Gendered Career Decision-Making:
Occupational Segregation in Modern Apprenticeships

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ABSTRACT

This study seeks to learn from those who make gender atypical career decisions. Individuals making explicitly gendered career decisions which conform to stereotypical expectations and gender biases leads to occupational segregation within the labour market. Theoretical and empirical literature focuses on homogeneous gender typical groups and therefore gender-typical rather than atypical career decision-makers. In contrast, in this study, gendered career decision-making is explored through new research which builds on the work of Bimrose (2001; Bimrose et al 2014) on gender and career and Campbell (Thomson, Campbell and McKay, 2005; Campbell, McKay and Thomson, 2006; Campbell et al. 2009; Campbell and Gillespie, 2017) on Occupational Segregation in Modern Apprenticeships. This project uses participants on the Scottish Modern Apprenticeship Programme as a data source. Following a pragmatist mixed methods orientation, a quantitative survey (N = 459) and five qualitative interviews are undertaken with Modern Apprentices in Scotland. The outcomes of the research include novel findings pertaining to apprenticeship provision and the demographics of Modern Apprentices. The analysis also pinpoints specific directions for future research in the career guidance and development discipline. In limiting the qualitative data collection to a specific cohort, the research offers the first opportunity to engage in critical insight into the nature and efficiency of work undertaken to address occupational segregation within the career information, advice and guidance sector itself via Modern Apprenticeship provision. Additionally, the research makes an explicit practical contribution to knowledge in relation to careers practitioner-researcher methodologies and practice.

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DECLARATION STATEMENT

Research Thesis Submission

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GLOSSARY

Common terms used in discourses on gender, careers and work

Gender pay gap

Within the workforce women overall earn less than men. The main causes of this are direct pay discrimination and grading disparities between the type of work women and men generally undertake and the level at which this is undertaken (occupational segregation). The predominance of women undertaking caring responsibilities and inflexible working patterns further impacts their position within the labour market.

Occupational segregation

Horizontal and vertical gender segregation exist within the labour market, across sectors and in career pathways. Both terms refer to unequal gender distribution within the workforce. Horizontal segregation defines how men and women traditionally undertake different roles, colloquially "jobs for the boys" and "jobs for the girls". Vertical segregation defines the greater number of men in senior positions within workplace hierarchies or in higher status roles, colloquially referred to as the result of "the glass ceiling", "sticky floors" and "glass elevators." This thesis focuses primarily on the former of these two phenomena, concentrating on gender bias at the point of career transition and entry routes into the labour market.

Non-binary gender

Within this thesis, the term gender refers to those who identify as female or male, while mindful that this term does not cover all identities. Non-binary describes a gender identity that is neither of the binary genders, male and female. It includes but is not limited to individuals who identify as transgender, gender fluid or pangender.

Apprenticeships: key terms

Apprenticeship

'Apprenticeship' is an umbrella term which defines a form of in-work, paid, practical training accompanied by academic and vocational study with an external learning provider. Apprenticeships are delivered in most sectors of employment and their content, funding, duration and expected outcomes vary. Apprenticeships can be offered to school leavers and to highly skilled and qualified graduates. An apprentice can be recruited to a post defined as an apprenticeship or an employer may support an existing employee to apply for/undertake an apprenticeship programme related to their employment.

An employer may offer an apprenticeship under their own framework, funded independently or by a publicly funded programme. Delivery may be matched against skills frameworks defined by the Sector Skills Councils (SSC) and National Occupational Standards (NOS). An employer can define specific learning outcomes, modes of assessment and certified vocational qualifications.

Modern Apprenticeships

A specific National Training Programme, for individuals aged sixteen and over, in Scotland. The Modern Apprenticeship programme is coordinated by Skills Development Scotland. A Modern Apprenticeship is an apprenticeship which follows an approved framework, mapped against the Scottish Credit and Qualifications Framework (SCQF). Developed by the industry in which it is positioned, a Modern Apprenticeship includes mandatory elements which mean it can be funded partly or wholly by the government through Skills Development Scotland. Modern Apprentices learn in the workplace, supported by on or off-site off-the-job training that follows a Modern Apprenticeship framework.

Use and collection of information and intelligence on Modern Apprenticeships and apprenticeships

The term "apprenticeship" can cover a wide range of schemes therefore the collection and analysis of labour market information on apprenticeships is complex.

Primary and secondary data on Modern Apprenticeships and apprenticeships are used in this thesis to demonstrate gender distribution in relation to supply, demand and participation rates and in the contexts of sector, role and occupation.

Data used relate to Modern Apprenticeships in Scotland unless otherwise stated. Data on apprenticeships across the whole of the UK are broken down where possible to produce a Scottish context. Data on apprenticeships in other UK nations have been used for indicative context when Scottish data are not available. Data on apprenticeships from outside of the UK are used minimally for indicative context when Scottish or UK data are not available.

Where the terms "Modern Apprenticeship" or "Modern Apprenticeship Framework" appear, they include Modern, Technical and Professional Apprenticeships, as the figures for both are collated in the production of statistics pertaining to apprenticeship provision in Scotland (by Skills Development Scotland). ABBREVIATIONS: frequently used acronyms

Acronym	Expanded term
CIAG	Career Information, Advice and Guidance
MA	Modern Apprenticeship[1]
SCQF	Scottish Credit and Qualifications Framework
SVQ	Scottish Vocational Qualification

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[1] MA refers to the term Modern Apprenticeship only and Modern Apprentice is not abbreviated.

1   Introduction

1.1   Overview of the work

The overall **aim** of this thesis is to contribute to theoretical knowledge of gendered career decision-making within the career guidance and development discipline. The work, in turn, intends to offer routes to create professional practice resources within the field of career information, advice and guidance which offer scope for mitigating gender bias in career decision-making.

To achieve this aim, the study explores gender atypical career decision-making that leads to an individual undertaking a Modern Apprenticeship in a framework or sector where there is a known and significant gender imbalance. Such occupational segregation demonstrates an outcome of gendered career decision-making, but some individuals still make non-stereotypical choices against expectation. Gaps exist in the literature to explain how individuals make these gender atypical career decisions. From these individuals there may be potential to understand how to better address this issue. Might it be character, family background, advice and guidance received, pragmatism, rational choice, or a specific combination of these and other background elements that lead to such a decision? With family background as a focus point, the thesis explores demographics, career decision-making influences, influencers and processes of Modern Apprentices and seeks to build new understanding from the patterns that emerge.

This chapter presents the structure of the thesis, the background to the research and introduces the policy landscape in which the research takes places.

1.2 Structure of the thesis

Following an overview in Chapter 1 of the intentions of the work and the policy landscape pertaining to career information, advice and guidance and apprenticeship provision, a theoretical literature review (Chapter 2) which sits in the context of equality and inclusion in career decision-making, offers a critique of extant theory and gender-orientated theoretical perspectives. A second empirical literature review (Chapter 3) explores how persistent gender imbalances in apprenticeships replicate and perpetuate the labour market challenge of occupational segregation and occur at an entry or upskilling route to the labour market.

The overall **objective** of the thesis is to conduct new research into gender atypical career decision-making. It does so by utilising a mixed methods approach, sited within the pragmatist tradition. Chapter 4, the lengthiest chapter within the work, presents the research's methodology, as sited within a career information, advice and guidance practice-orientated context and makes its own substantial contribution to the evidence base within the field. Significant consideration is given to the ethical processes pertinent to research in the field and the practitioner-researcher's position.

In Chapter 5, the results of the quantitative data collection obtained via a self-administered online survey are presented. Qualitative data obtained through indicative interviews with apprentices on frameworks where they are under-represented by gender are also presented. The qualitative data collection focuses on the career development sector as a specific gender-segregated sector and a Modern Apprenticeship route in which positive action has taken place during the time period of the research.

The discussion (Chapter 6) revisits the issues explored in the project and reiterates their contemporary significance. Findings pertaining to previously unexplored demographics are considered in addition to detailed consideration of findings pertaining to gender. The methodological approach is appraised.

The thesis concludes (Chapter 7) with a review of the work's broad contribution to knowledge pertaining to gender and career decision-making, including recommendations for practice and training and potential follow-on research, and to practitioner research.

The impact and implementation of work undertaken to date is presented and the overall value of the work is clarified.

1.3   Author's background

Work on this thesis commenced in September 2014 and during the period of its completion, aspects of the author's employment are to be noted, alongside her general professional background, as they are pertinent to the scope and shape of the doctoral work undertaken.

From September 2015 to December 2016 the author worked directly for Skills Development Scotland in a position highly relevant to the context of this thesis. This role was obtained based on knowledge gained following initial doctoral study on this project. Initially offered as a secondment position, the role of National Training Programmes Equality Adviser: Gender Bias Expert involved working as a gender ambassador with internal and external stakeholders including Scottish Government, addressing gender stereotyping and gender segregation in career choices and occupational routes chosen by young people, and supporting the embedding of equality processes in relation to programmes and initiatives including Modern Apprenticeships.

Expert knowledge gained in this period of employment informs the thesis. While not solely authored by the researcher, it is relevant to note that she was involved in the creation and delivery of the *Equalities Action Plan for Modern Apprentices in Scotland* (Skills Development Scotland, 2015b) referenced within the thesis. Her involvement extended to strategic management of projects and initiatives to meet the gender and disability targets within the plan. The focus of the PhD thesis shifted, informed by the author's experience in this role, to offer maximum value by covering areas outwith Skills Development Scotland project and strategic activity around occupational segregation in Modern Apprenticeships. The embedding of relevant employment knowledge pertinent to Modern Apprenticeship equality provision highlights the validity, relevance and marketability of this project and thesis.

At all times the researcher has remained impartial to Skills Development Scotland and the work undertaken for this thesis has been produced independently.

Upon leaving the employment of Skills Development Scotland, the author took up employment as a Lecturer in Career Guidance and Development at the University of the West of Scotland in December 2016. Alongside this employment, the author is a

qualified, practising careers adviser and UK Career Development Institute Registered Career Development Professional.

The work that follows considers core aspects of the role of the practitioner-researcher: "Practitioner research possesses elements of both practice intervention and inquiry. It is embraced, sometimes without question, as an element of good practice within a Profession" (Shaw and Lunt, 2017, p.142). The author is herself a practitioner-researcher, and it has been her intention in this thesis to undertake a research project that can make an explicit contribution to knowledge in relation to practitioner-researcher methodologies and practice. This responds directly to the needs of the career guidance and development sector, wherein:

> Developing a workforce which is skilled in research methods and can apply them in both developing their own and their organisational practice, offers the career guidance sector a new strand of professional practice through contributing to the theoretical and the applied body of knowledge (Neary and Hutchinson, 2009, p.43).

1.4   Positioning the work

A project concerning labour market activity, career decision-making and related career, information, advice and guidance interventions has multiple stakeholders, all of whom operate within their own remit and often in response to government policy.

Career information, advice and guidance (CIAG) services are deemed to bring benefits at individual, societal and economic levels. Positive outcomes from guidance interventions are well-evidenced, for example, Hooley's review of lifelong guidance provides a thorough overview of the value and impact of career guidance across the lifespan (Hooley, 2015). The Organization for Economic Cooperation and Development (OECD) definitions for career guidance are often cited (e.g. OECD, 2004; 2018), particularly in relation to interventions with young people, a common focus point for CIAG services. Within provision for career related learning sits career education, a specific "careers-focused school- or college-mediated provision designed to improve students' education, employment and/or social outcomes" (Hughes et al., 2016, p.1).

In Scotland, where this project is focused, there is diverse and comprehensive provision; organisations who formally offer CIAG or provide statutory and non-statutory career-

related learning include schools, colleges and higher education institutions, employability services, private companies, individual private practitioners, charities, training providers and local authorities. Skills Development Scotland operates as the Scottish Government's strategic lead in delivering its statutory CIAG provision through an all-age service. Appendix A provides details of statutory CIAG policy and delivery in Scotland, as underpinned by key publications: *Career Information, Advice and Guidance in Scotland: A Framework for Service Redesign and Improvement* (Scottish Government, 2011); *Career Management Skills Framework for Scotland* (Skills Development Scotland, 2012b); *Scotland's Careers Strategy: Moving Forward* (Scottish Government, 2020a).

As noted, young people are a long-standing focus of CIAG work, particularly in relation to youth employment. Social and economic perspectives underpin key policy drivers in this area. In Scotland the publication of *Developing the Young Workforce - Scotland's Youth Employment Strategy* (Scottish Government, 2014a) signalled a high-profile intention to reduce youth unemployment, within which there came a significant emphasis on the expansion of apprenticeship provision and an improvement of quality and equity therein. Appendix A provides a comprehensive overview of youth employment policy and its emphasis on apprenticeship provision in Scotland, as a form of vocational education and training (VET). Modern Apprenticeship are a National Training Program, specific to Scotland, for individuals aged sixteen and above. Their purpose, structures, financing and strategic direction are also defined within Appendix A.

A clear focus on the importance of equity in service provision has emerged during the time period of the work undertaken in this thesis, in relation to both CIAG and apprenticeships. This includes the publication of the *Equalities Action Plan for Modern Apprenticeships in Scotland* (Skills Development Scotland, 2015b) and *Skills Development Scotland Careers Information Advice and Guidance Equality Action Plan* (2019e). Gender takes a prominent position in the equality, diversity and inclusion scope of these drivers of service delivery. This correlates with wider concerns pertaining to occupational segregation within education, training and employment, which are explored in the two literature reviews within this thesis (Chapters 2 and 3).

1.5   Conclusion

This chapter has provided a brief grounding for the research project. It began by positioning the work in the context of practitioner-research and the intention of the work to make a broad contribution to knowledge, in relation to both theory and practice. Strategic policy drivers pertinent to the research topic are included in Appendix A and have been précised here.

In working towards the overall **objective** of the thesis, to conduct new research into gender atypical career decision-making, the next chapter offers a critique of extant theory pertaining to gender and career decision-making.

2 Theoretical literature review

2.1 Introduction

This chapter begins with an introduction to concepts pertaining to career guidance and development and career decision-making. This provides context and clarification around key terms used in the literature relating to 'career' and 'career decision-making' and factors that may influence them, introducing gender as one such factor.

The chapter goes on to examine the provenance and maturation of interdisciplinary career development theory and critiques the supposition that its limited heritage and perceived distance from career guidance practice means it cannot adequately explain the career decision-making of all individuals.

The extent to which established interdisciplinary career development theories, sited within a context of theoretical pluralism, promote inclusivity as a core tenet is considered alongside their tolerance for application to career decision-making processes through a gendered lens. Key scholars, selected for their prominence within the career guidance and development field, are critiqued from a new perspective of inclusivity. The interdisciplinary perspectives that have shaped the literature, from Parsons' (1909) and Holland's (1985, 1996) longstanding matching approaches through to sociologically orientated and life-stage models popularised by Super (1980; 1990) are considered for their cognisance of gender concepts and the extent to which they could be perceived to reinforce or be used to challenge gender norms in career decision-making. The opportunities presented by the uniting of perspectives into interdisciplinary cognitive and constructivist-dominant typologies (e.g. Lent, Brown and Hackett, 1994; Law 1981; Savickas et al 2009) are reconsidered in the context of the extent to which they can equip practitioners to better understand the influence of gender on career decision-making. Throughout, the chapter returns regularly to the relationship between the literature and career guidance practice, highlighting disconnects and opportunities for closer integration.

This critique of overarching theory provides a grounding for the following section in which bespoke theories pertaining to gender within the pluralist interdisciplinary career development theory landscape are critiqued. Building on the work of Bimrose (e.g.

2001; Bimrose et al 2014) this section further explores the lack of consideration of common features of women's career pathways. However, these theories' own shortcomings are illuminated: the shortcuts taken to explain women's career choices (e.g. Hakim, 1996;2006) are criticised for their homogenisation and lack of intersectional considerations. The space in the pluralist landscape within career development theory for incorporation of bespoke career decision-making theories is explored and the he critique progresses to examine whether gendered career development theory offers the potential for precise analysis of career decision-making in conjunction with the broader literature on career decision-making. In doing so, the implications of the existence of gendered theories, common themes and their applicability within careers practice are considered. Feminist and LGBTQ-inclusive perspectives on the literature highlight ongoing lack of inclusivity and are supported by examples of research studies into women's career development which demonstrate a selective and narrow focus. Those who make career decisions outwith gender norms are identified as being excluded within the literature.

To demonstrate the oversights and weaknesses in extant theory in relation to gender and career decision-making, the underexplored concepts and key issues are contextualised by examining career decision-making influences and influencers on a micro and macro level. This is undertaken by focusing on the contemporary family unit and its composition, presenting family background as a strong factor in career decision-making processes and one in which gendered influences can be explicitly identified.

2.2   Defining career and career decision-making

In defining 'career,' general descriptors of journeys, pathways and trajectories are used interchangeably despite referring to different measures that allow for flexibility or planning, happenstance or *fait accompli*. Career may be interpreted differently by career researchers, practitioners and non-professionals because "sometimes scholars tend to invent new terms for similar concepts in career studies" (Baruch, Szűcs, and Gunz, 2014, p.15).

Career "as a technical term, can be used to connote one's sequence or totality of work positions" (Lent and Brown, 2013, p.558). From sequentially securing financially beneficial employment through to fulfilling a vocational 'calling,' career may include education, paid and unpaid work and associated or independent wider-life roles, events and transitions.

The contemporary term is generally considered in the singular to describe an individual's life-long experience from an integrated, holistic perspective, incorporating more than occupational positions over time. In short, career refers to the accumulated occupationally significant activities a person does.

In undertaking these activities, a decision will be made to act. This is a career-related decision. Individuals make different types of career decisions. A single career decision could be considered part of a lengthy, measured process (be that conscious or unconscious) or a split-second opportunistic choice, albeit one that has long term implications. Gati et al. (2010) note over 160 measures for decision-making, with few explicitly considering the specifics of career decision-making. In proposing a new model of career decision-making profiles, they highlight how career-focused models concentrate "on classifying individuals into a few types based on their most dominant characteristics" (ibid., p.277). Bimrose and Mulvey (2015), for example, note four career decision-making styles in this pattern, which they propose are adopted by adults across Europe: strategic, evaluative, aspirational and opportunistic. The work of Foskett and Hemseley-Brown, focusing on young people's career decision-making, considers the continuousness of career-decisions and how while "we may perceive each small decision in isolation, in real life, decisions occur in sequences," (2001, p.28) reinforcing the singularity of the concept of career in relation to career-decision-making.

There are often-used phrases that define support for an individual's career decision-making. Most commonly seen are "career information, advice and guidance" (CIAG), and "career education, information, advice and guidance" (CEIAG) in a policy and delivery context. In relation to the personal support available, commonly used terms are "careers advice", "career development", "career guidance" and "career counselling" however it is not uncommon to see the word "career," particularly in the latter two terms, replaced with "vocational". This thesis uses "career guidance" as an umbrella term for these collected terms, in line with the following broad definition:

> the services which help people of any age to manage their careers and to make the educational, training and occupational choices that are right for them. It helps people to reflect on their ambitions, interests, qualifications, skills and talents—and to relate this knowledge about who they are to who they might become within the labour market (Cedefop/European Commission/ETF/OECD/ILO/UNESCO, 2019, p.2).

In the context of 'good' career decision-making, career development theory does not seek to answer the subjective question 'a good choice for whom?' (the individual, family, peers, the state, business and other stakeholders could take differing viewpoints) or evaluate against the success measures of policy-directives but instead presents patterns of career decision-making that lead to the development of a career over a lifetime. Models of career information, advice and guidance practice frequently utilise the tenets of decision theory and competency frameworks in their structures and are rooted in the importance of supporting "informed" career decisions. However, to describe one decision as more informed than another is perhaps a linguistic argument; individuals make career decisions based on the evidence available to them and make seemingly rational or irrational choices enveloped in cognitive biases.

Careers are by their nature defined by heterogeneity, and contemporary education, training and labour markets offer ever-more varied occupations and vocational routes. Economies and societies evolve, yet individuals continue to make regulated career decisions, leading to homogeneity within the outcomes of career decision-making. One such example of this is in relation to gender, and the continued prevalence of occupational segregation in the labour market, which this thesis explores.

2.3   Career development theory

Career development theory concerns 'why' and 'how' people make career decisions. It explains "vocational behaviour, such as initial career choice, work adjustment, or life span career progress" (Swanson and Fouad, 1999, p.8). Career development theory underpins and informs career guidance frameworks and delivery models used by career development practitioners who support individuals' career planning and provide the specific tools and techniques of career education and guidance (for example: person-centred counselling, career coaching, work experience) that enable career decisions to be made.

The broad principle of career development theory is to explain, and to an extent predict, the phenomena of career decision-making. From this, empirically testable theories have emerged. It is a small academic field, noted for its "developmental infancy," inadequacy and gaps, particularly in relation to "its failure to account for diversity" (Patton and McMahon, 2006, p.7). For this reason, whilst explicit career-theory generally emerges from the disciplines of psychology and sociology, discussion of career decision-making influences is often also informed by literature from wider fields, such as education or economics.

Scholarly research into career guidance, career education and career development is often practitioner-led or instigated, with academics in the field tending to move into their roles following time spent in career guidance practice. Although theory can be "considered as a macro-paradigm for informing and adapting practice" (Lauder and Neary, 2020, p.1) an uneasiness may present. Theories of career development can help career development practitioners identify helping mechanisms appropriate to their practice, yet this "ideal situation" is "met with some scepticism by practitioners and researchers alike" (Swanson and Fouad, 1999, p.8). Dismissive practitioners and apprehensive scholars may not be specific to the careers sector but the scenario risks practitioners becoming removed from theory and theorists becoming removed from practice, threatening professional standards, and so the value of theory is reiterated:

Theory has helped to mould the way in which careers advisers have worked. In one sense, it does not appear to help the practitioner that there are so many different theories, especially when they can present very different explanations for occupational choice. However, in another sense, this variety of theories does reflect the complexity of the process that is being examined. It also illustrates the fact that we can only understand occupational choice, in a dynamic context, in terms of change – economic, political, social and psychological. (Gothard in Gothard et al., 2001, pp.36-37).

Gothard also raises a key point pertaining to the field: whilst small, it features a multiplicity of theoretical postulations, drawing from different worldviews and multidisciplinary perspectives. Arthur and McMahon describe "a myriad of theories," which reflect the specific time and place of their origin, disciplinary positioning or contemporary adaptation (2019, pp.4-5). Lent notes that "the presence or absence of specific, testable propositions is a key part of what distinguishes a conceptual perspective from a formal theory," (2017, p.22) enabling clarity for the practitioner-researcher seeking a theoretical position in a widely rooted discipline.

This literature review critiques the inclusivity of the dominant and enduring career development theories, across the main typologies, with a specific focus on their gender inclusivity.

2.3.1 Emergence and establishment: matching, trait and factor, and person-environment fit theories

Incongruity and misconception around inclusivity confound career development theory from the outset. A prevailing belief is that career development theory's beginnings are in white, western, middle-class, "able-bodied" working men's experiences (Patton and McMahon, 2006, p.113), an assertion that could be levied against theory within many disciplines. While theories rooted in these experiences dominate, the earliest career development theorist[2], Parsons, is noted for being an advocate for women and disadvantaged groups (O'Brien, 2001, p.66). In *Choosing a Vocation* (1909) Parsons proposes the first 'matching' theory of vocational choice. In short: both people and jobs are different, but the two can be perfectly, scientifically, matched based on an assessment

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[2] Parsons and his counterparts are early scholars of career development theory however they were referred to as vocational theorists until the term 'career' came into common use in the later 20th century.

of personality traits and job role factors. Parsons' theory is based on an individual's knowledge of both the self and of work environments and asserts that when the two find their fit, a position of "true reasoning" exists. Parson's early matching theory has influenced careers practice for over a hundred years (McMahon, 2008) perhaps due to its perceivable simplicity and proximity to frontline careers practice.

Parsons emphasises the importance of the social networks around the individual making a career decision. While credited with establishing the school of thought that says people and jobs can be matched psychometrically, less publicised is "his acknowledgement of contextual influences in the career decision-making process" (McMahon and Patton, 2006, p.165). The limitations of this acknowledgement are noted, as Parsons' models overlook family and cultural influences (Spokane and Glickman, 2001, pp.302-303) but the principle still stands; Parsons does not present career decision-making as a standalone micro-level matching process free from all outside influence, however convenient it may be to present him as a scientist holding such a view. On the contrary, he proposes that vocational matching can address injustice and unfairness, and the unequal distribution of wealth (Hartung and Blustein, 2002). The roots of the contemporary career guidance for social justice agenda (Plant and Kjaergård, 2016; Hooley, Sultana and Thomsen, 2018) within the career development sector can be seen at the discipline's inception.

Holland's (still-widely utilised) person-environment fit theory of career choice (1985, 1996) formalises and expands on trait and factor matching theories that developed from Parsons' early work. This theory considers the match between personality and environment to be the key to a strong fit or "congruence" and is based on six personality types. Known as RIASEC, an acronym formed by the letters of the personality types: realistic, investigative, artistic, social, enterprising and conventional, the model suggests that people with specific personality types, interests and aptitudes are suited to certain work areas dependent on the typologies generated in RIASEC testing and their level of consistency and differentiation. Holland's categorisations are used in numerous assessment tools but the approach is not without critique regarding cultural divergence and inclusivity, which has shown them to be "affected by specific cultural values and perceptions" (Leung, 2008, p.118). Despite research supporting the RIASEC typologies, criticism of the person-environment fit theory relates to evidence of women scoring higher in the social and artistic personality types and to RIASEC types appropriating a stronger structural fit to men than women (Proyer and Häusler, 2007), supporting the

assertion that theoretical models are designed by men, for men. The theory also does not account for the fact that while individuals may be suited to a specific work area, social and cultural barriers may prevent them from entering it.

In this top-down, directive career guidance approach of occupational matching, the role of the vocational adviser in allocating jobs to potential employees who present as socially and culturally fit for purpose could be considered to reinforce social norms and be open to bias. The interpretation and ensuing practical application of matching theories could lead to challenges for equality. The dominance of these theories raises questions in relation to the recorded popularity of occupations and the ease with which a person can expect to be included or excluded from a specific role or type of work due to gender. There is ample space for self-fulfilling prophecies to flourish and the opportunity for individuals to conform to gender stereotype threats such as under and overestimating ability or presenting gender typical characteristics. Delivery models based on the theories could be rigged to maintain the status quo. In practice, evidence has been found of gender bias in the delivery of career guidance rooted in trait and factor theories, with male and female clients being given different interest inventory forms, containing gendered job titles (Sharf, 2006). Jobs where physiology is the deciding factor are few, and it is often at job role rather than occupational descriptor that this presents[3]. The disconnect and potential for misapplication between career development theory and the delivery of inclusive practice was established early in the emergence of the discipline.

At the heart of matching theories is the need for measurement and appropriate positioning of the individual to achieve a best fit within the world of work, satisfying the individual, the employer and beyond. Implicit in most matching theories is that a one-off intervention will sufficiently direct an individual into their perfect-fit job with a career to follow in a predictable linear direction (job availability permitting—many of these theories emerged during times of low unemployment and 'jobs for life'). Dawis and Lofquist's theory of work adjustment (1984) considers the potential for an employee to continually adjust to a work environment and work-based problems over time (perhaps what we would now consider to be the development of 'employability skills'). There is otherwise little consideration of the time after an individual is matched, when a trajectory might be stunted by workplace discrimination or wider societal expectations regarding gender-roles. The basic premise of these macro-level matching-orientated theories is that if a

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[3] For example, a support worker in the context of close personal care.

person fits their work-role, career satisfaction will ensue, a "fundamentally sound logic or sensibility" (Hartung and Blustein, 2002). Critique of the trait and factor theories predominantly focuses on the validity of the measurement elements[4] of traits and factors (Sharf, 2006, p.26), often undertaken at a point during adolescence, as opposed to the extent to which the theories adequately explain lifelong career decision-making and the individual decisions linked to wider-life roles beyond vocational choices across a career. Yet research casts doubt on the measurement aspects of person-environment fit theories, with individuals' interest groups by occupation shown to be less congruent and homogenous than previously thought (Nye, Perlus and Rounds, 2018).

