An exploration of the gender and professional identities of ab initio pilots

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Metadata Record: [https://dspace.lboro.ac.uk/2134/33218](https://dspace.lboro.ac.uk/2134/33218)

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An Exploration of the Gender and Professional Identities of Ab Initio Pilots

By Faye McCarthy

A Doctoral Thesis

Submitted in partial fulfilment of the requirements for the award of

Doctor of Philosophy of Loughborough University

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Abstract

Despite it being over a century since the first woman gained a pilot’s licence, piloting remains a male-dominated profession. Worldwide, only 3% of airline pilots are women and, of these, only 450 hold the rank of Captain, a number who could easily be seated within a single A380. UK airlines are recognising that the low number and proportion of female pilots is an issue and some carriers, including easyJet, have introduced initiatives to promote gender diversity on the flightdeck. However, as there are few female pilots qualifying and applying for airline jobs, there is a compelling need to both examine why relatively few women consider a career as a pilot and then understand the challenges those who do make a non-traditional career choice and enter the profession face during their initial (ab initio) training in reconciling their developing professional identity as a pilot with their gender identity as a woman.

The aim of this thesis is to explore the effects of women ab initio pilots’ minority status on their gender and professional identities. To address this aim, the thesis utilises the Theory of Tokenism, together with concepts of Gender Performativity and Professional Identity, to explore the experiences of ab-initio pilots at two UK-based Flight Training Schools. New empirical evidence, derived from in-depth interviews and surveys, found that female cadets perceive elements of their professional identities differently from men, and women cadets adopt a range of strategies to negotiate conflicts between their developing professional and gender identities. The research examines the experiences of these cadets to make both theoretical and empirical contributions to existing studies of gender-dominated professions as well as offering practical recommendations to airlines and flight training schools who are seeking to encourage more women to qualify as commercial airline pilots.
Acknowledgements

First and foremost, I would like to express my sincerest gratitude to my supervisors Professor Stephen Ison and Dr Lucy Budd for their continuous guidance, support, and encouragement throughout the course of this research. Your advice and knowledge has been invaluable, and I have thoroughly enjoyed working with Stephen and Lucy. I would also like to thank Professor Anne Graham and Dr Sarah Barnard for taking the time to read this work and providing constructive comments which have improved this thesis.

I would like to thank all the participants who kindly gave up their time to participate in this research, without their contribution this research would not have been possible. I am very grateful to the two Flight Training Schools who provided me with the opportunity to spend time within their organisations and shared their extensive knowledge. I would also like to thank each of the training cadets who participated in the research and shared their experiences.

Special thanks go to my friends and family for their support and patience. Finally, I would like to express my sincere thanks to Daniel for supporting, encouraging, and tolerating me through the challenging times.
Publications

Earlier drafts of this thesis have been published in journals, conferences and seminar proceedings.


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List of Abbreviations

ATPL- Air Transport Pilots License

BWPA- British Women’s Pilots Association

CAA- Civil Aviation Authority

DfT- Department for Transport

FS- Flight School

FS1- Flight School 1

FS2- Flight School 2

IATA- International Air Transport Association

ICAO- International Civil Aviation Organisation

ONS- Office for National Statistics

RAF- Royal Air Force

SET- Science, Engineering and Technology

SPSS- Statistical Package for the Social Sciences

STEM- Science, Technology, Engineering and Mathematics
1
Introduction

1.1 Background and Context of the Research Problem

“Fifty years ago almost all professions were dominated by men and over the last five decades there has been significant progress in almost every sector with women entering and attaining senior positions in professions like law, medicine, education, finance and politics. However, the proportion has not changed for pilots and it is hard to think of another high-profile profession where women are so underrepresented” Carolyn McCall, Chief Executive of easyJet (2016)

Despite the significant increase in women’s participation in the labour market in recent decades, the underrepresentation of women in male-dominated industries continues to challenge society, governments, companies and academics. Research has identified that there is a strong business case for increasing women’s representation in male-dominated workplaces including; a better image, an increased level of customer service, and access to untapped talent (Bagilhole, 1997; Dainty et al., 2004). Diversity is crucial for innovation. In a global survey 85% of corporate diversity and talent leaders agreed that ‘a diverse and inclusive workforce is crucial to encouraging different perspectives and ideas that drive innovation’ (Forbes Insights, 2011: 19). Recognising the beneficial effects of diversity, initiatives and policies to challenge gendered occupations are being introduced, however these are commonly proposed to address a skills shortage rather than to champion inclusivity.

‘Enabling women to meet their full potential in work could add as much as $28 trillion to annual GDP in 2025’ (McKinsey Global Institute, 2015: 1)

There has been a significant amount of research which seeks both to ascertain the reasons for the lack of women in certain occupations, and document the experiences of women in non-traditional occupations (Alpay, 2008; Barnard et al., 2012; Powell et al., 2008; Davey and Davidson, 2000;
Wright, 2016). However, despite the low number of women entering STEM (Science, Technology, Engineering and Maths) related careers being well-documented (Powell and Bagilhole, 2006; Powell et al., 2008; Durbin, 2010), there is a paucity of research concerning women’s participation in senior management or high level professional roles in transport generally.

The underrepresentation of women in transport has been recognised by the UK Government. Their 2016 Transport Infrastructure Skills Strategy has been formed to address the skills shortage within transport and part of this recognises the need to increase the diversity of the transport workforce. Fundamentally, the strategy has set a target for 20% of new entrants to engineering and technical apprentices in the transport sector to be women by 2020 (Department for Transport, 2016). Within the aviation industry specifically, the UK government has recognised that the industry relies on a highly skilled workforce and ‘developing skilled individuals is critical’.

However, for piloting in particular, ‘the length of training (approx. 18 months) may deter potential recruits and result in a lack of diversity’ (Department for Transport, 2017: 45).

This lack of diversity in piloting is reported by the UK’s specialist aviation regulator, The Civil Aviation Authority (CAA), (2016) in their Flight Crew Licensing statistics. These report that only 629 women hold an Air Transport Pilots License (ATPL); this is just 4% of total license holders. Globally, around 3% of commercial airline pilots worldwide are women (International Society of Women Pilots, 2015) and, despite recent attempts to challenge this imbalance, including easyJet’s Amy Johnson initiative, women remain significantly underrepresented on the flight deck. Existing literature reveals that piloting remains a gender-specific profession and the gendered culture is continually being reproduced through masculine beliefs and values of what constitutes ‘a Pilot’ (Mitchell et al., 2005). This was expressed in a recent interview with the first woman in the UK to pilot a wide-bodied aircraft, Yvonne Kershaw (News.bbc.co.uk, 2017a: 1);
‘I suppose normally they [passengers] would expect to see a silver-haired fox flying the aeroplane in command…breaking down those barriers wasn’t easy but nobody ever said it would be’.

One reason for the underrepresentation of women on the flight deck has been identified as the gendered heritage of the profession, as it originated from the military. This military legacy portrays a pilot as ‘elite, civilized, rational, technical, omniscient, and a thoroughly heterosexual, paternal figure’ (Ashcraft, 2005: 76). In addition, a lack of female pilot role models, the belief that a roster dominated lifestyle is not compatible with family life, and gender role stereotypes have also been suggested as factors contributing to the lack of women pilots (Davey and Davidson, 2000).

Research has also shown that for women who do ‘challenge the norm’ and enter male-dominated occupations, their entry can result in sexism, domestic and work conflict and fewer opportunities for career progression (Cohen and Huffman, 2003; Germain et al., 2012; Huppatz and Goodwin, 2013). In aviation, women pilots have reported sexist attitudes, remarks and behaviour from their (overwhelmingly male) instructors, peers and eventual colleagues (Davey and Davidson, 2000; Mitchell et al., 2006). In order to be accepted and succeed in a male-dominated environment, research has shown that women must be determined and resilient (Lumsden, 2010).

Recognising the advantages of diversity to their business, European airlines including British Airways, Aer Lingus, and easyJet have sought to raise the profile of the pilot career in order to inspire young women into the profession (Ellis, 2015). The Amy Johnson Flying initiative, for example, was introduced in 2015 by easyJet and aims to tackle an industry-wide stereotype. This initiative involves easyJet offering ten places just for women on pilot training and underwriting the training loan. EasyJet initially set a target to double the number of female new entrant pilots to 12% over two years (easyJet, 2016). Having achieved this target, they then set a new target of 20% female new entrant cadet pilots (hereafter referred to as ab initio pilots) by 2020 and they believe this long-term strategy to recruit more women will help to change the face of the industry.
However, such initiatives have led aspiring and existing pilots to question the motivation of the drive to recruit more women and have cautioned that an over-emphasis on the business case can risk the implication that ‘women are the last resort’ (Henwood, 1996: 200). As a result, careful consideration must be made to the industry’s motivations to improve gender diversity in the pilot population in order to improve the design and implementation of such initiatives.

The “Business Case” for Diversity on the Flight-deck

Pilot demand is ‘driven by the overall demand for commercial flights, how these flights are crewed and the need to replace pilots exiting the workforce’ (CAE, 2016: 13). The International Air Transport Association (IATA) forecasts 4.2% annual passenger growth and a market of 4.8 billion air passengers by 2027 (IATA, 2016). In order to accommodate this forecast increase in demand, the global commercial aircraft fleet is expected to grow from 12,000 to 37,000 aircraft and airlines need to crew their aircraft effectively to maximise utilisation and financial returns.

Recognising that aviation is a global industry, a ten year pilot demand forecast by CAE Training & Services (CAE) (2016) identified that the industry will need 255,000 new airline pilots over the next ten years. This means a total of 440,000 active pilots by 2027, of which, 60% will be required for fleet growth and 40% to offset retirement and attrition (CAE, 2016). However this growth is not evenly distributed around the world, Table 1.1 displays the pilot demand forecast by geographical region (source CAE, 2016). Improving diversity in the profession will be more difficult in certain regions, this is because women’s role in society and women’s role in the labour market depend on cultural factors.

In 2016 the three main sources of pilots being; airline-focused Flight Training Schools (FTS) (approx. 6,500), Universities, military and business aviation (approx. 3,000), and small regional flying clubs (approx. 10,500) (CAE, 2016). The mandatory retirement age for commercial pilots is typically 60-65, however loss of medical fitness or a change in career trajectory are just two other possible reasons for leaving the workforce.
Boeing’s Pilot and Technician Outlook stated that ‘meeting this demand will require innovative solutions – focused on educational outreach and career pipeline programs – to inspire the next generation of pilots, technicians, and cabin crew’ (Boeing, 2016: 5). To address the anticipated pilot shortage, airlines around the globe are attempting to attract, select and retain pilots to meet the increasing demand for air travel. In order to recruit new pilots, airlines are seeking to “select the right fit”. This means using a rigorous assessment and selection procedure which involves testing candidates’ language proficiency, flying skills, and attitudes to identify potential future Captains. Airlines also look for individuals who they believe will fit with their culture, their vision, and their operations. However, attracting new pilots is not an easy task. EasyJet’s Head of Crew Training, Eddie Sproul, reported that ‘the bean counters think they can turn on a tap to get more pilots, however, in reality, you need time to recruit and train them’ (Sproul cited in Read, 2016: 1). Airlines have begun to recognise the need to expand their pool of potential recruits and there is one potential pool of recruits that has up to now been neglected and ‘airlines are developing programs to tap into an underrepresented labour pool- female pilots’ (CAE, 2016: 34).

Airlines, Flight Schools, and pilot Unions are now working to raise awareness of aviation to young people. The British Women’s Pilots Association (BWPA) has launched The Aviatrix Project which involves women airline pilots visiting schools to talk to young children about their career (Theaviatrixproject.com, 2015). In addition, the BWPA are also partnering easyJet in their Amy Johnson Flying Initiative (easyJet, 2016). However, Eddie Sproul stated that

<table>
<thead>
<tr>
<th>Region</th>
<th>2017-2027 Pilot Demand</th>
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<tbody>
<tr>
<td>Americas</td>
<td>85,000 new airline pilots needed</td>
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<tr>
<td></td>
<td>62,000 new Captains needed</td>
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<tr>
<td>Europe</td>
<td>50,000 new airline pilots needed</td>
</tr>
<tr>
<td></td>
<td>36,000 new Captains needed</td>
</tr>
<tr>
<td>Middle East and Africa</td>
<td>30,000 new airline pilots needed</td>
</tr>
<tr>
<td></td>
<td>20,000 new Captains needed</td>
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<tr>
<td>Asia-Pacific</td>
<td>90,000 new airline pilots needed</td>
</tr>
<tr>
<td></td>
<td>62,000 new Captains needed</td>
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Table 1.1 Pilot Demand Forecast

Source: CAE, 2016

Boeing’s Pilot and Technician Outlook stated that ‘meeting this demand will require innovative solutions – focused on educational outreach and career pipeline programs – to inspire the next generation of pilots, technicians, and cabin crew’ (Boeing, 2016: 5). To address the anticipated pilot shortage, airlines around the globe are attempting to attract, select and retain pilots to meet the increasing demand for air travel. In order to recruit new pilots, airlines are seeking to “select the right fit”. This means using a rigorous assessment and selection procedure which involves testing candidates’ language proficiency, flying skills, and attitudes to identify potential future Captains. Airlines also look for individuals who they believe will fit with their culture, their vision, and their operations. However, attracting new pilots is not an easy task. EasyJet’s Head of Crew Training, Eddie Sproul, reported that ‘the bean counters think they can turn on a tap to get more pilots, however, in reality, you need time to recruit and train them’ (Sproul cited in Read, 2016: 1). Airlines have begun to recognise the need to expand their pool of potential recruits and there is one potential pool of recruits that has up to now been neglected and ‘airlines are developing programs to tap into an underrepresented labour pool- female pilots’ (CAE, 2016: 34).

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'there is still a mind-set problem which thinks that we are lowering our standards by recruiting women pilots or giving them preferential treatment' (Read, 2016). Captain Stokes from Virgin Atlantic has defended Virgin’s stance to recruit more female pilots stating; ‘It is about competency and not about positive discrimination. We want the best - it doesn’t matter who they are. But we need to ask - why are women not applying? Why are we not retaining them?’ (Read, 2016). Here we must note that positive discrimination is generally unlawful, it involves the practice of favouring individuals belonging to an underrepresented group, for example hiring a candidate because they have a relevant characteristic, not because they are the best person for the job (hrzone.com, 2017).

In order to improve the relative status of women in non-traditional occupations (including piloting), there is a need to reflect upon and deconstruct the gendered science of professions as a whole. In piloting, current women pilots have experienced difficulties including sexist comments and performance pressures which can require them to adapt their behaviours in order to be accepted (Davey and Davidson, 2000). True equality will only be reached when occupations can ensure that women can pursue a career without having to forego or modify their gender identification (Martin and Barnard, 2013). This will increase the number of women in occupations and they can therefore become role models, sponsors and mentors for young women (Chambers et al., 2018).

Although the aviation industry is aware of the impending pilot shortage and recognises the business case for enhancing diversity; current recruitment drives and initiatives will only produce the desired change if they are carefully implemented and managed. Therefore the industry should seek to understand the motivations and experiences of the women who enter the profession in order to develop and enhance strategies and initiatives to produce change.

Building on current research into the experiences of minority groups, this thesis examines how women experience “becoming a pilot”, by exploring the management of their gender and professional identities. The research
employs Kanter’s (1977) Theory of Tokenism to explore how women ab initio pilots are coping with their minority status during the early socialisation phase of the profession, during pilot training. The research aim and objectives are detailed in Section 1.2.

1.2 Research Aim and Objectives

1.2.1 Research Aim
To explore the effects of women ab initio pilots’ minority status on their gender and professional identities.

1.2.2 Research Objectives
This aim will be achieved through the following six objectives:

1. To understand the motivations and implications of a non-traditional career choice for women.
2. To identify a theoretical underpinning to explore the possible effects of women’s minority status in male-dominated occupations.
3. To examine the views of key aviation stakeholders with respect to the development of the pilot identity.
4. To explore how ab initio pilots perceive their gender and professional identities.
5. To investigate the relationship between ab initio pilots’ gender and professional identities.
6. To make recommendations to support women’s entry into, and development during, pilot training.

1.3 Structure of the Thesis
In order to address the aim, the remainder of the thesis is presented in 8 chapters.

Chapter 2: The Division of Labour and Gendered Occupations
A comprehensive literature review is used to examine the gendered division of labour and the development of gendered occupations which arise as a result of occupational stereotyping. Examples of gendered occupations are provided and an explanation as to why piloting is a male-dominated profession is presented. Research highlighting the experiences of individuals
who make a non-traditional career choice follows this. The chapter also
details the way in which individuals experience and cope in environments in
which they are a minority.

Chapter 3: Theory and Key Concepts
The review of the literature led to the theoretical underpinning and key
concepts being identified. This chapter presents the Theory of Tokenism
(Kanter, 1977) and explains how token behaviours form part of professional
identity formation using Kelchtermans’ (2009) concept of ‘Self-
understanding’. The ways in which gender is portrayed as a performance
utilises Butler’s (1990) theory of Gender Performativity.

Chapter 4: Research Approach
The research approach was developed in light of the research objectives and
the ontological position of the researcher. This chapter describes and justifies
the stages and decisions taken as part of the research process.

Chapter 5: Aviation Stakeholder and Flight School Management
Perspectives
The review of the literature identified a number of important issues that
needed verification, and this formed the basis of the scoping study. The
scoping study includes two parts. The first part includes interviews with
aviation personnel who have publicly stated their interest and knowledge in
the area and have expressed a desire to increase the number of women
entering the pilot profession. The second part includes interviews with Flight
School management personnel in the UK, providing a background to the two
case study sites and context for Chapters 6 and 7. Both parts provide
valuable insights.

Chapter 6: Cadets’ Perceptions of their Gender and Professional
Identities
This is the first of two findings chapters considering the cadets’ perceptions
of their gender and professional identities. It is based upon interviews and
surveys which have been analysed through an understanding of the key
concepts and theoretical underpinning of this research.
Chapter 7: Effects of a Token Status
Chapter 7 considers the effects of women ab initio pilots’ token status. The analysis relates to the theoretical underpinning outlined in Chapter 3.

Chapter 8: Discussion
Chapter 8 discusses the findings from Chapters 6 and 7 in light of existing literature.

Chapter 9: Conclusions and Recommendations
The final chapter identifies the main findings from the research. A number of recommendations are offered and the key empirical and theoretical contributions are discussed. Limitations and areas for future research are also identified.
2
The Division of Labour and Gendered Occupations

2.1 Introduction
Chapter 1 provided the background and context of the research problem, as well as the research aim and objectives. This chapter reviews the literature in order ‘to understand the motivations and implications of a non-traditional career choice for women’ (objective 1). The chapter is divided into 6 subsections;

Section 2.2 identifies the historical division of labour, highlighting how patriarchy, capitalism, hegemonic masculinity and gender stereotypes have played a role in creating and reinforcing occupational sex segregation. Section 2.3 defines gendered occupations and provides examples of non-traditional occupations for women including; science, technology, engineering, and mathematics (STEM) related occupations, transport, and particularly, aviation. This leads into Section 2.4 which explores the underrepresentation of women in certain job roles in aviation. The literature relating to the reasons why so few women become airline pilots is detailed in Section 2.5. This is then followed by examples of the experiences of women who ‘challenge the norm’ and enter a non-traditional occupation (Section 2.6). The ways in which women in male-dominated occupations cope with their minority status are then discussed in Section 2.7. The chapter ends by detailing the research gap and identifying the theoretical underpinning and key concepts of this thesis, which will be detailed in Chapter 3.

2.2 Gender and the Division of Labour
The division of labour by gender has been universal throughout human history (Hartmann, 1976). Although women represent almost half of the world’s population (Breneman and Mbuh, 2006); the dominance of hegemonic masculinity across society worldwide has meant that women have been denied equal opportunities (Connell, 2005).
In the United Kingdom, legislation to promote equality (such as The Sex Discrimination Act, 1975 and The Equality Act, 2010), and attempts to shatter the ‘glass-ceiling’ of gender inequality (Germain et al., 2012) have been made. Although women have made significant progress in entering some historically male-dominated fields, such as medicine (Frome et al., 2006), many occupations remain segregated by gender and pay inequality between men and women remains a barrier to true equality (Miller and Hayward, 2006; News.bbc.co.uk, 2017b).

Even in 2016, the Office for National Statistics (ONS) in the UK reported the median full-time gross annual earnings by sex was just over £31,000 for men and just under £25,000 for women (ONS, 2016a). Gender pay disparity continues to exist within occupations and workforces, indicating organisations are not gender neutral. The UK Government has recently introduced world-leading legislation by which all organisations with 250 or more employees must publish their gender pay gap data (HM Treasury, 2017). EasyJet has reported women’s hourly rates being 52% lower than men, this is because of the underrepresentation of women as pilots, whom are paid £92,400 a year on average, compared with 69% of lower-paid cabin crew being women, with an average annual salary of £24,800 (easyjet.com, 2017).

In order to understand the relative positions of men and women and ‘the pattern of practice that allowed men’s dominance over women to continue’ (Connell and Messerschmidt, 2005: 832), issues of patriarchy, capitalism, and hegemonic masculinity are explored in Sections 2.2.1 and 2.2.2 respectively.

2.2.1 Patriarchy and Capitalism
The concept of patriarchy refers to the social system of men’s domination over women in society. The term is defined as the ‘rule by the male head of a social unit’ (Pilcher and Whelehan, 2004: 93) and there are three important theories which are integral to the concept of patriarchy; ‘radical feminism’, ‘Marxist feminism’ and ‘dual systems theory’ (ibid, 2004: 93).

Radical feminism regards patriarchy as ‘the primary and fundamental social division in society’ (ibid, 2004: 93). Studies using this approach identify the
control which men have over women’s bodies and the role of the family institution in promoting men’s domination (ibid, 2004). Marxist feminism argues that patriarchy ‘arises from the capitalist economic system: it requires, and benefits from women’s unpaid labour in the home’ (Pilcher and Whelehan, 2004: 93) and suggests that ‘patriarchy has not just been seen as a form of sexist oppression, but as the exploitation of house workers in capitalism’ (Fuchs, 2017: 2). As a result, for Marxist feminists, the subordination of women in society is a by-product of capitals’ subordination of labour and, in patriarchy, the sexual division of labour is hierarchical, with men at the top and women at the bottom.

The third theory, ‘dual systems theory’ is a combination of the radical feminist approach and Marxist theories. It argues that capitalism and patriarchy are interdependent whereby ‘both systems structure and benefit from women’s subordination’ (Pilcher and Whelehan, 2004: 94). Theories which use patriarchy as a central concept have been criticised for reducing the explanation of patriarchy to one or two factors and for limiting discussions concerning gender relations to relationships between just men and women (ibid, 2004).

Linking patriarchy to the labour market, the world’s global capitalist economy is continually developing and ‘the emergence of capitalism in the fifteenth to eighteenth centuries threatened patriarchal control based on institutional authority as it destroyed many old institutions and created new ones, such as a "free" market in labour’ (Hartmann, 1976: 138). This link between patriarchy and capitalism is a contested issue within feminist scholarship. Hartmann (1979) merged patriarchy and capitalism to create ‘patriarchal capitalism’, identifying that ‘capitalism grew on top of patriarchy; patriarchal capitalism is stratified society par excellence’ (Hartmann, 1979: 230). Similarly, Eisenstein (1981: 42-49) identified the term ‘capitalist patriarchy’, stating that it comprises one system and that the ideology of equal opportunity in the workplace is patriarchal. However, Gordon (1996: 6) argued that ‘capitalism and patriarchy are interrelated…but the relationship is contingent and variable’. Gordon’s (1996) study of African women found that the impact of capitalism is different on men and women and this ‘differential impact reflects
the particular ways capitalism intersects with patriarchy within each society and is therefore conditioned by both historical and contemporary forces’ (Gordon, 1996: 5). Overall, patriarchy and capitalism have been used to contribute to understandings of the division of labour by gender as patriarchy consigns women to motherhood and limits them to the home while capitalism reinforces this inequality through discrimination and lower wages (Hartmann and Markusen, 1980).

One term which is used to identify an expression of patriarchy and capitalism is hegemonic masculinity.

2.2.2 Hegemonic Masculinity

‘The masculine hegemonic system that marks current gender politics represents a system of closure and oppression which, of course, reflects precisely the system of patriarchy’ (Howson, 2006: 5).

Hegemonic masculinity is ‘a set of gender practices that confers power in a given context’ (McGinley, 2013: 800). The term suggests that there are multiple, competing masculinities and that there are dominant definitions of masculinity which are embedded in social institutions, including family and education. These social structures and ideologies support the gender order in favour of men. However, masculinity is contested and it could be that very few men actually occupy the hegemonic position (Connell, 2005), suggesting it is also a damaging concept to men too.

‘Masculinities are configurations of practice within gender relations, a structure that includes large-scale institutions and economic relations as well as face-to-face relationships and sexuality. Masculinity is institutionalized in this structure, as well as being an aspect of individual character and personality’ (Connell, 2005: 29).

Hegemonic masculinity embodies the most honoured way of being a man, all men could benchmark against it and ‘it ideologically legitimated the global subordination of women to men’ (Connell and Messerschmidt, 2005: 832). The term focuses on characteristics such as competitiveness, aggression and courage (Connell, 2005).
Applying this to the labour market; ‘our society identifies the role of the breadwinner as masculine’ and this has affected the positions of men and women in the labour market (McGinley, 2013). Alongside this, the type of work which men and women perform is believed to be important to their identities. In particular, for men, ‘working is a gender performance and their masculinity is challenged more by working in a job traditionally held by women than by not working at all’ (ibid, 2013: 802).

To summarise, patriarchy, capitalism and hegemonic masculinity underpin the subordination of women in society. This has impacted women’s role in the labour market and contributed to occupational sex segregation.

2.2.3 Occupational Sex Segregation
Occupational sex segregation describes the disproportional representation of one gender or the other within the workforce and within individual careers (Duncan and Duncan, 1955; Weeden, 1998; Stockdale and Nadler, 2012). Occupational sex segregation has two axes, the horizontal axis shows that men and women have different types of occupations and the vertical axis demonstrates that where men and women are found in the same occupation, women are usually at lower grades to men (Connell, 2009). Historically women are reported to have undertaken less skilled tasks to men (Bradley, 1989).

Historical arguments by human capital theorists state that ‘women’s domestic obligations result in them being excluded from high-status jobs’ (Cohn, 1986: 6) and when a woman might consider entering a profession, society’s expectations that women will be the main care giver at home create a major barrier for women (Frome et al., 2006). Holland and Eisenhart (1990) found that as young women progress through to adulthood, they are increasingly likely to believe it is harder to have a family life whilst in a ‘masculine’ occupation than in a ‘feminine’, or neutral place of work. For some women, opting for a traditionally ‘feminine’ occupation allows them to combine work and family commitments unlike traditionally ‘masculine’ occupations which require rigid hours (Eccles, 1994; Ware and Lee, 1988). Furthermore, even if a woman delays childbirth until completion of higher education, the arrival of
young children will still coincide with the age and career stage when one is expected to make an impact on the field (Acker, 1983), meaning some women feel forced to make a choice between a career and a family (Dainty et al., 2000). This idea of gender and work-family conflict are complex psychological and social processes which result in men and women adopting various positions of traditionally masculine and feminine roles and responsibilities (Anderson and Leslie, 1991).

Supply theories of women’s career choices state that women would rather work in certain occupations, whereas demand theories concentrate on why employers have men and women working in certain occupations (Gibbon, 2014). However, experts in occupational sex segregation believe that no one theory adequately explains the influencers of women’s career decisions (ibid, 2014). Nonetheless, women tend to factor their gender rather than their ability into their career choices meaning women’s career decisions are highly influenced by their gender (Gibbon, 2014). Other literature has identified women’s underrepresentation in traditionally male-dominated occupations (including STEM, construction, law and policing) as being linked to the subject choices made at school (Frome et al., 2006), a lack of female role models and poor careers advice (Gilbert, 1985; Betz and Fitzgerald, 1987; Hackett et al., 1989; Quimby and DeSantis, 2011; McDonald, 2013).

The sectors which women are concentrated in include low-paid service jobs such as catering, cleaning, clerical and caring work. In contrast, men dominate the higher paid jobs in managerial, engineering and financial workforces (Connell, 2009). This can be explained by ‘characteristics traditionally associated with women such as empathy and consensus building’ contrasting with the ‘more competitive ‘masculine’ model or the brawny ‘masculine’ strength being necessary for many blue-collar manufacturing jobs’ (McGinley, 2013: 79). These gender-associated characteristics are influenced by gender role stereotypes and perceptions, which are explained in Section 2.2.4.
### 2.2.4 Gender Role Stereotypes and Occupational Stereotypes

Stereotypes are ‘strongly held overgeneralisations about people in some designated social category’ (Basow, 1992: 3). The ideas are universally known within society, are reinforced through life and societal norms, and may be based on prejudice (Kortenhaus and Demarest, 1993). Gender perceptions thus influence how men and women are represented (Liedberg et al., 2010). These perceptions are influenced by social norms and the views of each gender’s strengths and weaknesses. Gender stereotypes are an arranged set of beliefs about the characteristics of men and women (Ashmore and Del Boca, 1979). Gender stereotypes are developed as people acquire information about the world and the roles people play within it. From childhood, people learn the roles and behaviours of others (Basow, 1992) and these roles contain both descriptive and prescriptive components (Burgess et al., 2012).

The descriptive element consists of beliefs that women are expected to be maternal and display nurturing, caring and warm characteristics, while men are supposed to be wage-earners who may demonstrate aggressive and competitive characteristics (Burgess et al., 2012; Basow, 1992). The prescriptive component includes beliefs of the characteristics men and women should and should not possess (Burgess et al., 2012).

Gender stereotypes have been contested and reinforced over time and history, culture, daily interactions and social norms heavily influence gender stereotypes, roles and the occupational choices made by each gender (Eagly, 1987; Bradley, 1993; Walton and Politano, 2014). The perceived masculinity or femininity of an occupation influences career decisions and creates occupational stereotyping (Atkinson, 2009). This entails ‘holding images of occupations…including the personalities of people in those occupations, the work they do, the lives they lead…and the appropriateness of that work for different types of people’ (Gottfredson, 2002: 85). It is believed that children’s ability to identify occupations as either ‘masculine’ or ‘feminine’ starts from early childhood (Morgan et al., 2001; Gibbon 2014).
From a relatively young age, men are expected to be able to work and support themselves and it is implied or expected that women need to find someone to support them (Henning and Jardim, 2003). As a result of this, many young women solely aspire to be a mother and a wife, whereas men are conventionally thought to want to provide and protect their wife and children (Henning and Jardim, 2003; Connell, 2009). These ideologies and discourses of gender recreate and reinforce the sexual division of labour, sustaining notions of what is considered ‘men’s work’ and ‘women’s work’ (Ely et al., 2003; Simpson, 2004). A study by Rosoff and Spencer (2010) used fifty novels published between 1950s and 1960s to examine the representation of young girls and suggest how this would influence their career aspirations. The women were portrayed in domestic settings and their femininity was exaggerated in regard to fashion. Ultimately, such representations in literature and the media have a powerful influence of society’s views of men and women and women are more often likely to be presented in a family context and less likely to be depicted in occupational roles (Daalmans et al., 2017).

Both gender and occupational stereotyping has resulted in ‘feminine’ occupations (Datta and Bhardwaj, 2015; Lester, 2008), including primary school teaching, nursing and librarian work (Simpson, 2004), and ‘masculinise’ occupations include policing, construction and occupations related to science, technology, engineering and mathematics (STEM) (Prokos and Padavic, 2002; Powell and Bagilhole, 2006). When an individual enters an occupation which is incongruent with their gender, for example a woman entering engineering or a man entering nursing or midwifery, it is considered to be a non-traditional career choice. Examples of non-traditional occupations for women are discussed in Section 2.3.

### 2.3 Non-Traditional Occupations for Women

For women entering non-traditional occupations the literature identifies common themes including; lower pay (Ward, 2008), gender discrimination (Davey and Davidson, 2000), and limits on career advancement and promotion. The United States Department of Labour (2014) states that an occupation is male-dominated if ‘women represent 25% or less’. Examples of
sectors which are male-dominated and so considered non-traditional occupations for women include; law, academia, construction, transport, policing, STEM disciplines and the military (Wright, 2016).

The military and policing both have hegemonic masculinity embedded in their culture (Haarr, 1997). In the military, women soldiers face discrimination and women were only recently allowed in the front line (Crowley and Sandhoof, 2017). Similarly, police organisations and male officers have drawn on ‘masculine’ images to define what it means to be a police officer and some have sought to resist the inclusion of women in the force (Prokos and Padavic, 2002). Hunt (1990) also acknowledged that police are identified as masculine both organisationally and culturally and most ‘traditional’ crime fighting tasks are still characterised as masculine police work. Other non-traditional occupations exist within the realm of STEM subjects and women’s experiences in STEM-related careers have been well documented (See Fine, 1987; Dale and Glover, 1990; Crompton and Sanderson, 1990; McDowell and Court, 1994; Blackburn et al., 2002; Cross and Bagilhole, 2002; Richman et al., 2011; Barnard et al., 2012; Martin and Barnard, 2013; Wright, 2016; Hilliker et al., 2017).

2.3.1 Women in STEM
Just 15% of people working in STEM roles in the UK are women (WES, 2016) and historically the low representation of women in STEM was said to be due in large part to their ‘lack of ability, interest, or both’ (Horning, 1984: 30). Young women are less likely to study STEM subjects at school, with the exception of Biology (PwC, 2017), and although 50% of STEM-related University enrolments (including medicine) are female, they are unevenly distributed by discipline (IET, 2015). Physics is one discipline which has an underrepresentation of women. In 2011, almost half of all maintained co-ed schools in England (49%) sent no women on to A-level physics (Institute of Physics, 2012) and only around 20% of A-level physics students are women, a figure which has not changed in 25 years (ibid, 2012).

For engineering, STEM subjects at school are crucial and despite women’s access to higher education, gender differentiation in engineering remains
(Barnard et al., 2012) and only 9% of the UK engineering workforce are women (IET, 2015). Studies exploring the underrepresentation of women in engineering have identified key factors which impact an individuals’ decision to study engineering including; supportive parents (Godfroy-Genin’s, 2009), contact with engineering through family members (Alpay et al., 2008) and a positive perception of the career (ibid, 2008). Despite attempts to encourage women into engineering, the proportion of young women studying engineering has remained static since 2012 (National Centre for Universities and Business, 2015).

Perceptions about engineering have been found to affect a young adult’s decision to study engineering once they have achieved success at school (Phipps, 2002). The engineering industry is working to challenge these stereotypical perceptions of engineering through initiatives and The National Academy of Engineering (2004: 1) suggested that the skills of an Engineer by 2020 will include ‘analytical skills, creativity, resilience, agility, business and management skills – although maths is the basis, a good understanding of humanities, social sciences and economics is becoming vital’. However, the culture of engineering remains steeped in masculinity and such engrained cultures are difficult to change and women in engineering have reported that they struggle to fit in and gain acceptance (Eden, 1992).

Changing culture is a difficult process and Hofstede (2003: 16) identified ‘women are not considered suitable for jobs traditionally filled by men, not because they are technically unable to perform these jobs, but because women do not carry the symbols, do not correspond to the hero images, do not participate in the rituals or foster the values dominant in the men’s culture’. As gender specific dilemmas for women in engineering occur, some women experience a conflict between being a woman and being an engineer (Barnard et al., 2012).

Marthur-Helm (2006) found that retaining women in occupations dominated by men is a challenge. Typically, women do not tend to stay in these occupations for long due to how they are perceived and treated (ETF, 2005). This has been described as ‘the leaky pipeline’ which refers to the retention
rates of women in SET being far lower than men, showing a clear “leak-point” of women (Women’s Engineering Society, 2014). For those women who do enter a male-dominated field at degree level, for example engineering and technology, only half of women in the UK with an engineering and technology degree go on to work in the sector, compared to two thirds of men (McDonald, 2013).

In technology, only 5% of leadership positions are held by women (WES, 2016) and a study by PwC (2017) of 2174 UK students identified that just 27% of female respondents said that they would consider a career in technology compared to 61% of men. The reasons why women were less likely to consider a career in technology included there not being enough information about the career opportunities in technology (61%), the industry being too male-dominated (26%) and the jobs not being creative enough (20%).

Other industries which remain dominated by men include construction and transport. In construction, women make up only 11% of the workforce and just 1% of workers on site (UCATT, 2015). In transport, gaining accurate statistics of women’s participation internationally is difficult, however, data collected by LABORSTAT indicated that women constitute only one in seven transport workers around the world, but there are occupational variations within this (Turnbull, 2013: 3-4). Typically men dominate technical jobs and physical roles.

2.3.2 Women in Transport
Despite improvements in technology allowing women to take up jobs in transport which previously required heavy manual labour, the percentage of women remains low in many areas of the transport sector including rail, road, maritime and ports, and aviation (ETF, 2005). Although women are present in the transport workforce, they are typically concentrated in service-related and administrative roles (ETF, 2005; Turnbull et al., 2009). Just 22% of managers and directors in transport and logistics are women, as are 5% of road transport drivers and 6% of train and tram drivers (ONS, 2016b). The
transport industry is thus one of many sectors which has traditionally been viewed as not a place for women (Turnbull, 2013).

Relatively few academic studies have looked at women working in the UK transport sector. The literature which does exist focuses on gender differences in uses of transport (Hamilton et al., 2005), or traditionally female dominated occupations e.g. cabin crew (Simpson, 2004). Studies of women’s participation in urban transport have identified barriers to women’s participation including work-life balance, the masculine working culture, and the persistence of gender stereotypes (Wright, 2016). In addition, working hours in the UK transport sector are long and 19.5% of workers in transport, storage and communication work more than 48 hours per week (average of 12.9%) (Trades Union Congress, 2008). Contemporary data shows that women are underrepresented in the transport sector; Table 2.1 presents data from the UK Office of National Statistics which documented the number of women working in the UK transport sector across different transport modes from April to June 2016.
<table>
<thead>
<tr>
<th>Occupation</th>
<th>Total in employment</th>
<th>Number of women in employment</th>
<th>% of females</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Road Transport Drivers</strong></td>
<td>951,000</td>
<td>47,000</td>
<td>5%</td>
</tr>
<tr>
<td>Large vehicle goods drivers</td>
<td>315,000</td>
<td>2,000</td>
<td>0.6%</td>
</tr>
<tr>
<td>Van drivers</td>
<td>251,000</td>
<td>18,000</td>
<td>7%</td>
</tr>
<tr>
<td>Bus and coach drivers</td>
<td>119,000</td>
<td>11,000</td>
<td>9%</td>
</tr>
<tr>
<td>Taxi and cab drivers and chauffeurs</td>
<td>232,000</td>
<td>10,000</td>
<td>4%</td>
</tr>
<tr>
<td>Driving instructors</td>
<td>34,000</td>
<td>7,000</td>
<td>21%</td>
</tr>
<tr>
<td><strong>Other Drivers and Transport Operatives</strong></td>
<td>83,000</td>
<td>4,000</td>
<td>5%</td>
</tr>
<tr>
<td>Train and tram drivers</td>
<td>18,000</td>
<td>1,000</td>
<td>6%</td>
</tr>
<tr>
<td>Marine and waterways transport operatives</td>
<td>10,000</td>
<td>1,000</td>
<td>10%</td>
</tr>
<tr>
<td>Air transport operatives</td>
<td>16,000</td>
<td>1,000</td>
<td>6%</td>
</tr>
<tr>
<td>Rail transport operatives</td>
<td>17,000</td>
<td>2,000</td>
<td>12%</td>
</tr>
<tr>
<td>Other drivers and transport operatives</td>
<td>23,000</td>
<td>1,000</td>
<td>4%</td>
</tr>
<tr>
<td><strong>Managers and Directors in Transport and Logistics</strong></td>
<td>190,000</td>
<td>41,000</td>
<td>22%</td>
</tr>
<tr>
<td>Transport and distribution</td>
<td>80,000</td>
<td>15,000</td>
<td>19%</td>
</tr>
<tr>
<td>Storage and warehousing</td>
<td>109,000</td>
<td>25,000</td>
<td>23%</td>
</tr>
<tr>
<td><strong>Transport Associate Professionals</strong></td>
<td>47,000</td>
<td>5,000</td>
<td>11%</td>
</tr>
<tr>
<td>Air traffic controllers</td>
<td>7,000</td>
<td>2,000</td>
<td>29%</td>
</tr>
<tr>
<td>Aircraft pilots and flight engineers (including general aviation)</td>
<td>25,000</td>
<td>3,000</td>
<td>12%</td>
</tr>
<tr>
<td>Ship and hovercraft officers</td>
<td>16,000</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Table 2.1 UK Transport Workforce  
(Source: ONS, 2016b)
Despite the lack of research into women in employment within transport, possible reasons for women’s low participation include; working conditions (such as shift work), and working outside (Turnbull, 2013; ETF, 2005). An example of this has been found in the London bus industry as facilities, including toilets and roadside rest areas, were inadequate for women bus drivers whom stated that the industry was unresponsive to adapting working conditions (London Buses, 2004; ETF, 2005). In addition, the road transport sector has found that the underrepresentation of women is in part due to the unattractive working hours, working away from home and poor health and safety conditions (Eurofound, 2008). As transport companies assume that they are and will remain unattractive to women, there is little incentive for them to change and so they are unlikely to invest in more facilities (ETF, 2005). However if they want to address the reasons for the underrepresentation of women in transport, these factors need to be considered. In the European port and steel sectors, Turnbull et al. (2009) found that sexist and patriarchal attitudes persisted among male workers, and this affected women’s decisions to enter and remain within the transport industry. The perception that transport jobs are ‘exclusively suitable for men’ (ETF, 2005: 40) is still existent and the acceptance of women workers and the ability to retain women in transport is an issue.

Evidence of barriers have been found at all career stages for women in transport (Davey and Davidson, 2000; ETF, 2005; Eurofound, 2008) and the women who do enter male domains are challenging the gender hierarchies of existing roles. Common themes emerge within studies exploring women in jobs which traditionally require ‘masculine’ traits as these women are challenging the ideology of inherent difference that historically justified male dominance (Reskin and Padavic, 1988). An area of transport whose gendered heritage continues to be reproduced is aviation (Mills, 1998).

2.4 Women in Aviation
In general aviation, the 1920s to 1930s were known as the ‘Golden Age’ of flying (Corn, 1979). Amy Johnson became the first British woman aviatix to fly solo from England to Australia in 1930 (Moolman, 1983:86). Also during the 1930s, Amelia Earhart was the first woman pilot to fly across the Atlantic
solo in 1932 (BWPA.co.uk, 2013) she became a role model and advocate for women in aviation, she was a *champion of women's rights in general* (Moolman, 1983:55). The ‘Golden Age’ saw women such as Harriet Quimby demonstrate they had the ability to fly, however they continued to face barriers, including the cost of flying (Gibson, 2013:41). Women were taking part in many *firsts* including, Anne Morrow Lindbergh, the first US glider pilot receiving the National Geographic Society’s Hubbard Medal in 1934 (Gibson, 2013:42).

