is often involved. Punishment is NOT conducive to a positive learning environment	Questionnaire
There's also a poor environment that punished mistakes that are made. People are afraid to get things wrong, yet the majority of learning is done after making mistakes.	Questionnaire

NOA's, ECV's, the recourse culture, cadets don't feel they can speak up and fully interact due to fear of retribution.	Questionnaire
Further to this it seems that there is a punishment culture as when staff or results are questioned an immediate NOA/ECV is issued, teaching nothing as there seem to be dished out for fun at times. We have been told that there is no fixed way to lead, however it seems that if we do not strictly lead a certain way we will fail Ex VE and other parts of the course.	Questionnaire
Constant fear of repercussions. Although they say it's a safe place to make mistakes	Draw & Write No.21
Claim "mistakes are ok" yet when they happen, punishment occurs, sometimes severely	Draw & Write No.13
Fear inhibiting learning	
The environment surrounding the RTF Exercise phases instil fear within the Squadron, which can act as a barrier to individuals learning.	Questionnaire
The way in which some lessons/ lectures are delivered with force inhibits me from learning. I feel I am doing things through fear rather than wanting to actually learn, this does not create a safe environment to make the most from learning.	Questionnaire
The constant pressure and fear to 'keep your head down' can allow for a disengaging lesson due to people not having the confidence to express their opinions and feeling as though they need to remain professional.	Questionnaire
Often in the lessons where the instructor made us feel at ease, the participation levels and enthusiasm was significantly improved. For me, a relaxed, comfortable environment where you can have the confidence to debate and appropriately question is where people learn more. It is essential that cadets feel at ease to express their knowledge in front of instructors without the fear of judgement or risk of their opinions hindering future, and perhaps unrelated, assessments in the remainder of the course.	Questionnaire
I believe that there is a built-in fear culture that pushes cadets to be risk averse, keep heads down, and be the 'grey man'. There is a base assumption that if a cadet is not doing something the way it is usually done, or the way others are doing it then they are doing something wrong. Subsequently, it is absolutely viewed as safer by cadets to do whatever the majority are doing, whether good or bad, rather than what an individual might feel is right. It is a self-propagating culture that starts with the staff in term 1 and snowballs to the cadets, I think for learning to improve this needs to be addressed. Perhaps by more clearly vocalising the purposes of each term. It is understood that term 1 is for militarisation, and it is understood the need for uniformity and teamwork in that phase. But the purpose of IOT is to develop us into leaders and as such I believe that there should be a conscious, strongly asserted and re-asserted change in term 2 towards more free decision making.	Questionnaire
The fear of taking risks and making mistakes. This can sometimes be the most effective way of learning.	Questionnaire
The fear of being watched so closely all the time. It prevents people from saying what they really think/ feel about topics in group discussions and this prevents the kind of open, intellectual discussion which people benefit from.	Questionnaire
The rank of the Trainer, with IOT being a course to train and develop new Junior Officers it is known that cadets are monitored/assessed at all time thefore fear inhibits learning	Questionnaire

Fear of disapproval from commander.	Questionnaire
I feel that we are under constant scrutiny from Flight Staff, fearing that any actions or comments out of place may be misinterpreted and blown out of proportion on OTMIS.	Questionnaire
With some RAF Regiment instructors, the learning environment that they create, based on fear can sometimes hinder my learning experience.	Questionnaire
Humiliation of being wrong	Draw & Write No. 2
Fear of failure- negative affect on learning	Draw & Write No. 2

Issues with curriculum	Reported
Lack of relevance	
Air Power Overload- What is relevant? Focus on military history and not recent Ops. Future conflicts?	Draw & Write No. 5
More AT in carousel? Why?	Draw & Write No. 5
1.5 hours on SJARs??	Draw & Write No. 5
The forcing of irrelevant academic essays and exams "APS & Bandar" that in no way play into future roles especially considering the lack of training available to those who struggle with essays	Draw & Write No.16
Bandar-perhaps two or three 1000-word essays throughout the term we can improve upon, rather than one pass/ fail	Draw & Write No. 6
Teach & expose cadets to crisis management	Draw & Write No.18

293

So much CID Air Power history relating to things like the issues in WW2 with Air-maritime integration etc, but one 1 hour 20 lesson on COIN. COIN is what we have been doing for years and is so relevant and current. There has been so much focus on history but not on recent Ops. I explained Op Herrick to a DE in week 4 of term 3 and he didn't know anything about it! If OACTU is delivering credible officers I think much more content should focus on recent Ops which most of the RAF have been on. The cultural context is dated.	Draw & Write No.19
"AT" not really "AT". Call it something different.	Draw & Write No.17
Lack of ethos	
More militarisation and ethos building	Draw& Write No. 6
More esprit de corps!! We do not instil enough	Draw & Write No.10

Appendix J   Picture of the college wall, drawn during the focus group

They don't know us →

They don't know
the Job →

They don't know
How to relate →

Cannot teach →

Don't practice
what they peach →

Instructors

WALL
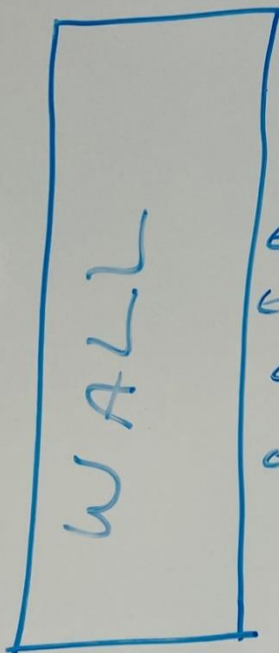
← Don't know them

← Don't know our limits

← Don't know how to speak to them

← can't relate to instructors

← We are teaching ourselves

← we don't know the standards

Cadets

296

Appendix K   Reconnaissance phase demographic results

OACTU Reconnaissance Survey Demographic Data Results

Age

1. Please select which of the following best describes your age group:

Category	Response Total	Response Percent
Under 21	14	6.4%
21-30	137	62.8%
31-40	62	28.5%
41-50	4	1.8%
51-60	0	0%
60+	0	0%
Skipped	1	0.5%
Total	218	100%
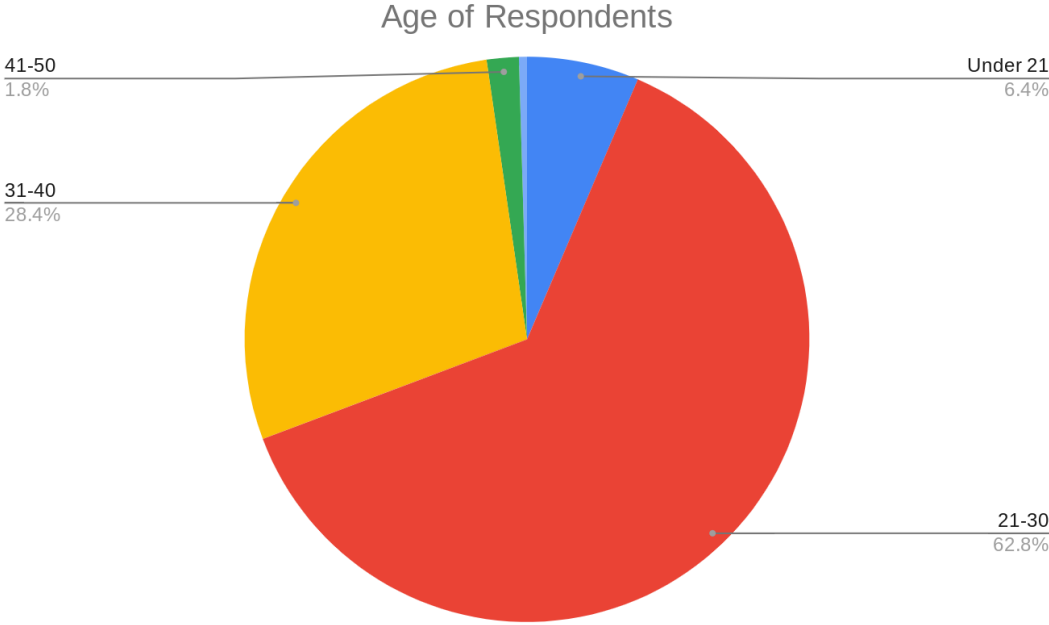
Age of Respondents

Gender

2. Please select which gender you identify with:

Total

	Response Total	Response Percent
Male	186	85.3%
Female	32	14.7%
Other	0	0%
Skipped	0	0%
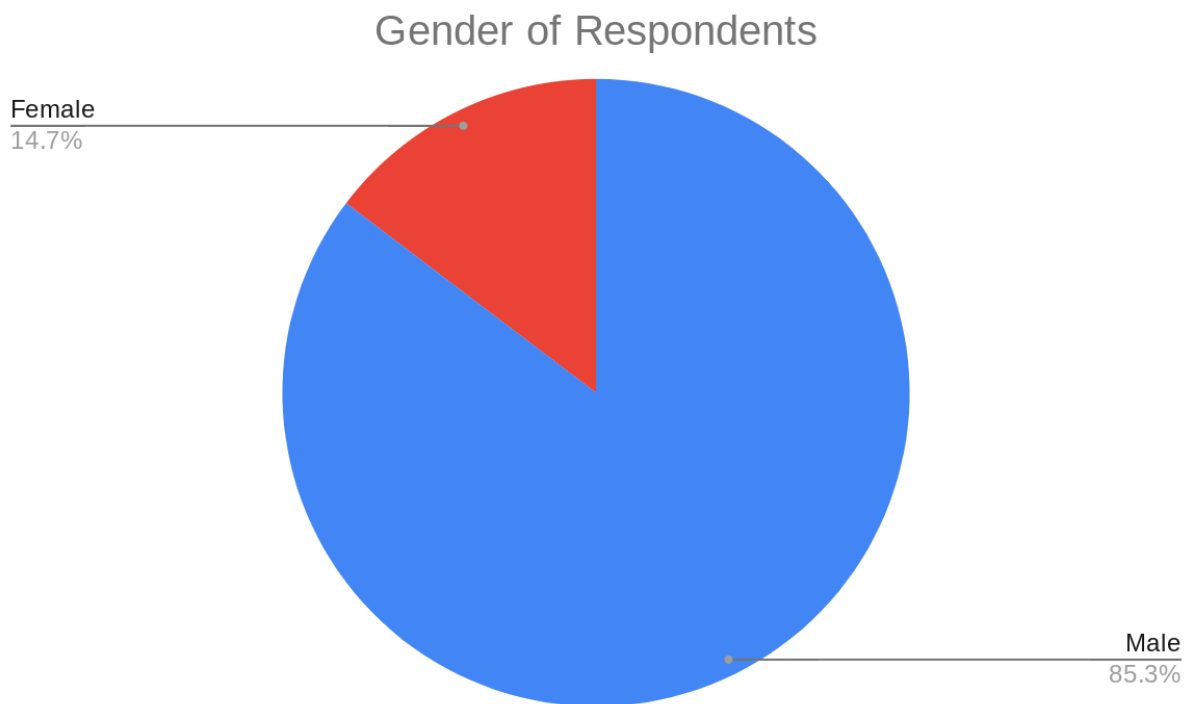
Gender of Respondents

Female
14.7%

Male
85.3%

Ethnicity

3. Please select which ethnic group you identify with:

Total

	Response Total	**Response Percent**
White	210	96.4%
Mixed/ multiple ethnic groups	4	1.8%
Asian/ Asian British	4	1.8%
Black/ African / Caribbean/ Black British	0	0
Other	0	0
Skipped	0	0

Ethnicity of Respondents

Asian/ Asian British
1.8%

White
96.3%
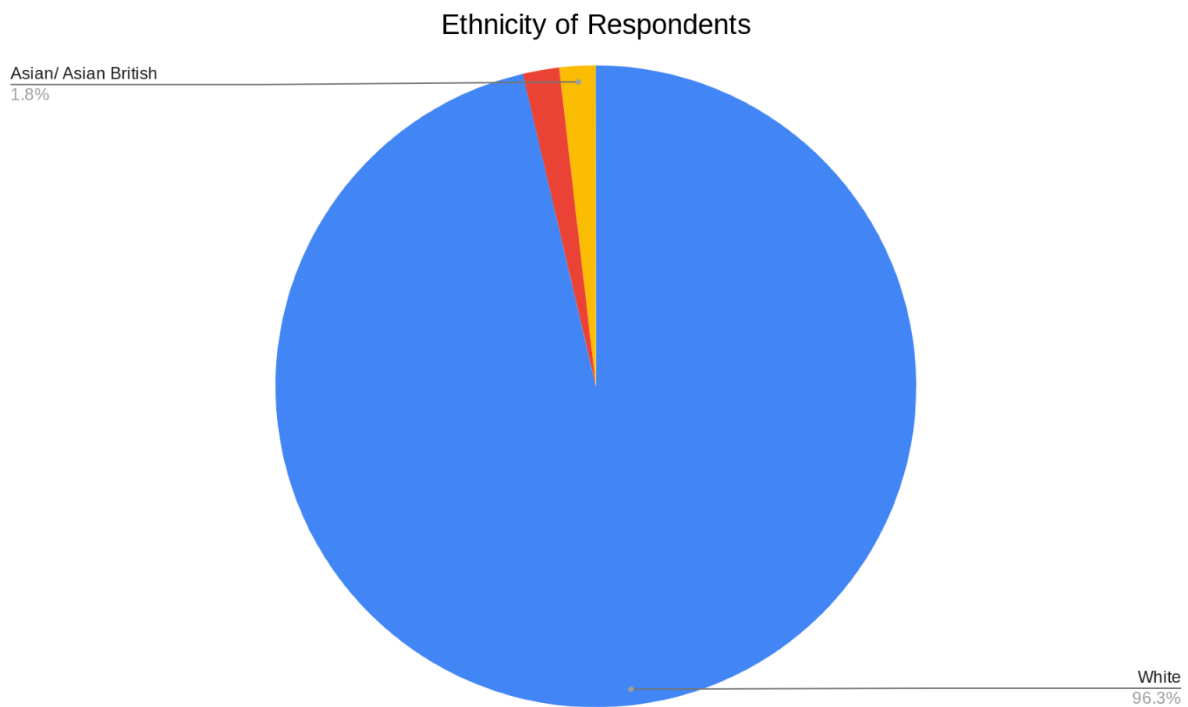
Education

4. Please select the highest level of qualifications you have attained:

	Response Total	**Response Percent**
A-Level or equivalent (VCE's/ Higher School Certificate/ Diploma)	61	28%
Degree or equivalent (BA, BSc, Level 6 Award, Level 6 Certificate, Level 6 Diploma, Level 6 NVQ)	116	53.2%
Postgraduate Degree or equivalent (MA, MBA, Level 7 Award, Level 7 Certificate, Level 7 Diploma, Level 7 NVQ)	29	13.3%
Other	12	5.5%
Skipped	0	0%
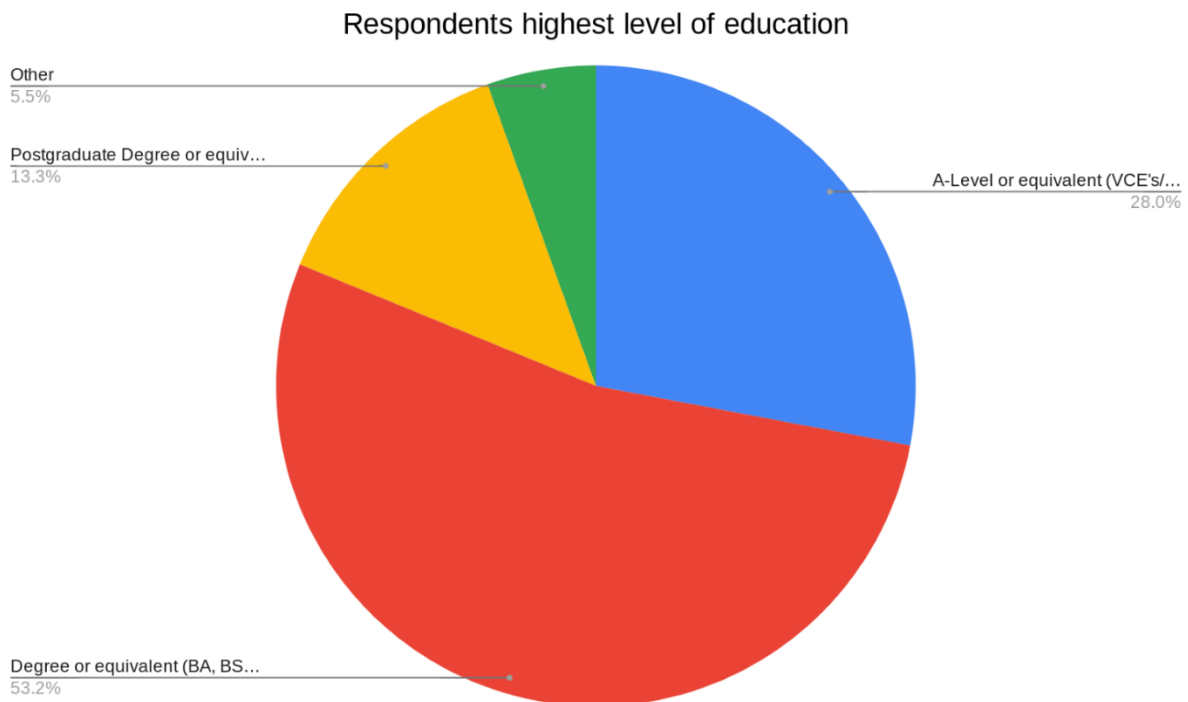
Respondents highest level of education

Other
5.5%

Postgraduate Degree or equiv…
13.3%

A-Level or equivalent (VCE's/…
28.0%

Degree or equivalent (BA, BS…
53.2%

Previous Military Service

5. Please detail below the number of years' service you have completed in the military. Please do not include any time in the University Air Squadron or Air Cadets but do include any time which you may have spent as a Full-Time Reservist.