2.3.2 Incorporating sociological perspectives

However well-proven measurements are, ascribing job-suitability by measuring a positive correlation between person and occupation raises multiple issues in relation to gender bias and overall inclusive practice. The limitations of 'treating everybody the same way' and the barriers this leads to in attempting to create a 'level playing field' where the constraints and structures of the outside world are ignored, including social and cultural gender biases, are now widely understood. Lifelong career development and career decision-making, either in line with or against social norms, is not explained by a psychologically-sound single job match. Aptitude, ability, strengths and occupational awareness are influenced by a willingness to take up specific social identities and by opportunity structures and social capital. Career development theory, from early in its interdisciplinary heritage, incorporates both psychological and sociological principles in its popular typologies and in those which continue to dominate the contemporary theoretical landscape.

Caution and balance are apparent in the introduction of sociological theories to career decision-making; literature on inclusivity is greater in sociological disciplines however these perspectives contribute to explanations of, rather than fully explain, career decision-making. Only the careership theory of career decision-making (Hodkinson and Sparkes, 1997) is presented as an explicitly sociological postulation. More generally, sociologically cognisant career development theories shift the focus onto external factors,

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[4] Aptitude test, ability tests, general interest questionnaires, interest inventories.

exploring societal and occupational structures that impact upon career decision-making, with career development theory's psychological roots exerting a continuing influence.

The work of Roberts demonstrates this well. Roberts is often cited in the context of sociological understanding of career decision-making. Considering societal change over a sixty-year period, Roberts (2009) demonstrates that while employment and education structures, social class aspirations and labour market policy undergo change processes, leading to a greater number of career choices for individuals, there is a stability in relation to the overall role of choice. People make decisions based on the opportunity structures available to them, therefore choice can only explain a decision made in a socially constructed vacuum, or a limited context (ibid.). In this sense, all career theory should be applied, be that directly or via guidance models and frameworks, with an awareness of the influence of social environment on career decision-making, which offers both opportunity and disadvantage.

2.3.3   Developmental career development theories

A challenge to psychologically-orientated theories discussed earlier is the concept of change within the lifespan. People's personal circumstances are not stable throughout a lifetime; individuals and their roles and responsibilities change while society and the world of work advances. In developmental career development theories, career decision-making moves from a one-off occurrence and becomes part of a career development process across life stages.

Ginzberg first proposes life stages theory, which influences career development theory for the later twentieth century. Ginzberg et al.'s (1951) fantasy, tentative and realistic stages of career development offer more than the trait and factor approaches; the theory concludes in early adulthood with the making of an irreversible job choice, resembling an extended matching model[5]. A criticism is that the theory's creation stems from "studies of young men from upper income homes, and as a result did not attend to the career development needs of women, minority or disadvantaged groups" (Patton and McMahon, 2006, p.51). This is however where the arguments around general robustness and applicability of career development theories should be considered; if a theory is valid,

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[5]Ginzberg later went on to expand the life stage model and is revisited later in this chapter.

then surely it should work for every client group? While Ginzberg initiates this new approach, it is the work of Super which is at the forefront of developmental career development theory.

Super's work introduces a broader and more inclusive approach that allows for change throughout the lifespan. First publishing on vocational theory in 1953, over the following forty years Super refines and reassesses his theoretical position. In a 1980 paper *A Life-span, life-space approach to career development*, Super notes how career development theories to date proposed ideologies that "almost always, dealt with occupational choice rather than career development," referring to them as "segmental theories" and reflecting on the limitations of his own earlier sequential descriptors of career decision points (Super, 1980, pp.282-283). Super's developmental theory acknowledges the multiple and various roles that individuals can take on throughout a lifetime and—crucially when reviewed for gender compatibility—the ability for men and women to fulfil them (ibid., p.284). Although Super goes on to state that "men and women are usually home makers, sharing all tasks equally in some contemporary households or dividing them in more traditional homes when the wife cooks and the husband dries the dishes" (Super, 1980, p.284). This is an interesting proposition which feminist scholars would find much evidence to refute. Career decision points occur prior to and during the time of a role change, or when an existing role changes substantially (ibid., p.291). Super applies age-bands to life stages (these stages being: growth, exploration, establishment, maintenance and decline) and a list of detailed propositions underpin his theory. He later expands on these to postulate fourteen clear propositions, which he describes as "taken from developmental, differential, social, personality, and phenomenological psychology and held together by self-concept and learning" (Super, 1990, p.199). The developmental patterns could be perhaps better understood as elements of bigger theories but demonstrate a willingness for scholars to take a diverse view of career decision-making factors.

Broader adult development theory and life stage models *can* be applied to career decision-making however it is important to note that these theories are not specific or primarily focused on career decision-making. Writing in 1989, Cytrynbaum and Crites refer to the persistent "dilemma" of women's adult development, despite some separate studies emerging and the modification of male-centred theories to include women's experiences (Cytrynbaum and Crites in Arthur, Hall and Lawrence, 1989, pp.78-79). The dilemma is

that strictly age-bound developmental models do not consider the additional complexity of women's lives (pregnancy and maternity, predominance to primary care-giver roles) and the multiple roles often played out at once. The implicit idea in developmental theories, that change is irreversible and will always move a person forward, is difficult to reconcile with, for example, the experience of a woman returner going back into the labour market and starting afresh after a long break.

Emerging from the study of Super's "growth" stage in more detail, a change in the foregrounding of developmental theories came with the work of Gottfredson. Her theory of circumspection and compromise (1981) marks a shift in that she concentrates on life stages theories rooted in societal position and individual feelings, values and interest and, for perhaps the first time, a theory emphasises the importance of gender in career decision-making, primarily in relation to childhood and youth. A four-stage model, the fourth stage of "circumscription" is itself broken down into five further stages, with gender and sex-roles acknowledged from childhood.

Perhaps best described as a supplement to Super's life stage model, Gottfredson's theory has received little critique and limited application and review over time. Testing of the theory on the Australian labour market focuses on the theory's accuracy in representing horizontal occupational segregation rather than in proving Gottfredson's assertion that occupational satisfaction comes from the fulfilment of traditional gender roles (Beavis, 2007, pp.38-44). Swanson and Fouad intimate that this is due to the theory's restricted time frame within the life span (1999, p.88). Furthermore the "one-size-fits-all" approach does not account for the range of educational and vocational transitions that young people now make when entering the labour market, or consider the lengthening in time attributed to the transition from youth to adulthood in the theory (Jeffrey and McDowell, 2004, p.135). However, the premises of Gottfredson's theory and of Ginzberg's and Super's postulations could perhaps be adapted to contemporary society and the broad decision-making stages, without age restrictions, applied across a career in the modern sense of the term. Regardless of criticisms levelled at the theories, developmental models demonstrate a more humanistic trend in explaining career decision-making and offer the opportunity for gender-aware implementation in career decision-making support.

2.3.4 Psychodynamic theories

Psychodynamic theories of career development receive little attention, particularly within the United Kingdom where a guidance counselling approach is generally present in career development practice. The Freudian heritage of this branch of theory differentiates it from other theories on career decision-making, with childhood development often cited as the reason for work preferences. Roe's personality development theory of the mid-1950s explains occupational choice in adulthood as the result of parent-child relationships during a person's upbringing (Sharf, 2008, pp.286-287). While gender is covered in Roe's research, her theoretical predictions are considered to fall somewhat short of success (ibid., p.302). Bordin (1990) focuses on the relationship between work and childhood play but his work has become "essentially of historic interest in the field" (Patton and McMahon, 2006, p.37). Informed by these points, the author's view is that perhaps psychodynamic theories are best considered as supplements to specific stages in life-stage models.

2.3.5 Converging theory: cognitive career theories

Notions of actor agency underpin cognitive career development theories, in which 'cognitive' often appears as a synonym for 'rational' action. Their concern with cognitive processes, with restricted consideration of external factors, places these theories in a primarily psychological arena. Yet contemporary cognitive career theories rooted in self-efficacy demonstrate the shift towards converging theoretical perspectives, considering the influence of both individual agency and social structures in defining human behaviour.

One of the more recent career development theories to fully emerge, social cognitive career theory (SCCT) directly applies self-efficacy or self-belief theories to career decision-making and is concerned with the potential for individuals to achieve career aspirations. In SCCT, gender makes a notable appearance, with a clear acknowledgement at its inception that the "broad framework could be elaborated further to better capture the issues, challenges and obstacles that especially characterize the career development of particular groups of women" with propositions in relation to "contextual factors, such as gender role socialization experiences" and "special challenges" such as "work/family

role conflict, sexual harassment, or 'glass ceiling' obstacles" (Lent, Brown and Hackett, 1994, p.117). The extent to which the ensuing development of the framework or research that overtly uses SCCT to this end is however debateable.

SCCT focuses on the "cognitive concepts of self-efficacy, outcome expectation, and goal selection" in the context of career decision-making, which "affect how individuals view their capabilities and what they are able to achieve" (Sharf, 2006, p.330). This can be interpreted as a belief in ability, appropriate choice and attainment, key concepts in relation to gender-based decision-making. In considering self-efficacy, a correlation could be drawn between resilience and situation-specific challenges; deciding to work in a sector where an individual's gender is under-represented, for example.

Between 1994 and 2006, Sharf sources more than 30 studies that use SCCT (2006, p.340) yet the authors of SCCT are critical of its application. Betz and Hackett admonish researchers' use of SCCT due to their tendency to "ignore the background sources of self-efficacy information" and the inclusion of "background affordances" that are given undue precedence (2006, p.8). Betz and Hackett also assert that the application of SCCT should be domain specific; self-efficacy within one field does not operate in the same way in another (ibid., p.9). Testing can only be considered relevant to each specific context in which the theory is applied, limiting the applicability for broader issues, such as occupational segregation in relation to role and sector. The argument relating to viability and applicability of career development theories is raised again; if a theory is valid then it being context-bound means any findings are limited to the test group, returning to an emphasis on verification of measures at a specific point in time while adding an extra dimension of setting.

A study applying SCCT to career aspirations of engineering students notes that within the sector and at that specific stage of career development "certain barriers and supports may be fairly generic, whereas others may well differ as a function of gender" (Inda, Rodríguez and Peña, 2013, p.354). The perception of these barriers and supports could be assessed in practice by careers practitioners and used to "encourage women to discuss barriers that they anticipate in their career paths, explore possible coping strategies relative to these barriers and identify support systems" (ibid.). The focus on perception creates space in which an individual or practitioner can attempt to challenge societal norms and structures; an individual could be coached to have higher goals, aspirations,

resilience and improved self-efficacy. Yet what of the day when they are faced with recruitment bias in the workplace, for example, a proven structural barrier rather than a perceived challenge? The burden of responsibility for change is passed on to the client, allowing the theory to reinforce gender norms.

2.3.6 Incorporating external influence and influencers

Law's community interaction theory (1981; 1993), gives scope for the gender-competent career practitioner to consider 'local' level gendered influences on career decision-making. Law identifies a problem with career theory at the time of his writing: while matching and developmental approaches focus on the psychology of the individual, sociological theories overly concern themselves with wider society leading to theories which are either too micro or too macro to explain career choices. Law argues for a "mid-range" focus wherein social interactions within the local community are seen to be of greatest influence on career decisions.

By "community," Law refers to a range of people that a young person (the focus on youth still being prominent in the early 1980s) could encounter in their local social world and who could potentially exert an influence: parents, extended family, neighbourhood contacts, peer group, and teachers (a simple adaptation of this theory for contemporary society might be to expand the group to include social media influences and influencers). These influences transmit motivation and modify social functioning, convey implicit or explicit expectations and give encouraging or discouraging feedback concerning choice of roles, all of which could easily be affected by stereotyping and bias. "Community" can also provide emotional or practical support and be a source of direct information or indirect information. Community contact in this sense is an easily proven justification for some career decisions but Law's theory is perhaps too simplistic to explain the nuances of career decision-making processes and, as with SCCT, broader structural barriers. As a supplement to other theoretical positions however, it is difficult to refute. For this reason, the influence of the family unit on career decision-making is examined in a subsequent section.

2.3.7 Narrative and constructivism

The interdisciplinary heritage of research into careers is intended to offer an "enriching" of the landscape and "broader understanding of the underlying career phenomena" (Chudzikowski and Mayrhofer, 2011, p.20) and it is within the postulations emerging at the turn of the twenty-first century that the theories explicitly combining sociological and psychological elements find a home. The theories are multifarious (those covered in this section are by no means exhaustive), due to their being located within human perspectives and viewpoints.

Narrative or constructivist theories appear as extensions to or new formulations of existing theories and their emergence over the last twenty years clearly demonstrates a continuing call for new theoretical perspectives to enhance the landscape. This also demonstrates the enduring dominance of psychology in explanations of career decision-making and the potential for a cyclical process by which practice informs theory.

Constructivist counselling approaches are rooted in an individual's perception of the self and could be seen to hinge on a practitioner or researcher sharing an ontological worldview with the individual, highlighting a need for philosophical education for those who adopt this approach, which may not be offered in training or practice. Storytelling over the lifespan places constructivist career development theories into the area of whole-life models and they owe much to the earlier work of Super. Savickas et al. (2009) present career construction theory as a "life-design framework," yet they propose and acknowledge the difficulties of creating a constructivist research agenda, where a subjective perception of any career decision process could be viewed differently from one person to the next. Both short and long-term evaluation of the framework in practice is encouraged, as are case studies, ethnography and considerations of cross-cultural contexts (Savickas et al., pp.239-250). Constructivist theory takes a whole life approach and in feeding back to practice it can be applied in a gendered context, even if not explicitly gendered in its core tenets.

Perhaps the seemingly contradictory notion that a theory should explain the decisions of the many (homogeneity), whilst simultaneously proposing that all decision processes are unique (heterogeneity) explains why few independent studies of career construction theory have been undertaken to date. Validity testing, if counselling practice is to shape

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theory, would require large scale qualitative analysis, considerable narrative testimony from individuals and complex thematic analysis as each person, regardless of gender, would have an individual interpretation of the world they inhabit. Evidently, scholars are reticent to test and elaborate on narrative or constructivist career development theory, while practitioners continue to use constructivist approaches to structure guidance interventions.

As the influence of constructivism has become more apparent, and reliance on logical, objective and sequential accounts of career development has decreased there has been an "increased recognition of the part chance plays in career development" (McMahon and Patton, 2006, pp.96-97). A keenness to re-engage practitioners is perhaps what has led to the popularity of Krumboltz's (2009) happenstance learning theory (HLT). The theory straddles the space between career guidance theory and career development theory, in "an attempt to explain how and why individuals follow their different paths through life and to describe how counselors can facilitate that process" (Krumboltz, 2009, p.135). Its proponents claim it addresses fluctuating labour market conditions and "societal inequalities" outside of an individual's control, with the aim of reaffirming self-efficacy in counselling situations (Krumboltz, Foley and Cotter, 2013, pp.15-26) yet on review it could be deemed to do entirely the opposite. Debates about the extent to which gender is within a person's 'control' notwithstanding, HLT formalises the role of chance: individuals make the most of what life presents them with. If life offers individuals limited opportunity to network outside of their habitus, then individuals can make the most of very little.

Perhaps not unexpected in the interdisciplinary career development theory timeline is the offering of a formal metatheory. In arguing for a "metatheoretical account of career development" McMahon and Patton's systems theory framework (STF) (1995; 2006) offers a primarily constructivist hybrid career development theory wherein logical positivist and objective data are accommodated alongside constructivist approaches (McMahon and Patton, 2006, p.95). While believing "one of the advantages of the STF is that it values the contribution of all theories" (ibid., p.95) the theorists present a complex interrelationship between all facets and structures around an individual, which, given the neutrality of the theory, can include gender as a biological factor or social construct. Reflecting on STF twenty years after its inception, McMahon and Patton highlight how the theory's straddling of epistemologies leads to its applicability and

appeal for researchers and practitioners alike. This is perhaps questionable given that all publications on STF link directly back to the original authors.

If the STF metatheory were to be proven and widely adopted it would suggest that no single career development theory can adequately the explain career decision-making of all individuals. STF's complexity is not insignificant; whereas the crux of early matching and person-environment fit theories could be explained in sentences, later career development theories require convoluted multi-level descriptors and evaluation frameworks. This highlights once again why practitioners may disengage from theory and rely on older or simpler constructs or resort to theoretical opportunism, retrospectively applying a career development theory to a client's career journey to date rather than favouring one particular position that aligns to their own worldview.

2.3.8   Summary

The theories presented within this section are by no means an exhaustive list. Baruch, Szűcs and Gunz highlight the cluttered landscape within career theory: "…despite the huge number of constructs that appear in the literature, only a few have been proven robust and enduring; others have not gathered momentum and wide endorsement, nor have they been adopted and utilized by the career research community" (2014, p.5).

This demonstrates a clash between an intent for social justice at theoretical level, present since the emergence of the field, and the opportunity for bias-prone practical implementation and application that reinforces social norms. Across all theories discussed here it is evident that poor application of theory through a lack of cognisance of inclusivity creates the opportunity for bias and inequality in careers practice. Alternatively, inclusive frontline career development practice is possible if theory is applied perceptively, as through a gendered lens, and with an explicitness about how theory is applied to incorporate diversity.

Interdisciplinary and epistemological convergence means that contemporary career development theory is in a state of pluralism but the benefits can be maximised. Theoretical opportunism in this cluttered landscape, a 'picking and choosing' to suit the circumstances to explain career decision-making and the perceived expediency of this,

could lead to the sacrifice of ethical principles. Yet the availability of multiple meso-level theories creates the opportunity for eclectic, pluralist application which can build an all-encompassing profile of every individual and adapt to the worldview of both client and practitioner, creating precision analysis of career decision-making.

One route to further developing accurate career decision-making analysis is to incorporate explicitly bespoke career development theories into this pluralist toolkit. The following section considers and critiques gendered career development theories.

2.4   Gendered career development theory

2.4.1   Career theories 'for women'

That separate career development theories, modifications of existing theories or new inclusive theories are necessary to explain the career decisions and career development of women creates controversy in an otherwise sedate theoretical field. Arguments in favour undermine the discipline; if a separate theory is necessary to effectively explain women's career decision-making, then separate theories may be needed for all under-represented groups (Bimrose, 2001, p.91). Furthermore, if separate theories over-emphasise gender differences and more moderate approaches are merely 'gender aware' (perhaps as are the career decision-makers themselves) it could be argued that theories at both extremes will omit the consideration of some sociological or psychological influences upon career choice.

The notion of gendering career theory has been simmering since the 1960s, with the field being "criticised for its inadequate representation of women's careers" (Bimrose et al., 2014 p.79), based on the assumption that existing career development theories have an intrinsic patriarchal bias, having emerged from the primary study of the working lives of men and neglecting issues specific to women's career decision-making (Bimrose, 2001, pp.82-83). While the issue is sporadically noted, proposals for women's career development theories have not gained mainstream traction. The concept of gendered career development theories raises difficult questions. Women are more present in the

contemporary and ever-changing labour market[6], through choice and necessity, and theories based on traditional gender dispositions could be considered archaic, assuming a perpetual status-quo and unfashionably at risk of alpha bias in defining women's career goals and aspirations. It is fundamental to remember that the overarching purpose of career development theory is not to judge any career decision. While career development theories influence career guidance theories, careers professionals should not look to gendered career development theory for examples of how things *should* be but how things *are,* and the premises therein should be open to ongoing critique.

To counter this, rather than denounce existing theories, women's career development theories identify career decision-making peculiarities based on gender. In explaining these cohort-specific phenomena caution should be exercised not to use current trends as permanent markers but to allow gendered theory to operate as a mechanism for change that can positively influence practical guidance models. In addition, trends should be considered in the broader evolving context of the term 'career' as discussed earlier in 2.2: Defining career and career decision-making, Patton and McMahon (2006) describe a woman's career as a potentially "'tessellated' structure" wherein "interconnected networks" from different life spheres converge. If all experiences are valid parts of a lifelong career, "motherhood, paid full-time and part-time employment, voluntary work are then eligible to be included in the structure since these too provide opportunities for self-growth and may be viewed as potentially meaningful lifecareer experiences" (ibid., p.117). It could easily be argued that this statement is as applicable to men as it is women, were 'motherhood' to be replaced with 'fatherhood,' or indeed the catch-all term, 'caring.' This understanding of career may also not be shared by the individual; women experiencing financial urgency to work are, for example, shown to consider a "career" a privilege they cannot attain (Clark and Bower, 2016).

Empirical research into the presentation of gender trends in the labour market informs gendered career development theories but to consider women's career decision-making as complex should not mean men's career journeys can be considered free of complexities. The "development of comprehensive theories applicable to women and men" enables "the complexity and contextual embeddedness of women's careers to be

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[6] "Over the past 40 years, the UK has seen an almost continual rise in the proportion of women in employment. The employment rate among women of 'prime working age' (aged 25-54) is up from 57% in 1975 to a record high of 78% in 2017" (Institute of Fiscal Studies, 2017).

accommodated" within the theoretical field (Bimrose et al., 2014, p.79). In the (ever)changing world of work it is not only women's careers that are now less linear yet women's careers are most *likely* to incorporate periods of childcare, other caring responsibilities, clipped aspirations, stunted trajectories and multiple re-entries into the workplace. Persistent gender issues in the labour market are considered to present primarily as career disadvantages for women. The gender pay gap, undervaluation of work types, occupational segregation, and sexual harassment are commonly-accepted issues perpetuated by structural factors. But in the context of individual career decision-making, finding comfort and security in the familiar and taking a traditionally gendered career pathway could be considered rational and pragmatic; 'fitting in' may be easier, support networks stronger. Gender stereotyping presents in many and varied forms, not merely as perceived in relation to work and family life balance but in contexts relevant to the specifics of occupations and roles: leadership and managerial styles and preferences, work-related values and morals being just some examples.

The careers practitioner is of course entirely at their own professional disposition or workplace/ethical code as to how far to challenge or reinforce gender norms and/or adopt a feminist-orientated counselling approach in practice. However, as already highlighted, there is a propensity for careers practitioners to be outwardly dismissive of theory, in an increasingly complex hybrid theoretical landscape. In a practical context, Swanson and Fouad review gender-aware and feminist approaches to career development and career counselling theories but return to the question of "whether separate theories are necessary or desirable" (1999, p.156). At the 'coalface' careers practitioners, working with diverse client groups every day of their working lives, often favour one or a limited number of preferred career development theories, holding the notion that a sound career development theory will be universally applicable. While research "emphasises the need for career support for women that is differentiated and subtly nuanced to meet individual needs" (Bimrose et al., 2014, p.86) gendered career counselling is certainly not a mainstream practice; practitioners and services do not (currently) advertise themselves as offering 'feminist careers advice.'

The evolving nature of the labour market means bespoke career development theories and cohort-specific career development frameworks and guidance practices can be time-limited if they articulate with contemporary political, social and cultural values. The language used by scholars arguing for gendered career development theories

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demonstrates this. In a still often-cited late-1980s theoretical and empirical review of women's career development arguing for gendered theories, the authors conclude: "What happens to the man who does decide to throw caution to the wind, let his wife be the sole breadwinner, and take a paternity leave…a broad model of women's career development may improve our knowledge of the non-conforming man" (Larwood and Gutek, 1987, p.174). In retrospect, it is easy to see why a strong model with longevity might not emerge from a review based on the concept of women being *allowed* to do something different and the theoretical knock-on effects explaining male cultural defiance or deficit, offering the opportunity for non-traditional men's career decisions to be explained by classifying them as female. Requiring a man who takes on the primary childcare role to have his career explained by women's career development theory would not sit easily with either feminists or gender essentialists. Following a non-traditional male/female gendered occupational pathway does not mean an individual's career choices should be analysed as if they are of the over-represented gender. Gendered career development theory and associated research often focuses on a comparison between women's and men's or women and gender-neutral career development, with little consideration for women forging careers in male-dominated sectors or occupations. In the same review is the assertion that women's career development theory needs to "attach more importance to exploration of and establishment in the traditional roles of wife and mother" (Diamond in Larwood and Gutek, 1987, p.19). A mainstream feminist reading of this proposition now could lead to a simple question: why must it? Career development theories can evolve and theorists often refine their work over an extended period yet revision may need to be undertaken more quickly for those that are explicitly and rigidly gendered.

2.4.2   Themes in women's career development theory

Gottfredson (1981) is credited for bringing gender to the forefront of the discipline, overshadowing earlier discussions. Her developmental theory of circumscription and compromise as previously discussed considers gender stereotyping as a primary career decision-making factor, in conjunction with social class, occupational prestige and intelligence[7]. Gottfredson's theory proposes that circumscription of preferences eliminates occupations and jobs based on gender ("sextype") and that gender is the least likely factor to be compromised. While Gottfredson's theory attracts sustained criticism

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[7] Gottfredson's use of the word "intelligence" is not without controversy.

due to a lack of empirical support (Hackett and Kohlhart, 2012, p.267) the terms 'preference' and 'compromise' continue to permeate the work of gendered career development theorists alongside the notion of categorisation.

It is wise to consider categorisation (Richardson, 1984; Betz and Fitzgerald, 1987) as a trend in defining women's career decision-making from as late a point as possible, once the categorisation of women's career decision-making has moved from being focused on stark heteronormative choices around working, marriage, timely and delayed childrearing, homemaking duties and so forth to consider it in the context of the 'modern woman' who is assumed (of course arguably) to have greater social and cultural freedom to work[8] and make her own unencumbered career decisions. Homemaking of course being one such career decision, and as clear and rational a choice for not entering the paid labour market as any other.

Minimal "empirical scrutiny" and widespread adoption impacts on early moves towards psychological-sociological hybrid gendered theories produced by Astin (1984) and Farmer (1985), albeit that their focus on structural context and determining factors are cited as influencers of later theoretical standpoints (Hackett and Kohlhart, 2012, pp.266-267). Hackett and Betz's (1981) self-efficacy theory demonstrates a parallel cognitively-rooted position, focusing instead on "the individual's belief that they can successfully accomplish something" (Bimrose, 2001, p.98). The theory has been consistently proven to be correct in postulating that women's self-efficacy for traditionally male careers is low, while men's self-efficacy doesn't vary by gender-typing of careers (Patton, 2013, p.14) and demonstrates how early gendered theories tend to compare male and female career decision-making, rather than focus on the career trajectories of women only.

Solely focusing on women, and often-referenced in relation to women's perceived increased choice in career decision-making is Hakim's controversial but influential preference theory (1996). Described as "prospective rather than retrospective" and offering a new direction (Hakim, 2006, p.286), it is a theory that "recognises the diversity of women's lifestyle preferences instead of assuming that women can be treated as a single homogeneous group" (Hakim, 1996, p.13). Despite this, preference theory again

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[8] In the UK, this increased freedom comes with some protection in the context of UK-wide equality legislation, maternity and paternity leave, flexible working and the introduction of pregnancy and maternity as protected characteristics under in the UK Equality Act 2010.

categorises all women into one of three groups or "sociological ideal types," primarily based on motherhood or childlessness, to which Hakim ascribes an estimated population percentage: home-centred, adaptive and work-centred, with adaptive women making up the majority therein (ibid., pp.287-288). Hakim draws specific attention to career guidance practice, highlighting how "It is career patterns and long term ambitions that differ between the three groups rather than occupational choices," (ibid., p.291) yet she ascribes no age ranges to these classifications, limiting the opportunity for women to change over the lifespan. Unlike other career decision-making theories, Hakim also proposes that her theory can predict, due to its "prospective" ethos, rather than merely explain previous career decisions.

Hakim receives considerable criticism both theoretical and empirical; preference theory's focus on conscious decision-making being described as "fundamentally flawed because of barriers and constraints that limit women's choices" (Bimrose et al., 2014, p.79). Longitudinal testing of the earliest iterations of preference theory with first-time mothers validates concerns about its structure and further challenges both the rigidity of the categorisations and degree to which preference is distinct between groupings (McRae, 2003). Similarly, testing on first-time expectant mothers yielded mixed results (Stanley-Stevens and Kaiser, 2011). Yet aspects of preference theory are foregrounded in earlier literature: "Farmer (1987) reported data that found many women do not consider career as either/or in relation to family, but plan careers mindful of integrating them with home and family" (in Patton, 2013, p.12).