In commercial aviation, between 1919 and 1965, the commercial pilot profession was dominated by men. The culture of the commercial aviation industry was steeped in organisational gender-related perceptions (Rollinson et al., 1997). The formation of distinct gender segregated roles including cabin crew and pilots were examples of this (Neal-Smith, 2014). Women occupied other positions including ground-based roles and, from 1930, stewardesses (Neal-Smith and Cockburn, 2009). In 1924, Britain’s Imperial Airways decided their entire cohort of airline pilots had to be ex-Royal Air Force (RAF) members, a policy which prevented women from applying, as women were not allowed in the RAF. At the same time, the International Civil Aviation Organisation (ICAO) banned women from being flight crew as it was believed that a woman’s menstrual cycle would affect her flying (Lomax, 1986; Mills, 1998).

A few years later, in 1933, Winnie Drinkwater became the first woman to be employed as a pilot by a commercial airline. Midland and Scottish Air Ferries employed Winnie for just one year. It was not until 1965 that the next woman to fly for a commercial airline was appointed. Yvonne Sintes (a former air steward for BOAC) was recruited by Morton Air Services (Redmond, 1997; Mills, 1998; Neal-Smith and Cockburn, 2009). The ban on women combat pilots in the Air Force meant women only had a chance of recruitment outside of Air Force pools (Mills, 1998). However only three women held an Air Transport Pilots License (ATPL) in 1968 and women’s progress in aviation was slow. By 1974, Yvonne Sintes became Captain for the first all-women flight for Dan-Air and, in 1987, sixty eight years after British Airways had been established, the airline employed its first woman pilot (Mills, 1998).
2.4.1 The Origin of Piloting
Ashcraft (2007) identified that the conscious historical construction of commercial and military pilots in popular and institutional discourses has portrayed them as skilful, brave, professional and, above all, masculine. The origins of such image can be traced back to military discourses and has been perpetuated by the portrayal of pilots in the media and in films (Kellner, 1995; Gibbon, 2014). It can be argued that hegemonic masculinity is deeply embedded in the commercial aviation industry and echoed by the historical contrast between stewardesses and pilots (Mills, 1998). In 1985, a review of airline employment practices highlighted the industry’s reluctance to invest their resources in women because they believed women were more likely to leave in order to raise a family (Kohn-Stuart, 2000).

As discussed, masculine beliefs, approaches and morals dominate the pilot profession (Nagel and Wiener, 1988). In addition, there is a perception that being a commercial airline pilot means frequently being away from home where activities associated with masculinity (such as excessive drinking, socialising and conversations about flight) are reported to be prevalent (Wolfe, 1979; Davey and Davidson, 2000). Because of these factors, Hansen and Oster (1997: 8) posited that ‘aviation suffers from image problems that may hamper its attempt to diversify the workforce’.

Scholars investigating the reasons for lack of women airline pilots have discussed the factors affecting the occupational choices of women and have critically examined the historical military affiliation of piloting. However, none quite ‘get under the skin’ of the issue (Ashcraft, 2005). Ashcraft’s (2005) study of professional identity among U.S. commercial airline pilots asked how do seemingly privileged professional men perceive and respond to gendered identity threats? Interviewing pilots about their history in the job, their experiences, and their promotional opportunities, Ashcraft (2005) found all of the pilots believed that they had an innately superior and prestigious image. Having explored how gender, race, class and sexuality are relevant parts in the becoming of a pilot, Ashcraft (2005) explained how becoming a Captain often meant becoming ‘the man’. By internalising the (masculine) historical pilot image, male pilots develop an emotional attachment to the job.
Crucially, while Ashcraft (2005) and Ashcraft and Mumby (2004) explored the professional identity of current pilots, no research has examined the experiences of pilots in training. The training stage is a crucial point in a professional career and this is a gap in the existing knowledge base as failure to enter the profession and successfully complete professional training will mean there are no women to employ, regardless of the good intentions of airlines.

In order to ‘get under the skin’ of the issue (in Ashcraft’s words, 2005), it is imperative to first understand the factors which could influence an individual’s decisions to start training to become a pilot and assess the role of gender in these decisions. As with any occupation, multiple factors will influence the decision maker. For potential pilots, the cost and length of training are known to be important (Department for Transport, 2017). However, the dominance of men in the profession may adversely affect women’s decision to enter training (Gibbon, 2014) and this forms the basis of the subsequent empirical research undertaken in this thesis.

2.5 Why are there so few women airline pilots?

2.5.1 Perceptions
The perceptions of the traits needed to become a pilot are heavily associated with masculinity. Courageous, competitive, adventurous and self-reliant are just some of the perceived requirements (Novello and Youssef, 1974; Eagly and Karau, 1991; Ely, 1994). Gibbon (2014: 60-61) for example identified that one must be ‘obsessed with flying’ to become a pilot and, due to the highly competitive masculine environment, resilience and determination are also essential (Ashcraft, 2005; Davey and Davidson, 2000). The perception of piloting being associated with ‘instrumental’ traits typically dominant in men contrast with the more ‘expressive’ traits believed to be held by women, who typically have more emotional, empathetic and caring natures (Spence and Helmreich, 1980; Dobbins, 1985; Fox et al., 1985; Ridegway, 1991). As a result of this, a woman’s perception of her ability to pursue a piloting career is likely to be affected as she may believe that she could experience some disconnect between being a woman and being a pilot (Dukes et al., 1991). The level of educational and technical skill needed to become a pilot is
another perceived barrier. As a minimum, cadet pilots must have a minimum of 5 GCSEs A-C including English, Maths, and Science. This makes piloting unique compared to other professions which may require A levels or a Degree level qualification. Murphy et al. (2007) discovered that women believe they are simply not as good as men at Maths and Science. However, Bell (2013: 1) asserts that women ‘need to understand they do not have to be a genius to enter the profession’.

2.5.2 The Cost of Pilot Training
There are different routes an individual can take to train as a pilot (see Chapter 5). An integrated approach offers an intense training schedule for around 18 months at one training location, whereas a modular route allows individuals to work alongside training, completing different parts of their licenses at different schools. The modular route can take longer for pilots to qualify, however the cost of modular training can be slightly lower compared to the integrated route (which can equate to around £100,000). This is because cadets have the ability to choose different schools for different parts of the training and complete training modules as and when finances permit (L3 CTS, 2017). Although some airline sponsored schemes are available, they are very competitive and, for many, self-funding is the only option.

Wheale’s (1988) study identified that pilot recruitment criteria specified that potential trainees should have the personality to deal with ‘stress’ and ‘human relations’ issues e.g. Crew Resource Management skills. This was deemed necessary to handle the level of intensity of flight training even before entering the profession (Davey, 2004). Alongside the intense context of Flight School, Maddock and Parkin’s (1994) investigation of US pilot training schools revealed they were ‘male-dominated college[s] characterized by ‘laddish’ attitudes’, a feature also observed by Germain et al. (2012).

Despite the cost of training not being a gender-specific factor, Germain et al. (2012) cited the cost of training as being the main barrier for women when deciding to enter the career. A possible explanation for this could be due to women anticipating the need of a career break to raise children.
2.5.3 Professional Lifestyle and Working Patterns

As Farmer (1997) found, women tend to value flexible occupations. In piloting, working hours are dominated by a roster which involves shift work and working anti-social hours across multiple time zones. Unlike other occupations, a pilot's working hours are likely to vary month by month and can be seen as being less stable than other occupations. In addition, the travel demands of a long haul pilot require being away from home for extended periods. Presser and Hermsen (1996) found (in similar occupations) men were more willing to travel than women, a key contributing factor as to why some women may not consider a pilot career. Alongside the roster-dominated lifestyle, it is a regulatory requirement that all pilots must keep their flying hours up to date and above a minimum level. This can be difficult to align with women's child-bearing responsibilities and, in 2005, a British Airways pilot was refused a 50% reduction in working hours after the birth of her child (News.bbc.co.uk, 2005). Despite the airline stating 'their safety threshold is applied equally, whether the pilot is male or female' (News.bbc.co.uk, 2005: 1), some women may perceive the pilot lifestyle as incompatible with their gender and domestic responsibility.

Women's assumed domestic responsibilities and child-bearing role can be detrimental on a career in any workplace and may require them to choose between a career and children (Dainty et al., 2000; Chambers et al., 2018). In addition, pilots are required to fly from various locations meaning they may need to frequently relocate. Baldridge et al. (2006) identified that gender-role demands on women mean they are less likely to relocate for work and this may limit their career options. As geographic mobility is integral to becoming and being a commercial airline pilot, some women's reluctance to relocate is likely to be a significant factor in them not considering the occupation (Presser and Hermsen, 1996; Stockdale and Nadler, 2012). However, contradicting this factor is the high proportion of women as cabin crew. Cabin crew have the same roster dominated lifestyle as pilots, therefore possible explanations of this gender difference could be due to the perceived difficulty of the pilot profession and the cost of pilot training meaning it is a life-long career investment, not a seasonal or temporary one.
2.5.4 Limited Exposure and Role Models

Exposure to an occupation allows young children to consider pursuing an occupation and lack of visibility can limit individuals’ horizons (Chambers et al., 2018). Gibbons’ (2014) study found that most women pilots had exposure to flying through their fathers and male relatives were key influences in the women’s career choice (Fitzpatrick and Silverman, 1989; Gibbon, 2014). Similar factors have been found in other STEM related professions (UNESCO, 2017). Ultimately, a lack of exposure can limit those (particularly women) who have not experienced active practical exposure through a male (paternal) figure.

Similar to the influence that exposure plays in career-decision making, role models have also been cited as vital in career decision-making and development (Gibson, 2004). Drury et al. (2011) stated that the gender of a role model is irrelevant and having men or women role models proved to be equally as effective during recruitment. However, Singh et al. (2006) stated that being able to identify with an individual from a similar background is important as young women are disadvantaged when they cannot see someone similar to them occupying a role. As women are a minority in certain occupations, there is inevitably a lack of women role models in certain fields and this has been found to act as a barrier for women entering non-traditional occupations (Gilbert, 1985; Betz and Fitzgerald, 1987; Hackett et al., 1989; Quimby and DeSantis, 2011).

As there are a low number of women pilots, there are limited role models and a limited amount of exposure for young women (Neal-Smith, 2014). Indeed a 2015 study by British Airways found that 63% of women surveyed stated that they were deterred from the pilot career whilst growing up, with 20% identifying a lack of women pilot role models in life and in TV and film. The representation of pilots in TV, film and in the media have perpetuated the idea of flying being masculine (Saner, 2014) and support the notion that if women cannot see other women in a role, they may not believe they can successfully perform it themselves. This is supported by Sawar and Azmat (2013) who found that the media can both encourage and discourage
individuals by creating occupational stereotypes of what constitutes ‘normal’ work for men and women.

Having explored the reasons for the gendered division of labour and identified examples of gendered occupations, the literature review will now focus on the experiences of women who have entered non-traditional occupations and how they cope in such environments.
2.6 The Experiences of Women in Non-traditional Occupations: Effects of a Minority Status

‘The challenges women face in attempting to penetrate successfully and persevere in historically male-dominated work environments emanate from traditional gender hierarchies and norms that prevail in the family and society’ (Martin and Barnard, 2013: 1).

Overall, fields dominated by men (for example; science, technology, law, medicine, engineering, policing, mathematics and transport) (Ward, 2008; Richman et al., 2011; Wright, 2016) rarely provide a welcoming or accepting environment for women due to working conditions, how women are perceived and treated, and the work-life balance (ETF, 2005). In contrast, for women, fields such as education or nursing are seen to be more attractive (Ward, 2008) because of the working conditions, for example sociable hours and cultures (female-dominated). The entry of women into male dominated occupations can result in sexism, domestic and work conflict and less opportunities for progression (Cohen and Huffman, 2003; Germain et al., 2012; Huppatz and Goodwin, 2013). Within the literature concerning women being a minority in male-dominated occupations, some common themes occur. This section reviews this literature of the experiences of women’s in male-dominated environments and the possible effects of their minority status.

Women’s minority status in a traditionally masculine field is a structural barrier which activates gender stereotypes and promotes a threat to men’s social identity. Cejka and Eagly (1999) identified that women who perform non-traditional occupations tend to experience a disadvantage at work as the social identity threat they pose highlights the expectations of men in a culturally masculine domain. Women who choose to enter a male-dominated industry are perceived to have rejected a stereotypical women’s career and their contribution to challenging masculine and feminine identity can be testing (Linstead and Brewis, 2004; Davey, 2008). Some women resolve this issue by perceiving that they are not skilled enough to enter certain male-dominated work settings (Richman et al., 2011).
One of the occupational obstacles which can occur due to these stereotypes is the existence of role anomalies. These anomalies mean individuals are first identified by their gender, then their role. This can create problems when men or women do not behave in a stereotypically way, for example for women, by being emotional and supportive. Linking this to gender role stereotypes, these anomalies can result in assumptions, such as an expectation that women should provide family care (Simeone, 1987). Therefore, when a woman prioritises a career over having a family, they are behaving inappropriately and/or selfishly (ibid, 1987), however it has been found that the women who challenge gender expectations are the ones who succeed in occupations dominated by men (Burgess et al., 2012). The theme of needing to be a certain ‘type of woman’ to succeed in a male-dominated environment is common in the literature which suggests there are similarities between the women who challenge the norm (Barnard et al., 2012).

In addition, for women, their personal identity, their gender identity, and their perceptions of the profession all play a role in their success in a male-dominated profession (Barnard et al., 2012). These factors are all influenced by context and Yoder (1991) identified that ‘context matters, to understand women and work, we cannot assume that women and men doing the same gender-skewed job, such as fire-fighting, experience the same context’. Similarly, Kelchtermans’ (2009) study of teachers’ professional identity suggested that ‘professional identity pertains to how teachers see themselves as teachers based on their interpretations of their continuing interaction with their context’. Lester (2008: 284) found that ‘certain identities are aligned with power and considered more contextually appropriate, thus limiting the scope of agency and identity’. Goffman (1959) also identified that professional identity negotiation is an ongoing process of reflection of experiences in the context of social and institutional practices in which the individual is embedded. This can be difficult for minorities, as Miller’s (2002) study of female engineering students found; women felt under pressure to conform to the masculine culture.

Studies have identified that being a minority can result in experiencing difficulties in line with The Theory of Tokenism (Kanter, 1977). This is where
a dominant group exaggerates the differences between themselves and the minority group, therefore when the dominants experience a challenge to their group culture they respond by heightening the boundary between themselves and the token group. Part of this threat emerges as men can perceive that a woman would find it easier to get employment in traditionally male dominated jobs because of their gender (McLean et al., 1997). This aligns with recent literature on affirmative action e.g. introducing quotas and targets, as these can be perceived as discriminatory or as risk causing backlash (Baez, 2003; Lihamba et al., Morley et al., 2006). However, these interventions can be seen as necessary and essential for creating change where gender segregation is entrenched (OECD, 2008).

Research in policing indicated the ways in which men heighten the boundary between themselves and women. Some male officers use offensive humour, sexual stereotypes and profanity to reinforce the masculine environment, segregating women as an out-group (Brown and Fielding, 1993; Herbert, 2001). In science, engineering and technology-related (SET) careers, ‘the issue of language is particularly epitomised through the use of humour’ (Bagilhole et al., 2008: 23) and Maddock and Parkin (1994) also identified how men use humour and mocking towards women in management. Konrad et al. (2008) found that women who are on their own on executive boards will experience negative impact and risks of tokenism and therefore support is essential. However, Taylor (2010) identified that in male-dominated environments, women experience relatively low levels of support in general.

Although Kanter’s (1977) theory explains that it is a minority status, not gender, which affects how tokens are treated, studies have identified that men often benefit from their minority status (Lupton, 2000; Simpson, 2004). When men are a minority it has been found that they monopolise positions of power and are rewarded for their difference from women (Williams, 1993). Studies exploring the experiences of men working in female-dominated occupations found that men reconstruct the job to enhance its masculine components (Pringle, 1993; Lupton, 2000; Cross and Bagilhole, 2002); these strategies mean men continue to ensure a dominant position, despite being in a minority group. Simpson’s (2004) study of forty men in female-dominated
occupations (teachers, librarians, flight attendants, and nurses) found that male stereotypes resulted in both positive and negative outcomes. Some men were assigned more difficult tasks and expected to speak out more because they were men. Lupton (2000) claims there are two reasons why men stay in professions dominated by women—individual and social. Some men feel that they can utilize the gender stereotype to their advantage and quickly progress up the career ladder (Lupton, 2000; Williams, 1993). Others feel that even within their profession they are subjected to stereotyping, having to take on more vocal or physical roles because of their gender (Bradley, 1993), therefore women as well as men apply stereotypes.

The literature discussing the effects of women’s minority status in commercial piloting will now be discussed.

2.6.1 Experiences of Women Pilots
The media attention received by women pilots is indicative of society’s expectation to hear a male voice from the flight deck. As one columnist expressed; ‘in an industry where it is far more common to meet a woman flight attendant than pilot, you might expect a passenger to raise an eyebrow as she taxis to the runway’ (Lay, 2014: 1).

Resistance from Passengers
Women pilots have experienced negative comments from passengers as some passengers boarding their aircraft expect to hear a man’s voice delivering the flight brief. In a survey conducted in 2012 by the online travel company sunshine.co.uk, 51% of passengers said they were less likely to trust a woman pilot than a male one and 32% believed male pilots would be ‘more skilled’ than women pilots (Anderson, 2013). Similarly, research by Winter et al. (2014) found the trust rating of a woman pilot was lower than that of a male pilot. The social stigmas and stereotypical beliefs meant people believed women would be less capable and would find it more difficult to deal with stress (Halpern, 1986).

Proving any lack of trust by a passenger towards a woman pilot is unjustified, research has shown there is no significant difference between the technical ability of men and women pilots and studies into accident rates have shown
that although there may be gender differences in the type of accidents, there is no significant difference in the rate of accidents (Vail and Ekman, 1986; Mitchell et al., 2005; Bazargan and Guzhva, 2011). An example of this is a study by The Johns Hopkins Bloomberg School of Public Health (2001) which analysed US general aviation accidents between 1983 and 1997. This found that accidents by men pilots were more likely to be due to inattention or poor planning, whereas accidents by women were more likely to be due to mishandling the aircraft.

Despite this, negative reactions towards women pilots persist. In 2012, a Brazilian pilot had to have a passenger removed from her flight due to ‘loud, sexist comments’ being made by the passenger once he heard the pilot was a woman (news.com.au, 2012). Similarly, in 2014, after landing, a WestJet pilot in Canada found a note from a passenger left for her in the flight deck stating that the ‘cockpit is no place for a woman’ (Mutzabaugh, 2014: 1). These are not problems encountered by men pilots. Negative reactions potentially contribute not only to negative experiences, but also to some young women not considering it as a possible career.

**Resistance from Male Colleagues**

Women pilots have also reported sexist attitudes, remarks and behaviour from their (overwhelmingly male) instructors, peers and eventual colleagues (Davey and Davidson, 2000; Mitchell et al., 2006).

Examples of such resistance include women pilots experiencing sexist attitudes, remarks and behaviour due to their ‘token’ status (Davey and Davidson, 2000; Mitchell et al., 2006). When these women are perceived to act in a manner that is regarded as masculine, for example exerting assertive behaviour or using demeaning language (Turney, 1995), a conflict can arise as some men do not like women entering their territory and behaving in ways which challenge the gender stereotype (a so-called sex role conflict). A study by Sitler et al. (1996) revealed that male pilots did not experience any sexual harassment or sexual invitations; however women reported that verbal and attitudinal sexual harassment was problematic. Other research reported a female captain at a European airline expressing a concern that male captains
expect less of women co-pilots, or they were very reluctant to give the necessary corrective feedback, while Johnson (1995) and Turney (1995) found that mistakes by women were seen as gender differences rather than personal mistakes. Furthermore, in an online interview study conducted in the USA, 80% of women pilots stated that it was difficult to break the barrier and become a woman leader in commercial aviation and 80% believed resistance by male colleagues created a problem, stating they were ‘forced to deal with men that did not want them in their careers’ (Puckett and Hynes, 2011: 5). As the male-dominated workplace and masculine culture has resulted in sexism, isolation and additional professional scrutiny for women pilots (Davey and Davidson, 2000; Mitchell et al., 2005), sometimes even leading to women pilots wanting to leave the industry (Germain et al., 2012). Accounts of such experiences are likely to affect the attraction of women to the existing male domain.

Having explored examples of the impact of women commercial airline pilots’ minority status, Section 2.7 will review the literature which identifies the strategies which women in male-dominated environments have utilised in order to cope and succeed.

2.7 Coping with a Minority Status
In order to ‘survive and thrive’ in a male dominated culture, the literature has found that women use strategies which ‘generally involved adapting to the dominant, masculine culture rather than trying to change it in anyway’ (Miller, 2002: 145). A study of female engineering students by Powell et al. (2008) investigated the “doing” and “undoing” of gender in engineering. They found that multiple masculinities and femininities can be demonstrated and women engineers are ‘neither typically feminine nor typically masculine’ (Powell et al., 2008: 15). The study found the women engineering students performed their gender in a number of ways in order to gain acceptance. Strategies included ‘acting like one of the boys (to avoid problems), accepting gender discrimination, achieving a reputation and adopting an anti-woman approach’ (ibid, 2008: 561). Such findings are in line with Tyler and Cohen’s (2010: 11) work that reported that women ‘negotiated and negated identity’ in male-dominated workplaces.
In policing, Brewer (1991) identified women underplaying their femininity and not conforming to their gender role. In concordance with this study Lumsden (2010) found that girl-racers attempt to act like the boy-racers in order to be accepted. In the USA, a CEO of a tech company identified that she has decided to wear androgynous clothing in order draw as little attention as possible (News.bbc.co.uk, 2017c). Similarly, van den Brink and Stobbe (2009) found female students in earth sciences dressed like men so they did not stand out, dissociating themselves from femininity. These coping strategies show how women variously ‘do gender’ in male-dominated cultures by adopting strategies either of resistance or cooperation (Connell, 1987).

Looking at both genders, Messerschmidt (2000; 2004) spent years researching teenage boys and girls “doing gender” in schools, with their families and in social interactions with their friends. His research identified that gender is not possessed; it is “done” through interaction. During this interaction ‘we see “sex” and “gender” as an inseparable, seamless whole, and this is why incongruence produces a cognitive dissonance in us- for which masculine girls (and feminine boys) often get punished’ (Messerschmidt, 2008: 86). Due to failure to conform to sex-gender congruence, “masculine girls” were often bullied. In a professional work setting, Tyler and Cohen (2010: 178) identified the ways in which women perform their gender identities in and through their workplaces (in academia). Aiming ‘to understand Gender Performativity within organisational life and the ways in which this performativity is lived and experienced in and through organisational space’ through identifying the ways in which gender performativity is materialised through organisational space, they set out to advance on Butler’s Theory of Performativity by linking this to space and organisational life. Their study identified how women perform their gender identities through their workspaces and attempt to continuously enact themselves as “normal” women. Similarly, McDowell and Court (1994) study of women in London banks identified gender identity, gender performance and sex as being part of the selling service provided to clients and
constructing a gendered identity is vital when selling financial advice (ibid, 1994: 747).

According to Dryburgh (1999), adapting to the dominant culture begins before the workplace. McIIwee and Robinson (1992) contrasted the occupational cultures of engineering workplaces and schools. They demonstrated that engineering schools value academic work, at which women typically excel. They concluded that the transition from education to occupation is difficult for women as their academic strengths are no longer valued to the same extent, however knowing how to conform to the masculine engineering culture and doing it well is critical to a woman’s professional success in engineering. As women will form a minority group during both their educational setting and their profession, learning these mechanisms or strategies during training could be seen to aid their success later in the profession. This is vital as ‘successful transformation into a professional person requires adjustment to the culture, a process that consists of accepting certain values and norms and identifying with certain symbols’ (Greenwood, 1966: 18).

These studies have identified women using strategies in line with the Theory of Tokenism (see Chapter 3) in order to manage their gender identities and to cope within male-dominated environments, these include; outperforming men and adapting their own behaviours to fit into the male-dominated environment and gain acceptance (McDowell, 1992; 2011; Turnbull, 2013).

2.8 Summary and Research Gap
An extensive review of the literature has identified the origins of occupational sex segregation and provided examples of non-traditional occupations for women. As a result of this, women’s experiences in non-traditional occupations, including STEM and transport, have been discussed and the underrepresentation of women in aviation and piloting in particular has been identified. This forms the context for the subsequent empirical research.

The literature has shown that the pervasive professional norms in certain occupations result in a masculine idealization (Faulkner, 2009) in which women can experience negative effects due to their minority status. As a
minority, women may experience a conflict between contradictory yet interwoven gender and professional identity components due to gendered professional norms and group identification processes. In order to cope with these effects studies have shown the strategies which women tend to adopt, including actively managing their gender identity. These are learnt during the educational stage. It is important to understand the ways in which women are coping because when occupations can ensure that women can pursue their training and their career without having to adapt their gender identification, taking a position as being the same or different will be irrelevant and dissociation from their own peer group will become obsolete. This will increase the chances that women in occupations can become role models, sponsors, and mentors for young women and other minority groups.

In order to improve the numbers of women pilots there is an urgent need to understand the meaning behind the development of the ‘airline pilot’ and reflect upon and deconstruct the gendered profession of piloting. How people become pilots and how they take up their role as pilots are ultimately questions about identity and understanding this at the educational stage of a pilot’s career will add to the existing body of literature surrounding women in the workplace.

In order to explore and understand the effects of ab initio pilots’ minority status and how women negotiate their professional identities, Chapter 3 will introduce Kanter's Theory of Tokenism (1977) and the key concepts of gender and professional identity as the theoretical underpinning to this research. These will be used to explore the ‘token behaviours’ of minorities and to understand how token behaviours are part of professional identity formation.
3 Theory and Key Concepts

3.1 Introduction
The purpose of this chapter is to detail the theoretical approach that underpins this thesis. The theory has been identified through the literature review (Chapter 2) that affirmed that gendered occupations exist and individuals who enter non-traditional occupations can experience difficulties and predictable forms of discrimination due to their minority status. For this reason, the Theory of Tokenism (Kanter, 1977) has been employed to underpin this thesis and provide a framework for exploring the experiences of ab initio pilots. Although this thesis specifically examines the experiences of ab initio pilots, the theory is applicable to any minority group.

The motivations and experiences of women who make atypical career choices and enter non-traditional occupations have been explored in order to further understand their career decisions and experiences. In construction and transport, Wright (2016) found that the reasons for women entering male-dominated careers reflected the relationship between their gender identity and other identities. Gender and professional identities form an important element of this thesis.

Section 3.2 introduces the key concepts of gender and identity. As gender is not regarded as a fixed category, the actual practices of constructing or performing identity have to be analysed and this will be conducted using Butler’s (1990) theory of Gender Performativity. Following this, Kanter’s Theory of Tokenism (1977) will be introduced in Section 3.3 to provide a definition and explanation of the theory in order to establish the parameters for analysis. In order to understand how the experiences of the cadets with a token status negotiate and develop their gender and professional identities, a professional identity lens using Kelchtermans’ (2009) term ‘Self-understanding’ will be applied. This is detailed in Section 3.4. Finally, the suitability of applying a professional identity lens and viewing gender identity as performative within the Theory of Tokenism will be detailed alongside a
3.2 Key Concepts

3.2.1 Gender

‘Gender is a key dimension of personal life, social relations and culture’ (Connell, 2009: 1).

The concept of gender refers to ‘the social and cultural construction of biological sexes’ (Järviluoma et al., 2003: 3). Everyday life sees people instantly recognise other people’s gender and categorise individuals into male or female, according to appearance and physical characteristics (Connell, 2009). We are able to notice gender all around us, however understanding gender is complex and has multi-faceted dimensions. Decades of research has produced theories and better understandings of gender and gender issues (ibid, 2009). Gender can be understood as ‘the cultural difference of women from men, based on the biological division between male and female’ (ibid, 2009: 9). However, this definition forces the
construction of binary terms which are unhelpful distinctions since it is impossible to divide human life into two distinct categories and not recognising the role of social process in categorising genders (ibid, 2009). By “doing” and discussing gender and sex, both are ‘created and recreated’ (Yuval-Davis, 1997: 119). One is an effect of exposure to a culture, the other is a natural state (Järviluoma et al., 2003).

The view that there are certain universal, innate based features of gender which are the reasons for the differences in behaviours between men and women originates from gender essentialism. Stone (2004:138) defines essentialism as: ‘Philosophically, essentialism is the belief that things have essential properties, properties that are necessary to those things being what they are. Reconceptualised within feminism, essentialism becomes the view that there are properties essential to women, in that any woman must necessarily have those properties to be a woman at all’. Judging people based on their biological sex mean people come to conclusions about gender. The fact that gender is seen as a binary concept means that you are either male or female and the two are seen as opposite. This distinction reinforces characteristics associated with men (strong and powerful) and women (emotional and weak). Western societies view men and women as ‘naturally and unequivocally defined categories of being’ (Garfinkel, 1967: 116-118). Their behaviours can be predicted and individuals can readily identify differences between the two (West and Zimmerman, 1987). The discourse in society continues to reinforce itself and could make it even harder for women and cultural notions of “feminine” and “masculine” will be shaped by views of what men and women do and this process of “gender making” can deter some women from entering traditionally “masculine” occupations (Faulkner, 2009). Stereotypical views of men and women and notions of masculinity and femininity are aspects of ‘a gender belief system’ (Deaux and Kite, 1987: 97).

Opposing gender essentialism, a social constructivist view of gender emerged in the 20th century. This views gender differences as being socially constructed (social constructionism), characteristics which are thought to be biological e.g. gender, race, class- are product of interpretation shaped by
cultural and historical context (Kang et al. 2017). As a result, concepts such as ‘men’ and ‘women’ are constantly being created and changes.

Järviluoma et al. (2003) found that we learn gender roles through cultural exposure and socialisation and from a young age, children have awareness of the physical differences between genders (Alvesson and Billing, 2009). However, this socialisation process is not the same for all young boys and girls and, as Leinbach et al. (1997) identify, in the constructionist approach to learning, that girls growing up amongst boys will develop different skills and qualities during socialisation than girls surrounded solely by other girls.

3.2.2 Identity
Identity is a social process. It is an individual’s concept of belonging; it is who they are, how individuals define themselves and how they are defined by others (Hogg and Abramms, 1988; Deng, 1995). Identity defines expectations of oneself (Wendt, 1992) and the term loosely refers to subjective meanings and experience to ongoing efforts to address questions such as ‘who am I?’ and ‘how should I act?’ (Cerulo, 1997). Answering these questions means individuals referring to characteristics and understanding what defines them and their identity (Alvesson and Billing, 2009).

Individual identities ‘comprise those supposedly idiosyncratic aspects of an individual’s experiences, temperament and development’ (Hitlin, 2011: 519). An individual’s combination of values, norms, and beliefs are part of their personal identity, therefore if a person decides to value something different, believing in something they previously thought was not right, they would experience a divergence of the person they “really” are. Identity ‘arises in interaction, is reaffirmed in interaction is changed in interaction’ (Charon, 1992: 85). Developing throughout an individual’s life (Beijaard et al., 2004), experiences enable people to develop their own identities and identity ‘accounts for trends in occupational segregation and allows us to evaluate policy’ (Akerlof and Kranton, 2010: 84).

Rodgers and Scott (2008) summarise recent trends in identity research stating that contemporary notions of identity share basic assumptions. First, identity is dependent upon multiple contexts which bring social, cultural,
political, and historical forces to bear upon that formation. Next, they state identity formation is a relationship with others and involves emotions and finally, they emphasise the shifting, unstable nature of identity and the involvement of construction and reconstruction of meaning through stories over time (ibid, 2008; Lester, 2008). This is a key consideration for the methodological approach underpinning this research. An important point of identity is that they are ‘multiple and contextual’ (Alvesson and Billing, 2009: 97). For example, a person may see themselves as a loving mother, an accountant and a politically conservative voter. Such identities are crucial in self-esteem and self-perception.

Identity is heavily gendered due to societal needs to categorize oneself and others into a specific gender (Alvesson and Billing, 2009). Guiding how people categorise themselves and others is of growing interest in organisational studies which seek to understand ‘how identity may hold an important key to a variety of managerial outcomes’ (Alvesson and Billing, 2009: 96). Thus, understanding this concept is vital to explaining how individuals and members of groups think, feel and act as identity is a key part of these processes (ibid, 2009).

### 3.2.3 Professional Identity

Individuals can hold several identities at the same time (Sims, 2011) and professional identity is formed through accumulated individual experiences within a profession over time. Professional identity is strongly influenced by the norms, attributes and motives in the profession (Ibarra, 1999).

Professional identity involves the integration of values, beliefs, knowledge and skills which members of a professional group share (Erikson, 1968). It is at the early socialisation phase of an individual’s career and during their journey to becoming a professional that they develop attitudes about the profession they are going in to. Professional identity develops over time as knowledge and ability increase and understandings of the beliefs and values of the profession improve (Irby, 2011). Therefore professional identity is an interpretivist notion; it is not tangible or fixed but fluid and dynamic and affects different people in different ways over time.
Professional identity is a lifelong process of continuous change and reshaping of oneself in work (FAME Consortium, 2007). However, adolescence is believed to be the time in which this development begins as experiences then contribute to the foundation of occupational identity (Skorikov and Vondracek, 2007). The work choices of family members, stereotypes and cultural context all influence and form the basis of 'shaping the meaning of work' (Danto, 2003), leading to disadvantages as gender stereotypes and occupational sex segregation can limit specific genders' perception of their career opportunities (Gottfredson, 2005).

3.2.4 The Role of Gender in Professional Identity
Gender can play an important role in professional identity. Starting from a young age and leading into their teenage years, girls have been found to be more advanced in their professional identity development (Meeus and Dekovic, 1995). In particular, for girls, their gender identity has been identified as being a major factor in their occupational interests in comparison to boys (Hollinger, 1988) as girls are more aware of family and relationships when considering which career path to follow. Some young women have also identified that they are prepared to sacrifice careers for a family life and children (Vondracek et al., 1986; Seginer and Noyman, 2005) and motherhood could be considered an occupational decision for women (Merrick, 1995).

The reasons for this have been linked to the gender differences between the perception of family role identities in men, with some women prioritising being a mother and caring for children (family role identity) (Goossens, 2001; Meeus and Dekovic, 1995). As girls get older, they understand the need to adapt to the various roles in their identity and this can cause difficulties. As Eden (1992) found in an engineering setting, women experienced difficulties being accepted and found it hard to sacrifice their family values. This suggests there are gender specific dilemmas for women in male-dominated environments and raises the question of the extent to which women are ‘forced’ to develop a more masculine professional identity in such settings. Despite this, research on the concept of work-family conflict has advanced over the last few decades. Identifying that both men and women face
difficulties in the workplace, Duxbury and Higgins (2003) found that male and female employees with dependant care responsibilities report higher levels of work-to-family conflict, however researchers have identified work-to-family conflict as complex and multi-dimensional (Ahmad, 2008).

Although evidence of gender differences have been identified, other studies have found that there is no significant difference between men and women’s professional identity development later on in life (Sckorikov and Vondracek, 1998; Archer, 1989; Sckorikov and Vondracek, 2011). However, even if the formation of professional identity is similar for both genders, the types of professions which women go into could affect their professional identity more than that of their male counterparts. Literature exploring the professional identities of women in male-dominated occupations shows that, at times, women modify their professional identity to cope and fit into the masculine culture which they perceive at their workplace (Prescott and Bogg, 2011).

Eden’s (1992) study of engineers identified that men viewed their profession as a career, whereas women were open to change, viewing their profession as a temporary occupation to gain financial independence. Similarly, Savickas’s (1985) study of medical students found that young women demonstrate stronger professional identities in comparison with men and show more career goals, suggesting these women want a stable professional identity. Furthermore, Goossens’s (2001) study of engineering and psychology students at a Belgian college found that women were more likely to have a stronger professional identity than the men. These points link to the impact of gender on professional identity. Although the concepts of professional identity and gender have been investigated in other occupations and settings, identifying the effects of women’s minority status in pilot training on women’s gender and professional identities will add to social science and aviation specific literature in this field.

Having introduced concepts of gender, identity, and the role of gender in professional identity it is clear that an analysis of gender must not only look at what men or women do, but how the world around them is gendered and how this affects identities and all other products of human behaviour (Järviluoma
et al., 2003). As a result, Section 3.2.5 describes the construction of gender in order to establish the approach to gender identity used in this thesis.

3.2.5 Conceptualising Gender and Gender Identity as Performative

Gender can be regarded as a) a social variable (e.g. what men do and what women do); b) a system (gender order and gender hierarchy); c) a social construction (how gender is socially produced through language, culture and social action); or d) a political tool (how gender ideologies can be reconstructed and changed) (Connell, 2005).

Gender and identity are inexorably linked and there are many different theoretical approaches to gender identity that need to be explored. Sociological approaches often speak of masculinities and femininities (Connell, 2005) and focus on how gender identities are embedded in social structures. There are diverse views for gender differences with social arrangements and socio-structural practices being the main support of status differences (Bussey, 2011). The debates surrounding the social construction of gender have been central over recent decades. In order to study the procedural nature of gender, academics have explored and employed the notion of ‘doing gender’. Leading academics in this research domain include West and Zimmerman (1987) and Butler (1990) who recognised gender as being a continuous achievement and proposed the sociological understanding of ‘doing gender’.

‘Doing gender’ understands gender as a routine accomplishment embedded in everyday interaction, if gender is “done” appropriately, institutional arrangements will be reproduced and reinforced based on sex category.

‘There is no gender identity behind the expressions of gender; that identity is performatively constituted by the very ‘expressions’ that are said to be its results’ (Butler, 1990: 25)

‘Gender is a powerful ideological device, which produces, reproduces and legitimates the choices and limits that are predicated on sex category. An understanding of how gender is produced in social situations will afford clarification of the interactional scaffolding of social
The ‘doing gender’ expression originated from Garfinkel’s work in 1967 and was developed by West and Zimmerman (1987). They proposed the notion that gender identity is socially constructed and they highlighted how important interaction is for understanding gender identity (Nentwich and Kelan, 2014). In addition, West and Zimmerman (1987) stated the importance of gender being a major part of social structures and hierarchies which influence how gender is done. A problem with their ethnomethodological approach in their theory is that they ‘tend to treat gender as omni-relevant and reproduced in any situation’ (Nentwich and Kelan, 2014: 123).

West and Zimmerman’s (1987) approach to ‘doing gender’ aims to study natural interactions, whereas, Butler focuses on how gender is performed in real instances (Nentwich and Kelan, 2014). This highlights that if different performances occurred, it could be possible ‘to change the dominant gender order and the binary understanding of masculinity and femininity’ and therefore ‘undo gender’ (Poggio, 2006: 227). West and Zimmerman’s (1987) theory highlighted the issue of whether we can avoid doing gender, however Butler’s theory posed the question of what types of performance are enacted and whether enactment of alternative performances (gender trouble) is able to change the dominant gender order and the binary understanding of masculinity and femininity. The approach which will be used in this research will be Gender Performativity developed by Butler (1990). This is different from West and Zimmerman (1987) ethnomethodological approach and Butler’s discursive/post-structural approach will now be outlined.

3.2.6 Gender Performativity

‘Gender is the repeated stylization of the body, a repeated set of acts within a highly rigid regulatory frame that congeal over time to produce the appearance of substance, a natural sort of being’ (Butler, 1999: 45).
Judith Butler aimed to deconstruct the categories of sex and gender. For Butler, gendered subjectivity is gained through the repeat performances of an individual. Gender is a stylization of the body and is understood through its movements and actions, thus the performance. Her argument is that people learn to perform their gender through repetition of acts so that it then becomes the norm itself. Those who do not perform these norms can experience much difficulty. She continued to question Foucault’s suggestion of power regulating sex and questioned ‘what is “sex” anyway?’, arguing that social systems maintain definitions of man/woman and masculinity/femininity (Butler, 1990).

Her book Gender Trouble (1990) established the theory of Gender Performativity, provoking new debates in the social sciences. In this, gender is seen to be a socially constructed category which is created during ‘gendered performances’, not a single action, but a series of performances. Performativity is viewed as how ‘gendered subjects are constituted by regulatory notions within a heterosexual matrix’ (Kelan, 2010: 47). Performativity explains gendered performances (Butler, 1990) as ‘an expression of the social norms and gender roles within an organization and help us understand how particular performances are favoured within organizations and how, in turn, individual gender identity is constructed and complicated by performances’ (Lester, 2008: 279).

Gender roles, according to Butler (1990), are not pre-determined, they are established and reinforced through performances and this process of performance, production and reproduction provides a belief that these behaviours are ‘natural’ and necessary for this gender. Essentially then, gender will not, and does not, appear outside of the performance process (Lester, 2008) and the theory aims to establish the socially constructed nature of gender as well as understand how roles are performed, re-enacted and reinforced.

‘Gender proves to be performative- that is, constituting to the identity it is purported to be. In this sense, gender is always a doing’ (Butler, 1999: 34). Under the influence of social regulatory practices, gender is always “done”, 
Butler explains one only determines ‘one’s own sense of gender to the extent that social norms exist that support and enable that act of clarifying gender for oneself’ (Butler, 2004: 7).

It is the performances which create a person’s identity and thus, their gender identity- an effect, rather than a cause (Butler, 1990; Lester, 2008). Using identity, agency and power, Butler’s (1990) theory can be detailed further. Identity and how the assumptions of this ‘inform the discourses on ‘gender identity”’ (Butler, 1990: 16) are important considerations. Identity is unstable, it is not a fixed state and several identities can coexist alongside one another (Lester, 2008). Individuals can resist norms, ‘certain identities are aligned with power and considered more contextually appropriate, thus limiting the scope of agency and identity’ (Lester, 2008: 284). Power also operates on gender and can also work as a “norm” which, when resistance occurs, powerful regulators identify those actions as unsuitable (ibid, 2008).

Gender performativity creates a connection between the performing of gender and gender identity. Individuals perform roles in relation to their identity, recreating and reinforcing their gender identity through the act of performing. The performance of gender can provide an explanation as to how and why individuals interpret and maintain dominant organisational gender roles and how these roles affect individual identity. The theory explains gender as ‘the mundane way in which social agents constitute social reality through language, gesture, and all manner of symbolic social signs’ (Butler, 1988: 519) a theme developed most notable in her recent account of gender performativity as a constant process of doing and undoing (Butler, 2004).