- 68 respondents had previous military service
- This equates to 31% of respondents.
- Range: 3-22 years
- Average previous time served: 11.5 years

Adult Learning Environment

6. In your opinion, does OACTU currently have an adult learning environment?

Term 1

	Response Total	Response Percent
Yes	60	60%
No	40	40%
Skipped	0	0%

Term 2

	Response Total	Response Percent
Yes	20	36%
No	32	64%
Skipped	0	0%

Term 3

	Response Total	Response Percent
Yes	10	15%
No	56	85%
Skipped	0	0

Total

	Response Total	Response Percent
Yes	90	42%
No	128	58%
Skipped	0	0

Appendix L   Requested quota for sample for the reconnaissance phase draw and
                    write exercise

Requested quota for sample for the reconnaissance phase draw and write exercise

Minimum Quota	Notes
3 females	Representative of the 14 % of the student body
6 previously serving airmen	Representative of the 33% of the student body
1 in the 18-21-year-old bracket	Representative of the 6% student body
2 in the 31-40-year-old bracket	Representative of the 28% student body
1 in the 41-50-year-old bracket	Representative of the 1.8% student body
2 who hold A-levels as the highest qualification	Representative of the 28% of the student body
2 who hold a post graduate degree as the highest qualification	Representative of the 13% student body
1 with an ethnic background other than white	Representative of the 3% of the student body

Appendix M   Cycle 1 pre-service instructor draw and write task sheet

<u>Role and responsibilities of an instructor at OACTU</u>

Please use the paper and pens provided to illustrate the multiple roles and responsibilities you anticipate you will undertake as an instructor at OACTU.

These do not have to be illustrated through paragraphs, it can be drawings, spider diagrams, poems, or any other way in which you wish to express yourself.

<u>Inspiration:</u>

Flag 1. A framework for teachers which illustrates the key areas attributes they must show

Flag 2. An example of an acronym

Flag 3. An example of a mind map

Flag 4. An example of a free hand approach

Thank you for your help!

Appendix N			Cycle 1 semi-structured interview questions

OSIC Questions

Military Basic Training

- When did you complete your Phase 1 training?

- Looking at the pedagogy versus andragogy table, in your opinion, how was your phase 1 training delivered?

- How did you respond to these delivery methods?

- How might the delivery methods have changed since you completed your training?

- Please can you describe any of the members of who you would have regarded as a role model going through training and why?

- Did you enjoy phase 1 training?

  And why?

Background

- What motivated you to become an instructor?

- Have you worked in any instructional roles before this post?

  Where did you work?

  How did you find the experience?

- Have you completed any previous instructional qualifications?

- What level of formal educational qualifications do you hold?

- When did you complete this?

- What format were these delivered? Face to face? Online?

- What delivery methods did the instructors use?

Roles of a military instructor at OACTU (Refer to drawing)

- Describe your ideal cadet

- Describe who you think is an average cadet? Age? Education? Military experience?

- Describe your ideal instructor

Scenario

You have been asked to teach a lesson on the RAF rank structure....

- Would you feel more comfortable picking up a lesson someone else has written and delivered previously or would you rather design your own?

- How might you plan your lesson to stretch all cadets in the room given that some may have more knowledge of the topic than others?

- How might you plan your lesson to cater for students who prefer to learn in different ways?

- How might you use learning technology in this lesson?

- How confident would you be using learning technologies?

- A cadet asks you a question during the lesson. Is this appropriate?

- They challenge something you have said. Is this appropriate?

Scenario

You are a Flight Commander/ Deputy Flight Commander on a Squadron....You walk past a term 3 residential corridor and spot that two of the cadets have left their rooms untidy.

- What would be your initial reaction?

- How might standards be reinforced appropriately?

Scenario

You are teaching a lesson and a student puts their hand up and asks you why you need to know this information.

- What would be your initial reaction to this question?

- Another student googles the topic and spots an in accuracy in your lesson and highlights this. How would you respond?

- A cadet puts their hand up and highlights that they have previous experience in the topic being delivered. How do you respond?

Closing Question

- What % of your time do you anticipate being allocated to administration versus teaching/ interacting with cadets?

Appendix O   Cycle 1 draw and write pictures

Purpose Discipline
Honour Laughter

INSTRUCTOR

CARE
— Welfare
— OPI
— Values

THE mission

Example
empathy
emotional
intelligence

SUPPORT

Develop
— the individual
↳ Mental
Confid

competence
— confidence
— credibility

BUILD
— the team
— purpose
— cohesion

INSTRUCT ⟹ INSPIRE
⟹ leverage

— Delegate
MU1 on Command
DEVELOP

influence
— mentorish
— humility

CHALLENGE

Leader

INSPIRE

(14)

Roles of a military instructor at OACTU

New
- Lesson plan
- Lesson content
- Lesson delivery
- Feedback

Standards
- Class
- Department
- Conduct

Role Model

Know your cadets
Be a positive role model
(be high standards)

SME

Impart Knowledge
Communicate
Conflict resolution

Existing

314

Roles of a military instructor at OACTU

Good Role Model

- Passive
- Visible
- Motivated
- Good Emotional Intelligence
- (1) MELvE Packaged
- Disciplined (+Self Disciplined)
- High Standards
- Credible
- Fair
- Encouraging
- Developing
- Mentoring
- (2) Shared Instructional Techniques
- Honest
- Flexible
- Confident
- Loyal
- Understanding
- Good Communicator
- Articulate
- Reflective
- (3) Open to Other Views

45

Roles of a military instructor at OACTU

Roles of a military instructor at OACTU

Professional

Democratic

CSTV — Appropriate Behaviours

Depth of Knowledge

Role Model

Facilitator — enhance of the individual

Positive — enthusiasm motivated

Knowledge skills?

Mentor — relevant have personal/professional experience

Encourage challenge + growth

Cater to culture + safety

Appreciate Peer/Feedback Coach

Provide honest + regular feedback on performance/attitude

Encourage students to understand

Provide RF + clear + ongoing purpose

THREE

16

317

Appendix P   Analysed data from the draw and write pictures and semi-structured interviews

Facilitate	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Facilitate knowledge and skills	i6	1	16

Provide a safe environment	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Provide a safe and secure learning environment	i6		
Assess risk	i6		
Cadet safety	i6	1	16

Mentor	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Mentor	i6		
Mentor	i4		66
Mentoring	i3		
Be a mentor by supporting but having your professional boundaries.	i2	4	

Ensure Cadet welfare	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Cadet welfare	i6		
			33
Welfare	i4	2	

Motivate	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Motivated	i6		
Motivate	i2	2	33%

Share relevant experience	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Share relevant personal / professional experiences	i6	1	16%

Be approachable	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Approachable	i6		
Approachable - there is nothing worse than having a line manager that is not approachable.	i2	2	33%

Coach	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Coaching	i4	1	16%

Provide Feedback	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Provide honest and regular feedback on performance/ attainment	i6		
Honest, there are some things that they will need to know and something's that they won't. You can be as honest as possible. Especially with feedback. The more honest you are the better they will go.	i3		
Honest reporting	i4	3	50

Encourage self-awareness	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Encourage self-awareness	i6	1	16

Promote RAF Ethos core values and standards	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Promote RAF ethos and company purpose	i6		
Demonstrate core standards and values	i6		
Values and standars	i4		
Standards	i5		
Someone who lives values and standards	i4		
Values and standards	i3	5	83

Challenge	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Encourage challenge	i6	1	16

Growth	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Encourage growth	i6	1	16

Role Model	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Appropriate Behaviours	i6		
Professional	i6		
Good role model	i3		
Role model	i5		
Role model	i2		
The big thing for me was a good role model. How you are presented, how you present yourself and how you teach and actually a lot of things	i3	6	100

321

I think that the cadets would want to see a role model therefore you have to have that standards piece yourself. Otherwise, the credibility starts to go.	i5		
Role model while embedding the ethos and values and spirit of the RAF	i4		
We are supposed to be a great example for them to follow,	i1		

Develop the individual	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Develop the individual	i4		
Develop	i4		
Developing the individual	i3	2	33

Competence	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Competence	i4	1	16

Develop cadet's confidence	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Develop confidence	i4		
Confidence	i2	2	33

Develop cadets credibility	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Develop credibility	i4	1	16

Delegate	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Delegate	i4	1	16

Build the team	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Build cohesion	i4		
Build the team -While a lot of that will happen it is also the influence of the instructor that will embed the ethos and values and spirit of the RAF.	i4		16
Build purpose	i4	1	

Mission Command	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Mission Command	i4	1	16%

Inspire the cadets	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Inspire	i6		
Inspire inspire a cadet to be the best leader that they can be.	i4		
Inspire	i5	3	50%

Resource	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Resource	i4	1	16

Support	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it

323

Support	i5		
Support	i2		
Emotional support	i4		
Physical support	i4	3	50

Engender diversity & Inclusion	**Instructor code**	**Total No. instructors that mentioned it**	**% of instructors that mentioned it**
Diversity and Inclusion	i4		
Someone who lives diversity and inclusion	i4		33%
Fair- this is D&I think, treat everyone evenly	i3	2	

Empathy	**Instructor code**	**Total No. instructors that mentioned it**	**% of instructors that mentioned it**
Empathy	i4		
Goes back to being empathetic	i3		
Understanding of your cadets and being able to empathize with them, for example you have had a really busy morning, then heavy on PT and you have then straight after lunch, you might not want to do written comms, you might want switch it around and do something else. Something that is more energizing to pick them up.	i5	3	50%

Care	**Instructor code**	**Total No. instructors that mentioned it**	**% of instructors that mentioned it**
And the care point which is the most important one. A solider that knows you care will love you for looking after them and by caring	i4	1	16%

324

Emotional Intelligence	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Emotional Intelligence	i4		
Good emotional intelligence -Keeping an eye on people and identifying when people are different. How people talk, their body language. Why are they different form last week? Do you ask their team makes, do you ask them direct? He may be nervous because he doesn't like the exercise phase but how can we keep him bubbling because he has done really well on the theory stuff.	i3		33%
Good emotional intelligence	i3	2	

Discipline	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Discipline	i4	1	16%

Provide Direction and Guidance	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Provide direction and guidance	i1		16%

Assess Understanding	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Assess understanding	i1		
Assess them in both a formative and sumamtive way to ensure that almost you are content that they are confident and compatent at undertaking their role	i2		50%
Confirm understanding	i5		
Assess	i2	3	

Formative	i2		
Summative	i2		

Demonstrate and explain	**Instructor code**	**Total No. instructors that mentioned it**	**% of instructors that mentioned it**
Demonstrate and explain	i1	1	16%

Treat people fairly	**Instructor code**	**Total No. instructors that mentioned it**	**% of instructors that mentioned it**
You need to treat people fairly. You will have all sorts of ages and abilities and you need to treat them equally	i3	1	16%

Project confidence	**Instructor code**	**Total No. instructors that mentioned it**	**% of instructors that mentioned it**
Confident-Confident in your abilities, they will pick up if you are not confident. If you deliver something confidently even if you are not particularly, it instills confidence in them.	i3	1	16%

Loyal	**Instructor code**	**Total No. instructors that mentioned it**	**% of instructors that mentioned it**
Loyal	i3	1	16%

Understanding	**Instructor code**	**Total No. instructors that mentioned it**	**% of instructors that mentioned it**
Understanding	i3		33%
Understanding	i5	2	

Good communicator	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Good communicator	i3		33%
Articulate	i3		
Communicate	i5		
A good communicator and articulate with it.	i3	2	

Honest	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Honest	i3		16%

Flexible	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Flexible	i3		16%

Encouraging	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Encouraging- should give them a little bit of encouragement.	i3		33%
someone who wants to bring the best out in everyone	i4		

Self-Disciplined

Self-Disciplined	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Self-Disciplined	i3		16%

Encourage decisiveness in a safe environment	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it

327

Decisive -Some of the others have talked about their IOT days and being told to make a decision doesn't matter if its right or wrong, just make one. You being decisive is a way of empowering them. As long as you are content that in allowing them to make the decision they will be safe then learning can come of it. You can use this as feedback and ask them how their decision played out. Would you do the same again?	i3		16%

Visible	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Visible Being visible is also really important	i3		16%

Credible	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Credible -which does back to visibility but also that you have credibility because of your background. I think that makes you justified to stand up and teach people.	i3		16%

Know your cadets	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Know your cadets	i5		16%

Empowerment of cadets	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Help them help them selves	i5		16%

Impart knowledge	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it

328

Impart Knowledge	i5		16%

Subject Matter Expert	**Instructor code**	**Total No. instructors that mentioned it**	**% of instructors that mentioned it**
Subject Matter Expert	i5		16%

Provide Leadership	**Instructor code**	**Total No. instructors that mentioned it**	**% of instructors that mentioned it**
Leadership	i5		50%
The instructor providing a robust leadership style where required.	i2		
Talking about leadership being the thing that we are impacting, actually it may be more of the leadership and command element	i5		

Direct influence	**Instructor code**	**Total No. instructors that mentioned it**	**% of instructors that mentioned it**
Direct influence	i5		16%

Resource	**Instructor code**	**Total No. instructors that mentioned it**	**% of instructors that mentioned it**
Resource	i5		16%

Conducts themselves appropriately	**Instructor code**	**Total No. instructors that mentioned it**	**% of instructors that mentioned it**
Conduct	i5		16%
Conduct	i5		

329

Dresses appropriately	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Deportment	i5		33%
How you present yourself	i3		
Upholds Professional Boundaries	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Professional Boundaries	i2		16%
Develop Training Techniques	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Develop training techniques -The instructor to then develop their own techniques so that you can deliver it correctly and in your own methods and style.	i2		16%
Deliver suitable training	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Deliver suitable training	i2		33%
Make things interesting as a lot of the stuff that we teach can be very boring	i3		
How you teach	i3		
Provide direction and guidance	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Provide direction and guidance	i2		16%
Enthusiasm	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it

Enthusiasm	i2		16%

Passion	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Passion	i2		16%

Learn	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Learn about self	i2		16%
Learn about the workplace	i2		
Learn about individuals	i2		

Differentiate	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Basically everyone has a place and you might look at someone and think you are useless but it doesn't necessary mean that they are at all. It might just be that they are suited to being in a bunker somewhere and playing with computers. Just because they do not come across as a hugely personable leader, it doesn't mean that they aren't going to be a great Junior Officer in a role that suits them.	i1		66%
Some people might not want to be here, or not wan to do bits of it. They may not like this bit so you have to be adaptable, I think. Your start pupil when you are doing the exercises may not be the star pupil when you are doing the theory and you may have to balance it out.	i3		
have a good understanding of where they have been and where they are going, their back ground. They could have personal problems.	i3		
looking at different learning styles or SpLD's then yes you would have to break it down. The 1st people may not get it and you may have to go over it again with them. Ok, PowerPoint didn't work so lets put a video on, or lest break you into groups of 3 at a board. I think it depends on how deep it goes.	i3		