Structural barriers that affect the work-life balance of men, acknowledging they may have or affording them similar family-focused opportunities for career foresight, are not considered in preference theory or in other gender aware theories but are a focus of contemporary research (e.g. by Working Families (2011) and research commissioned and collated by The Fatherhood Institute and Fathers Network Scotland (no date)). Preference theory, when applied to career decision-making, perhaps has aspects in common with other gender-aware theories, and similarly could be perceived to be firmly rooted in justifying women's decisions to maintain rather than challenge the status quo.

Hakim's focus on lifelong career decision-making is however important. Studies to shape guidance and counselling policy and practice that best meets girls' and women's needs seek to improve understanding of issues that affect their career decision-making

throughout a lifetime. Gendered career planning starts early; recent OECD research summarises explicitly gendered aspiration in children at the age of five (OECD, 2021). Qualitative work on an international scale has been undertaken by Bimrose and colleagues (Bimrose, McMahon and Watson, 2016; Bimrose et al., 2014) focusing on the varied and heterogeneous later working lives of women, addressing gaps in the life stage models of Gottfredson and other theorists. Yet the theoretical implications for the findings are sparse: Blustein looks outwith both gendered and neutral, traditional and emerging career development theories for new explanations, for a "broader and more inclusive intellectual framework" (in Bimrose, McMahon and Watson, 2016, p.226) demonstrating an ongoing dissatisfaction with the discipline.

2.4.3   Gendered career development theory: limitations, omissions and conflicts

A career development theory should be revisited for continued applicability and testing, in new contexts, to ensure it continues to be both robust and socially and culturally favourable. Limited empirical testing creates difficulties for gendered career development theory.

The speed with which gendered career theory dates and generalisations about women's homogeneous decision-making may be someway responsible for the lack of empirical evidence. Examples of outmoding are not difficult to find. The postulation that characteristic-rooted inhibiting factors to career success such as limited self-efficacy and the "lack of behaviours that would facilitate women's pursuit of and achievement in careers correspondent with their individual capabilities and talents" (Hackett and Betz, 1981, p.326) or Hakim's assertion that different types of women seek occupational promotions (2006, p.291) are debunked by contemporary research. For example, research indicates that it is not the case that women don't ask for pay rises, it is that they are more often refused (Artz, Goodall and Oswald, 2018). Yet trends do persist: on researching patterns of women's employment in the Netherlands, Germany and the UK, Yerkes found that primary influencing factors on women's career decision-making remain stable while the diverse nature of their participation in, appearance of and the language used to describe the labour market and society change apace (2009, p.711).

The major issue however is that criticisms similar to those levelled at career development theory for being orientated around specific male groups could be levelled against women's career development theories. Research into women's career decision-making is often based on homogeneously grouped subsets such as: mothers in dual-earning couples (Valcour and Ladge, 2008), dual career professional couples (Arthur and Parker, 2004), or professional career women (Whitmarsh et al., 2007). Further small-scale yet broadly published research includes qualitative research involving small numbers of older women (80% of whom held a university degree or above) in research by Bimrose, McMahon and Watson (2013) and Bimrose et al. (2014) and quirky quantitative topics which are difficult to upscale or translate geographically, such as Whitmarsh and Wentworth's 2010 study of occupational groupings based on New York Times wedding announcements, considering the career choices of married couples and which gleaned limited new information beyond existing measurements of occupational segregation. A focus on professionalism is clear; few studies specifically consider marginalised women (Clark and Bower, 2016) and studies undertaken by Chronister and McWhirter (2003; 2006) and Davidson et al. (2012) highlight the sustained theoretical and empirical overlooking of the impact of domestic violence on career decision-making, a factor which disproportionately impacts on women. If women's career development theorists do not consistently place issues that occur if not uniquely but in predominance for women at the forefront of the discipline, they could be accused of a selective and exclusive approach, not least by feminist critics.

There is an incongruous absence of feminism within gendered career theory, in both practical advocacy and in scholarship. Fassinger, best known as a scholar of sexual orientation, work and career, is notably the only gendered career development theorist to consistently promote feminist positions and liberal views regarding gender roles as independent variables in career decision-making (1985; 1990; 2002; 2005) (Patton and McMahon, 2005; Hackett and Kohlhart, 2012). Chronister, McWhirter and Forrest's critical feminist approach perhaps best summarises the overall issue of transferring theory into practice that supports women's career development, wherein it "raises questions and assumptions that guide the questions, and refrains from imposing those values and assumptions on the client" (2006, p.188). It appears that the lexicon of feminist discourse has perhaps not reached the wider field; Blustein writes somewhat patronisingly of

"women's issues[9]," "brave women" and a "courageous struggle" in describing advances in gendered career development theory (in Bimrose, McMahon and Watson, 2015, p.228) which would perhaps benefit from a more contemporary phrasing.

Sexual orientation presents a similar challenge, with few studies drawing on the unique experiences of gay women. Whitmarsh and Wentworth's 2010 study into the career direction of married couples for example looks at career choices within marriage announcements but includes a statistically insignificant number of same-sex couples and took place before same-sex marriage was legally recognised in the state where the research was conducted. Datti's review of the application of Krumboltz's social learning theory of career decision-making to gay, lesbian, bisexual, transgender, and questioning young adults highlights the need for these voices to be included in career development theories:

> Although GLBTQ individuals are choosing a wider array of careers, issues continue to arise with career decisions that are unique to these individuals. Identity issues, fear of social acceptance, anticipated discomfort with work environments, and possibilities of significant discrimination may be present or arise and make for more difficult career development and decision-making processes (Datti, 2009, p.55).

Hancock (2019) presents a brief review of the career theory literature pertinent to lesbian, gay and bisexual people, noting both positive and negative perceptions including but not limited to: delayed transitions, occupational bias and emerging stereotypes.

A further omission to be considered is the issue of gender identity. Career development theory's is rooted in cis-gendered patterns and lacks literature on the career journeys of individuals of trans and non-binary gender identities.

Upscaling of the testing of women's career development theories must be undertaken with caution as it is in these omissions and exclusions that gendered career development theory's limitations become apparent, creating a "danger of falling into the same theoretical trap of generalising findings from one population to another for which these findings are not relevant" (Bimrose, 2001, p.84) which led to their emergence in the first place. Women's careers are persistently heterogeneous and in turn qualitative investigation often incorporates an interdisciplinary contextualisation. Clark and Bower's

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[9] Research conducted in 2017, to mark International Women's Day, noted a lack of any unanimity in defining what "women's issues" are: https://yougov.co.uk/news/2017/03/07/womens-issues

research into marginalised women demonstrates that within a geographically and ethnically homogeneous group, "women with major financial barriers have similar yet varied work experiences" (2016, p.383). While in different countries with different labour markets, similarity between women's career journeys may emerge (Bimrose, 2014, p.87) it is in seeing women as *more* than 'just women' that mechanisms to challenge the status quo rather than support conformity can emerge in the translation of theory into practice.

2.2.4   Unexplained anomalies

Gendered theories may explain specific patterns that present for women who make career decisions to meet perceived lifelong career needs. The permeating themes and postulations in women's career development theory of compromise and balance can however mask the complexity of career decision-making.

Gender-focused career development theorists espouse or intimate a need for supplementary theory yet this chapter highlights how gendered theory could be seen to reinforce static norms and generalisation. In this respect, gendered theory offers no scope for the exploration of non-traditional anomalies. Career theory should not overlook the difficult task of explaining non-traditional career decision-makers; it is in mainstreaming anomalies that wholesale change can be brought about in an unequal labour market. Much could be learned from the anomalous, who refuse to quietly conform to the norm when faced with gender identity threats linked to their occupational choices upon entering the labour market.

In researching the experiences of men in non-traditional roles, Simpson (2005) offers a comprehensive insight into the importance of understanding and building a picture from these anomalies. The research follows the thematic trends seen in women's career development theories: compromise (in the context of role strain), balance (conflict between negative stereotyping and role satisfaction) and categorisation (three male typologies). Yet it is in the consideration of additional variables attached to the theme of preference that the findings demonstrate change mechanisms: a third of the research participants working in non-traditional roles identified as gay, highlighting sexual orientation as a strong influencing factor in choosing a non-traditional occupation. Simpson's review of the existing literature on non-traditional male career decisions

highlights a raft of values and attitudes that further influence non-traditional male career choices, particularly in relation to entry routes and orientation (Simpson, 2005).

While Simpson's study is the most recent to undertake a comprehensive review of non-traditional male career decision-making, the literature for non-traditional female career decision-making is even more scant. The practicalities and barriers presented by working in a sector where ones gender is underrepresented are well documented in interdisciplinary scholarly and professional literature but the career decision-making processes that lead individuals to be there are underexplored. To reach a critical mass of men or women breaking gender norms, career development theories would need to be utilisable to challenge rather than reinforce norms and build a movement.

2.2.5   Summary

This section demonstrates how a clear gap exists in the literature and theory on career decision-making in relation to how those excluded from the theoretical norms make career decisions. Gendered career development theorists however present limited differences in the underpinning tenets they postulate and there are some variables that are not considered within the existing literature. Personal background is one such variable and will be further considered in the next section of the theoretical literature review.

2.5   The contemporary family as a career decision-making influence

2.5.1   The contemporary family unit

While the labour market is constantly changing, so too are the individuals who inhabit it. The challenges that broad population change bring about for labour market skills planning models are well-documented[10] yet simultaneously there are subtle changes taking place within family units. One such example is that UK families, wherein the family unit is deemed to be parents and their children, are becoming smaller and more diverse.

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[10] For example: an ageing population, a longer-working life.

Between 1996 and 2016, the number of UK families with three or more dependent children decreased while the number of families with one or two children increased. Of these, the percentage of families with one dependent child increased and the percentage of families with three or more dependent children decreased. The proportion of two-sibling families remained stable (Office for National Statistics, 2016). Within these figures is a rise in only-children, fewer multi-sibling families and fewer mixed-gender sibling families. A greater number of children are becoming 'first' or only-born to a family (or remain an only child for a longer period).

As Oomen notes, "The primary role of the family system in the career development of young people is broadly acknowledged, but little researched" (2018, p.75). Families come in increasingly diverse shapes and sizes: lone-parents (a majority female), separately co-parenting families, same-sex parenting families, or families with adopted or foster children and corporate parenting[11]. While census data shows Scottish household size is consistently decreasing (National Records of Scotland, 2013), some families continue to have multiple generations, including co-habiting non-dependent children or grandparents and extended family. In the contemporary family, where young people look within their 'community' (Law, 1981; 1983) for their influencers, these may be much broader than those influences explicitly considered, primarily parental, within existing career development theories.

2.5.2 Parents and career support: a gendered role?

This research does not aim to add to the many approaches to defining and/or measuring the multifarious routes to parental engagement with career education. It is, however, worth noting that there have been attempts at general classification of parental engagement modes. Barnes et al. conceptualise parental career support in three domains: support, informational support and emotional support (2020, p.9), demonstrating common themes pertaining to parental engagement with their children's careers. In relation to parental input, "career" is generally defined as education and employment outcomes, and inputs often limited until an upper age limit of eighteen is reached. Finite societal and economic-focused parameters create the opportunity to look beyond existing

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[11] Corporate Parenting is defined in the Children and Young People (Scotland) Act 2014 and refers to the organisation and services supporting looked after children, young people and care leavers.

focal points, especially if "little is known about the applicability of these findings outside the limited contexts studied or across the spectrum of employment and domestic outcomes potentially affected" (McGinn, Castro and Lingo, 2018, p.2). In western society, gendered aspects of such parental career support mechanisms or influence may be seeing a shift from a lingering mainstream rhetoric relating to outdated binary measures (e.g. whether mothers working is 'good' or 'bad' or the impact on children of their exposure to working mothers) but a more complex gendered analysis is required. Even in the consideration of simple role-modelling, while maternal employment appears to increase the employment rate of daughters and the willingness of sons to engage in caring responsibilities, there are also social class implications wherein "higher incomes and supervisory responsibility accrue primarily to women raised by mothers with more education and higher skill jobs" (ibid., p.21). Viewing mothers as a homogeneous influencing group would be erroneous and the gendering of parental involvement warrants consideration.

Barnes et al.'s comprehensive review of evidence on parental engagement in career support, *The role of parents and carers in providing careers guidance and how they can be better supported,* surfaces only one study where parental gender is an explicit consideration (2020, p.13). There is however some literature available on the gendering of parental career support or influence on career development. Research shows that "among the family group, mothers are more active influencers than fathers" (Phillips and Newton, 2014, p.3). This active role is validated in research by Ginerva, Nota and Ferrari, whose study of parental career support shows "that compared with fathers, mothers have a greater perception of themselves as being supportive of their children's career development" (2015, p.12). This is a seemingly international and stable position; Otto notes that in a research cohort of American high school students, 81% would speak with their mothers about career choice, compared to 62% with their fathers (2000, p.113). Research often focuses on the influence of parents on study routes, whereas apprenticeship training routes offer more diverse entry pathways, however even in this aspect, "Mothers—not fathers—seem to socialise their children into gender-specific fields of study" (van der Vleuten, Jaspers, Maas and van der Lippe, 2018, p.311).

Pertinent to the research undertaken in this thesis is the recent *Review of Career Guidance in the Republic of Ireland*, undertaken for the Irish government by Indecon (April, 2019). The research report incorporates analysis of data collected for the Growing Up in Ireland

(GUI) longitudinal study of young people, on the influence of family members on their career decision-making. Findings relating to family influencers are highly significant to the fieldwork in this project as the research incorporates disaggregated analysis of the perceptions of sixth year students who, at age 16-19 years, directly correlate with the age band for Modern Apprenticeship in Scotland with the consistently highest number of new starts (Skills Development Scotland, multiple sources, e.g. 2015c; 2016b; 2017b; 2018a).

Figure 2.1 shows that Irish school pupils in the 16-19 age range place significantly more importance overall on the influence of their mothers than other contacts within education, family and friends. Fathers are the second most cited source, and other family members third. The research notes a socio-economic factor on willingness to consult for career information, advice and guidance, with young people from families with the lowest household equivalised disposable income less likely to consult career influencers overall and more likely to look to school teachers for that advice (ibid., p.23).

Table 3.5: Percentage of Respondents Views of Importance of Helping You Decide Career Choice – Sixth Years			
	Very Important	Important	Not Very Important
Guidance Counsellor Class Session	23.7%	46.8%	29.6%
Guidance Counsellor Individual Appointment	49.4%	33.8%	16.8%
Year Head	21.2%	48.8%	30.0%
Subject Teachers	32.0%	57.1%	10.9%
Friends	29.9%	53.1%	17.0%
Mother	65.2%	31.1%	3.6%
Father	58.7%	35.8%	5.6%
Other Family Members including Siblings	45.9%	39.5%	14.7%
Someone Else	45.9%	39.5%	14.7%
Source: Indecon analysis of GUI data			

Figure 2.1: Significance of influence. Source: Indecon Review of Career Guidance (2019) p.22

In the analysis of the data by gender (Figure 2.2) the figures are also relevant to the current research. A clearly gendered approach to both accessing and who is consulted as a career influencer is evidenced by the young people in the cohort. The analysis demonstrates how male and female young people are *both* more likely to consult with a female parent than a male parent.

Table 3.7: Percentage of Respondents Who Consulted With a Range of Potential Career Influencers by Gender									
Gender	GC Class	GC One on One	Year Head	Subject Teachers	Friends	Mother	Father	Siblings	Other
All Students									
Male	75.9%	63.1%	29.2%	49.7%	100.0%	89.4%	80.9%	55.5%	20.2%
Female	78.1%	67.6%	27.2%	44.9%	100.0%	92.6%	79.7%	60.2%	19.3%
6th Years									
Male	81.1%	78.1%	30.6%	51.4%	100.0%	90.3%	80.1%	56.5%	21.9%
Female	81.5%	83.9%	28.3%	45.0%	100.0%	93.1%	81.0%	60.8%	20.6%
Source: Indecon Analysis of GUI Data									

Figure 2.2: Consultation by gender. Source: Indecon Review of Career Guidance (2019) p.23

Of particular significance is the gender breakdown of parental influence within single parent households (Figure 2.3), where the mother becomes substantially more likely to be consulted in relation to career decisions. In Germany, where stable vocational education and training is well established, single parents perceive themselves as less able to support their child's career decision-making compared to dual parents (Institut für Demoskopie Allensbach, 2014, p.12). In exploring this suggestion, research has proposed the likelihood of lower career competency (broadly but not exclusively focused on general career management skills) in children from single parent families in Germany (Klein, Ohlemann and Driesel, 2018).

Table 3.8: Percentage of Respondents Who Consulted With a Range of Potential Career Influencers – One Parent Households and Not One Parent Households									
	GC Class	GC One-to-one	Year Head	Subject Teachers	Friends	Mother	Father	Siblings	Other
All Students									
One Parent Household	77.4%	66.2%	31.3%	44.8%	100.0%	83.0%	50.5%	53.8%	19.3%
Not One Parent Household	76.9%	65.3%	27.6%	47.6%	100.0%	92.6%	85.7%	58.7%	19.8%
6th Years									
One Parent Household	82.3%	80.1%	35.0%	47.8%	100.0%	83.3%	50.2%	55.6%	22.3%
Not One Parent Household	81.1%	81.2%	28.5%	48.2%	100.0%	93.3%	85.9%	59.3%	21.0%
Source: Indecon Analysis of GUI Data									

Figure 2.3: Household data. Source: Indecon Review of Career Guidance (2019) p.24

Offering a UK-wide context (albeit with limited responses from Scotland, Northern Ireland and Wales) the Education and Employers report, *Disconnected: Career aspirations and jobs in the UK* (2020) offers additional reinforcement of the high weighting placed on parents and family members in young people's career decision-making. Family connections are cited as a career influence in their creation of networks of opportunity for occupational knowledge: "Parents, family and friends are the greatest influences on the jobs to which young people aspire because it is hard to aspire to a job without knowing it exists," (ibid., p.14) rather than on their position as supporters of career decision-making processes. There is no breakdown by gender of the career influencer available within the data obtained from young people interviewed. The report advocates greater engagement with parents as career influencers, a difficult term to reconcile with impartial CIAG intervention, albeit by suggesting routes to enable parents to have better access to labour market information to support their children's career decision-making (ibid., p.16).

Cognisance of societal factors is important, if, for example, household income means "individuals in lower income quartiles have less advice from family and may therefore be in greatest need of access to professional guidance counsellors" (Indecon, 2019, p.25). Yet regardless of gender, how well positioned anyone who is not a career development professional is to provide career decision-making support is debateable; without training, they could easily become a modifier of career decisions rather than an impartial, professional provider of information, advice and guidance. Provision and availability of good career information, advice and guidance are paramount.

The gendering of career decision-making support is however potentially also influenced, if not reinforced, by the predominance of women in frontline career guidance adviser roles[12], a trend reflected in the male to female ratio of applications to train for the role at postgraduate level[13]. An assumption could be made that career decision-making support should come from women, particularly mothers, and small-scale research in Scotland indicates this may be the case[14]. If it is women, at family and social level, who primarily

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[12] Internal data obtained from Skills Development Scotland in 2018 shows the gender split in frontline careers adviser to be 77% female to 23% male. The same gender split is present across all career, information, advice and guidance operational staff in the organisation.

[13] Data available internally via author's employment at UWS.

[14] Forth Valley College in Scotland undertook a small-scale survey of students on single-sex and mixed-sex streams of a STEM sector course in 2016, asking who the students got their careers advice from. Overwhelmingly, the students stated it was their mother [unpublished].

offer career decision-making support and guidance, then it is perhaps these women who could be better enabled to support non-traditional choices.

Changing family structures may affect the applicability of career decision-making theories based on heteronormative, dual parenting, dual gender parent-child norms. Gender socialisation mechanisms may alter over time. Longitudinal research considering families across higher, middle and working class socioeconomic backgrounds, undertaken by Lawson, Crouter and McHale, shows how over a fifteen-year period, women who spent more time with their fathers in middle childhood, revisited in their twenties, demonstrated less of a tendency to engage in gender-typed occupations (2015, pp.32-33). Lustig, Zu and Strauser (2017, p.50) write of how "research into family interaction and career cognition would provide much needed insight on how the quality and strength of the family relationship impact the development of career cognitions"— gender bias can be described as a dimension to the "cognitive processes related to career decision-making" the authors describe (ibid.) however, beyond this there are other dimensions for consideration within the family unit.

2.5.3 The extended family and siblings within careers literature

The significance of, but limited research into, birth order and sibship is noted within careers literature. Writing in 2002, Palladino Schultheiss et al. describe how "sibling social support and identification with siblings (i.e., role modelling, personality, and ideology) have emerged as potentially relevant to the career decision-making process" indicating that "systematic quantitative inquiry is needed to assess the degree to which sibling social support and identification are associated with success in career exploration, progress toward commitment to a career choice, occupational goals, and future expectations of work" (2002, p.308). Aaltone's (2016) research study explicitly considers the role of older siblings in influencing vocational career decisions. While it is important to note that the research is limited to young people aged 15-17 from mainly working-class backgrounds, it offers several points for consideration. This includes: a bluntness in the style of "advice" given by older siblings, perhaps incongruent to parental views, more contemporary, albeit personal-experience limited, knowledge of work and training routes, holistic role-modelling, and increased value-placed on advice given by siblings of the same gender (pp.7-8). Van der Vleuten, Maas and Weesie's (2019) work on sibling

influence on field of study correlates with this, with younger siblings mirroring older siblings regardless of parental occupation, particular so when of the same gender but without significant impact (negative/positive) in relation to the gender bias in the fields of study. Siblings appear to have a significant career decision-making influence, but their ability to shape younger siblings' career direction may be limited by their own personal experiences.

Grinberg (2015) notes a continuing dearth of research into birth order and occupational choice. In research testing competing psychological and economic theories regarding birth order in the context of managerial suitability Grinberg finds parental investment (time and resource), family size and family income affect the likelihood of first-borns making career-decisions that later lead them to become managers, which they do in greater number than other siblings. Other occupational trends remain underexplored. This justifies exploration of these topics alongside discussion relating to the impact on career decision-making of wider environmentally rooted gender normativity (for example friendship groups' influence on the fixedness of gender role expectations (van der Vleuten, Steinmetz and van de Werfhorst, 2019)).

In linking birth order to the career development theories of Holland and Super and their associated guidance models, Leong et al. note that "individuals of different birth orders develop different vocational patterns" but that "associated variables, such as sibling group size and spacing between siblings, must also be considered when determining birth-order effects" (2001, p.36). The authors test ordinal birth data in the context of high-achieving medical students and, although the results are considered without thorough gender disaggregation, they show "support for examining birth order as a significant variable that influences vocational behaviour and career development" (ibid., p.27). Evidence that children born earlier in a family enjoy a mental edge, better wages and greater education in later life due to greater parental cognitive engagement (Lehmann, Nuevo-Chiquero and Vidal-Fernandez, 2018) further evidences that birth order has an impact on career outcomes. However, alongside a lack of gender analysis these studies also tend to focus on the high achievements of first-borns and only-children, validating subjective measures of 'career success' rather than focusing attention on those in need of greater familial support to raise aspirations and achievement.

2.5.4 Partners, wives, husbands and children

There is limited cognisance of the need for consultation with family members when making career decisions throughout the life span. Perhaps rooted in the fact that much career theory concentrates on the career decision-making of young people, in particular school leavers, there are few studies that consider how adults consult with family members when making career decisions.

There are some highly specific studies, such as that Cuesta-Briand et al.'s (2020) review of Australian Junior Doctors' career decision-making relevant to physical work locations but little literature available on the general consultation processes that occur within later life career decision-making. Gender constructs may continue to play a large part in later life career decisions, for example, research into dual career couples within the academic sector highlights how "it is more likely for a dual career household to move due to the husband's career rather than the wife's career" (Tzanakou, 2017, p.301-302), a scenario which might be replicated across employment, regardless of whether partners work in the same or different sectors.

2.5.5 Summary

This section has shown that an often-cited career influence are family members, but the structure of the family unit and its relevance across the lifespan lack consideration. Parental influence on career decision-making receives steady attention but do other individuals in specific family unit structures impart different gender values and gender essentialism? Do 'non-traditional' family structures and other close influences have the potential to reduce gender bias in career decision-making? Is this linked to sibling gender frequency or main-parenting? If there are fewer family members to demonstrate gender typical roles, does this increase or reduce the potential for gender norm reinforcement and its influence on career decisions? How do family influences and influencers change throughout the lifespan? These are questions which are not raised within the existing careers literature. Family unit changes may be subtle but despite legislation and positive action approaches so is the pace of change in relation to gender within the labour market. The relationship between family, career decision-making and the implications for gendered career choice remain underexplored. Examining whether there is any

correlation between family structure, sibship and gender atypical career decision-making may explain career behaviour that both conforms and reacts against gender norms.

2.6 Conclusion

This chapter began with a clarification of terminology in relation to definitions of career and career decision-making. It went on to evidence how career guidance and development has a limited heritage as an academic discipline and limited focus on inclusion and diversity. As career development theory is an evolving theoretical area, new approaches are welcome and the tendency for pluralist application of theory could be further exploited. In critiquing extant theory through a gendered lens, it has evidenced how there is a lack of empirical testing of the often rapidly outmoded gendered career development theories and how gendered theories tend to focus on typically gendered decisions by women resulting in an under-exploration of gender atypical career decisions. Not least, career decisions are considered in a heteronormative context, with under-exploration of sexual orientation and gender (including non-binary gender) as interacting variables defining gender atypical career choice. There are gaps regarding the exploration of the contemporary family unit, in its many forms, in relation to career decision-making, providing justification for it as a focus of new research. This reinforces the points made earlier in the chapter, that to ensure continued applicability, career development theory may require continuous review and adaptation in practice.

The specific theoretical gaps which have been identified in this chapter are as follows:

Career development theory
- Career guidance and development has a limited heritage as an academic discipline and modest focus on inclusion and diversity
- Existing career development theories demonstrate limited applicability to the diverse career patterns of women in the contemporary (and historical) labour market
- Career development theory is an evolving theoretical area, wherein pluralist application could be further exploited

Gendered career development theory

- There is a lack of empirical testing of the often rapidly-outmoded gendered career development theories
- Gendered theories focus on typically gendered decisions, resulting in an under-exploration of gender atypical career decisions
- Sexual orientation and gender (including non-binary gender) as interacting variables defining gender atypical career choice are under-explored

The contemporary family unit as a career decision-making influence

- Relationships and positioning within the family unit are underexplored in career decision-making literature
- The gendering of formal and informal career guidance and support is underexplored
- Existing career development theory may not fully integrate the context of the modern family unit

Using apprenticeship routes as a clear and longstanding example of gendered career outcomes in the labour market, participants on the Scottish Modern Apprenticeship Programme are presented as a valid data source on gendered career decision-making. In the following chapter, the manifestation of occupational segregation in Modern Apprenticeships is introduced alongside critique of approaches undertaken to date to examine and mitigate the phenomena.

3 Empirical literature review

3.1 Introduction

Occupational segregation in Modern Apprenticeships is an outcome of gendered career decision-making. This chapter reviews the gendered critique of modernised apprenticeship provision in the first two decades of the 21st century. The focus is on synthesising, for the first time, prior scholarly critique of gender issues present in the Modern Apprenticeship programme in Scotland.

Gender imbalance and inequity is a longstanding concern within apprenticeship provision across the UK, and not an issue limited to Scotland. This chapter focuses on Scotland where possible but introduces wider literature where appropriate to demonstrate broader trends and a persistence in occupational segregation within apprenticeships since their reintroduction as a modernised labour market vocational education and training provision. The commitment of scholars within Scotland to surface and extricate structural issues within the Modern Apprenticeship programme since its introduction is apparent (e.g. Thomson, Campbell and McKay, 2005; Campbell, McKay and Thomson, 2006; Campbell et al. 2009; Campbell and Gillespie, 2017). To build on the work of these scholars, the nature of activity undertaken to address occupational segregation in apprenticeships is examined as are trends and issues in relation to gender in wider apprenticeship policy and provision. This is supplemented by wider research into the cause and presentation of the gendered uptake of apprenticeship provision.

A data and statistics analytical section is included to demonstrate how occupational segregation has presented in recent years in the Modern Apprenticeship programme and its value as a data source on gendered career decision-making.