Butler drew on Austin’s speech-act theory (1962) and showed the performative nature of gender and sex. The theory has been extensively used in gender studies and has been applied in male-dominated settings (Yoder, 1991; Williams, 1992; MacCorquodale and Jensen, 1993; Krimmel and Gormley, 2003), it is vital in exploring and understanding the gender identities of ab initio pilots.

Kanter’s (1977) Theory of Tokenism will be used to explore the experiences of ab initio pilots and the effects of these experiences on the key concepts,
gender and professional identities, Section 3.3 will now outline the Theory of Tokenism.

### 3.3 The Theory of Tokenism

Kanter’s (1977) Theory of Tokenism attempts to understand how individual’s identifying characteristics (e.g. sex, race, ethnicity) impacts his or her social and professional advancement when he or she is a minority within the group. The theory posits numerical underrepresentation is a primary cause of negative experiences for minority group members (Yoder, 1991).

Kanter’s (1977) investigation of women sales managers in a large cooperation offered a numerical definition of a “token”, identifying any proportion of a group which is less than around 15% of a total can be identified as a “token”. The numerically superior group are labelled as “dominants” and this group (the dominants) control the culture. The minority group (tokens) are often treated as symbols rather than individuals (Kanter, 1977) and can therefore be subject to problems due to their numerical scarcity. Tokens are people recognised by characteristics such as sex, religion and race which are associated with assumptions of culture, behaviour and status. Kanter (1977) offers variations on the numerical proportions; however the emphasis of the theory is on a minority group because this provides a good basis for an examination of the effects of proportion encountered by many women in organisations traditionally dominated by men. As tokens enter an organisation or group, their small number fails to change the dominant group of the organisation or group, therefore tokenism continues to exist. Despite the focus of Kanter’s work being on how minorities respond to dynamics of marginalisation, a development of the theory is the concept of ‘critical mass theory’. This speculates as to how minorities experiences change as the number of minorities increases (Kanter, 1977; Dahlerup, 1988).

The challenges faced by minorities/tokens include having difficulties fitting in and gaining acceptance. As a result, individuals tend to overcompensate in order to be accepted, for example, by overachieving or even hiding their successes. The members of the minority group possess different traits to the
majority group and their differences are emphasised because they are rare. The “tokens” are seen to represent their category and are always a hyphenated member described by their difference, for example; a woman engineer rather than just an engineer.

The theory suggests being a token results in three perceptual phenomena; **Visibility, Polarization** and **Assimilation**. The three phenomena, the resulting pressures of each phenomena, and an example of the coping strategies which “tokens” have been found to use are detailed in Table 3.1 (source: Kanter, 1977).
<table>
<thead>
<tr>
<th>Phenomenon</th>
<th>Definition</th>
<th>Creates</th>
<th>Example</th>
<th>Coping Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Visibility</td>
<td>Tokens have a higher visibility than dominants; therefore they tend to stand out due to being different from the dominants.</td>
<td>Performance pressures</td>
<td>Placed before the media for their “accomplishments”, treating tokens as representatives of the group (e.g. women) not individuals. However, tokens must manage their performance carefully as they cannot overachieve as this will make the dominants look bad.</td>
<td>Overachieve: set high aspirations and work extra hard, threatening dominants. or Limit Visibility: try to blend in and minimise their differentness. E.g. wearing masculine clothing or avoiding social events.</td>
</tr>
<tr>
<td>2. Polarization</td>
<td>Differences are exaggerated between the token(s) and the dominants. Dominants become aware of the presence of tokens and their differences, therefore they try to keep the token on the outside and create boundaries due to their self-consciousness.</td>
<td>Heightening of dominant culture boundaries creating social isolation</td>
<td>Dominants emphasise the “macho” status of men, using sexual jokes and talking about sports or drinking in front of token women to emphasise the common bonds of men and exaggerate the differences between the token women and dominant men. Dominants distance themselves from tokens, isolating tokens from the core groups. Similarities between dominants are exaggerated to make a stronger bond between the dominants.</td>
<td>Accept isolation of being a token and remain an “outsider”. or Tokens accept jokes about themselves, laughing off remarks in order to be “accepted” into the dominant group and become an “insider” by arguing they are exceptions of their social group. However, polarization will always exist, even for an “insider” because tokens are never fully accepted because of their “difference” from the dominants.</td>
</tr>
<tr>
<td>3. Assimilation</td>
<td>Using stereotypes about a person’s social type, distorting the perception of the token.</td>
<td>Role Encapsulation: status levelling or stereotyped role induction</td>
<td>Women as Tokens as assumed to be in “traditional” fields e.g. nursing, therefore, even when pursuing a “non-traditional” field e.g. engineering, she is treated as if she were in a traditional position and is given tasks associated with that position e.g. admin. Another example is when dominants define special roles for women to set them apart, e.g. a motherly role listening to the dominants.</td>
<td>Tokens cope by with role encapsulation by accepting the stereotypical roles. This is easier than fighting the stereotypes as this requires trying not to display any characteristics of the stereotype.</td>
</tr>
</tbody>
</table>

Table 3.1 Kanter’s Three Perceptual Phenomena
The coping strategies which “tokens” use in order to cope with their minority status are not only the result of marginalizing interactions, but they are also expressions of long drawn (gender) identity formation processes which are influenced by professional norms. Within occupations, organisational demographics, group identification processes, gendered professional norms and accumulated individual experiences affect how individuals in a token status negotiate their professional identities. The Theory of Tokenism is relevant for professional identity as token behaviours, also known as coping strategies, (see Table 3.1) form part of professional identity formation.

3.4 Application of a Professional Identity lens
In STEM related professions, the pervasive professional norms such as analytical competence, objectivity and rationality have been unmasked as a masculine idealisation (Faulkner, 2009). This places women in male-dominated professions in a dilemma between contradictory yet interwoven, gender and professional identity components. Studies have looked at how women have learned to cope with this contradiction. Ultimately, research has identified that when women can achieve success without compromising their gender identity, their own peer identification will be obsolete and there will not be a difference between the men and women in the settings. Constructing identity at work is complicated by gender stereotypes (Ridgeway, 1991; Ridgeway and Correll, 2004). When a person does not fit the ‘ideal’ of a profession based on the stereotype of the profession’s culture it can interfere with one’s professional identity. In male dominated professions with gendered masculine cultures, professional identity is often not gender-neutral and using labels such as ‘women engineers’ serves to reinforce the belief that women take on different meaning from men in the same professions.

In order to further understand professional identity, Kelchtermans’ (2009) term ‘Self-understanding’ provides valuable insight into the components of professional identity and will be used as a framework for this research (see Table 3.2).

3.4.1 Components of Professional Identity
Kelchtermans (2009) used the term ‘Self-understanding’ to explain the components of professional identity. Self-understanding is made up of five
attributes that can be identified individually and linked to each other; self-understanding is a dynamic and on-going process of sense-making. In order to understand emerging professional identity, the five components developed by Kelchtermans (2009), namely self-image, self-esteem, job motivation, task perception and future perspective are provided in Table 3.2 (source: Kelchtermans, 2009).

<table>
<thead>
<tr>
<th>Component of ‘Self-understanding’</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-image</td>
<td>The way individuals see themselves in their profession. This is highly influenced by the way one is perceived by others.</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>This is linked to the achievements of the individual and how well they are performing. At this stage, feedback is vital and individuals' understanding of how well they are achieving will influence their self-esteem.</td>
</tr>
<tr>
<td>Job motivation</td>
<td>This is what drives the individual to choose a profession; it includes what would ensure they stayed in a profession and these change over time.</td>
</tr>
<tr>
<td>Task perception</td>
<td>This links to individuals' understanding of what is involved in order to do well, it encompasses deep beliefs of what constitutes “doing the job”, what they believe are moral duties and responsibilities.</td>
</tr>
<tr>
<td>Future perspective</td>
<td>Individual’s expectations and aspirations for their future, how they see themselves in the future as an individual and a professional. This component is not fixed; it is a dynamic and on-going learning process.</td>
</tr>
</tbody>
</table>

Table 3.2 Kelchtermans’ Components of Professional Identity

Professional identity negotiation is an ongoing reflection of experiences in the context of social and institutional practices in which the individual is embedded. It has been identified that in order for tokens to proactively justify their presence, impression management tactics are learnt as early as the training or education stage (Goffman, 1959). Section 3.5 explains why it is crucial to explore and understand the experiences of individuals with a minority status during the educational stage of their career.

3.5 Theory of Tokenism: A Professional Identity lens in an Educational Setting

Literature in other professional contexts identifies the initial educational phase and early socialisation of professions being major contributors to the start of emerging professional identities (Wegner, 1998). Studies from
engineering education have shown that individuals are socialised very early during training (Ibarra, 1999). Here, minorities can endure passages of hard work, insecurity and anxiety as they begin to identify with the profession and show solidarity with the culture (Dryburgh, 1999).

Timostsuk and Ugaste’s (2010) study of teacher training found initial training was an important time for students to begin to create a solid teacher identity that would support and sustain them in their future profession. This shows the training stage is an important determinant of future professional identity. The training stage ‘is thought to contribute to the development of commitment to the occupation as a life career and to a shared identity, a feeling of community or solidarity among all those who have passed through it’ (Freidson, 2001: 84). The professional training process therefore ‘results in: an autonomous professional being, who constructed her or his own professional identity, but whose professional identity, level of commitment and projected career strongly reflect the structural and situational variables within the training program’ (Bucher and Stelling, 1977: 279).

3.6 Suitability of the Theory and Key Concepts
Combining the literature, the key concepts and the theory, this research asks questions of how people become pilots, how they take up their pilot role and if they experience any difficulties in this, and all are ultimately questions about identity.

The Theory of Tokenism has been applied extensively to explain the interactions and coping behaviours of individuals in non-traditional employment (Kanter, 1977). It is hoped that cadets’ interactions and behaviours will be revealed through the accounts of their experiences. This data will provide a basis for the analysis of the experiences of the cadets and an insight into their identities, in particular, the experiences of the minority group (female cadets). Through an understanding of the theory, the data will be used to explore if the minority group experience any of the three perceptual phenomena (Visibility, Polarization and Assimilation) outlined in the Theory of Tokenism, and if so, the coping strategies used to mitigate these phenomena. Previous studies have identified that such coping
strategies provide an insight into individuals' identities. The components of Kelchtermans’ (2009) term ‘Self-understanding’ and Butler’s theory which outlines that individuals perform roles in relation to their identity (conceptualising a connection between performing gender and gender identity) will provide a framework for further analysis of the experiences, alongside the three perceptual phenomena, revealing if and how the minority group negotiate their identities to cope.

Despite the differences and difficulties in combining these concepts, for example in Performativity gender is a performance, it is socially constructed and affected by norms, whereas, Kanter (1977) relies solely on numerical proportions to explain the effects of a minority status, without examining possible intervening variables e.g. patriarchy and culture. Understanding Gender Performativity through the lens of professional identity alongside the overarching Theory of Tokenism will enable for detailed exploration of the experiences of ab-initio pilots in their training schools, in particular the cadets’ views on their own gendered and professional identities. By applying Kanter’s (1977) Theory of Tokenism to pilot training (an educational setting), its efficacy in settings beyond the workforce can be assessed, contributing knowledge to the possible applications of the theory. The acknowledgment of the theory plays a part in the justification of the method (Järviluoma et al., 2003). The research approach will now be detailed in Chapter 4.

3.7 Summary
This chapter has detailed the concepts of gender, identity and professional identity; it has also provided an explanation of the approach to gender identity which is used in this thesis.

This thesis uses Kelchtermans’ (2009) term ‘Self-understanding’ to provide an understanding of the components of professional identity. Within occupations, organisational demographics, group identification processes, gendered professional norms and accumulated individual experiences impact individuals’ professional identities. The professional norms of commercial piloting have been identified in Chapter 2 as dominated by masculinity.
The Theory of Tokenism is relevant for professional identity as token behaviours, or coping strategies, are part of professional identity formation. Crucially, it has been identified that the educational stage of a profession plays a critical role in the development of an individual’s professional identity.

The key concepts and theory identified in this chapter guide the rules of the research and therefore the method. The acknowledgment of the theory will play a part in the justification of the method (Järviluoma et al., 2003). The research approach will now be detailed in Chapter 4.
4 Research Approach

4.1 Introduction
The purpose of this chapter is to present the research approach used to collect the data that is needed to satisfy the aim, objectives and research questions of this thesis. For the purpose of this research, an adapted version of the ‘Research Onion’ by Saunders et al. (2012) (see Figure 4.1) has been used to guide the research approach and the structure of this chapter. This illustrates a range of choices, strategies and steps for researchers to follow during the research process. Bryman (2012) identified the ‘Research Onion’ as being adaptable to almost any research methodology, in any context.

![Figure 4.1 Adapted Research Onion](image)

(Adapted from Saunders at al., 2012 and Saunders and Tosey, 2012)

The aim, objectives and research questions are detailed in Section 4.2. These have been influenced by the research philosophy and research approach explained in Sections 4.3 and 4.4. The methodological choice is
described in Section 4.5 and the research strategy is detailed in Section 4.6. To a significant degree, the research philosophy has determined each layer of the research and it has also determined the types of research methods chosen for each part of the research. These will be presented in Section 4.7 including; Stage 1: the scoping study (Section 4.8), Stage 2: cadet interviews (Section 4.9), and Stage 3: cadet surveys (Section 4.10). Ethical considerations are stated in Section 4.11 and justification for the data analysis methods are provided in Section 4.12. Ultimately, this chapter explains why certain approaches have been taken and justifies the links between the main elements of the research process in recognition that ‘the choice of methods will be influenced by the research methodology chosen. This methodology, in turn, will be influenced by the theoretical perspectives by the research, and, in turn, by the researcher’s epistemological stance’ (Gray, 2014: 19).

4.2 Aim, Objectives and Research Questions

Emerging from the previous chapters, the aim of this thesis is:

**To explore the effects women ab initio pilots’ minority status on their gender and professional identities.**

This aim will be achieved through the following six objectives:

1. To understand the motivations and implications of a non-traditional career choice for women.
2. To identify a theoretical underpinning to explore the possible effects of women’s minority status in a male-dominated occupation.
3. To examine the views of key aviation stakeholders with respect to the development of the pilot identity.
4. To explore how ab initio pilots perceive their gender and professional identities.
5. To investigate the relationship between ab initio pilots’ gender and professional identities.
6. To make recommendations to support women’s entry into, and development during, pilot training.
In order to achieve the objectives, and ultimately the aim of this thesis, ten research questions have arisen from Chapters 2, 3 and 5. Each research question can be mapped onto an objective as Table 4.1 demonstrates.
**Aim:** To explore the effects of women ab initio pilots’ minority status on their gender and professional identities.

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Objective</th>
<th>Research Questions</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1. To understand the motivations and implications of a non-traditional career choice for women.</td>
<td>i. Why are there gendered occupations?</td>
<td>Literature</td>
</tr>
<tr>
<td>2</td>
<td>2. To identify a theoretical underpinning to explore the possible effects of women’s minority status in a male-dominated occupation.</td>
<td>ii. What are the possible implications of a non-traditional career choice?</td>
<td>Theory and Key Concepts</td>
</tr>
<tr>
<td>3</td>
<td>3. To examine the views of key aviation stakeholders with respect to the development of the pilot identity.</td>
<td>iii. Why is piloting considered a non-traditional occupation for women?</td>
<td>Interviews with aviation personnel and flight school management</td>
</tr>
<tr>
<td>4</td>
<td>4. To explore how ab initio pilots perceive their gender and professional identities.</td>
<td>iv. What is the role of gender in the career decisions of ab initio pilots? v. What influences ab initio pilots’ perceptions of their gender and professional identities?</td>
<td>Interviews and surveys with ab initio pilots</td>
</tr>
<tr>
<td>5</td>
<td>5. To investigate the relationship between ab initio pilots’ gender and professional identities.</td>
<td>vi. Are there any gender specific dilemmas for women ab initio pilots undergoing initial flight training? vii. How does the culture of the Flight Training School impact cadets’ experiences? viii. Do women ab initio pilots have to compromise their gender identity during training? If so, how? ix. Do women ab initio pilots experience any conflict between being a woman and becoming a pilot?</td>
<td>Interviews and surveys with ab initio pilots</td>
</tr>
<tr>
<td>6</td>
<td>6. To make recommendations of strategies to support women’s entry into, and experiences during, pilot training.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 4.1 Research Design and Thesis Structure**
The research objectives and research questions drive the way research is carried out. Walliman (2006) states that research questions and the way in which research is carried out is based on the epistemological (how something is known) and ontological (what is reality) viewpoint of the researcher. There are many different views of what research is and how it relates to the knowledge being developed and researchers bring their own beliefs and assumptions which are influenced by their position in the world and their experiences. Because of this, researchers need to be aware that there are different ways of viewing the world and philosophies guide how researchers make decisions (Guba, 1990).

4.3 Research Philosophy
A paradigm or philosophy is a set of shared beliefs or assumptions about phenomena and include an agreed range of methods that a community uses to carry out research (Guba and Lincoln, 1994). Guba (1990) suggests that research philosophies can be characterised through their ontology (what is reality), epistemology (how do you know something), and methodology (how do you go about finding it out). Within the social sciences ‘there is a question of the position of the human subject and researcher, and the status of social phenomena’ (Walliman, 2006: 20) and during the past three decades there has been an extensive debate within the behavioural and social sciences regarding the two major paradigms of positivism and interpretivism.

According to Hacking (1981), the positivist approach to scientific investigation is based on realism; it is an attempt to find out about the real world. Positivist researchers’ views are that facts are gained through observation and experience. In addition, a positivist view of what constitutes acceptable knowledge (epistemology) focuses on causality and law-like generalisations, eliminating bias. Positivists ‘saw the natural sciences as progressing through the patient accumulation of facts about the world in order to produce generalisations known as scientific laws’ (Gray, 2014: 21). There are different strands to positivism but data collection techniques used within a positivist paradigm are highly structured and predominantly quantitative.
The alternative approach is interpretivism. This approach looks for ‘culturally derived and historically situated interpretations of the social life-world’ (Crotty, 1998: 67) and maintains the view that knowledge is socially constructed. The aim of interpretivist research is to understand and interpret the meanings in human behaviour and interpretivists believe that reality is multiple and relative. Ultimately, an interpretivist approach seeks to understand meanings and reasons which are time and context specific (Hudson and Ozanne, 1988; Neuman, 2000). In order to ensure a more flexible research approach, interpretivists avoid rigid structural frameworks (Carson et al., 2001) and use a collaborative approach in the belief that humans have the ability to adapt to changing situations (Hudson and Ozanne, 1998). Interpretivism is closely linked to constructivism in terms of epistemology. Constructivism recognises reality as a product of human intelligence and interactions in the real world. Research practices in constructivism include bringing personal values into the research and interpreting the data. It typically involves qualitative research.

Each of these philosophical positions holds a view about social reality and what can be regarded as legitimate knowledge. As a result, the ontological position shapes the epistemological position (Williams and May, 1996).

**Ontological and Epistemological Considerations**

‘Ontology embodies understanding what is, epistemology tries to understand what it means to know. Epistemology provides a philosophical background for deciding what kinds of knowledge are legitimate and adequate’ (Gray, 2014: 19).

Epistemology and ontology are essential in forming the basis of what constitutes knowledge and how researchers view the world. There are various ontological and epistemological positions in social research and so it is vital to understand the approaches and their effects on research (Walliman, 2006). Adopting a theoretical perspective and a philosophical background that is congruent with the researchers’ epistemology is vital and directly informs the subsequent research methodology that is adopted.
Ontology

The paradigms of researchers are determined by an ontological position. Ontology concerns social entities. The positions of ontology question whether social entities ‘can and should be considered objective entities that have a reality external to social actor, or whether they can and should be considered social constructions built up from the perceptions and actions of social actors’ (Bryman, 2008: 18). The traditional positions include objectivism, constructivism, and subjectivism.

Objectivism implies that social phenomena exist independently of social actors and they are facts which have an independent existence. This approach stresses the importance of a formal property of organisations and cultures. For example, people do what they are told within an organisation, they follow rules and regulations and therefore the organisation is a constraining force which inhibits its members (Bryman, 2008). Similarly, cultures contain shared values and beliefs. Individuals are then socialised according to these values and consider them in order to be a good citizen. Therefore, within this position, the social entity is seemingly external to the actor (Ibid, 2008).

A subjectivist view of culture is that although it is a point of reference, it is constantly being understood, adapted and formed (Bryman, 2008). Subjectivism states that 'social phenomena are created from the perceptions and consequent actions of social actors' (Saunders et al., 2012: 132). Subjectivism is often associated with constructivism. Constructivism ‘asserts that social phenomena and their meanings are continually being accomplished by social actors’ (Bryman, 2008: 19) social phenomena are therefore in a constant state of revision. In terms of applying this position to organisations and cultures, although organisational structures exist, everyday interactions and social order play a part in constraining the practices of individuals.
**Epistemology**

Epistemology concerns *'how we know the things we do and what we can regard as acceptable knowledge in the discipline'* (Walliman, 2006: 15).

Originally, empiricism and rationalism were the two choices of epistemological positioning. Empiricism identifies knowledge being gained through sensory experience and rationalism by reasoning (Walliman, 2006). More recently however, there have been developments in the approaches to acquiring knowledge. Positivism, interpretivism and realism have been identified as philosophical positions which influence the choice of methodology and perceptions of social reality.

A further consideration for researchers, alongside epistemology and ontology, includes understanding the role which researchers’ values play in all stages of the research; this is known as axiology (Saunders et al., 2012).

**Axiology**

Axiology concerns the role of values and value judgements. Heron (1996) identified that being able to execute axiological skills requires articulating values as a basis for making judgements about what research the researcher is conducting and how they do the research. These values guide the reasons for all human action and can therefore influence the enquiry. For example, positivists believe that research is value-free and researchers are independent of data and objective, whereas in interpretivism, the researchers’ values will influence how something is interpreted as research is value-bound and the researcher is part of what is being researched. Table 4.2 provides an overview of the main beliefs underpinning the philosophies associated with the social sciences.
As this section has identified, epistemology concerns knowledge generation. One of the key epistemological considerations is the intellectual autobiography of the researcher (Stanley, 1993). Researchers must be aware of their own beliefs, values and background and consider their place within the research; this is known as reflexivity.

**Reflexivity**

Reflexivity can be defined as; ‘a consideration of the practice of research, our place within it and the construction of our fields of inquiry themselves’ (May, 2000: 44). By being consciously aware of the values and beliefs held by researchers, their practice is placed under scrutiny in order to prevent researcher bias. Poggenpoel and Myburgh (2003) identified that the researcher as an instrument can be the greatest threat to trustworthiness in qualitative research if considerable time is not spent on preparation of the field and the reflexivity of the researcher. In this research, it was important to consider how the researcher’s gender influences her position in relation to the topic. As a female researcher, the researcher understands that gender

<table>
<thead>
<tr>
<th>Ontology: the researcher's view of the nature of reality or being</th>
<th>Positivism</th>
<th>Interpretivism</th>
</tr>
</thead>
<tbody>
<tr>
<td>External, objective and independent of social actors. Observation and experience are used to gain facts.</td>
<td>Socially constructed, subjective, may change, multiple.</td>
<td></td>
</tr>
</tbody>
</table>

| Epistemology: the researchers view regarding what constitutes acceptable knowledge | Only observable phenomena can provide credible data facts. Focus on causality and law-like generalisations, reducing phenomena to simple elements. | Subjective meanings and social phenomena. Focus upon the details of a situation, a reality behind these details, subjective meanings motivating actions. |

| Axiology: the researchers view of the role of values in research | Research is undertaken in a value-free way, the researcher is independent of the data and maintains an objective stance. | Research is value bound, the researcher is part of what is being researched, cannot be separated and so will be subjective. |

| Data collection techniques | Highly structured, large samples, measurement, quantitative, but can use qualitative. | Small samples, in-depth investigations, qualitative. |

Table 4.2 A Comparison of Research Philosophies

(Sources: Saunders et al., 2012; Bryman, 2012).
bias can occur as the researcher’s stereotypes and prejudices about gender can affect the research. Ritchie (2009) stated that this bias could be defined as a systematically erroneous gender dependent approach related to a social construct, which incorrectly regards women and men as similar/different.

This section has shown that researchers need to be aware that there are different ways of viewing the world and philosophies guide how researchers make decisions (Guba, 1990). Alongside this, just how clear a researcher is about their stance at the beginning of their research relates to questions about the research approach. This can be portrayed by three research approaches based upon the reasoning that is adopted, these are; deductive, inductive and abduction (Saunders et al., 2012). An outline of the different research approaches which can be taken is provided in Section 4.4 in order to justify why a certain approach has been taken within this thesis.

### 4.4 Research Approach

A deductive approach tests possible cause and effect relationships derived from existing theory and/or the researchers’ preliminary observations. The researcher deduces a hypothesis based on what it known and that is subjected to empirical scrutiny (Bryman, 2012) through observations or experiments (Walliman, 2006). Positivists usually use a deductive approach. Contrary to this, an inductive stance means theory is the outcome of research, inductive reasoning starts with specific observations and leads to general conclusions. Known premises are used to generate untested conclusions and generalisations are made from the specific to the general. The data is used to explore a phenomenon, identify themes and patterns, and create a conceptual framework; it is a process of theory generation and building (Saunders et al., 2012). Interpretivist research usually uses an inductive approach. Finally, an abductive approach moves back and forward between theory and data (Saunders et al., 2012). It happens as an observation of a ‘surprising fact’ occurs, and it then works out a theory as to how this has occurred. Data is used to explore a phenomenon in order to identify themes and explain patterns.
By identifying and understanding the different research philosophies and the epistemological, ontological, and axiological considerations within these, it is possible to identify and justify the philosophical stance of this thesis. This thesis seeks to understand a specific, unique context and recognises that knowledge is developed through the construction of social phenomena. It looks at culture and how people live their lives rather than looking at a general overview and understands that social phenomena are in a constant state of revision and everyday interactions and social order play a part in constraining the practices of individuals. With this in mind, this thesis is informed by an interpretivist epistemology and a constructivist worldview to investigate how gender and identity are presented and performed in a specific context. The research is open-minded and exploratory and no hypothesis is being tested (Daff, 2011), therefore, following a bottom-up approach, this thesis adopts an inductive theoretical drive. Because of these factors, a qualitative approach will drive this thesis, supplemented by a quantitative approach. When considering a mixed method approach, it is important to ask if the approach is going to add more value than a single method (Mckim, 2017). Although a mixed-method approach will require more resources and time, it is possible to overcome the limitations of a single design (Cresswell and Plano Clark, 2007). Hurmerinta-Peltomaki and Nummela (2006) found that mixed methods added value by increasing validity in the findings, assisting with knowledge creation. Furthermore, being able to integrate the findings provides researchers with more confidence in the results and conclusions (O’Cathain et al., 2010). In order to enhance the findings of this work (Bryman, 2006), a mixed-method approach which has a dominant qualitative method was considered the most appropriate for this research (see Section 4.5).

4.5 Methodological Choice: Mixed Methods

‘A mixed methods study involves the collection or analysis of both quantitative and/or qualitative data in a single study in which the data are collected concurrently or sequentially, are given a priority, and involve the integration of the data at one or more stages in the process of research’ (Cresswell et al., 2003: 165).
The term mixed-method is used to describe a ‘*combination of methods related to both qualitative and quantitative data*’ (Bryman, 2012: 37). Recognising that all methods have limitations, researchers proposed that biases from individual methods could be overcome by using more than one method (Cresswell, 2003). Therefore, by using a combination of two approaches, researchers are able to obtain ‘*distinctive kind of evidence*’ which, ‘*used together, can offer a powerful resource to inform and illuminate policy or practice*’ (Ritchie and Lewis, 2003: 38). By using this approach, researches can seek convergence across qualitative and quantitative data sources and triangulating data sources (Jick, 1979). Existing research into sex-segregated occupations is dominated by the use of qualitative methods (McDonald, 2013), however a combination of methods can and have been used. Murray (1996) conducted a four-year study using participant observation field work, interviews, and surveys to understand why childcare is considered a gendered occupation. Similarly, when researching the gendered profession of academia, Katila and Merilainen (1999) used observations, conversations and personal experience to analyse narratives of women academics. Discourse, observational fieldwork, interviews and surveys have been used within gender studies (McDonald, 2013; Simpson, 2009). By combining two approaches, quantitative research will provide the ability to statistically analyse the resulting data and qualitative research will enable an in-depth investigation (Bryman, 2012: 40).

Different procedures for using mixed methods have been developed, these include; sequential, concurrent and transformative. Table 4.3 details these different strategies.
<table>
<thead>
<tr>
<th>Strategy</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sequential procedures</strong></td>
<td>A procedure in which the researcher seeks to elaborate on or expand the findings of one method with another method. This may involve beginning with a qualitative method for exploratory purposes and following it up with a quantitative method with a large sample so that the researcher can generalize the results to a population.</td>
</tr>
<tr>
<td><strong>Concurrent procedures</strong></td>
<td>The researcher converges quantitative and qualitative data in order to provide a comprehensive analysis of the research problem. The researcher collects both forms of data at the same time during the study and then integrates the information in the interpretation of the overall results.</td>
</tr>
<tr>
<td><strong>Transformative procedures</strong></td>
<td>The researcher uses a theoretical lens as an overarching perspective within a design that contains both quantitative and qualitative data. This lens provides a framework for topics of interest, methods for collecting data, and outcomes or changes anticipated by the study. Within this lens could be a data collection method that involves a sequential or a concurrent approach.</td>
</tr>
</tbody>
</table>

Table 4.3 Mixed Method Strategies
(Source: Cresswell, 2003).

Sequential procedures include a two-stage approach which means that it is relatively easy to collect and report the data; it is also valuable for researchers who want to expand on their findings (Cresswell et al., 2003). In comparison, concurrent procedures allow a researcher to simultaneously collect data in one data collection phase and gain ‘perspectives from the different types of data or from different levels within the study’ (Cresswell et al., 2003: 185). These general strategies can be further broken down by four criteria, as shown in Table 4.4.
<table>
<thead>
<tr>
<th>Design Type</th>
<th>Implementation</th>
<th>Priority</th>
<th>State of Integration</th>
<th>Theoretical perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sequential explanatory</td>
<td>Quantitative followed by qualitative</td>
<td>Usually qualitative; can be qualitative or equal</td>
<td>Interpretation phase</td>
<td>May be present</td>
</tr>
<tr>
<td>Sequential exploratory</td>
<td>Qualitative followed by quantitative</td>
<td>Usually qualitative; can be quantitative or equal</td>
<td>Interpretation phase</td>
<td>May be present</td>
</tr>
<tr>
<td>Sequential transformativ e</td>
<td>Either quantitative followed by qualitative</td>
<td>Quantitative, qualitative or equal</td>
<td>Interpretation phase</td>
<td>Definitely present (i.e., conceptual framework, advocacy, empowerment)</td>
</tr>
<tr>
<td>Concurrent triangulation</td>
<td>Concurrent collection of quantitative and qualitative data</td>
<td>Preferably equal; can be quantitative or qualitative</td>
<td>Interpretation phase or analysis phase</td>
<td>May be present</td>
</tr>
<tr>
<td>Concurrent nested</td>
<td>Concurrent collection of quantitative and qualitative data</td>
<td>Quantitative or qualitative</td>
<td>Analysis phase</td>
<td>May be present</td>
</tr>
<tr>
<td>Concurrent transformativ e</td>
<td>Concurrent collection of quantitative and qualitative data</td>
<td>Quantitative, qualitative, or equal</td>
<td>Usually analysis phase; can be during interpretation phase</td>
<td>Definitely present (i.e., conceptual framework, advocacy, empowerment)</td>
</tr>
</tbody>
</table>

Table 4.4 Types of Procedures for a Mixed-Method Design
(Source: Cresswell, 2003)

Table 4.4 provides three sequential and three concurrent design types. The choice between gathering both forms of data concurrently or sequentially is informed by the research questions and objectives. By concurrently gathering both forms of data, a researcher seeks to compare both forms of data to search for similar findings. Choosing a sequential procedure means the researcher is seeking to explore the problem and then follow this up with a second method of data collection. The procedure chosen will impact how the findings are reported; if a sequential procedure has been followed then the researcher will usually analyse and present each stage separately, whereas a concurrent procedure will require researchers to integrate the findings during the analysis stage (Cresswell et al., 2003).
In line with the aim of this thesis, a dominant qualitative approach is used to understand and explore experiences, and this is supplemented by quantitative data in order to make reference to a population. A concurrent nested design involves the concurrent collection of quantitative and qualitative data; however one type of data is prioritised. The integration of the quantitative and qualitative data takes place during the analysis and a theoretical perspective may be present, however this is not essential. This thesis uses a concurrent nested design type; in line with an interpretivist stance. It has a predominant (qualitative) method that guides the research and a second (quantitative) method has been embedded within the predominant method. The concurrent nested design provides a broader perspective than one research method alone and as this thesis seeks to understand the experiences of certain individuals in a particular context, the additional method allows for the study of different groups (Cresswell et al., 2003). However, there are limitations to this approach. These include the fact that the data needs to be transformed so that it can be integrated within the analysis phase of the research, and unfortunately, ‘there has been little written to date to guide a researcher through this process’ (Cresswell et al., 2003).

Having detailed why a mixed method approach obtaining qualitative and quantitative data is required to investigate how gender and identity are performed; an explanation of the research strategy is provided in Section 4.6. In accordance with the next layer of the ‘Research Onion’ (Figure 4.1), the research strategy identifies how a researcher intends to carry out the work (Saunders et al., 2007).

### 4.6 Research Strategy

There are a number of different strategies including; experimental, survey, archival, historical, action research, systematic literature reviews and case studies. The strategy chosen for this thesis, in line with an interpretivist stance, is a case study strategy. A description of the case study strategy and why it has been chosen is provided in Section 4.6.1.
4.6.1 Case Study

Case studies explore and investigate contemporary real-life phenomena through a detailed contextual analysis of a limited number of events or conditions and their relationships (Zainal, 2007). Yin (1994) reported that case studies can be used in many situations. They can contribute to the knowledge of individual, group, organisational, social and political related phenomena. The justification of the use of a case study approach depends on 1) the type of research question, 2) the extent of control an investigator has over actual behavioural events and 3) the degree of focus on contemporary as opposed to historical events. Yin (1989) identified a case study as a research strategy, not a technique; therefore a range of methods can be used. A case study can be summarised as ‘an empirical inquiry that investigates a contemporary phenomenon within its real-life context when the boundaries between phenomenon are not clearly evident: an in which multiple sources of evidence are used’ (Yin, 1994: 23). Fundamentally, case study researchers must be good listeners; they must ask good questions and interpret their answers. In addition, as new situations arise during the case study, the researcher must be able to adapt to changing situations and have a good understanding of the issues being studied (Yin, 1994).

Case studies enable researchers to examine data at the micro level and they can be a practical solution when a larger sample is difficult to obtain (Zainal, 2007). However, there are limitations to a case study approach. They have been criticised for a lack of rigour, therefore systematic procedures must be used and care must be taken over bias. Case studies involve an attempt to describe relationships that exist in reality, often in a single site or organisation. Case studies may be positivist or interpretivist in nature, depending on the approach of the researcher, the data collected and the analytical techniques employed. Reality can be captured in greater detail by an observer-researcher, with the analysis of more variables than is typically possible in experimental and survey research. Case studies are typically restricted to a single organisation and it is difficult to generalise findings since it is hard to find similar cases with similar data that can be analysed in a statistically meaningful way. Furthermore, different researchers may have
different interpretations of the same data, thus adding bias into the equation.

Table 4.5 details the different types of case study strategies.

<table>
<thead>
<tr>
<th>Type of Case Study</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explanatory</td>
<td>Seek to answer a question about presumed causal links in real-life interventions that are too complex for a survey or experiment.</td>
</tr>
<tr>
<td>Exploratory</td>
<td>Used to explore situations in which the intervention being evaluated has no clear single set of outcomes.</td>
</tr>
<tr>
<td>Descriptive</td>
<td>Used to describe an intervention or phenomenon and the real-life context in which it occurred.</td>
</tr>
<tr>
<td>Multiple case-studies</td>
<td>Enables the researcher to explore differences within and between cases. The aim is to replicate findings across cases. Because comparisons will be drawn, it is imperative that the cases are chosen carefully so that the researcher can predict similar results across cases or predict contrasting results based on a theory.</td>
</tr>
<tr>
<td>Intrinsic</td>
<td>Stake (1995) uses this term, suggesting that researchers who have a genuine interest in the case should use this approach when the intent is to better the case. It is not undertaken primarily because the case represents other cases or because it illustrates a problem, but because in all its particularity and ordinariness the case itself is of interest the purpose is not to understand some abstract, construct, or generic phenomenon, or to build theory.</td>
</tr>
<tr>
<td>Instrumental</td>
<td>Used to accomplish something other than understanding a particular situation. It provides insight into an issue or helps to refine a theory. The case is of secondary interest; it plays a supportive role, facilitating the understanding of something else. The case is often looked at in depth, its contexts scrutinised, its ordinary activities detailed, and because it helps the researcher pursue the external interest. The case may or may not be seen as typical of other cases.</td>
</tr>
<tr>
<td>Collective</td>
<td>Collective case studies are similar in nature to multiple case studies. An example of this would be to collect data from multiple departments in one organisation.</td>
</tr>
</tbody>
</table>

Table 4.5 Types of Case Studies

(Sources: Yin, 1994; Stake, 1995; Yin, 2003; Scheib, 2003).

This thesis explores a contemporary set of events over which the researcher has little or no control. Therefore a case study research strategy has been chosen to collect detailed data. Using a multiple case study approach through a set of individual cases, an exploration of the differences within and between cases can be undertaken. A multiple case study includes two or more observations of the same phenomenon and the two case study sites chosen share similar features. In this thesis, using the following criteria; 1) a UK Flight Training School which 2) offers an integrated ab-initio training
programme (see Section 5.3), four potential case study sites were identified and approached to participate in this research. Approaching the Flight Schools required seeking out a key contact and emailing this individual with a briefing document and contextual information about the project. Despite the same information being sent to all four potential case studies, only two of the four sites were willing to be involved in this research. The two Flight Schools willing to be involved required an in-depth briefing and preliminary face-to-face meeting to discuss the scope of the project and ethical considerations. Reflecting on the Flight Schools who were not willing to be involved, one of the Flight Schools had recently undergone a large restructure, and the other was a relatively new Flight School. As a result, the two case studies are referred to in this thesis as; Flight School 1 and Flight School 2 (hereafter FS1 and FS2). An outline of the individual cases (FS1 and FS2) is provided in Chapter 5.

4.6.2 Case Study Sites: Flight Schools
The Flight Training Schools are both global professional pilot training and resourcing companies, providing a range of aviation services. In order to limit the scope of the thesis and focus on the most intense training route, cadets undertaking an integrated training approach are the focus of this thesis. An integrated training route lasts typically between 70-78 weeks. They enable individuals with little or no flying experience to become licensed to fly for an airline as a First Officer upon completion of their aircraft type training. Both of the schools are licensed to offer the full time integrated programmes for an Integrated Airline Transport Pilot License (ATPL) and Multi-crew Pilot License (MPL) and they are approved to deliver ab initio (from the beginning) training directly for national license issues for different global regulators. In order to fund these courses, sponsorship can be obtained through an airline sponsored scheme, or cadets can fund their training themselves. Both of the schools have strong airline links and high placement figures upon course completion. Although FS2 is a UK company, its training base is in Spain. Chapter 5 (Section 5.3) provides an overview of Ab Initio Pilot Training and gives more information on each case study sites (Section 5.4).
Having presented the case study strategy used within this thesis the techniques and procedures which have been used to collect the data, the research methods are identified in Section 4.7. The methods used at each phase of the research will be described and a justification as to why these methods have been used will be provided.

### 4.7 Research Method

As described in Section 4.5, this thesis adopts a mixed-method approach to obtain both qualitative and quantitative data. In accordance with the theory and key concepts of this thesis, a predominant method which will generate in-depth, qualitative data is fundamental in social research. Interviews allow participants to discuss their interpretations of the world in which they live and express how they regard situations from their own point of view (Cohen et al., 2000). Therefore, in order to gather participants’ thoughts, feelings and stories, interviews have been chosen as an appropriate data collection method for this thesis.

Seeking to understand gender and identity, in-depth, qualitative interviews allow for an exploration of identity. The stories and interpretations given during interviews are seen as part of an identity management process (Gheradi and Poggio, 2007). Interviews are a way of uncovering and exploring the meanings that underpin people’s lives, routines, behaviours and feelings (Rubin and Rubin, 1995). Interviews are ‘an active resource for exploring identity in that the stories and interpretations offered are seen as part of an identity management process’ (Simpson, 2009: 18), allowing researchers to examine how participants construct their gender identities in relation to their occupational realities.

#### 4.7.1 Interviews

Interviews are a careful questioning and listening technique to gain in-depth knowledge from interviewees (Kvale, 1996), allowing qualitative data to be obtained. There are different types of interviews including; unstructured, semi-structured and structured. Unstructured interviews are similar in character to a conversation, they are free and do not follow a specific format (Burgess, 1984). Semi-structured interviews require the interviewer to have a list of questions or topics (an interview guide); however questions may not
follow exactly the order they appear in. The questions will all be asked and similar wording will be used for each interview (Bryman, 2012). Both unstructured and semi-structured interview approaches are flexible. A structured interview is an inflexible approach and deviation from the interview schedule is not permitted. Structured interviews are used to ‘standardize the asking and often the recording of answers in order to keep interviewer-related error to a minimum’ (Bryman, 2012: 229). Although unstructured interviews allow for probing, the lack of control within the unstructured environment decreases the ability to compare responses between men and women within a gender natured research project (Ritchie and Lewis, 2003). A semi-structured interview format has been used in this thesis as this format provides flexibility as well as uniformity in the questions whilst also not limiting respondents to a set of pre-determined answers.

The other method to be used which will obtain quantitative data, in line with the mixed-method approach of this thesis, is a survey. This method is explained in Section 4.7.2.

4.7.2 Surveys

‘A survey provides a quantitative or numerical description of trends, attitudes, or opinions of a population by studying a sample of that population’ (Creswell, 2003: 153).

Surveys can be used to obtain data about certain aspects or characteristics, or test hypotheses about the nature of relationships within a population. Jackson (2011: 17) identified the essence of a survey method as ‘questioning individuals on a topic or topics and then describing their responses’.

Advantages of the survey method include; being low-cost and allowing respondents to remain anonymous. However, the ability to gain in-depth information from a survey is restricted (Denscombe, 2004) and data is affected by the characteristics of the respondents (Robson, 2011). Surveys are used to gather a large amount of information and can be administered in different ways, most of which will involve the use of a questionnaire which can be administered through self-completion, a face-to-face interview or a
telephone interview (Robson, 2011). More recently, the internet is being used; online surveys reduce the cost of administration and the length of the data collection period. Each approach has its own advantages and disadvantages.