331

	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
To use you words earlier, the tell. The best way to engage people is to interact with them and have it as inclusive and interactive as you can.	i4		
developing them as individuals	i4		
I think if the instructor knows there is various levels, it is incumbent that they must use that experience in the lesson. They cant just talk at them, they have to engage them and use that knowledge. I think there is a level that the lesson needs to be at but you can utilize the assets that you have in front of you.	i4		
No, just that you have to consider people and the speed that they work at. For example, three of them might get it and one might be struggling you have to recognize that and that person may need a little extra training	i1		
respecting that if they not getting something may not be their fault, You may have to reword it. You have to respect their way of learning. And then develop cadets by understanding their needs	i2		
draw in on peoples experiences because you might have a FS who has been in for 20 years who knows a more than me so I should know who it is I am teaching and draw upon this experience so that they feel included and they are including other people. They are learning from me and the other person.	i2		

Build Rapport	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Someone who can create a really good rapport and get peoples attention	i1		16%

Motivate	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
I think it comes into the motivate. Learning about the training techniques. Communicate.	i2		16%

Respectful	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Respect as individuals, respect as humans	i2		16%

	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Flexible			
Flexible on working hours, like we have been told, sometimes people will come to you just as you are logging off and you know you have a 45 minute drive ahead of you but you have to stay and listen as it will be important to them.	i3		16%

	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Use of learning technology			
The use of technology- The use of technology. I have just come off a special investigations course and the instructors there quite often said, get out your phone and lets use cahoot. Everything we have learn today, lets just test it. Cahoot is good fun. Its all a bit jingly jangly you know, not traditional in the slightest. Its visual and modern and they were very clearly stepping into that world, using all of the different senses to learn and I love the challenge of getting an individual to understand something when they don't at the start. I think I thrive on the opportunity to do this.	i4		16%

	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Knowledge			
On the basis of being an officer I am qualified to teach operational law, values and standards and our law of armed conflict. I know some officers with some horrendous values and standards but they can stand up and tell everyone about values and standards, gripes me sometimes.	i4		16%
You should know the material and ideally have the background and experience to give you the credibility to be able to teach it.	i4		

333

	Instructor code		
Sandhurst loves all of their staff to have a wrack of medals as that demonstrated credibility because of Ops they have been on. What will be fascinating is in a couple of years, actually now, the army in particular is really struggling to get out on Ops so how will they select people? I have been in for 4 years and not even a sniff of an Operation and that's why I joined.	i4		
Sandhurts will get to the point that their instructors will not have medals and at the minute they think that medals equals credibility. How will the academy deal with that will be really interesting?	i4		
But you have the opportunity to spin a dit about it and a lesson learnt. There is a lot to be said for going through a Command Appointment which a Colout Sgt will have done and he may have been attached etc and that's how you bring that alive. That said I totally agree with the SME approach that you discussed earlier and freeing up Flt Staff to be staff and not having to deal with personal issues on top of everything else. It will be important as if you don't have ex rankers there will be more of a burden on instructors. Otherwise people will not invest in the lessons as they will be worrying about the latest welfare issue that has come in.	i4		

Feed the Sponge	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
the role of the instructor is to feed the sponge, the instructor is the primary focus of feeding and developing the sponge	i4		16%

Mission Focused	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
All of these help to build a cadet that ultimately understands that the mission is the most important thing; they are part of something bigger.	i4		16%

334

Challenge	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Challenge to lead	i4		16%

Lesson Delivery	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
Your knowledge of the subject and how you are imparting needs to be spot on and they been to tie together.	i5		16%

Questioning	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
I think as long as it is done respectfully, and it done in the right context then of course it should because that it what we are trying to teach them to do. We don't want them to go into the RAF and never question anything. If we did that then nothing would ever change. But there are some elements of it, clearly the academic side while there are seminars and debates in which they are encouraged to partake in, a lot of it is rote learning and you are saying, this is the way it is. Respectful questions about this is why we do things is absolutely fair but you cannot have them standing there in front of everyone saying, you are wrong. At this point, this is where the discipline part comes in	i1		80%
Yes, they need to learn so if they have a question or they want to clarify something then they need to highlight it, If I am not sure I have to ask the question straight away so I would encourage them to ask the questions straight away because I may not have worded something correctly and people may not be getting things so I need to know. I would rather they stop me at the earliest opportunity so that I can fix it.	i2		
It depends on the question. If its just for clarification. It's all about how you ask the question. If they do it respectfully and diplomatically then yes. That's why I think you have to take it in context.	i3		
Yes. I think it is. The person that is delivery that lesson needs to be confident enough in that field to take questions and questions that challenge the instructor legitimately, the instructor should be happy	i4		

	Instructor code	Total No. instructors that mentioned it	% of instructors that mentioned it
enough to say, you know what, I will come back to you on that. Or you come back to me with some research and we will discuss it next time. Instructors who are ill prepared or put in a situation where they don't know the subject should not be intimidated by questions as asking questions is part of development and learning process.			
f they are constantly questioning how it is being delivered, well you have a finite time to get through a certain amount of material and if people are constantly questioning it, will you ever get to the end within the time frame that you have. I think there needs to be a different style within phase one and I presume that's what most people would think.	i5		
Positive praise	**Instructor code**	**Total No. instructors that mentioned it**	**% of instructors that mentioned it**
It does, and I remember myself, I always struggled with the green side, no I didn't, I enjoyed it but I struggled and I remember being told to leopard crawl 200M and thinking, if I have to do this as a logistics officer then something has gone badly wrong. But I got positive praise because I did it and I helped a few people on the way and that positive praise massively over weighed any negative feelings that I had at that time and possibly they say that I was on the edge and they gave me a carrot to keep me going and in a way that one little thing did an enormous amount. To a degree, we cannot praise everyone all the time, we expect people to meet that but if people go above and beyond then they should be acknowledge for it. The Regiment are particular bad for just telling people to do things and they don't like it when someone questions what they have told you. That is their whole ethos and mentality. But I do see elements of it. I know you do need to see if you can function under high levels of stress and tiredness as you may have to on Operations. But you may not see that at the time and no one is giving you the reason behind it.	i1		64%
Yep, I don think you want to over egg it. I have done some courses like IMLC when I was told off for not telling people that they had done things really well when actually that was a bit false. You know when you have done a good job but if you have done an above average job then yes defiantly.	i3		

In anyone situation, there is almost certainly something or something's that someone has done well, if you have an individual that does a task and its rubbish, for want of a better word, otherwise, this is something that I picked up on, in the unit trainers course that I did, the bath tub debrief. So, if you go in with a load of bad, they will walk away demoralized. It affects their morale, will you get the best out of them? Then, if you excuse my language, a shit load of bad, then you need to prioritize, 1, 2 and 3.	i5		
Appropriately questioning is perfectly legitimate. This is not a committee debate and the course is the course as it is designed but I have no problem in explaining why an element in but it may well be that the inclusion of Adair's model, this is the one that we are using but I am happy to have a discussion about the merits of the other models at an appropriate time. If you are just on transmit and they are on receive it will go in one ear and out the other. There will be no spark in their own minds. I am not afraid of it. There are some practical issues surrounding it like classroom management and time management but when I was on BAWC I was struck by how inquisitive the cadets were and to the best that we could we encouraged it.	i6		

Appendix Q   Overview of the pre-service instructor's demographic data

	I1	I2	I3	I4	I5	I6
Age	Early 30's	Late 30's	Late 40's	Early 30's	Late 40's	Late 40's
Rank	Flight Lieutenant	Flight Lieutenant	Warrant Officer	Captain	Warrant Officer	Squadron Leader
Service	RAF	RAF	RAF	Army	RAF	RAF
Specialism	Logistics (Generic)	Nurse (Critical Care)	Operations	Royal Military Police	Air Traffic Control	Logistics (Catering)
Education	Law Degree and Solicitors practicing certificate	Nursing Diploma and coaching certificate	GCE's	Degree- Yacht Engineering	GCE's	BA (Hon)- History MA- MBA
No. Years since Phase 1 Training	5 (Joined at 25)	5	24 (Joined at 17)	5 (Joined at 25)	30 (Joined at 17)	22
Previous instructional Experience	N/A	Coaching and mentoring nurses.	N/A	Yes	N/A	Yes. Two previous instructional tours teaching Air Power and Catering.
Military Training Qualifications	N/A	DTTT	N/A	N/A	N/A	DTTT
Civilian Training Qualifications	N/A	N/A	N/A	N/A	N/A	N/A
Experience on Phase One	Did not enjoy it, found it. Found directive approach frustrating.	Loved it.	Got through it. Too young to know any better.	Found it very frustrating due to completing it after a short civilian career.	Got through it. Too young to know any better.	Got through it. Too young to know any better.
Job at OACTU	Flight Commander/ Leadership Instructor.	Flight Commander SERE/ Leadership Instructor.	Flight Commander NCAICT Course.	Flight Commander/ Leadership Instructor.	Flight Commander NCAICT Course.	Officer Commanding a Squadron
Motivation to become an instructor	I think it was that not having necessarily having the best time while I was here but massively seeing the value in the process I wanted to come back and just have a really positive experience here.	Just because I liked it here so much. I thought it would a good place for me to develop as a Junior Officer to see what it is like from a different perspective.	With my breath of experience I thought that the joint NCA course was actually more relevant so I thought now is as good a time as any	I have seen a lot of bad instruction, which I don't think there should be so I want to be in it to have influence left and right as well as downwards. And I do like instructors. I do like imparting knowledge and experience.	So I wanted a refresh, it is going to sound cheesy, but I felt like I should really give something back. And to be honest the location, timing and circumstance also all suit.	

Appendix R   Transcription of a Cycle 1 interview

Date: 08ᵗʰ January 2019

Participants
R= Researcher
I 1 = Instructor 1

Transcription results:

R	For me, just for a little bit of a background, what branch are you?
I1	I am logistics
R	How long have you been in the RAF for?
I1	6 years
O	So you graduated in…
I1	I graduated in 2013
R	So not long since you completed phase 1 training then?
I1	No and this is why coming back, well Charlie who is also on this course graduated on the same IOT, were SERE and its been quite an interesting experience coming back I didn't necessary have the best time, I enjoyed it and the process was brilliant and I think I changed a lot as a person doing it, and I am glad for that bit I didn't have the best of time so its quite nice to come back and release some of those negative preconceptions.
R	So you said that you completed it six years ago, what types of jobs have you done since?
I	So my 1ˢᵗ tour was in catering, what would have been OC Catering, then I went to Abu Dhabi to be a deployed logistics commander, that was pretty cool but it was only for six months. Then I came straight back and went to **(Operational Name excluded)** as a deployed logistics commander for six months. I then went to 2MT as OC tasking and training and then into A7 Training and Exercise the Force Head Quarters.
R	That is a really interesting background.
I	It's not bad. I have managed to cram in quite a bit. I also did Exercise Safe Seria. I have also had quite a lot if exercise experience from doing the Eagles series.
R	That's a really interesting background to bring into Cranwell.
I	I hope so. Obviously I am replacing a Logistics Officer. But I think because he is from a movements background, he will have been predominantly stove piped movements but because I didn't specialize, I have been able to do a broad range of jobs.
R	Is that unusual for a Logistics Officer or do you get stove piped in?
I	Normally you would usually go movements or fuels.
R	If we think about your time on IOT, this is something that I am studying. If you think of pedagogy as how we teach children and

	andragogy as how we teach adults. Can you take a look at the table and tell me how you think your phase one training was deliever?
I	It's a combination of the two. The 1st two terms are predominantly this (Pedagogy), I cant say the terms so I'm not going to embarrass myself in trying to say them, predominantly the child way of teaching. Towards the latter part of term two going into term three they tried to get you to apply your experience and what you learnt on the course and almost perform more as an individual rather than the building block of the leader that they have created up to that point.
R	How did you respond to that approach to those techniques?
I	I really enjoyed term one bizarrely as I had trained as a lawyer previously so I had been in academia for a hugely long term which bored the tits of me by that point so to come into something absolutely brand new, handling a rifle and everything I loved it and for that, something which is potentially such a dangerous thing and I had never seen one before I completely appreciated the need for that (points to pedagogy). That became an awful lot more tedious when it became tasks that you already knew how to do, like taking care of yourself, cleaning, etc. and you are still being treated like a five year old. That grated on me a bit and that's where I struggled.
R	Do you feel that you were transitioned towards the end?
I	Definitely to a degree. Probably not as much as you need to. I think the course has changed now to do so.
R	How do you think the delivery methods may have changed in the last six years since you have completed the course?
I	I think there is more of an onus on people to develop their own sort of styles. I know they have taken some of the reflection out, when they reduced the length of the course which I think was a strange decision but I am sure that they did it for some very good reasons but I think they now put more of the onus on the individuals and there is less of that very direct direction, do it exactly this way. I think they now let you develop in your own way.
R	Can you describe a member of staff that you regarded as a role model whenever you were going through and why?
I	Is there another one that asked you about a cadet as she wasn't a member of staff but she was a formed Sergeant and my roommate?
R	Go for that one.
I	She had been a Sergeant engineer before and she was commissioning and she was everything I would expect a good leader and a good person and then everything I would expect a good Officer to be. She was fantastically empathetic and she was the mum of the course. She was a little bit over weight coming into the course , she was carrying an injury but she did everything she could do and anything she couldn't she made up for it by doing something else to make sue she kept up with everyone else. She lost a tonne of weight, she became incredibly physically fit, academically she had never done any university work before but she utilized us which made us feel worth while. She didn't

	just lead from experience, she also used the people around her to feel valued and helped at the same time
R	What will you take away from that experience into your new role?
I	I want to emulate her in my new role. She has come back to Cranwell since as an instructor; she was a leadership instructor I think. I want to be as empathic as possible as I can for every body and appreciate that everyone is entirely different and that their approach to training and day to day life will be completely different and that is not necessary a bad thing. And to try and see what those little ideosyncricie. Basically everyone has a place and you might look at someone and think you are useless but it doesn't necessary mean that they are at all. It might just be that they are suited to being in a bunker somewhere and playing with computers. Just because they do not come across as a hugely personable leader, it doesn't mean that they aren't going to be a great Junior Officer in a role that suits them.
R	Did you enjoy your phase one experience?
I	No
R	Why?
I	I did parts of it, on the whole neutral. And because I struggle with collective punishment and things that I personally perceive to be arbatory, I hope I will be able to see the same mental struggles that I had a cadet basically like a little internal tantrum. Asking myself, why am I being punished for them fucking up and I hope I will be able to see that and nip it in the bud early and say, look I can see why you are pissed off, but we have to do this and this is the reason why.
R	What motivated you to become an instructor?
I	I think it was that not having necessarily having the best time while I was here but massively seeing the value in the process I wanted to come back and just have a really positive experience here. I think I also say the instructors and staff having a bit of a whale of a time and I thought it looked like a really good tour and by the end of term three the relationship that we had with the staff was fantastic and I would quite to be able to replicate that if I can.
R	You mentioned your previous roles but have any of them been instructional?
I	No so my last two roles were training based but one was in policy and the other was in an assurance role in 2MT. I had a team of 13 Corporal instructors but I wasn't DTS or DTM or DTTT trained so while I assured the courses and course structure, I didn't have anything to do with the actual training.
R	That's quite nice as at last you are coming in as a blank slate, with no preconceptions.
I	I do not have a way of doing things yet.
R	So you can find your way of doing things here, which is really nice actually.
I	You talked about law and your background; I assume you did a degree.