3.2 The presence and persistence of occupational segregation in apprenticeships

3.2.1 Occupational segregation

Occupational gender-based division or segregation is the ideological perspective that there are occupations and job roles (including unpaid domestic work) that are assumed to be more suited to men or women. Organisational and occupational structures, cultural and societal influences, gender socialisation and gender essentialism perpetuate occupational segregation which manifests in labour markets in the form of horizontal and vertical occupational segregation. One consequence is a gender wage gap or pay penalty: overall, women earn less than men, especially in private sector roles (Murphy and Oesch, 2015), employees in traditionally female sectors receive lower pay. Appended to this are the multifarious results of direct and indirect causalities that have a negative significance for women's equality at work. For example, women: are disproportionately affected by recovery strategies following economic recession (McKay et al., 2013), are more likely to work-part time and experience career penalties by doing so (Lyonette, 2015), continue to work later in life and beyond UK state pension age due to financial slippage across the career span (Finch, 2014), and encounter devalued wages in feminised occupations (Murphy and Oesch, 2015). Occupational segregation underutilises skills, affects national productivity and upholds a rigid labour market, demonstrating limitations on individual freedom to make unencumbered occupational choices through restricted career opportunities and career decision-making processes.

Gender divisions and challenges in vocational education and training (VET) mirror those seen in the wider labour market, in relation to occupation, role and level, professional identity and the lifelong career journey that can start with VET. Within VET, individuals in the minority gender undertake professional learning and development whilst also negotiating stereotypical expectations of gender roles outside of their non-traditional occupational area; a "cope with or confront" position has to be adopted to battle against expectations of personality and competence (Tanggaard, 2006, p.231), a position that can remain for the duration of an entire career.

The causes of occupational segregation are multiple and can be demonstrated through direct and indirect discrimination, family, educational and peer group influences and in individual beliefs and values. It should however be considered that any perpetuating mechanisms also offer the opportunity to alleviate a problem. The Scottish Modern Apprenticeship (MA) Programme is a vocational education and training programme that demonstrates the results of these structures and has been criticised for acting as one such sustaining mechanism. If gender segregation were to be eradicated in the Modern

Apprenticeship Programme, scholars and lobbyists argue that this could impact positively on the wider labour market and women's experiences within it: "Training programmes in general and apprenticeships in particular have an important role to play in helping to break the cycle of occupational segregation that results in 'women's jobs' being lower paid" (Campbell, Thomson and Pautz, 2011, p.371). While this belief is tempered by others, "authors and commentators express a concern that overcoming gender segregation in occupations through the Apprenticeship programme is an 'unrealistic goal' and that Apprenticeships may contribute to this agenda but should not be expected to be the solution to it" (Williams, Foley, and Newton, 2013, p.90), the importance of addressing occupational segregation in apprenticeships is widely accepted.

3.2.2 Occupational segregation in Modern Apprenticeships in Scotland

The crux of the problem of occupational segregation in Modern Apprenticeships is simply rooted in equality of opportunity; apprentices in traditionally male dominated frameworks receive greater investment in their future careers and have better pay outcomes than those in female dominated sectors. Traditionally male apprenticeships lead to occupations and job roles that command wage premiums.

Much research has been undertaken to evidence how occupational segregation within apprenticeship programmes results in a wage difference for male and female apprentices. This includes analysis of gender pay gaps during (Fong and Phelps, 2008) and post-apprenticeship (Walker and Zhu, 2007) and highlights how in certain sectors an apprenticeship can have little or no impact on earning potential (McIntosh, 2007).

The gender bias between Modern Apprenticeship occupational frameworks creates a bias in investment in women's careers. Attention falls on Scottish Government as public money finances Modern Apprenticeships and, due to occupational segregation within the frameworks, proportionately more of this funding is invested in the training of individuals in male dominated sectors. The Modern Apprenticeship frameworks that attract greater numbers of male apprentices (often the frameworks in which apprenticeships have a stronger heritage) are not only those that result in these higher wage premiums post-completion, due to higher public/employer regard, they also receive a higher allocation of public funding due to their increased length and higher level training.

Context is important, however, and the general "appeal" of apprenticeships to, particularly younger, men and women must be considered. A traditionally male and vocational career option, Modern Apprenticeships now exist in sectors where they didn't previously and in traditionally female sectors (e.g. retail, health and social care). However, in parallel to this development, school leaver destination data in Scotland demonstrate that despite overall increased progression from statutory education to higher education as a "positive destination" post-school, there is an increasing gap between the number of men and women who go directly into higher education. Female school leavers are consistently more likely to enter further study, particularly higher education, than go directly into full-time work or training (Scottish Government, 2020b). Criticism that apprenticeships are perceived as a male career path may be assuaged by progression

towards a 50/50 split in overall take up and increasing numbers of female apprentices. However, an overall rise in participation in Modern Apprenticeships will not necessarily lead to a rebalancing of gender in underrepresented sectors if, in continuously high numbers, apprentices train in traditionally gendered roles. Therefore, attention should be focused on segregated sectors.

3.2.3   Critique of apprenticeship programmes 2000-2009

While the research in this study focuses on the contemporary Modern Apprenticeship programme, earlier criticism clarifies why occupational segregation therein is a persistent issue.

Literature on modernised apprenticeships across the UK in the period 2000-2009 centres on provision in England. It focuses on overall quality and purpose (Fuller and Unwin, 2007; Ryan, Gospel and Lewis, 2006), benefits to employers of apprentices (Kenyon, 2005) and the varying levels of success achieved in the creation of apprenticeships in non-traditional sectors and for lower-achieving school leavers (Fuller and Unwin, 2003). The Equality and Human Rights Commission further examine apprenticeships from a skills strategy and economic perspective, making a clear productivity and business case for the employment of apprentices from underrepresented groups. Directed towards employers, their 2007 report explicitly links sectors with skills shortages to the low employment therein of women (Equality and Human Rights Commission, 2007). The initial agenda for apprenticeship research was primarily economically orientated, a trend which continues to date.

In the broader context of women and work, the UK Government's Women and Work Commission 2009 review criticises the depth and impact of work undertaken to implement its earlier recommendations, listing sectoral, structural and workplace barriers to gender equality in apprenticeship provision (Women and Work Commission, 2009). Although ambitious and broad, the commission's work was perceived to have initiated little change by those engaged in improving the opportunities and working lives of young women. Interviewed in 2012, senior female trade unionists reflected upon the legacy of the commission in relation to apprenticeships: "Gender segregation continues to exist generally in the types of apprenticeships women and men choose" (Ward, 2012, p.866).

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This perhaps reflects wider perceptions of gender equality work; gender equality is a major challenge and, whatever is achieved, progress will be considered slow, perhaps even imperceptible.

While these studies are pertinent, the lack of research interest solely from a Scottish perspective is an issue; Scotland has distinct industries (wherein the largest apprenticeship provision is in male dominated sectors), geography and economic structures. Financing of vocational education and training differs from the other UK nations, as does statutory and further education provision (which are devolved responsibilities in Scotland) and Modern Apprenticeships are very much seen as a school-leaver or young person's option.

In Scotland, concerns were raised early in the decade (Scottish Women's Budget Group, 2002) regarding gender inequality in the Modern Apprenticeship programme. Criticism focuses on gender-neutrality in the financing and policy and its tendency to lead to replication and reinforcement of existing occupational segregation. The first major research study to specifically consider gender and Modern Apprenticeships was undertaken as part of an Equal Opportunities Commission General Formal Investigation (GFI) into Occupational Segregation, which had a specific Scottish component. Early research as part of the GFI points towards skills shortages in sectors in which women were underrepresented (Thomson, Campbell, and McKay, 2005, p.301) demonstrating the need to focus on occupational segregation leading to inefficiency and underproductivity in the labour market. Correlating with the thematic approach of UK-wide research into apprenticeships at the time, the final report also takes an economic focus, and asserts that occupational segregation in Modern Apprenticeships both limits the economy and contributes to the gender pay gap in Scotland. The GFI report makes nine recommendations pertinent to gender and apprenticeship provision (Thomson, Campbell, and McKay, 2005). Alongside this, specific criticism of Modern Apprenticeship Programme evaluations undertaken to 2006 relates to whether the quality and completion of apprenticeships were prioritised as markers of success without cognisance of gender (Campbell, McKay and Thomson, 2006, p.76). This highlights not only the importance of gender being a consideration at the inception stage of a new programme of vocational education and training, with a thorough operational equality impact assessment undertaken rather than post-hoc equality fixes, but also that by 2006,

significant occupational segregation in Modern Apprenticeships had been both acknowledged and formally evidenced.

The findings of the GFI and other academic critique appear to have had limited application: in an evaluation of the influence of the nine recommendations of the GFI report, the authors note how occupational segregation in Modern Apprenticeships to 2009 became "more rather than less entrenched, with men continuing to dominate the 'traditional' sectors and women the new, mainly service-based apprenticeships" (Campbell et al., 2009, p.51). To counteract the "piecemeal and fragmented" approaches to addressing gender segregation in Modern Apprenticeships, they conclude that a stronger lead from the Scottish Government is needed to initiate specified "actions and outcomes" and enable greater financial transparency (ibid., p.56).

Critique of gender in Modern Apprenticeships to 2009 draws attention to the economic costs of occupational segregation, identifying how gender inequality present in Modern Apprenticeships reinforces broader gender inequality in employment, stifling the Scottish economy. Modern Apprenticeship economic framework analysis highlights issues pertinent to the depth, duration and greater investment in the Modern Apprenticeship training programmes of apprentices in traditionally male sectors and the overall financial contribution rates per sector (Campbell et al., 2009; Campbell, McKay and Thomson, 2006; Thomson, Campbell, and Gillespie, 2005). The programme appears to extend and contribute to rather than challenge occupational segregation with poorly acted upon practical examples of routes to bring about change.

These are concerns reinforced in UK-wide literature relating to early modernised apprenticeship provision which highlights the limitations of existing research into gender and apprenticeships and a lack of practical implementation of the recommendations offered therein. A 2008 Trades Union Congress (TUC) report notes that despite attracting political attention, occupational segregation in apprenticeships had not been properly addressed. A joint paper between the TUC and the Young Women's Christian Association (YWCA) followed in 2010, once again raising concerns and describing how women's labour market inequality within the apprenticeship system, despite being "well documented and well understood" shows a consistent gender pay gap and continued occupational segregation (TUC and YWCA, 2010, p.16). While gender bias in

apprenticeships was acknowledged and specific challenges noted, it was perceived that insufficient action was being taken to address it.

A 2009 Institute for Employment Studies (IES) project offers insight into ways to address inequality in apprenticeship provision, using pilot projects to attract apprentices from underrepresented groups. The review presents routes to best practice (partnership working, securing employer commitment, mentoring, parental engagement, attractive and targeted promotion of apprenticeships, equality training) to expand apprenticeship appeal (Marangozov et al., 2009, pp.5-6). The review raises wider access issues regarding finance and welfare, the need for tailored support, gendered career choice, information provision and problems created by informal recruitment processes. Although the research offers insight into broad equality and diversity approaches, Campbell, Thomson and Pautz question the applicability of the conclusions drawn, for a lack of specificity to both occupational segregation and to apprenticeships (2011, p.373).

3.2.4   Critique of apprenticeship programmes 2010-2019

Literature published in the period leading up to the commencement of this study in 2014 demonstrates the ongoing issue of being able to say little that is new or innovative in the context of deep-rooted gender biases in apprenticeship provisions once those biases have been described. Campbell et al. (2013) discuss how despite ongoing scrutiny and successive policy commitments by Scottish Government to address gender biases within the Modern Apprenticeship programme, and an increase in female participation overall, the continued existence of significant occupational segregation within Modern Apprenticeship frameworks requires robust investigation of the structures within the programme. The authors return to the issue of the impact of occupational segregation on economic growth, the gender pay gap and unequal allocation of public funding. This correlates with UK-wide research which also continues to address the economic impact of gender inequality in apprenticeships and the underutilisation of skills and talent it creates (Fuller and Unwin, 2013, 2014; Fuller and Davey, 2010).

Similar issues are raised in the Warwick Institute for Employment Research Reviews of Apprenticeships Research (Gambin, Hogarth, and Brown, 2012; Gambin, 2013), prepared for the National Apprenticeships Service and the UK Government's Department for

Business, Innovation and Skills. The 2012 draft review covers gender disparities and trends in some detail throughout the report, whereas the 2013 final report, wherein the literature is updated to demonstrate current trends, does not mention gender in relation to research themes or new literature; it could be surmised that the issue is being ignored or intentionally overlooked, perhaps due to its inherent difficulties.

Scotland-specific critique concentrates on the economic impact of Modern Apprenticeship programme shortcomings in relation to labour market inequality, as demonstrated by the 2013 publication of three research reports by the Equality and Human Rights Commission linking apprenticeship provision, skills (under-)utilisation and inclusivity of labour markets. Once again, the reports analyse gender disaggregated data and draw attention to gender-biased spending, alongside consideration of age on commencement of Modern Apprenticeship (Equality and Human Rights Commission, 2013). Drawing attention to the higher number of under-20s in the Modern Apprenticeship programme highlights the pressing issue that, in Scotland, Modern Apprenticeships are often undertaken earlier in the career pathway, allowing occupational segregation to take a hold at an entry stage to the labour market. Modern Apprenticeships, while just one route by which young people enter the workforce, mirror overall labour market trends. The authors of one of the reports direct readers to the notion that permeates critique of much Modern Apprenticeship provision: "patterns of entry to apprenticeships mirror those seen in employment, given that role models, stereotypes and occupational gender segregation as well as employer recruitment decisions all exert an influence on young people's career choices" (Sosenko and Netto, 2013, p.3). Career choices are key, and yet the report, like other literature, falls short of describing how those gendered career decisions are made.

Commissioned jointly by the TUC's unionlearn, the National Apprenticeship Service and the Skills Funding Agency, a 2013 Institute for Employment Studies examination of gender and ethnicity in apprenticeships focuses on policy, provision and practice. Being England-centric the research project offers limited scope for the Scottish provision but does cite two best practice examples from Scotland alongside specific recommendations for gender that can be applied to any apprenticeship provision (Williams, Foley, and Newton, 2013). The IES research notes "slow progress" in relation to gender and apprenticeships and the specific need for a greater understanding of the 'pipeline' approach to gender in apprenticeships, a term which is used to convey the career pathway

taken by a young person to include career decision-making points (ibid., p.1). A continuous, un-fragmented pipeline of support during that pathway suggests a lesser likelihood that potential apprentices will be dissuaded from entering a sector in which their gender is underrepresented.

The often-cited 'pipeline' is problematic. The image it creates is of a free-flowing pathway but the metaphor should not extend further; a pipeline offers protection from outside influences. The pipeline theory has been criticised for having shortcomings in relation to women's career expectations across the lifespan. Schweitzer et al. (2011) contend that a pipeline approach does not sufficiently provide a "fix" to issues of occupational segregation and that a higher number of women on the supply side of the labour force and a focus on the legislation governing the demand side cannot result in major changes, because a "tipping point" whereby a critical mass of women entering male dominated sectors with sufficient sway to change the gender biases therein cannot be reached. The reasons are rooted in career perceptions; in testing hypotheses regarding the lower pre-career expectations (regarding pay and promotion) of women over men, the authors consider conscious career decisions. While focused on first jobs, post-formal education and limited by the use of restricted expectation measures, the authors cite the need for qualitative research to explain the research's quantitative findings.

The responsibility to bring about change is often placed in the hands of careers practitioners. Citing multiple previous studies, Williams, Foley, and Newton assert, "The most commonly-cited measure to improve the uptake of Apprenticeships amongst non-traditional candidates is the provision of more, better-tailored information and careers guidance" (2013, p.107). This includes sectoral knowledge, family and career planning, parental engagement and up to date teacher and careers practitioner understanding. Despite a body of literature on and pertinent to the existence of occupational segregation in Modern Apprenticeships, with some practical suggestions as to how to address it, the problem persists: aspirations are still being restricted, career choice is still gendered. Literature on the Modern Apprenticeship programme published around the commencement of and during this study reiterates the known and deep-rooted issues, and research from Scotland continues to concentrate on the disaggregation of the presentation of occupational segregation in Modern Apprenticeship frameworks and the broader economic impact of a gender-biased labour market (Campbell, Thomson, and Ross, 2017, p.131).

Speaking in March 2017 to the Economy, Jobs and Fair Work Committee of the Scottish Parliament, and representing ongoing research by Glasgow Caledonian University, Emily Thompson stated: "in the 10 to 12 years that I have worked on modern apprenticeships, women's representation in the traditional frameworks has not shifted at all." An overall sense of "treading water" is conveyed when it comes to the issue of occupational segregation in Modern Apprenticeships. The Committee's final report on the gender pay gap also refers to its belief that "women are more likely to undertake non-traditional apprenticeships, or look at retraining in a new sector, later in their lives" (Scottish Parliament, 2017, p.49), yet this issue of career decision-making maturity throughout the life-span appears rarely in the literature.

There is a clear gap in the research literature of the analysis of one key variable: personal choice of the individual. Critique, recommendations, best practice and data point towards the small-scale impact of positive action to address gender biases. What is missing is detailed analysis of the moments of seemingly rational or irrational choice that result in occupational segregation in apprenticeships. Women, primarily young women, are not choosing to work in traditionally male occupations where prospects are better. Regardless of any discernible financial benefits of masculinisation, men, particularly young men, are not choosing to work in traditionally female occupations.

A further issue in the research undertaken to date is the tendency to view individuals as part of a homogenously career-minded group, based on gender. Any tendency towards homogeneity creates a potential for oversight. Research from The Young Foundation (2010), a not-for-profit, non-governmental think tank, notes a contemporary focus in engaging young people not in employment, education or training (popularly and often pejoratively referred to collectively as 'NEETs'). Bulking young people together as a homogeneous group creates the potential for a foggy-edged and ill-defined status to dominate over wider issues of gender, ethnicity and disability in relation to access to apprenticeships. It presents apprenticeships as a provision wherein disadvantage, disengagement and under-representation can flourish (Anderson et al., 2010, p.13). This independent report summarises some of the barriers to apprenticeships for underrepresented young people, including greater understanding and awareness of apprenticeships and the limitations of career information, advice and guidance with suggestions to tackle these barriers. It also highlights that the specific focus of inclusion

work can change direction depending on external pressures. With a policy switch there follows a focus on one new, large, group of individuals, be they women, disabled people or ethnic minorities. A flurry of short-term activity follows, with target-driven, finite achievements. This can be seen in contemporary approaches to addressing gender segregation in apprenticeship provision.

There is a tendency to undertake evaluation of small scale 'diversity in apprenticeships' research projects, with the result invariably demonstrating routes to good practice tempered by the deep roots of gender bias and the limitations therefore of time-bound, perhaps incentivised or part-funded projects (Newton et al., 2012). Acker's work on gender and change projects is echoed: writing on gender within inequality regimes, Acker cites narrow areas of focus such as vertical segregation and the gender pay gap as specifically project-ised areas of activity, with the projects themselves doing "nothing to address underlying organizational class inequality" (Acker, 2009, p.213). Gender bias is shown to be addressable through role models, taster work or employer liaison to name a few examples, but with each project comes limited and context-specific evaluation. These narrow-focus projects are difficult and costly to replicate, even if they do show results:

> Even within countries, there is surprisingly little publicly available evidence of what initiatives have been effective. Most studies are based on small-scale, localized initiatives. Whilst these are helpful in providing ideas for strategies, it is not possible to judge the extent to which they have a lasting influence as many are funded on a short-term basis (Fuller and Unwin, 2014, p.196).

Research commissioned by the Young Women's Trust (Davies, 2018) into gender balance in English apprenticeship provision highlights how even positive action on gender segregation is misunderstood and poorly applied. A further key problem is that there is hardly any evidence about strategies aimed "specifically at boys and young men" (Fuller and Unwin, 2014, p.196).

A substantial number of initiatives relating to gender equality within Modern Apprenticeships are detailed in an evaluation of first year of delivery of the *Equalities Action Plan for Modern Apprenticeships in Scotland* (Skills Development Scotland, 2015b) undertaken by the University of Glasgow Training and Employment Research Unit (TERU) (2017). TERU note how pragmatism in funding and delivery could achieve KPIs set for gender in current Modern Apprenticeship provision (2017, pp.41-42). Shrewd behaviour seems futile in a wider context where similar incentivised activity has barely changed the picture in the twenty-five years since Modern Apprenticeships

appeared. The report suggests moving the timescale for achieving a greater gender balance in apprenticeship provision back by ten years (ibid., p.50) yet if change is so slow, are new approaches to understanding gender biased career decision-making needed if even this target is to be achieved? Further independent critique echoes concerns regarding the targets set and the potential to achieve:

> Whilst the sincerity is not in doubt of either the Scottish government or Skills Development Scotland in terms of their desire to tackle and reduce gender-based occupational segregation…the target may not be effective at addressing the underlying causes of gender segregation, even if it is achieved (Campbell and Gillespie, 2017, p.11).

The data and statistics section, Occupational Segregation in the Modern Apprenticeship Programme, details starts per Modern Apprenticeship framework and evidences how male and female applicants undertake apprenticeships in traditionally gendered sectors. The figures for Modern Apprenticeship starts present rather than explain the phenomenon, using a single axis of analysis (gender). Not least the published statistics demonstrate an archaic lack of inclusion of individuals who are non-binary gender.

An EHRC review of positive action as a tool to address under-representation in apprenticeships notes the expanding scope of diversity initiatives in apprenticeships since the GFI:

> Almost 15 years ago, the EOC launched a general formal investigation into gender segregation and uneven patterns of participation…The wider dialogue on apprenticeships and the importance of mainstreaming equality and diversity in this area has recognised not only the moral but the economic and business case for increasing diversity across apprenticeships" (Davies, 2019, p.17).

However, the review also highlights a general lack of understanding of the use of positive action in relation to diversity in apprenticeships and an ongoing preference to undertake action on gender over other protected characteristics (ibid.). Concern over a lack of improvement, and even a worsening of issues, is echoed in criticism of apprenticeship provision throughout Great Britain (England, Scotland and Wales). Year-on-year analysis of the annual pay surveys for apprenticeships shows an increase in the gender pay gap in the year 2018-19, close to double the 2016 gap (Young Women's Trust, 2020). Progress towards Modern Apprenticeship gender targets within Scotland is described as "halting" in the *OECD Review of the Apprenticeship System in Scotland* (OECD, 2020, p.11). Accuracy on this point notwithstanding, this report demonstrates a lack of understanding of the positioning of the Scottish target in its suggestion that the problem of occupational segregation within Modern Apprenticeships is a female underrepresentation-only issue.

The report states the Modern Apprenticeship gender equality target for Scotland to be "that 60% or less of apprenticeship frameworks should have a gender balance of more than three males to each female" (ibid.) when the target pertains to all frameworks with a gender imbalance, regardless of which is the dominant gender. Occupational segregation requires rectification not just where women are under-represented.

A unidimensional approach to analysing markers of discrimination creates homogenous groupings. Individuals have infinite combinations of characteristics, experiences and backgrounds but binary measures may mean important interaction effects are overlooked. Monitoring on the single axis of gender (or any other protected characteristic under the Equality Act 2010, such as age) could overlook that in smaller numbers, disability, geography or human capital rather than gender are the dominant marker of disadvantage. The 2018 Close the Gap report, makes specific recommendations in relation to occupational segregation in Modern Apprenticeships:

> Recommendation 15: Scottish Government should raise the age limit for women accessing Modern Apprenticeships to enable women to retrain under the programme
>
> Recommendation 22: Skills Development Scotland should gather and publish data disaggregated by gender, race and disability to provide evidence of the experiences of different groups of women undertaking apprenticeships (Close the Gap, 2018, p.35).

While intersectionality allows for a consideration of other variables to explore the nature of interaction between combined sources of disadvantage, it is also possible that gender may have an additive or reductive effect dependent on favourable incentives or opportunity structures. In constructing a sense of personal identity, there may be a perception that gender is not the most pressing barrier.

3.2.5   Conclusion

Despite repeated endeavours to address occupational segregation in Modern Apprenticeships, the problem continues, albeit with peaks and troughs in statistics, which are not overtly explained by any data on specific initiatives. Research offers robust analysis of segregation data to further demonstrate the budgetary inequality of gender-

blind programme design and delivery but this means that the focus of the literature is on presentation rather than pathways to gender-biased career decisions.

To 2009, gender was increasingly seen to be an issue in relation to UK-wide apprenticeship provision but work to address it small-scale, lacking a sub-national or regional focus and demonstrating the breadth of the challenges occupational segregation presents. In the following decade, a move towards wider-impact projectisation emerged but with a tendency to focus on outcomes for homogeneously grouped individuals.

Project evaluations look for positives within limited cohorts, endorsing standalone case studies and funding-affirming outcomes with recommendations for best practice based on initiatives that address the attitudes and perceptions of small groups of young people, often overlooking the opportunity to capture data on the decision-processes of career changers undertaking Modern Apprenticeships later in life. But what of the mirror-image individuals, those few who were always going to counter the stereotypes, regardless of inclusion on a specific initiative? Where is the best practice learning based on the individuals who break gender norms without intervention and what they bring to the pipeline prior to starting a vocational education and training programme? The learning from their experience is underutilised, if not invisible.

There are clear trends in the literature regarding gender and apprenticeship provision, which are primarily issues of persistence, omission and a tendency to prove the existence of occupational segregation as detrimental to women's careers rather than explain the routes to gendered career decision-making in vocational education and training. In doing so, it provides a justification for a new approach to investigating the issue of occupational segregation in Modern Apprenticeships.

3.3   Occupational Segregation in the Modern Apprenticeship Programme

Gender and occupational segregation in Modern Apprenticeship provision is a persistent challenge. Both prior to and following the formation of Skills Development Scotland in 2008, when management and delivery of Modern Apprenticeships became Skills Development Scotland's remit, gender bias has been evident across the programme, as is evidenced in this section.

3.3.1 The Modern Apprenticeship Programme: headline statistics for gender

Table 3.1 shows the overall gender split in Modern Apprenticeships since Skills Development Scotland took control of the Modern Apprenticeship programme in 2008. The data show initial significant improvement in the 2008-2009 reporting year, followed by substantial stability around a 40:60 split between female and male Modern Apprenticeship starts.

MA Starts	Female	Male	Total
2008-09	2,857	7,722	10,579
Percentage	*27%*	*73%*	
2009-10	8,473	11,743	20,216
Percentage	*42%*	*58%*	
2010-11	9,656	11,905	21,561
Percentage	*45%*	*55%*	
2011-12	11,381	15,046	26,427
Percentage	*43%*	*57%*	
2012-13	11,040	14,651	25,691
Percentage	*43%*	*57%*	
2013-14	10,445	14,839	25,284
Percentage	*41%*	*59%*	
2014-15	10,169	15,078	25,247
Percentage	*40%*	*60%*	
2015-16	10,505	15,313	25,818
Percentage	*41%*	*59%*	
2016-17	10,440	15,822	26, 262
Percentage	*40%*	*60%*	
2017-18	10,451	16,694	27,145
Percentage	38.5%	61.5%	
2018-19	10,489	16,781	27,270
Percentage	*38%*	*62%*	
2019-20	11,226	16,649	27,875
Percentage	40%	60%	

Table 3.1: The 12-year gender split for Modern Apprenticeship starts 2008-2020, (Multiple sources: Skills Development Scotland)

3.3.2 2015 onwards: the *Equalities Action Plan for Modern Apprenticeships in Scotland*

The *Equalities Action Plan for Modern Apprenticeships in Scotland* was launched in December 2015 (Skills Development Scotland, 2015b). The action plan, which runs until 2021, sets clear targets for four under-represented groups in the following areas:

disability, ethnicity, care experience and gender, and sets out clear objectives to increase participation in Modern Apprenticeships by young people in these groups. The specific targets for all equality groups are subject to annual review.

The overall outcome for gender is: "to reduce to 60 per cent the percentage of frameworks where the gender balance is 75:25 or worse by 2021" (Skills Development Scotland, 2011, p.6). This figure refers to the 80+ specific frameworks, rather than framework groupings. For comparison the retrospective figure for 2014-15, showed that the percentage of frameworks where the gender balance was 75:25 or worse was 72% (Skills Development Scotland, 2015c, p.39).

Prior to the launch of the Equalities Action Plan, for the period 1 April 2014 to 31 March 2015, there were a total of 25,247 Modern Apprenticeship starts. Table 3.2 splits these by age.