The previous sections have used the ‘Research Onion’ to detail each layer of the research approach and explain why this research has been conducted in a certain way. The next three sections (4.8, 4.9 and 4.10) detail each of the three research stages of this multi-stage research including;

**Stage 1: The Scoping Study (Section 4.8)**
Part 2: Interviews with Flight School management personnel from FS1 and FS2.- 6 interviews collected in Spring 2016

**Stage 2: Cadet Interviews (Section 4.9)**
Interviews with cadets from FS1 and FS2.- 17 interviews collected in Summer 2016.

**Stage 3: Cadet Survey (see Section 4.10)**
A survey released for cadets from FS1 and FS2- 128 surveys collected in Summer 2016

**4.8 Stage 1: Scoping Study**
Before the main data collection stage, a two-part scoping study was conducted in order to identify what is and is not known, and then set this within the context of policy and practice (Anderson et al., 2008). A scoping study allows researchers to determine the value of undertaking a full systematic review, identify gaps in the literature, and gain up-to-date empirical information. The scoping study was split into two parts; Part 1 and Part 2. Each part of the scoping study will now be explained.

**Scoping Study: Part 1**
Part 1 of the scoping study was conducted during the winter of 2015. It comprised semi-structured interviews that were conducted via telephone. As this stage of the research was a preliminary part, it was decided that
telephone interviews would provide a cost-effective way to gain in-depth, qualitative data. Telephone interviews are cost-effective; they allow interpersonal communication without face-to-face meeting (Carr and Worth, 2001). Telephone interviews have been criticised due to the lack of visual contact between the interviewer and the respondent (Gillham, 2005), however, this could mean that both parties are forced to listen and articulate clearly (Stephens, 2007). Telephone interviews are becoming more common in multi-stage research (Mitchell and Zmud, 1999).

**Scoping Study Part 1 Respondents**

Respondents to the first part of scoping study were identified from literature searches and specifically targeted due to their knowledge of the challenge of improving diversity in aviation. The ten respondents were drawn from airlines, pilot unions, aviation societies and researchers who had publicly stated their interest and knowledge in the area (see Table 4.6). Respondents’ identities have been anonymised and they are referred to as S1-S10 in the subsequent chapters of this thesis.

Upon completion of Part 1 of the scoping study, it became apparent that the views of Flight Training providers should be acquired in order to gain a more nuanced view of the research problem identified in Chapter 1. It was at this stage that, as explained in Section 4.6.1, four UK-based Flight Training Schools which offered an integrated training programme were approached, two of which were willing to be involved in this research.

<table>
<thead>
<tr>
<th>Respondent</th>
<th>Gender</th>
<th>Employer</th>
<th>Job Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1</td>
<td>Female</td>
<td>UK Airline</td>
<td>Pilot and Diversity Champion</td>
</tr>
<tr>
<td>S2</td>
<td>Female</td>
<td>UK Airline</td>
<td>Diversity and Inclusion</td>
</tr>
<tr>
<td>S3</td>
<td>Male</td>
<td>UK Airline</td>
<td>Flight Operations Team Member</td>
</tr>
<tr>
<td>S4</td>
<td>Female</td>
<td>UK Airline</td>
<td>Pilot and Union Representative</td>
</tr>
<tr>
<td>S5</td>
<td>Female</td>
<td>UK Airline</td>
<td>Pilot and Union Representative</td>
</tr>
<tr>
<td>S6</td>
<td>Female</td>
<td>Informed Society</td>
<td>Gender Initiative Specialist</td>
</tr>
<tr>
<td>S7</td>
<td>Female</td>
<td>Informed Society</td>
<td>Gender Initiative Specialist</td>
</tr>
<tr>
<td>S8</td>
<td>Male</td>
<td>Pilots Association</td>
<td>Gender Interest Group Member</td>
</tr>
<tr>
<td>S9</td>
<td>Male</td>
<td>Flight School</td>
<td>Flying Instructor</td>
</tr>
<tr>
<td>S10</td>
<td>Female</td>
<td>Academic</td>
<td>Human Resource Specialist</td>
</tr>
</tbody>
</table>

*Table 4.6 Scoping Study Part 1 Respondents*
Scoping Study: Part 2

Part 2 of the scoping study was conducted during the spring of 2016. This phase included 6 semi-structured, face-to-face interviews. This required visiting Flight School 1 at their training base, Flight School 2 personnel were interviewed at their UK headquarters when they travelled to the UK from their training base in Southern Europe for a careers event.

Scoping Study Part 2 Respondents

Part 2 respondents are identified in Table 4.7. Respondents’ identities have been anonymised and they are referred to as M1-M6 in the subsequent chapters of this thesis.

<table>
<thead>
<tr>
<th>Respondent</th>
<th>Gender</th>
<th>Employer</th>
<th>Job Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1</td>
<td>Female</td>
<td>FS1</td>
<td>Marketing Officer</td>
</tr>
<tr>
<td>M2</td>
<td>Female</td>
<td>FS1</td>
<td>Airline Resource Manager</td>
</tr>
<tr>
<td>M3</td>
<td>Female</td>
<td>FS1</td>
<td>Communications Officer</td>
</tr>
<tr>
<td>M4</td>
<td>Male</td>
<td>FS2</td>
<td>Marketing Manager</td>
</tr>
<tr>
<td>M5</td>
<td>Male</td>
<td>FS2</td>
<td>Flying Instructor</td>
</tr>
<tr>
<td>M6</td>
<td>Female</td>
<td>FS2</td>
<td>Welfare and Communications Officer</td>
</tr>
</tbody>
</table>

Table 4.7 Scoping Study Part 2 Respondents

4.8.1 Stage 1: Scoping Study Interview Schedule

The questions asked within both parts of the scoping study were derived from the literature review, the theory, and the key concepts explored in Chapters 2 and 3. These sources also guided the sample chosen at Stage 1. The interview schedule consisted of 15-17 (depending on the respondent’s role) open-ended questions presented in a semi structured manner. Additional questions were added for Part 2 of the Scoping Study (see Table 4.9). The additional questions allowed for contextual information about each of the Flight Schools to be obtained as well as information regarding their processes in terms of attracting, selecting, and retaining their cadets. The questions followed a logical, progressive flow using the following sequence: 1) introduction to the research, 2) introductory questions, 3) main body of the interview and 4) closing questions (Robson, 2011: 284). A recording device was used to record the interviews. The interviews were then stored and
transcribed. Details of each section of the scoping study interviews will now be provided.

**Introduction**
This section introduced the researcher, the topic and purpose of the interview. The confidentiality procedures were also explained which assured the interviewee of anonymity and their right to withdraw from the research at any time. Permission to record the interview was requested. The final part of this section stated an estimation of the interview length (Ritchie and Lewis, 2003: 145).

**Biographical Information**
Following the introduction, questions asking for biographical information of interviewees were posed to provide information for a comparative analysis when analysing the data.

**Main Body**
The remainder of the interview shaped the main body phase, with the researcher guiding the respondent through the questions (Ritchie and Lewis, 2003: 146). The main body of the interview included clear, brief and systematic questions to enable active listening (Kvale, 1996: 132), this is particularly important as the interviews conducted during Part 1 of the scoping study were via telephone.

The questions asked in the main body of the interview included questions around the following four themes:

- **Theme 1**: Career choice
- **Theme 2**: What is a pilot?
- **Theme 3**: The underrepresentation of women in piloting
- **Theme 4**: How to challenge the stereotype of a pilot

**Closing Section**
Finally, a standardised closing procedure was followed, thanking the respondents and asking if there are any other questions the respondent would like to ask of the interviewer. Table 4.8 provides a list of the interview questions from Stage 1.
<table>
<thead>
<tr>
<th>No.</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>What do you consider to be the main factors which could influence a person’s decision to become an airline pilot?</td>
</tr>
<tr>
<td>2</td>
<td>Regardless of the cost of training, in order to become an airline pilot, what characteristics/qualities are required?</td>
</tr>
<tr>
<td>3</td>
<td>What qualities do you think UK airlines are looking for in their pilots?</td>
</tr>
<tr>
<td>4</td>
<td>What skills do you think are essential to becoming a pilot?</td>
</tr>
<tr>
<td>5</td>
<td>Do you personally perceive the low representation of women commercial airline pilots to be an issue?</td>
</tr>
<tr>
<td>6</td>
<td>Do you think the low representation of women pilots is widely recognised by the UK aviation sector?</td>
</tr>
<tr>
<td>7</td>
<td>What do you think could be the reasons for the low representation of women airline pilots in the sector?</td>
</tr>
<tr>
<td>8</td>
<td>Do you think that the high proportion of male pilots could deter women from applying to become pilots?</td>
</tr>
<tr>
<td>9</td>
<td>Why do you think some of the public perception could be that men are more suited to a career as a pilot?</td>
</tr>
<tr>
<td>10</td>
<td>What were (name of organisation/society/flight training school) motivations to address the underrepresentation of women in piloting?</td>
</tr>
<tr>
<td>11</td>
<td>Who was responsible for the decision to introduce/promote your initiative to women in particular?</td>
</tr>
<tr>
<td>12</td>
<td>How do you think the media coverage of the initiative was received? Has it had an impact?</td>
</tr>
<tr>
<td>13</td>
<td>Why do you think increasing the number of women pilots has been recognised as an issue by some airlines at this point in time?</td>
</tr>
<tr>
<td>14</td>
<td>What do you think could be the benefit to UK airlines of increasing the number of women pilots?</td>
</tr>
<tr>
<td>15</td>
<td>What else do you think could be done to improve the attractiveness of the career for women?</td>
</tr>
<tr>
<td>16</td>
<td>How do you think airlines, training schools, colleges/universities could work together to encourage more women to consider the pilot career path?</td>
</tr>
<tr>
<td>17</td>
<td>Do you have anything else you wish to add?</td>
</tr>
</tbody>
</table>

*Table 4.8 Scoping Study Interview Questions*
### Additional Questions

<table>
<thead>
<tr>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many cadets are at the Flight School currently?</td>
</tr>
<tr>
<td>What is the gender split of the cadets?</td>
</tr>
<tr>
<td>How many cadets are typically in each integrated programme cohort?</td>
</tr>
<tr>
<td>How often does each integrated course begin?</td>
</tr>
<tr>
<td>How many cadets are self-funded and how many are on sponsorship schemes?</td>
</tr>
<tr>
<td>What is your current airline placement figure?</td>
</tr>
<tr>
<td>During the selection process, do you notice any differences between men and women in the approaches taken to complete tasks at any of the stages?</td>
</tr>
<tr>
<td>Can you tell me a bit about the culture of the training school?</td>
</tr>
<tr>
<td>How do you as a school ensure cadets are happy during their time in training?</td>
</tr>
<tr>
<td>Are there any common problems experienced by cadets during training?</td>
</tr>
<tr>
<td>How do you think the training school culture prepares the cadets for the professional world?</td>
</tr>
<tr>
<td>What support networks do you offer cadets upon graduating?</td>
</tr>
<tr>
<td>Do you think airlines have a preference to the training route individuals take?</td>
</tr>
</tbody>
</table>

Table 4.9 Additional Questions for Part 2 of the Scoping Study

The interviews from Parts 1 and 2 were transcribed and a thematic data analysis technique was used using NVivo, a qualitative data analysis software package. Further information about the qualitative data analysis technique used is provided in Section 4.12.1. The findings drawn from both parts of the scoping study are presented in Chapter 5.

Part 2 respondents identified that the cadets at their respective Flight Schools would be willing to be involved in the research and therefore the scoping study findings informed the next stages of the research; the cadet interviews (Stage 2) and survey (Stage 3). Stages 2 and 3 were conducted using respondents attending FS1 or FS2. Although Stages 2 and 3 were conducted concurrently, they are explained sequentially in Sections 4.9 and 4.10.

#### 4.9 Case Study Stage 2: Cadet Interviews

Stage 2 consisted of semi-structured, face-to-face interviews with cadets at Flight Schools 1 and 2. Cadet interviews at FS1 were conducted at their Flight School in the UK; however, cadets at FS2 complete their training in Spain, therefore the cadet interviews at FS2 were conducted in Spain.

**Stage 2 Interview Respondents**

Cresswell (2007: 133) states the importance of selecting suitable
respondents for interviews and advises that it is important to select respondents who will be open and honest in sharing information or ‘their story’. Stage 2 consisted of 17 interviews with cadets. This comprised 8 cadets (5 women, 3 men) from FS1 and 9 cadets (5 women, 4 men) from FS2. A number of cadets were approached and asked to participate by the respondents in the second part of the Scoping Study, Flight School Management personnel. However, cadets’ availability and flying schedules dictated whether they could participate in the interview. Table 4.10 lists the interview respondents by their ID, the letter ID’s have been used to anonymise the cadets and these letters will be used in Chapters 6 and 7 where the interview findings are presented. In addition, cadets’ Flight School, gender, and funding position are stated as well as whether they are responsible for any other individuals (e.g. spouse/partner, relative or dependent children).

<table>
<thead>
<tr>
<th>ID</th>
<th>Flight School</th>
<th>Gender m-male f-female</th>
<th>Funding Position</th>
<th>Responsible for any other individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1</td>
<td>F</td>
<td>Self-funded</td>
<td>0</td>
</tr>
<tr>
<td>B</td>
<td>1</td>
<td>F</td>
<td>Airline sponsored</td>
<td>0</td>
</tr>
<tr>
<td>C</td>
<td>1</td>
<td>F</td>
<td>Airline sponsored</td>
<td>0</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
<td>F</td>
<td>Self-funded</td>
<td>0</td>
</tr>
<tr>
<td>E</td>
<td>1</td>
<td>F</td>
<td>Self-funded</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>M</td>
<td>Self-funded</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>M</td>
<td>Airline sponsored</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>M</td>
<td>Airline sponsored</td>
<td>0</td>
</tr>
<tr>
<td>F</td>
<td>2</td>
<td>F</td>
<td>Self-funded</td>
<td>2</td>
</tr>
<tr>
<td>G</td>
<td>2</td>
<td>F</td>
<td>Self-funded</td>
<td>0</td>
</tr>
<tr>
<td>H</td>
<td>2</td>
<td>F</td>
<td>Airline sponsored</td>
<td>0</td>
</tr>
<tr>
<td>I</td>
<td>2</td>
<td>F</td>
<td>Airline sponsored</td>
<td>0</td>
</tr>
<tr>
<td>J</td>
<td>2</td>
<td>F</td>
<td>Self-funded</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>M</td>
<td>Airline sponsored</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>M</td>
<td>Airline sponsored</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>2</td>
<td>M</td>
<td>Self-funded</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
<td>M</td>
<td>Self-funded</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 4.10 Stage 2 (Cadet) Interview Respondents
4.9.1 Stage 2 Interview Schedule

The questions asked in the main body of the interview stemmed from the literature review, theory, and the findings of the two-part scoping study. These questions and their purpose can be broken down into sections:

**Career decisions**: to examine the reasons why cadets have chosen to become a pilot.

**Pathway to the profession**: to explore how the experiences of cadets prior to training have shaped their identities.

**Perceptions of piloting**: to determine the cadets’ perceptions of piloting.

**Culture of the Flight School**: to explore the context of the flight training school and cadets’ perceptions of the culture of the flight school.

**Experiences in training**: to determine how cadets experience the flight training setting.

Throughout the interviews, probing was used. This is a device which gets the respondent to expand on their responses (Robson, 2011). Flexibility of the interview is important because, as Cresswell (2007) noted, respondents may not necessarily always fully answer the question being asked by the researcher. In some cases, respondents may answer questions which are due to be asked later in the interview.

Table 4.11 lists the questions asked to the cadets during Stage 2. The italicised questions were only asked during the interviews with women cadets.
<table>
<thead>
<tr>
<th>No.</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Can you explain what motivated you to become a pilot?</td>
</tr>
<tr>
<td>2.</td>
<td>When did you decide you wanted to become a pilot?</td>
</tr>
<tr>
<td>3.</td>
<td>What appeals to you the most about the profession?</td>
</tr>
<tr>
<td>4.</td>
<td>What, if anything, would have discouraged you from starting training?</td>
</tr>
<tr>
<td>5.</td>
<td>What did you look for in a training provider?</td>
</tr>
<tr>
<td>6.</td>
<td>Can you tell me about the culture (principles, beliefs, values) of the training school?</td>
</tr>
<tr>
<td>7.</td>
<td>Does the training school make an effort to include all cadets at the school?</td>
</tr>
<tr>
<td>8.</td>
<td>Do you notice the training school being predominantly male? If yes, does this bother you?</td>
</tr>
</tbody>
</table>
| 9.  | a) Can you tell me a bit about the application and selection process you went through?  
   b) Did you experience any difficulties during this stage?                 |
| 10. | How do you think you are getting on in training?                         |
| 11. | a) Have you experienced any difficulties so far?                          
   b) If you have experienced a problem during training, how have you dealt with it? |
| 12. | Has there been/is there a favourite part of your training so far?         |
| 13. | What, if anything would result in you considering leaving the training school? |
| 14. | Do you feel your training has affected your social life?                  |
| 15. | Would you say there are any advantages or disadvantages of being a woman in training school? |
| 16. | What are the easiest and toughest things about being a woman in pilot training? |
| 17. | Can you describe your role as a woman in the training school and as a woman outside of the training school? |
| 18. | Can you describe your relationships with the members of staff and flight instructors? |
| 19. | Have you been taught by both men and women instructors? How many?        |
| 20. | Do instructors treat all of the cadets similarly?                        |
| 21. | Do you have a preference for a male or female instructor?                |
| 22. | Can you describe your relationships with your peers?                    |
| 23. | Can you define what being a good pilot means to you? What characteristics do they hold? |
| 24. | What is it about you as an individual which you think is significant in you becoming a pilot? |
| 25. | Do you expect to face any difficulties/ challenges in your choice of career? |
| 26. | What do you think will be the best and worst thing about being a pilot?  |
| 27. | What sort of airline/company would you like to work for in the future? What attracts you to this particular airline/company? |
| 28. | And later on in the profession, what factors would ensure you remained in the profession? (Working conditions/ pay/ flexibility etc.) |
| 29. | Are you confident that your gender will have no bearing on your career progression? |
| 30. | Finally, do you have any advice or a message for someone considering starting pilot training school? |

**Table 4.11 Stage 2 Interview Schedule**

As concurrent nested procedures and a mixed method approach were chosen, Stages 2 and 3 occurred concurrently. Stage 3 included the survey which was released to the cadets at FS1 and FS2; this is described in Section 4.10.
4.10 Case Study Stage 3: Cadet Survey
The survey was designed and distributed via Bristol Online Survey (BOS), an online survey tool. This type of survey minimises costs, creates an effectively designed survey and increases response rates. The survey tool produces a URL code which respondents can access via the internet. Two surveys for each Flight School were produced, one for men and one for women. The only variations between the survey was the name of Flight School and the respondents gender.

Stage 3 Survey Respondents
Respondents to Part 2 of the scoping study confirmed that the cadets at their respective Flight Schools would be willing to participate in this research. As a result, the survey URL code was released to the cadets via email by a member of flight school management from each Flight School as Data Protection regulations prevented the Flight Schools from releasing the names and email addresses to the researcher. It must be noted that there was no control over who completed the survey; therefore it is possible that some of the interview respondents may have also completed the survey.

An overview of the Stage 3 survey respondents is provided in Table 4.12. In addition, Figures 4.2 and 4.3 show the survey response split by gender (Figure 4.2) and by Flight School (Figure 4.3).
<table>
<thead>
<tr>
<th></th>
<th>Flight School 1</th>
<th></th>
<th>Flight School 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
<td>Men</td>
<td>Women</td>
</tr>
<tr>
<td><strong>Responses</strong></td>
<td>70</td>
<td>8</td>
<td>38</td>
<td>12</td>
</tr>
<tr>
<td><strong>Response Rate</strong></td>
<td>12.4%</td>
<td></td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td><strong>Female Response Rate</strong></td>
<td>21%</td>
<td></td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Training course</strong></td>
<td>55 Integrated</td>
<td>8 Integrated</td>
<td>All Integrated</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15 MPL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Average time in training</strong></td>
<td>9 months</td>
<td>10 months</td>
<td>8 months</td>
<td>7 months</td>
</tr>
<tr>
<td><strong>Funding positions</strong></td>
<td>50 self-funded (of which 3 women)</td>
<td>28 airline schemes (of which 5 women)</td>
<td>20 self-funded (of which 2 women)</td>
<td>30 airline schemes (of which 10 women)</td>
</tr>
<tr>
<td></td>
<td>8 months</td>
<td>12</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td><strong>Level of Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary education</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Post-secondary education</td>
<td>34</td>
<td>2</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Vocational Qualification</td>
<td>5</td>
<td>0</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Undergraduate Degree</td>
<td>22</td>
<td>2</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>Postgraduate degree</td>
<td>4</td>
<td>3</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Doctorate</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Ethnic Origin</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White British</td>
<td>55</td>
<td>6</td>
<td>19</td>
<td>5</td>
</tr>
<tr>
<td>White Irish</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Any other White background</td>
<td>8</td>
<td>2</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Bangladeshi</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Indian</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Any other Asian background</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Any other mixed background</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Any other ethnic background</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Responsible for any other individuals</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

Table 4.12 Stage 3 (Cadet) Survey Responses
Survey Response by Gender
N=128

![Pie chart showing 84% Men and 16% Women response]

Figure 4.2 Survey Responses by Gender across both Case Studies

Survey Response by Flight School
N=128

![Pie chart showing 66% FS1 and 34% FS2 response]

Figure 4.3 Survey Responses by Flight School
4.10.1 Stage 3 Survey Design

The survey was developed using a process described by Czaja and Blair (2005: 60-61) See Appendix A. The nine steps taken included:

1) Listing the research questions
2) Under each question, key topics and key themes began to emerge
3) A literature search was conducted, based on other surveys within this field
4) Draft version of the survey introduction produced
5) Draft versions of questions are produced
6) Ethical considerations
7) Proposed ordering of questions
8) Pilot testing phase
9) Adapting and making changes based on results and feedback

Key considerations for creating the survey include; the wording of the questions, the number of question types, and the timing of the survey (Oppenheim, 1992: 110). The different possible question types include open and closed questions; a mixture of both of these provides freedom for respondents and controls the time taken to complete the survey. The most effective questions are brief and clear, preventing the respondent from confusion (Ritchie and Lewis, 2003: 155). In order to gain a high response rate, ease of understanding and ‘accurate, exhaustive, mutually exclusive’, fixed-alternative responses have to be provided (Robson, 2011: 254).

The survey included five-point Likert scales as a ‘multiple-item measure of a set of attitudes relating to a particular area’ (Bryman, 2012: 166). Likert scales are used to measure the intensity of respondent’s feelings. The format is usually a five point scale which allows respondents to indicate their level of agreement to with a particular statement (commonly referred to as items). A frequent set of five point measurements used include ‘strongly agree’ to ‘strongly disagree’. When using a Likert scale it is important to ensure that ‘the items must be statements, not questions’ and ‘the items must all relate to the same object’ and ‘the items that make up the scale must be interrelated’ (Bryman, 2012:166). A variation of negative and positive phrases is required.
in Likert scale formats, some items must imply a negative view and others a positive view to ensure that respondents respond in a consistent way.

The appearance and layout of any survey are also important considerations. This survey used a Bristol Online Survey (BOS), a design template to ensure the survey is aesthetically pleasing and clear which should motivate respondents to complete it (Frazer and Lawley, 2000: 32).

When designing the survey, the questions originated from the literature review, the theory and key concepts, and the scoping study. See Appendix B for information on question origins. The survey design has been broken down into sections including;

**Introduction**
The start of the surveys includes an introductory paragraph; this provides respondents with enough information to induce their cooperation (Czaja and Blair, 2005: 85). It outlines the purpose of the research and the ethical guidelines that will be adhered to. The survey then has five subsequent sections;

**Section A: Pathway to Piloting**
This section asks cadets how long they have been at the training school and seeks to understand what factors influenced the cadets’ career decision.

**Section B: Training School Experiences**
This section asks how the cadets chose their training provider and what factors were important to them when choosing a training provider. Questions about their attachment and commitment to their training school are also asked within this section.

**Section C: Future as a Pilot**
Section C asks how the cadets are funding their training. If they are not sponsored by an airline, then this section asks what factors will be important to the cadet when choosing a potential employer.

**Section D: Background**
The final section asks background information of the cadets including; their age, their level of education, ethnicity and whether they are responsible for dependent adults or children. This information is vital for the survey data analysis.

**Closing statement**

The closing section provides information thanking the respondents, reminding of their right to withdraw from the research and provides contact details if respondents have any further questions.

The survey design is presented in Appendix A.

### 4.11 Ethical Considerations

Ethical approval for the work was sought from, and granted by, Loughborough University's internal ethics committee and conforms to all relevant data protection safeguards.

Ethics relate to the integrity of the research and related discipline (Bryman, 2012). Ultimately, ‘*Ethical behaviour helps protect individuals, communities and environments*’ (Israel and Hay, 2006:2).

A key ethical consideration for this work was respondents participating on the basis of informed consent. Faden and Beauchamp (1986) stated that those participating in research need to understand that they are authorising someone else to involve them in the research, and what they are authorising. Because of this, it was necessary that the purpose of the research, methods, risks, and use of results were detailed to all participants. By having this information, participants were able to make an informed decision if they would like to participate (ibid, 1986). Sufficient information and assurances about participating in the research were provided to all interview and survey respondents. Alongside this, confidentiality and anonymity of information provided was assured, stating compliance with the Data Protection Act (1998).
Having detailed the data collection procedures, the next stage of the research process includes data analysis and interpretation.

### 4.12 Data Analysis

Analysis ‘requires “breaking up” something complex into smaller pieces and explaining the whole in terms of the properties of, and relations between, these parts’ (Robson, 2011: 412).

As this thesis uses a mixed method approach, different techniques are required to analyse each type of data. These are detailed in Sections 4.12.1 and 4.12.2.

#### 4.12.1 Qualitative Data Analysis

The interviews at Stages 1 (Part 1 and 2) and 2 of the research were recorded via Dictaphone and transcribed verbatim by the researcher. Once transcribed, the data was coded.

NVivo, a qualitative analysis software package, was used to analyse the qualitative data. This specialist package processes large amounts of data very quickly and allows consistent coding schemes to be developed (Robson, 2011). The chosen data analysis technique used in this thesis, thematic analysis, is outlined in this Section.

‘Thematic analysis is a data reduction and analysis strategy by which qualitative data are segmented, categorized, summarized, and reconstructed in a way that captures the important concepts within the data set’ (Given, 2008).

The advantages of thematic coding include its flexibility and accessibility, however, it has been criticised for being too broad and limited to description and exploration instead of interpretation (Braun and Clarke, 2006). The four steps of thematic analysis are; (Ritchie et al., 2003; Attride-Stirling, 2011; Robson, 2011).
**Step 1: First Level Coding**

Gibbs (2007: 38) explains coding is;

> ‘how you define what the data you are analysing is about. It involves identifying and recording one or more passages of text or other data...usually, several passages are identified and they are then linked with a name for that idea-the code. Thus all the text and so on that is about the same thing exemplifies the same thing is coded to the same name’.

Familiarity with the data is essential. As the data is collected, initial codes emerge which highlight areas of interest or importance. This process requires going back and forward from the data to the analysis and writing down any notes, putting data into meaningful groups and themes and sub themes begin to emerge. Codes are ‘the most basic segment, or element, of the raw data of information that can be assessed in a meaningful way regarding a phenomenon’ (Boyatzis, 1998: 63). First level coding involves assigning labels to groups of words, systematically working through the data. Coding can be ‘data-driven’, ‘theory-driven’, or both (Robson, 2011: 479); data-driven coding means themes arrive as a result of the data, whereas in theory-driven coding, researchers approach the data with specific questions in mind. This thesis used both of these approaches to coding, whilst some ideas of codes begin to emerge from the literature and the research questions, themes are also identified inductively through the interaction with the data (Robson, 2011). The types of information which can be coded include behaviours, events, activities, strategies, meanings and settings (Gibbs, 2007: 47-48) and whilst coding, repetition and potential themes will start to emerge.

**Step 2: Second Level Coding**

Having completed the initial coding, second level coding occurred, this involved grouping the initial codes into smaller themes and at times, the initial codes end up being themes in their own right. Identifying themes can be done through various techniques, within this thesis, repetitions, similarities and differences and missing data are used to identify themes. By identifying
repetition and searching for similarities and differences, themes and sub themes emerge. Data which did not fit into a specific theme was grouped under ‘miscellaneous’. Having completed this stage, it was necessary to reread the entire dataset in order to identify any incorrect coding or missing themes and to ensure that the themes captured the data, reworking some themes, finally the themes began to fit together and the story which the data tells could be seen (Robson, 2011).

**Step 3: Identification of Themes**

This ‘story’ can help form the stage of managing the themes into thematic networks. How the themes can fit together and where the main themes branch off into sub themes are identified during this stage in order to ensure the ‘themes reflect the data and the data supports the themes’ (Robson, 2011: 483). The network can be used in the next stage as a tool to analyse the data, it can help to form and understand relationships and patterns from the data, aiding integration and interpretation.

**Step 4: Generating Meaning**

This step requires generating meaning from the data. Miles and Huberman (1994) identify ways in which this can be done. The main techniques used in this thesis included; noting patterns, counting, making contrasts and generating theoretical coherence. These techniques enabled an accurate, non-repetitive story of the data to be provided (Braun and Clarke, 2006) in order to answer the research questions set out in this thesis.

Having detailed the steps of the thematic analysis, this thesis used data and theory driven coding, therefore elements of the data were not approached with any questions in mind and therefore themes emerged as a result of the data. However, some of the themes were driven by the theory and key concepts outlined in Chapter 3. Through knowledge of Kanter’s Theory of Tokenism (1977), Kelchtermans’ components of professional identity (2009), and Butler’s (1990) theory of Gender Performativity, elements of the data were approached with specific questions in mind. Table 4.13 lists the broad themes identified in first level coding (Stage 1) in bold. These themes were
then grouped into smaller themes during second level coding (Stage 2). The next process required managing the themes so that they began to tell a story (Stage 3) before generating meaning from the data in Stage 4. The analysis of the scoping study interviews followed the same process.
<table>
<thead>
<tr>
<th>Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Career Influences</strong></td>
</tr>
<tr>
<td>- Family influences, the media and childhood experiences</td>
</tr>
<tr>
<td>- Perception of the profession</td>
</tr>
<tr>
<td>- Appeal of the Profession</td>
</tr>
<tr>
<td>- Job motivation</td>
</tr>
<tr>
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Table 4.13 Coding Strategy for the Thematic Analysis (Stage 2)
This section has described the qualitative data analysis technique used in this thesis. The 'stories' which emerged from the qualitative data are detailed in Chapters 5 (scoping study), 6, and 7 (cadet interviews). However, this only provided data to answer part of the research- additional information obtained from a survey was also required. The quantitative data analysis process will now be provided.

4.12.2 Quantitative Data Analysis
Quantitative data analysis uses techniques to convert data to numerical forms and analyse them statistically in an attempt to explain what is observed. It involves the *numerical representation and manipulation of observations for the purpose of describing and explaining the phenomena that those observations reflect* (Babbie, 2010: 422). This thesis used the Statistical Package for Social Sciences (SPSS) to analyse the quantitative data produced from the survey. By statistically analysing the data, findings can be generalized to a larger population. However before conducting a statistical analysis which will enable the researcher to make inference from the sample to the population, a description of the data is required.

**Descriptive Statistics**
Descriptive statistics describe what the data shows. Descriptive statistics simplify a large amount of data and present the information in a manageable form (Trochim, 2006). Examples of descriptive statistics include the mean, median, mode, range, variance and standard deviation. With descriptive statistics, the researcher can describe the data but can only make reference to the sample used. However, in order to make inference from the sample to the population, inferential statistics are required.

**Inferential Statistics**
Inferential statistics allow researchers to *demonstrate the probability that the result deriving from a sample are likely to be found in the population from which the sample was taken* (Bryman and Cramer, 1997: 5). There are a number of different tests which can be used for this; therefore a number of different factors must be taken into consideration in order to choose the most appropriate test.
1) The variable of the research. In statistics there are two types of variables, numerical and categorical. Categorical variables are made up of categories e.g. male or female, whereas numerical variables are numbers e.g. height or number of participants. The possible variables in this research are categorical variables; these are men and women and/or FS1 and FS2.

2) The scale of measurement. There are four measurement scales; nominal, ordinal, interval and ratio. Nominal scales are essentially labels, they are mutually exclusive. Ordinal scales are measures of non-numeric concepts for example happiness or satisfaction. Interval scales are numeric and the difference between the values is known and finally, ratio scales have an absolute zero and the difference between units is known, e.g. height or weight.

Once these have been decided, the decision of a parametric or non-parametric test can be made.

**Parametric and Non-Parametric Tests**

Researchers argue that parametric tests ‘should only be used when the data fulfils the following three conditions: 1) the level or scale of measurement is of equal interval or ratio scaling; 2) the distribution of the population scores is normal and 3) the variances of both variables are equal or homogenous’ (Bryman and Cramer, 1997: 117). Non-parametric tests are called distribution-free tests as they do not rely on parameter estimates or precise assumptions about the distributions of variables.

As this thesis deals with: 1) unrelated samples of subjects (men and women) and 2) ordinal scales of measurements (the survey includes Likert scales), it was decided that a non-parametric test should be conducted. Because the research questions aim to investigate the difference between two samples of data, an independent-measures t-test/two-sample t-test was required because the populations are not equal. The Mann-Whitney U-test was deemed as the most appropriate test, it can be used to compare any two
Mann-Whitney U Test
The Mann-Whitney U test is a non-parametric equivalent of the unpaired two-group t-test (Robson, 2011). This test compares outcomes between two independent groups (men and women) and although it is a non-parametric test, it does assume that the two distributions are similar in shape.

The assumptions of the Mann-Whitney U test include:

1) The dependent variable should be measured on an ordinal or continuous scale
2) The independent variable should be two independent, categorical groups.
3) Observations should be independent (there should be no relationship between the two groups or within each group).
4) Observations are not normally distributed. However, they should follow the same shape (i.e. both are bell-shaped and skewed left) (Statisticshowto.com, 2017: 1).

By comparing two populations, the test produces a U statistic by running the following formula:

\[ U_1 = R_1 - \frac{n_1(n_1 + 1)}{2} \]

\[ Or \]

\[ U_2 = R_2 - \frac{n_2(n_2 + 1)}{2} \]

\( U= \) Mann-Whitney U test, \( n_1/n_2 \) is the sample size for sample 1, \( R_1/R_2 \) is the sum of the ranks in Sample 1 (ibid, 2017)

‘The logic behind Mann-Whitney test is to rank the data for each condition, and then see how different the two rank totals are. If there is a systematic difference between the two conditions, then most of the high
ranks will belong to one condition and most of the low ranks will belong to the other one. As a result, the rank totals will be quite different. On the other hand, if the two conditions are similar, then high and low ranks will be distributed fairly evenly between the two conditions and the rank totals will be fairly similar. The Mann-Whitney test statistic “U” reflects the difference between the two rank totals. The SMALLER it is (taking into account how many participants you have in each group) then the less likely it is to have occurred by chance. A table of critical values of U shows you how likely it is to obtain your particular value of U purely by chance. Note that the Mann-Whitney test is unusual in this respect: normally, the BIGGER the test statistic, the less likely it is to have occurred by chance). (Hole, 2011)

Using the appropriate test means researchers are able to determine if the result is statistically significant. The statistical value tells you ‘how likely it would be that you would get the difference you did by chance alone, if there really is no difference between the categories represented by your groups, in the population from which you drew your sample’ (Robson, 2011: 446). This thesis tests the plausibility that the “null hypothesis” (that is no difference between the population means) is true.

4.13 Summary
This chapter has presented the research approach which is being used to collect the data in order to address the aim, objectives and research questions of this thesis. A description and justification of each methodological decision has been provided. The next chapter, Chapter 5, presents the findings of Stage 1 of the research, the scoping study, in order ‘to examine the views of key aviation stakeholders with respect to the development of the pilot identity’ (objective 3).
5
Aviation Stakeholder and Flight School Management Perspectives

5.1 Introduction
Chapter 5 presents the findings from the scoping study which aims ‘to examine the views of key aviation stakeholders with respect to the development of the pilot identity’ (objective 3). The literature in Chapter 2 revealed a paucity of research into the pilot profession. As awareness of the underrepresentation of women in piloting has increased among the industry and the Government due to the anticipated shortage of commercial pilots, an up-to-date insight was necessary. The approach used for the scoping study has been explained in Chapter 4. The scoping study consists of two parts. The first part of the scoping study involves interviews with ten carefully selected aviation personnel. The findings of these interviews are discussed in Section 5.2. In light of the information revealed, the second part of the scoping study includes interviews with management personnel at two Flight Training Schools (FS1 and FS2). Section 5.3 provides contextual information about the two Flight Training School case study sites and details of Flight Training. This is followed by Section 5.4 which reports on the findings from the interviews with the Flight School management personnel.

Chapter 4 detailed the questions which were asked of the respondents during the scoping study interviews and the findings will be presented in the order in which the questions were asked.

5.2 Scoping Study Part 1: Aviation Stakeholder Perspectives
The benefits of having a diverse workforce were evident with eight of the ten interviewees stating that having more women pilots is a business case for airlines, allowing them to access potential talent. In addition, it can also improve the image and reputation of an organisation and strengthen the workforce, with women being able to bring a different skillset to the profession. Two of the airline representatives explained that their company is
currently working at encouraging women into piloting by using current women pilots as mentors to young women. All of the respondents recognised that the lack of women pilots is an issue and suggested that gender *should* be irrelevant with Respondent S2 stating: ‘*it should be the right person for the job*’. However it is evident that airlines are only able to recruit from those who have actually applied for jobs. Therefore the obstacles facing the industry in challenging the pilot stereotype must be addressed to attract more women to apply for pilot training.

The five “challenges” which were identified from Part 1 of the scoping study are presented in Sections 5.2.1-5.2.5.

### 5.2.1 Challenge 1: Gender Stereotypes

Gender role stereotypes and the segregation of jobs by gender were evident. Respondent S6 stated;

> ‘Our society is built around it, it sounds old-fashioned but it’s true; a male boss, these are the roles we expect men to be in, woman the mother. Subconsciously, in the way our society is organised that’s how we think’.

All of the respondents mentioned the pilot stereotype. Respondent S1 stated ‘*the job is surrounded by many stereotypes which may make it appeal more to males, such as the jet set lifestyle*’. These stereotypes are evident from a young age as three respondents identified the ‘*generic boys and their toys thing*’ and suggested many women do not consider flying an aircraft. As Respondent S9 stated piloting is seen as a ‘*male thing from a young age*’. In addition to this, the contrasting stereotype of cabin crew being ‘*glammed up and feminine*’ was discussed by Respondent S10, who suggested that girls are more likely to be attracted to cabin crew as it is ‘*gender-appropriate*’.

Respondents stated that challenging a deeply engrained stereotype is difficult. As Respondent S5 stated; ‘*we are surrounded by these images all the time and I think if you are not exposed to it, then you don’t see, you don’t know- it doesn’t even occur to most women*’. Highlighting how the stereotype has caused aviation to be ‘*so set in its ways*’ (Respondent S2), six of the
respondents referred to breaking the exposure barrier as essential to attracting more women into aviation. In particular they referred to young girls predominantly communicating with their (girl) friends, whom equally are not attracted to the profession. As Respondent S6 stated ‘numbers [of women] are so low in commercial aviation that women do not see it as a sort of norm’.

Occupational sex role stereotyping of the pilot profession was explained as a by-product of the military by five respondents with Respondent S9 stating that ‘pilots needed to be strong to fly old aircraft, however this is not true of new, modern aircraft’. Respondent S6 concurred, stating that ‘it’s just such an engrained way of looking at life, that we presume that you have to be big and heavy and strong to handle a piece of complex machinery’. Echoing this, albeit from a different perspective, Respondent S9 identified ‘the job of flying is very much matter of fact and not requiring much emotion so a male behaviour type fits the flight deck better than a female one’.

The effects of occupational sex role stereotyping were identified by Respondents D and E, who explained how stereotyping affects society’s perceptions of the profession, and in turn, how women pilots have experienced both positive and negative reactions from passengers. Examples of positive reactions included elderly women congratulating women pilots on their careers. Yet, despite the positive intent of these remarks, they are merely reinforcing the ‘male norm’ of the pilot profession by remarking on the women pilots’ achievements. Similarly, Respondent S10 highlighted society’s perceptions of women airline pilots; ‘It’s always a surprise to see a woman pilot, the same with woman lorry drivers and tractor drivers’. Despite the respondents identifying the deeply engrained pilot stereotype, Respondent S2 asked ‘time slowly erodes old stereotyping and gender balances; does it need speeding up?’, similarly, Respondent S5 said ‘I can see the industry is changing and the future will be different’, suggesting improvements could be realised in a few years’ time.
5.2.2 Challenge 2: Lack of Knowledge of the Career Pathway into Aviation

Four of the respondents identified the lack of knowledge of entry pathways into the profession as being an issue. ‘Many people do not know how to get into it [piloting], they do not know the options available’ (Respondent S7). In addition, the lack of knowledge from careers advisors on ‘how to get into’ aviation was noted by three of the respondents. They stated that it is very difficult to enter the aviation profession in the first place and a lack of careers guidance is an issue. The type of individuals who are attracted to aviation were identified by three respondents. They explained that the types of individuals who are attracted to aviation have usually had an emotional attachment with flying from a young age or their family members been pilots. Consequently, it is not something which ‘most people could be influenced into’ (Respondent S6).

Another obstacle related to a lack of knowledge concerning the pilot profession. Five respondents mentioned that people perceive the pilot lifestyle being incompatible with family life and the profession being solely focused on technical knowledge and physical ability to handle the aircraft. However, all of the respondents agreed that what airlines are looking for in their pilots has changed. Respondent S4 suggested that ‘there is a lot less focus on technical ability nowadays’. Similarly, Respondent S2 stated ‘airlines are looking for many more skills than just flying: personal skills, customer service skills’.