R	I did and a legal practitioners course which qualifies you to be a solicitor and then I was just about to do a start an internship with the Crown Prosecution Service and I just had a bit of a flap and I had known for some time that I didn't love law but obviously you pick a and you think its going to be a good career and I doggedly travelled down that part until I realized I didn't want to do this and then my mum suggested joining the military. That was in the November and then I joined in the January.
I	That was a brave decision to leave a career which could have been life long and lucrative.
R	Yes, brave or stupid but actually this one pays perfectly well and actually as a solicitor actually starting out, I would only have been on about twenty thousand a year so I knew that I was going into a job which paid me better from the off so I wasn't that brave, I think I was quite mercenary really.
I	You completed the qualification relatively recently, about six years ago, ho were they delivered?
R	It was mostly just lectures. There was a little online work on Blackboard for your notes and revision notes.
I	How did you find the blackboard application?
R	I am the kind of person that has to actually see or do something or I am probably going to chin it off. Being told to go home and read something will mean that I will probably chin it off. I like to have someone stand there and say, this is how this work and you must do this, then it sticks a bit better.
I	Looking at the pictures that your drew of me, please could you talk me through the role of the instructor?
R	Well driving home last night I was thinking, how do I perceive the roll of the instructor? And predominately I thought it was teach the man to fish analogy. They are coming in and we are the Junior Officer teaching them to be Junior Officers. We are supposed to be a great example for them to follow, to show them almost teaching a child to walk. In theory we are taking them from nothing to a polished, finished product ready to start their Phase Two training. So these are the little cadets who don't know how to fish, and this is us, the instructors, we know how to fish. This picture is us fishing, moving on this is us showing them how to fish and I should properly stop using the fish analogy as you get the point but there are elements of people management, leadership models and by this point they should be questioning it. Have I got this right? Working through their academic projects and they should be starting to grasp it and we are there to give them that little bit of support to say, yes you are doing it right or no you are doing it wrong. What do you think? Or maybe you haven't quite got it right but have you thought about it this way? And that's the bit where they are actually starting to fish and I theory by the time they get to term 3 they should pretty much be able to just crack on, on their own

	and we can stand to one side in a power pose and say yes they have done pretty good there.
I	You mentioned about the cadet questioning. Do you think the cadets should be allowed to question the instructor as part of this process?
R	I think as long as it is done respectfully and it done in the right context then of course it should because that it what we are trying to teach them to do. We don't want them to go into the RAF and never question anything. If we did that then nothing would ever change. But there are some elements of it, clearly the academic side while there are seminars and debates in which they are encouraged to partake in, a lot of it is rote learning and you are saying, this is the way it is. Respectful questions about this is why we do things is absolutely fair but you cannot have them standing there in front of everyone saying, you are wrong. At this point, this is where the discipline part comes in.
I	You talked about being chuffed, is positive praise appropriate for phase one training?
R	It does, and I remember myself, I always struggled with the green side, no I didn't, I enjoyed it but I struggled and I remember being told to leopard crawl 200M and thinking, if I have to do this as a logistics officer then something has gone badly wrong. But I got positive praise because I did it and I helped a few people on the way and that positive praise massively over weighed any negative feelings that I had at that time and possibly they say that I was on the edge and they gave me a carrot to keep me going and in a way that one little thing did an enormous amount. To a degree, we cannot praise everyone all the time, we expect people to meet that but if people go above and beyond then they should be acknowledge for it. The Regiment are particular bad for just telling people to do things and they don't like it when someone questions what they have told you. That is their whole ethos and mentality. But I do see elements of it. I know you do need to see if you can function under high levels of stress and tiredness as you may have to on Operations. But you may not see that at the time and no one is giving you the reason behind it.
I	Do you think they could have told you why?
R	Yes, but then there is that whole ambiguity thing and I suppose they also want ot breed the whole, we will tell you to do it and you will do it well and if you do then we might tell you why. So I can see it both ways.
I	Do you think that this is potentially a societal thing; you see things differently because of the generation that you are from?
R	I think it is a personality thing. Some people are a little more obliged to do what they are told or more mild minored or measure people like ex-rankers who can say, you know its just a game, just do as they say, its only 9 months, just do what you are told. And then there is me going, I just don't get it. I think it personality based because I was slightly more analytical.

I	Is there anything else that you put in here that you haven't mentioned?
R	No, just that you have to consider people and the speed that they work at. For example, three of them might get it and one might be struggling you have to recognize that and that person may need a little extra training.
I	Please can you describe your ideal cadet for me?
R	I think it would be H the girl that I described previously. She didn't know everything and didn't pretend to know everything but always helped everyone where she felt she could. She added value where she could and she asked for help when she needed it. She was always the kind of person that if she had finished a race, would go back and help other people carry their kit so she was just hugely consciously, hugely empathetic, massively dedicated and she never munked and moaned. Not once did she complain about anything, even me and I was a nightmare and her roommate.
I	Please can you describe what you think an average cadet it in terms of age and educational qualifications?
R	I think now, probably degree leavers. Until my last tour I would have said older but now because there are so many pilot and engineers coming through I think it's a little younger, probably about 21-25. Generally higher education.
I	Do you think you will be conscious of that background when you are delivering lessons?
R	Not really, I think the academic lectures would need to be, especially during the Bandar phase, a lot of them would have very recent experience of essay writing and know how to structure it but some would not, they might need a little extra help or guidance but as a leadership instructor I do not think I would change my approach.
I	Please can you describe your ideal instructor?
R	Someone who can create a really good rapport and get peoples attention. The amount of lectures that we fell asleep in and I know when you are up to one a clock in the morning you cant really help it but it was bad. But then there were some people, no matter how tired you were, you perched yourself up on the seat and you listened the whole time. I do not know how I will achieve that yet but I am going to try.
I	So you have been asked to teach a lesson on the RAF rank structure. Would you feel comfortable picking up someone else's lesson and teaching it?
R	How much time do I have?
I	Overnight
R	I would probably much rather take their template and I would jig it. They clearly knew what content they wanted so I would take that and check the content and put it into a format which I felt more comfortable with.

I	How might you plan a lesson to stretch cadets, for example you have ex-rankers in the room and you have DE's that have never touched it before, would you teach the same lesson to all?
R	You can tell them the basic rank structure, you could tell anyone that in a quick presentation but how that works in reality in a Sqn you could lean into or utilize the experience in the room to talk about how they found it, how often they seen their Flt Cdr had how it worked in reality. You could deliver the same presentation to both but use your ex-rankers to bring it to life.
I	How would you incorporate TEL into the lesson?
R	Technology I'm not sure. Clearly you could bring rank slide in, hand them out and discuss them. I would probably go PowerPoint presentation, nothing too exciting.
I	A cadet asked you a question during the lesson. Do you think this is appropriate?
R	Yes, I think the best way to facilitate learning for me has always been, there is no point waiting until the end of the lesson as you will have forgotten it or your question will no longer be in context. So I would encourage people to ask questions as they go along.
I	A cadet challenges something that you said but they do so respectfully. Is this appropriate?
R	Yes, like I said we are not teaching them to be mindless robots who assimilate the information and spout it off like mindless robots. If we are teaching something wrong or they have experience which differs then that is valuable, so that is something which you can incorporate into your presentation. You have Sgts here who may have do 20 years already, OK maybe not that much but far more than most of the instructors here so to disregard any form of respectful challenge would be full hardy.
I	Ok, so I worked it out and the average an ex-ranker has done before they get here as a student it 10 years.
R	See, that is a long time. And that's an average and this discounts the commissioned WO's.
I	I think you would massively rub them up he wrong way and it would be damaging to disregard any questions form them. I would look like a knob and we would all look like knobs.
R	So you are a Flt Cdr and you walk past a set of term 3 bedrooms and discover that they are in a little bit of a mess. What is your initial reaction and your course of action?
I	Are they in there?
R	No
I	I would go and find their Flt Sgt and ask them to give them a little bit of a talking to and ask them to sort it out before the Sqn Ldr sees it. I wouldn't go to them directly at 1st because we are teaching them to use and understand the rank structure. Go find the lowest level I can to speak to them, ask them to give them a gentle reminder and if it keeps happening give them some tier 1 or 2 punishments.

R	You are teaching lesson and a cadet puts their hand up and asks why we need to know the information. What would your reaction be?
I	I would tell them exactly why I am delivering it and why it would be of us to them.
R	At points under the new system, the cadets will have their laptops in front of them.
I	That will be new and weird.
R	In what way?
I	People will be sat there, tapping way.
R	Yes, it will and it will be a new way or working but as instructors we need to get used to it. It can only be for the better.
I	If a student goggles something and they put their hand up and challenge you that something you said want quite right, how would you respond?
R	I would just say that we had done our own research, tried and tested and this is what we had found. This is how we are teaching it but there may be other modes and methods, for example another leadership model, there are a million and one different models that you could prescribe to but we are teaching this one, it works for us, we appreciate that there are other ways of doing things but we are focusing on this one.
I	What % of your time do you anticipate being admin verses dealing with the cadets?
R	It depends, if I am a Flight Commander than I expect it to be 80% admin and 20% dealing with the cadets but if I am a leadership instructor then I think maybe 40% dealing with the cadets and 60% admin.

Date: 08ᵗʰ January 2019

Participants
R= Researcher
I 2 = Instructor 2

Transcription results:

R	What branch are you?
I2	I am a nurse
R	That is a bit of a change to come to here
I2	Completely different, very out of branch but I am still required to keep up my clinical work. I must do a minimum of 80 hours of clinical work every six months to keep my registration. I will go and work on the emergency assessment unit in Bury St Edmonds to keep my clinical skills up
R	Are you going to teach on SERE?
I2	The 1st plan is leadership and then potentially SERE
R	Did you do SERE going through here?
I2	I did yes. To be honest I really enjoyed it and that's why I wanted to come back.
R	How long ago was that?
I2	2013. I know it's changed and I know a lot of the exercises have changed.
R	That's possibly not a bad thing?
i2	It will be interesting to see what they have done with the course.
R	Looking at how the course was taught, was it taught in a more directive manor, like you would teach children or were you treated more like an adult?
I2	It was a bit of both because there were some subjects that had the direct approach and others that did not. Some subjects you were asked to go away and research and feed back to the rest of the group and the instructors.
R	How did you find that approach, were you comfortable with it?
I2	Yes. Because then you can learn in your own style. I tend to struggle if I am told to do something in a certain way or if I am sitting and its just presentation after presentation then I am gone in about ten minutes. I am disappeared, out of here!
R	Do you think the delivery methods that you experienced will have changed at all?
I2	I'm not sure. I wrecken they may have changed slightly.
R	How might they have changed?
I2	There may be more self-directed learning. I don't know if they have looked specifically at making the cadets be more responsible for their

349

	own learning or whether it comes down to the instructor guiding and mentoring them through the whole process.
R	Can you describe any members of staff that you would have regarded as a role model when you were going through and why?
I2	I had one, funny enough who was a nurse, she is now a Sqn Ldr. Wasket-Booth, she was amazing. With her I think it was just her methods and her style. She is very softly spoken but I don't think you would want to mess with her and that really worked for her. It was just that I respected for her because of the way that she dealt with people in general. She encouraged us to do lot of reflection with her and her feedback was really good.
R	When you said she dealt with people well? What did you mean by that?
I2	She really looked after me. I was the shortest person on the course and it was at the time where there were a lot of pelvic stress fractures and she was always making sure that she reminded the rest of the group not to put me at the back of the group. Through this she reminded people that they needed to consider everyone and they say she taught I really quite liked.
R	Overall did you enjoy SERE?
I2	Yeah I did.
R	Why?
I2	I just did. I am like one of those weirdos that just enjoyed it. I still speak to some of the guys on the course and they keep telling me I am a weirdo. I enjoyed the structure, I thought I knew what I was doing every day. I liked the challenges. Yes some of them were really hard but I didn't mind that. I learnt a lot about myself and what I was capable of and I enjoyed the support of and supporting other people.
R	What motivated you to come back as an instructor?
I2	Just because I liked it here so much. I thought it would a good place for me to develop as a Junior Officer to see what it is like from a different perspective. For me an out of branch role especially for nurses in general is not really an option. The only kind of instructor jobs that we have are Litchfield, Halton and here so it is really limited for training jobs. The other type of training that I could have looked into was my aeromed training.
R	Have you done any of the military instructional courses before?
I2	It is constant reflection. Say a patient has a cardiac arrest you will then reflect on their performance or if you did something well and it went to plan you reflect on that. That is what we are expected to do to keep our registration but it is very much health, wellbeing and how to develop students.
R	Do you think some of that experience will be able to be translated into here?
I2	I hope so. I think it is a god way to learn how your mistakes have gone wrong. It like Hararis window, some people cannot see where they are going wrong because they are not reflective but if you can work on it

	together and approach it by saying, have you though of this, or can we look at this?
R	You talked abut your nursing back grund, did you do a nursing degree?
I2	No, I did the diploma and I just haven't had any time to top it to a degree. We used have a defense degree which was run out of Birmingnahm but its gone and is now self funded. My ambition is to do a degree but no on. I have to do something which I am interested in as its a long old journey if you arent. So for me I would love to be wound injury or something like that.
R	How was your diploma taught? Was it self-directed or was it face to face?
I2	It was in a big lecture hall, sat on receive. How did you respond to that?
R	Not well. That didnt go down well with me. A lot of the assignments you were given a title and just sent on your way and we were having to do 37 hours a week of clinical shifts.
I2	How long was the qualification?
R	3 years
I2	Each then term you were rotating around different wards so you were having to learn a new skill set.
R	Given all of that, do you think you respond better to a more refletive, self-paced adult learning environment?
I2	Yes, I learn by doing. It's the apply. Tell me what I need to do and I will go away and give it a go. Let me show you and then I have done it.
R	Do you think there will be a lot of tat style of teaching at Cranwell?
I2	I think it will be hard but I think there must be elements of the apply. But it comes down to the instructor and what the topic is.
R	What is your ideal student?
I2	Someone who is motivated. It's the attitude, there is nothing worse than someone moaning along. I need them to be open minded, I don't know everything, and they don't know everything. Every day is a school day, I would rather someone come with an open mind. Except people's opinions and everyone will have a slightly different way of doing things
R	How do you feel about students voicing their opinions in a lesson?
I2	Yes, if someone disagrees, then I would rather them say something than them just sitting stewing away. If I am wrong, I don't care, I will take it on the chin. I quite like it when people come up to you and tell you that they have a different way of doing something or that they think you aren't quite right.
R	What do you think the average cadet looks like in terms of education and age?
I2	It could be anyone. It doesn't matter what age as I think when I went through there was a nurse than was 45 and ive seen some really young guys.
R	Can you guess at what the average age is?
I2	23

R	25, so not far off. In term of education
I2	50%
R	60%, of which 20% are MA's
I2	And there is me with my diploma
R	They would be very grateful of you if you got hurt
I2	Please could you describe to me what your ideal instructor would be?
R	Someone who is robust but fair, who is passionate. motivated, knowledgeable, good standard of dress
I2	Please can you chat me through your drawings. Let's start with roles of a military instructor.
R	SO on this I put inspire, as you want to inspire others, be a mentor by supporting but having your professional boundaries. Assess them in both a formative and sumamtive way to ensure that almost you are content that they are confident and compatent at undertaking their role. Approachable, there is nothign worse than having a line manager that is not approachable. The instructor to then develop their own techniques so that you can deliver it correctly and in your own methds and style.
I2	Do you expect to do CPD when you get on course?
R	Yes, 5 hours every year.
I2	Is the way that you are delivering suitable to the audience? Then I put motivate, either the cadet or yourself. Be enthusiastic, confident, learn. It is important that you ar ekeeping up with changes in policy adn guidelines so that you are not just elarning myself so that I am learning about myself, the team and the individual students.
R	Do youe xpect CPD sessions to be provided or do you think it will be self-directed?
I2	I think it will be a mix of both. I think we will be pointed in a direction and then you will be expected to do some of the research yourself. I know what assurance do come in and assess so they will point us in the right direction. I expect them to reflect and stimulate others.
R	What do you mean by stimulate others?
I2	I think it comes into the motivate. Learning about the training techniques. Communicate. Being respectful of others. I think that's a massive thing.
R	When you say respectful of others, what do you mean by that?
I2	Respect as individuals, respect as humans and respecting that if they not getting something may not be their fault, You may have to reword it. You have to respect their way of learning. And then develop cadets by understanding their needs. The instructor providing a robust leadership style where required.
R	Can you chat me through the roles of a cadets?
I2	They need to be willing to learn. For them to develop themselves, so having the awareness and maturity, I think if they are immature are they going to be willing to learn? Are they going to get the most of the learning opportunity and that they are responsible for their own learning to take ownership? For them to provide motivation in lessons

352

	and are engaging and by them participating. Confidence in their military skills, through FP and the different drills that they have to undertake. The medical stuff and all of the operational stuff in the military environment. Really this is all just the foundation and the rest will be picked up when they get out in the workplace. Understand the RAF, the roles that that are out there. Independence but for them to adjust and review their leadership style and perform. There needs to be a safe environment for them to try, fail, adjust and see what suits them. For them to be respectful and take criticism. Communicate clearly. To bond with the team. Independence with own learning. Understand management as that is an important thing, you go straight into leading people. You need to be aware of your team as a whole. Be able to deal with welfare issues. Prep for your role as a JO but also be able to use mission command. A deeper understanding of Air Power but that is a continual development. It wont really be until they do BAWC and IOD when they will get a bit more of an understanding of AP. IF you work in a tri service environment you need to know about it.
R	A lot what you discussed is very self-directed, do you except the cadets to be able to take ownership for their own learning?
I2	Yes, because they are an adult. Most of them have been through university. I know there are times when someone might may not have a degree, but you would still expect them to be able to cope and its the role of the instructor to help them do this.
R	You have been asked to teach a lesson on the rank structure. Would you feel comfortable picking up someone else's lessons and running with it? Or would you wan to design it yourself?
I2	Yes and no. I would be happy to pick up someone else's lesson although I might not understand what it is they are wanting to get across. If I was teaching someone else's lesson I wouldn't want to go in there without looking at it. The ideal situation would be for me to design my own lesson but if there is a bog-standard template for all which you are to teach and that's how you have to teach it but you can apply your own methods then fair enough. I don't like it when it is personalized to someone else and you don't know what's coming.
R	Would you expect to teach the same lesson to everyone in the room as they will all have the same standard to knowledge or would you vary it for the potentially different levels of knowledge in the room?
I2	You wouldn't be able to very it as a lot of the presentations you will have to teach the basic information that has been prescribed but you can draw in on peoples experiences because you might have a FS who has been in for 20 years who knows a more than me so I should know who it is I am teaching and draw upon this experience so that they feel included and they are including other people. They are learning from me and the other person.
R	Would you feel comfortable using learning technologies in a lesson?