Age	Female	Male	Percentage gender split female:male
Overall	10,169	15,078	40:60
16-19	5,539	7,708	42:58
20-24	3,355	3,522	49:51
25+	1,275	3,848	22:75

Table 3.2: Modern Apprenticeship Starts by age and gender 2014-15 (Source: Skills Development Scotland, 2015c)

In relation to Modern Apprenticeship Framework groupings, the most marked gender difference for Modern Apprenticeship starts were as follows:

Construction and Related   98 percent male

Automotive   97 percent male

Engineering & Energy Related   96 percent male

Transport & Logistics   94 percent male

Personal Services   93 percent female

Other Manufacture   85 percent male

Other Services (including ICT prof.)   85 percent male

Animal Care, Land & Water based   84 percent male

Sport, Health and Social Care   81 percent female

(Skills Development Scotland, 2015c, p.40)

3.3.3 Framework-level presentation of occupational segregation in Modern Apprenticeships

Based on the published data for Modern Apprenticeship starts in 2015-16, Table 3.3 presents the gender breakdown per Modern Apprenticeship live framework where there were Modern Apprenticeship starts and reproduces this data as a percentage by gender. The final additional column notes whether the percentage of bias per framework is acceptable in line with the *Equalities Action Plan for Modern Apprenticeships in Scotland* (Skills Development Scotland, 2015b) target, to reduce to 60 per cent the percentage of frameworks where the gender balance is 75:25 or worse by 2021. Using these calculations, for 2015-16, the percentage of frameworks where the gender balance was 75:25 or worse was calculated to be 74% (which corresponds with Skills Development Scotland published figures for this period[15]).

In the action plan target for 2021, equal weighting is given to frameworks regardless of the number of participants. This means that changes in the gender balance of low participation frameworks have a disproportionately large effect on the target. Again, using the published data for Modern Apprenticeship starts in 2015-16, if the number of Modern Apprentices in a framework with a significant gender imbalance is made the focus (rather than the number of frameworks with a significant gender imbalance) then the total number of Modern Apprenticeship starts in an acceptable gender balance framework is 11,132 and the total number of Modern Apprenticeship starts in an unacceptable gender balance framework is 14,686. This latter method of calculation prevents very small frameworks from having undue influence over targets. For example, in the 2015-16 dataset, one additional male Modern Apprentice on the Children's Care, Learning and Development framework would have had the same effect towards the 2021 target as 203 additional female MAs on the Engineering framework.

The 2015-16 data are used here for representation as it is the most recent publicly available data which includes a full breakdown of numbers at framework level and covers the commencement date of this research project. From 2016-17 onwards statistics publicly released by Skills Development Scotland redacted any figures less than 5. This is in line with public reporting best practice, and in relation to Modern Apprenticeship reporting means that disclosure control has been applied to frameworks of less than five

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[15] Multiple sources, e.g. Skills Development Scotland, 2018b

starts, or where numbers below five can be identified by differencing. This means that the data on gender balance at framework level was last made publicly available in the 2015-16 reporting year and is no longer calculable using documentation in the public domain.

While disclosure control presents challenges in relation to critique of progress against the Modern Apprenticeship gender target using data in the public domain, Skills Development Scotland annually report against the Equalities Action Plan (2018b, 2019b) and includes overall progress updates.

Based on the publicly available data for Modern Apprenticeship starts in 2019-20, Table 3.4 presents the gender breakdown per Modern Apprenticeship live framework where there were Modern Apprenticeship starts and again reproduces this data as a percentage by gender. Of the 82 frameworks list starts, 25 are not available for analysis due to disclosure control. The final additional column notes whether the percentage of bias per framework is acceptable in line with the Equalities Action Plan target, to reduce to 60 per cent the percentage of frameworks where the gender balance is 75:25 or worse by 2021.

Highlighting the limitations of using data with redacted components, the analysable frameworks wherein the gender balance was 75:25 or worse appears to be 61%, which based on trends in previous years seems an unlikely drop. However, what can be seen in the data presented in Table 3.4 is evidence of persistent segregation within Modern Apprenticeship frameworks, particularly in those with significantly high participation rates.

Frameworks	Female MA Starts	Male MA Starts	Total Starts	% Female MA starts	% Male MA starts	Accept able in line with 2021 target?
Accounting	53	39	92	58%	42%	YES
Achieving Excellence in Sports Performance	0	103	103	0%	100%	NO
Active Leisure, Learning and Wellbeing	87	163	250	35%	65%	YES
Agriculture	10	63	73	14%	86%	NO
Aquaculture	6	47	53	11%	89%	NO
Automotive	31	1,134	1,165	3%	97%	NO
Bus and Coach Engineering and Maintenance	1	37	38	3%	97%	NO
Business & Administration	1,702	657	2,359	72%	28%	YES
Care Services Leadership and Management	7	1	8	88%	13%	NO
Children's Care, Learning & Development	1	0	1	100%	0%	NO
Construction	0	23	23	0%	100%	NO
Construction: Building	20	1,460	1,480	1%	99%	NO
Construction: Civil Engineering	3	698	701	0%	100%	NO
Construction (Craft Operations)	0	14	14	0%	100%	NO
Construction: Professional Apprenticeship	1	84	85	1%	99%	NO
Construction: Specialist	0	195	195	0%	100%	NO
Construction: Technical	25	546	571	4%	96%	NO
Construction: Technical Apprenticeship	5	375	380	1%	99%	NO
Creative	20	12	32	63%	38%	YES
Creative and Digital Media	19	12	31	61%	39%	YES
Customer Service	403	284	687	59%	41%	YES
Dental Nursing	192	7	199	96%	4%	NO
Digital Marketing	6	2	8	75%	25%	NO
Electrical Installation	8	706	714	1%	99%	NO
Electronic Security Systems	0	64	64	0%	100%	NO
Engineering	66	1,007	1,073	6%	94%	NO
Engineering Construction	2	36	38	5%	95%	NO

Equine	47	5	52	90%	10%	NO
Extractive and Mineral Processing	8	250	258	3%	97%	NO
Facilities Management	1	14	15	7%	93%	NO
Fashion & Textile Heritage	76	60	136	56%	44%	YES
Food and Drink Operations	452	645	1,097	41%	59%	YES
Freight Logistics	100	1,356	1,456	7%	93%	NO
Furniture, Furnishings and Interiors	0	2	2	0%	100%	NO
Game & Wildlife Management	1	12	13	8%	92%	NO
Gas Heating and Energy Efficiency	0	32	32	0%	100%	NO
Gas Industry	0	6	6	0%	100%	NO
Glass Industry Occupations	1	165	166	1%	99%	NO
Hairdressing	39	2	41	95%	5%	NO
Hairdressing & Barbering	882	84	966	91%	9%	NO
Healthcare Support	25	7	32	78%	22%	NO
Heating, Ventilation, Air Conditioning and Refrigeration	1	98	99	1%	99%	NO
Horticulture	3	189	192	2%	98%	NO
Hospitality	1,496	1,153	2,649	56%	44%	YES
Hospitality Management Skills Technical Apprenticeship	39	16	55	71%	29%	YES
Housing	18	13	31	58%	42%	YES
Industrial Applications	0	44	44	0%	100%	NO
Information & Communication Technologies Professionals	5	51	56	9%	91%	NO
Information Security	2	18	20	10%	90%	NO
IT and Telecommunications	133	738	871	15%	85%	NO
Land-based Engineering	0	31	31	0%	100%	NO
Life Sciences	17	18	35	49%	51%	YES
Management	378	405	783	48%	52%	YES
Maritime Occupations	0	27	27	0%	100%	NO
Occupational Health & Safety Practice	21	27	48	44%	56%	YES
Oil and Gas Extraction	4	39	43	9%	91%	NO
Payroll	12	3	15	80%	20%	NO
Plumbing	5	367	372	1%	99%	NO
Power Distribution	2	39	41	5%	95%	NO

Print Industry Occupations	3	23	26	12%	88%	NO
Printing	0	1	1	0%	100%	NO
Process Manufacturing	3	41	44	7%	93%	NO
Procurement	17	15	32	53%	47%	YES
Professional Services Technical Apprenticeship	7	6	13	54%	46%	YES
Providing Financial Services	356	281	637	56%	44%	YES
Retail	1,139	892	2,031	56%	44%	YES
Signmaking	0	8	8	0%	100%	NO
Social Services (Children and Young People)	1,231	57	1,288	96%	4%	NO
Social Services (Children and Young People) TA	141	9	150	94%	6%	NO
Social Services and Healthcare	1,025	153	1,178	87%	13%	NO
Social Services and Healthcare Technical Apprenticeship	52	20	72	72%	28%	YES
Supply Chain Management	11	9	20	55%	45%	YES
Sustainable Resource Management	1	26	27	4%	96%	NO
Technical Apprenticeship in Professional Services	2	0	2	100%	0%	NO
Travel Services	62	7	69	90%	10%	NO
Trees and Timber	0	13	13	0%	100%	NO
Upstream Oil and Gas Production	2	30	32	6%	94%	NO
Water Industry	0	8	8	0%	100%	NO
Wind Turbine Operations and Maintenance	0	2	2	0%	100%	NO
Wood and Timber Industries	0	2	2	0%	100%	NO
Youth Work	17	25	42	40%	60%	YES

Table 3.3: Modern Apprenticeship Framework starts 2015-16 by gender (Source data: Skills Development Scotland, 2016b, with final column calculated by the author)

Frameworks	Female MA Starts	Male MA Starts	Total Starts	% Female MA starts	% Male MA Starts	Acceptable in line with 2021 target?
Accounting	34	23	57	60	40	YES
Achieving Excellence in Sports Performance	0	134	134	0	100	NO
Active Leisure, Learning and Wellbeing	80	140	220	36	64	YES
Agriculture	11	54	65	17	83	NO
Aquaculture	9	57	66	14	86	NO
Aquaculture Management Technical Apprenticeship	*	*	18			
Automotive	56	1,067	1,123	5	95	NO
Bus and Coach Engineering and Maintenance	*	*	36			
Business & Administration	1,089	455	1,544	71	29	YES
Business Administration Technical Apprenticeship	*	*	14			
Care Services Leadership and Management	41	8	49	84	16	NO
Career Development	*	0	*			
Construction: Building	42	1,570	1,612	3	97	NO
Construction: Civil Engineering	*	*	1,193			
Construction: Professional Apprenticeship	7	259	266	3	97	NO
Construction: Specialist	0	204	204	0	100	NO
Construction: Technical	60	1,106	1,166	5	95	NO
Construction: Technical Apprenticeship	21	698	719	3	97	NO
Creative	7	5	12	58	42	YES
Creative and Digital Media	13	10	23	57	43	YES
Customer Service	201	139	340	59	41	YES
Data Analytics Technical Apprenticeship	23	37	60	38	62	YES
Dental Nursing	*	*	350			
Digital Applications	293	229	522	56	44	YES
Digital Marketing	270	111	381	71	29	YES
Domestic Plumbing and Heating	*	*	386			
Electrical Installation	15	701	716	2	98	NO

Electronic Security Systems	*	*	77			
Engineering	77	1,083	1,160	7	93	NO
Engineering Construction	*	*	36			
Equine	*	*	10			
Extractive and Mineral Processing	0	49	49	0	100	NO
Facilities Management	0	14	14	0	100	NO
Fashion & Textile Heritage	59	67	126	47	53	YES
Firefighting	32	162	194	16	84	NO
Food and Drink Operations	414	620	1,034	40	60	YES
Freight Logistics	95	1,342	1,437	7	93	NO
Game & Wildlife Management	0	14	14	0	100	NO
Glass Industry Occupations	0	112	112	0	100	NO
Hairdressing & Barbering	560	46	606	92	8	NO
Healthcare Support	58	11	69	84	16	NO
Heating, Ventilation, Air Conditioning and Refrigeration	6	89	95	6	94	NO
Horticulture	*	*	196			
Hospitality	1,173	936	2,109	56	44	YES
Hospitality Management Skills Technical Apprenticeship	155	117	272	57	43	YES
Housing	16	11	27	59	41	YES
Industrial Applications	6	30	36	17	83	NO
Information Security	*	*	9			
Information Security Technical Apprenticeship	*	*	83			
Insurance Technical Apprenticeship	*	*	7			
IT and Telecommunications	115	625	740	16	84	NO
IT and Telecommunications Technical Apprenticeship	19	173	192	10	90	NO
Land-based Engineering	*	*	58			
Life Science and Related Science Industries	9	22	31	29	71	YES
Management	356	334	690	52	48	YES
Maritime Occupations	*	*	34			
Occupational Health & Safety Practice	7	18	25	28	72	YES

Occupational Health & Safety Practice Technical Apprenticeship	0	*	*			
Optical Practice Support	*	*	9			
Paralegal Practice	*	*	33			
Payroll	*	*	6			
Power Distribution	0	22	22	0	100	NO
Print Industry Occupations	*	*	23			
Process Manufacturing	9	59	68	13	87	NO
Procurement	34	22	56	61	39	YES
Project Management	11	22	33	33	67	YES
Providing Financial Services	360	233	593	61	39	YES
Retail	814	554	1,368	60	40	YES
Rural Skills	*	*	10			
Signmaking	0	17	17	0	100	NO
Social Services (Children and Young People)	1,924	160	2,084	92	8	NO
Social Services (Children and Young People) Technical Apprenticeship	292	13	305	96	4	NO
Social Services and Healthcare	1,781	319	2,100	85	15	NO
Social Services and Healthcare Technical Apprenticeship	79	16	95	83	17	NO
Supply Chain Management	*	*	15			
Sustainable Resource Management	0	12	12	0	100	NO
Travel Services	*	*	7			
Trees and Timber	*	*	8			
Upstream Oil and Gas Production	12	96	108	11	89	NO
Water Industry	7	32	39	18	82	NO
Wood and Timber Industries	0	11	11	0	100	NO
Youth Work	19	12	31	61	39	YES

Table 3.4: Modern Apprenticeship Framework starts 2019-20 by gender[16] (Source data: Skills Development Scotland, 2020e, with final column calculated by the author)

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[16] The 25 subject to disclosure control are represented by an asterisk and shading within the table.

3.3.4   Modern Apprenticeships starts in relation to gender during the research period

This section summarises Modern Apprenticeship starts against gender outcomes in the *Equalities Action Plan for Modern Apprenticeships in Scotland* (Skills Development Scotland, 2015b). While the overall equalities action plan target is to, by 2021, reduce to 60 per cent the percentage of frameworks where the gender balance is 75:25 or worse by 2021, there are no annually set targets.

2015-16

For the period 1 April 2015 to 31 March 2016, there were a total of 25,818 Modern Apprenticeship starts.

Age	Female	Male	Percentage gender split female:male
Overall	10,505	15,313	41:59
16-19	5,226	7,611	41:59
20-24	3,732	3,937	49:51
25+	1,547	3,765	29:71

Table 3.5. Modern Apprenticeship Starts by age and gender 2015-16 (Skills Development Scotland, 2016c)

Progress

Percentage of frameworks where the gender balance was 75:25 or worse: 74% (Skills Development Scotland, 2018b). This shows no change against Equalities Action Plan overall target.

2016-17

For the period 1 April 2016 to 31 March 2017, there were a total of 26,262 Modern Apprenticeship starts.

Age	Female	Male	Percentage gender split female:male
Overall	10,440	15,822	40:60
16-19	5,260	7,405	42:58
20-24	3,432	3,750	48:52
25+	1,748	4,667	27:73

Table 3.6: Modern Apprenticeship Starts by age and gender 2016-17 (Skills Development Scotland, 2017b)

Progress

Percentage of frameworks where the gender balance was 75:25 or worse: 68% (Skills Development Scotland, 2018b). This shows an overall change of an improvement, a 6% reduction in line with the equalities action plan overall target.

2017-18

For the period 1 April 2017 to 31 March 2018, there were a total of 27,145 Modern Apprenticeship Modern Apprenticeship starts.

Age	Female	Male	Percentage gender split female:male
Overall	10,451	16,694	38.5:61.5
16-19	4,852	7,157	40:60
20-24	3,374	3,624	48:52
25+	2,225	5,913	27:73

Table 3.7: Modern Apprenticeship Starts by age and gender 2017-18 (Skills Development Scotland, 2018a)

Progress

Percentage of frameworks where the gender balance was 75:25 or worse: 72% (Skills Development Scotland, 2018b). Comparing year on year, this shows a decline, with a 4% increase since 2016-17 reporting period. However, this is still an overall change of an improvement, a 2% reduction in line with the equalities action plan overall target.

2018-19

For the period 1 April 2018 to 31 March 2019, there were a total of 27,270 Modern Apprenticeship starts.

Age	Female	Male	Percentage gender split female:male
Overall	10,489	16,781	38:62
16-19	4675	7045	40:60
20-24	3147	3563	47:53
25+	2667	6173	30:70

Table 3.8: Modern Apprenticeship Starts by age and gender 2018-19 (Skills Development Scotland, 2019b)

Progress

Percentage of frameworks where the gender balance was 75:25 or worse: 72% (Skills Development Scotland, 2019c). This shows no change on an annual basis but maintains an overall change of a 2% reduction in line with the equalities action plan overall target.

2019-20

For the period 1 April 2019 to 31 March 2020, there were a total of 27,875 Modern Apprenticeship starts.

Age	Female	Male	Percentage gender split female:male
Overall	11,226	16,649	40:60
16-19	4,277	6,686	39:61
20-24	2,858	3,280	47:53
25+	4,091	6,683	38:62

Table 3.9: Modern Apprenticeship Starts by age and gender 2019-20 (Skills Development Scotland, 2020e)

Progress

Percentage of frameworks where the gender balance was 75:25 or worse: 68% (Skills Development Scotland, 2020f). This shows a reduction on an annual basis and an overall change of an improvement, a 6% reduction in line with the equalities action plan overall target, equivalent to the figures recorded in 2016/17.

3.4   Conclusion

The chapter has evidenced how attention, for over 20 years, has been on the presentation of persistent occupational segregation in apprenticeship programmes. Research has primarily focused on the economic and social impact of occupational segregation over career decision-making processes of individuals. Meanwhile, operational activity tends to be small-scale and delivered against a backdrop of wider equality concerns and critique focused on quality, contracting and procurement. The pressure on governments, statutory services, education and training and business to address the problem of occupation segregation is, however, constant. Despite ongoing efforts to reduce occupational segregation in apprenticeship provision, the problem remains stable. Specific data and project work pertaining to occupational segregation in Modern Apprenticeships in Scotland was introduced, using historical and contemporary data to evidence the persistence of the issue.

The specific empirical gaps which have been identified are as follows:

- The presentation of gender bias in Modern Apprenticeships and wider apprenticeship provision is critiqued from a primarily economic perspective while the impact of personal career decision-making that results in occupational segregation in apprenticeships is underexplored
- Non-binary gender has not been considered in relation to occupational segregation in Modern Apprenticeships

The overall objective of the thesis is to conduct new research into gender atypical career decision-making. The empirical gaps identified in this chapter when viewed in conjunction with the theoretical gaps identified in the preceding chapter create a context for research investigating this this objective in line with the thesis aim. Apprenticeship routes have been evidenced as a clear and longstanding example of gendered career outcomes in the labour market. The new research uses participants on the Scottish Modern Apprenticeship Programme as a data source on gendered career decision-making by utilising a mixed methods approach, sited within the pragmatist tradition.

The following chapter presents the methodology underpinning the new research conducted within this project.

4 Methodology

4.1 Introduction

The purpose of this chapter is greater than the study in and of itself. This chapter intends to make a substantial contribution to strengthening the evidence-base in the career development field and the approach and realisation of the project can be seen to lead the way in contemporary research in the sector.

This chapter begins by presenting the rationale for mixed methods research and the underpinning philosophical position of the mixed methods design of the study. The objectives and research questions are defined. Following this, the robust ethical processes are presented within the context of career development practitioner-led research. The components of the mixed methods approach are clearly delineated, presenting the quantitative research instrument design, implementation, pilot data collection and framework for analysis separately to the design, implementation and analytic framework for the qualitative methods.

The value to the discipline of the innovative research methods utilised in the study are indicated throughout the chapter. Their adaptation to teaching, research and practice are signposted; the methods and frameworks utilised in the research have already been embedded in teaching and learning at postgraduate level and shared more widely within the sector.

The intentions of the research to contribute to and expand on existing research approaches in the sector are consistently present throughout this chapter. For example, the fixed mixed methods approach takes research in the field beyond a dependency on qualitative approaches. The methodology chapter is designed intentionally to extend the knowledge-base within the career development field. The frameworks for the work are transferable and accessible, designed to instil confidence in students and early researchers to also expand upon their own methodological approaches and indeed, to engage in practitioner-led research. The explicit linking of research approaches to the underpinning ethical tenets of career guidance and development practice throughout the chapter emphasises the unique position of the practitioner-researcher to conduct high-quality, insightful and relevant careers research.

4.2 Mixed methods: overview of approach

As "the third methodological movement in social and behavioural sciences" (Tashakkori and Teddlie, 2009, p.101), mixed methods research has proven itself to be as robust as mono-methods, offering an additional route to explore complex research problems. The research in this thesis sits within a mixed methods design, defined by Greene, Caracelli and Graham (1989, p.256), as it includes at least one quantitative (surveys) and one qualitative (interviews) data collection and analysis technique. Mixed methods research has subsequently been procedurally developed and refined (e.g. Creswell, 2015; Bryman, 2016, p.635). A purist view, that mixed methods is simply the combination of numerical and narrative data, undersells the value of mixed methods research. Mixed methods analysis is more than simply collecting two different types of data. Creswell (2015) summarises what mixed methods is *not*, addressing misconceptions regarding its perceived simplicity and scope. Mixed methods requires a complex consideration of how data integrates to construct meaning (e.g. Plano Clark and Ivankova, 2016, Tashakkori and Creswell, 2007). Closed and open-ended data collected are synthesised, without privilege, with the purpose being to bring insight that could not otherwise be obtained if they stood alone.

4.2.1 The value and benefits of mixed methods research in the context of this study

Mixed methods research has been chosen with both general and specific rationales. As highlighted in the theoretical literature review, solely quantitative or qualitative research into career decision-making has been criticised. Undertaking mixed methods research responds directly to this concern, allowing for a greater understanding of the issues to be investigated. The mixed methods design also responds to Haug and Plant's explicit call for more mixed methods research in the field: "Given the assumption that career guidance is a complex field of study…we are certain that a more holistic research approach is needed, and more mixed-method approaches should be implemented to a larger extent in future research" (2016, p.146).

In choosing a mixed methods approach for this thesis its effective use can enable more meaningful study of "complex and pluralistic social contexts" which "demand analysis that is informed by multiple and diverse perspectives" (Sammons et al., 2005, p.221). The explanatory sequential design is appropriate as it "is most useful when the researcher wants to assess trends and relationships with quantitative data but also be able to explain the mechanism or reasons behind the resultant trends" (Creswell and Plano Clark, 2011, p.82). Mixed methods is particularly pertinent as it enables the ability to "add to instrument data (quantitative information) details about the setting, place, and context of personal experiences (qualitative research)" (Creswell, 2015, p.15).

While a mixed methods approach can be justified in the context of this study, to convey mixed methods research as solely without its opponents would be misleading. Creswell and Plano Clark describe it as "The Question of Convincing others" based on its relative newness (2007, p.15). Greene and Hall counter this: "Moreover, from a pragmatic and practitioner standpoint, social inquirers have long been mixing methods, as it simply made practical sense to measure both the frequency and experiential significance of an important phenomenon, or to juxtapose etic, theory-derived, standardized measures of human activity with emic, contextual, individualized narratives of meaning" (2010, p.120). In this sense mixed methods research could be viewed as having the potential to also limit bias, an important element of both research and of professional practice.

Easterby-Smith, Thorpe and Jackson summarise the arguments for and against mixed methods research and advise caution to ensure its appropriateness to each study rather than application for the sake of it (2011, p.63). Not least mixed methods research is time consuming and requires the researcher to demonstrate a broad range of research skills. Criticism of mixed methods is however primarily focused on issues relating to the rigidity of epistemological and paradigm incompatibility, often countered by the argument that both have more flexibility than conventionally accepted. These considerations therefore mean it is important to present a contextualised account of any use of mixed methods.

4.2.2   The pragmatist paradigm in the context of the study

Creswell and Plano Clark encourage the use of a shifting epistemological assumption between phases in explanatory sequential mixed methods design (2011, pp.82-83).

Similarly, Bryman, in the context of an increasing number of mixed methods studies, notes "a growing willingness to think of research methods as techniques of data collection or analysis that are not as burdened by epistemological and ontological baggage as is sometimes supposed" (2016, p.656). The worldview of the author of this study is that of pragmatism, "a philosophy of research focused on consequences of research, the problem and what works in real-world practice" (Creswell, 2015, p.124).

A paradigm of pragmatism espouses single and multiple realities (ontology) and a practical epistemology (Creswell and Plano Clark, 2011, p.42). This alternative paradigm stance, with its affinity to mixed methods research[17], has been adopted by the author not least because a pragmatist position correlates with the practice-orientated overall aim of this thesis, to enable individuals to make gender-aware career decisions:

> pragmatism argues that if statements about the world do not lead to consequences or actions that are instrumental in enabling us to make appropriate decisions, take effective action and successfully get things done, then those statements or beliefs will not count as knowledge (Plowright, 2011, p.184).

Similarly, a pragmatist approach allows for a formal or informal rhetoric as appropriate (Creswell and Plano Clark, 2011, p.42), essential as the audience for the research includes both academics and practitioners.

Johnson and Gray clarify Johnson and Onwuegbuzie's earlier (2004) description of the pragmatist maxim: "the "small t" truths (i.e., warranted beliefs) that we use in our many human situations are obtained when our values and evidence provide warrants, and these small truths continually change (2010, p.88)." This description aptly describes career decision-making: a moment when a decision to act is made, based on the evidence the individual currently has at hand.

Table 4.1 presents the translation into practice of the pragmatist worldview elements and draws on indicative examples within the study to demonstrate how the current research adopts a pragmatist stance.

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[17] The term 'affinity' is used here in line with Biesta's description of pragmatism, in that: "there are stronger and weaker versions of this claim, ranging from the suggestion that pragmatism provides the philosophical foundation for mixed methods research to the idea that pragmatism could provide philosophical support for mixed methods approaches" (2010, p.95).

Worldview Element	Pragmatism	Indicative example of how this maps onto the research methods
Ontology	Singular and multiple realities	Hypotheses relating to career decision-making are tested and validated though perspectives conveyed in interviews.
Epistemology	Practicality	Data are collected to directly address the quantitative and qualitative research questions.
Axiology	Multiple stances	All survey respondents and interview participants must declare whether they have a biased (gender aware) perspective.
Methodology	Combining	The research is of a quantitative and qualitative mixed methods design
Rhetoric	Formal or informal	Both styles of writing are employed in the presentation of findings, positioning the practitioner-researcher in line with the field of study.

Table 4.1: Pragmatist stance of the research (adapted from Creswell and Plano Clark, (2011, p.42))

4.2.3   Ontology and epistemology: the researcher journey

Having summarised the pragmatist position in relation to the study, the following section contains a personal reflective narrative account of how this position has been reached in conjunction with a justification of how to gain the knowledge and data required to achieve the thesis aims. This is essential as pragmatism is not, as is commonly perceived, the only paradigm compatible with mixed methods research:

> The key assumptions and lofty discourse of postpositivism, constructivism, phenomenology, critical social science, action research, feminist inquiry, postmodernism, and pragmatism, along with other philosophical paradigms, remain integral to the ongoing development and justification of a mixed methods approach to social inquiry (Green and Hall, 2010 p.124).

As a researcher, the individual needs to resolve "the ontological question" and "the epistemological question." While an ontological position will correlate with an epistemological position, within the pragmatism paradigm, the two are intertwined. To resolve these questions, it is not possible to state a perspective without good reason for rejecting alternatives. Furthermore, axiology requires consideration within the author's present context: reflexivity and understanding personal bias and motivation is essential for the career practitioner and researcher-practitioner for them to be able to account for the philosophical position that underpins their work. This is fully explored in the Ethics (4.3) section of this thesis.