5.2.3 Challenge 3: Culture of Aviation

The culture of aviation was identified as a challenge. Respondent S2 stated; ‘the airline culture is archaic’. Respondent S3 concurred explaining ‘culture takes time to change, it was recognised many years ago that more women need to enter the profession, however we have a long way to go’. Despite all of the respondents identifying change having taken place in the industry and believing that the future will be different, the ‘macho, rough, tough’ (Respondent S2) culture of aviation remains, creating and reinforcing perceptions of the industry and leading to a heavily male dominated environment. With this in mind, it was identified by three of the respondents
that this culture would deter some women from considering the profession however, ‘not the type of women flying now’ (Respondent S9). All ten respondents made similar points as to how women pilots needed to be ‘assertive, not afraid to speak out and have a dominant personality, they need to speak up a lot and not be shy’ (Respondent S4). This culture seemingly filters out those women who are ‘softy, floaty, flowery’ types according to Respondent S5, while Respondent S10 suggested that ‘females need to be thick-skinned and take a joke, the ones that get through tend to be the ones who are more determined’. Respondent S6 similarly stated ‘it is a heavily male dominated environment; you have to be a certain type of woman to bother with that’.

The impact of the male-dominated culture seemed to be that women pilots adapt. As Respondent S2 stated ‘sometimes I think they [women pilots] try to appear ‘harder’ and sterner and serious to try and fit into the way most retiring/older pilots behave’. Such statements suggest women are conforming to the culture. These coping mechanisms seemed to start as early as training. Four of the respondents identified women pilots in training wanting to prove themselves and their ability. Comments included; ‘during training, women worked extremely hard to achieve the best, they didn’t want to stand out because of their gender’ (Respondent S1) and ‘the females in training seemed to want to prove themselves’ (Respondent S4). Another effect of the aviation culture which became evident throughout responses is the confidence barrier the culture can impose for individuals. Insight from respondents included ‘it’s realising that females can carry out the role as well’, ‘females need to realise they will be accepted as a woman, a female, and a mother’, ‘one angle is thinking they can do it’ and ‘I think many young women feel intimidated at the thought of becoming a pilot’ (Respondents S1, S3, S7 and S8).

5.2.4 Challenge 4: The Media
Media representation of pilots is an evident challenge. Respondent S5 said that ‘you don’t look in women’s magazines and see a woman dressed as a Captain do you?’ Similarly, Respondents F, G and J highlighted the lack of
exposure of women pilots in the media; ‘a pilot isn’t advertised as glamorous like a celebrity status is’; ‘compare a pilot image to the famous people; a pilot seems boring doesn’t it?’ and ‘men are pilots, you are just used to seeing them that way, as soon as people see the uniform, you expect to see a man’.

In addition, the medium of communication was highlighted as an obstacle. Although airlines are presenting more images of women pilots in their advertising, and flight schools are using women in their brochures, as Respondent S1 expressed; ‘publicising in aviation magazines will not help, we need to target other means of media sources which more women read’.

Eight respondents identified the media as being critical to this discussion and Respondent S3 ‘the media plays a role in normalising the profession’. However, three of the respondents felt strongly about the need for the media to handle the issue carefully and airlines must ensure they are not undertaking campaigns and advertising solely to target women as this could be considered positive discrimination. Alongside this, the requirement of subtlety became apparent. Five of the respondents mentioned how key slogans and marketing pitches including ‘you can do this’; ‘If I did it, you can!’ can reinforce the stereotypes and male norm, suggesting careful consideration should be given to marketing strategies.

5.2.5 Challenge 5: Structure of Pilot Training
A final challenge was the implication of the decision to embark on pilot training, with the integrated training route (see Section 5.3) in particular receiving comment. Respondent S7 said ‘it is always assumed that those entering training will not even be considering a family for many years, however for those people with a family before training, the environment is completely unfriendly’. The training environment and structure emerged as an obstacle for individuals who are unable to take a lengthy period of time out of their lives, however three Respondents identified this as possibly being more difficult for women. Respondent S1 stated that ‘training is a huge commitment, you have to put your life on hold for it’ and ‘a man may be more willing to give up their job for a year of two to train over a woman’. Similarly, Respondent S5 suggested that ‘older men considering training could be more supported at home to be able to start training’, suggesting perhaps it was
more difficult for women to enter training. In addition to the perceived sacrifices being made in order to start training, a recurring factor was the cost of pilot training, half of the respondents identified the 'huge financial decision' (Respondent S7) with respect to training, leading us to question whether parents may be more willing to invest in training their son than their daughter. Respondent S3 believed the cost barrier could be overcome by 'more airlines sponsoring cadets'.

5.2.6 Conclusions from Scoping Study Part 1
Five issues, namely stereotypes (both gender and occupational), a lack of knowledge of the industry, the role of the media, the culture of aviation and the structure of pilot training have emerged as being key challenges facing the aviation industry’s commitment to increasing the number of women airline pilots. However, whilst the industry can work towards tackling the "male norm" through understanding these challenges, some barriers may not be easily overcome. Just how much control the aviation industry has over challenging the pilot stereotype must be considered. The affordability of training and structure of the training course are the challenges which the industry has most control over, as training providers and airlines can work together to facilitate entry into the profession and provide support during training. However, increasing the awareness of the profession and challenging stereotypes is the role of both the industry and the media, making the pilot profession more appealing and raising aspirations of young women. Evidently, the aviation industry recognises the need to promote diversity; however, airlines must ensure they are not reaching out to women just to enhance their brand image.

Airlines should seek to identify who can influence the process to challenge this stereotype, existing women pilots can act as role models and increase exposure, however by women taking on extra responsibilities, there is the potential of over burdening the marginalised, minority group. Therefore it is also the responsibility of male pilots as well. In terms of societal views, change takes time and the profession still has a long way to go. The current initiatives are increasing the exposure of the profession within society,
allowing young men and women to understand how they could get into the industry. However, the way in which these initiatives and drivers are pitched is even more important than the decision to implement them in the first place. The schemes and initiatives will be seen by those who subscribe to updates, read aviation related magazines and who already have an interest in the profession, however more needs to be done externally by the aviation industry and the media has an important role to play in changing cultural perceptions. Although exposure through media communications can be positive and this scoping study research has identified that the media plays a role in normalising the masculine dominated nature of the profession, the media can equally play an influential role in subconsciously reinforcing the stereotype of the pilot profession by using slogans such as ‘You can do it’; ‘If I can do it, you can do it!’; these remarks impose the belief that, historically, it couldn’t be done, that some women believe it can’t be done and that women should anticipate problems in the profession.

In order to encourage more people to embark on pilot training, the cost barrier could be reduced through more airline-sponsored schemes; this could also tackle the class barrier too. However, the perception of the sacrifices and the time cost of embarking on training being more substantial for women is an avenue for future research. The key lessons learned are the need for airlines to understand the reasons for promoting diversity in the workplace, allowing for more initiatives to be introduced. In addition, both men and women are required to act as role models to promote diversity and initiatives alongside a more careful consideration of marketing techniques and the means of distribution of any media exposure. This will allow for those external to the aviation industry to become more aware of the opportunities in the industry.

Finally, existing pilots must work towards challenging the culture, allowing for a (slow) cultural change, which in turn will change perceptions and challenge “the male norm” of the pilot profession. As it was identified by the respondents that the “type of woman” entering the profession is not a ‘softy, floaty, flowery’ type. Existing women pilots need to challenge the culture, not
reproduce it. If those external to the industry believe you have to “act like a man” in order to succeed in the profession, some young woman may be deterred and believe they do not have what it takes to succeed. As the Chapters 2 and 3 identified, when occupations can ensure that women pilots can succeed in their profession (being a pilot) without having to forego their gender identity (being a woman), being the same or different to men will be irrelevant and there will be more opportunity for women to become role models to young women. This part of the scoping study has identified that future work should seek to understand how women pilots are getting through the training stage of their pilot career by understanding if and how they experience and cope in the early socialisation phase of their career and how their experiences in training are shaping their professional identities.

Having conducted the interviews with key aviation personnel, it became apparent that the views of the personnel at Flight Training Schools would be valuable as this socialisation stage is key to the formation and reproduction of pilot identities. As a result, the second part of the scoping study includes interviews with 6 Flight School management personnel employed by 2 UK Flight Schools. Chapter 4 presented the questions which were asked of the respondents during the scoping study interviews and the findings of the second part of the scoping study will be presented in Section 5.5 in the order which the questions were asked. Prior to this, Section 5.3 provides an overview of the different pilot training routes in order to provide a definition of ab initio pilots and Section 5.4 details contextual information about the Flight Training Schools (FS1 and FS2).

5.3 Overview of Pilot Training

Before becoming a pilot individuals have to consider a few factors. The first is their ability to obtain a Class 1 Medical Certificate in order to ensure they can fly professionally. The medical examination will test vision, hearing, and physical health. Next, the financial cost of pilot training must be considered. It can cost around £100,000 to obtain an Airline Transport Pilot License (ATPL) if an individual is self-funding their training. Some airlines offer financed training in which they provide a loan to the cadet to cover the cost and this is
then paid back when the pilot begins working for that airline (L3 CTS, 2017). As these schemes are very competitive, some cadets secure funding through a loan company. Finally, in order to apply for a place at Flight Training School, a minimum of 5 GCSE’s A-C is required.

Having undergone the selection and assessment procedure to obtain a place on either an airline funded scheme, or a self-funded scheme, individuals have to undertake a rigorous training programme which involves a combination of theoretical knowledge, simulator training and flying experience as well as obtaining multiple different licences and ratings.

In the UK there are three routes to obtaining a pilot’s license;

**Integrated Route**
The integrated course has four main elements; Flight Training (Basic and Advanced), Multi Crew Cooperation Course (MCC), Jet Orientation Course (JOC) and an Airline Preparation Course, all of which make up an Air Transport Pilot License (ATPL). This is an intense course which involves cadets being located at a single Flight Training School for the duration of their training (Balpa, 2016). The integrated course and style of teaching *may not suit everyone, particularly the more mature candidate*” (Balpa, 2016: 9). This route is highly regimented and is an expensive option. An integrated course will mean individuals complete around 195 hours of Flight Training (actual and simulator) and 750 hours of Ground School.

**Modular Route**
Although the modular route will provide individuals with the same outcome as an integrated route, an ATPL qualification, it allows them to complete each stage one at a time. This reduces the pace and also the cost of the course. By taking this approach, candidates can seek out the most cost efficient school and course at a time which suits their lifestyle. This route means that individuals can complete different stages of their training at different training organisations.
Multi-crew Pilot License Route (MPL)
A more recent training option is a Multi-Crew Pilot Licence (MPL) which many airlines have adopted. It is only considered for those who want to work for a specific airline and fly a certain aircraft. Ultimately, the license will be issued with restrictions as the pilot will only be able to fly for that airline on that specific type of aircraft (Balpa, 2016). An MPL will mean cadets complete a minimum of 240 hours of flying (70 hours of actual flying and 170 hours on simulators) as well as 750 hours of ground school (Balpa, 2016). It increases the use of simulator based learning and reduces the amount of time cadets fly in small training aircraft. The aim of an MPL is to reduce the time taken for pilots to progress from a First Officer to a Captain.

This thesis is interested in the experiences of cadets undertaking integrated training because an insight into the Flight Training School environment can be gained as these cadets experience an intense training programme within one Flight Training School. In addition, in 2016, approximately 6,500 new pilots were sourced from such Flight Training Schools (CAE, 2016). However, there are limitations to this approach including not being able to generalise the findings to cadets on modular flight training programmes or training in the military.

5.4 The Flight Schools
5.4.1 Flight School 1
Between June-December 2016, FS1 had 620 cadets undergoing training, 38 of whom were women (6%). At the time in which the interviews were conducted, there were 591 cadets across all training programmes at the school, 33 of those were women (5.6%). Each integrated course has between 12 and 14 cadets on it and courses start at the beginning of each month.

When asked how the school remains competitive, respondents identified that ‘emphasising our placement figure is key’ (M1). The school is highly reputable and has a 98% placement figure rate upon course completion. In addition, the school promotes their opportunities for cadets to train abroad.
The Flight School has identified that the underrepresentation of women at the school as an issue. Therefore, in terms of support; FS1 ensures that if there is more than one woman on a course they will put them together in a house or near each other in accommodation. They have also tried to change the uniform over the past few years to ‘make it a bit more feminine; women [cadets at the flight school] are now allowed to wear heeled shoes [during flight training], unless they are in an aircraft’ (M1). Upon graduation, the school will continue their commitment to care for cadets and offers support to ensure the graduates obtain jobs. This support includes; interview preparation days, one-to-one assistance and regular communication of job opportunities.

5.4.2 Flight School 2
At the time of the interviews, FS2 had 201 cadets, 12 of whom were women (5.9%). Each programme cohort typically contains between 12 and 16 cadets and integrated courses start every month, except for December. Similar to FS1, cadets funding positions vary and they can either self-fund their course or obtain an airline sponsorship. When asked how FS2 remains a competitive training provider, Respondent M4 stated;

‘We focus mainly on our unique selling points...a lot of schools focus on quality, for example the best fleet. However, we have some unique features like the campus environment which is rare for other Flight Schools. We are slightly more exclusive because we have limited spaces available; therefore we have smaller class sizes at around 12 students per cohort’.

All of the training at FS2 is delivered at one site and the school personnel identified that they try to get potential cadets to come and visit the campus in order for the campus to ‘sell itself’ (M5) because they believe that ‘once students visit the campus and sit their assessments about 95% of those students will take up their offers to train here’ (M6). However, due to the campus, family like environment, personnel at the school stated that it can be difficult to ‘find the balance between being formal and having discipline for training and a relaxed atmosphere outside of the classroom’ (F4). Although it
is a common sight to see an instructor and students having a de-brief in the social area together, the school expects very high standards in terms of dress code and behaviours. The fundamental element of training at Flight School 2 is that;

‘You can go anywhere to get a license, however we are trying to prepare cadets so that they adopt the mind-set of a pilot. Every single element of the training contains an assessment to ensure that each cadet is airline material’ (M6).

In terms of support, FS2 has a student committee which provides support for students and ensures that their views are being heard by management. There is also a welfare officer and cadets are paired with a course mentor. FS2 operates an ‘open door policy so the cadets can knock on any door whenever, we are a small-family like campus school not a big cold cooperation’ (M4, FS2). The school offers CV advice, interview preparation and references to cadets who are near graduation.

Having provided a description of the two Flight Schools which are the focus of this thesis, Section 5.5 presents the findings of the second part of the scoping study.

5.5 Scoping Study Part 2: Flight School Management Perspectives

5.5.1 Recognising and Understanding the Problem
All of the respondents identified that the underrepresentation of women at their Flight Schools is an issue. Respondent M4 recognised that ‘we think about aviation being a male chauvinistic sector, but the gender thing is an issue in the job market in every industry. Yes it is in aviation, but that’s just the history of culture’. Five of the respondents identified that the image of a pilot ‘which has stemmed from the Second World War’ (M6) has created and reinforced a stereotype and perception that ‘piloting is a man’s job’ (M4). Because of this stereotype, Respondent M1 identified that there has been a knock-on effect and as there are so few women pilots to act as role models to young women, therefore young women do not realise that piloting is a
possible career open to them. Another reason which was identified as contributing to the underrepresentation of women in piloting was the perception that pilots are away from home a lot, which respondents believed could be a possible deterrent for women. In line with this, Respondent M5 identified that ‘the only disadvantage of the job is the affect it can have on family life, and this may be more of a barrier for women than men’.

All of the respondents identified that things have improved and they stated that they have many more women in training nowadays. However, respondents agreed that societal perceptions still exist and changing culture takes time. Some of the respondents stated their views of needing to normalise the profession for women;

‘There is too much ignorance out there, you still hear passengers making quips if they hear a female on the intercom- it’s a real slow burn’ (M2).

‘When it is normal to hear a female voice from the flight deck, that’s when things have changed, however these things take time’ (M5).

All of the respondents agreed that by being able to access a more diverse pool of talent, flight schools, airlines, and the industry will gain the best talent. They agreed that diversity would mean a more balanced, inclusive culture with different skillsets and personalities. However, a key issue mentioned by Part 2 respondents was the fact that airlines prefer cadets who have trained through an integrated training programme over a modular training route. They stated that this was because the airline likes to know what type of training the individual has received and integrated schools will compile a final training report detailing the cadets’ training. However, modular training is more family-friendly and can reduce training costs as individuals can train at different schools; therefore respondents identified the need to challenge airline preferences for cadets who have trained through an integrated route. Respondent M3 recalled a notable event;

‘I did speak to a woman at a careers event who was in her early thirties, she had a family and two children and she was desperate to become a
pilot and we debated the modular versus integrated route. I think life stage will affect an individual’s ability to choose an integrated route which is such a shame’.

Having identified that the respondents recognise the underrepresentation of women in piloting as an issue and that they are trying to understand possible reasons for it, respondents were asked to identify what their organisation is currently doing to address the issue.

5.5.2 Current Flight School Initiatives

‘I think aviation is probably teaching other industry’s how it should be done because it is a joint effort between the training providers, the airlines, the press and organisations’ (M4).

Respondents from FS2 said that they ‘are not actively doing anything to tackle the problem; we treat everyone as equals’. However, they are consciously trying to create awareness by using images of men and women in their marketing materials. They are doing this by consciously putting women cadets forward to be represented in media articles and using case studies and quotes from women cadets on their website. Similarly, FS1 respondents stated that ‘all of our marketing campaigns represent everybody and we make sure we are consistent with this approach’ (M3). In addition, to attract more women, FS1 has recognised the need to focus less on promoting the technical skill required to be a pilot and more about flight deck management and communication skills, which Respondent M1 stated; ‘lend themselves to typical female attributes’. Cadets at FS1 did identify that they have to be careful not to over emphasise and exaggerate women in their marketing campaigns as this can paint an unrealistic picture. Respondent M2 recalled a recent experience;

‘We did a marketing video a little while ago and we had four women and one man taking part because they were the ones available at that time. The first thing the [female] camera operator said was “this is a weird combination, this isn’t normal!”’ (M2).
Respondents from FS1 identified that in order to further understand the issue, they continue to ask their women cadets why they decided to become a pilot and the women cadets always state that ‘they just know or they just always knew’ (M1, FS1). FS1 respondents identified their frustration with this. However, they continue to host careers events, provide careers guidance and support airline sponsorship schemes. Alongside the efforts being made by Flight Training Schools, respondents stated that they are aware that airlines are consciously making an effort to attract more women onto their sponsorship schemes. This led to respondents identifying a major difficulty which airlines, organisations and the training providers are facing when trying to encourage more women into piloting; potential positive discrimination.

‘Despite what people say, no one is selected for the airline sponsorship schemes unless they meet the highest standard; sometimes there are 4,500 applicants for 12 places’ (M4, FS2).

M4 identified that ‘whatever we do at the school must be carefully managed because some [men] may start saying why does she have more rights than me?’ The difficulty for all of the respondents arose from wanting to balance creating awareness and exposure of piloting whilst not positively discriminating. Respondent M3 identified that ‘you can actively promote a career to a particular audience because there is a skills gap but the problems arise when you start incentivising things and putting money out there’.

Respondents from FS1 expressed their frustration with wanting to target untapped talent whilst not excluding their current pool in the process.

Recognising the difficulties respondents are facing, and having explained what is currently being done by the Flight Schools to increase the number of women into piloting, respondents identified what they think should be considered in the future.

5.5.3 What Flight School respondents think should be done
Respondents from FS2 believe airlines need to promote their ‘family friendly policies, maternity leave arrangements, and working conditions’ in order for women to realise that the career can be managed alongside a family.
Similarly, FS1 respondents agreed that education is key; in particular, educating women to understand that it is possible to have a career as a pilot and a family. In order to encourage more women to enter aviation, M4 identified the need for society to challenge the stereotypes. ‘If a woman shows an interest in aviation we should not think “ok she is going to push a trolley” no, “she can fly the aircraft”’. The view was that the objective should be to normalise the profession for women, so that when they express an interest in flight, there are no negative or surprised reactions. In order to do this, all of the respondents agreed that there is a need to increase exposure, promote female role models and provide good careers guidance. Respondent M4 recalled a story of a woman cadet who had experienced poor career guidance;

‘I know of a female pilot who was told by another female pilot that she shouldn’t go to a job interview because the airline did not want pregnant pilots’. He continued, ‘some females may feel threatened by other females because of their minority status and seeing them as competition. Therefore, positive female role models are essential’.

Respondents from FS1 agreed that exposure is important, but what is more vital is the placement of that exposure. Respondent M3 identified that some of the existing strategies to create exposure are just ‘adding to stereotypes and stereotypical gender roles’, for example ‘there was a recent blog by a female pilot who just spoke about going shopping in New York’, she suggested, ‘maybe an editorial in Glamour magazine which had a female pilot talking about her family and career would be good’ (M3).

It was recognised that the extent to which the airlines or Flight Schools alone can make a difference is limited; however, by working together it is possible to increase exposure, create awareness, promote role models and provide sponsorship to aspiring pilots, increasing the pool of talent. Overarching all of the respondents’ responses was that before an individual becomes a pilot they have to be selected to train and complete the training programme. In order to do this, the respondents identified that there are specific traits and
competencies which are essential to becoming a pilot and for those competing to gain a place on an airline sponsored scheme, you must be a “perfect fit”.

5.5.4 The “Perfect Fit”

‘With the airline programmes, the wrong person, the wrong interview, the wrong word and you are out of the running- you just didn’t fit that one day at that one time’ (M6).

Traits used to describe what airlines are looking for in their cadets included; a quick thinker, a self-assessor and a good listener. Respondent M6 recalled a ground school instructor summing up a pilot as ‘somebody who knows a little about a lot, not a lot about a little’. In addition, the constant need to do better was mentioned as ‘you are only as good as your last flight’ (M6). Therefore pilots are always self-assessing and critiquing their actions. The technical skill required was also alluded to; respondents identified that pilots need to have the capacity to react, and possess good hand-eye coordination and visuospatial skills.

The airline sponsored schemes were identified as very competitive and respondents from FS2 stated that there are noticeable personality differences between cadets on certain airline sponsored schemes, for example certain schemes valued life experience, whereas others valued education level. Similarly, respondent M3 (FS1) identified that; ‘[although we are not able to track assessment by gender] airlines value hand-eye coordination and capacity, so they have to excel in both of these technical skills from the very start- these are in general skills that the men are better at’. However, both Flight Schools stated that they offer feedback to individuals who do not obtain a place on an airline sponsorship schemes to allow them to improve and try again in the future. When thinking about the feedback they provide, respondents from FS1 questioned whether ‘perhaps women take feedback more sensitively to men and they may be put off by not making it however, the type of woman who does come back will ultimately make it’ (M2, author’s emphasis).
It Takes a Certain “Type of Woman”

‘It’s not about the actual job- it’s getting there in the first place because it is eighteen months of living, sleeping, breathing flying alongside a bunch of guys. It takes a very strong lady’ (M3, author’s emphasis).

The view that it takes a certain “type of woman” to complete the training and pursue a career as a pilot were prominent throughout the responses from both Flight Schools. Respondents referred to the women at their schools as being ‘very assertive’ and ‘not being put off by poor careers guidance’ (M1).

Fundamentally, the respondents are referring to the women cadets as different to other women and the determination, resilience and drive of these women had not gone unnoticed;

‘The women are definitely a particular type, you very rarely come across a woman in selection who is just here for a bit of fun and to see how it goes, they are always so focused and no one is going to get in their way’ (M5).

‘When you interview them they are generally the types that have had maybe a family influence, they are so convinced and driven to achieve this goal it’s almost as if they say “you know, against all of you, I will make this happen”’ (M2).

Despite the perception that the “type of women” entering pilot training are strong-willed, determined and not worried about their minority status, other evidence demonstrated that women were aware of and concerned about their potential minority status. This came to light as respondents from both schools stated that on open days or career events; women frequently ask ‘how many girls do you have on campus?’ (M5) or ‘are there many girls at the school?’ (M1, FS1). Respondent M1 identified that ‘mothers of girls usually ask if we have many girls training because their daughters are worried that they are going to be the only girl’.

Although there may be some concern from the women before training at the anticipation of their minority status, FS1 respondent’s stated that during their
time at the company they had never had to handle any gender discriminatory issues between any of the cadets. Similarly, FS2 personnel stated that they had never witnessed any gender discriminatory issues within their Flight School. However, they had heard of women facing difficulties once in the profession; Respondent M5 stated that ‘you might find the old captain, close to retirement, with some terrible, sarcastic comment, however this is not true of everyone and you see a lot of constructive and positive feedback for women in aviation’.

Despite not being aware of any gender discriminatory behaviours or problems, respondents recognised the difficulties which women cadets may face because of their minority status. M5 stated that; ‘I think women at the school do feel pressure because they are a minority. They are aware that they have to prove something because they haven’t reached that “normality”. Could you imagine the joke if a woman has a slight incident parking her aircraft? If it was one of the men, they would just make fun of him and not because he is a man’.

5.5.6 Conclusions from Scoping Study Part 2
The majority of the findings from Part 2 of the scoping study align with the findings from Part 1; however a few additional themes did emerge. Respondents from both parts of the scoping study identified the underrepresentation of women in commercial piloting as an issue which the industry is trying to address. The reasons for this issue were agreed as the deeply engrained pilot stereotype originating from the military, the lack of female pilot role models, lack of exposure to the profession and poor careers guidance. These factors align with the findings of the literature review in Chapter 2. Whilst it has been identified that respondents’ respective organisations are attempting to challenge the pilot stereotype through generating awareness, promoting airline sponsorship training schemes and engaging in more inclusive marketing, all of the respondents identified that culture will take time to change. In addition, the prospect of positive discrimination continues to challenge the industry as respondents stated they
are finding it difficult to balance generating awareness of the profession to women without being seen as discriminating against men.

Part 1 respondents stated their concern that existing campaigns and marketing campaigns to encourage women into aviation could be reinforcing the stereotype of a pilot. This specific concern was not cited by respondents in Part 2 of the scoping study, however equally as stereotypical, Part 2 respondents stated that they believe airlines should promote family friendly policies and accept modular training routes in order to encourage more women to consider the profession. These views are reinforcing gender role stereotypes and suggest that in order for women to consider the profession, it must be made more “female friendly”; however this may not be the answer. In order to develop more effective initiatives it would be valuable to explore and understand the identities of women who have chosen to pursue a career in piloting, in particular those at an early stage of their career, in pilot training. By doing this, the industry will be able to consider if strategies which the airlines and Flight Schools think will encourage women into piloting will work, or if their focus should be on changing the stereotype of a pilot.

A key finding from Part 2 of the scoping study was that none of the respondents expressed any concern over gender discrimination issues within their respective Flight Schools; however they are aware that women can be anxious prior to training at the anticipation of their minority status. Furthermore, the overarching view from both parts of the scoping study was that it “takes a certain type of woman” to be attracted, to be selected and to remain in the industry, questioning the identities of the women choosing to pursue a pilot career.

Part 2 confirmed that the experiences and views of the cadets-in-training need to be understood. Whilst the views of flight school management personnel have been identified, investigating the experiences of the individuals undertaking the training is essential to understanding how their identities are shaped. Questioning identity asks how gender divisions are being formed and how individuals think, feel, relate and act.
5.6 Summary
Chapter 5 has presented the findings from both parts of the scoping study. Part 1 of the scoping study identified the importance of the training stage of a pilot’s career and the need to explore the views of personnel at Flight Training Schools. Following this, by obtaining the views of personnel from two Flight Schools, the scoping study confirmed that it is the identities of the cadets in training which need to be further understood and therefore seeking the perspectives of the actual cadets is the next stage of this research. Chapters 6 and 7 will present the findings from the next two stages of the research; interviews (Stage 2) and surveys (Stage 3) conducted with ab initio pilots from the two Flight Schools identified in this chapter.
6
Cadets’ Perceptions of their Gender and Professional Identities

6.1 Introduction
In line with objective 4; ‘to explore how ab initio pilots perceive their gender and professional identities’, this chapter presents parts of the findings from Stages 2 and 3 of the research. As identified in Chapter 4, these stages included 17 in-depth interviews and 128 responses to the survey of cadets from both Flight Schools. The analysis draws on both qualitative and quantitative data, comparing the findings between men and women and, where appropriate, between Flight Schools. Viewing gender as a performance and using the concept of professional identity, this chapter provides an insight into the cadets’ motivations for choosing the profession, and their self-image, self-esteem and task perception in order to understand how ab initio pilots perceive their gender and professional identities. Analysis of the data revealed a number of key themes, many of which reinforce the findings of the literature review (Chapter 2), key concepts, and theory (Chapter 3) but also new areas of interest.

The themes will be presented as detailed in Chapter 4, Section 4.12.1. Section 6.2 outlines the cadets’ pathways to piloting, identifying their career influencers and the appeal of the profession (job motivation). In conjunction with this, cadets’ perception of the profession (task perception) and their perceptions of their own self-fit with the profession were explored to provide an insight into cadets’ identities (Section 6.3). These identities are affected by experiences, therefore, cadets’ previous failures and experiences prior to training are examined. Finally, Section 6.4 reveals cadets’ perceptions of the integration between their gender and professional identities in order to identify differences by gender.
6.2 Pathway to Piloting

6.2.1 Influencers
The influencers refer to the key factors which played a role in the career decision of the cadets. The majority of cadets stated that they became attracted to flying at a very young age, one being as young as five (Cadet B, FS1). This attraction mainly came from being introduced to aviation through a family member who worked in the aviation industry which fuelled the cadets’ fascination with flight.

Family, the Media and Childhood Experiences
Two of the women at FS1 recalled that travelling a lot with their families throughout their childhood generated exposure to aviation and one stated that both of her grandfathers had military backgrounds. Family links and interest were important in influencing the cadets’ career choice, particularly for women cadets, albeit in very different ways, as Cadets C and D (FS1) explained:

‘When I was younger, my mum was always interested in travel and I think she was convinced that me and my sister wouldn’t have “boy’s jobs” so she would buy us toys which were not girly. She wanted to explore all options, she used to take me to an airfield where they flew gliders and they would show me around the hangars. I think that started the “aviation bug”’ (Cadet C, FS1, Interview Response).

‘Going on holiday regularly when I was younger I always loved the airport. If we didn’t fly somewhere and we were driving it would never be as exciting for me. Both my grandfather and my dad had their Private Pilots Licenses so I had that exposure, but they always took my brother up instead, they were never interested in me doing it. They are really supportive of me now but they didn’t push me into it, they weren’t really persistent about it they left it up to me to see if I wanted to do it’ (Cadet D, FS1, Interview Response).

Similarly, Cadet I (FS2) had attended flying shows since a young age with her grandfather. However, she did not think a career in piloting was possible
after having her children. Finally, she decided she wanted to ‘become a good role model for her children’ and began her pilot training after years of ‘self-doubt’. Cadet D (FS1, Interview Response) stated that her attraction to the profession came at a later age whilst working as cabin crew and being exposed to the flight deck. She had not previously considered becoming a pilot and it was this experience which made her believe she ‘could do it’.

In accordance with the majority of women cadets, all of the men cadets interviewed stated that becoming a pilot had been their ‘childhood dream’. Typical influencers included travelling extensively with their families as children, a grandfather in the military and, unlike the women, Cadet 2 (FS1, Interview Response) admitted that ‘watching Top Gun’ spurred him on. However, with minimal media exposure of women pilots, none of the women cadets identified a film, or the media, being a key influence on their career decision.

The survey too sought to ascertain where cadets’ interest in aviation originated. Responding to the open question, 34 respondents stated that they had a family link to aviation and all of these family members were cited as fathers or grandfathers. The only exception was one (man) cadet (FS2) whose father and mother were both pilots. The majority of the survey responses from the men identified the profession being a childhood dream, quotes mentioning this included ‘my dream since I was five years old’ (Survey Response: Man, FS1) and ‘every little boys dream’ (Survey Response: Man, FS2). A number of respondents expressed their fascination of flight influencing their career decision. This recurring theme highlighted how both men and women were captivated by ‘the challenge and responsibility and excitement of flight’ (Survey Response: Man, FS2), leading them to select this career in order for them to experience this excitement and thrill regularly. Other influencing factors for men cadets included exposure from the Air Cadets or living near an RAF base or airport (see Table 6.1).
6.2.2 Appeal of the Profession

For all of the cadets, their original exposure to aviation generated their interest in flight and gave them the opportunity to further understand flying careers. Certain aviation related jobs require staff to work unusual shift patterns and hours, in particular pilots and cabin crew who typically lead roster dominated lifestyles. Prior to investing their time, money, and effort into training, cadets must be aware of, and attracted to, the lifestyle which comes with the pilot profession. As identified by Cadet 4 (FS2, Interview Response) ‘I think it’s hard to pin point one thing about the lifestyle but basically you are going to love what you do for the rest of your life, I think it’s that passion for aviation’. All of the cadets’ passion for aviation was portrayed as the main reason they wanted to make flying their career as identified by Cadet 6 (FS2):

‘For me it’s one of life’s greatest achievements, once you lift off it’s the best feeling ever and it gives me the same excitement every time I take-off, I hope to be getting that in forty years’ time’ (Cadet 6, FS2, Interview Response).

The elements of the profession which were commonly mentioned as appealing to the women cadets included; the constant learning and challenges, the variety of the profession, the travel prospects and the unusual working hours. Cadet J (FS2, Interview Response) mentioned that there are certain misconceptions about the reality of the pilot lifestyle, stating that ‘a lot of people think it’s quite glamorous but I kind of saw first-hand it’s hard work’. She stated that this is what motivated her as an individual who thrived on challenges and the requirement of hard-work. Similarly, both

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<td>Childhood dream</td>
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Table 6.1 Factors Influencing Cadets' Decision to Become a Pilot
Cadets E (FS1, Interview Response) and B (FS1, Interview Response) had formerly worked as cabin crew and identified they ‘needed something more challenging. I want the same job but more challenging. I want to be in a job where there is constant learning and we have to learn for the rest of our careers’ (Cadet E, FS1, Interview Response). It is this constant learning and challenge which became evident throughout the interviews with women cadets, demonstrating similarities in their characters. In addition to this, a common response from the women was the variety that the profession offers, including meeting and working with new people and not having an office. Cadets A (FS1), H (FS2) and I (FS2) felt particularly strongly about this;

‘It’s not a nine to five job, like anything in aviation there are so many different people you meet all the time. It’s better than being stuck in an office with the same ten people every day’ (Cadet A, FS1, Interview Response).

‘I suppose it’s just what I have always wanted to do. It’s different. You aren’t working in an office. I wanted to do a job where I won’t really be working as such. I think if you enjoy what you do you will be happy and you will never really work in your life again. I’m looking forward to not being in an office’ (Cadet H, FS2, Interview Response).

‘The fact that you are doing something different every day, the weather is different, the crew are different and that really appealed to me. I could never do an office job!’ (Cadet I, FS2, Interview Response).

‘Well from my cabin crew days, I know every day is never the same. Everyone says “your job is going to be so tedious” and I don’t believe that. I am going into a short-haul, domestic airline and there is so much variety, so many different sectors, different crew and different passengers’ (Cadet B, FS1, Interview Response).

The variety of the profession was a common response from the men too, but not for the same reasons as women. Women tended to focus on meeting new and different crew or passengers as variety; however this was only
mentioned by one of the men cadets, Cadet 4 (FS2, Interview Response). He expressed that ‘it is just so wide ranging, it is not just technical things, you get to travel, visit other countries and my languages will come into it and meeting different people every day, I speak French, Spanish and Italian’. Other responses in terms of variety included;

‘The lifestyle, you are not at a desk, you are going to different places and starting at different times’ (Cadet 2, FS1, Interview Response).

‘Variety is the big one for me, like even the Air Transport Pilot Licence subjects you study, you go from Law to Physics to Meteorology to Biology. And the day to day job is just so varied in what you do, you’re a manager then you’re an operator all of these things. There is also the element that it’s a big toy and it’s got lots of buttons and things, that is quite exciting’ (Cadet 1, FS1, Interview Response).

Having the opportunity to travel as part of their profession was a dominant response for the majority of women. One cadet expressed that ‘travel is a big factor’ (Cadet I, FS2, Interview Response) and the ‘opportunity to have 5 days on and 3 days off is great’ according to Cadet H (FS2, Interview Response). The male cadets also agreed with this and the opportunity to travel was the most common response for men. Cadet 3 (FS1, Interview Response) identified ‘being able to see a lot of the world’ as the most appealing factor of the profession and having the opportunity to go to new places was seen as very important.

The survey revealed the challenging nature of the profession, the technical skill required, the travel opportunities and the pilot lifestyle as the three most frequently identified appealing factors for the cadets. Other responses included the opportunity to meet new people and experience a high status and unique career. Figures 6.1 and 6.2 show the responses by gender. The factors on the right of Figure 6.1 were not mentioned by women cadets; however they were mentioned by some of the men cadets. This shows that different factors appealed to men and women when considering the profession.
As with the women cadets, the technical challenge of being a pilot was frequently cited by male cadets. The pilot lifestyle was also a recurrent factor attracting men to the profession with some stating they ‘could never see themselves in a 9 to 5 job’ (Survey Response: Man, FS2). Other factors included having the opportunity to travel and having an ‘office in the sky [not a desk office job]’ (Survey Response: Man, FS2). Career progression and the pilot salary were absent from the women cadets’ responses but were identified by the men in the survey; however the men made no mention of the profession giving them the opportunity to meet new people.
**Women Cadet Survey Responses: Appeal to the Profession**

- **Travel opportunities**: 20%
- **Challenging/Technical Skill required**: 20%
- **Lifestyle (not a 9 to 5)**: 20%
- **Glamour of commercial aviation (status)**: 10%
- **Opportunity to meet new people**: 10%
- **To be a role model**: 10%
- **Unique Career**: 10%
- **Career progression**: 0%
- **Continuous learning of profession**: 0%
- **The salary**: 0%
- **To live abroad**: 0%
- **Having an office in the sky**: 0%
- **Will enjoy the job forever**: 0%

**Figure 6.1 Women Cadet Survey Responses: Appeal to the Profession**
Men Cadet Survey Responses: Appeal to the Profession

- Will enjoy the job forever: 10%
- Career progression: 8%
- Continuous learning of profession: 2%
- Travel opportunities: 12%
- Challenging/Technical Skill required: 16%
- The salary: 8%
- Unique Career: 6%
- Having an office in the sky: 12%
- To live abroad: 6%
- Glamour of commercial aviation (status): 6%
- Opportunity to meet new people: 0%
- To be a role model: 0%

Figure 6.2 Men Cadets Survey Responses: Appeal to the Profession
Having outlined the key factors which have influenced the cadets’ career
decisions and motivated them to choose the pilot profession, their career
decisions were also related to and affected by their identities. Section 6.3
explores how a cadet’s decision to enter the pilot profession related to their
own identities, providing an insight into the cadets’ components of
Kelchtermans’ term ‘self-understanding’.

### 6.3 Identity

For women cadets, working in a male-dominated profession seemed to be an
appealing challenge for them;

‘I like that you get to work with mainly men; they tend to be quite level
minded about things’ (Cadet H, FS2, Interview Response).

Similarly, five of the women cadets stated that they ‘get along better with
boys’ and Cadet B (FS1, Interview Response) expressed; ‘I don’t get along
with girls very well anyway so this is actually kind of better for me. All the girls
I have spoken to at the School tend to have friends that are guys, not friends
that are girls’. The women seemed to believe they had more in common with
men than with other women;

‘I think I shocked some of the lads a bit because I’m quite sporty and
always have been a bit of a tomboy and I am really competitive when we
play sports’ (Cadet J, FS2, Interview Response).

Cadets expressed their views on their own identity aligning with their
perception of the pilot (professional) identity. For women cadets, particularly
at FS2, being competitive, a good communicator, motivated, hard-working
and meticulous were referred to when asked to describe their fit with the
profession. Interestingly, these traits are commonly associated with
masculinity (see Chapter 2). However, traits typically associated with
femininity, which the women at both schools commonly alluded to, were their
ability communicate, be a people’s person, and to get along well with others
as they will always be working with different crew members:
‘I love people and I love getting to know people. I see the positive in people, so I will be good at dealing with the different kind of Captains. I am quite particular with the way I do things, so I suppose my flying standard should be good, I’m a good all-rounder; the flying, the people skills and then I like working on other projects as well’ (Cadet H, FS2, Interview Response).

‘I am responsible; I like being part of a team and being social. I like a bit of a thrill, I am committed, motivated. Generally cadets tend to hold similar qualities, even though you are individuals, there is a common threat’ (Cadet F, FS2, Interview Response).

‘I am a good interactor and communicator and I think that element will be good for me as a pilot. If I ever did a presentation at school I was always the one to speak and it didn’t bother me, I feel like those leadership skills will be good for me as a pilot’ (Cadet B, FS1, Interview Response).

Conversely, interpersonal skills including ‘getting on with people’ was only mentioned by one of the men cadets (Cadet 7, FS2, Interview Response), yet confidence, calmness and determination were frequently identified by the men as traits they hold which are necessary to become a pilot. Cadet 2 (FS1, Interview Response) explained ‘the phrase instructors used in training phase 1 was “a good pilot is someone who is not weird”’, I think someone who is quite calm, no matter what is going on around you, you must sit there and remain calm’. It became clear from some of the cadets that every life decision made was in anticipation of becoming a pilot; their lives were tailored towards the career, particularly for those who had expressed the career as a ‘childhood dream’ including Cadets B and 1 (FS1, Interview Response):

‘Apparently, I looked out the window one time when we were taking off and I said to my mum “I’m going to be a pilot” when I was 5 years old. It stemmed from there and I just stuck with it…I decided not to do Art and Graphics, which would have led me to Architecture so I was moving in on the pilot direction. I took a range of subjects so I had something to fall
back on if for example, I couldn’t get a medical or something’ (Cadet B, FS1, Interview Response).

‘If you ask anyone in my family, since I was able to walk and talk I always wanted to be a pilot and I maintained that attitude through everything I did and when I was doing my degree, because it was business, I could tailor it towards aviation, so I did lots of my essays and my work around aviation and my placement with an aviation orientated company’ (Cadet 1, FS1, Interview Response).

Although the cadets’ career choice had been shown to be influenced by certain factors and related to their identities, once the initial decision to enter the profession had been made, certain experiences were shown to affect cadets’ identities. This was particularly evident for women cadets, because of their decision to enter a gender atypical career.

6.3.1 Affected Responses
One type of experience commonly referred to by cadets was the affected responses they received. Affected responses are the responses of people around you. For the cadets, having decided that this is the career path they want to follow, it was evident that the women in particular had encountered surprising, stereotype-entrenched responses when informing others of their career choice. A common response was a state of surprise due to these women contradicting the engrained pilot stereotype and societal expectations of the profession only being suitable for and/or attractive to men. Cadet B (FS1) referred to a time when a stranger had assumed she was going to become a member of Cabin Crew when she stated that she was going to fly for a career:

‘At the weekend I was sitting watching the rugby and I was speaking to this woman and when I told her what I was doing she nearly dropped off her seat and she said “oh my god, that’s amazing”. And then her husband came over and she said “oh my, guess what she is going to do?” and he said “is she going to be an air hostess?” And she said “no, so much
better than that”, but that was his first reaction- it’s not even intentional’ (Cadet B, FS1, Interview Response).