I2	If it has a purpose they defiantly, if it is going to distract or detract then no because I am thinking about me and what I would do if a student had a laptop and I would just want to stare at their screen. I would not be listening. That is my own problem.
R	A cadet asks you a question in a lesson, is that appropriate?
I2	Yes, they need to learn so if they have a question or they want to clarify something then they need to highlight it, If I am not sure I have to ask the question straight away so I would encourage them to ask the questions straight away because I may not have worded something correctly and people may not be getting things so I need to know. I would rather they stop me at the earliest opportunity so that I can fix it.
R	A cadet challenges you and highlights that he thinks you were wrong on something, how would you respond?
I2	It depends on how they say it. If its rude then no but if they challenge me then I would go OK, I will have a look. I would have to go straight away and have a look as it would bug me if I didn't. If they were right I would go back and let them know.
R	You are a Flt Cdr and you walk past the term 3 residential rooms and you spot that they are in a bit of a mess, what would be your initial reactions?
I2	I wouldn't go in there and start shouting. I would come back. I would have a chat with the FS and then do a bit of an inspection if it was required but I would find out why it their rooms were like that in the 1st place. I would also let them know why we expect them to keep their rooms tidy. I walk past people's room in the Officers mess and I've seen medical females that have had rooms that are disgusting. Infection control issues!! It's not just being tidy it's about representing yourself.
R	Do you think it's important to explain people to why they need to do things?
I2	I think the older generation especially think they want to tell you to do something and don't expect to tell you why, but I think that must change as people need to know why. It could be that it's because of safety or quality so if people understand why. That's why in DTTT you must put it into your interest and need so that people see if up front.
R	What % of your time do you think will be admin verses interacting with cadets?
I2	I think probably quite a lot. I would probably say 70% admin. Everything seems quite admin heavy at the moment and it does depend on what role you go into. I think in Leadership Flt you will have to write reports. There will be elements of admin, teaching and assessment but no matter which job you end up in, there will be admin in it.

Date: 08ᵗʰ January 2019

Participants
R= Researcher
I 3 = Instructor 3

Transcription results:

R	So I gather you are going to in instructing on the NCA course. What is your back ground?
I3	In trade group 9 as an SAC and a Cpl you are the same trade. When you get to Sgt you get selected to go to do air traffic control or Operations. I didn't want to control anything so I went Operations. Therefore I have a much boarder back ground than most. I4 who you will talk to tomorrow has gone air traffic and stayed air traffic and he has spent most of his career in air traffic tours but mine has been a lot more varied. I have done a lot more travelling around the world. I have had more chance to mentor people. I have done a lot of training standards stuff so I think mine has been a lot more varied and I am really glad that I went that route. They changed to trade group 7 and I remained trade group 9. I am hoping that when I go down stairs and I am working with both the controllers and the aircrew I will be able to draw on the bigger picture and help draw it for them.
R	If you don't mind me asking, when did you complete phase one training?
I3	January 1994
R	And how was it delivered? If we look at the information in front of us, it describes two different types of approach. One is more child centered and is very directive and the other is more of an adult learning approach. What way was yours delivered?
I3	We were the 1ˢᵗ course to move from Swinderby to Halton so to out it nicely it was a cake and arse party. It was very instructor led but luckily we had two senior men who were both ex army and luckily from their point of view, the instructors could go, senior men come with me, they would go away, get a brief and then come back and tell us. Looking back on it they did give you a little bit of leeway but it was still very much, this is what I want you to do and this is how I want it done. Only in the last week when we had a little bit of flex did I have to approach things in our own way.

R	Do you think the delivery methods will have changed much between then and now?
I3	I think there will be a lot more adult. I would expect that they will be expected to be a lot more proactive and independent. You are going to be a Sgt in the next 9 weeks so go away and sort yourself out. So yes, form their point of view, it will be more of us briefing them and then leaving them to it. A bit more independence, I think.
R	Can you describe any of the members of instructional staff that you would have regarded as a role model when you were going through training?
I3	Probably phase 2, there was a Cpl there who took us away to an air field visits and it was a bit like does anyone want to help sort bits and pieces out. He didn't have to but he made us feel like we were helping. He also let us call him by his 1st name while we were there. We went out and had a few beers and it was quite relaxed and lighthearted. It wasn't overly objective heavy, and I think everyone took it on board and thought it was alright compare to just being shouted at.
R	Do you expect to find that more adult environment there when you get down stairs?
I3	I would like to think so. Form the little bits that I have seen so far and the fact that they will get Sgts so quickly, they will have to pick it up. They will be the baby Sgt when they get to work and they will have mentors there but anyone on Sgt would say, "You Sgt, you need to sort this out," therefore they will need to be able to think for themselves quickly. Much quicker than I had to back in the day.
R	What motivated you to become an instructor?
I3	RTS seemed a bit prescriptive for me. Phase 2, I was going to be offered there but it was a lot more office based and less involved in the training itself. Our trade is really really anal on Trg standards and we are assured up to the ying yang. It is very difficult to comply and that's fine, that's the way we do it but that put me off phase two. With my breath of experience I thought that the joint NCA course was actually more relevant so I thought now is as good a time as any.
R	Have you been in an instructional post before?
I3	No, not an official one. I have been on a training or a standards team for the last 15 years so I have been involved in training and doing standards and validations teams but not teaching a syllabus.
R	Have you completed any instructional techniques courses?
I3	We have to do Unit Training Course, which is covered in our trade training but not any formalized training courses.
R	Have you completed any other educational courses recently?
I3	The only thing I did do, was I started to do an OU module in Law. It was ok but the OU way did not appeal to me.
R	Why didn't it appeal?
I3	I don't know, I did it and I did quite well but I couldn't see myself doing a whole degree in that format?
R	Was it a lack of face interaction?

I3	Yeah I think that played a part. I spoke to her on the phone and she seemed nice but I don't think it's the same as looking someone in the face. So for me yes it lacked personal interaction.
R	Describe your ideal cadet?
I3	Probably someone who is punctual, well presented, got an open mind, good sense of humor, and is willing to look at things from other peoples point of view and is willing to take feedback/ criticism/ direction without taking it personally.
R	If we look at OACTU as a whole, what does the average student look like, in terms of age and education?
I3	I think its varied. From OACTU's point of view, so I have heard uner 18's are rair so a few 19 year olds, a lot in the 21-25 bracket and then all the way up to 50 on the SOIT course.
R	What about qualifications, what % do you think are graduates?
I3	52%.
R	Average age 25, average 60% with degrees of which 20% are Masters.
I3	Ummmmm
R	Describe to be, what would be your average instructor?
I3	Oh, I think it depends on the scenario. Someone who makes it interesting, as a lot of the stuff that we teach can be very boring. Someone who gets your attention. Someone who is willing to accept feedback. Without mentioning nay names, someone was a bit contentious in that scenario. I challenged him and he took it on the chin and say yes, I see your point of view. Again someone with a bit of empathy. Some people might not want to be here, or not wan to do bits of it. They may not like this bit so you have to be adaptable, I think. Your start pupil when you are doing the exercises may not be the star pupil when you are doing the theory and you may have to balance it out.
R	Lets look at the drawings you did for me. Please can you talk me through the roles of a cadet?
I3	I struggled with this one. I don't know why. I have probably already covered a lot of this but a desire to progress. They want to be in the RAF but they may not wan to do the training so they have to focus and realize that the light is at the end of the tunnel if they keep going. Motivated, to do well, I would like to think. I would want them to not be motivated to just get through tomorrow but to get through tomorrow well. A good listener, to the instructor and the other people on their team. A good sense of humor, for me that's a big thing. There is very few circumstance in the line of work that we are in where you cant has a laugh, to a certain extent. Determine driven. As I was talking about earlier everyone will struggle with bits of the course so you have to be determined get through the bit you find hard. Willing to question tasks for clarification. You cant let people walk off from a briefing without asking the questions that you need them to and not just say yes.

R	That ability to question, is it appropriate for the cadets to question you?
I3	It depends on the question. If its just for clarification. It's all about how you ask the question. If they do it respectfully and diplomatically then yes. That's why I think you have to take it in context. Team player, which we talked about before. We need to learn and adapt. Empathetic of others. As much as kit is yout thing and your Oppo is then you have to help him and he is probably going to be better something's that you. I think its really important to make the most out of your team mates, especially on a long course like IOT. Good communicator, that probably ties in with a lot of those, especially a tam player and a good listener. Mentor to others in the Sqn with difficulties. This goes back to being empathic. Willing to stand by your decisions. Train hard, fight easy. Do it now and potentially do it wrong, but tell me why I did it wrong and you can learn from that. Hopefully when you then go out into the real world you will think, I am going to make that decision and then you cast your mind back and then think, no I better not.
R	And the instructors?
I3	The big thing for me was a good role model. How you are presented, how you present yourself and how you teach and actually a lot of things. Being visible is also really important. I went to look at another job and it was recruitment and section. The current person is involved in a lot of stuff but the person before used to just shut his door. How can you do a good job and be visible if you close your door? He wouldn't know what was going on, on the shop floor. So that is a big one for me. Motivated to be here for the right reason. Almost everyone that I have spoken to so far has enjoyed it and has extended. For me that made me want o get involved. Credibility which does back to visibility but also that you have credibility because of your background. I think that makes you justified to stand up and teach people. Fair, this is D&I think, treat everyone evenly . Confident in your abilities, they will pick up if you are not confident. If you deliver something confidently even if you are not particularly, it instills confidence in them.
R	DO you think positive praise has a place within the course?
I3	Yep, I don think you want to over egg it. I have done some courses like IMLC when I was told off for not telling people that they had done things really well when actually that was a bit false. You know when you have done a good job but if you have done an above average job then yes defiantly. Why is that bad?
R	Nooo not at all.

I3	Loyal, in those four walls, the lesson that we just had the instructor stood up and said, this job is shit and I don't want to be doing it. For me and I get why he said it but that as an almost opening gambit, my ears pricked up. We are not going to do that job he is doing but that sort of for me was a very brave statement to make.

You need to treat people fairly. You will have all sorts of ages and abilities and you need to treat them equally. Goes back to being empathetic, have a good understanding of where they have been and where they are going, their back ground. They could have personal problems.

A good communicator and articulate with it. Honest, there are some things that they will need to know and something's that they wont. You can be as honest as possible. Especially with feedback. The more honest you are the better they will go. Flexible on working hours, like we have been told, sometimes people will come to you just as you are logging off and you know you have a 45 minute drive ahead of you but you have to stay and listen as it will be important to them.

Encouraging, developing and mentoring. It is all-relevant. Seeing them progress and making reference to it is important and it should give them a little bit of encouragement.

Good emotional intelligence. Keeping an eye on people and identifying when people are different. How people talk, their body language. Why are they different form last week? Do you ask their team makes, do you ask them direct? He may be nervous because he doesn't like the exercise phase but how can we keep him bubbling because he has done really well on the theory stuff.

Decisive- Some of the others have talked about their IOT days and being told to make a decision doesn't matter if its right or wrong, just make one. You being decisive is a way of empowering them. As long as you are content that in allowing them to make the decision they will be safe then learning can come of it. You can use this as feedback and ask them how their decision played out. Would you do the same again? |
R	You have been asked to teach a standard less, it's the basic rank structure. Would you be comfortable picking up someone else's lesson plans and just teaching it?
I3	If it was just rank structure then I probably could as I have learnt enough over the years about it to apply it. I don't know what the deal is, do you get an oversight of all of the lessons. If it's the 1st time that I have been it then yes I probably could.
R	Would you expect to teach the same lesson to everyone in the group or would you steer it for differing abilities?

I3	I think it depends on how deep the lesson goes. You could pin it up on the wall and say learn this but if it is deeper and you are looking at different learning styles or SpLD's then yes you would have to break it down. The 1st people may not get it and you may have to go over it again with them. Ok, PowerPoint didn't work so lets put a video on, or lest break you into groups of 3 at a board. I think it depends on how deep it goes.
R	Looking at learning technologies, would you feel comfortable picking up new learning technologies?
I3	Yes, I think laptops and smartboards do have their place. There is still a lot to be said for the direct face-to-face approach but there is defiantly a place for variety.
R	You walk past Jackson Block, the lads are on their last few weeks and their rooms are a bit of a mess. What would your initial reaction be?
I3	Inside I would be a bit annoyed but I would go away and find out why it's happened. Is it because John's mum has died and one of the other lads has just taken him to the train. There might be a valid reason, probably not but I need to find out 1st. But a lot of time you have to check the reason before you give them a bollocking as you could end up really embarrassed.
R	What % of your time do you expect will be administration versus face to face instruction and time with the cadets?
I3	Interesting, I would like to say it will be small but I don't think it will be. I think with reports, reviews etc. 40% admin, 60% teaching.