Ontology concerns the form and nature of reality. It is, in short, "what exists?" and "what is reality?" The researcher's journey into a philosophical understanding of their position, within a myriad of ontologies and limited prior study of philosophy, incorporates reflection upon their own comprehension of the world, formed by experience, knowledge and personality, aspects which are debated rigorously at the interdisciplinary core of career decision-making scholarship.

At first the author sought to reject realism and objectivism, perhaps due to a simplistic bias stemming from a lack of knowledge and understanding of natural sciences and an unwillingness to consider social entities and phenomena as existing separately to social actors. A concrete and external world doesn't sit easy within the interdisciplinary field in which the author operates, and its recurrent postulations, as noted in the theoretical literature review of this thesis, positing that social actors shape phenomena. Still believing a place in the "middle ground" to be incompatible with their approach to prior research

projects, relativism felt like the simpler yet comprehensive approach being sought yet its simplicity and valuing of discourse was a burden. With reticence, the author reconsidered subjectivism and continued in a cycle of dissatisfied searching for a position that matches both their context and values.

Important therefore is an understanding of the author's axiological position, shaped ultimately by their life to date. Having spent over twenty years writing and critiquing fiction and life writing, the essence of which is viewpoint, character, story and narrative, the author believes the storyteller always constructs meaning. Creative and literary studies, as with the social sciences, can incorporate deep philosophical reflection leading often to linguistic postulating which can both detract from and enhance the precise conveying of facts at the heart of the disciplines. In the creative fields it is noted that the creative writer creates stories from 'facts' that enable readers/viewers to experience universal truths, as the Irish film director Robert J. Flaherty famously declared: "One often has to distort a thing to catch its true spirit." The question for the author was to what extent they see this in their social science research.

After a dual career spent in creative writing alongside career development, the author's first concern was that positions towards nominalism seem to lead to a creative, shifting explanation of existence influenced by the unreliability of first-person narration. A belief that all narrators, be they fictional or autobiographical life-writers, are unreliable in that they reveal only what they want to be currently known by the observer, creates an awkwardness in relation to the currently popular notions of constructivism in the career guidance discipline.

The popularity of the constructivist ontology in an interdisciplinary field challenges the applicability of results and findings. Perhaps what draws the researcher to the career guidance and development discipline is their own shifting sense of existence, of their own agency in relation to the structures around them and of how their influence changes over time. A belief that nothing is definitive and reality is in a constant state of revision leads to a shifting perspective that, as previously acknowledged, correlates to a pragmatist paradigm that fits within the discipline and supports the mixed methods research chosen for the current study.

Caution must also be taken in relation to potential bias in the enquiry undertaken by a researcher into their topic. Initially, closely to a subjectivist ontology, the author considered her epistemological position to be that of interpretivist, incorporating further positions from "anti-positivism" through to the three-way split into hermeneutics, phenomenology and symbolic interactionism. At the core, interpretivism carries the belief that the social sciences are fundamentally different to the natural sciences. Prior to this study, the author's main social research work had been qualitative and it would have been easy to adopt a secure and familiar position by maintaining a mono-methods approach to the current topic and indeed to assume the previously preferred and utilised stances to be fitting in the current context.

Doctoral study offers the opportunity for re-evaluation and personal development. Following an introspective evaluation of the author's worldviews the fundamentals of qualitative interpretivist research were further considered and could be observed to conflict again with the topic, discipline and proposed qualitative research methods; it would be presumptive to consider interactive, co-operative and participatory interviewing to be the essence of career guidance interventions. While career guidance tools and models are adopted in the interviews, as explored in the qualitative analysis, being reflexive in the interview setting does not always have to include these interpretivist aspects, likewise the assessment of the performance of those being observed (disrupting them if possible) or self-disclosure. Cooperation does not ultimately lead to participation and collaboration; to ensure reliability and validity, impartiality is at the heart of career guidance. The career guidance intervention, in whatever form it takes, is a pragmatic one. To reiterate the earlier quote from Creswell and Plano Clark, pragmatism is about "what works in real-world practice" (2011, p.42). The careers practitioner-researcher is never far from practice.

4.2.4 Formulation of objectives and research questions

In response to research gaps identified in the theoretical and empirical literature reviews, objectives and research questions for the mixed methods research were formulated as follows:

Quantitative Research

Objective: To obtain and examine quantitative data relevant to gender typicality and atypicality of individuals completing Modern Apprenticeships.

Research question: Does personal background and the family unit structure affect the likelihood of an individual undertaking an apprenticeship in a gender (a)typical framework?

Qualitative Research

Objective: To obtain and examine qualitative data on the career decision-making processes of apprentices in gender atypical Modern Apprenticeship frameworks.

Research question: To what extent do gender atypical apprentices attribute and relate their career decisions to the family unit and gendered influences and influencers?

4.2.5 How this study maps onto mixed methods research frameworks

In planning for the integration of data sets further clarity emerges regarding the purpose of mixed methods research in the context of the study and its epistemological position. The work undertaken for this thesis is of a fixed mixed methods design, in that "the use of quantitative and qualitative methods is predetermined and planned at the start of the research process" (Creswell and Plano Clark, 2011, p.54) and the data collected directly correlate with the quantitative and qualitative research questions.

Bryman signposts Creswell and Plano Clark's design frameworks as "the most commonly employed" (2016, p.638). Of their six prominent mixed methods framework designs, differentiated by the sequencing and weighting of methods, the research undertaken in this study is of an embedded design.

In the embedded design, the timing of data set collection and analysis can vary (Creswell and Plano Clark, 2011, p.90). In this study the qualitative data collection takes place after the quantitative data collection. Following phase one data collection, the results are analysed and explained in relation to significance, non-significance, anomalies and correlations between groups and used to identify interview participants through extreme/deviant case identification for the qualitative stage two data collection. These findings are also used to shape the qualitative approach in relation to defining the questions to be asked and the appropriateness of the selected participants. The qualitative research is analysed independently and triangulated with the quantitative data. This also creates the potential for the reporting and publication of separate quantitative and qualitative results (Creswell and Plano Clark 2011, p.94), broadening the scope of the output of the research.

Creswell and Plano Clark's rationale for the use of an embedded design is that "the premises of this design are that a single data set is not sufficient, that different questions need to be answered, and that each question type requires different types of data" (2011, p.91). Separate research questions are addressed in the quantitative and qualitative data collection and analysis. Furthermore, "the embedded design is appropriate…to enhance the application of a quantitative or qualitative design to address the primary purpose of the study" (ibid.). As presented in the literature review, there is limited correlation between quantitative and qualitative research in the discipline, hence the application of a mixed methods approach to advance towards "completeness", and "arrive at a more comprehensive account of the area of enquiry" (Bryman, 2016, p.641), in turn informing the discussion and proposals section of the thesis and overall purpose of the study.

Given the weightings placed on the quantitative and qualitative data collection, using accepted mixed methods notations (e.g. Wheeldon and Ahlberg, 2012), the research can be conveyed QUAN →← qual. Figure 4.1 is a diagram which presents the structure, procedures and products of the research design.

Embedded Mixed Methods Design of the study: Occupational Segregation in Modern Apprenticeships: Gendered Career Decision Making

Procedures
•Distribution of survey to limited number of Modern Apprentices
•Survey measures: demographics

Quantitative pilot study

Products
•Numerical and text data

Procedures
•Text coding
•Data cleaning
• Identification of errors and inconsistencies

Quantitative data analysis of pilot study

Products
•Refined survey
•Initial trends and indications

Procedures
•Distribution of survey to MAs
•Data cleaning
•Input to statistical software

Quantitative data collection

Products
•Numerical data
•Descriptive statistics
•Simple hypotheses tests

Quantitative data analysis

Procedures
•Regression analysis

Products
•Final regression model

Quantitative data analysis

Qualitative data collection

Procedures
•Indicative interviews
•Practice-informed biographical interview model

Products
•Transcripts

Procedures
•Testing of further hypotheses identified via qualitative interviews

Quantitative data analysis

Qualitative data analysis

Procedures
•Coding and thematic analysis using SCCT framework

Products
•Narrative analysis
•New hypotheses for testing against survey data

Discussion

Figure 4.1: The embedded mixed methods design of the study

4.3 Ethics

4.3.1 Academic research and ethical responsibility

A rigorous commitment to ethical research is both expected of and upheld by higher education institutions. The author is affiliated to two separate higher education institutions; one as a doctoral student and a second where they are employed as an academic lecturer, with the latter also co-sponsoring the doctoral study. Alongside fulfilling the research ethics policy requirements of the higher education institutions to which they are linked, and compliance with UK legislation, the researcher must also be cognisant of relevant codes of practice. The ethical values demonstrated by a researcher impact upon their own professional reputation and that of any institution or professional body to which they are affiliated. This section explores how the author's position as a member of the career development profession shapes their upholding of rigorous ethical values in research practice.

4.3.2 Ethical practice in the career development sector

Professional bodies issue ethical codes relevant to accredited members. These codes take practice beyond legal compliance and bring with them a requirement for ethical and moral sensitivity. The practice of a career development professional must be ethical, in line with the values espoused by the sector. By extension any research undertaken by the practitioner-researcher must also uphold these values.

The author, as a member of the UK Career Development Institute and a Registered Career Development Professional (RCDP), upholds the 11 points of the Career Development Institute's Code of Ethics: Accessibility, Accountability, Autonomy, Competence, Confidentiality, Continuous Professional Development, Duty of Care—to Clients, Colleagues, Organisations and Self, Equality, Impartiality, Transparency and Trustworthiness (Career Development Institute, 2019a). The Career Development Institute believes the Code should "be used and referred to as a tool to increase and maintain a common trust and understanding of values and beliefs necessary to do our work" (Career Development Institute, no date), work which includes practitioner-led research. As is the case for all ethical codes, "the Career Development Institute Code of

Ethics is not a rulebook, it does not list procedures to follow for every circumstance but is intended as a guide to professionals in all aspects of their professional lives" (Career Development Institute, no date). How the points of the Career Development Institute's ethical code relate to practitioner-research are presented in Table 4.2.

Point of the Career Development Institute Code of Ethics	Application to practitioner research
Accessibility *Members must promote access to career development activities and services in a range of ways that are appropriate and ensure inclusion.*	Accessible research requires a commitment to inclusion at every stage. This includes, for example, the use of inclusive language and adaptable/flexible formats for theory, fieldwork and dissemination of findings. Equality impact assessment of processes involved in the research should be undertaken. There must be the ability for practitioners without academic expertise or academic networks to access the findings of research. This is far more than a format/academic style/language issue; research findings should be openly accessible where possible and not held behind subscription-only firewalls. Summary overviews of research with the author's contact details included should be made available in the public domain and promoted to fellow professionals. Dissemination opportunities should be taken up which include in-person sector-specific professional development conferences or online professional training, such as webinars.
Accountability *Members are accountable for their career development activities and services and must submit themselves to whatever scrutiny is appropriate to their role, including the Career Development Institute Discipline and Complaints Procedure. Members must act in the interests of society and at all times exercise integrity, honesty and diligence. Members must in all circumstances endeavour to enhance the standing and good name of the career development*	There should be a willingness to submit to scrutiny, and an openness to operate within accepted research guidelines. It is important to promote career development professional values in research (as this section of this research project itself demonstrates). The Code of Ethics can be used within fieldwork, to demonstrate the commitment to ethical practice and enhancing visibility of accountability, for example by signposting it within research interviews and participant information sheets. By explicitly presenting oneself as a member of the Career Development Institute and upholding the Code of Ethics, the practitioner-researcher

profession and the Career Development Institute.	furthers the standing and good name of their professional body.

In acting in the interests of society and exercising integrity, honesty and diligence, the social justice element of career development practice is evident. |
| **Autonomy**

Members must encourage individual autonomy in making decisions and always act in the individual's best interests | Fieldwork undertaken should align with core principles of careers practice and at no time should the researcher intervene with unsolicited advice or give biased direction. |
| **Competence**

Members must monitor and maintain their fitness to practice at a level that enables them to provide an effective service. Members must represent their professional competencies, training and experience accurately and function within the boundaries of their training and expertise. | While a careers practitioner may be professionally qualified, that qualification, while it may include research techniques, does not necessarily incorporate researcher skills[18]. Professional development activity may be necessary prior to undertaking research to ensure that fitness to practice as a practitioner-researcher is achieved.

Research should not commence until the practitioner-researcher is sufficiently competent in the research skills required for each individual project. |
| **Confidentiality**

Members must respect the privacy of individuals. Personal guidance interactions/interviews should be conducted in an agreed and suitably private environment. Clients must be informed of the limits of confidentiality and data-sharing at the outset. Disclosure of confidential information should only be made with informed consent or when required by law. | All research data should be collected in line with the General Data Protection Regulation and the Data Protection Act (2018). All research participants can expect to have their data and personal information treated with the same confidentiality as would be afforded to them as CIAG clients. All research should be undertaken in a suitably private location.

Confidential information can only be disclosed when the safety of the participant or the researcher is a risk or when required by law to disclose information conveyed.

Researchers must undertake appropriate disclosure, in line with the client group/research participants as appropriate (i.e. basic disclosure, standard disclosure, enhanced disclosure or membership of the Protecting Vulnerable Groups |

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[18] At UWS, the postgraduate modules in Career Development Theory and The Contemporary Labour Market which form part of the Postgraduate Diploma in Career Guidance and Development and are coordinated by the author from 2018 onwards have included teaching and assessment of practitioner-researcher methods.

	(PVG) Scheme) and to meet the requirements of the Safeguarding Vulnerable Groups Act (2006).
Continuous Professional Development *Members must maintain their professional competence, knowledge and skills through participation in continuous professional development informed by reflective practice and the National Occupational Standards: Career Development.*	Researcher reflexivity and critical self-awareness should be evident, perhaps through a research diary to enable identification of competency issues and professional development needs. The performance criteria and knowledge and understanding expectations of each of the National Occupational Standards for the Career Development Sector (Career Development Institute, 2014a) can be used to identify professional development needs. Engagement with sector-led researcher training, alongside a willingness to share and train other professionals in researcher tools and techniques.
Duty of Care – to Clients, Colleagues, Organisations and Self *Members have a duty of care and are expected always to act in the best interests of their clients. Members must develop and maintain professional and supportive working relationships with colleagues both inside and external to their own organisation and respect the contributions of other career development professionals to the activities and services on offer. Members must fulfil their obligations and duties to their employer (where applicable), except where to do so would compromise the best interests of clients. Members have a duty of care to themselves, both in terms of their personal integrity, personal safety and their capacity to practise in order to provide an effective service to clients.*	Engagement with practitioner-researcher communities of practice. Role expectations are highly important and must be clarified in all practitioner-researcher interactions. Clarity must always be given at contracting stage to explicitly reiterate the difference between research interviews and change/action orientated career guidance interventions. Cognisance of any employer codes or other affiliations that apply to the individual researcher and regulations relating to the research context. This could include, for example, when working with research participants from another sector (e.g. a university careers consultant undertaking research with school pupils). Similarly, researchers should understand how their work relates to legislation, such as The Children and Young People (Scotland) Act (2014).
Equality *Members must actively promote equality and diversity and work towards the removal of barriers to*	All research should comply with The Equality Act (2010), to ensure fair treatment of all and promote a fair and more equal society. All research should focus on producing socially just discussion. Findings of research may help enable

personal achievement resulting from prejudice, stereotyping and discrimination.	public sector bodies to fulfil their requirement for Public Sector Equality Duty and other duties. Equality impact assessment must be undertaken across all processes and should consider an intersectional approach where possible. Research should be designed to recruit from as diverse a group as possible. Researchers should seek to make visible the experiences of underrepresented groups. To this end researchers should be suitably equipped to identify and work with underrepresented individuals and a commitment shown to ongoing professional development in relation to equality, diversity and inclusion.
Impartiality *Members must ensure that professional judgement is objective and takes precedence over any external pressures or factors that may compromise the impartiality of career development activities and services. In doing so, members must ensure that advice is based solely on the best interests of and potential benefits to the client. Where impartiality is not possible this must be declared to the client at the outset.*	Research should be undertaken independently and clarity maintained in relation to the author's affiliated institution(s) and employment(s). If the research is funded, the sponsor should be made explicit and output should not be swayed in the direction of the funders' needs or objectives. Research findings should focus on client-centred outcomes.
Transparency *Members must provide career development services and activities in an open and transparent manner.*	An accurate presentation of the work must be made at all times. It should be articulated to all stakeholders/research participants that data collected on a participant as part of the research is open to their review if requested, in line with the Freedom of Information Act (2000).
Trustworthiness *Members must act in accordance with the trust placed in them, ensure that the clients' expectations are ones that have reasonable expectation of being met and honour agreements and promises.*	Upon completion of a project, the researcher-practitioner should deliver on all promised outputs. Planning and time management should ensure that research participants receive the same treatment as would be offered to clients in a professional capacity.

Table 4.2: Mapping research onto the Career Development Institute Code of Ethics

Table 4.2 also demonstrates how the research competence of a career development professional is closely related to their promotion of the career development sector. While lax values in a researcher risk bringing the sector into ill-repute, the converse, a rigorous dedication to ethical practice, can promote the sector, highlighting how the career development researcher-practitioner has unique strengths which can be harnessed for wider benefit. The abilities of the career development practitioner can also be well-utilised in the methods of the research, as further explored in later in this chapter.

Further ethical guidance explicitly for the career development professional as a practitioner-researcher is presented by Johnson and Neary (2016). Focused on human participants in research, it highlights key ethical considerations: informed consent, coercion, incentives, withdrawal, anonymity and confidentiality, risk assessment, debriefing, and confirmation. While the quantitative and qualitative methods present specific ethical processes for each stage of the research, Table 4.3 highlights overarching summary examples of how the career development practitioner-researcher's ethical considerations are adopted and integrated within the research.

Practitioner-researcher ethical considerations	This study
Informed consent	All research participants are fully informed about the research purpose and the general topic, alongside the position of their participation in the project.

Consent is gained from all participants in the online survey instrument, which is made available in more than one language.

Interview participants are provided with this information again prior to being interviewed and an information sheet. Where face-to-face interviews take place, a consent form is signed by the researcher following the interview participant's verbal consent, in line with Bryman's citing of studies that show participant signed consent forms can result in biased samples due to research participants losing their willingness to participate when they sign their own forms (2016, p.138).

The participant information form and informed consent form comply with Economic and Social Research Council (ESRC) guidance on the expectations of research participants (Economic and Social Research Council, no date). |
| Avoid coercion | Research participants are free to participate or not and self-identify their eligibility for voluntary participation.

The survey is promoted via neutral means and by reputable organisations. |
| Incentives | To encourage participation, incentives are nominal and offered in the form of a prize draw for the major survey.

The researcher travels to the participant so no travel incentives are offered for participation. Where possible interviews are completed remotely via video conferencing to meet contemporary environmental and sustainability priorities. |
| Withdrawal | Interview participants can refuse to answer qualitative interview questions or withdraw from the research at any time, with assurances that the data obtained about them will be withdrawn from the project and securely and confidentially destroyed. |
| Anonymity and confidentiality | Participants cannot be identified by their involvement unless they explicitly state they are happy to be identifiable due to the nature of their situation.

The researcher is cognisant of and compliant with the General Data Protection Regulation (GDPR) along with the Data Protection Act 2018 (DPA). GDPR compliant data management is upheld throughout the project. Participant information sheets for |

	the research includes specific information about data use and data rights.
	Suitable, confidential venues are used for interviews.
	The researcher does not to share information from one participant with another.
Risk assessment	All venues for research interviews are health and safety compliant and publicly located but confidential locations are used for the physical safety of the researcher and participants. The doctoral supervisor and/or colleagues are notified when the researcher is undertaking one-to-one research interviews.

Care is taken that no psychological harm should come to research participants, specifically in consideration of emotional well-being. This covers any harm in relation to possibility that the discussion of personal career decisions and close family background can trigger emotional responses or psychological discomfort. Using the tools and technique of guidance counselling any potentially emotive topics are appropriately addressed in a participant-centred manner, however the interviews do not take the form of a counselling intervention which brings with it a higher ethical risk.

Consideration that vulnerable adults could potentially be amongst survey respondents is taken prior to contacting any individuals identified as potential interview participants, to ensure support is available for the researcher and participant if required.

An ethical decision-making process (see below) is utilised in the case of any ethical challenges that arise.

The nature of the research does not pose any reputational risk to the researcher, their place or study or their employer. |
| Debriefing | The researcher passes on the findings of the research to participants who wish to be kept informed following completion of the project.

Any obligations to funders in relation to summary reports of the work are met. |
| Confirmation | In line with career guidance interviewing techniques, the responses of all participants are clarified during the interviews. Furthermore, they are given the opportunity to check the narrative they have given after transcription and summarising. |

Table 4.3: Integration of career development practitioner-researcher ethical considerations within the research (Adapted from Johnson and Neary, 2016)

These ethical considerations correspond directly with the Universities UK Concordat to support research integrity. Applicable across all fields, the Concordat sits alongside other ethical practice guides and reiterates four key principles of research integrity: honesty, rigour, transparency and open communication, and care and respect (Universities UK, 2012). These points also correspond with the ESRC[19]'s six key principles for ethical research, which are:

- research should aim to maximise benefit for individuals and society and minimise risk and harm
- the rights and dignity of individuals and groups should be respected
- wherever possible, participation should be voluntary and appropriately informed
- research should be conducted with integrity and transparency
- lines of responsibility and accountability should be clearly defined
- independence of research should be maintained and where conflicts of interest cannot be avoided they should be made explicit.

  (Economic and Social Research Council, no date)

Points on this list require further comment in the context of this study. The latter is pertinent to expand upon as the research is co-funded by Skills Development Scotland who have a vested interest in the research findings and proposed the original research project topic area of gender and apprenticeships. While the project has changed substantially, particularly following the author's move to full time employment as a lecturer in career guidance and development, the organisation may still consider the output to be their sponsored research. Additionally, the author has worked for Skills Development Scotland and has contacts across functions of the organisation. The author maintains a fully independent stance and has reached agreement with Skills Development Scotland that they can have sight of the final thesis and selected other outputs prior to publication of the findings. Furthermore, in the unlikely event that there should be any politically sensitive findings within the research the author will be willing to embargo the thesis for an agreed time period. Skills Development Scotland has been wholly supportive of the research throughout.

Given the interdisciplinary nature of the career decision-making sector, the author is also cognisant of the British Psychological Society (BPS) Ethical Principles for Conducting

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[19] The author's first year of study was co-funded by the ESRC therefore ESRC principles are upheld throughout project.

Research with Human Participants: respect for the autonomy, privacy and dignity of individuals and communities, scientific integrity, social responsibility, and maximising benefit and minimising harm (BPS, 2014, p.7).

The BPS principle of social responsibility and the ESRC first principle of maximising of benefit to individuals and society link to the contemporary emancipatory social justice agenda within the career guidance and development field (e.g. Hooley and Sultana, 2016; Hooley, Sultana and Thomsen, 2017). The research focuses on outcomes that are for the common good in that it considers those who have career outcomes that go against societal norms, in a society considered to be rife with career-related injustice and inequality, thus broadening the social justice argument to gender equality and freedom of choice.

4.3.3 Ethical decision-making processes

Ultimately ethical practice is the continuous attention to the upholding of ethical values, and explicit reference to these values when faced with an ethical dilemma. This encompasses much more than a research study achieving ethical approval and the presumption that researchers intend to act ethically. Ethical practice is not a one-off accomplishment and cannot be measured by a researcher's declaration that they "abide by", "adhere to" or "comply with" ethical criteria. Ethical practice goes beyond legislative and organisational compliance.

However robustly planned a piece of research is, and however keenly an individual is motivated to act ethically, the unexpected can occur, particularly when research participants are given the opportunity to give free text answers in surveys or to undertake qualitative interviews. It is one thing to complete an ethics proposal and meet expected standards on paper but another to operate ethically in practice; it is in the response one takes to ethical challenges that ethical values can be proven. There will always be times when ethical practice is limited to individual accountability; ultimately it is how the researcher conducts oneself in all aspects of their research that is important and it is the individual researcher who is required to "accept responsibility for the decisions they make" (Universities UK, 2012, p.12). While professionalism and ethical practice are closely linked, the individual must have the capacity to acknowledge a scenario as containing an ethical concern, for which ethics training may be required.

At the University of the West of Scotland, all students working towards a postgraduate qualification in Career Guidance and Development must complete a core module, Ethical and Inclusive Practice, which is coordinated and taught by the author of this study. As career development professionals in training studying this module, students consider the ethical decision-making process, which includes understanding individual and collective bias. This aspect of their professional training also responds to current research considering the importance of moral sensitivity as a professional skill, or competence, that careers practitioners can acquire. But even with training in place, one must not assume that others have same moral sensitivity or moral awareness as themselves.[20]

Developing moral sensitivity leads to a foundation upon which morally and ethically sound decisions and actions can be taken. The counterpart to this is "moral blindness," defined by Katsarov and Christen as "when people overlook moral aspects partially or entirely in their decision making," caused by individuals experiencing factors in one of three categorisations: cognitive overload, psychological biases, moral disengagement (2018, p.115). Cognitive overload factors include *moral intensity* wherein short-term outcomes are prioritised over longer term consequences and *ego depletion* affecting moral intentions in high stress scenarios. Moral disengagement includes *rigid framing* wherein moral or ethical aspects of a scenario are blanked out (ibid., p.116). It is vital for any researcher to be mindful of these factors when undertaking fieldwork, for example by ensuring good time management to avoid stress and enable expediency.

Psychological bias is the factor within this grouping that has arguably received greatest attention in recent years, with the focus on unconscious and implicit bias training in professional education and organisational training. The Equality Challenge Unit's *Unconscious bias and higher education* literature review (2013a) and associated *Unconscious bias in colleges and higher education: training pack* (2013b) provide a solid foundation for the academic researcher's training and development in relation to their acknowledgement and mitigation of their implicit and explicit biases.

Vital for the career development professional is knowing which processes to use to deal with an ethical challenge when one arises. With research indicating that "a problem with

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[20] In testing (2018) of a systematic framework for moral sensitivity, the author "correctly" completed the questions in the fastest recorded time, demonstrating an advanced competency for identification of ethical and moral concerns.

perceiving key professional ethical issues…may be rooted in being distracted by irrelevant surface-level information" (Fialkov, Jackson and Rabinowitz, p.281), the option to use an ethical decision-making framework or schema is valuable when an individual is faced with a complex ethical challenge. The author believes that a reaching of a *resolution* that stands up to the rigorous parameters of moral reasoning rather than focusing on a *solution* is important when approaching an ethical challenge. Again, the author of the research looks to their professional body in these scenarios and follows the Career Development Institute 9 step framework for ethical decision-making, which is as follows:

Step 1: Identify the problem

Step 2: Apply the Code of Ethics

Step 3: Review professional literature

Step 4: Consult with experienced others

Step 5: Generate potential courses of action

Step 6: Select the most appropriate course

Step 7: Evaluate the selected course

Step 8: Implement the course

Step 9: Monitor and evaluate

(Career Development Institute, 2015b)

4.3.4 Formal ethical approval

The research, including the pilot project, was subject to the Heriot-Watt University ethics application and approval (October 2017) and major review and confirmation process (December 2017).

4.3.5 Data management plan

A General Data Protection Regulation (GDPR) compliant data management plan which adheres to Heriot-Watt University's Economic and Social Research template was produced for the research and is available to review at https://dmponline.dcc.ac.uk/plans/5238/download.

4.4 Quantitative methods

Quantitative research objective and research question

> **Objective:** To obtain and examine quantitative data relevant to gender typicality and atypicality of individuals completing Modern Apprenticeships.

> **Research question**: Does personal background and the family unit structure affect the likelihood of an individual undertaking an apprenticeship in a gender (a)typical framework?

4.4.1 Overview

This section presents the study's quantitative research instrument design. Following a pilot survey, a full survey was distributed and promoted to Modern Apprentices in Scotland. A process was undertaken to refine and validate the survey to ensure the collection of robust data.

As with all surveys, a limitation of conducting a survey is that the data obtained may not be fully representative of the population, in this case the Modern Apprentice population in Scotland. Modern Apprentices in certain frameworks may be more or less likely to complete the survey. This section explains how this potential limitation was minimised.