Similarly, Cadets K and I (FS2) relived similar responses by people when telling them about their choice of career:

“When I went in to get my eyes tested, I said I was going to train to be a pilot and the guy at reception said “a pilot!”, he was so shocked. And I saw the optician and she said “oh you’re becoming an air hostess aren’t you?” You can only laugh at those. It’s good they meet someone who’s going off to do it; a lot of people have said they have never been on a flight with a female pilot’ (Cadet H, FS2, Interview Response).

‘Before I started I told a few people I was going to train to be a pilot and it happened on two separate occasions they said “don’t you mean cabin crew”. No, I mean a pilot!’ (Cadet F, FS2, Interview Response).

These responses reinforce societal expectations of a pilot being a man and the male cadets did not recall any similar responses. However, it was the women cadets’ reactions to such responses which were fascinating including; ‘it’s not even intentional’ and ‘you can only laugh at those’, suggesting that these experiences did not affect the women. In addition to these responses from members of the public, close friends and family members also expressed a sense of concern for some of the women cadets, one cadet recalled the moment when she told her former students she was leaving teaching to fulfil her dream:

“When I told my students why I was leaving, the girls couldn’t believe what I was going to do and some of the 16 to 17 year old boys couldn’t get their heads around the fact that I was going to be flying a plane’ (Cadet I, FS2, Interview Response).

Similarly, Cadet A (FS1, Interview Response) recalled ‘a lot of my friends were like “oh I would never get on a plane with you”, that hasn’t really changed to be honest and you do say to people “I’m going to be a pilot” and
they say “oh really, are there many girls doing that?” Only one of the men cadets identified any unusual response. Cadet 4 (FS2, Interview Response) said he had experienced former colleagues being surprised by his change of career as they were unaware of his passion. Unlike the affected responses received by the women cadets, the response he received was not undermining his ability to perform the job.

Despite some negative or shocked responses, all of the women cadets stated that they received a strong sense of support for their career choice from their families and close friends with three of the women mentioning that their friends think ‘it’s the coolest thing ever!’ (Cadet B, FS1, Interview Response) and ‘they are not neutral, they are really encouraging’ (Cadet C, FS1, Interview Response). These responses, although positive, are similarly emphasising the atypical nature of the pilot profession for the women cadets and could affect women before starting their training course at the anticipation of their minority status.

Alongside the differences in responses which men and women cadets received when informing others about their career choice, experiences at Flight School open days and assessment days had also affected some of the women cadets.

6.3.2 Pre-Training Experiences: Shaping Identity
Two of the women cadets (A and D) stated they had negative experiences during their selection processes;

‘I went for an assessment at this school and I sat in a room with all women candidates and two of the instructors walked in and said “oh none of you will get in” and then walked out, and we were like well that’s great! Nobody said hello to you, they were very unfriendly’ (Cadet A, FS1, Interview Response).

‘I went for the assessment day and they were not very welcoming. I am left handed and so the joy stick was a problem and they didn’t say I could
switch it around, they didn’t speak to me and they didn’t give me any feedback’ (Cadet D, FS1, Interview Response).

As a result of this, these two cadets chose to attend different Flight Schools; however, Cadet B (FS1) shared a similar negative experience but limited funding options meant she eventually did attend the Flight School where she had the negative experience.

‘I came down to an open day here a while ago and I was the only girl in two hundred people and I felt like I was singled out for the wrong reasons. Someone asked “does anyone have any questions?” and I had my hand up, and they ignored me, I wasn’t asked. And then I went up to the desk and there was someone telling you about all the different ATPL exams and subjects and I sat down with my mum and he said “oh, are you here about ATPLs?”, I said “yes, I am here on an open day” and so he introduced himself and he said “ok, there’s 14 exams and they include….etc. and they are quite hard, so you will really have to work at them and you would have to be clever” and I looked at my mum and my mum said “I’m sorry? Well we are just going to leave”. I felt so patronised and belittled, he directed that at me. Then we went to the SIM and there were ten guys in front of me and they got talked through the whole SIM, don’t touch this, do that, and I sat in there and he didn’t even speak to me, he just started the SIM, so I deliberately just flew it off the runway and it crashed and he said “oh my!” and my mum turned around and said “oh ok, so you are paying attention to my daughter now” and he was mortified and I said “well you didn’t speak to me did you?”. And he said, “yeah no, I didn’t” so I haven’t had the best start with it’ (Cadet B, FS1, Interview Response).

Despite this experience, she stated ‘here I am and I’m still as determined as anything to do it’. These three cadets cited their negative experiences, however these experiences only reinforced their passion and seemed to spur them on even more, as identified by Cadet B (FS1, Interview Response) who stated that ‘it just made me more determined, I just thought I will be doing it
don't you worry! But for some girls, that would put them off without a doubt’. This was similarly emphasised by Cadet 2 (FS1, Interview Response) who recalled ‘there are always quite a lot of families with girls asking how many women applied, how many made it through, it seems they are concerned about being the only girl’, echoing this being a potential concern for some women prior to training. Whilst open day and selection day experiences seemed to impact women in particular, for all of the cadets, their failures from other applications influenced their current attitudes and sense of self.

6.3.3 Previous Failures: Shaping Identity
Most of the cadets interviewed had been unsuccessful in previous applications for airline sponsorship schemes due to intense competition. Prospective cadets prefer sponsored schemes because of the significant cost of training and the lack of job security upon completing training if self-funded. Due to the attractiveness of the schemes, Cadet 4 (FS2, Interview Response) explained ‘the airline scheme applications are a lot stricter, speaking to some of the guys from one airline, some of the tests they did were a lot more stressful than what I had to go through to get here. I had lower standards (self-funded route) and they aren’t as strict on your grades, but the airlines want the best of the best’. Despite previous failure, some of the cadets continued to apply for airline sponsorship schemes until they were successful, whilst others went on to self-fund their training.

At FS1, aside from Cadet E, all of the cadets had previously applied for other cadet schemes with only one cadet (Cadet C) being successful on her first attempt. Two of the nine cadets at FS2 had not applied for an airline cadet scheme; none of those who applied had been successful the first time and eventually only four of the seven were successful in obtaining sponsorship (see Table 6.2). Evidently, these schemes are competitive and require hard work, dedication, and perseverance in order to be successful; these traits were also expressed as part of the cadet’s self-perceptions.
The number of previous attempts was typical throughout both schools and of both genders. However, it was the way in which the cadets responded to these failures which was interesting. All cadets who had previously failed were not embarrassed by this, it was suggested this was the “norm” and cadets identified that ‘sometimes the airlines like to see you really want this and are determined so it looks good if you keep coming back for it and trying’ (Cadet 5, FS2, Interview Response). The experiences of one cadet stood out in particular, demonstrating just how much she wanted to become a commercial pilot and how she was going to do whatever it took to get there:

‘I applied to one airline scheme three times; all three times I got past the first application and got to the assessment stages. On my first and third times I got through to the final stage and I didn’t get them, I was so close. But then I applied to a different programme, got to the assessment day and didn’t get any further. I also applied for another airline scheme, got an assessment day but again, no further. I applied for my current sponsor the first time round but there was something wrong with my application and then I got through the first application for a different airline but I didn’t

<table>
<thead>
<tr>
<th>Cadet</th>
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<th>Cadet</th>
<th>Number of previous attempts at obtaining sponsorship</th>
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<tbody>
<tr>
<td>Flight School 1</td>
<td>Flight School 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
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<td>1</td>
</tr>
<tr>
<td>7</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6.2 Number of Attempts at Obtaining an Airline Sponsorship

The number of previous attempts was typical throughout both schools and of both genders. However, it was the way in which the cadets responded to these failures which was interesting. All cadets who had previously failed were not embarrassed by this, it was suggested this was the “norm” and cadets identified that ‘sometimes the airlines like to see you really want this and are determined so it looks good if you keep coming back for it and trying’ (Cadet 5, FS2, Interview Response). The experiences of one cadet stood out in particular, demonstrating just how much she wanted to become a commercial pilot and how she was going to do whatever it took to get there:

‘I applied to one airline scheme three times; all three times I got past the first application and got to the assessment stages. On my first and third times I got through to the final stage and I didn’t get them, I was so close. But then I applied to a different programme, got to the assessment day and didn’t get any further. I also applied for another airline scheme, got an assessment day but again, no further. I applied for my current sponsor the first time round but there was something wrong with my application and then I got through the first application for a different airline but I didn’t
hear back, so I assumed I didn’t get it. And then the eighth one was this, and here I am. It was as if there was always someone just better than me on the day, but I didn’t give up. I think this was probably my last attempt and then I was thinking of possibly [enrolling on a] Modular [course]’ (Cadet B, FS1, Interview Response).

For the majority of cadets, getting through the first stage was common but this stage requires spending around £250 for their assessment day, excluding travel costs. As a result of this, applicants can be limited in their attempts.

‘I think my application for one airline scheme I spent about £1,000 and I didn’t even get the whole way, it was the next one or never’ (Cadet 5, FS2, Interview Response).

‘I considered self-funding but then I got this, I was just about to start saving... the money aspect stopped me from going into aviation straight from school’ (Cadet I, FS2, Interview Response).

‘The airlines advertise it as “anyone can do it with our scheme” but they can’t because they need to pay £250 for the selection, they need accommodation and everything. So many people think “I can’t do it because it’s too much money”. People don’t even know how much it really is because they know it’s a lot but they don’t even consider it’ (Cadet D, FS1, Interview Response).

However these costs seemed minor compared to the full training costs (minimum £100,000) if cadets were to self-fund. Many of the cadets interviewed stated that the only way they would be able to undertake training was to be on an airline scheme.

‘I applied to a different airline scheme first and got through to the last round but didn’t get on that scheme, but that was quite good practice for applying for this one. For me it was this one or nothing because I didn’t
have the money to do it any other way’ (Cadet 3, FS1, Interview Response).

In attempting to obtain a place on an airline sponsored scheme, cadets’ choice of Flight School was limited as airlines will partner with certain Flight Schools. However, once the airline sponsorship factor was removed from the occasion, the survey revealed that cadets looked for a training provider which would provide them with the best employment prospects. The cadets were asked to identify the importance of eight factors; Table 6.3 shows the importance of factors by gender in order of mean response rate. The table highlights the nature of the cadets; they are focused on the prospects of gaining employment even before embarking on training.

<table>
<thead>
<tr>
<th>Highest mean score of importance</th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment prospects =</td>
<td>Employment prospects X</td>
<td></td>
</tr>
<tr>
<td>Training facilities X</td>
<td>Reputation of the school X</td>
<td></td>
</tr>
<tr>
<td>Reputation of the School</td>
<td>Training facilities available X</td>
<td></td>
</tr>
<tr>
<td>Location of the course X</td>
<td>Cost of the course X</td>
<td></td>
</tr>
<tr>
<td>Cost of the course X</td>
<td>Location of the course X</td>
<td></td>
</tr>
<tr>
<td>Work-life balance offered X</td>
<td>Length of the course X</td>
<td></td>
</tr>
<tr>
<td>Cost of accommodation X</td>
<td>Work-life balance offered X</td>
<td></td>
</tr>
<tr>
<td>Length of course X</td>
<td>Cost of accommodation X</td>
<td></td>
</tr>
</tbody>
</table>

Table 6.3 The Importance of Factors When Choosing a Training School by Gender

The factors are relatively similar with the top three and bottom three factors changing slightly between genders. As expected, the cadets are in training to gain their licences, therefore the facilities and reputation of the school are considered very important in comparison to work-life balance, length of course, and cost of accommodation. The cost of the training course was considered of mid-importance for both genders. It is important to note the number of cadets on airline sponsored schemes in the survey which will affect the importance of the “cost” factor. For women, only one factor gained a ‘Very Unimportant’ response- the cost of accommodation, whereas for five of the men, the length of the course, cost of accommodation and location of
the course were rated as ‘Very Unimportant’. The work-life balance offered and the cost of the course also received ratings of unimportance from some men cadets in comparison with none of the women cadets.

In line with the survey revealing that employment prospects were at the forefront of many self-funded cadets’ minds, the interviews revealed that some cadets felt that they could not waste their time any longer in applying for sponsorship schemes as this was delaying the process of them fulfilling their dream;

‘I went for a few cadetships and didn’t get any of those, so I said if I don’t have a sponsorship by the time I finish college then I will set myself a deadline and I was saving the whole time. I didn’t get the previous one and I thought I could wait for another airline cadet scheme to open and by the time I get out of here the industry is in a trough again. I’m better off spending my money now and coming out now, it was the right timing to take the smallest risk possible rather than putting it off another couple of years’ (Cadet J, FS2, Interview Response).

‘I originally applied for an airline scheme and I wasn’t successful in the first round so I decided I wanted to get on with my career so just took that step. I only went for a scheme once, a lot of people do it three or four times at different airlines but I was working part-time and I wasn’t enjoying it at all’ (Cadet 6, FS2, Interview Response).

As evidenced by the cadets, in order to be successful in obtaining an airline sponsorship scheme, drive, determination and perseverance are essential. In addition, there are extensive costs required to attend an assessment day and ultimately embark on training. As a result of this, it was clear that the cadets had made financial and personal sacrifices in order to get to where they are, demonstrating their determination.

6.3.4 Making Sacrifices
As explained by Cadets I and J (FS2, Interview Responses); ‘It’s hard to describe, I just want it’ and ‘I think how much I want to do the whole thing,
how much I want to be a pilot transcends the whole thing’. Similarly demonstrating their determination, women cadets recalled what they had gone through to get to this stage:

‘I was working very hard to save the money for self-funding so I missed out on a lot of things with my friends because I was saving. I moved back home and I spent a lot of time working on sponsorships and scholarships to get my CV up to speed. I sold my horse I had as well to try and pull everything together, I think my parents thought I would grow out of it but I never did’ (Cadet H, FS2, Interview Response).

‘I always wanted to do the college thing as well, so one sacrifice would have been working a full time job in college to save for this, it did mean missing a lot of class, driving home, working crazy hours and just running myself into the ground but I was so determined and I knew I would never have enough money for training, but I thought look it’s something maybe if I get this much together I can get a loan for the rest’ (Cadet J, FS2, Interview Response).

‘It was a Eureka moment a few years ago, I decided to leave my husband and I thought what do I want to be doing with my life? I want them to see me as a role model and it just kind of clicked that this is what I always wanted to do but never had the confidence to think I could do it. Leaving the children was a huge sacrifice, but they have been brilliant and my mum and dad have been fantastic, and the school. My main sacrifice has been my time with them but it’s going to be worth it’ (Cadet F, FS2, Interview Response).

Undoubtedly all of the cadets had made sacrifices to be able to train as a pilot; however the determination shown by the women cadets was significant. Having explored cadets’ perceptions of their identities which had been shaped by experiences prior to training, the survey explored cadets’ gender-professional identity integration, measuring the extent to which the two
identities overlap and their perceptions of the strength of their gender and professional identities both inside and outside of training.

6.4 Gender-Professional Identity Integration
By measuring the degree of the overlap as opposed to any conflict, identity integration can explain how women ab initio pilots navigate their two social identities. Figure 6.3 presents the statements and responses split by gender, the highlights of Figure 6.3 were as follows;

Only two women and four men strongly disagreed or disagreed with the statement ‘both my gender and professional identities make me who I am’ and the mean average for the women was slightly lower (2.35) than the men (2.69). This shows that 95% of all cadets are certain their gender identities and their pilot professional identities are both a strong part of who they are.

50% of women cadets agreed that there are ‘more similarities than differences between their gender and professional identities’ in comparison to 45% of men cadets. Importantly, a high percentage of men cadets (37%) stated they neither agree nor disagree with this statement. 20% of women cadets and 18% of men cadets disagreed or strongly disagreed, identifying some individuals face difficulties.

In line with this, 20% of women cadets either disagreed or neither agreed nor disagreed to their ‘gender and professional pilot identity easily co-existing’; with the remaining 80% either agreeing (60%) or strongly agreeing (20%). As for the men cadets, 24% strongly agreed and 61% agreed that their gender and professional pilot identities easily co-exist.

In order to further understand if cadets face any difficulties in training because of their gender, cadets were asked if they found being a male/female pilot difficult. 30% of women either disagreed (15%) or strongly disagreed (15%), meaning some women find being a woman pilot difficult compared to just 10% of the men cadets, suggesting gender is more pronounced for women in training.
However, when asked if they find it easy to have both their gender and professional identities in training; 60% of women agreed or strongly agreed as well as 70% of men, with 2 women disagreeing compared to 0 men.

Cadets’ perceptions of any differences between their qualities as a man or woman and as a pilot identified that; 35% of women and 33% of men agreed their qualities as a man or a woman are different to their qualities as a pilot. Importantly, 40% of women disagreed in comparison to 26% of men (the remaining were undecided), this could suggest that some women experience difficulties during training.

Finally, 90% of women and 98% of men cadets did not feel torn between their gender and professional identities and 10% of women and 2% of men cadets felt that their gender and pilot identities were incompatible.

Having identified the descriptive statistics from these statements, inferential statistics were produced in order to reveal the significance of these findings and to be able to generalise the statements to cadet pilots outside of the sample. Further statistical analysis revealed that the only statement displaying a statistically significant difference by gender (.041) was: ‘I do not find being a woman/man cadet difficult’. This means that gender was significant during training for women. Table 6.4 displays the results of the statistical analysis.
Gender-Professional Identity Integration Statements: Survey Responses

- Strongly Agree
- Agree
- Neither Agree Nor Disagree
- Disagree
- Strongly Disagree

<table>
<thead>
<tr>
<th>Statement</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both my gender and my pilot identities make me who I am</td>
<td>3 25 4</td>
<td>1 1 1</td>
</tr>
<tr>
<td>My qualities as a man are different to my qualities as a pilot</td>
<td>23 44 12</td>
<td>5 5 2</td>
</tr>
<tr>
<td>I feel conflicted between my identity as a man/woman and my identity as a pilot</td>
<td>8 27 2</td>
<td>9 2 2</td>
</tr>
<tr>
<td>I feel there are more similarities than differences between my gender and my professional pilot identity</td>
<td>1 2 6</td>
<td>66 3 4</td>
</tr>
<tr>
<td>My gender and my professional pilot identity easily co-exist</td>
<td>47 12 7</td>
<td>0 0 4</td>
</tr>
<tr>
<td>I do not find being a man/woman cadet pilot difficult</td>
<td>26 3 5</td>
<td>0 4 0</td>
</tr>
<tr>
<td>I find it easy to have both gender and professional pilot identities in training</td>
<td>0 39 12</td>
<td>3 0 1</td>
</tr>
<tr>
<td>I feel torn between my gender and my identity as a pilot</td>
<td>0 43 7</td>
<td>3 1 0</td>
</tr>
<tr>
<td>I feel that my gender and my pilot identities are incompatible</td>
<td>0 0 0</td>
<td>10 1 0</td>
</tr>
</tbody>
</table>

Figure 6.3 Cadet Survey Responses: Gender-Professional Identity Integration Statements
In addition to cadets’ perception of their gender and professional identity integration, the survey also questioned cadets’ perceptions of the strength of their identities.

### 6.5 Strength of Identities

It became clear that the majority of men and women cadets experienced a shift in their identities depending on their context. Figure 6.4 depicts the results of the four questions which asked how strongly cadets identify with their gender and professional identities at home and during training.

<table>
<thead>
<tr>
<th>Statement</th>
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<th>Result</th>
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<tr>
<td>Both my gender and my pilot identities make me who I am</td>
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</tr>
<tr>
<td>I feel there are more similarities than differences between my gender and my professional pilot identity</td>
<td>.472</td>
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<tr>
<td>My gender and my professional pilot identity easily co-exist</td>
<td>.544</td>
<td>Retain null hypothesis</td>
</tr>
<tr>
<td>I do not find being a woman/man cadet difficult</td>
<td>.041</td>
<td>Reject null hypothesis</td>
</tr>
<tr>
<td>I find it easy to have both my gender and professional pilot identities in training</td>
<td>.394</td>
<td>Retain null hypothesis</td>
</tr>
<tr>
<td>My qualities as a woman/man are different to my qualities as a pilot</td>
<td>.557</td>
<td>Retain null hypothesis</td>
</tr>
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<td>I feel conflicted between my identity as a woman and my identity as a pilot</td>
<td>.566</td>
<td>Retain null hypothesis</td>
</tr>
<tr>
<td>I feel torn between my gender and my identity as a pilot</td>
<td>.196</td>
<td>Retain null hypothesis</td>
</tr>
<tr>
<td>I feel that my gender and my pilot identities are incompatible</td>
<td>.712</td>
<td>Retain null hypothesis</td>
</tr>
</tbody>
</table>

Table 6.4 Hypothesis Tests for Statements
Strength of Identities: Cadet Survey Responses

- **Very Strong**
- **Strong**
- **Neither**
- **Weak**
- **Very Weak**

<table>
<thead>
<tr>
<th></th>
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<th>Men</th>
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<th>Women</th>
<th>Men</th>
<th>Women</th>
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</thead>
<tbody>
<tr>
<td>When you are in training, how strongly do you identify with your gender identity?</td>
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<td>7</td>
<td>31</td>
<td>7</td>
<td>15</td>
<td>2</td>
<td>9</td>
<td>1</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>When you are in training, how strongly do you identify with your pilot identity?</td>
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<td>7</td>
<td>39</td>
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<td>3</td>
<td>0</td>
<td>0</td>
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<td>1</td>
</tr>
<tr>
<td>When you are at home, how strongly do you identify with your gender identity?</td>
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<td>10</td>
<td>24</td>
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<td>0</td>
<td>2</td>
<td>0</td>
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<td>4</td>
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<tr>
<td>When you are at home, how strongly do you identify with your pilot identity?</td>
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<td>4</td>
<td>13</td>
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</tbody>
</table>

Figure 6.4 Cadet Survey Responses: Strength of Identities
Overall, when in training; 4 of the women cadets identified a weak or very weak connection with their gender identity and 0 women cadets identified a weak or very weak connection with their pilot identity during training. In addition 45% of women cadets stated they strong or very strongly identified with their gender identity in training compared to 70% of women cadets identifying strongly or very strongly to their gender identity when at home. In comparison, 42% of men stated they strongly or very strongly identify with their gender identity in training compared to 53% at home, this is not as significant as the difference between women’s identification with their gender identity in and out of training, but is very similar. Identifying with their pilot identities, 71% of men stated they strongly or very strongly identify with their pilot identities in training compared to 40% at home. Similarly, 85% of women identified strongly or very strongly with their pilot identity during training compared to 60% at home. These findings reveal the importance of context and how the cadets experience a shift in their identities when in training. The impact of the context will be further explored in Chapter 7.

6.6 Summary
This chapter has reported on some of the findings from the interviews and surveys conducted with the cadets at FS1 and FS2. The cadets’ pathways to piloting have been explored, this included the factors influencing their career choice and their experiences prior to Flight School affecting and shaping their identities. In addition, cadets’ views of what it takes to be a pilot have been identified, revealing the importance of cadets’ self-image and self-fit in deciding to pursue the career. Finally, this chapter reported on the cadets’ perceptions of their gender and professional identity integration and the strength of their identities in different contexts. The next chapter (Chapter 7) follows on from this, seeking to further explore the relationship between the cadets’ gender and professional identities through their experiences during the context of their Flight Training School.
7
Effects of a Token Status

7.1 Introduction
The previous chapter provided an insight into cadets’ perceptions of their gender and professional identities; this Chapter aims ‘to investigate the relationship between ab initio pilots’ gender and professional identities’ (objective 5). This will be done by looking at the culture of Flight Training School and the experiences of ab initio pilots, focusing on the experiences of women and the impact of their minority/ ‘token’ status.

The chapter presents the remainder of the findings from Stages 2 and 3 of the research. As identified in Chapter 4, these stages included 17 in-depth interviews and 128 survey responses of cadets from both Flight Schools. The analysis draws on both qualitative and quantitative data, comparing the findings between men and women and, where appropriate, between Flight Schools.

A thorough analysis of the data revealed the themes, many of which reinforce the findings of the literature review (Chapter 2), key concepts, and theory (Chapter 3). It will become apparent that many of the themes overlap. The themes will be presented as they were produced during the thematic analysis outlined in Chapter 4 (Section 4.12.1).

Section 7.2 identifies cadets’ views of the training school culture at FS1 (Section 7.3) and FS2 (Section 7.4) and the impact of such cultures on the cadet’s experiences. Following this, cadets’ commitment and attachment levels to their Flight Schools are identified in Sections 7.6 and 7.7, allowing any gender differences by Flight School to be revealed. Finally, the chapter will focus on the experiences of the women cadets in Section 7.8, identifying the effects of their minority status and revealing how they navigate their identities to cope with their minority status (Section 7.9).
7.2 Impact of the Training School Culture

7.2.1 Male-dominated Environment
Cadets at both schools agreed that the culture is heavily male dominated. When asked about the culture of the Flight School in the survey, 70% of women cadets agreed or strongly agreed with the statement ‘there are not enough people of my gender in training’ whilst 94% of men cadets disagreed or strongly disagreed with the statement. Further statistical analysis revealed that there was a significant difference (.000) in the responses between men and women.

In line with this survey finding, the male dominated culture was frequently mentioned by the cadets during the interviews, Cadet 1 (FS1) identified ‘the environment is very male heavy’. Because of this, Cadet 3 (FS1) believed that ‘there could be one or two girls who may be put off by the amount of boys here’ (FS1). Some of the women cadets were the only women on their course intake and others had one or two other women on their courses. Cadet D (FS1) stated that she is the only woman on her course and in her accommodation; therefore she has experienced some difficulties.

‘I feel like there are advantages and disadvantages to being the only girl, for example my dog passed away and I had no one to go to, if there was another girl there I could have probably gone out for a drink or something. The guys in the house could even hear me crying and they didn’t do anything. One guy asked if I was ok but that was the extent of it really. I do know a few girls at the other training bases but all of them have another girl on their course, and I think it helps a lot to just have someone else there at times. Sometimes it’s absolutely fine but just certain times you think it could be really good to have another girl. And that’s why I wanted to come tonight [to the research interview]; I came down from the other section of the school tonight because I thought it would be nice to see some other girls as I live with all boys, I’m on a course with boys and I don’t see girls anymore. So for me it’s a big thing, I do really notice it sometimes’ (Cadet D, FS1, Interview Response).
Whilst Cadet D (FS1) revealed the potential benefits of having another woman on her course, Cadet B (FS1) shared her experience;

‘Because I have another girl on my course I have someone to go to for support and it would be difficult if I didn’t have another girl. I think you would notice that a lot. Because as a woman you can get along with guys and you can have more male friends than female but there are some things that are easier when you have a girl to relate to. I have definitely noticed that in training, it’s far easier if the two of us just support each other and just go out whereas the boys wouldn’t have even noticed if we weren’t ok. When I have been upset [Cadet C] notices, whereas a guy would never notice you know? So it is good’ (Cadet B, FS1, Interview Response).

Cadets B (FS1) and D (FS1) cited the value in being able to share their experiences and emotions with other women. Cadet B (FS1) stated that the women cadets are more likely to pick up on emotions and when something is wrong, therefore by not having that connection, Cadet D (FS1) is struggling with her time in training.

For the men cadets at FS2 the dominance of their own gender was highlighted during the interviews as they identified that ‘it’s not something you notice at first but after a while you do think I have not seen any females in a few months’ (Cadet 5, FS2, Interview Response). The men cadets who did not have any women on their course mentioned that the dynamic of their course would be very different if women were present, for example instructors would not be as crude. However, Cadet 4 (FS2, Interview Response) stated that ‘most of the girls seem to be just as orientated as we are and most of our conversations resolve around planes any way so I’m sure it wouldn’t be too different’. Despite this, the women cadets at FS2 did not express any negative feelings towards the male dominated environment, statements included:
‘I went to an all-girls school, so it’s the complete opposite here but the guys are great; it’s not intimidating at all’ (Cadet G, FS2, Interview Response).

‘You do notice it’s mainly all boys but it doesn’t bother me, you know what to expect when coming in so it’s not a surprise. I have four other girls on my course which is really rare, we don’t tend to stick together and we all mix’ (Cadet J, FS2, Interview Response).

‘Before arriving here I thought I’ll be the only girl and you just don’t know, but you can’t let it bother you, it’s completely fine! The guys are a good laugh; girls shouldn’t be worried about that’ (Cadet I, FS2, Interview Response).

The women cadets at FS2 seemed less concerned with the dominance of men than the women cadets at FS1. Possible reasons for this could include the campus environment and FS2 being smaller than FS1, this will be further explored in Section 7.3. The survey revealed a statistically significant difference to the question ‘I feel the training school supports women cadets’ by Flight School (.000); however, no significance was found by gender (.801). Women cadets at FS2 felt more supported, further analysis is shown in Table 7.1.

<table>
<thead>
<tr>
<th>Flight School</th>
<th>N</th>
<th>Mean</th>
<th>Median</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS1</td>
<td>78</td>
<td>1.94</td>
<td>2.00</td>
<td>.972</td>
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<td>FS2</td>
<td>50</td>
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<td>128</td>
<td>2.45</td>
<td>2.00</td>
<td>1.215</td>
</tr>
</tbody>
</table>

Table 7.1 Statistical Analysis of Survey Question by Flight School and Gender

Table 7.1 reveals significant differences between the Flight Schools, the analysis will now be broken down by Flight School in order to provide an insight of these differences.
7.3 Flight School 1

As identified in Chapter 5, cadets at FS1 can train at various locations in the UK and abroad. As a result, the cadets from this school had experiences of different training centres throughout their programme. Three of the women cadets had spent time at one of the smaller training centres and expressed their preference to the smaller environment due to the smaller classrooms, better relationships with the instructors and also the motivation of being located near an airfield.

‘I feel like it is much more personal, all of the instructors know you, you know everyone there and it’s like a little family. This (bigger) training centre has a completely different vibe; I have done all of my exams here and there are so many people there, you never see the same person, there are no windows and you are not by an airport. I am so glad that I am located at the smaller base because I feel like it is a better place to be for ground school, just seeing planes take off every day is so much better and more motivating’ (Cadet D, FS1, Interview Response).

‘I first started at the smaller training centre and it had just opened, there were only seven of us so it was one-to-one teaching, it was like a little family which is different from ground school at the larger training centre. You notice the difference because the larger training centre isn’t connected to an airfield, whereas the other three are, I notice it acutely that I’m not around aircraft anymore- it can be demotivating’ (Cadet C, FS1, Interview Response).

Another common theme at FS1 was the cadets’ views of the Flight School getting too big too soon and as a result, some of the cadets cited communication and a lack of support as problems. Cadet B (FS1, Interview Response) outlined her views; ‘I honestly think it’s expanded too much, too quickly and there are too many people in charge. Nobody knows whose role is whose and who to speak to and it doesn’t get passed down to us so we don’t know who to contact’. The main themes highlighted from cadets at FS1 will now be identified, these included support and communication.
7.3.1 Lack of Support

‘I would strongly recommend that any woman considering training to become a pilot has a strong and reliable support network at home, as the support offered here is distinctly lacking. Nobody told me before just how emotionally taxing this would be in addition to the academic commitments, if I had known then what I know now then I would have reconsidered training here’ (Survey Response: Woman, FS1).

In line with the concerns of the cadets about the expansion of FS1, a lack of support was cited by the women cadets at the larger training centre of FS1. They expressed that there were many members of staff and they were unsure of whom to go to if they had a problem, particularly if it was gender-related. Cadet A (FS1, Interview Response) stated that she had experienced a gender related problem with one of the other cadets, she stated ‘I don’t know who I would speak to because it used to be someone but she has gone and they haven’t replaced her and I don’t know if they will any time soon’. Cadet D (FS1) is based at one of the smaller training centres and she recalled a time when she had visited the larger centre:

‘At the smaller centre there are two people clearly in charge so I would know who to go to and when I have broken down before one of the staff members knows exactly what to do and she was there for me so I was really lucky to have her there. However, when I have been in the larger centre I wouldn’t know who to go to. I remember when I was there for my exams last time I felt really ill but there was nowhere for me to go and I didn’t know who to tell that I felt ill I sat the exam anyway, when I go to the larger centre we really don’t know anyone’ (Cadet D, FS1, Interview Response).

The member of staff who had helped Cadet D (FS1) when she experienced a problem at the smaller training centre was also identified as supportive by another cadet as she recalled having to make an emergency landing whilst at the flight centre outside of the UK. ‘When I was at the training centre abroad I
was involved in a problem and we had to do an emergency landing in a field and a few days after I had an email from a staff member just checking that I was ok and making sure that it didn't affect my training which was really nice for her to go the extra mile.' The cadets valued and recognised this support but they seemed to treat it as a unique and rare experience. Overall, the women cadets in particular recognised the need for transparency of staff members so they knew who to approach if they had a problem. In addition, Cadet B (FS1) suggested how the school could introduce a support group for the women cadets;

‘I think the school could benefit from a support group of the girls, especially for courses with just one girl on; it would be good if there was a girl’s night once a month or every couple of weeks. I know in the training centre abroad they have a girl’s Facebook group and we sort of had a girly night out with six of us girls just to escape from the boys for a bit, go shopping or something’ (Cadet B, FS1, Interview Response).

For Cadet D (FS1), attending the interview was an opportunity for her to see the other women cadets; it is disappointing that it took an event such as a research interview for her to have the opportunity to mix with the other women cadets.

‘That’s why I wanted to come tonight, I came down from the training centre about 2 hours away because I thought it would be nice to see some other girls. It was more for me, I just thought it would be so nice to see some girls because I live with boys, I’m on a course with boys and at the weekend I live with my boyfriend so I don’t see girls anymore’ (Cadet D, FS1, Interview Response).

For the women in particular, the lack of support and inability to identify a member of staff to speak with about any welfare problems was frequently mentioned and had affected their experiences in training. Women cadets’ survey responses also revealed the lack of support at FS1;
‘I very nearly left following months of torment due to the prolific lad bible culture within the masses of white privileged boys here’ (Survey Response: Woman, FS1).

‘The atmosphere is toxically competitive and there is a clear lack of empathy or kindness, because of this I would discourage other women from joining as the emotional stress and trauma is too great’ (Survey Response: Woman, FS1).

Similarly, some of the men cadets stated that they believed money and time were valued more than the cadets’ welfare at the school, survey responses included;

‘There is a lack of support as I feel they value their own interests (profit) over trainee’s best interests’ (Survey Response: Man, FS1).

‘When you start you are very much bottom of the ladder, people with zero knowledge are treated like “sausages in a sausage factory”’ (Survey Response: Man, FS1).

Alongside this, due to the expansion of FS1, communication issues were identified as problematic.

7.3.2 Communication Problems
Due to FS1’s rapid expansion and their acquisition of new training bases, effective communication is essential; however the cadets experienced problems during their training due to communication issues.

‘I have found communication between the company as a whole and the cadets has been very poor throughout the whole experience. The staff in the UK have no idea how bad it is in the training centre abroad, nothing was communicated back to the UK. The head of training had no idea of the training issues and delays and he is meant to be in charge. No internal communication and that’s been a big issue for me’ (Cadet B, FS1, Interview Response).
‘Communication is a problem, when we were abroad we didn’t know who to go to for what and it sorted itself out but it took a long time’ (Cadet C, FS1).

Survey responses also revealed communication problems and a lack of organisation at FS1 as issues;

‘Lack of communication with cadets, organisation has not been the best throughout our course’ (Survey Response: Man, FS1).

‘Quality of teaching is dropping and management is getting sloppy’ (Survey Response: Man, FS1).

‘There is poor communication; a lack of interest in our circumstances and the only thing they are concerned about is time, not our performance’ (Survey Response: Man, FS1).

The size of FS1 seemed to be affecting the culture and environment for all of the cadets. A lack of integration with other courses and cadets in particular affected this as it was identified that; ‘it’s such a bubble, you eat, sleep and go out with the same people, you are always talking about pilot stuff’ (Cadet A, FS1, Interview Response).

7.3.3 “Bubble” Environment
The frequent mention of the “bubble-like” environment at FS1 meant cadets were keen to have more extra-curricular activities and social events to take their mind off of their studies and many felt that FS1 could offer more opportunities for social events. Cadet B (FS1, Interview Response) identified that ‘you are in a class with the same people, you speak to them every day, but obviously there are hundreds of other cadets walking around and by doing events you can integrate with each other’. Cadet 3 (FS1, Interview Response) also felt particularly strongly about this, he stated; ‘I think they could do a lot more with events, there’s nothing that stands out. In the two training centres abroad they have dedicated personnel for pastoral care; however they don’t have it in the UK. There are not any clubs or sports
events here.’ In addition to these events taking their mind off of their studies, these events would enable them to integrate more with other courses and cadets within FS1 as it was evident that cadets only mixed with those on their course, who they also live with. This can be linked to Section 7.2.1 which identifies that for women cadets, being the only woman on your course means you only have the opportunity to integrate with men cadets. Cadet B (FS1) recalls her experience of escaping from studying with a fellow cadet;

‘It was good that I had her on my course and in my house because for instance on a Saturday when I think I can’t study anymore we would just go out together and drive around the area and listen to music. It’s bizarre but you need the release and switch off’ (Cadet B, FS1, Interview Response).

Having revealed cadets’ views and experiences of the culture at FS1, cadets’ perceptions of the culture of FS2 are explored in Section 7.4 in order to understand the role and impact of the culture on the experiences of men and women cadets.

### 7.4 Flight School 2

#### 7.4.1 Competitive Environment

A key theme within cadets’ responses at FS2, predominantly among the women, was the competitive culture of the Flight School and the school encouraging and nurturing competitiveness. Cadet 7 (FS2, Interview Response) identified that ‘there is a lot of healthy competition here’, similarly Cadet J (FS2, Interview Response) stated that ‘we definitely have a healthy competitive thing going on, I think it’s our personalities’. This links back to the self-perceptions of the cadets and how they view themselves as an individual, and as a pilot, however the Flight School encouraging competitiveness is significant and the way in which the cadets respond to competition demonstrates their personalities. Two accounts of the competitive culture which stood out were from two women cadets:
‘There is a bit of friendly competition, especially with me and one of the other guys there is a bit of kind of healthy competition between us. He actually said to me that it does bother him that I beat him at stuff because I’m a girl. That’s kind of a compliment wrapped in an insult in a way, but it’s all quite jovial, quite friendly. I mean, it is kind of inherently competitive here, but it’s in a positive way. And you can see that in ground school as well, they won’t do it to the girls but say if one of the guys gets a question, another guy across the room will jump on him and say that’s wrong and why it’s wrong. They are a bit more competitive against themselves, rather than the other way around’ (Cadet J, FS2, Interview Response).

‘There is a lot of underlying competition, and for me it doesn’t affect me as much because I am not competing for a job. But they almost encourage the “contest” of the whole thing. Which I find quite funny because I have never been that kind of person but here it just happens, it’s like they have filtered it into the water, and everyone has that mind set about them. We had to do psychological interviews to get here, and we would have conversations about competitiveness and I always found I was more competitive with myself than with other people, so watching the sort of the “contest” between people I find quite funny. I do think they sort of almost encourage it but I can see why, I mean it’s a dog eat dog world here so if you want to get a job, you have got to be the best’ (Cadet I, FS2, Interview Response).

Another word commonly mentioned by the cadets at FS2 was ‘family’.

7.4.2 Unique Family Culture
The cadets viewed FS2 as unique compared to other schools because of the family feel and supportive environment.

‘I felt like here it was much more personal than the other flight schools I looked at, it’s very small and so you get to know everyone. There is a good community spirit’ (Cadet G, FS2, Interview Response).
Cadet 6 (FS2, Interview Response) also reflected on the culture of FS2 as ‘a real family environment which I don’t think you would get at other flight schools’. Similarly, Cadet F (FS2, Interview Response) explained that she believes ‘most people will tell you it’s quite a family-feel, we are all on the same journey, all here together’. This family environment was what attracted some of the cadets to this particular school having had a taste of the school culture during their selection and assessment days. Cadet F (FS2) was one of the cadets who felt very welcomed on her selection day, meaning she could see herself training at this school over others, she expressed;

‘You are not just a number, they really value you and they want you to do well as a student. It has a family feel and people want you to do well’ (Cadet F, FS2, Interview Response).

In contrast to the lack of support cited by cadets at FS1, this help and support was also echoed by other cadets at FS2. Responses included:

‘Everyone is more than happy to help each other and everyone is very committed to passing as well. A lot of people helped me when I started and now I am helping other people as well’ (Cadet 6, FS2, Interview Response).

‘I don’t feel like a number, I feel very included in the school, even management know most people’s names’ (Cadet 4, FS2, Interview Response).

‘What I noticed here is that people are very proactive about giving out help, like in University you kind of have to seek out help and you may be told no from classmates. So that’s what struck me about the place, I saw on a few online forums that this school is like a family and I kind of took that with a pinch of salt, but when you get out here, it really is’ (Cadet J, FS2, Interview Response).

Because of this supportive and family-like culture cited at FS2, cadets who thought that they would be homesick said that they had not felt homesick at
all and when a cadet is seen to be experiencing difficulties they are picked up by the school. Cadet J (FS2) identified how the school had supported a fellow [woman] cadet:

‘One of the girls was in trouble, I think the sheer volume of work was getting to her and one of the instructors recognised that and spoke to her after and told her to take a break, so they are very supportive in that way too. They look at us as people too, and I know one of the course instructors had made others aware of someone struggling’ (Cadet J, FS2, Interview Response).

Several other cadets identified FS2 being proactive and picking up on cadets who may be experiencing difficulties. FS2 contains a social committee which includes a sports rep, a canteen rep, a careers rep and a welfare officer. In addition, each student has a course mentor and two student mentors who are ahead of them in training. It was clear that cadets would rarely seek the help of the official welfare officer or school and they relied on their peers a lot. When asked about support networks, Cadet F (FS2) valued the mechanisms in place from the school, especially as a mother:

‘You have your course mates and you are all here together you eat together, you study together but you do have your personal space. Beyond the students, there are the instructors and if you feel like you are struggling or need some extra help, they do not mind and will give up their time. Even just general staff, they all take a general interest if you feel down. I think cadets seek support from people that they are hands-on with on a day-to day basis including your friends but then you have the head of training who has made seeing the kids a lot easier for me, so pretty much anyone you come across here is part of the support network in one way or another’ (Cadet F, FS2, Interview Response).

However, the support of the school was not always praised as Cadet I (FS2, Interview Response) identified that ‘one of the girls bag was stolen the day we got here and watching from the outside I don’t think they supported her as
well as they could have’.