Date: 08th January 2019

Participants
R= Researcher
I 3 = Instructor 3

Transcription results:

R	So I gather you are going to in instructing on the NCA course. What is your back ground?
I3	In trade group 9 as an SAC and a Cpl you are the same trade. When you get to Sgt you get selected to go to do air traffic control or Operations. I didn't want to control anything so I went Operations. Therefore I have a much boarder back ground than most. I4 who you will talk to tomorrow has gone air traffic and stayed air traffic and he has spent most of his career in air traffic tours but mine has been a lot more varied. I have done a lot more travelling around the world. I have had more chance to mentor people. I have done a lot of training standards stuff so I think mine has been a lot more varied and I am really glad that I went that route. They changed to trade group 7 and I remained trade group 9. I am hoping that when I go down stairs and I am working with both the controllers and the aircrew I will be able to draw on the bigger picture and help draw it for them.
R	If you don't mind me asking, when did you complete phase one training?
I3	January 1994
R	And how was it delivered? If we look at the information in front of us, it describes two different types of approach. One is more child centered and is very directive and the other is more of an adult learning approach. What way was yours delivered?
I3	We were the 1st course to move from Swinderby to Halton so to out it nicely it was a cake and arse party. It was very instructor led but luckily we had two senior men who were both ex army and luckily from their point of view, the instructors could go, senior men come with me, they would go away, get a brief and then come back and tell us. Looking back on it they did give you a little bit of leeway but it was still very much, this is what I want you to do and this is how I want it done. Only in the last week when we had a little bit of flex did I have to approach things in our own way.
R	Do you think the delivery methods will have changed much between then and now?
I3	I think there will be a lot more adult. I would expect that they will be expected to be a lot more proactive and independent. You are going to be a Sgt in the next 9 weeks so go away and sort yourself out. So yes,

	form their point of view, it will be more of us briefing them and then leaving them to it. A bit more independence I think.
R	Can you describe any of the members of instructional staff that you would have regarded as a role model when you were going through training?
I3	Probably phase 2, there was Cpl there who took us away to an air field vists and it was a bit like does anyone want to help sort bits and pieces out. He didn't have to but he made us feel like we were helping. He also let us call him by his 1st name while we were there. We went out and had a few beers and it was quite relaxed and light hearted. It wasn't overly objective heavy and I think everyone took it on board and thought it was alright compare to just being shouted at.
R	Do you expect to find that more adult environment there when you get down stairs?
I3	I would like to think so. Form the little bits that I have seen so far and the fact that they will get Sgts so quickly, they will have to pick it up. They will be the baby Sgt when they get to work and they will have mentors there but anyone on Sgt would say, "You Sgt, you need to sort this out," therefore they will need to be able to think for themselves quickly. Much quicker than I had to back in the day.
R	What motivated you to become an instructor?
I3	RTS seemed a bit prescriptive for me. Phase 2, I was going to be offered there but it was a lot more office based and less involved in the training itself. Our trade is really really anal on Trg standards and we are assured up to the ying yang. It is very difficult to comply and that's fine, that's the way we do it but that put me off phase two. With my breath of experience I thought that the joint NCA course was actually more relevant so I thought now is as good a time as any.
R	Have you been in an instructional post before?
I3	No, not an official one. I have been on a training or a standards team for the last 15 years so I have been involved in training and doing standards and validations teams but not teaching a syllabus.
R	Have you completed any instructional techniques courses?
I3	We have to do Unit Training Course, which is covered in our trade training but not any formalized training courses.
R	Have you completed any other educational courses recently?
I3	The only thing I did do, was I started to do an OU module in Law. It was ok but the OU way did not appeal to me.
R	Why didn't it appeal?
I3	I don't know, I did it and I did quite well but I couldn't see myself doing a whole degree in that format?
R	Was it a lack of face interaction?
I3	Yeah I think that played a part. I spoke to her on the phone and she seemed nice but I don't think it's the same as looking someone in the face. So for me yes it lacked personal interaction.
R	Describe your ideal cadet?

I3	Probably someone who is punctual, well presented, got an open mind, good sense of humor, and is willing to look at things from other peoples point of view and is willing to take feedback/ criticism/ direction without taking it personally.
R	If we look at OACTU as a whole, what does the average student look like, in terms of age and education?
I3	I think its varied. From OACTU's point of view, so I have heard uner 18's are rair so a few 19 year olds, a lot in the 21-25 bracket and then all the way up to 50 on the SOIT course.
R	What about qualifications, what % do you think are graduates?
I3	52%.
R	Average age 25, average 60% with degrees of which 20% are Masters.
I3	Ummmmm
R	Describe to be, what would be your average instructor?
I3	Oh, I think it depends on the scenario. Someone who makes it interesting, as a lot of the stuff that we teach can be very boring. Someone who gets your attention. Someone who is willing to accept feedback. Without mentioning nay names, someone was a bit contentious in that scenario. I challenged him and he took it on the chin and say yes, I see your point of view. Again someone with a bit of empathy. Some people might not want to be here, or not wan to do bits of it. They may not like this bit so you have to be adaptable, I think. Your start pupil when you are doing the exercises may not be the star pupil when you are doing the theory and you may have to balance it out.
R	Lets look at the drawings you did for me. Please can you talk me through the roles of a cadet?
I3	I struggled with this one. I don't know why. I have probably already covered a lot of this but a desire to progress. They want to be in the RAF but they may not wan to do the training so they have to focus and realize that the light is at the end of the tunnel if they keep going. Motivated, to do well, I would like to think. I would want them to not be motivated to just get through tomorrow but to get through tomorrow well. A good listener, to the instructor and the other people on their team. A good sense of humor, for me that's a big thing. There is very few circumstance in the line of work that we are in where you cant has a laugh, to a certain extent. Determine driven. As I was talking about earlier everyone will struggle with bits of the course so you have to be determined get through the bit you find hard. Willing to question tasks for clarification. You cant let people walk off from a briefing without asking the questions that you need them to and not just say yes.
R	That ability to question, is it appropriate for the cadets to question you?
I3	It depends on the question. If its just for clarification. It's all about how you ask the question. If they do it respectfully and diplomatically then yes. That's why I think you have to take it in context.

	Team player, which we talked about before. We need to learn and adapt. Empathetic of others. As much as kit is yout thing and your Oppo is then you have to help him and he is probably going to be better something's that you. I think its really important to make the most out of your team mates, especially on a long course like IOT.

Good communicator, that probably ties in with a lot of those, especially a tam player and a good listener.

Mentor to others in the Sqn with difficulties. This goes back to being empathic.

Willing to stand by your decisions. Train hard, fight easy. Do it now and potentially do it wrong, but tell me why I did it wrong and you can learn from that. Hopefully when you then go out into the real world you will think, I am going to make that decision and then you cast your mind back and then think, no I better not. |
R	And the instructors?
I3	The big thing for me was a good role model. How you are presented, how you present yourself and how you teach and actually a lot of things. Being visible is also really important. I went to look at another job and it was recruitment and section. The current person is involved in a lot of stuff but the person before used to just shut his door. How can you do a good job and be visible if you close your door? He wouldn't know what was going on, on the shop floor. So that is a big one for me. Motivated to be here for the right reason. Almost everyone that I have spoken to so far has enjoyed it and has extended. For me that made me want o get involved. Credibility which does back to visibility but also that you have credibility because of your background. I think that makes you justified to stand up and teach people. Fair, this is D&I think, treat everyone evenly . Confident in your abilities, they will pick up if you are not confident. If you deliver something confidently even if you are not particularly, it instills confidence in them.
R	DO you think positive praise has a place within the course?
I3	Yep, I don think you want to over egg it. I have done some courses like IMLC when I was told off for not telling people that they had done things really well when actually that was a bit false. You know when you have done a good job but if you have done an above average job then yes defiantly. Why is that bad?
R	Nooo not at all.
I3	Loyal, in those four walls, the lesson that we just had the instructor stood up and said, this job is shit and I don't want to be doing it. For me and I get why he said it but that as an almost opening gambit, my ears pricked up. We are not going to do that job he is doing but that sort of for me was a very brave statement to make.

	You need to treat people fairly. You will have all sorts of ages and abilities and you need to treat them equally. Goes back to being empathetic, have a good understanding of where they have been and where they are going, their back ground. They could have personal problems. A good communicator and articulate with it. Honest, there are some things that they will need to know and something's that they wont. You can be as honest as possible. Especially with feedback. The more honest you are the better they will go. Flexible on working hours, like we have been told, sometimes people will come to you just as you are logging off and you know you have a 45 minute drive ahead of you but you have to stay and listen as it will be important to them. Encouraging, developing and mentoring. It is all-relevant. Seeing them progress and making reference to it is important and it should give them a little bit of encouragement. Good emotional intelligence. Keeping an eye on people and identifying when people are different. How people talk, their body language. Why are they different form last week? Do you ask their team makes, do you ask them direct? He may be nervous because he doesn't like the exercise phase but how can we keep him bubbling because he has done really well on the theory stuff. Decisive- Some of the others have talked about their IOT days and being told to make a decision doesn't matter if its right or wrong, just make one. You being decisive is a way of empowering them. As long as you are content that in allowing them to make the decision they will be safe then learning can come of it. You can use this as feedback and ask them how their decision played out. Would you do the same again?
R	You have been asked to teach a standard less, it's the basic rank structure. Would you be comfortable picking up someone else's lesson plans and just teaching it?
I3	If it was just rank structure then I probably could as I have learnt enough over the years about it to apply it. I don't know what the deal is, do you get an oversight of all of the lessons. If it's the 1st time that I have been it then yes I probably could.
R	Would you expect to teach the same lesson to everyone in the group or would you steer it for differing abilities?
I3	I think it depends on how deep the lesson goes. You could pin it up on the wall and say learn this but if it is deeper and you are looking at different learning styles or SpLD's then yes you would have to break it down. The 1st people may not get it and you may have to go over it again with them. Ok, PowerPoint didn't work so lets put a video on, or

	lest break you into groups of 3 at a board. I think it depends on how deep it goes.
R	Looking at learning technologies, would you feel comfortable picking up new learning technologies?
I3	Yes, I think laptops and smartboards do have their place. There is still a lot to be said for the direct face-to-face approach but there is defiantly a place for variety.
R	You walk past Jackson Block, the lads are on their last few weeks and their rooms are a bit of a mess. What would your initial reaction be?
I3	Inside I would be a bit annoyed but I would go away and find out why it's happened. Is it because John's mum has died and one of the other lads has just taken him to the train. There might be a valid reason, probably not but I need to find out 1st. But a lot of time you have to check the reason before you give them a bollocking as you could end up really embarrassed.
R	What % of your time do you expect will be administration versus face to face instruction and time with the cadets?
I3	Interesting, I would like to say it will be small but I don't think it will be. I think with reports, reviews etc. 40% admin, 60% teaching.

Date: 14th October 2015

Participants
R= Researcher
I5 = Instructor 5

Transcription results:

R	If you don't mind me asking, what trade are you?
i5	So non, commissioned controller, Trade Group 7.
R	How long ago was it since you completed your Phase One Training?
i5	1989.
R	If you think about the training that you went though in your Phase one and you think of the two types of approaches on this diagram below, how was your training delivered?
i5	I was 17 at the time so it was more monkey see monkey do, a child learning I would suggest.
R	How did you respond to that approach?
i5	At the time it was exactly what I expected, a lot of marching and a lot of shouting. The Regiment getting angry with you and using swear words and stuff and in truth it was exactly what I expected. And so, looking back now, it is difficult because as a 17 year old obviously no one shouted or swore at school but it was a school type environment but militarized. I wasn't expecting anything else and really didn't want anything else. It was very difficult but would I have responded to a more adult learning environment as a 17 year old that is difficult for me to answer. At that age and at that time, I think it was the right thing for the right time. But would that be right for now?
R	Looking at the other military courses that you have completed, in what sort of style have they been delivered?
i5	Those were much more of the adult learning, so more thinking about what you are doing and your leadership styles. There was some marching and a little bit of shouting and a lot of outside exercises but they were focused on your actions and leadership style. Although, there were some sections of JMLC and some of IMLC where I thought, this is a little bit out of date, like writing memos; I can't believe we are doing two hours of writing memos. And then I was worrying about it and then I just thought, I am never going to use this so why even bother.
R	Can you describe an instructor who you remember from either phase one or any other military course, which you have completed that you, would regard as a role model?

i5	Yes, so the WO on our joint air traffic controller's course who taught ground school. He was very good at picking the points of theory that were pertinent to the practical and he was able to, I remember he would pick out what was relevant and bring it to life. I remember when we did the invals every student would make the point to saying that he was great because he went for the throat of what it was you needed to do and made it relevant. Which was really good and he created an adult learning environment as we were SNCOs and JO's and people really responded to that.
R	Why have you chosen to come here as an instructor?
i5	So I wanted a refresh, it is going to sound cheesy, but I felt like I should really give something back. And to be honest the location, timing and circumstance also all suit.
R	Have you been in an instructional post before?
i5	No, well not in a formal sense. The only instructional posts, which I have held, have been in the environment, which I have been working in. For example the unit training officer here at Cranwell. That was an instructional driven post but informally within the work place.
R	Have you completed any of the military formal instructional courses or civilian qualifications?
i5	Nope, I went on a unit trainers course to become the unit training officer but it is only a couple of days and it goes through the administration of training and policy rather than the delivery.
R	So you are staring with a blank slate in terms of delivery instruction?
i5	As I said yesterday, they asked me what I was expecting from the next few months and I said yes when I was an SAC, I used to look at a WO and think, he/ she must know everything but actually I know a lot in air traffic but I know very little about this. JMLC, IMLC has been as close to what I am going to do, I expect but that has been two or three weeks of training over a 30 year period. So where does my experience levels lie, actually I think they are very low.
R	Have you completed any other formal educational courses?
i5	Laughs- NO!
R	That's fine. I was going to ask, if you had, how had they been delivered and how did you respond. But you probably already know what type of training you respond best to. Do you respond better to being talked to or more practical training?
i5	I prefer the more interactive courses. I did do an intermediate excel course so I have jumped on bits and pieces like that and I did start my wind surfing instructor course but I didn't manage to finish it. So, I haven't experienced much instructional styles myself but I think the more interactive style than just being talked at.

R	Looking at what is ahead of you, what would be your ideal cadet?
i5	Well I think what I wrote on there, someone who is a sponge and doesn't give any back chat and I know that probably seems really shouty and old hat but I think that they need to be receptive and whilst we do want a challenging culture I think in phase one I don't think as much so, otherwise when it comes to the delivery of training, if they are constantly questioning how it is being delivered, well you have a finite time to get through a certain amount of material and if people are constantly questioning it, will you ever get to the end within the time frame that you have. I think there needs to be a different style within phase one and I presume that's what most people would think.
R	If they well not questioning the style but more questioning the content, so if I use a scenario to explain this. You have been asked to teach a basic lesson on rank structure, would you expect everyone on that room to be taught at the same speed and one lesson to be delivered to all.
i5	So if we go back to the modular questions and approach, so the military field skills, and you said that when you paired it back, the start here is very much the same as Halton, but the specifics of how you achieve that may be tricky. And actually what I don't think you would wan to do is drive commonality if that makes things less productive in the long run.
R	Ok, so for example, you have an ex SAC or Cpl in your lesson, and they have obviously gone through the system, how would you approach it with them?
i5	If it was appropriate to do so in the lesson content., I would want to be able to use some of their experiences to drive home points because I think that someone said that when we do debriefs a lot of the feedback some from their pals and I think people will accept that more as I think it probably would have more impact. I have no evidence for this, apart from what people have said, but it does make sence.
R	Someone who may have a little bit of experience challenges something that you have said. How would you respond to that?
i5	Well I would choose to take on board what it was that they have said and then go away and think about it. I would see if there was something that needed testing or adjusting. Having spent a lot of time in the service, you can be going down one avenue thinking that you are right and then someone comes along and says have you thought about this and all of a sudden you do, sugar! If you close yourself off to their feedback you are not likely to get the best out of them.
R	You have been asked to use learning technologies, how comfortable would you feel with incorporating these within your lesson?
i5	It would really depend on how much time I had to practice. I am a but of a luddite with IT so I would like a bit of time, probably more than most. But if I had that then I would be quite happy. What I would want would be a plan B

	so that when the technology goes down, which it inevitably will, I will have a back up.
R	You have been asked to teach a lesson and you have been handed someone else's lesson plan, how comfortable would you feel about teaching someone else's plan?
i5	If the subject material was something that I felt comfortable with, then I would be in a position to be able to use it. Often when you read someone else's stuff they have their take on things, so if the material isn't something you are familiar with then if there is something on the slides that you don't understand then its clear that you don't understand but if it was clear I would have no qualms about it.
R	You walk past the barrack block, all of the lads are out at lessons and some of their rooms are a little bit of a mess. What is your initial reaction and response?
i5	Get in there and sort it out, I think. It depends on the extent and the circumstances. It might be that we have just come back off exercise and they are sorting their kit out, that's to be expected. But if it was 0930 and I am walking past then that room should be of a certain standard so I would want them to sort it out.
R	Can you talk me through your drawing on the roles of a military instructor?
i5	I think that the cadets would want to see a role model therefore you have to have that standards piece yourself. Other wise the credibility starts to go. Talking about leadership being the thing that we are impacting, actually it may be more of the leadership and command element so your knowledge of the subject and how you are imparting needs to be spot on and they been to tie together. In order that you are able to impact that then the understanding of your cadets and being able to emphasize with them, for example you have had a really busy morning, then heavy on PT and you have then straight after lunch, you might not want to do written comms, you might want switch it around and do something else. Something that is more energizing to pick them up.
R	How important do you think positive praise is?
i5	In anyone situation, there is almost certainly something or something's that someone has done well, if you have an individual that does a task and its rubbish, for want of a better word, otherwise, this is something that I picked up on, in the unit trainers course that I did, the bath tub debrief. So, if you go in with a load of bad, they will walk away demoralized. It affects their morale, will you get the best out of them? Then, if you excuse my language, a shit load of bad, then you need to prioritize, 1, 2 and 3.
R	Looking at the job as a whole, what % do you think is going to be administration verses cadet focused teaching.