The primary quantitative research collected data online using Online Surveys (previously known as the Bristol Online Survey). This web survey package was selected due to its increasing use by academic communities within the UK and its full compliance with UK data protection and accessibility legislation. A self-administered questionnaire using an online tool was preferred due to the number of responses required, geographic location of the sample (the whole of Scotland), complexity, opportunity to complete the survey using multiple types of device (e.g. smartphone, tablet, laptop, PC) and for ease of data extraction.

To encourage response rates, the completion of the survey was incentivised, with respondents offered the opportunity to win one of five £20 gift vouchers.

Issues of confidentiality were clarified within the survey text and a specific focus was taken to ensure use of inclusive language and accessible formats to increase the likelihood that targeted individuals could self-complete the survey.

The live duration of the survey was five months, from 1st June to 1st November 2018. A Gaelic language version of the survey made available on 4th September 2018.

4.4.2   Population, sample size and sampling method

The target population for the survey was based on the number of Modern Apprentices currently progressing through the programme. Defined as "in training", on 31 March 2017 (the annual reporting date) this totalled 37,086 individuals (Skills Development Scotland, 2017b). The target population for the survey, or sampling frame, therefore was 37,086. The inclusion criteria, ensuring a homogeneous group of respondents, was that survey respondents should be completing Modern Apprenticeship in Scotland. This was clearly stated at the outset of the survey, in all communications relating to it and the survey's required elements meant that without stating a Modern Apprenticeship framework, the survey response data could not be incorporated in any analysis.

The survey was distributed and promoted to Modern Apprentices in Scotland via training providers, employers, Skills Development Scotland and targeted postings on social media. For example: it was included as a news article in the Skills Development Scotland Modern Apprenticeship Training Provider newsletter and the Scottish Training Federation website and other skills and education organisations.[21] The intention was to minimise bias and allow every Modern Apprentice to have the same opportunity to participate and therefore the same probability of being included in the sample, reducing sampling error.

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[21] Examples:
   https://www.stf.org.uk/apprentice-survey-chance-win-20-amazon-vouchers,
   https://twitter.com/CCSkills/status/1035119947960082432,
   https://twitter.com/LantraScotland/status/1032929605362102278,
   https://twitter.com/NCLanarkshire/status/492675391317102592.

The target completion rate was approximately 10% of the total amount of Modern Apprenticeships in training. Since the whole population was targeted, this would result in a sample size of at least 370.[22]

A robustly collected sample, reflective of the 2017 Modern Apprenticeship in-training figures, should approximately be split 70% male and only 30% female (ibid.).[23] The implications of this on the potential for generalisability were that the data could be weighted in favour of that obtained from male respondents. As the survey intended to target all Modern Apprentices equally, the decision was made, despite gender segregation present within the Modern Apprenticeship Programme, not to enhance its visibility to female apprentices or to highlight gender underrepresentation as the focus of the research, as this could have led to a disproportionate number of female respondents. Instead, the intention was to concentrate on the collection of sufficient survey responses to make it possible to undertake sub-group analyses of sufficiently large sizes. To minimise this gender bias, gender disaggregation was undertaken in hypotheses testing where appropriate.

4.4.3 Inclusion and accessibility

A priority for the survey was to ensure its inclusivity and accessibility for all Modern Apprentices. The following measures were taken in line with this aim:

- The pilot study was sent to two organisations, one supporting disabled Modern Apprenticeships and one within a sector noted for its gender bias (automotive engineering).
- The final survey was distributed in two languages, English and Gaelic, to increase engagement with Gaelic-speaking Modern Apprentices. Two responses were received in Gaelic.
- Use of inclusive language to engage individuals who identify as non-binary: as the survey attempted the first collection and analysis of data from Modern Apprentices wishing to state non-binary gender, best-practice in language use was paramount and consultation was undertaken with specialist agencies.

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[22] Exceeded in data collection.
[23] The survey also offered the opportunity for participants to identify as non-binary gender.

- An overall "plain English" approach to language use and the following of guidance provided by the Scottish Accessible Information forum (http://www.saifscotland.org.uk/) in relation to all written materials. This was to ensure accessibility for individuals with dyslexia, and other specific learning difficulties and disabilities.
- Alternative formats and completion methods of the survey made available if required.

4.4.4 Survey structure and question types

The survey design was cognisant of the quantitative analysis framework. The structured survey utilised the minimum possible number of questions, utilising closed questions except where deemed absolutely necessary. This was due to the difficulty in coding open-ended responses in a large sample size and because of the intention to undertake univariate and multivariate data analysis. As the purpose of the survey was to obtain objective data, Likert scaling and ranking was avoided and multiple choice questions were used, resulting in the collection of primarily nominal variables, which present with no preference/ranking. The opportunity to provide further information was made available via a free text response box as required. Using Bryman's (2016) classification of question types, *personal factual questions* (information, e.g. gender) and *factual questions about others* (information, e.g. family unit) were used.

A final free text box was included to give respondents the opportunity to add additional information if they felt unable to clearly answer any of the questions, and to create an opportunity to find out more information about any outliers within the responses.

The content and questions for both the pilot and final survey are available in Appendix B and Appendix C, respectively.

4.4.5 Pilot Study

A non-incentivised pilot survey was undertaken, after a draft version of the survey had been tested on a group of individuals, to collect feedback on the questions being asked. A pilot study creates the opportunity for the research design to be tested and refined, with a focus on the relevance of the parameters of the information collected, its reliability and

validity. In addition, the pilot study offered the opportunity for a preliminary review of trends within the data and to test a set of hypotheses. This can be found in the section below: *Pilot survey: indications and amendments*.

Risks identified prior to the pilot survey and their mitigation

Risks attached to the data collection were identified, which primarily relate to the complex landscape for apprenticeship provision in Scotland:

1. While there are 25,000+ Modern Apprenticeship starts per year, a key challenge is that Modern Apprentices may not be aware that they are on a Modern Apprenticeship programme and may not be able to self-identify as such.
   - To mitigate this, the survey targeted training providers who could in turn directly target the survey in turn to their Modern Apprenticeships

2. There are 82 current (2018) Modern Apprenticeship frameworks and the landscape changes year on year with new frameworks added, updated or removed. This means that the current number of "live" frameworks at any one time exceeds 100. The renaming and creation of new frameworks further complicates the landscape, with some survey respondents being unable to confirm which framework they are working towards.
   - To mitigate this, a free text box was included in the pilot survey. As the author has expertise in relation to the field and specialist knowledge of the Modern Apprenticeship frameworks it would be possible to clean the data and provide a rational categorisation of the assumed frameworks.
     - Cleaning the data in this way could be time consuming and comes without the opportunity for verification unless a training provider is involved and anonymity of the respondent waived.
     - The pilot study contained all current live frameworks and a "don't know/unsure" option with a free text option.
   - An option considered was to provide an alternative categorisation, for example by framework grouping or standard occupational classification, however this would lead to weak mapping against the Skills Development Scotland Modern Apprenticeship equality targets.

3. Insufficient respondents could be obtained per framework, to the point of 0 respondents per framework or by gender per framework in those with most under-representation.

   - While the survey could have been targeted towards specific groups, this may have created bias in the data. The promotion of the survey was neutrally targeted.

4. There is a difficulty in correlating Modern Apprenticeship to sector, as for some non-traditional Modern Apprenticeships, it is not clear what industry they relate to (for example, a business administration apprenticeship could be undertaken in any sector)

   - To mitigate this, the pilot survey collected data on both Modern Apprenticeship framework and industry, listed by Standard Industrial Classification 2007 (Office for National Statistics, 2009).

5. Modern Apprentices may not be aware of their level or stage on a Modern Apprenticeship.

   - The decision was taken to not collect this information as existing data shows that women are concentrated in lower level, shorter duration apprenticeships.

6. There may be insufficient respondents overall. Several measures were taken to mitigate this risk:

   - There would be the option to extend the time the final survey was live, as qualitative research could commence while the survey was running if necessary.
   - To increase the likelihood of completion, an incentive was offered.
   - Agreement was made with Skills Development Scotland that the organisation would send the survey direct to all contracted training providers to share with their trainees.
   - In an unlikely final resort option, that would result only if there was a catastrophic data loss, there existed the potential to analyse existing data held by Skills Development Scotland, that is not publicly reported on, to provide new insights. This includes but is not limited to data collected via

the Modern Apprenticeship Equal Opportunities Monitoring Form and the most recent My World of Work user survey.

Pilot survey: indications and amendments

24 responses to the pilot survey were received after it was disseminated to individuals via their employer (Diageo) and training providers (LAGTA and Career Studio)[24] and via social media[25], for a limited time period of 10 days. An initial sweep of trends in the pilot data was undertaken, primarily to ensure robustness of the final survey data.

General demographics:

There were no unexpected results within the general demographic information collected in the pilot survey.

The gender ratio of respondents was: 58.3% male, 41.7% female, with no respondents choosing to prefer not to state their gender and no respondents describing their gender as being different to that which was assigned at birth. Given the small scale of the survey, in relation to gender identity this was not unexpected. Similarly, the gender split for respondents did not match the apprentice population very closely. Collection of data in a greater amount could address both of these points.

In relation to sexual orientation, respondents selected across the categories and one respondent questioned the relevance of the question which was addressed prior to the final survey being disseminated—see amendments list below.

The age spread of survey respondents matched the general population for Modern Apprenticeships, with 18 (75%) respondents having started their Modern Apprenticeship in the targeted 16-19 age range and only one having started aged 25+.

Only 4% of respondents stated they were under-represented by gender in their chosen Modern Apprenticeship or sector, indicating that 96% felt they were overly or fairly represented by gender. This figure was to be expected as the Modern Apprenticeships targeted for the pilot survey were in gender segregated work areas.

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[24] Chosen to ensure a balance in responses, as Diageo and LAGTA apprenticeships are male-dominated and Career Studio apprenticeships are female-dominated.
[25] To ensure some non-targeted responses were also received.

Basic queries were run against the data, using the IBM Statistical Package for the Social Sciences (SPSS) computer software, to ensure validity of data and to consider whether any initial correlations could be found in relation to these gender typical groups of respondents. These queries informed the initial hypotheses tested on the final survey data.

Amendments:

Some minor amendments were made in relation to the responses received, primarily to clarify further the purpose of the study and questions therein as two respondents raised questions as follows:

> Question 17: Do you have any other comments to make about the survey questions? Were there any answers that you wanted to give but weren't able to?
> *I didn't quite see the relevance of the questions about family and siblings. A question about how the apprentice feels about their apprenticeship or something along those lines might be good too.*

As the respondent had not understood the limited parameters of the survey, the following text in the introduction to the survey was highlighted in bold text in the final version of the survey: "…You will be asked about your apprenticeship and about your personal and family background…"

> Question 4: How do you describe your sexual orientation?
> *Prefer not to say - relevance?*

To clarify the relevance of this question, the following text was added to this question in the final version of the survey: Question 4: How do you describe your sexual orientation? (this data is being collected to establish whether sexual orientation could be better considered in relation to the Apprentice experience)

In response to Question 5: Which Modern Apprenticeship (MA) framework are you working towards? If you don't know please tick the last box "not sure/don't know" and provide further details below. Only one respondent chose this option. It was easily manually coded against the correct framework.

In response to <u>Question 6: Do you know what industry you work in?</u> 9 respondents (37.5%) in total selected don't know/not sure or Other. Only those stating "other" were prompted to state their industry, and of these, 4/5 were easily manually coded. This high percentage reflected point four of the earlier risks identified prior to the pilot survey.

The following options were considered:
- To leave the question as it was and manually code "other" responses where possible
- To offer a text box for both "Don't know/not sure" and "Other" and manually code "Other" responses where possible
- To remove the industry question

The industry question was relevant; at role-level different gender biases may present differently within a sector to overall perception of the gender balance therein, yet the overall perception may still have impact. It was however a supplementary question to the main survey. The decision was taken to change the final option in Question 6 to: "Other/Not sure/Don't know" (→If you selected Other/Not sure/Don't know, please describe your industry here), aligned with the style of the previous question, and to manually code responses against the categories if required.

4.4.6   Quantitative survey: prize draw

The prize draw for the final survey was drawn at 11am on Monday 21st January 2019. To select the five winners, the two Gaelic language survey responses were added to the 462 English language responses and numbered 463 and 464. An online random number generator (randomlists.com) was used for the draw.

The numbers selected were: 341, 18, 22, 295, 119

Of these, survey respondent 119 had stated they did not wish to be included in the prize draw, so the survey draw was re-run. The replacement number selected was: 255.

The winners were contacted by individual email to verify their email on 21st January 2019: The draw and winners' first names were also noted on the author's blog at http://www.emmabolger.co.uk/2019/01/phd-survey-prize-draw-winners.html.

Following the verification of email addresses the gift vouchers were sent by email in January 2019 to all survey winners.

4.5   Framework for quantitative analysis

This section presents the data analysis methods for the quantitative data collected through the survey instrument and how they interface with the qualitative data collection, demonstrating the mixed methods approach.

4.5.1   Descriptive statistics and hypotheses testing

Following data cleaning, an initial set of descriptive statistics was produced, to give an overview of the data collected and to check it adequately represented the Modern Apprentice population for the purposes of the research. Where appropriate, data were transferred into Minitab, a statistical software package, to run tests of selected sample proportions, on a question by question basis.

The results are presented using narrative accompanied by illustrative tables, charts and other diagrams where relevant.

4.5.2   Multivariate statistical analysis and the use of regression modelling

The data were transferred into Genstat, a statistical software package, to produce a regression model.

Regression analysis enables more robust interrogation of the data obtained within the mixed methods design whilst offering scope to uncover hidden trends within the survey data. It allows for the exploration of the potential effect of an explanatory variable while accounting for the potential effects of other explanatory variables and is an example of

multivariate statistical analysis. Singh offers a concise summary of the purpose of and growth in appeal of this type of statistical analysis due to "factors such as the advent of statistical software packages, which made complex computation very easy, and an increased emphasis on collection of large amounts of data involving several variables together" (Singh, 2007, p.177). Furthermore, Singh's description of multivariate statistical analysis as a "complementary" technique (ibid.) highlights how it is apt for inclusion in an embedded mixed methods study.

Researcher personal development

This stage demonstrates the implementation of more complex mixed methods research which, as already noted, responds to the call for broader mixed methods research in the careers field. Developing some statistical understanding and the required skills to use software to undertake this aspect of data analysis results in an expansion of the author's capabilities for future research within the field. The researcher specifically chose to use different statistical analysis software at each stage of the research (SPSS, Minitab and Genstat respectively) to gain a better understanding of the strengths and limitations of each package.

4.5.3   Application of qualitative findings

Analysis of the qualitative data created the potential for identification of specific trends which could be examined through further quantitative analysis of the survey data. While these indications can be viewed as a critical part of the mixed methods approach, they must also be considered with caution due to the small scale and specific context in which they were collected. Therefore, while there is scope to explore the extent of their validity and look to triangulate the findings against the survey data, further, larger scale testing would be required to justify their robustness.

4.6   Qualitative methods

Qualitative research objective and research question

> **Objective:** To obtain and examine qualitative data on the career decision-making processes of apprentices in gender atypical Modern Apprenticeship frameworks.

> **Research question**: To what extent do gender atypical apprentices attribute and relate their career decisions to the family unit and gendered influences and influencers?

4.6.1   Overview

This section presents the primary qualitative research methods undertaken, the practitioner-researcher approach, and the practice-informed biographical interview model, a replicable semi-structured interview model to obtain career history data, which utilises career guidance counselling tools and techniques.

To begin, it is important to clarify why the qualitative tool was selected. In contrast to the quantitative tool, which collected a large sample, the qualitative tool sought to obtain indicative data from a smaller sample, with sample members chosen for their demonstration of non-traditional career choices.

A case study approach was rejected, to avoid the inclusion of other voices in the discussion: the perceptions of outside influencers such as family members, teachers and guidance professionals are outside of the scope of this project.

A group interview was considered, as the setting might encourage the sharing of commonly held perceptions. It could perhaps evoke discussion on the feelings, thoughts and experiences that lead to gendered decision-making. However, the research seeks to obtain data on subjects who do not conform, who go against expectations and have, seemingly independently, made career decisions that are outside of gendered norms. Therefore, this approach was also rejected, however the author remained mindful that this could be utilised as an additional qualitative method should the chosen tool not prove satisfactory.

Indicative interviews were selected as the most appropriate qualitative data collection tool. The intention was to draw out data on micro processes undertaken by the subjects, to be analysed using a self-efficacy approach to career decision-making espoused by a specific career development theory and using a theoretical framework for qualitative analysis. The focus in the interviews, to be kept to no more than 30 minutes in length, was to capture biographical information and data on the participants' responses to past career decisions, to look for patterns in behaviours and processes, to consider the weighting placed upon family influences and offer a snapshot of specific aspects of career decision-making.

Qualitative interviewing is often described in language that uses terms such as "richness" or "depth" but in a small sample, the individuals may not always be representative of the wider population. This qualitative interview tool created the opportunity to gain further insight into interview participants' non-traditional career decision-making to create case vignettes[26] and created the opportunity to validate earlier survey responses and gain further contextualised information. This qualitative data could also be tested against the quantitative data to provide greater insight into the trends demonstrated therein and offer credibility whilst avoiding generalisation.

4.6.2   Selection criteria for interview subjects

This section explains the rationale of the sampling approach used for the qualitative data collection. A target of four interviewees relevant to the research question being investigated was set. Setting a small target for the interviews was an intentional limitation, in keeping with the QUAN →← qual design of the study, in which qualitative research offers a route to inform reanalysis of quantitative date and provide context for the quantitative data obtained. To identify participants for the qualitative interviews, the sampling of participants could be completed across all Modern Apprenticeship cohorts or limited to a cohort yet replicable for other Modern Apprenticeship framework cohorts if required. The modest target of four interviewees was chosen as the qualitative data

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[26] The term 'case vignette' has been chosen to differentiate from the frequently misappropriated term 'case study' in the careers literature, which book chapters often conclude with, and to align with a recent publication in the field (Arthur, Neault and McMahon, 2019).

collection would occur at a late stage in the project, in line with the mixed methods approach, following quantitative data analysis.

The first method to be used was strategic purposive sampling to obtain participants with differing "key characteristics" (Bryman, 2016, p.408). This could be undertaken using deviant case analysis of the survey responses collected via the qualitative tool. The potential participants could be selected anonymously and, as they had completed the survey only up to a maximum of eighteen months earlier, would likely still be in training.

The identification of deviant cases demonstrates the value of the mixed methods approach, enabling the qualitative data collection to interface with the quantitative data collection. Using deviant case analysis, individual survey respondents can be identified as suitable research interview participants. The identification as a deviant case in this scenario requires the meeting of two parameters:

+ under-representation by gender in the framework

+ under-representation by gender in the sector.

To identify individuals undertaking a Modern Apprenticeship framework in which they are underrepresented by gender, historical trends in framework gender splits can be used. These demographic confirmations could be re-run prior to qualitative interviews taking place to ensure interview participants have been correctly identified and are still underrepresented by gender in their framework.

The second sampling method to be used was direct recruitment via the author's own network. During the time period of the research project, interest was generated within the apprenticeship and post-apprenticeship community (e.g. current apprentices, completed apprentices, training providers, employers) of the work being undertaken. While the first approach would result in qualitative research participants that were likely to still be in training, with no guarantee they would stay in their sector/role upon completion of their Modern Apprenticeship, by this method participants could be selected because they had *maintained* work in a gender imbalanced role/sector offering lengthier validity of their gender imbalance within their role/sector. This would also offer the opportunity for the author to select from a wider pool of potential subjects, who may have differing key characteristics to the participants identified via deviant case analysis of the quantitative data.

As a back-up, a third sampling method was proposed. Should insufficient responses be obtained by either method, the author could undertake direct recruitment for the qualitative interviews from the current apprentice population, which may include recent new starts or those completing an apprenticeship who did not complete the original survey. Potential research participants currently completing a Modern Apprenticeship meeting the same criteria as those selected via the deviant case approach to the survey data could be targeted. Recruitment could be undertaken via the same methods used to recruit participants for the quantitative survey, such as via a direct call to training providers which would limit bias in the recruitment process. As with the deviant case identification method, demographic confirmations would be re-run prior to qualitative interviews taking place to ensure interview participants had been correctly identified and fulfilled the research profile.

To limit the parameters, and in turn obtain relevant and focused data, interview participants were sampled from a specific cohort only, those on the Career Development Modern and/or Technical Apprenticeship Framework[27]. This created a limitation to the data obtained, however enforcing this constraint was an explicit choice in relation to the scope and value of the research project.

There is a clear justification for choosing this cohort:
- The researcher has specialist and expert knowledge in the career development sector and professional roles therein.
- The selection of this framework would directly relate to the objectives of the thesis, as to explore gendered career decision-making influences and influencers, specific issues pertaining to gender bias within in the sector itself should not be overlooked.
- An intention of the research is to explore the potential impact of the predominance of women in the careers sector. The sector has a clear gender bias with over 70% of the careers workforce in Scotland being female (Skills Development Scotland, 2019d, p.23).

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[27] An overview of the Modern and Technical Apprenticeship Frameworks in Career Development is available in Appendix A.

- The Modern Apprenticeship Career Development and Technical Apprenticeship Career Development frameworks were fairly recently (2016) approved[28], and the documentation for both qualifications highlights consultation events which took place during their design period, with the frameworks' existence and design deemed to improve accessibility for non-traditional entrants to the sector (Skills Development Scotland/Career Development Institute, 2015a and 2015b).

- A good proportion of respondents (20 responses) to the quantitative survey conducted stated they were completing a Modern Apprenticeship/Technical Apprenticeship in Career Development.

- The researcher has a strong network in this sector and would be able to directly approach training providers should insufficient numbers of research participants be obtained via the deviant case identification from the survey.

- The sector offers progression into careers professional trainee roles within the public sector, which in itself offers a relatively stable, predictable and secure working environment. In conjunction, the Public Sector Equality Duty (PSED) in Scotland places a requirement on employers in the sector to apply and meet equality duties, which encompass gender equality.

- Furthermore, this transpired to be an astute decision in relation to global events which unfolded during the period of qualitative data collection (see later note on the impact of COVID-19 on the project).

Accordingly, four individuals were identified via the first sampling method, as deviant cases from within the quantitative survey data, and were approached for interview. None of these individuals responded to a request for a follow up interview. Two individuals were identified via the second sampling method, within the author's network, and agreed to be interviewed. The third sampling method was therefore utilised, and a call for research participants went out via a training provider. The first three individuals who volunteered to be interviewed were interviewed. Thus the target of four interview participants was exceeded, five interviews took place and no further interviews were conducted.

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[28] The researcher advised on the equality wording of the framework whilst employed by Skills Development Scotland.

4.6.3 Collection of interview data

Initial contact

Potential research participants were contacted initially by email. A suitable location was agreed for the interviews, which took place face-to-face and were recorded using an audio recording device. All participants were asked to complete an abridged version of the qualitative survey tool, to ensure accuracy of key personal data to be used in the mixed methods data analysis. Interviewees were provided with participant information sheets and consent forms (available in Appendix D) and were also made publicly available online at: https://tinyurl.com/PhDInterviews A printed copy of the Economic and Social Research Council information sheet: 'What to expect as a research participant' (online, no date) was also provided. All data were stored in line with the data management plan to ensure a clean audit trail. Data collected in the interviews were removed from the device and stored securely as soon as possible after collection. Individual transcripts were produced of the interviews.

Interview approach

It is easy to perceive similarities between interviewing for explicit data collection purposes in qualitative research and one-to-one career guidance/career counselling interventions, and much consideration is given within the literature of both fields to the interview process and setting. Both the career guidance and research interview offer a confidential environment in which data are conveyed by the interviewee for interpretation by a skilled interviewer, with clear parameters. There are problems, however, inherent in overstressing this as a shared position. It would be improper to assume that the qualified career development practitioner has an intrinsic ability to produce robust and authentic academic research within a qualitative research environment. As discussed in the ethics section of this thesis, it is essential for a practitioner-researcher to also undertake qualitative research interview training.[29]

While the unintentional helpfulness to the client-participant of undertaking a research interview has been noted (Amundson, 2003, p.104) it is vital that, knowing their

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[29] The author has introduced training in this area to the MSc Career Guidance and Development at the University of the West of Scotland.

interviewer is a guidance professional, the client does not come to expect a guidance intervention from a research interview. However, to fully separate the two may not be possible if the researcher discloses their background. It is therefore important that the interviewer comes to the interview well-prepared and mindful of their professional responsibility and is willing to, post-interview, signpost any career information, advice and guidance resources that the interview participant may have shown a requirement for, in line with ethical practice and duty of care.

To create parameters for this specific practice-led approach to the interviewing of the subjects, wherein the researcher takes the stance of the career development practitioner as interviewer, the author developed[30] a practice-informed biographical interview model to be used when obtaining career history data from research participants. Through prior work and training, the author is both an experienced qualitative interviewer and a qualified career development professional, therefore the approach used in the qualitative interviewing process draws from skillsets in both fields. Indeed, the author's interviewing style could be deemed to have emerged from the combining of these prior skill sets.

While summary career history is often obtained from clients to add depth to the career interview, there is no commonly used template to do this. In a sector where practitioner-led research is encouraged and where practice often leads to new theoretical models, there is value in formalising this approach. Work undertaken by McCrory and O'Donnell (2016) offers insight into the utilisation of counselling skills in the research interview. Their Participant-Centred Approach to Qualitative Research Interviewing (PCA) highlights the need for effective working relationships, established in line with Rogers' (1962) enduring foundation elements of counselling (congruence, empathy and unconditional positive regard) and considers the correlation between the applied counselling techniques of "contracting", "attending and listening", "reflective skills" and "questioning" and elements of a research interview (2016, pp.166-172).

In this study the interview was used to obtain a chronological biographical account of the participant's career history. Creswell defines the interdisciplinary biographical tradition as, "the study of an individual and her or his experiences as told to the researcher," (1998,

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[30]Initially for the purposes of this study but now adapted by the author for use as part of postgraduate training in careers research on the MSc Career Guidance and Development at the University of the West of Scotland.

p.47) and in the model used the emphasis is on self-identification of key career decisions, transition points, influences and influencers.

Interview environment

Prior to analysing the intent and approach of each stage of the interview model, it is important to give attention to the physical environment in which interviews take place. The comfort and confidentiality of the physical interview location is paramount in both guidance counselling and research interviewing to ensure an open and honest interaction. Comfort in this context is about more than common sense approaches and ensuring a confidential and quiet, neutral, interview location with ambient room temperature, adequate lighting and furniture (although these key points often receive minimal consideration in guides to conducting social research).

Orientation, room layout, interviewer posture and body language convey a professional and attentive approach. The practitioner-researcher may look within their field to enhance their understanding of the physical implications for successful interviewing. Egan's oft-cited *The Skilled Helper* offers clear instruction in this area, using the "SOLER" model for empathic presence, wherein the interviewer should present themselves in the following manner: S: Squarely; O: Open posture; L: Lean towards; E: Eye contact; R: Relaxed (2014, p.77-78) to show involvement, engagement, attentiveness and comfort. How the SOLER model is employed by the interviewer is open to interpretation and judged by the scenario, but Egan encourages behaviours that are designed to elicit non-confrontational interactions and enhance an engaged and attentive interview in which both participants are set at ease, a scenario no qualitative researcher would dispute as conducive to good data collection.

Research methodology literature espouses key fundamentals of good one-to-one interviewing practicalities: attentive listening, appropriate pacing of questions (e.g. Bryman, 2016; Creswell, 1998) and increasingly notes the importance of reflexivity in research practice (e.g. Bryman, 2016; Mann, 2016). A primarily philosophically rooted phenomena, researcher reflexivity is an introspective, often post-hoc, review of person and practice. However, interviewee reflexivity, which may result in the participant demonstrating a change of perspective mid-interview, also warrants consideration (Perera, 2019) in the context of this study.