7.5 Comparison of both Flight Training Schools
Sections 7.3 and 7.4 have explored the cadets’ views of their respective Flight Schools, providing an insight into the cultures which the cadets experience and highlighting the differences between the two schools. Whilst both schools were identified as male-dominated, cadets’ responses between the schools were very different. Cadets at FS1 cited a growing school which fails to support their cadets and communicate effectively. The environment proved difficult for some of the women cadets as they cited a lack of welfare support and minimal integration with other courses leading to negative experiences for them. Cadets at FS2 cited the school breeding competition; however this was identified as “healthy” at times. More positively, FS2 cadets praised the “family-like” environment which offers welfare support and enables cadets to feel at home, this is important for minority groups. However, FS2 is smaller than FS1 therefore; it is likely that the schools will face different problems.

The previous sections have provided an insight into each of the training schools; to support the interview findings, the survey included questions asking cadets about their commitment to their Flight School. These responses reveal how committed cadets feel to their school and provide more evidence of the impact of the Flight School cultures on the views of the cadets. The survey responses were analysed by gender and then by Flight School to identify any significant differences.

7.6 Cadets’ Commitment to their Flight Training School
Cadets were asked if they ‘would be happy to recommend this training school to a friend/family member’. At FS1, 2 women (25%) and 4 men disagreed (6%) with this statement compared to 0 respondents at FS2. Further statistical analysis by Flight School, showed a significant difference (sig .000).

The mean response for cadets’ views on the statement ‘I agree discussing
this training school with people outside of it’ was 1.97 for men and 2.0 for women demonstrating that the majority of cadets are happy to discuss the training provider outside of the school. However, 6 men (9%) and 2 women (25%) at FS1 either disagreed or strongly disagreed with this statement compared to just 1 man (3%) at FS2, explaining the variance in responses from men. Conducting further statistical analysis revealed a significant difference (sig .049) by Flight School. Possible reasons for some of the cadets’ strong views are alluded to further on in the survey.

Similarly, 4 women (50%) and 27 men (39%) at FS1 disagreed or strongly disagreed to the statement ‘the training school has a great deal of personal meaning to me’ in comparison to 0 women and 5 men (13%) at FS2. These results highlight the impact that the Flight School environments have on the experiences of cadets and further qualitative data corresponds with the differences by Flight School (sig .000). The average mean for the statement ‘I feel as if the training schools’ problems are my own’ was 2.85 for women and 2.98 for men, showing a slightly higher average level of agreement from women cadets. Analysing this question by Flight School revealed a statistically significant difference (.027). Having measured cadets’ commitment to their Flight Schools, the survey also asked cadets attachment to their Flight School in order to reveal the impact of the training culture on cadets’ attachment to their schools by gender.

7.7 Cadets’ Attachment to their Flight Training School
Responses were aggregated by Flight School and, overall, cadets displayed similar levels of attachment to each Flight School. At FS1, 4 women (50%) and 30 men (43%) either disagreed or strongly disagreed to the statement ‘I could easily become attached to another training school’ and 7 women (58%) and men 15 (39%) at FS2 disagreed or strongly disagreed. The majority of responses were either strongly disagree, disagree or neither agree nor disagree with 0 women from either Flight School strongly agreeing with the statement in comparison to 5 (5%) men in total, however there was no significant difference by school (significance value .763).
Despite this, the statement ‘I feel like part of the family at this training school’ generated the highest mean response rate for both genders (3.75 for women and 3.55 for men) out of the attachment measuring statements. These results show that on average, women responded slightly closer to disagree than men, 2 women (25%) and 12 men (17%) from FS1 agreed they did not feel part of the family compared with 0 women and 9 men (24%) from FS2. In addition, 0 women and 7 men (10%) from FS1 strongly disagreed to ‘not feeling like part of the family’ compared to 6 women (50%) and 13 men (34%) at FS2. Further analysis revealed a significant difference between the Flight Schools (significance value .005), identifying higher levels of attachment from cadets at FS2, however the analysis revealed no significant difference (.403) by gender.

At FS1, 4 women (50%) and 25 men (35%) disagreed or strongly disagreed with the statement ‘I do not feel emotionally attached to the school’ in comparison to 9 women (75%) and 24 men (64%) from FS2. Further statistical analysis revealed no significant difference by gender, however there was a significant difference (significance value .001) between cadets’ emotional attachment to each Flight School. These findings reveal that cadets’ commitment and attachment levels were higher at FS2. It seems that these findings support the cadets’ views of their Flight Schools identified in Sections 7.3 and 7.4. A key finding is the significant difference between Flight School rather than gender, suggesting that, overall, cadets are less happy at FS1. Despite this, during the interviews, women cadets at both schools identified facing difficulties because of their gender. The rest of this chapter will now concentrate on the lived experiences of the cadets at the Flight Schools to further understand the development of cadets’ identities during training. The experiences of women cadets will be the focus in order to explore the effects of their minority status.
7.8 Effects of Women’s Minority Status

7.8.1 Relationships with Instructors

‘I couldn’t even imagine how the instructors would deal with an all-female class’ (Cadet A, FS1, Interview Response).

Overall, cadets at both Flight Schools praised their flying and ground school instructors, as Cadet 1 (FS1, Interview Response) stated ‘I think ‘instructor’ really is the right word, they are not teachers, they are instructors on your course, you can have a laugh and a chat but they are still showing you something to do'. This relaxed and friendly relationship was frequently mentioned by cadets. Cadet 3 (FS1, Interview Response) described the relationship as ‘a bit like a teacher and student at school, but more A level period but I suppose you wouldn’t stand outside and have a cigarette with teachers at school, but you might here’. Due to the friendly relationship between the instructors and the cadets, the use of humour by the instructors was frequently cited.
7.8.2 Instructors Humour

Instructors’ humour was picked up on by many of the cadets at both Flight Schools, particularly the women. Cadet B (FS1) stated ‘I don’t know what it would be like without girls in the class but it seems like they couldn’t really go any further without us to be honest with some of the humour that’s used and stuff that’s said’. Similarly, Cadet A (FS1) believed that the instructors ‘don’t seem to hold anything back’. And Cadet G (FS2, Interview Response) identified ‘some of the classes are awful, like some of the [rude] stuff they have said’. However some of the women believed that ‘some of the instructors are a little bit more considerate when there are girls in the class’ (Cadet J, FS2) and ‘they make less dirty jokes with us there, well yeah, less about us, less direction to us because the lads sometimes get it bad, it would be different and less reserved if we weren’t there’ (Cadet I, FS2, Interview Response). The male cadets believed that instructors would be more careful if women were present in the class:

‘If there were females in our class, maybe the classes would be a bit different at times, there would probably still be quite a macho environment but maybe the instructors or cadets would tone the jokes down a bit’ (Cadet 4, FS2, Interview Response).

‘I think the instructors would still have the same crack, but maybe they would tone it down a bit if there were girls in the room I don’t know’ (Cadet 5, FS2, Interview Response).

Alongside ‘dirty jokes’ (Cadet J, FS2, Interview Response), the women cadets identified that some of the instructors did not know how to deal with women being present in their classes. Cadet F (FS2, Interview Response) stated that the instructors tend to think ‘we can’t swear or say rude jokes with women in the class’. Cadet H (FS2, Interview Response) shared a course with three other women and she identified that the instructors ‘didn’t know whether to crack loads of jokes or not when we first came in, being four girls in the class’. Similarly, the women noticed that instructors tried to be careful because of the women being present, common strategies included
apologising after jokes and excusing their humour for example by saying ‘it’s just a joke, I’m not actually sexist but..’ (Cadet A, FS1, Interview Response). Despite this, cadets noticed that any care taken to avoid jokes at the start of their course had disappeared as instructors have ‘relaxed, got to know us and eased into it’ (Cadet H, FS2, Interview Response).

Despite the mention of the instructors’ humour, during the interviews a selection of the women cadets stated that they believed they are treated equally, common responses included ‘we are all treated equally, no different being male or female’ (Cadet F, FS1, Interview Response) and ‘generally, you are treated as an equal’ (Cadet F, FS2, Interview Response). However, some of the women cadets believed that they get more attention from the instructors because they are women.

7.8.3 Treated Differently
Cadet I (FS2, Interview Response) stated ‘the instructors will fall over themselves to help you’, expressing her view that women at times get preferential treatment due to their minority status, Cadet F (FS2, Interview Response) agreed; ‘sometimes the instructors go easy on the girls’. Cadet J (FS2, Interview Response) identified this differential treatment as having an element of positive discrimination within it; ‘you could call it positive discrimination but they probably tend to treat the girls a little bit nicer than the lads, like they will get a buzz off the lads, and take the mick a bit, but they won’t with the girls’. Although the women didn’t want to be treated differently and disregarded gender as a reason for differential treatment, some of the women seemed to like the fact that they were sometimes favoured or treated better because of their gender. Cadet D (FS1) explained:

‘Sometimes being a woman is an advantage because I feel like some of the instructors put me before the boys sometimes; most of them treat me better than the boys. I have one favourite instructor as I feel like he favours the girls so much so that can’t be a bad thing’ (Cadet D, FS1, Interview Response).
The interviews revealed possible differential treatment towards the women cadets. The survey asked cadets to respond to the statement ‘I feel I am treated unfairly because of my gender’. Women cadets expressed a higher negative mean response rate (3.80) to the men (4.10). Importantly, 3 out of 8 women (38%) at FS1 strongly agreed or agreed that they felt they were treated unfairly because of their gender, in comparison to 0 women at FS2, however the survey revealed no significant difference by gender (.260) or by school (.826). Figures 7.1 and 7.2 identify the survey responses to this question by gender.

**Figure 7.1 Women Cadet Survey Responses: 'I feel I am treated unfairly because of my gender'**
Figure 7.2 Men Cadet Survey Responses: 'I feel I am treated unfairly because of my gender'
The possibility of any differential treatment by gender caused concern to some of the cadets as they seemed to suggest there are elements of positive discrimination. Although this could be seen as advantageous for the women, the women did not want to be treated differently due to their gender.

7.8.4 Potential Positive Discrimination
One woman cadet mentioned organisations which offer flying scholarships ‘love women applying’ (Cadet H, FS2, Interview Response). Similarly, Cadet G (FS2, Interview Response) identified that she thinks ‘because there is a lack of female pilots it could put us women at an advantage in a weird way’. This idea of positive discrimination was frequently mentioned throughout the interviews. As airlines are introducing gender-specific initiatives in conjunction with training schools, the cadets highlighted that the airlines’ drive to increase the number of women pilots can be seen as positive discrimination. Cadet F (FS2, Interview Response) stated that ‘the school has an airline coming to look for new pilots and they have specifically said they are looking for females’ she went on ‘it’s nice to know they are putting that out there but we (women) do not want to be chosen on because we are female and the more they keep doing things like this it’s just highlighting it more’. Many of the other women cadets shared these views;

‘There shouldn’t be positive discrimination where you get the job because you are a woman and you don’t want to be the ‘token woman’ on the course. With some of the initiatives out now I can see why men are outraged, even I don’t agree with gender-specific initiatives. I think it will almost make it more difficult for women because they will have prejudice from the men that they are on the course with and probably receive comments that they are there just because they are women. I think it should be equal. Most women are saying “I don’t want the help thank you, I will get in on my merit and because I deserve to be there’” (Cadet A, FS1, Interview Response).
‘I am actually offended by gender targeted initiatives because I don’t need extra help; its implying women need extra training, that’s offensive!’ (Cadet E, FS1, Interview Response).

These concerns were shared by cadets at both Flight Schools;

‘There is a fine line between promoting gender and positive discrimination. The gender specific initiative has had a lot of negative feedback because guys feel like they are not being treated fairly because the airline are openly stating they will pay for women to start training and they are saying “yeah we support the guys too, we offer them sponsorship” but they only offer an underwriting of the type rating loan which is completely different to paying for somebody’s full sponsorships and the guys have cottoned onto this and now they are thinking there is positive discrimination’ (Cadet B, FS1, Interview Response).

‘I did have someone once say to me, oh yeah you are more likely to get a job because you are a female; I was so angry’ (Cadet G, FS2, Interview Response).

Many of the women shared the view of wanting to be selected because they are the best candidate for the job, not because of their gender. This included Cadet H (FS2) who stated; ‘I want to be picked because I am the best person for the job, not because I am a girl’. The idea of being chosen to fill a quota or tick a box was infuriating for the women cadets. Cadet I (FS2, Interview Response) felt very strongly about this stating; ‘I don’t want it to become a point where I’m just being hired to tick a box and fill a quota’. The men cadets also expressed their views on differential treatment of women, similarly focusing on the gender-specific initiative recently being released by a UK airline:

‘I can see how a lot of people would be against that, considering the majority of pilots looking for jobs are male, and if I was looking for a job with an airline using gender-targeted initiatives that may upset me to think that just because I am male I don’t get the equal rights. But at the same
time, there needs to be ways to pull women into the profession, I think with most of the airlines now, their publicity is obviously drawing more women in but I still think more needs to be done. But I can see how a lot of males may find it upsetting’ (Cadet 6, FS2, Interview Response).

‘The gender-specific initiative is great but as a male I don’t agree with it. I think from the public view it’s good for the publicity and it’s good to help the gender problem, it will expose it to little girls and the big companies are then setting an example for the other companies. But the question is; do they need to be helped or will it happen anyway? I’m not sure they need to be helped. To say there is a problem is one thing but to have help specifically targeted at women in the news etc. is too much, they don’t really know what that’s doing’ (Cadet 7, FS2, Interview Response).

Cadet 7 (FS2) suggested the gender targeted initiatives could be subconsciously reinforcing the problem, or causing more harm than good. Similarly, Cadet 4 (FS2, Interview Response) stated ‘I think there needs to be kind of a kick to change the industry initially. I’m not sure quotas are good in the long run, but I guess there needs to be visibility’. Other views from men cadets included;

‘I think the best people should get the jobs, regardless of gender. But at the same time, I think perhaps girls don’t apply for it because they don’t think they can do it there needs to be kind of people there visible for young women. But then, speaking to some of the girls here, they were going for it whatever, whether there were other female pilots or not. The gender specific initiatives annoyed me because I think its undermining the objective that they are trying to achieve and fight for because it creates the opinion that firstly, girls need extra training to get into those positions, which isn’t true. And secondly, it creates the idea that you are doing things to make women come forward. And it means that any girls that do go forward will potentially have something hanging over their head where it’s oh “you were only chosen because you’re a woman”. And
I’m surprised some airlines are doing it because they are usually quite smart with these things, yet they are doing an initiative which to me seems quite self-destructive’ (Cadet 1, FS1, Interview Response).

‘I’m not sure the scheme targeted at just women is the right way to go about it because it’s a bit of positive discrimination. I think you should get the job because you are the right person for the job; you deserve it, not because you are a woman. However, I do think they have to make a concerted effort to attract women, just in the right way’ (Cadet 2, FS1, Interview Response).

‘I would recommend that now is a great time for women to apply as airlines as discriminating against very talented men in favour of less talented women in a desperate bid to come across as inclusive’ (Survey Response: Man, FS1).

Although the men cadets identified supporting the industry’s aim to attract more women into aviation, they stated that it is the way the airlines and Flight Schools approach these initiatives which is key. Cadets feared those who enter on these types of training initiatives could face difficulties as even the introduction of them has been a controversial topic at both flight schools. Gender-specific drives were criticised heavily by both men and women cadets as they consider that they subconsciously reinforce the problem and the women who enter on these schemes may be treated differently. Another theme which related to differential experiences had by women cadets included differential treatment according to stereotypes associated with their gender, these are outlined in Section 7.8.5.

7.8.5 Treated Stereotypically

Cadet E (FS1, Interview Response) shared an example of this stating that FS1 aim to put one woman in each house to ‘keep it reasonably tidy’.

Furthermore, Cadet D (FS1, Interview Response) recalled the moment she told fellow cadets about meeting other women cadets for the research interview to take place; ‘when I told the guys about today they said we would
be drinking champagne and talking loads at an event which is just for girls’. Examples of treating women stereotypically continued;

‘If two of the lads come into my room to have a chat it’s all laugh and jokey but if one of the lads comes in to have a conversation it becomes a lot calmer almost, and they will speak to you about their family or things they think women can advise them on, it’s quite funny’ (Cadet I, FS2, Interview Response).

‘I think I kind of shocked some of the lads a bit because I’m quite sporty and always have been so I played tennis with some of the lads and is one of the guys in the class and it really bothers him that I win all the time whenever we play something because he is a bit of a kind of alpha male character’ (Cadet J, FS2, Interview Response).

‘I think females do encounter stereotype-led behaviour but I’ve always approached this with the attitude of doing my best regardless and not worrying about negative comments along the way’ (Survey Response: Woman, FS2, Interview Response).

Although the interviews revealed some instances of the women cadets feeling as if they are treated stereotypically, the survey revealed that there was no significant difference (significance value .175) by gender to the question ‘I feel that people often interpret my behaviour according to stereotypes of what they believe men/women are like’.

Despite this, the survey did reveal that, on average, women cadets felt they ‘had to work harder because of their gender’ (2.25 mean response compared to 3.53 for men). Performance pressures emerged as another difficulty experiences by women cadets.

7.8.6 Performance Pressures
Figures 7.3 and 7.4 display the results to the statement ‘because of my gender I feel I have to work harder than others’. There was no statistical significance by Flight School, however 8 of the men (11%) surveyed at FS1
and 25 of the men (66%) at FS2 either agreed or strongly agreed to this statement. Possible reasons for the men feeling this way could be identified from the interview responses including the competitive culture at FS2.
Women Cadet Survey Responses: Because of my gender, I feel I have to work harder than others

- Strongly Agree: 30%
- Agree: 30%
- Neither Agree nor Disagree: 25%
- Disagree: 15%
- Strongly Disagree: 0%

Figure 7.3 Women Cadet Survey Responses: ‘Because of my gender, I feel I have to work harder than others’
Men Cadet Survey Responses: Because of my gender, I feel I have to work harder than others

- Strongly Agree: 13%
- Agree: 17%
- Neither Agree Nor Disagree: 14%
- Disagree: 15%
- Strongly Disagree: 41%

Figure 7.4 ‘Because of my gender, I feel I have to work harder than others’: Men Cadet Responses
During the interviews the women cadets revealed that they felt that they had to excel in their training because of their minority status. Cadet H (FS2) expressed ‘I suppose in here as a girl, certain things must be more polished as there is that pressure and I suppose you feel like you have something to prove’. Similarly, Cadet J (FS2) recalled feeling just as pressurised on her assessment day;

‘I came out here for assessment and I thought I knew my stuff, but I was the only girl on assessment and the guys seemed really clued in and very self-assured that kind of thing and it made me feel like I had something to prove because I was the only girl and I still feel like we [women] have to in class now’ (Cadet J, FS2, Interview Response).

Despite the women’s perceptions of the performance pressures because of their minority status, cadets were aware that their time on the course has been a process of self-evaluation and adjustment and many of the cadets reflected on realising certain behaviours should be avoided when becoming a pilot. Cadet B summed up her learning process;

‘Through the course I have learned and I completely accept when I am wrong now. The other day I put the [landing] gear down instead of doing something else and the instructor said I was wrong and I said, yes I am. But before this course that would have been self-destructing, I would have been so angry at myself. I am always too hard on myself, I have had that since I have been able to speak and it has continued all the way through, I’m too hard on myself. However, I have got better and I have changed so much from a year ago, developed certain traits and skills’ (Cadet B, FS2, Interview Response).

In addition to self-reflection and learning, other cadets were cited as playing a critical role in the learning and development processes during their time in training. As a result, relationships between other cadets were frequently referred to when reflecting on the women cadets’ experiences.
7.8.7 Relationships with Peers

Men Cadets

Some of the women cadets had experienced resistance from male cadets including Cadet J (FS2, Interview Response) who stated; ‘there may be the odd one who says you shouldn’t be a pilot but oh well!’ Similarly, Cadet A (FS1) revealed ‘I have had problems with other cadets, which has been borderline where someone needs to know. Everyone else is fine; it’s just the odd person who will ruin it for everyone else. It has got to the point where I have asked other people should I tell someone or not?’ (Cadet A, FS2, Interview Response). As well as resistance, women cadets also identified feelings of isolation and for Cadet D (FS1, Interview Response), being the only woman at her training centre meant she had experienced ‘a lot of disadvantages’ both during flight training and in her accommodation. She shared some recent experiences;

‘I feel like the odd one out and they will look at me when answering a question or sometimes I am the centre of a joke and if there was another girl I would feel more comfortable. But it doesn’t bother me, I just laugh along with it anyway. I felt a bit singled out when I had problems in my house because I didn’t know if it was because I was a girl or if it was just general? But I think it’s because I am more sensitive than the other guys, I think without me they would have just got on with it but because it was me, I addressed it a bit more and I said I really can’t live with this person anymore’ (Cadet D, FS1, Interview Response).

The survey too revealed similar responses;

‘I have experienced being treated unfairly because of my gender from other cadets, not from the instructors’ (Survey Response: Woman, FS1).

‘It’s not a nice environment to be female, very over masculine environment in some cases, sexism and objectification are everywhere, particularly in the schools’ (Survey Response: Man, FS2).

Cadet B (FS1, Interview Response) said that ‘with the boys at some points, I
have just felt like they are against me, and I go to the other girl on my course and she says I shouldn’t think about it like that because they’re not. We have different outlooks on the gender thing. I have had it since the start, whereas she just doesn’t even think about it like that.’ For women, the behaviours and experiences had with the men cadets were different to that of their experiences with fellow women cadets. During the interviews, women cadets’ emotions towards other women cadets varied between the two Flight Schools, affecting their experiences.

Other Women Cadets

Before embarking on training, the women cadets were aware that they would be a minority group and some of the women did state they had hoped there would be at least one other woman on their course. At FS1 there seemed to be a strong bond between the women on the courses and by not having another woman on her course, Cadet D (FS1) stated she felt singled out and wished for a fellow woman cadet. Cadets B (FS1) and C (FS1) shared a course and both stated the invaluable support they had provided each other; ‘Because I have another girl on my course I have another girl to go to for support and it would be difficult if I didn’t have her. I think you would notice that a lot because as a woman you can get along with guys and you can have more male friends that female but there are some things and it’s easier when you have a girl to relate to. I have definitely noticed that in training, its far easier if the two of us just support each other and just go out whereas the boys wouldn’t have even noticed if we weren’t ok’ (Cadet B, FS1, Interview Response).

At FS2, the women cadets shared a different view hinting at there being underlying competition between the women cadets, tying in with cadet’s perceptions of the competitive culture at FS2. Cadet I (FS2, Interview Response) shared her experience ‘I suppose there is an element of competition with the girls, some of the girls are lovely and some are quite stand offish and I don’t want to be like that so I’m just friends with whoever I click with’. Interestingly, the women cadets whom did mention the competitive
nature of other women were all part of airline sponsored schemes and Cadet H (FS2) stated that she had been in contact with one of the other women cadets before starting training, however they have not been close friends since starting training;

‘I was in touch with one girl quite a lot because we knew we were coming out together but since we came here, we aren’t close, we haven’t mixed that well and I get along better with the lads. So that’s interesting, because coming out here I was thinking we [girls] would stick together but we haven’t really, it’s not a big deal’ (Cadet H, FS2, Interview Response).

These experiences tie in with the women cadets’ views of their gender identity in Section 6.3 as most of the women cadets identified that they ‘get along better with boys’ (Cadet H, FS2, Interview Response) which they believe is paramount when considering whether or not to enter a male-dominated profession.

Alongside the women cadets’ experiences with their fellow cadets, the women recalled experiences when they felt they were recognised for their presence, rather than their achievements.

7.8.8 Recognised by their Presence, not their Achievements
Women identified that their presence was exaggerated by men cadets and some of the women cadets stated that their appearance was frequently commented on, unlike the men’s. Cadets B (FS1) and D (FS1) shared their experiences;

‘One day I think I had mascara on and everyone made such a big deal and I remember when I got dressed up for dinner one night and all the boys said “who’s that?” it’s so annoying’ (Cadet B, FS1, Interview Response).

‘They are all really lovely but they always say “oh everyone on the course loves you” and I just think why can’t you just see me as a friend? Why is it so “oh my god, there’s a girl” I think being the only girl at the smaller base
means everyone looks at me a lot more. It’s kind of a bit weird, whereas at home I have all my girlfriends and it’s just normal to be a girl, whereas there it’s not normal to be a girl here. I am pretty relaxed here, I am but I wouldn’t want to go to the effort of wearing make up! One Friday I was driving home straight after training and so I wore make-up and they were all like “oh you are wearing make-up today, you look so different” and I just thought please leave me alone. If I do one thing, everyone notices and it’s just annoying. I feel like if I do wear make-up they are like “who are you trying to impress?” why can’t I just wear make-up and not be questioned? I went to Boots last weekend and I bought a tinted lip balm and I wore it last Wednesday and everyone was asking “what have you got on your lips?”’ (Cadet D, FS1, Interview Response).

The survey also revealed that some of the men cadets recognised the difficulties which the women may face.

‘I do feel that it must be difficult living at the school as such a minority group, particularly for attractive ladies who may get a lot of attention from both students and staff’ (Survey Response: Man, FS2).

Having outlined the experiences and difficulties which the women cadets are facing during their time in Flight Training, a variety of “coping mechanisms” were cited by the women. These are described in Section 7.9.

7.9 Coping Strategies: Standing out or Fitting in?

‘I think for girls, it’s a brilliant career; just the main thing is not to make allowances for being a female. Just get on with the job at hand. Just like anyone else, you are a pilot’ (Cadet H, FS2, Interview Response).

The way in which Cadet C (FS1) coped with her experiences during training was by deciding that she wanted to stand out, this required emphasising her presence;

‘Even when I did engineering at University, I was known as “the engineering girl” who wears a dress all the time because I’m quite girly in
that sense. I like a nice dress and make up and that’s something I was
determined not to take away from it. Of course, yeah I have to wear
uniform and do the job but that doesn’t mean I have to be any less girly
with that. When the boys react to us getting dressed up, I find that really
amusing. Some people think that to fit in you have to make yourself more
masculine in ways but I’m not going to do that—I’m going to be as girly as I
want!’ (Cadet C, FS1, Interview Response).

This strategy used by Cadet C (FS1) had influenced Cadet B (FS1) who
identified that;

‘I have got a lot more girly since I have been on a course with Cadet C,
she has changed me completely, and she does my hair and everything. I
would never have worn this dress a year ago’ (Cadet B, FS1, Interview
Response).

Cadets E, A and D (all FS1) managed their minority status in a very different
way:

‘From my point of view, being a girl, you don’t want to seem like you are
making a big fuss out of nothing. But obviously differential treatment
doesn’t happen to guys so they wouldn’t ever need to make a fuss’
(Cadet E, FS1, Interview Response)

‘The first week I spent the whole week complaining about how cold I was
because of the air conditioning and everyone would say “she is moaning
again she is cold” so the next week I just put up with it because I didn’t
want to be the girl making a fuss’ (Cadet A, FS1, Interview Response).

‘I won’t wear anything anymore so they can’t say anything. I don’t think I
could ever go in with a full face of make-up; I would have to hide my face
all day. When I do wear a bit I get reactions so I’m think I will just wear it
in my private life’ (Cadet D, FS1, Interview Response).

Similarly, the way which the women cadets responded to the instructors’
humour mentioned in Section 7.8.2 reveals a coping mechanism. The blasé
attitude towards the humour of the instructors was striking. Women cadets stated that they ‘don’t care’ (Cadet B, FS1, Interview Response) and ‘if instructors ever make a gender related joke there is no malice to it, it’s all in good humour’ (Cadet I, FS2, Interview Response). Laughing off and deeming jokes as “entertaining” were the coping strategies used by the women cadets. The response given by Cadet I (FS2) summed up the attitudes of most of the women cadets towards their instructors’ humour;

‘I think if you took offense to anything then it would be a problem, I think it’s the same in the industry as a whole, I think you have to have a thick skin. You really do. Because that’s all they are used to, women as the trolley dollies you know. I mean there has been comments like “imagine having an all-woman cockpit” and we are thinking we are sitting right here? (Laughs) I think since starting training I now maybe taking dirty jokes a bit better, I have become conditioned to that’ (Cadet I, FS2, Interview Response).

The women at FS2 deemed instructors’ behaviour as ‘a laugh’ and stated ‘all of the instructors are nuts’ (Cadet J, FS2, Interview Response). Cadet F (FS2) stated that her ‘favourite instructor is probably the dirtiest of them all, but he is the most entertaining, you will never fall asleep’. Alongside this, Cadet H (FS2, Interview Response) seemed to accept the humour as the “norm” stating; ‘I have worked in other male-dominated industries and I think I’m used to it’. When citing negative experiences the women cadets would frequently refer to the resistance and isolation as ‘not bothering them’ and denying any difficulties, yet some women did highlight the issues, suggesting they were affected by them.

7.10 Summary
This chapter has identified the cadets’ views of their Flight Training Schools, their experiences at the Schools and their commitment and attachment levels to the Schools. In particular, the impact of the training culture has been shown to disproportionately affect the women, as identified in the womens experiences, this has demonstrated the conflict they are facing between
being a women (gender identity) and becoming a pilot (professional identity). However, in order to manage this difficulty, the women identified the ways in which they navigate their identities to cope with their minority status—revealing the relationship between gender and professional identities. The next chapter will draw on the findings from Chapters 6 and 7 and present the results in the context of the literature and theoretical underpinning advanced in Chapters 2 and 3 in order to add to existing empirical and theoretical knowledge.
8 Discussion

8.1 Introduction
The previous two chapters explored the cadets’ perceptions of their gender and professional identities and their experiences of pilot training in their respective Flight Schools. The purpose of this chapter is to draw these findings together and to present the results in the context of the literature and theoretical underpinning advanced in Chapters 2 and 3 in order to add to existing empirical and theoretical knowledge. Section 8.2 will address cadets’ perceptions of their gender and professional identities through an exploration of their career influencers and motivations in light of the existing literature. Section 8.3 will examine the role of these motivations and experiences on the cadets’ professional identity through Kelchtermans (2009) concept of ‘Self-understanding’. The impact of the Flight Training School culture on the cadets’ identities will then be presented in Section 8.4. Finally, Sections 8.5 and 8.6 will explore the experiences of the cadets through the lens of Kanter’s Theory of Tokenism (Kanter, 1977) so as to identify the impact of these experiences on cadets’ gender and professional identities.

8.2 Influencers and Socialisers to the Pilot Profession
Understanding the influencers, socialisers and career motivations of the cadets allows for an exploration of the cadets’ perceptions of their gender and professional identities. Palos and Drobot (2010: 3411) proposed that ‘the career decision-making process starts quite early on and the child’s decisions are modelled by family influences’. Indeed, some of the cadets identified their father or grandfather flying as being a key factor in their decision to become a pilot. This confirms the view of existent studies that the early socialisation process is vital when considering a career and helps explain how a piloting career may not even be considered by those who have not had that exposure. For women in particular, Gibbon (2014) stated that limited exposure to aviation and the paucity of women pilot role models are central to understanding why so few women become pilots. However, according to
Drury et al. (2011), the gender of a role model is irrelevant and having men or women role models proved to be equally as effective during recruitment. If this is the case, exposure to flight or aviation per se rather than a (gender) association with the individual plays a more important role in influencing career decisions of future pilots.

The main variance between the influencers of the men and women cadets was the significance of the 1996 film ‘Top Gun’. This link, made only by the men, suggests popular culture plays a role in career awareness and reinforces the dominant discourse of piloting as ‘male work’. Sawar and Azmat (2013) state that the media can both encourage and discourage individuals by creating occupational stereotypes of what constitutes ‘normal’ work for men and women. The media can be both constructive and destructive. This was evident in a study by British Airways (2015) which found that 63% of women surveyed stated they were deterred from pursuing a career as a pilot whilst growing up, with 20% reporting a lack of visible women pilot role models in TV and film. As well as influencing career decisions, the representation of pilots in TV, film and in the media have perpetuated and continually reinforced the idea of flying as being a masculine activity (Saner, 2014) and support the view that if women cannot see other women in a role they may not believe they can successfully perform or undertake it.

Although initial exposure to the profession may have been influenced by the lack of women pilots in the media or as visible role models, an individual supporting or encouraging women is vital. Women cadets identified fathers and grandfathers showing preference to brothers flying or parents encouraging the women into a male-dominated occupation.

As the cadets are already in training, they have made the decision to pursue a piloting career and the women who have done this could be seen to have challenged the occupational stereotype entrenched in society. For current cadets of both genders, the main barrier to embarking on training was the financial cost, which is currently in the region of £100,000 (L3 CTS, 2017).
This is likely to be a significant factor due to the young average age of the cadets, explaining why airline sponsorships are so highly sought after. Similarly, existing studies focus on current pilots who had completed training when they were younger, without family commitments (Davey and Davidson, 2000; Ashcraft, 2007). Only one of the cadets interviewed was a parent and she identified being a mother as a barrier to starting her pilot training. Clearly life stage is a significant factor in entering pilot training as many of the cadets were young.

Similarly, Dainty et al. (2000) discovered that some women feel they have to make a choice between a career or a family and typically women-dominated careers (e.g. teaching) represent a family orientation, whereas typically male dominated occupations (e.g. piloting/engineering) represent a masculine career orientation (Kimberly et al., 1999). The structure of pilot training is unique and many of the cadets identified it as being intense which required being away from home for long periods of time, often abroad. Evidently, as a parent this would be difficult to commit to and would require sacrifices to be made.

8.2.1 Appeal of the Profession
The men cadets professed that what appealed to them about the profession was the ‘boys and their toys element’. This reinforces Ashcraft’s (2007) study which identified the historical construction of commercial and military pilots in popular and institutional discourses as skilful, brave, professional and, above all, masculine. Whilst the mention of ‘boys and their toys’ reinforces the male pilot stereotype, both men and women cadets agreed that they want a ‘challenging’ career which requires constant learning. Furthermore, some of the women cadets had switched from cabin crew to piloting because they wanted more of a challenge. For the male cadets, the appeal of the profession focused more on being able to perform technical skills, whereas the idea of travelling and meeting new people was more prominent for the women. Geographical mobility was not an issue for the cadets; this contradicts existing literature by Baldridge et al. (2006) which identified that
gender-role demands on women mean they are less likely to relocate for work, potentially limiting their career options. Similarly, Presser and Hermsen (1996) and Stockdale and Nadler (2012) stated mobility as being a significant factor in women not considering a particular occupation and Farmer (1997) identified that women tend to value occupations which were more flexible on their time. One explanation for this is the life stage of the cadets. As aforementioned, most of the cadets in this research are below the age of thirty with limited family commitments. Life stage evidently played a critical role in a cadets’ decision and ability to undertake pilot training and the ability to relocate may become more critical at a later stage of life.

This section has identified how early socialisation processes, influencers and views of the profession have guided cadets; career choices and cadets’ perceptions of their identities have begun to emerge. Through the use of Kelchtermans (2009) term ‘self-understanding’, the following section will help to understand the role gender identity has played in shaping cadets’ views of the profession.

8.3 Cadets’ Perceptions of their Gender and Professional Identities

Kelchtermans’ (2009) term ‘Self-understanding’ (closely linked to professional identity) and the components within it have provided a clear framework to understand the cadets’ evolving professional identities. By simultaneously understanding gender identity also as a performance (Butler, 1990), individuals perform roles in relation to their identity, recreating and reinforcing their gender identity through their acts of performance. Butler (1990) identified that the performance of gender provides an explanation as to how and why individuals interpret and maintain dominant organisational gender roles and how these affect individual identity. Ultimately, individuals who do not perform the norms can experience difficulty, which has been found in the interviews and surveys of the cadets.
Having explored one aspect of Kelchtermans (2009) explanation of professional identity in Section 8.1 (Job motivation), two other components will now be considered (Task perception and Self-image).

**Task perception** includes the core values and ideas of what cadets think it means to be a pilot. The cadets identified the traits and competencies which they believe are required to be a pilot. All of them can be closely linked to masculinity including being competitive, motivated, hard-working and meticulous. This aligns with Hansen and Oster’s (1997:8) view that ‘aviation suffers from image problems that may hamper its attempt to diversify the workforce’. Similarly, the findings of Novello and Youssef (1974), Eagly and Karau (1991) and Ely (1994) identified the perceptions of the traits needed to become a pilot are also heavily associated with masculinity namely; being courageous, competitive, adventurous and self-reliant. These gender perceptions are beliefs held by society which affect how people believe men and women should behave. These perceptions are influenced by social norms and the culturally entrenched views of each gender’s attributes. Contested and reinforced over time, these stereotypes have a strong influence on the occupational choices of each gender (see Section 8.1) (Liedberg et al., 2010).

Gibbon’s (2014: 60-61) study of gap year students discovered that students must be ‘obsessed with flying’ to become a pilot and, due to the highly competitive masculine environment, resilience and determination are also essential (Ashcraft, 2005; Davey and Davidson, 2000). All of the cadets, and the women cadets in particular, demonstrated their resilience and determination to succeed because of the personal and financial sacrifices they had made in order to embark on training. In addition, their previous failures to obtain places on airline schemes had only motivated the cadets to try again with one woman attempting to get onto a scheme eight times. Evidently, application and selection processes and pre-training experiences are testing of resilience, determination and hard-work. This was also evident in Wheale’s (1988) study where it was stated that recruitment criteria
specified that potential trainees should have the personality to deal with ‘stress’ and ‘human relations’ issues.

A further component of Kelchtermans’ (2009) term ‘Self-understating’ is self-image. **Self-image** produced a difference in responses by gender. The women cadets identified their interpersonal skills being essential in becoming a pilot, whereas the men focused on their technical ability. These views on their ‘fit’ with the profession can be linked to the typical traits associated with each gender. As Spence and Helmreich (1980) discovered, “instrumental” traits are dominant in males while more “expressive” traits are present in females who develop more emotional, empathetic and helping natures (Dobbins, 1985; Fox et al., 1985; Ridgeway, 1991). Therefore, how women cadets view themselves and how they view piloting could be contradictory, suggesting the need for a ‘performance’ when being a pilot (Butler, 1990). An example of this was discovered in the male dominated culture of policing, Brewer (1991) identified women underplaying their femininity and not conforming to their gender role.

The National Academy of Engineering (2004: 1) suggested that the skills of an Engineer in 2020 includes ‘analytical skills, creativity, resilience, agility, business and management skills – although maths is the basis, a good understanding of humanities, social sciences and economics is becoming vital’. Similarly, in piloting, British Airways stated that the masculine image of the pilot started to change during the 1930s as pilots were encouraged to view themselves as professional team member (Mills, 1998). However, it became evident that the cadets view of the male norm persist and using Kelchtermans’ (2009) term of ‘self-understanding’ to understand professional identity, the women cadets are experiencing a conflict or contradiction between their task perception (masculine) and their self-image (aspects of femininity) within their professional identity. This demonstrates how professional and gender identities (as a performance) can be linked and interwoven to address the question of how are women coping or managing this conflict.
In line with this, Crowley and Sandhoff (2017) explored women in a military setting and identified that the perception of a soldier was male, similar to piloting (Ashcraft, 2007). However, despite piloting being similar to soldiering and dominated by beliefs and associations of masculinity, the women cadets saw themselves as pilots differently to men and believed they could bring ‘different’ skills to the flight deck. Although this is dissimilar to Crowley and Sandhoff (2017), a similarity between the women cadets here and the women soldiers is ‘the association with thick social relationships with men during childhood and young adulthood’ (p.225). The women cadets identified getting along better with boys and by doing this they reaffirm their belonging in a masculine context (Flight School) and disassociate themselves from their own gender, making themselves exceptions. This links to Butler’s theory (1990) which identifies that ‘doing gender’ can also be undone. This was found to be the case for women engineering students by Powell et al. (2009) who identified that women performed their gender in a way to gain acceptance. However, similar to the women cadets in this study, these performances also meant that they failed to value femaleness and often ‘undo’ their gender.

Despite their ability, often by their own acknowledgement, women cadets continued to perceive differences between women and men as innate. In upholding these stereotypes, women seem to be disassociating themselves from other women and aligning themselves with their male peers: they are the exception to the rule. Similar findings were identified by van den Brink and Stobbe (2009) who identified that female earth scientist students wanted to be ‘one of the boys’ and because of this, most of the female students behaved according to the taken-for-granted (presupposed) masculine rules. However, the reinforcement of the stereotypes also seems to pre-empt any criticism they may encounter in the sector and also justify any suspicions they may have of other women in the sector. The men also did this by stating; ‘most of the girls seem just as orientated as we are and most conversations are around planes’ showing the male cadets’ perception of the
masculine culture and male norm of the pilot profession which women are ‘conforming’ to. A study of engineering students by Miller (2004: 47) also found that women felt ‘outside the norm’, suggesting ‘that there was an absoluteness of the general belief in a binary gender system’. In line with this, Collinson and Hearn’s (1996) found that women ab initio pilots are perceived as competent because they have to survive in a male-dominated environment.

8.3.1 Affected Responses Impacting Identities

In accordance with “being an exception”, the reactions cadets received from strangers, friends and family prior to embarking on training have had an early impact on their identities. Hayes (1986) and Miller et al. (2004) found that occupations are sex segregated and occupational sex role stereotypes lead to societal beliefs and expectations that certain jobs require particular gender-specific traits and characteristics. The affected responses the women cadets received prior to training confirmed societal expectations of piloting as a male profession. Individuals close to the women cadets (as well as strangers) were all surprised that these women were defying the norm. The responses the women received, albeit some supportive, were equally as influential as those documented by existing women pilots (Davey and Davidson, 2000). All of the affected responses similarly emphasised the atypical nature of the piloting profession for the women cadets and affected their outlook before they commenced their training as they anticipated their minority status.

When being subject to responses, the women cadets typically responded by laughing off any remarks, failing to challenge prevailing societal norms and ensuring women remain the “exceptions”. These experiences and responses can be seen as the origin of the effects of a token status and demonstrate that minorities are learning techniques/strategies in line with the Theory of Tokenism (Kanter, 1977) before starting their pilot training. For some of the women, the perception of their ability to pursue a piloting career is likely to be affected by such responses as they may believe that they could (or would)
experience incongruity between being a woman and being a pilot (Dukes et al., 1991).

Sections 8.2 and 8.3 have identified cadets’ perceptions of their gender and professional identities in light of existing literature, however Kelchtermans’ (2009) study of teachers’ professional identity suggested that ‘professional identity pertains to how teachers see themselves as teachers based on their interpretations of their continuing interaction with their context’. Similarly, Lester (2008: 284) states ‘certain identities are aligned with power and considered more contextually appropriate, thus limiting the scope of agency and identity’. Goffman (1959) also identified that professional identity negotiation is an ongoing process of reflection of experiences in the context of social and institutional practices in which the individual is embedded. As a result, understanding the context cadets are in (Flight Training Schools) is essential in order to interpret and understand their experiences. In other words, how ab initio pilots see themselves as pilots is based on their interpretations of their continuing interaction with their context. Section 8.4 will address the flight training school context and explore the impact of the school culture on cadets’ experience.