370

i5	Ummm, the pessimistic side of me is now thinking that there will probably be a lot more administration that I thought, and I suspect that there will be a lot of report writing so I will say 60% teaching and 40% admin but I am guessing.

Participants
R= Researcher
I6 = Instructor 2

Transcription results:

R	What Branch are you?
i6	I am a logistics Officer. Yes I have done a couple of out of branch tour but yes.
R	When did you complete your Phase One Trg?
i6	1996-1997
R	How was your phase one training taught? Was it taught through an adult learning environment or was it a more directed, child centered approach?
i6	The child.
R	How did you respond to that?
i6	You looked it as a mean to an end. I didn't know any different, I hadn't done UAS or anything like that. My Dad was in the RAF, so I was familiar with the course but that's it. I looked at it as, this was the course I needed to complete. I needed to complete it to become a JO so I just got on with it.
R	Do you think the delivery techniques may have changed since you went through your trg?
i6	I don't know for certain, based on the 1st week on the OSIC and brief chats with the staff I suspect there may be some tweaking around the edges but fundamentally no.
R	Can you describe any instructor that you have experienced that you would describe as a role model?
i6	Two people. On my logistics officers course there was a FS who was a technical specialist supply lectures and he was really good, hugely knowledgeable, good sense of humor. No swearing, confident, calm assured ad kind o encouraged us to look around. There were elements of not giving us answers but pointing us in the right direction and letting us find the answers for ourselves. He was good. A Flt Lt he was my Flt Cdr on the movements course. He stood out because he was very fair. You knew the line and that line didn't move about. He was thoroughly consistent. He used to come in with the Officers spin of application and brought it to life through his own experiences.
R	Did you enjoy Phase One?
i6	No not really. It was too rushed, everything felt rushed and I am picking up that it is the same now. I do acknowledge that I didn't get this at the time but I know that time pressures are put into a course to increase pressure and stress but I do feel that everything was covered at a superficial level. WE did not have a bespoke academic element and it

	often felt that was taught by overweight old male aircrew who just spun ditts. You hear the sausage be spoken about and this was true. It wasn't all bad, I had the luxury of doing my 1st degree as a history grad in 1987-1990 and then I did an MA at Manchester Business School in 2007-2008 and it was probably the best experience of my life. People talk Operations, but this was far better. I loved that.
R	Why did you enjoy it so much?
i6	It was a chance to think. I am not bosting or being big headed, but I really like theory. I like thinking and having tome to reflect. I was there full time as a student. So I was a weekend parent and then during the week I was a student and I was a full student without the financial worries. I could immerse myself in the reading and research and the seminars and my course mates. I was the oldest on the course and ranged from hose that had just finished their undergrad work through to those that had been away and come back. It was a mid-career uplift. The staff were fantastic in the main, their knowledge, experience and research was a true learning environment. It was a polar opposite of Shrivenham.
R	Why was it so different?
i6	Shrivenham is just pretense. It has Kings College huff and puff and it has some old duffer sudo academics and I guess it tried by association to boast an academic flavor but the reality is that it too is a sausage factory. It has constrained thinking. Think along this narrow band with. It's not quite a line but if you fall outside of it you run the risk of failure. it then breeds passive compliance. I love being in the RAF but I think we are sadly far too restricted in the way we look a problems. We have a limited range of clubs in our golf bag so when we are in the ruff we are still trying to play a fairway shot. You find that we are constrained by our equipment. We look at problems through a lens of the equipment we have got and not what we could have. I am not disruptive, I have not been pulled or told off but I kind of try and think outside the box. Where group think has taken us down a track, I often want to look at it from a different angle, like an injection of new ideas.
R	The MA, how was it delivered, was it face to face or online?
i6	I don't recall any online in that time. Interestingly it was PowerPoint, not wasn't it was even before that, it was overheads, it was largely along those lines. We would get questions at the end but as always when you get to the end of a lesson and you want to pursue a question, but you are always very conscious about asking questions as you don't want to be that person that keeps everyone back from lunch.
R	Can you describe for me your ideal cadet?
i6	Someone with a clear interest, someone who is not afraid to think for themselves. They must understand that there will be elements of conformality but not complete compliance. WE need people who are euthanasic, intelligent, willing to learn. Willing to fail. What is

	important tis that they are willing to fail if the organization is willing to get them fail. There is a bit of dove tailing with those two. We have touched on it so far in the OSIC that I think you learn far more by failing to hit the mark. Your self-analysis or post mortem is much more rigorous when you have failed than when you have passed. When you fail you give yourself a hard time and are more through in your reflection?
R	How important is it to be reflective?
i6	Hugely, interestingly ISCS air moved from 4 to 8 weeks and built into that package was genuine reflection time. A lot o that was on a FRi afternoon not ideal, but I guess going back to my MA, there were lots of pockets of time so we could think about what had just been taught and read up on it. Joking aside, from having a lie in to travelling reflection is really important. If it's just learn this list that is a type of learning but it's so basic. I get that there will be some elements of this, but we need a balance. When we are taking about leadership which is a science and an art. I know we have a chosen model, but it is the sort of topic here you need to have discussion and discourse. Because if it was easy it would be prescribed, it would have a set of standard operating procedures. It is about how you apply a whole set of skills and experience in the context of the experience and scenario.
R	The cadets that you will have in your Sqn. How comfortable will you be with them questioning things?
i6	Appropriately questioning is perfectly legitimate. This is not a committee debate and the course is the course as it is designed but I have no problem in explaining why an element in but it may well be that the inclusion of Adair's model, this is the one that we are using but I am happy to have a discussion about the merits of the other models at an appropriate time. If you are just on transmit and they are on receive it will go in one ear and out the other. There will be no spark in their own minds. I am not afraid of it. There are some practical issues surrounding it like classroom management and time management but when I was on BAWC I was struck by how inquisitive the cadets were and to the best that we could we encouraged it.
R	Looking at the role of the cadet drawing that you did for me, is there anything that we haven't touched on yet?
i6	The course should set its stall out from the beginning. What you should expect to received. I am not talking about giving away the answers but there should be no surprises. We keep hearing them say that we are training in and not selecting out and quite rightly as there is rigor to the course and summative assessment and I fully accept that some people may not make the mark but fundamentally OACTU believe that when you pitch up here you have showed that you have the basics to work on. What we need to be giving the cadets are really constructive performance feedback. And I'm not sure that we do that. All the tells and things like that, they are just theoretical. They strike me as being sort of, what is the purpose of it? I get that a cadet needs to

	meet the standard but when I was an Uni there was no marching in. There was nothing like that. You sat down and got feedback, it was constructive, but it was honest. We should be finely tuned on our ability to coach and mentor and use appropriate performance measures.
R	You walk past the block, its term 3, they are out at lessons and you discover that their rooms have been left in a little bit of a mess. What's your initial reaction?
i6	Ok, this is a good one. I think I kind of what to understand where they were and what was going on. I would need to understand the degree of untidiness. I think a forthright discussion but not a, the temptation is to go and shout and ball. When faced with things like this I always remember an analogy that my manager used which was that you walk into a lobby and the porter is sat reading a newspaper and a man is carrying his bags up the stairs. You immediately want to shout at the porter but then you find out that the man has rushed in, he is keen to surprise his wife as its their anniversary. He wants to rush up to unpack and tells the porter that the best thing he can do for him is to help him find some theatre tickets and that's why he is reading the paper. The temptation is to shout, I am not a push over, but you need to check understanding and then act appropriately. If it is sloppy standards, then deal with it. They are given latitude and leeway and if that had been abused then they have left themselves down, but they need to know the consequences that could have in an operational sense. Parallel examples need to be drawn and highlighted.
R	What % of your time do you think will be cadet facing versus administration?
i6	I suspect it will be in the favor of running the Sqn. The Sqn is comprised of both staff and student, that family or group so I will have cadet and staff administration. I suspect that I am ensure that the OACTU regime and policies are in place, but I am there to make sure that is for both staff and students. I would say that most of the cadet facing will be done by the staff and it is my role to ensure that the systems are in place to allow them to do that.

Appendix S   Combined coded data of the role and responsibilities of an instructor

Professional values and attributes

- Motivating (33%)
- Competence (16%)
- Uphold professional boundaries (16%)
- Respectful (16%)
- Approachable (33%)
- Inspire (50%)
- Enthusiastic (16%)
- Honest (16%)
- Support (50%)
- Passionate (16%)
- Role Model (100%)
- Diversity & Inclusion (33%)
- Empathy (50%)
- Care (16%)
- Flexible (16%)
- Emotional Intelligence (33%)
- Treat people fairly (16%)
- Confidence (16%)
- Understanding (33%)
- Self disciplined (16%)
- Visible (16%)
- Credible (16%)
- Dress appropriately (50%)
- Conduct themselves appropriately (16%)
- Loyal (16%)

Professional knowledge and understanding

- Share relevant experience (16%)
- Subject matter expert (16%)
- Impact knowledge (16%)

These were all the same instructor

Professional skills

- Use learning technologies (16%)
- Differentiate (66%)
- Build rapport (16%)
- Motivate (16%)
- Provide leadership (16%)
- Direct influence (16%)
- Resource (16%)
- Communicate (33%)
- Assess understanding (50%)
- Delegate (16%)
- Encourage (16%)
- Demonstrate (16%)
- Build the team (16%)
- Know cadets as individuals (16%)
- Explain (16%)
- Reinforce Discipline (16%)

- Help students understand the mission (16%)
- Deliver suitable training (33%)
- Provide direction and guidance (16%)
- Facilitate (16%)
- Coach (16%)
- Encourage divisiveness (16%)
- Provide a safe environment(16%)
- Encourage self-awareness (16%)
- Mentor (66%)
- Challenge (16%)
- Encourage Growth (16%)
- Ensure cadet welfare (33%)
- Develop the individual (33%)
- Develop the cadets confidence (33%)
- Provide Feedback (50%)
- Develop the cadets credibility (16%)
- Employ Mission Command (16%)

THE PROFESSIONAL STANDARDS

377

Appendix T   Individual instructor data of the role and responsibilities of an instructor,

mapped against the EFT professional standards for teachers and trainers

in education and training (Education & Training Foundation, 2020)

Hypothesis	Proved/ Disproved
Hypothesis 1: If an individual has educated using constructive philosophies they will identify constructivist delivery methods and roles of a military instructor	N/A
Hypothesis 2: If a pre-service teacher has been educated using traditional methods, they will predominantly identify transmission based instructional roles	Proved
Hypothesis 3: Pre-service instructors that have worked in the military for the majority of their career (15 years plus) will predominantly identify traditional transmission instructional roles	N/A
Hypothesis 4: Pre-service instructors that identity student orientated, constructivist roles instructor roles are more likely to identify instructor CPD as a role	N/A
Hypothesis 5: Pre-service instructors who have been edcuate to degree level are more likely to support an adult leanring environment at the College	Proved

Demographic Data	
Instructor code	i1
Age	Mid 30's
Years service	5
Instructional Experience	Nil
Supports an adult learning environment at college	Yes

Roles and responsibilities of an instructor

379

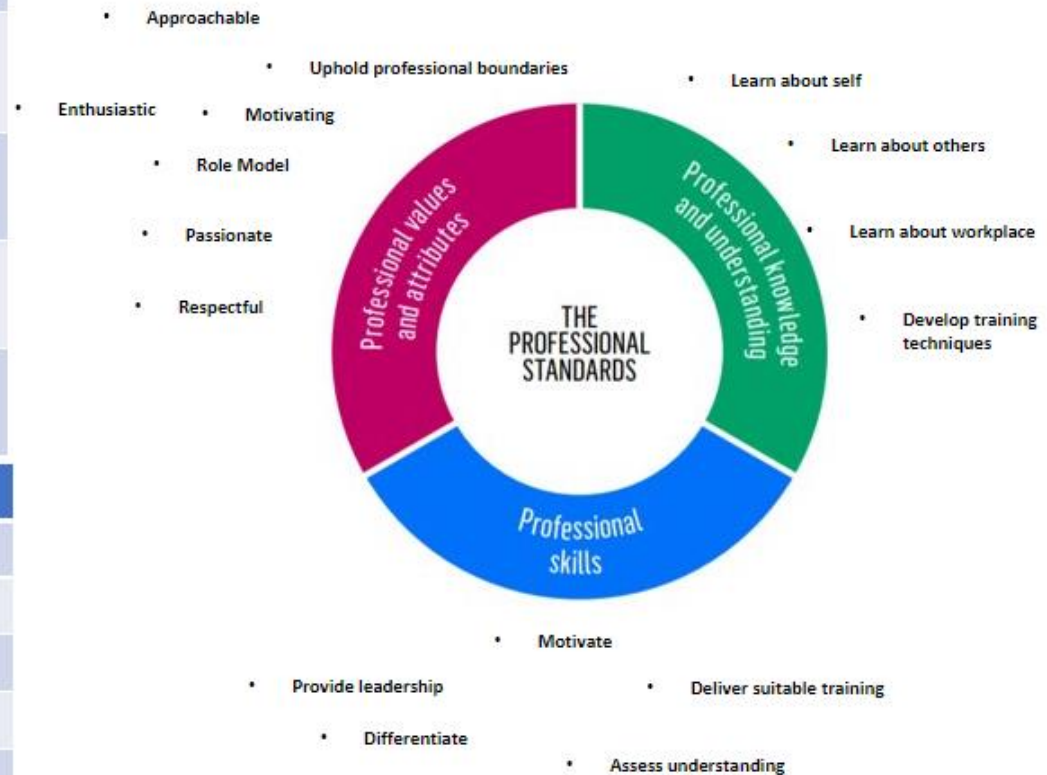| Hypothesis	Proved/ Disproved
Hypothesis 1: If an individual has educated using constructive philosophies they will identify constructivist delivery methods and roles of a military instructor	Prove
Hypothesis 2: If a pre-service teacher has been educated using traditional methods, they will predominantly identify transmission based instructional roles	N/A
Hypothesis 3: Pre-service instructors that have worked in the military for the majority of their career (15 years plus) will predominantly identify traditional transmission instructional roles	N/A
Hypothesis 4: Pre-service instructors that identity student orientated, constructivist roles instructor roles are more likely to identify instructor CPD as a role	Prove
Hypothesis 5: Pre-service instructors who have competed higher education are more likely to support an adult leanring environment at the College	Prove

Demographic Data	
Instructor code	i2
Age	Late 30's
Years since phase 1 training	5
Highest level of education	Diploma
Instructional Experience	Nil
Supports an adult learning environment at college	Yes

Roles and responsibilities of an instructor

- Approachable
- Uphold professional boundaries
- Learn about self
- Enthusiastic
- Motivating
- Learn about others
- Role Model
- Learn about workplace
- Passionate
- Develop training techniques
- Respectful

Professional values and attributes
Professional knowledge and understanding
THE PROFESSIONAL STANDARDS
Professional skills

- Motivate
- Provide leadership
- Deliver suitable training
- Differentiate
- Assess understanding

380

Hypothesis	Proved/ Disproved
Hypothesis 1: If an individual has educated using constructive philosophies they will identify constructivist delivery methods and roles of a military instructor	N/A
Hypothesis 2: If a pre-service teacher has been educated using traditional methods, they will predominantly identify transmission based instructional roles	Proved
Hypothesis 3: Pre-service instructors that have worked in the military for the majority of their career (15 years plus) will predominantly identify traditional transmission instructional roles	Proved
Hypothesis 4: Pre-service instructors that identity student orientated, constructivist roles instructor roles are more likely to identify instructor CPD as a role	N/A
Hypothesis 5: Pre-service instructors who have competed higher education are more likely to support an adult leanring environment at the College	N/A
Hypothesis 6: Pre-service instructors who have not competed higher education are more likely to support a pedagogical leanring environment at the College	Proved

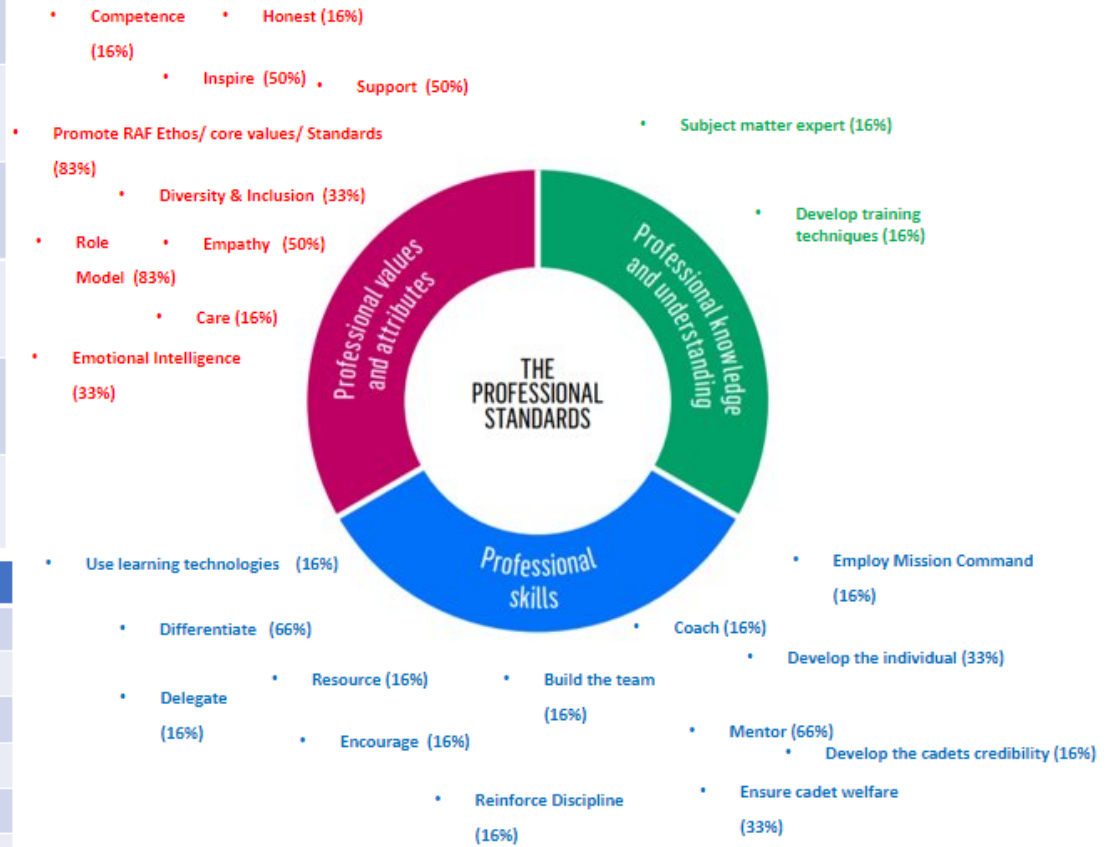| Demographic Data	
Instructor code	I3
Age	Late 40's
Years since phase 1 training	24
Highest level of education	GCSE
Instructional Experience	None
Supports an adult learning environment at college	No

Roles and responsibilities of an instructor

Hypothesis	Proved/ Disproved
Hypothesis 1: If an individual has educated using constructive philosophies they will identify constructivist delivery methods and roles of a military instructor	Proven
Hypothesis 2: If a pre-service teacher has been educated using traditional methods, they will predominantly identify transmission based instructional roles	N/A
Hypothesis 3: Pre-service instructors that have worked in the military for the majority of their career (15 years plus) will predominantly identify traditional transmission instructional roles	N/A
Hypothesis 4: Pre-service instructors that identity student orientated, constructivist roles instructor roles are more likely to identify instructor CPD as a role	Proven
Hypothesis 5: Pre-service instructors who have competed higher education are more likely to support an adult leanring environment at the College	Proven
Hypothesis 6: Pre-service instructors who have not competed higher education are more likely to support a pedagogical leanring environment at the College	N/A

Demographic Data	
Instructor code	I4
Age	Mid 30's
Years since phase 1 training	5
Highest level of education	Degree
Instructional Experience	Nil
Supports an adult learning environment at college	Yes

Roles and responsibilities of an instructor

- Competence (16%)
- Honest (16%)
- Inspire (50%)
- Support (50%)
- Subject matter expert (16%)
- Promote RAF Ethos/ core values/ Standards (83%)
- Diversity & Inclusion (33%)
- Develop training techniques (16%)
- Role Model (83%)
- Empathy (50%)
- Care (16%)
- Emotional Intelligence (33%)

THE PROFESSIONAL STANDARDS

Professional values and attributes

Professional knowledge and understanding

Professional skills

- Use learning technologies (16%)
- Employ Mission Command (16%)
- Differentiate (66%)
- Coach (16%)
- Develop the individual (33%)
- Resource (16%)
- Build the team (16%)
- Delegate (16%)
- Mentor (66%)
- Encourage (16%)
- Develop the cadets credibility (16%)
- Reinforce Discipline (16%)
- Ensure cadet welfare (33%)

382

Hypothesis	Proved/ Disproved
Hypothesis 1: If an individual has educated using constructive philosophies they will identify constructivist delivery methods and roles of a military instructor	N/A
Hypothesis 2: If a pre-service teacher has been educated using traditional methods, they will predominantly identify transmission based instructional roles	Proven
Hypothesis 3: Pre-service instructors that have worked in the military for the majority of their career (15 years plus) will predominantly identify traditional transmission instructional roles	Proven
Hypothesis 4: Pre-service instructors that identity student orientated, constructivist roles instructor roles are more likely to identify instructor CPD as a role	N/A
Hypothesis 5: Pre-service instructors who have competed higher education are more likely to support an adult leanring environment at the College	N/A
Hypothesis 6: Pre-service instructors who have not competed higher education are more likely to support a pedagogical leanring environment at the College	Proven

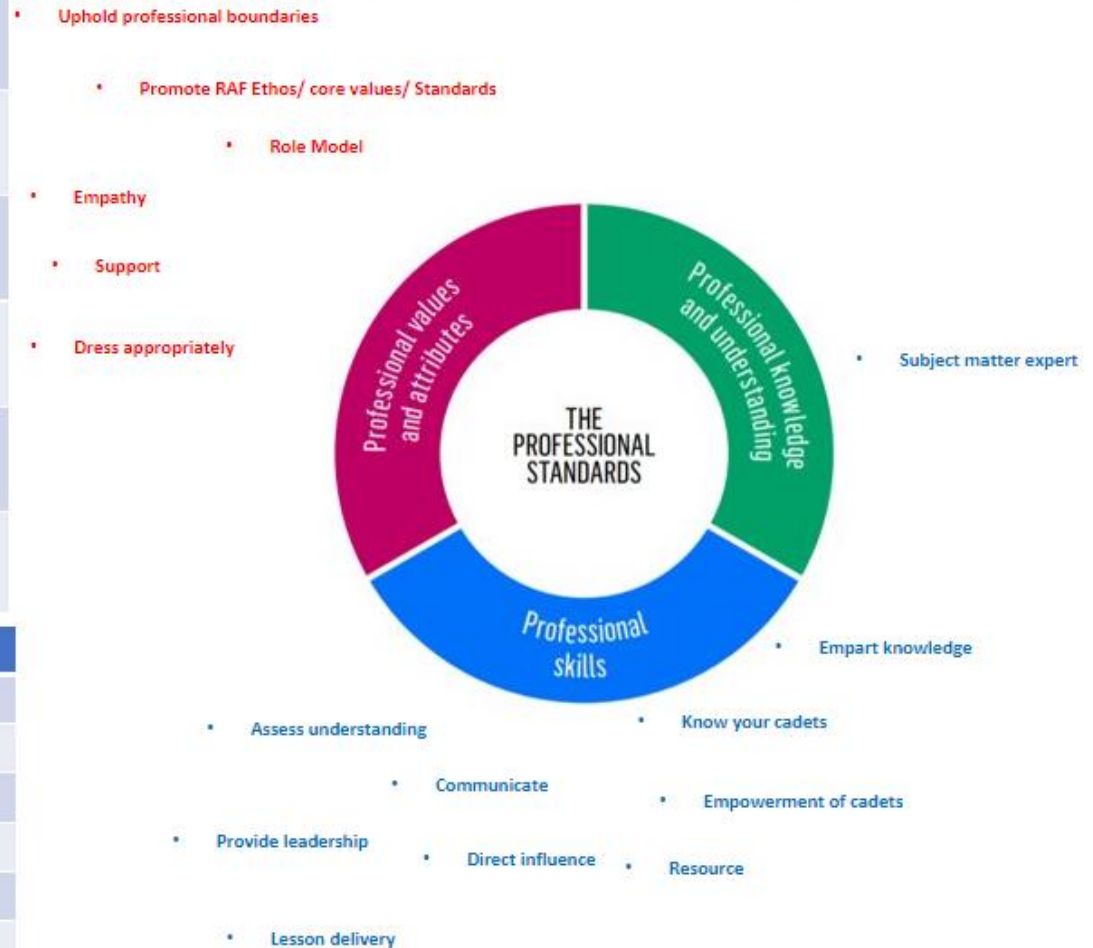| Demographic Data	
Instructor code	I5
Age	Late 40's
Years since phase 1 training	30
Highest level of education	GCSE
Instructional Experience	Nil
Supports an adult learning environment at college	No

Roles and responsibilities of an instructor

- Uphold professional boundaries
- Promote RAF Ethos/ core values/ Standards
- Role Model
- Empathy
- Support
- Dress appropriately
- Subject matter expert
- Empart knowledge
- Assess understanding
- Know your cadets
- Communicate
- Empowerment of cadets
- Provide leadership
- Direct influence
- Resource
- Lesson delivery

THE PROFESSIONAL STANDARDS

Professional values and attributes

Professional knowledge and understanding

Professional skills

383

Hypothesis	Proved/ Disproved
Hypothesis 1: If an individual has educated using constructive philosophies they will identify constructivist delivery methods and roles of a military instructor	Proven
Hypothesis 2: If a pre-service teacher has been educated using traditional methods, they will predominantly identify transmission based instructional roles	N/A
Hypothesis 3: Pre-service instructors that have worked in the military for the majority of their career (15 years plus) will predominantly identify traditional transmission instructional roles	Disproven
Hypothesis 4: Pre-service instructors that identity student orientated, constructivist roles instructor roles are more likely to identify instructor CPD as a role	Proven (need to sort)
Hypothesis 5: Pre-service instructors who have competed higher education are more likely to support an adult leanring environment at the College	Proven
Hypothesis 6: Pre-service instructors who have not competed higher education are more likely to support a pedagogical leanring environment at the College	Proven

Demographic Data	
Instructor code	I6
Age	Later 40's
Years since phase 1 training	22
Highest level of education	Masters
Instructional Experience	Yes
Supports an adult learning environment at college	Yes

Roles and responsibilities of an instructor

- Approachable
- Inspire
- Promote RAF Ethos/ core values/ Standards
- Role Model
- Share relevant experience
- Subject matter expert
- Impact knowledge

THE PROFESSIONAL STANDARDS

Professional values and attributes

Professional knowledge and understanding

Professional skills

- Mentor
- Coaching
- Motivate
- Facilitate
- Encourage self-awareness
- Encourage Growth
- Provide a safe environment
- Challenge
- Ensure cadet welfare
- Provide Feedback

Appendix U   Lesson plan for the intervention session

Time	Activity	Resource
	Welcome • Detail the objectives of the lesson • Question Policy • Classroom rules • Feedback required at the end of the lesson	
	Generational Theory- Research Task • Split group into 3 groups of 2 • Allocate a generation per group • Allocate each group a laptop Task: For your allocated generation please identify • Characterises of the people from that generation • Potential generational weak spots • Assumptions about that generation • What strategies could you employ to get the best out of them in a lesson? • What key historical events/ technological interventions shaped this generation? Subtask: With play dough each person must build an object that they think summaries their allocated generation	• Question cards • 3 laptops • Prowise Board • Mifi router
	Generation Research Task – Feedback	

386

	• Three groups sit in a triangle all facing each other. • Each group feedback their findings and at the end of each brief the other groups need to feedback how their allocated generation might them. This is to identify prejudices and assumptions.	
	Cadets lived reality Reflective task • About 15 quotes and pictures are scattered in the floor • Instructors are asked to pick one which resonates with them and then talk about why • As a group I want them to talk about why someone may view the course in this way and how it can be prevented	• Copies of quotes and pictures
	Exploration of key words **3 Boards:** Walk around as an individual and add post-its onto: **Fear**: What generates fear **Failure:** What generates failure **Grey man:** How does it develop?	

	Principles of adult leaning theory Task • In groups of 2- Identify challenges and opportunities of all the principles and assumptions in a phase one environment	• Blown up images of the principles and assumptions
	The sacred cows • As the lesson progresses, start a list of all of the assumptions that we have about a military learning environment that we may have to slay to develop a adult learning environment	

	Self-Reflection task:
	    • 2 minutes- Draw the shape of how you feel after the session
	    • 2 key take aways	

Appendix V   Intervention session feedback form

Feedback on Theory of Adult Learning Session

1.   Did you add or delete any information on your roles of an OACTU instructor diagram?

2.   Please detail why.

3.   Where there any elements of the session which challenged your beliefs or values?

4.   What were your three main takeaways from the session?

5.   If you have any further comments, please detail them below.

Appendix W   Coded intervention session feedback

Feedback on Intervention Session

1. **Did you add any information on your roles of an OACTU instructor diagram?**

Instructor	Yes/ No	comments
I1	Yes	Hadn't explained in detail that an instructor is to instruct. But instructing shouldn't be non-engaging, the instructor has a responsibility to inspire, and to inspire concurrently while role modelling.
I3	Yes	The material delivered and its delivery is key to learning.
I4	Yes	I added some new information because after the session I got a bigger vision.
I5	Yes	After todays session, a few more points were discussed that were relevant
I6	Yes	Recognise the value we place on knowledge in the respect of instructors. Command of subject matter ability to discuss and challenge etc.

3. **Where there any elements of the session which challenged your beliefs or values?**

Instructor	Qualitative comments
I1	A type of arduous environment is required in training to add mental stress to decision making/ leadership and put cadets into stress. But this does not have to be the current set up.
I3	I was interested in the potentially new ways for adults to learn, particularly this new generation.
I4	Yes, since we're in the military environment, I thought it's difficult to apply some elements and stick to them.
I5	Still think 4 principles of andragogy are not necessarily correct to the military. Points 3 and 4 could be seen as contradictory.
I6	The generational piece was worth some reflection.

4. **What were your three main takeaways from the session?**

Instructor	Qualitative comments
I1	• Different approaches required for different generations • The viewpoints of cadets on lesson delivery • The viewpoints of cadets on Directing Staff
I3	• Consider cadet viewpoint • Tailor learning/ delivery to suit the new generation of officers/ SNCO's • Consistent review and feedback
I4	• Views of different generations • Viewpoints of the cadets • My own prejudices

I5	• The syllabus needs updating
	• Varied learning delivery and methods required
	• Think outside the box
I6	• IOT needs urgent review, we like to think that we are delivery. We like to think that we are delivering high class training but some of the cadet comments would suggest otherwise!
	• Staff need more training and support gapping course design and development in favour of just getting the numbers through the system, short sighted.
	• Wider attitude of RAF needs to shake up. The College should attract the very best SNCO's and Offices across the RAF and be seen a positive career move by manning/ branches. One RAF Regiment Officer said he was warned the college was a career foul.

5. **If you have any further comments, please detail them below.**

Instructor	Qualitative comments
I1	The directing staff need to be selected in. RAF needs the best of the best/top third to instruct/ influence and role model.
I3	Whatever changes are made IOT? NCACITC I believe core military skills and ethos and core values underpin. Phase 1 training and this should be born in mind when reviewing/ changing course content.
I4	Nil
I5	Nil
I6	We need to take the design and delivery of Phase one training more seriously and seek the input of SME's not just the semi-skilled view of more senior non-specialist folk. We seen to talk a good job but adult education is a professional and serious business. The tertiary education sector is full of highly experienced educators and trainers why do we rely on the gut feeling of amateurs?