8.4 Flight Training School Culture

US pilot training schools were identified by Maddock and Parkin (1994) as being ‘male-dominated college[s] characterized by ‘laddish’ attitudes’. Germain et al. (2012) also discovered that pilot training colleges were male-dominated. Both flight schools studied in this research were described by the cadets as being male-dominated and containing a masculine culture. In light of this, as Yoder (1991: 178) identified; ‘context matters, to understand women and work, we cannot assume that women and men doing the same gender-skewed job, such as fire-fighting, experience the same context’.

Significant differences between the flight schools emerged. FS1 is larger than FS2 and, as a result, has difficulties in communicating with their cadets. This created a lack of integration between courses and an ‘emotionally taxing’ and ‘toxically competitive’ environment. Cadets at FS2 also identified a high level
of competition. This concurs with Davey’s (2004) findings that ‘some cadets admitted to being secretly pleased when somebody was expelled from the course because it appeared to increase their own chances of success’. The large size of FS1 had impacted the level of support provided for cadets; however, cadets at FS2 identified a family feel and provision of welfare support. Similar to FS1, Taylor (2010) identified that in male-dominated environments, women experience relatively low levels of support, suggesting the need for FS1 to review their practices.

It became apparent that some of the women cadets at FS1 would value more welfare support, especially those who did not have another woman on their course. The women cadets who did have another woman on their course reported benefits, this links with Kanter’s (1977) ‘critical mass theory’ which speculates as to how minorities experiences change (and improve) as the number of minorities increases (Kanter, 1977; Dahlerup, 1988). However, friendship is complex according to Lyman (1987) and it would not be enough to put two women together on a course as friendship is based on an individual’s intellectual and emotional affinity to another person. This helps to explain why some of the women at FS2 did not get along well despite being minorities on the course. For most of the time, having another woman on their course seemed to benefit women at both schools. This is in line with Kanter’s Theory of Tokenism (1977) and supported by Konrad et al. (2008) study of women on executive boards who found a woman on their own will experience negative impact and risks of tokenism. This also confirms Davey’s (2004) study which identified that, whilst the presence of women potentially benefited the course and the college environment, the lack of female company created problems for women as it could lead to feelings of enhanced visibility and isolation.

Tyler and Cohen’s (2010) study of women in their academic workplaces identified the ways in which gender performativity is materialised through organisational space. They discovered ways in which women perform their gender identities through their workspaces and attempt to continuously enact
themselves as “normal” women. Similarly, this thesis found that women cadets were uncomfortable with the reactions from male colleagues when they wore make-up or dressed differently.

Seeking to understand the context which cadets are experiencing, findings show that cadets were less attached and committed to FS1 than their peers at FS2. Using Flight School or gender as variables revealed the Flight School was more significant than gender in terms of commitment and attachment. This suggests that context could be causing negative experiences, rather than a minority status. It also emphasises the importance of culture on the experiences, and in turn identities, of cadets.

8.4.1 Flight Training School Culture preparing the cadets for the profession

Both of the flight schools had masculinity embedded in their cultures and, for women cadets, their anticipation of a similar culture when they complete their training and enter the profession was highlighted. According to Dryburgh (1999), adapting to the culture begins before the workplace meaning women have to adjust to the occupational culture. This causes problems for some of the cadets. McIlwee and Robinson (1992) identified and contrasted the occupational cultures of engineering workplaces and schools, identifying engineering schools valuing academic work, at which women typically excel. They concluded that the transition from education to occupation is difficult for women as their academic strengths are no longer valued to the same degree. The flight training school context proves similar to that of the engineering school as exams and testing is continuous. However, unlike engineering workplaces, the cadets anticipate future testing in their career during recurrent simulator checks and this appealed to both men and women.

As a result of these findings and previous literature, flight training schools must be aware of their cultures and work with airlines to ease cadets’ transition into the workplace, particularly women cadets. This is vital as ‘successful transformation into a professional person requires adjustment to the culture, a process that consists of accepting certain values and norms and identifying with certain symbols’ (Greenwood, 1966:18).
Related to flight schools acknowledging their responsibility of smoothing cadets’ transition into the profession, the cadets viewed work life balance during their training of low importance. Revealing mobility being part of the professional pilot identity, the cadets identified the intense nature of the pilot training course. Managing this level of intensity and being away from home are practices essential for ab initio pilots to develop before entering the profession and Davey (2004) identified a similar, intensive culture for cadets at US training schools. In addition, FS2 was described as a ‘bubble environment’, showing how cadets residing on a campus may feel that they are in a more intense training environment.

Through understanding the culture embedded in the Flight Schools, we are able to see that context plays a vital role in the experiences and behaviours of the cadets. At times, context is more significant than gender; however the effects of women’s minority status are beginning to emerge. Section 8.4 seeks to further explore the experiences of cadets in light of the literature and theoretical underpinning of this work. The impact of women’s token/minority status will then be explored in Section 8.5 in order to understand how they navigate their gender and professional identities through token behaviours.

8.5 Women Cadets’ Experiences

Extant literature has shown that male dominated environments rarely provide a welcoming or accepting setting for women. Masculine cultures can cause dilemmas for women including negative treatment and perceptions (ETF, 2005; Marthur-Helm, 2006). DiDonato and Strough (2013) and Huppatz and Goodwin (2013) suggested that gendered cultures and dispositions result in women feeling isolated, experiencing a high visibility of mistakes, scrutiny and resistance from male colleagues, supporting Kanter’s Theory of Tokenism (1977). The women ab initio pilots identified experiencing difficulties both prior to, and within, their training. As a result of this, it can be confirmed that their contribution to challenging masculine and feminine identity can be testing, as found by Linstead and Brewis (2004). Davey (2008) identified that women’s minority status in a traditionally masculine field
is a structural barrier, activating gender stereotypes and promoting a threat to men’s social identity. Similarly, Cejka and Eagly (1999) identified that the few women who perform non-traditional occupations tend to experience difficulties at work, this work identifies that disadvantage occurs even before the educational/training stage. For men in female-dominated occupations, Simpson’s (2004) study of forty men in female-dominated occupations (teacher, librarian, flight attendant, and nurse) found that stereotypical roles of men did result in both positive and negative outcomes, meaning some men were assigned more difficult tasks and expected to speak out more on account of their gender. Although research has shown men in female dominated occupations can have positive experiences due to their minority status, the women cadets experienced both positive and negative outcomes due to their minority status.

8.5.1 Treated Differently
The prospect of positive discrimination was raised by many of the cadets as it was suggested that the women may be treated differently because they are women and they may find it easier to gain future employment. Men cadets discussed female-only cadet initiatives and agreed that these were unfair, similarly women did not want to be chosen “because they are a woman”. Many of the cadets agreed such affirmative action could undermine women’s role as pilots and questioned whether these initiatives are causing more harm than good. McLean et al. (1997) identified that men perceived that women would find it easier to get employment in traditionally male dominated jobs because of their gender. In line with this, recent literature on affirmative action found that introducing quotas and targets can be perceived as discriminatory or as risk causing backlash (Baez, 2003; Lihamba et al., Morley et al., 2006). However, these interventions can be deemed necessary and essential for creating change where gender segregation is entrenched (OECD, 2008). In this thesis, at times women enjoyed the preferential treatment which the instructors afforded them (c.f. Miller, 2002). However, at other times, the women did not want to be treated differently and so suppressed their gender (c.f. Powell et al, 2008).
8.5.2 Token Experiences
The women cadets reported heightened visibility, performance pressures and at times being recognised for their presence not their achievements. These are in line with the ‘Visibility’ phenomenon of Kanter’s (1977) Theory of Tokenism. ‘Polarization’ also occurred for some of the women, there was a heightening of the dominant cultures boundaries creating social isolation, for example pointing out when the women wore make up. In addition, instructors could be seen to play a role in this with their humour, thus similarities between dominants are exaggerated to make a stronger bond between the dominants. In SET, Bagilhole et al. (2008: 23) identified that ‘the issue of language in SET is particularly epitomised through the use of humour’, similarly, Maddock and Parkin (1994) also found teasing was both common and of an ambiguous nature for women as a minority in management. However, only a small number of women identified overt mocking at the Flight Schools, and it was more apparent at FS1. This could be linked to the lack of support and communication problems cadets identified within FS1 (see Section 8.3) and could suggest provision of welfare support and a smaller ‘family like’ school (FS2) reduces the likelihood of negative experiences for women.

Finally, in line with the ‘Assimilation’ aspect of Kanter’s (1977) Theory, the women cadets reported some of the dominants (men) did not know how to cope with their presence which could be interpreted as a reaction to the perceived threat to their dominant status (Kanter, 1977). As a result, some of the male cadets were seen to use stereotypes about women, distorting the perception of the token (women). An example of this was the male cadets consulting women about their personal problems and so obliging the women to feel as though they are taking on a “motherly” role. This evokes role anomalies, where the women are first identified by their gender, then their professional role. This can create problems of communication for men who feel uncomfortable when women do not behave in a stereotypical way.
Having outlined the effects of women ab initio pilots’ token status, namely; **Visibility, Polarization and Assimilation**, how the women cope with these processes can be seen as a management and performance of both their gender and professional identities. Similar to Miller’s (2002) findings of women engineers in the oil industry, some of the women accepted traditional male values and aligned their behaviour with them whilst others used different strategies. It can be argued that the cadets’ Self-understanding (professional identity) (Kelchtermans, 2009) plays an important role in the strategies they adopt.

Section 8.5 has highlighted the experiences of women cadets which arise from their minority status. This research proposes that the impact of these experiences requires women to (re)negotiate their gender and professional identities in the context of the flight training school. The strategies which women cadets adopt are described in Section 8.6.

### 8.6 Token Behaviours

Haas et al. (2016) combined the Theory of Tokenism with professional identity. This research proposes that gender performativity can also be interwoven in both of these concepts. By viewing gender as performative (Butler, 2000), it became evident that women ab initio pilots are using strategies, in line with the Theory of Tokenism (Kanter, 1977), to ‘survive and thrive’ and these ‘generally involved adapting to the dominant, masculine culture rather than trying to change it in anyway’ (Miller, 2002).

The strategies observed can be broken down into the ways to mitigate the three conceptual phenomena (**Assimilation, Visibility and Polarisation**). These strategies can also be seen as ways in which the cadets manage/perform their gender and pilot identities, this proved to be difficult for some of the women.

Miller (2002) identified female engineering students feeling extreme pressure to conform to masculine culture, this was not the case for most of the women cadets- their anticipation of the flight training school culture (and the
profession) had almost prepared them for the experiences and they were aware of what to expect. This could suggest that piloting has stronger associations with masculinity than engineering. Evident throughout the women cadets’ behaviours were their strategies to mitigate Polarization, this included laughing off gender related jokes from male colleagues, “not wanting to make a fuss of things”, and accepting the humour of their flight instructors. Kanter (1977) identified these behaviours being used in order to be “accepted”.

Strategies used in order to aid the effects of Assimilation included role encapsulation and accepting stereotypical roles, for example being motherly or not being sporty. These mechanisms are easier than fighting the stereotypes as this requires trying not to display any characteristics of the stereotype. Marshall (1993: 99-101) identified females use of an approach called “muted”, this involved being unaware of the masculine nature of the context and women learning both during their training and in work what types of behaviours were rewarded. The cadets were all aware of the masculine nature of the pilot training context, and the women recognised and exploited their minority status.

Strategies used to mitigate Visibility included attempting to overachieve and threaten dominants. Women stated the need to excel during the selection process and how they limit Visibility by trying to blend in, for example not wearing make-up and creating an element of ‘sameness’ with the men. Denying gender was relevant was common, also mentioned by Marshall (1993) in her aspect of the ‘muted’ approach. Miller (2002) found women engineers “destabilize” gender roles by acting like men and women may wish to be seen as engineer, rather than a ‘woman engineer’ (Miller, 2004).

More in line with this work, Haas et al. (2016) identified women scientists using either a ‘sameness’ or a ‘difference’ approach and ultimately; ‘both of these strategies do not challenge the masculine norms and that they fail to “break patterns”’. The cadets’ attempts to minimise Visibility and Polarization can be thought of in conjunction with each other as tokens try to blend in and
minimise any differences through any strategy they use. The women cadets too can be seen to adopt one of the two approaches in line with Haas et al. (2016) in order to minimise Visibility and Polarization as there was no evidence of the women cadets “acting like men” as much as they were either just limiting Visibility or emphasising their femininity, contradicting McDowell (1992) who identified women ‘acting like one of the boys’ being a coping strategy used by women. This is in line with the findings of Paechter (2001: 50) who suggested that women perform their gender as part of their assimilation and professionalization into the profession, but also for themselves because ‘we create and reinforce our gender identity by the performance we put on’.

What can be seen in this thesis is that the strategies adopted by the women cadets are not just responsive behaviours; they are influenced by contextual norms and professional norms and are learned during and throughout the training/educational stage of a minority in order for them to take into the profession. For example, the women cadets at FS1 felt unsupported and the size of the Flight Training School meant that the women were unsure who they could approach if they had any problems.

McIlwee and Robinson (1992) argue that knowing how to conform to the masculine engineering culture and doing it well is critical to a woman’s success in the engineering workplace. As women will form a minority group both during training and when they enter the profession, learning such mechanisms or strategies during training could be seen to aid their success later in the profession. “The Pilot”; is traditionally associated with masculinity, however the coping strategies which the women choose to adopt are determined by individual experiences and are context dependant, resulting in different strategies being adopted by women at different times at different schools in different courses. Ultimately, women’s adaptation strategies are reinforcing the masculine value system, resulting in short term, individual success and long-term failure for gender change.
8.7 Summary
This chapter has presented the results from Chapters 6 and 7 in the context of the literature and theoretical underpinning advanced in Chapters 2 and 3. This has been done to identify how this research adds to existing empirical and theoretical knowledge and identify the significance of these findings for future recommendations. Chapter 9 will identify these conclusions and recommendations.
9

Conclusions and Recommendations

9.1 Introduction
This chapter draws together the research by presenting its significance and implications for the future of pilot training and the aviation industry. First, Section 9.2 summarises the findings in the context of the research aim and objectives. The contribution this research makes to knowledge will then be identified in Section 9.3, followed by specific and general recommendations (Section 9.4). Finally, the limitations of this research (Section 9.5) and areas for future research (Section 9.6) are detailed.

9.2 Summary of Findings
This section identifies how the aim of the research has been achieved through the objectives set out in Chapter 1. The aim of this research was ‘to explore the effects of women ab initio pilots’ minority status on their gender and professional identities’.

Objective 1: To understand the motivations and implications of a non-traditional career choice
The literature review (Chapter 2) aimed to address the research question why are there gendered occupations? The chapter reported that gender perceptions are held by society and these influence how men and women are represented. As a result, culture, daily interactions, and social norms of society heavily influence gender stereotypes, roles, and the occupational choices open to each gender. Examples of gendered occupations (occupations containing a concentrated presence of one gender) were identified. An occupation which the literature identified as male-dominated and heavily associated with masculinity was piloting. For women who have entered the pilot profession, the literature has reported that their minority status has resulted in them feeling isolated, experiencing a high visibility of mistakes, and receiving scrutiny and resistance from male colleagues. In other male-dominated occupations, studies have revealed that women use
strategies to cope with the working environment including outperforming men and adapting their own behaviours to fit in and gain acceptance. The literature also highlighted the ways in which gender can be managed and performed to “cope”, as well as the importance of culture. Such coping strategies are thought to have been “learned” as early as the educational setting and there remains a dearth of research located at the training stage of a pilot’s career- in Pilot Training Schools. In order to facilitate women’s entry into piloting, and within pilot training, the need to understand the difficulties they could face in challenging a masculine and feminine identity during a crucial stage in their careers became evident.

Objective 2: To identify a theoretical underpinning to explore the possible effects of women’s minority status in a male-dominated occupation.

The literature review led to the research question of what are the possible implications of a non-traditional career choice and identified Kanter’s (1977) Theory of Tokenism as a possible theoretical underpinning for this thesis. Alongside this, several key concepts were identified including; gender identity and professional identity. These were outlined in Chapter 3.

Kanter’s (1977) Theory of Tokenism attempts to understand how an individual’s identifying characteristics impacts his or her social and professional advancement when he or she is a minority/token within the group. This token status can lead to the minority group being treated as a symbol, rather than individuals and the theory explains the minority group experiencing three perceptual phenomena; Assimilation, Polarization and Visibility. The theory also identifies the ways in which minorities cope with their status and the strategies they use to mitigate the three perceptual phenomena. Via the literature and this theory, the key concepts of gender and professional identity emerged. Token behaviours form part of professional identity formation and Kelchtermans’ (2009) term ‘Self-understanding’ has been used to identify the components of professional identity; providing a framework for this research. Within occupations,
organisational demographics, group identification processes, gendered professional norms and accumulated individual experiences impact how individuals in a token status negotiate their professional identities. This led to exploring the ways individuals manage their gender identity by viewing gender as a performance (gender performativity). Butler's theory of Gender Performativity explains gender as a constant process of doing and undoing (Butler, 1990; 2004).

**Objective 3: To examine the views of key aviation stakeholders with respect to the development of the pilot identity**

This objective aligns with the research question asking why is piloting considered a non-traditional occupation for women? The interviews with key aviation stakeholders revealed that piloting is still considered to be a gender-specific profession whose gendered culture is continually reproduced and reinforced through the perpetuation of masculine beliefs and values of what constitutes a pilot. Respondent’s views as to why piloting is a male-dominated profession revealed that the deeply engrained occupational stereotype of the ‘macho man’ pilot persist, perpetuated by the media and societal representations of the pilot profession. The ‘archaic culture’ of the aviation industry was also echoed, alongside the view that women in the industry need to be ‘assertive, not afraid to speak out and have a dominant personality’. It was also discovered that ‘the culture seemingly filters out those women who are ‘softy, floaty, flowery types’.

Adding to existing literature, the respondents identified that efforts are being made to challenge the ‘male norm’ of the pilot profession as the industry recognises commercial aviation’s increasing growth worldwide and the anticipated shortage of commercial airline pilots. However, current attempts were identified as subconsciously reinforcing the stereotype of the pilot profession as slogans such as ‘You can do it’; ‘If I can do it, you can do it!’ impose the belief that, historically, it couldn’t be done. Furthermore, using quotas and gender-specific initiatives were criticised for being seen as positive discrimination. Having obtained the views from key aviation
personnel, it was identified that the views of Flight School management personnel and training pilots would provide valuable insight into the research problem.

**Objective 4: To explore how ab initio pilots perceive their gender and professional identities**

Kelchtermans’ term ‘Self-understanding’ was used to explore cadets’ perceptions of their professional identities, alongside viewing gender as a performance (Butler, 1990) which allowed gender identity to be explored. The research questions aligned to this objective included: *What is the role of gender in the career decisions of ab initio pilots? And what influences ab initio pilots’ perceptions of their gender and professional identities?*

The cadets’ appeal to the profession differed by gender (revealing identities), women wanted to meet new people and experience variety, whereas men focused on being able to exert technical skill. Exposure to aviation from a young age was vital for cadets to consider the career, mainly through a “father-figure” and only men cited being influenced by the media. Life-stage was an influential factor to embark on training, in order to pursue an integrated training route (which was identified as favoured by the airlines), an intense period of 18 months is required and most of the cadets were able to do this because they were young and did not have family commitments.

For women cadets, being competitive, a good communicator, motivated, hard-working and meticulous were referred to when asked to describe their fit with the profession. These traits are commonly associated with masculinity. However, a trait typically associated with femininity which the women at both schools commonly alluded to (but not the men), was their ability to communicate, be a people’s person, and to get along well with others as you will always be working with different crew members. Men and women cadets perceived elements of their professional identities differently. Despite both men and women perceiving the ‘Task perception’ of the pilot profession requiring traits associated with masculinity, the women cadets identified a
conflict or contradiction between their task perception (masculine) and their self-image (aspects of femininity).

Pre-training experiences impacted cadets’ identities, but only for the women cadets. Responses from family, friends, and the public reinforced societal expectations of the ‘male norm’ of the pilot profession. Women’s reactions to these responses were preparing them for the anticipation of their minority status in training- these formed the start of their coping strategies (managing gender).

**Objective 5: To investigate the relationship between ab initio pilots’ gender and professional identities**

The research questions aligned with this objective included; *are there any gender specific dilemmas for women ab initio pilots in the male dominated training environment? How does the culture of the Flight Training School impact cadets’ experiences? Do women ab initio pilots experience any conflict between being a woman (gender identity) and becoming a pilot (professional identity)? And do women ab initio pilots have to compromise their gender identity during training, if so, how?*

The relationship between their gender and professional identities was understood through the experiences and behaviours of the cadets, revealing the effects of women’s minority status. The Flight Training School culture and environment appeared vital in preparing cadets for the profession and the cultures are impacting the experiences of the cadets, particularly the women (male-dominated, competitive, lack of support). Women identified negative experiences because of their minority status including: instructors’ humour, being treated differently, positive discrimination and being treated stereotypically (all in line with Theory of Tokenism).

The impact of the training culture was shown to disproportionately affect the women, as identified in the women’s experiences, this demonstrated the conflict they face between being a woman (gender identity) and becoming a pilot (professional identity). However, in order to manage this difficulty, the
women identified the ways in which they navigate their identities to cope with their minority status—revealing the relationship between gender and professional identities. Women used token behaviours to “cope”. These token behaviours are linked to the ongoing negotiation of identities and the process of performing gender. Minorities’ behaviours were performed in different ways, nevertheless, all of the strategies are used in order to gain acceptance and whilst the token behaviours have led to individual success, they are failing to challenge the dominant culture and create long term collective change. They are ways in which minorities achieve a sense of belonging, constructing their identity. Token behaviours are not just response strategies; they are part of identity formation, affected by professional norms of piloting (in this case-masculine).

Research objectives 1-5 have been considered throughout this thesis and have been covered in Section 9.2. These findings have identified the need to address research objective 6 that is ‘to make recommendations for supporting women’s entry into, and development during, pilot training’. Objective 6 will be enclosed in Section 9.4. Firstly, the contributions to knowledge that this research has made are detailed in Section 9.3.

9.3 Contributions to Knowledge
This research has sought the views of key aviation personnel, understanding the issues which the industry is currently facing in their drive to increase the number of women in commercial piloting. Gaining previously unexplored views has provided a summary as to how research must guide future initiatives and provides evidence for addressing the difficulties in challenging the ‘male norm’ of the pilot profession.

Life-stage was identified as an important factor to pursuing the career. The majority of the cadets were young without family commitments, highlighting the intense training period being more appealing and suitable at a young age. In addition, the extensive costs required to undertake pilot training were revealed and cadets highlighted their (sometimes numerous) attempts to obtain airline sponsorship. However, to even attend the assessment and
selection days for an airline scheme was expensive—identifying a barrier for some individuals to obtain airline sponsorship and pursue the career.

Prior to choosing to enter the profession, gender was a prominent factor in cadets’ ‘Job motivation’. For women cadets, the ability to meet new people was prominent, whereas the men focused on the technical challenge required. Furthermore, the men and women cadets perceive their professional identities differently because of their gender. Despite both men and women perceiving the ‘Task perception’ of the pilot profession requiring traits associated with masculinity, the women cadets identified a conflict or contradiction between their ‘Task perception’ (masculine) and their ‘Self-image’ (aspects of femininity). Both of these points can inform how the industry markets the pilot profession (See Section 9.4).

Empirical evidence about the culture of integrated Flight Training Schools has been provided. The historical dominance of men within Flight Training has created a masculine culture, reinforced in the values and structures of the Flight Training Schools. As a result of this, challenges and opportunities have been identified for both of the Flight Schools within this research. Importantly, understanding such contexts provides empirical research to implement changes upon for the future of flight training and the aviation industry.

Understanding professional identity through Kelchtermans’ framework and term ‘Self-understanding’ has not previously been undertaken. Applying this to the educational stage has increased the understanding of the fluidity of professional identity and how individuals are affected before the workplace setting. This research highlights that it is essential to understand the culture which individuals are in and how their identities are affected by their interactions with the culture. Similarly, there has been limited research which positions Kantar’s Theory of Tokenism (1977) in an educational setting. This research has shown that the coping strategies of minorities identified in the Theory of Tokenism are learned as early as training. The minorities (women cadets) were already anticipating their minority status within the profession,
therefore their educational phase provided them with the opportunity to learn and adapt. However, the ways in which the women were coping could be split into using strategies of “sameness” and “difference” and the extent to which the women needed to cope was also dependent on the culture of their Flight School.

This work has combined The Theory of Tokenism, professional identity, and Gender Performativity. This research shows that token behaviours are linked to the ongoing negotiation of identities and the process of performing gender can be a result of “dominants” behaviours. Minorities’ behaviours can be performed in different ways.

9.4 Recommendations
The findings identified the need to address research objective 6: ‘to make recommendations for supporting women’s entry into, and development during, pilot training’.

9.4.1 Specific Recommendations

Recommendations for Flight Training Schools
The cadets at FS2 identified positive experiences because of the ‘family-like’ and supportive culture present, this was particularly important for the women cadets because of their minority status. Flight Training Schools should work towards creating an inclusive culture which supports all cadets. FS1 can learn from FS2 by introducing a welfare support network, social activities and events, creating a more social and interactive environment for the cadets. This is important as the course is intense; therefore cadets need a release from their studies. For women cadets in particular, having the opportunity to attend social events could promote integration between the courses and means they have the opportunity to network with other women at the Flight School.

Cadets at both of the Flight Schools referred to the competitive environment they are in. A ‘toxically competitive’ environment was identified at FS1 and an environment ‘which breeds competition’ at FS2. This is harmful for cadets
and management must address this. Whilst their priority is to prepare cadets for the profession, nurturing resilience, determination and hard work, their focus should be on fostering a community. In order to do this, they need a transparent culture which listens to the needs of the cadets and reacts to their feedback. In addition, clear staffing structures (essential at FS1) can aid communication between staff and cadets and support cadets’ time in training. This will ensure cadets are aware who they can approach in confidentiality, this is particularly important for women cadets as their minority status had resulted in welfare issues and they were unsure as to who to speak to about these.

This research identified that effects of a minority status are reduced if individuals are with other members of their minority group. Relieving the impact of women’s minority status and their need to manage their identities, Flight Schools should make a conscious effort to ensure that there is more than one woman on each course and within each accommodation. This will minimise some women’s anticipation of their minority status before entering training and provide more support for them, reducing the effects of their minority status.

Despite many of the women cadets not taking offense to the instructors’ language or humour, Flight Schools could benefit from including gender awareness or diversity and inclusion training for members of staff. This would help to increase awareness of gender differences in learning and the appropriate behaviours when teaching both genders as some instructors cited being used to teaching male-only courses.

The aviation stakeholder personnel identified the integrated training courses being unsuitable for individuals with families. Many of the cadets were noticeably young, with few life or family commitments. The structure of the integrated course is an intense 15-18 month period which requires either living abroad (FS1) or travelling abroad (FS2). This has created a life-stage barrier for aspiring pilots, which may affect women more than men due to their assumed domestic and childcare responsibilities. As a result, Flight
Schools should work with airlines to consider a more flexible, yet integrated, training course which enables cadets to remain in the UK for the duration of their training.

The cadets revealed their determination and the sacrifices they had made to be able to undertake flight training. For many of the cadets, they had made several attempts to obtain a place on an airline sponsorship scheme; however attending the selection days required a cost. Flight Schools could work with airlines to sponsor those from underprivileged backgrounds to attend assessment and selection days, this would allow the schemes to be fairer and address the evident “class-barrier” of those in the profession.

Finally, women cadets identified their self-fit with the profession differently to the men; Flight Schools should work with other aviation stakeholders to promote the profession in a different way. By doing this, the Flight Schools and airlines would attract a more diverse range of candidates, particularly more women. Changing the way stakeholders promote the pilot image will be explained as the first recommendation for airlines.

**Recommendations for Airlines**

Both the aviation stakeholders and the cadets highlighted the traditional typical traits and skills required to be a pilot being associated with masculinity; however the women cadets emphasised different skills which they think can bring to the flight deck. Flight Schools, airlines, and other stakeholders should use this to impact on how the pilot profession is portrayed and advertised, emphasising the need for interpersonal skills (which women are believed to be stronger at). This is essential as this research has identified that cadets must be able to have ‘self-fit’ with the pilot profession in order to consider piloting. Furthermore, changes in societal views about the profession will impact the support for women when considering the profession and eventually reduce negative responses and pre-training experiences as expectations change.
The aviation personnel and cadets were concerned with the possibility of ‘positive discrimination’. For the women cadets, they highlighted that they did not want to be chosen ‘because they were a women’ and the men cadets stated that they do not think gender-targeted initiatives are fair. Furthermore, the cadets believed that the women cadets who obtain a place on a “women-only” scheme may face more difficulty because it can be considered as positive discrimination. As a result of this, careful consideration must be given to future marketing and initiatives are seen as positive action, rather than positive discrimination. This research has identified that exposure to flight or aviation rather than a (gender) association with the individual plays a more important role in influencing the career decision of the cadet. Therefore, current initiatives should be about exposing aviation to the younger generation, gender specific role models are not essential.

Airlines must ensure they have support in place for the cadets on their sponsored schemes, both during training and during the transition into the profession. Although this is the primary responsibility of the Flight School, airlines with sponsorship schemes can support cadets, particularly women, by ensuring regular contact with their cadets during their time in training.

Whilst the context of this research is the Flight Training School, and the focus is on women as the minority group, this research has relevance to other occupations and environments which contain minority groups. Therefore, there are general recommendations which can be made.

9.4.2 General Recommendations
When an individual chooses to explore a possible career option, their positive or negative experiences at open days or events can affect their ultimate career decision. Because of this, open days and events should ensure they promote female and male role models and use gender neutral marketing material.

This research has identified the importance of the educational stage and setting. Minorities learn to “cope” in different ways during the early stages of
their career, therefore, the importance of support and networks at this point are vital. Support mechanisms within the setting should be in place for all individuals. A particular focus should be given to the requirements of the minority group in order to ensure their views are heard and considered.

A final recommendation considers the way gendered occupations can seek to challenge the “norm”. Avoiding gender-targeted initiatives which can be seen as positively discriminating against the dominants will cause resistance. In addition, these mechanisms can be seen to be highlighting the problem, therefore reinforcing the problem. Fundamentally, it must be about positive action.

There are limitations to this work. Section 9.5 addresses the limitations of the research; this is followed by identifying any areas for future research (Section 9.6).

9.5 Limitations
Intersectionality
Women have been considered as a homogenous group, this can be seen as a limitation of the work as women’s’ experiences will be influenced by other protected characteristics including age, class, race, sexuality and ethnicity.

Focus on the Experiences of Women
The focus of this research has been on the experiences of women. Although men were included in the research, the decision to focus on women’s experiences is a limitation of this work. It is important to recognise that not all masculinities are hegemonic and masculinity takes different forms in different contexts.

Career Stage
This research concentrated on the training stage of the pilots’ careers. This limits the generalisations of the work as the conclusions were drawn from just one stage of the individuals’ career. The experiences of the cadets upon entering the profession and continuing their career development cannot be identified from this research.
**Pilot Training Context**

By exploring the experiences of cadets within pilot training the context is unique setting and culture. Therefore, the experiences of individuals in other disciplines cannot be generalised from this research.

**The Theory of Tokenism**

A limitation of the theory is that it relies on numbers for its parameters, therefore it assumes that change will occur by simply increasing the numerical representation of a minority group, ignoring cultural and societal norms. Kanter (1977) does argue that her ratios are approximate, using wording such as “perhaps” and “about”, this numerical focus on the under-representation also ignores persistent gender roles and the social status of the respective minority (Powell et al., 2006). A further shortfall of the theory is the solution Kanter (1977) proposes, that by just increasing the number of women in male-dominated institutions tokenism will be eliminated, however this has been criticised for being too simplistic and there is no guarantee an increase in women would remove their token status. Stichman et al. (2010) found that despite increasing representation of female staff at a police agency, the females still felt they stood out and were underestimated by their peers, they concluded that tokenism is more complex than just a “numbers game”. In line with this, Yoder (1991) identified the theory goes beyond a simple numerical scarcity and there is no evidence that increasing the number of women in a male-dominated workplace will reduce the effects of Tokenism and extensive social changes need to occur for any changes to be recognised. Although Kanter (1977) does recognise that there must be changes to power, behaviour and the social system themselves to reduce the effects of tokenism, Kanter (1977) fails to identify ways in which this widespread reform could happen, a further limitation to the theory.

Emerging from these limitations, areas for future research have been identified.
9.6 Areas for Future Research

Longitudinal Study
Future work to extend the understanding of a pilot’s career could use a longitudinal study. This approach would enable the researcher to explore the transition which pilots go through between their different career stages for example; during training, transitioning into the profession, and then within the profession. This approach would provide the ability to show patterns of a variable (gender) over time.

Cross-Cultural
This thesis viewed gender as a social construct, it is important to recognise that gender is viewed differently in different cultures. Therefore, extending this research to the experiences and difficulties faced by training cadets in other cultures would add to existing knowledge and provide more insight into how other cultures could increase the number of women entering commercial aviation.

Other Professions
This thesis concentrated on a unique profession, piloting. However, the theory and key concepts used can be applied in other professions. Future work should seek to understand other disciplines including more “feminised” disciplines and the experiences of men within those. This would also provide the opportunity for disciplines to learn from each other.

Other Protected Characteristics and Intersectionality
White men were the dominant group at both of the Flight Training Schools used in this thesis. Future work should seek include other protected characteristics including ethnicity. By doing this it will provide a more rounded approach to a “minority status” and also recognises that the experiences of men and women are not homogenous.

Reflection of the Research Approach
The interpretivist approach recognises the nature of the knowledge produced, it is relative, meaning it is time, context, culture and value bound.
This research predominantly employs qualitative enquiry, asking how or what of people and culture, and seeking to understand social and cultural phenomena. As a result, the researcher brings their subjectivity (their biases, perspectives and knowledge) to the data collection, analysis and discussion. Through understanding the socially constructed nature of the world, the researchers’ values are part of the process. Recognising reflexivity, the researchers own position in the research, is essential to reduce bias and increase objectivity. The qualitative inquiry is unique and requires creativity and judgement, however human factor is a fundamental weakness of the analysis.

As a researcher I have reflected on my own experience of this doctoral research. My social class, gender, ethnicity, age and biography all shaped and influenced the research in myriad ways. My personal history led to my interest in this topic, particularly my range of experiences as a female studying a male-dominated Undergraduate degree programme in air transport. The formation of research questions, the research design, and methods of data collection were influenced by the nature of my perspectives and by those who were involved in the research. They affected the questions I asked in the interviews, the points which I ignored and parts of participant responses which I decided were important. In addition, throughout each stage of the research, the processes added new meaning to the experiences and I gained a deeper insight into my evolving research process.

Reflecting on my own impact on the research process, my identity influenced the quality of the interviews. Considering the interviewer-interviewee relationship, as a female researcher researching gender-related concepts, I found all the female participants were enthusiastic about talking to a female researcher. The female respondents seemed to feel as though I would understand. As such, I felt that my identity as a female gave me an entrée into the interview situation, something which a male researcher may not have experienced. Despite this, at times this was challenging as I listened to relatable and difficult experiences from some female cadets and my sense of
self as a researcher meant I was required to not react and listen, however, my sense of self as a person felt saddened by these. Although I found that my identity as a female gave me a unique insight, I had to be cautious not to make assumptions and try to notice all aspects of the phenomenon I was studying. I had to make a conscious attempt to identify how and what social understandings had been produced during the research and recognise that more awareness can help make use of the strengths and minimise weaknesses. Through understanding how I influenced the results of the research processes, I have recognised interview bias and the preconceptions which may have influenced the findings. I found that building trust through outlining the ethical procedures was vital as the interviews were conducted upon first meeting the participants, therefore I didn’t have the ability to build trust over a period, therefore use of informed consent protocols and ethical approval was essential.

Combining the Theory of Tokenism, professional identity, and Gender Performativity, this research shows that token behaviours are linked to the ongoing negotiation of identities and the process of performing gender can be a result of “dominants” behaviours. Minorities’ behaviours can be performed in different ways. Nevertheless, all of the strategies are used in order to gain acceptance and whilst the token behaviours have led to individual success, they are failing to challenge the dominant culture and create long term collective change. They are ways in which minorities achieve a sense of belonging, constructing their identity. Token behaviours are not just response strategies; they are part of identity formation, affected by professional norms of piloting. Indeed, “Fifty years ago almost all professions were dominated by men ... the proportion has not changed for pilots and it is hard to think of another high-profile profession where women are so underrepresented” Carolyn McCall, Chief Executive of easyJet (2016) and ‘the length of training may deter potential recruits and result in a lack of diversity’ (Department for Transport, 2017: 45). However, this thesis offers a valuable insight into the experiences of ab initio pilots and the Flight Training
School culture and provides recommendations for the industry to support women’s entry into, and development during, pilot training.
References


Haarr, R.N. (1997). They're making a bad name for the department". Exploring the link between organizational commitment and police


Appendix A: Cadet Survey Design

Figure A1 illustrates how the questions appeared on the web based survey used for training cadets.

Welcome
This survey is part of a doctoral research project being undertaken by Faye McCarthy at Loughborough University. The aim of this survey is to explore the experiences of cadets during training. All the information you provide will be anonymous and entirely confidential. You have the right to withdraw your responses at any point during or after the survey. The survey should take around 15 minutes to complete, please follow the instructions provided. Thank you for your time.

Figure A1

Section A: Attraction

1. How long have you been at the training school?

   [Response field]

2. Can you outline any factors which influenced your decision to become a pilot?

   [Response field]
How important were the following factors in deciding which training school to attend?

Please don't select more than 1 answer(s) per row.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Very Important</th>
<th>Important</th>
<th>Neither Important Nor Unimportant</th>
<th>Unimportant</th>
<th>Very Unimportant</th>
</tr>
</thead>
<tbody>
<tr>
<td>The cost of the course</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The length of the course</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The location of the course</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The reputation of the school</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The work-life balance offered</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The employment prospects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The training facilities available</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The cost of the accommodation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Thinking about your training, please state how strongly you agree or disagree with the following statements.

Please don't select more than 1 answer(s) per row.
Please select at least 1 answer(s).

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree Not Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would be happy to recommend this training school to a friend/family member</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>I enjoy discussing the training school with people outside it</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>I feel as if the training school’s problems are my own</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>I could easily become attached to another training school</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>I do not feel like part of the family at this training school</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>I do not feel emotionally attached to the training school</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>The training school has a great deal of personal meaning for me</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>I do not feel a strong sense of belonging to the training school</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>I feel I am treated unfairly because of my gender</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>I feel that people often interpret my behaviour according to stereotypes of what they believe women are like</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>There are not enough people of my own gender undergoing training at this school</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Because of my gender, I feel I have to work harder than others</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>I feel the training school supports women</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>I feel as if my actions are representing my gender as a whole</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>
Thinking now about your life as a woman training cadet, please state how strongly you agree or disagree with the following statements:

Please don't select more than 1 answer(s) per row.

Please select at least 1 answer(s).

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree Nor Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both my gender and my pilot identities make me who I am</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My qualities as a woman are different to my qualities as a pilot</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel conflicted between my identity as a woman and my identity as a pilot</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel there are more similarities than differences between my gender and my professional pilot identity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My gender and my professional pilot identity easily co-exist</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I do not find being a woman cadet pilot difficult</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I find it easy to have both gender and professional pilot identities in training</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel torn between my gender and my identity as a pilot</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel that my gender and my pilot identities are incompatible</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
When you are in training, how strongly do you identify with your... (1-very strong, 5-very weak)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender identity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pilot identity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This part of the survey uses a table of questions, view as separate questions instead?

When you are at home, how strongly do you identify with your... (1-very strong, 5-very weak)

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>Gender identity</td>
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<td>Pilot identity</td>
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</table>
When you have completed your training, how important are the following factors in deciding which airline to work for?

Please don't select more than 1 answer(s) per row.

Please select at least 1 answer(s).

<table>
<thead>
<tr>
<th>Factor</th>
<th>Very Important</th>
<th>Important</th>
<th>Neither Important Nor Unimportant</th>
<th>Unimportant</th>
<th>Very Unimportant</th>
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<tr>
<td>The work-life balance</td>
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<td>Geographic location (base airport)</td>
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<td>The shift patterns</td>
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<td>The equal opportunities policy</td>
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<td>The salary</td>
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<td>The child-care policy</td>
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<td>The maternity policy</td>
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<td>Company benefits (e.g. healthcare, insurance)</td>
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<td>The promotional prospects</td>
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<tr>
<td>The reputation of the airline</td>
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<td>The nationality of the airline</td>
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<tr>
<td>The type of aircraft operated</td>
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<td>The route network flown</td>
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<td>Knowledge of the company/word of mouth</td>
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</table>
## Appendix B: Cadet Survey Question Origin

<table>
<thead>
<tr>
<th>Question No.</th>
<th>Origin</th>
<th>Further Information</th>
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</thead>
<tbody>
<tr>
<td>Question 2, 5, 10, 11 and 12</td>
<td>Kelchtermans (2009) Components of Professional Identity.</td>
<td>Self-image: the way individuals see themselves in their profession. Self-esteem: this is linked to the achievements of the individual and how well they are performing. Job-motivation: this is what drives the individual to choose a profession. Task Perception: this links to individuals’ understanding of what is involved to do the job well, it encompasses deep beliefs of what constitutes “doing the job”. Future Perspectives: individual’s expectations and aspirations for their future, how they see themselves in the future as an individual and a professional.</td>
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<td>Question 5</td>
<td>Adapted from Brayfield and Roth (1951) study of Job Satisfaction and Meyer and Allen’s (1991) study of Organizational Commitment.</td>
<td>Using Job Satisfaction as a measure, there is an understanding that one’s perception of their identities is influenced by their job satisfaction. Locke (1976: 1300) defines job satisfaction as the ‘positive emotional state resulting from the appraisal of one’s job or job experiences’. Part of this includes judging one’s compatibility to the job, how an individual sees themselves as an individual and then in the job and a higher perception of person fit will likely mean a higher job satisfaction. Part of appraising one’s job involves judging the compatibility—the perceived fit—between self and job.</td>
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<td>Question 7</td>
<td>Gender-Professional Identity Integration (GPII) Scale items were adapted from BIIS-1 (Benet-Martinez, 2003) and BIIS-2 (Huynh, 2009)</td>
<td>Previous measures of GPII have been administered to women in traditional male occupations, such as business, engineering, and law (see Cheng et al., 2008; Mok &amp; Morris, 2012; Sacharin et al., 2009).</td>
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<tr>
<td>Question 8</td>
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<td>Identity integration aims to identify the extent to which two identities can blend together and women who work in male-dominated jobs may perceive either overlap or incongruity between their gender and professional identities.</td>
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