In a career-review interview it is arguable that reflexivity explicitly extends to the interview participant. While the subjects in this study are aware that they act against gender norms, due to their selection for interview, when being questioned about their specific career decisions, it may be that they reflect on the outcomes and turning points in their lives to date more deeply than they have previously. In this scenario, once again, the broad skills (alongside the utilisation of guidance tools and techniques discussed in the following section) of a career practitioner-researcher become ever more valuable. Not least, the practitioner-researcher needs to be able to reflect in action (Schön, 1983) and to do so ethically, by considering when, and when not, to implement advanced interviewing techniques. For example, a skill developed via guidance practice, is that of using challenging approaches which may or may not be appropriate in a career history interview: "the aim of challenging is to help the client reflect, evaluate and increase their awareness and understanding," (Reid, 2019, p.191). This may indeed be helpful in the conveying of detail around career turning points for the purpose of data collection, but if a distressing reflection is left unsupported, "a wrongly exercised challenge can do more harm than good," (ibid.) and risks the practitioner-researcher disregarding their duty of care.

4.6.4 The practice-informed biographical interview model

Interview style: questions and responses and explicit use of career tools

The literature on qualitative research training (e.g. Bryman, 2016; Kvale, 1996) and careers professional training (e.g. Arthur, Neault and McMahon, 2019; Reid, 2016; Kidd, 2006) includes core teaching on how to question and respond in the most effective way, orientated around active listening skills and variation in questioning styles. Table 4.4 summarises interview question and response techniques that draw on and combine teachings from both fields and are utilised in the practice-informed biographical interview guide for this study.

Question type	Purpose
Open questions	Non-invasive question type.
Statement questions	Non-invasive question type that offers the interviewer the opportunity to prompt further.
Probing	Direct question type for gathering of specific pertinent data. May be used to challenge the interviewee and gain more detail about their frame of reference.

Response type	Purpose
Restating and paraphrasing	A reflective technique, allowing for clarification and to check understanding of both the interviewer and interviewee. Also offers scope for triangulation of data.
Summarising	Creates structure, offers a natural pause or bridge and creates the opportunity for further clarification or for the interviewee to indicate where any further input may benefit them, by demonstrating that the interview is about more than collecting key data.
Silence	Allows time for the interviewee to reflect on points raised.

Table 4.4: Examples of effective interview dialogue

Within the guidance interview, it is not uncommon for the interviewer to use physical prompts, verbal and non-verbal gestures, or sociodynamic counselling methods and tools, to elicit information. Prominent in the respect of sociodynamic methods is the work of Peavy; many of the written tools and techniques used in career guidance interviewing can be seen to fit into Peavy's "life-space mapping" approach (2000) wherein life space is defined as a psychological and sociological space that can be made visible. The broader sociodynamic approach can include: "images, visualisations, activity-based tasks, written tasks" and "encourages counsellors to be creative and develop their own methods," (Arthur, Neault and McMahon, 2019, p.394). Sociodynamic tools are used in the interview model employed in this study.

Interview structure: seeking a model

All interviews in the study used the same replicable semi-structured approach which incorporates adapted guidance counselling skills and the application of specific career guidance tools and techniques. The explicitly staged model follows on from the use of staged guidance interview models in the careers field, making it accessible and familiar to careers practitioners looking to expand their skills into research. A selection of popular stage models, both specific to and not-specific to career guidance, are summarised in Table 4.5.

Popular Models	Egan	Kidd	Culley and Bond	Ali and Graham
	(not careers-specific)	(careers specific)	(not careers-specific)	(careers specific)
Ethos	3-stage problem management approach	(following Egan) 4-stage counselling approach	3-stage integrative skills-led model	4-stage counselling model
Stages	Stage 1: explore concerns Stage 2: determine outcomes and set goals Stage 3: plan ahead	Stage 1: relationship building Stage 2: enabling self-understanding Stage 3: exploring new perspectives Stage 4: forming strategies and plans	Stage 1: relationship building Stage 2: assessing problems and concerns Stage 3: planning and formally ending the interview	Cyclical model continuously routing through the stages of clarifying, exploring, evaluating an action planning

Table 4.5: A brief comparison of careers interview stage models (Egan, 2014; Kidd, 2006; Culley and Bond, 2006; Ali and Graham, 1996)

An interview seeks valid data and is not a therapeutic intervention to instigate client progress yet Culley and Bond's counselling model offers an adaptable structure, which was used to inform the creation of the interview model.

The practice-informed biographical interview model

The practice-informed biographical interview model is a replicable semi-structured interview model designed by the author to obtain career history data, which utilises career guidance counselling tools and techniques. The practice-informed biographical interview model (Table 4.6) is a flexible model which can be adapted to consider specific labour market contexts and equality, diversity and inclusion issues. The model was piloted with volunteer interviewees prior to its utilisation in this study. It is used as a framework for the questions of the semi-structured interviews; specific questions are added to the model to produce a guide for a semi-structured interview. The guide used for the interviews conducted in this study follows.

Model Stage	Activity	Purpose	Link to Cully and Bond's Process (2006, pp.13-24)
Stage 1: Orientation			**Beginning**
Stage 1a: Contracting	Interviewer presentation	The contracting stage creates a formal introduction to the interview. It allows the researcher to introduce themselves again, explain the purpose of the interview, its expected length, the boundaries and parameters of the interview. The confidentiality level of the interview is stated and the interviewer clarifies any requirements for notetaking or recording activity.	1. *To establish a working relationship:* the interviewer is "trustworthy" and "respectful" 2. *To clarify and define problems*: the problem, in this scenario, is that of the interviewer requiring data 3. *To make an assessment:* clarification of what the interviewee will share 4. *To negotiate a contract:* mutually agreed purpose of the interview and management of expectations
Stage 1b: What is career?	Interviewer-led	Clarification of terms to be used and the scope of what is meant by "career."	
Stage 1c: Verification of	Interviewer-led using written resources	While functioning as an icebreaker, the clarification of previously obtained	

demographic data		demographic data also ensures accurate data are obtained, in line with research ethics and data protection compliance.	
Stage 2: Data collection			**Middle**
Stage 2a: Timelining	Interviewer-led career guidance tool	Use of psychodynamic mapping tools The interviewee is asked to produce a timeline of their career history to date, using a career line. If the interviewee is unable to write, the interviewer can act as scribe.	*1. To reassess problems and concerns:* the interviewee is encouraged to convey their own perspective *2. To maintain the working relationship:* the interviewer focuses on their duty of care in the self-review process *3. To work to the contract:* the interviewer does not deviate from the requirements of data collection interviewing
Stage 2b: Personal networks and family background	Interviewer led career guidance tool	Use of psychodynamic mapping tools The interviewee is asked to map important people onto their career line or to put them onto a new map If the interviewee is unable to write, the interviewer can act as scribe.	
Stage 2c: Career turning points	Interviewer led	Probing and expansion of data conveyed. The interviewee is asked to pinpoint clear and specific career decision points and discuss in more detail any critical or significant events.	
Stage 2d:	Interviewer led	Consideration of the influence of	

The labour market		environmental factors on career decision points: for example, participation in positive action programmes; geography.	
Stage 2e: Equality, diversity and inclusion	Interviewer led	Consideration of equality, diversity and inclusion factors (e.g. gender, disability, ethnicity).	
Stage 3: Conclusion			**Ending**
Stage 3a: Data validation	Interviewer-led summary	Reflection on and verification of points discussed.	*1. To decide on appropriate change* *2. To implement change* *3. To transfer learning:* if required, the interviewee is supported beyond the scope of the interview *4. To end the working relationship:* formally ending the contract
Stage 3b: Duty of care	Interviewee response	Time accounted for to give any additional help and to maintain professional responsibility. Interviewee asked whether they require the signposting of any sources of further career information, advice and guidance support.	
Stage 3c: Ending	Interviewer presentation	Formal ending of the interview, with a reminder given of what the data collected will be used for.	

Table 4.6: The practice-informed biographical interview model

The practice-informed biographical interview guide for this study

In line with the model, to ensure clear parameters, each interview commenced with a brief discussion to clarify the interviewee's understanding of the term "career" with clarification offered by the researcher as to how "career" is being used in the research, to create a shared understanding and consistency within the data.

The subject's responses to the abridged survey (and original survey, for the subjects identified via deviant case analysis) were clarified for triangulation and validation purposes. Specific interview questions were then asked, with a focus on the identification of career decision or turning points and their relationship to gender.

Table 4.7 presents the semi-structured interview framework used in the qualitative data collection.

Stage	General discussion and specific questions
Stage 1: Orientation	
Stage 1a: Contracting	Interviewee is welcomed to the interview and thanked for their participation Clarification that participant information has been received and understood and reiteration of the purpose of the interview as required. Confidentiality of data reiterated and use of recording device explicitly re-stated. Stating of the expected duration, boundaries and parameters of the interview and its position as data collection rather than career guidance but that any difficult issues will not be left hanging. The interviewer clarifies that any requirement for notetaking is for the purposes of the interview only and will be securely destroyed at the end. Interviewee is free to review the notes at any point.
Stage 1b: What is career?	Q. You are here today to talk about some of your career decisions. What do you understand by the term career? *Interviewer can explain that this can cover both work, education and personal life, but does not correct the interviewee's perspective.*
Stage 1c: Verification of demographic data	Interviewee is shown their response to the pre-interview survey and the responses therein are verified.
Stage 2: Data collection	
Stage 2a: Timelining	Q. Are you ok to do a written/drawing activity? If not, I can do the writing and you can tell me what to put where. The interviewee is asked to produce a timeline of their career history to date, using a career line. *This is a simple line drawn on a piece of paper, to which the interviewee may add their own end date (ether in the present or future)*
Stage 2b: Personal networks and family background	The interviewee is asked to map important people in their life in relation to their career history, including family members, onto their career line or to put them onto a new map.
Stage 2c: Career turning points	The interviewee is asked to pinpoint clear and specific career decision points on their career line and discuss in more detail any critical or significant events.

	Q. Can you think of anyone who was important around the time of any of the career decisions? Apprenticeship specific: Q. When did you first think about doing a Modern Apprenticeship? Q. What did your family think of this decision?
Stage 2d: The labour market	Apprenticeship specific: Q. How did you find out about your apprenticeship? Q. Was this something lots of your peers did or were you different? Q. Did you take part in any positive action activities, for example you spent a day out of school attending a workplace or training provider in the sector?
Stage 2e: Equality, diversity and inclusion	Q. What does equality and diversity mean to you? Q. Do you feel like there have been any equality and diversity issues for you in your career? Gender specific: Q. Looking at the decisions you've made, where there any points where you thought about whether it was usual for someone of your gender to do this? What made you do it anyway? Do you think anyone influenced you to do something that isn't the norm?
Stage 3: Conclusion	
Stage 3a: data validation	Interviewer recaps the points made throughout the interview. Q. Is there anyone else you can think of in your workplace now who would be a role model? Or someone that you'd have gone to for careers advice yourself or to talk about career planning?
Stage 3b: Duty of care	Q. We've talked a lot today about the things that have happened to bring you to where you are in life right now. How are you feeling about that? Q. In talking about the past, you might also have started to think about the future. Can you think of any career information, advice and guidance support that might help you plan your future career?
Stage 3c: Ending	Interviewee is thanked again for their participation and reminded of how the data will be used for research.

Table 4.7: The practice-informed biographical interview guide for this study

4.6.5 Transcription methods

The interview data were transcribed by the author, using standard orthography and punctuation.

4.6.6 Impact of the COVID-19 pandemic on interviews

The qualitative research collection for this project was conducted within the final year of the study, during which period the global COVID-19 pandemic occurred. It would be remiss, indicating a potential overlooking of ethical implications and the validity of design methodologies, to not explicate the potential impact of the pandemic on the qualitative work undertaken. While vital for all social sciences research, the potential for responsiveness of both researcher and research design became visible.

As many workplaces, particularly public-facing and office-based environments, closed due to pandemic lockdown restrictions, the physical location of the interviews may have changed from a neutral or work-based environment to, perhaps, the family home. Being asked questions about family background and the influence of family members whilst in the family home itself, may have had an impact. To mitigate this, interviewees were encouraged to join the video interview in a space where they would not be overheard and felt able to speak freely.

The intention had been to conduct all interviews face-to-face, in the same physical location, however the impact of the pandemic meant that this was no longer possible, in all but one interview. Interviews were instead conducted using video conferencing, consistent with the principles of interviewing practice noted earlier in this chapter. In the interviews conducted remotely, the unprecedented labour market environment in which participants found themselves was noted, and it was clearly reiterated that their answers to the questions posed were reflective, based on their time as an apprentice rather than their perceptions of their present and future career.

Furthermore, the importance of "Stage 3b: Duty of care" became more prominent in the interviews and its value further reiterated. Within the "Stage 1a" contracting section the difficulty of the current environment was surfaced. In all interviews conducted after the onset of the pandemic, participants noted the uncertain and turbulent working life they or

others might have ahead in the short, medium and long term and time was given to briefly discuss this within the final stage of the interview and relevant sources of support signposted where appropriate.

4.7   Qualitative analysis framework

4.7.1   Theoretical choices

This section justifies the selection of a specific career development theory and framework for the analysis of qualitative data obtained in the indicative vignettes.

Trends in frontline careers practice, as noted in the literature review, suggest post-hoc application of theory could be possible for the research undertaken. While pertinent, mirroring practice would not necessarily elicit the most robust theoretical analysis. The theoretical literature review highlights the limitations of gendered theories in focusing solely on women's career decision-making so, as the intention of the data collection was to consider atypicality regardless of gender, these theories were discounted as frameworks to use. The literature also indicates how contemporary career development theory is dominated by those theories that demonstrate convergence from differing schools of thought and adaptation over time. Of these, two integrative theories have received much attention in recent years: Social Cognitive Career Theory (SCCT) and the Systems Theory Framework (STF). A model of SCCT is used in the analysis.

Rejection of the Systems Theory Framework

Before introducing the SCCT framework, it is important to summarise why the STF was rejected. Patton and McMahon's metatheory (e.g. 1999; 2006; 2015) appears to offer much in its overall constructivist perspective, seemingly apt for use in a contemporary analysis of a guidance intervention orientated research interview. The scholars state the STF "is not designed to be a theory of career development" but a "framework within which all concepts of career development described in the plethora of career theories can be usefully positioned and utilised in theory and practice" (2006, p.196). However, a core underpinning feature of the STF presents a challenge for this study and its use within a pragmatist paradigm.

The STF attempts to link all the concepts by defining two spheres of influence: content and process. Content influences are both individual and contextual (social/environmental), demonstrating a clear link with the development of career theory. Process influences include the repetitive interactions between individuals and their context and temporal change, again linking clearly with trends in the discipline. The ethos of the STF is also reflective of contemporary career guidance practice and practitioner value of all theories, whilst promoting a constructivist implementation. These positions are sound and encompassing of theory to date. It is however the third process influence that presents the author with an insurmountable challenge in relation to her own philosophical position: the final process influence being that of "chance."

The researcher does not view the notion of chance as an influence that can be theorised in the context of career. While the concept of luck is incorporated by other theorists (perhaps most notably in Krumboltz's Planned Happenstance Theory) the capacity to capitalise on fortune or fate is about an individual's identification of such 'luck' and response processes in relation to seemingly unplanned events. In the STF, labour market changes and life-changing accidents are considered chance events. Even genetic endowments are regarded as such (Patton and McMahon, 2006, p.210) yet a talent can never emerge if not given the opportunity to flourish, labour market trends can be predicted and manipulated and accidents, like all life events, occur through action, however unlikely or likely an outcome may be. Like all else in life, chance does not occur within a vacuum. This is acknowledged: a dominant constructivist philosophy is used in the STF as justification for the inclusion of chance as a process influence, and an individual *may* explain an event as a "chance" event despite its "interconnectedness" with other context and process influences (ibid.). Yet this presents a possible philosophical contradiction; if the client sees their life as built around chance events, and the practitioner-researcher applies a differently perspective to their view, then the two are operating from different worldviews. To position chance as a key tenet of the STF metatheory sits uneasily with the author; to define this approach, in which constructivism is privileged, as compatible with *all* other career theories ignores alternative underpinning epistemological positions present within earlier postulations. While applicable to mixed methods research, a pragmatist position should not be considered to 'catch-all' other philosophical positions.

It may be possible to adapt and test the STF by removing the chance process influence but this would negate the metatheory's position as an integrated framework. Therefore, the STF was rejected as a framework for this research for primarily epistemological reasons.

Social Cognitive Career Theory in the convergent landscape

The author's position was to instead look to a theory that offers context-specific application. As discussed within the theoretical literature review, the major trends in career development theory are the interdisciplinary convergence of vocational psychology and sociology and the epistemological convergence of positivist/objectivist and constructivist worldviews. Social Cognitive Career Theory (SCCT) is one such position.

SCCT has undergone development and expansion since it was first postulated by Lent, Brown and Hackett in 1994; clarity as to which iteration is used in research is essential. Furthermore, other models have emerged based on the SCCT, and their rejection warrants comment. Most pertinent to this research is the Kaleidoscope Career Model (KCM) (Mainiero and Sullivan, 2005) which offers a gender-focused advancement of the SCCT. KCM however takes a focus on women's careers while the research undertaken considers the unconventional career decision-making of individuals of all genders and thus requires neutrality.

SCCT is well utilised in career research; a comparative global abundance of projects and papers test its validly and/or broadly apply it to empirical work. SCCT is often referred to as a 'self-efficacy' or self-belief approach to career decision-making, a reductionist approach which undermines the complexity of its core components. Its application extends from, for example, the vocational education and training context of study of school-to-work transitions (Lent, Hackett and Brown, 1999) to offenders (Johnson, 2013) and criminal justice populations (Brown, Lent and Knoll, 2013) and application, crucially, in a gendered context (Inda, Rodriguez and Pena 2013; Chronister and McWhirter, 2003), demonstrating a useful legitimacy across diverse groups.

Not least, SCCT "emphasises learning in contexts such as home environments. Parents' roles in providing experiences for their children, encouraging the development of

abilities, and providing support or barriers contributes to the development of children's self-efficacy outcome expectations…SCCT emphasises the centrality of families" (Liu and McMahon, 2018, p.103). These are concepts highly pertinent to the work undertaken in this project wherein family may be considered as resonant to career decisions throughout the lifespan. SCCT can be applied to both quantitative and qualitative research, making it viable for mixed methods research. It can be used in both large and small scale research samples. In this study, its application is qualitative and small-scale, therefore the *themes* of the SCCT models are used rather than detailed testing of, for example, self-efficacy measures.

Over time the SCCT has evolved and for its, perhaps simplistic, application here to the indicative vignettes obtained, the most recently formulated model of the theory is used and the key components of the enduring aspects of the unifying theory prioritised. Not least, the relative newness of the model should be treated with caution in the ensuing period wherein practical testing is limited (Lent et al., 2016, p.48) although "the model has begun to receive a healthy level of attention in the literature and is stimulating a growing number of novel research applications in a variety of career process domains, despite its recent appearance" (Brown and Lent, 2019, p.569) suggesting flexible value in its application. The creation of a fifth model of SCCT by the original authors produces the Social Cognitive Career Theory model of Career Self-Management (SCCT CSM) (Lent and Brown, 2013) which is applied in this project. Being "aimed at *process* aspects of career behaviour that transcend particular career fields" (Lent et al., 2017, p.107) it offers applications across vocational sectors and roles. The SCCT model of CSM design also correlates with the most popular age range for apprentices and the broad scope of Modern Apprentice framework provision in that it was "developed to predict how people make school- and work-related choices and manage other important developmental tasks, challenges, and crises, regardless of the occupations they enter" (Brown and Lent, 2019, p.568). Furthermore, SCCT theorists highlight the need for more focus on bridging the gap between theory and practice, a theme noted in the literature review. They suggest that "one especially ripe area involves SCCT's application to career choice assessment and intervention," (ibid., p.575) correlating with the overall aim of the discussion stage of this thesis, to contribute to the contemporary career guidance and development canon in the context of equality and inclusion in career decision-making. While limited in its potential application in mixed methods research and to the current project, the SCCT model of

CSM is applied to the qualitative data obtained in Stages 2c, 2d and 2e of the practice-informed biographical interview model.

A core underlying tenet of all SCCT models is "the assumption that people are typically able to assert some measure of personal control, or agency, in at least some aspects of their own career development" (Lent and Brown, 2013 p.558). This ability to actively self-direct career decision-making, the authors argue, justifies the existence of career support services but is tempered by that the consideration that "allowing for agentic capacity in no way implies that people fully control their career lives" (ibid.). SCCT offers scope to explore the role played by CIAG services but with cognisance of the limitations of all career influences and influencers. As an integrative, convergent theory, SCCT clearly allows for psychological and sociological factors to influence the career decision-maker and explicitly the SCCT model of CSM "focuses on factors that influence the individual's purposive behaviour" (ibid.). Its pertinence to the current research is demonstrated in its acknowledging of the decision-maker as both in control of and influenced by external factors that result in non-traditional career decisions.

The SCCT model of CSM is a two-part model based on the "adaptive career behaviors" (both proactive and reactive) people use to "help direct their own career (and educational) development" (Lent and Brown, 2013, p.559). The SCCT developmental framework presents career development via cyclical and repetitive re-entry through commonly seen but tentatively age-fixed lifespan periods of growth, exploration, establishment, maintenance and disengagement/reengagement. Within the lifespan, adaptive career behaviours are considered to draw from a broad and varied activity list (ibid., p.560) albeit generally distributed between "developmental tasks," such as work experience, and "coping skills," such as transition negotiation (ibid., p.561). The focus on agency is pertinent to the contemporary Career Management Skills approach to CIAG practice in that career behaviours "allow individuals to take part in their own career development, adaptation and renewal" (Lent et al., 2016, p.48).

The SCCT model of CSM is used in this study to identify the career behaviours associated with career decision-making vocalised in the qualitative interview data and to allocate them within a thematic structure for discussion. It is not intended to offer a complex empirical testing of data against SCCT self-efficacy measures or testing of variables, due to the limited data available, but follows trends in the SCCT literature (e.g. Chronister

and McWhirter, 2003; Brown, Lent and Knoll, 2013) to apply constructs of the theory with an acceptance of the underlying tenets, in order to obtain practice-orientated learning by illustrating career behaviours in context.

4.7.2 The thematic template for the qualitative analysis

In line with the biographical interview model employed, the writing-up of a narrative representation of the qualitative data sits within a biographical tradition, wherein events, "epiphanies", events and objective experiences, are presented in relation to chronological life stages (Creswell, pp.146-149). The transcribed interview data were coded against the proximal antecedents, "personal or environmental attributes that are relatively malleable and responsive to particular developmental or situational challenges" (Lent and Brown, 2013, p.561) and distal antecedents, "person inputs and contextual affordances that, together, comprise the individual's initial "social address" (ibid., p.563) of adaptive career behaviours defined in the SCCT model of CSM. The proximal and distal antecedents are presented in Table 4.8.

Adaptive Career Behaviours	
Proximal Antecedents	
Cognitive-person factors	Self-efficacy; coping efficacy; process efficacy; self-belief; outcome expectations (social, material, self-evaluative); goal directedness.
Contextual and personality factors	Supports: social, financial; limitation of barriers; socioeconomic conditions; individual agency; resources; behavioural performance; behavioural tendencies.
The role of interests and abilities	Quality of performance[31]; ability.
Distal Antecedents	
Person inputs	Demographics: gender, ethnicity, sexual orientation, background, disability.
Contextual affordances	Education; resources.

Table 4.8: Sources of Adaptive Career Behaviours within the Social Cognitive Career Theory model of Career Self-Management (Lent and Brown, 2013, pp.561-563; Lent et al., 2016 pp.107-108)

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[31] The SCCT model of CSM explicitly omits inclusion of educational and vocational interests.

In analysing against a prescribed list of possible adaptive career behaviours as lexical descriptors the thematic template offers a neutral initial base for presentation of the findings.

Following the application of the SCCT thematic template, additional coding of prominent thematic concepts was undertaken pertaining to the interviewees' attribution and relation of their career decisions to the family unit, their citing of gendered influences and influencers, and their transmission of gendered concepts.

While consideration was given to the use of NVivo or similar, due to the small data set, computer-assisted qualitative data analysis software (CAQDAS) was not employed. To create a starting point for the categorisation of antecedents and representation of the data, a tag cloud visualisation tool was utilised, as espoused by Mann (2016, p.208) to highlight potential themes via frequently used lexical units.

4.8   Conclusion

In this chapter, of significant length, the methodology for the new research was presented and evidence of the thesis's contribution to knowledge, namely the extended exploration of practitioner-researcher methods and practice which will be further explored in Chapters 6 and 7, has emerged.

The chapter began with an overview of the mixed methods approach of the thesis and its underpinning philosophical positioning within a pragmatist paradigm. The specific mixed methods approach was justified and positioned against existing mixed methods frameworks and the relationship between the quantitative and qualitative aspects of the research was presented. Responding directly to the research gaps identified in the theoretical and empirical literature reviews, specific objectives and research questions were formulated for the new research.

Substantial consideration was given to the ethical processes pertinent to research in the career guidance and development discipline and to the practitioner-researcher's position. In mapping research approaches against the Career Development Institute Code of Ethics (Career Development Institute, 2019a) and general principals of ethical research, the

chapter demonstrated the importance of robust ethical compliance in keeping with the values espoused within the career guidance and development sector, for research undertaken by the practitioner-researcher.

Following this, the processes for conducting the new research were presented in detail. The quantitative methods section explained the purpose and form of the survey tool and included a review of the pilot survey undertaken and the learning from this which informed the production of the final tool. Within the qualitative methods section, the criteria for the selection of interview participants were justified and a novel interview model was developed from Culley and Bond's (2006) 3-stage integrative counselling model to obtain career history information from interviewees.

Finally, the analytical frameworks to be used to present, analyse and discuss the new research conducted in response to the research questions:

Does personal background and the family unit structure affect the likelihood of an individual undertaking an apprenticeship in a gender (a)typical framework?

To what extent do gender atypical apprentices attribute and relate their career decisions to the family unit and gendered influences and influencers?

were presented and justified. The findings are presented in the following chapter.

5 Findings

5.1 Introduction

This chapter is structured in line with the mixed methods approach of the research. It begins by presenting descriptive statistical findings and hypotheses testing of the quantitative data collected through the survey instrument. Following this the findings of the regression modelling are presented. The qualitative research findings are coded against the SCCT model of CSM framework and their transmission of gender concepts. To complete the integrative mixed methods approach, findings from the qualitative analysis are used to undertake a reanalysis of the quantitative data.

5.2 Quantitative findings

This section presents the quantitative findings of the research, using a combination of narrative description and tables and figures as appropriate. It begins by clarifying the number of usable responses received via the survey instrument and explaining the data cleaning process undertaken.

5.2.1 The data cleaning process

A total of 464 survey responses were received. Two were via the Gaelic language version of the survey but were discounted from the analysis. The data obtained via these Gaelic language surveys contained anomalies and implausible elements, assumed to be in relation to the respondents' level of competence in the Gaelic language. The survey respondents had both included an email address and were asked to re-complete the survey in English using a unique survey link however no further responses were received in the specified time to add them to the data.

Two respondents were not current Modern Apprentices (identified by the discrepancy between their age at Modern Apprenticeship commencement date and age at date of survey) and thus were removed from the data as they provided no email address for further contact.

One respondent was not a current Modern Apprentice (identified by the discrepancy between their age at Modern Apprenticeship commencement date and age at date of survey) but had provided an email address and was asked to recomplete the survey. No response was received and they were removed from the data.

The sample size, when these non-valid responses were removed, was reduced to 459.

Eight respondents stated the date they completed the survey as their date of birth. Where email addresses were provided, these respondents were contacted. One respondent did not include an email address, one email address was no longer active, and six emails were delivered. Four responses were received from the six successful emails and their correct date of birth amended on their response. Therefore, the non-respondents with anomalous birth dates in their data were removed from the analysis where necessary; i.e. the valid sample size was reduced by four to 455 when analysis by age was undertaken.

For analysis of non-compulsory questions, the sample size was reduced accordingly by the number of participants who chose not to answer the particular question. Analysis of the grid-based responses to question 11 on spread of siblings is not included in this section as it is not useful as a non-contextualised finding.

5.2.2 Descriptive statistics and hypotheses testing

Summary findings

The data from the individual survey questions, mainly focused on demographics, is presented in this section. This includes primary measures of frequency, measures of position plus hypotheses testing in relation to population averages, where available.

Summary findings are as follows:
- The proportion of Modern Apprentices born in a multiple birth is significantly higher than the instance in the general population
- The number of apprentices from lone parent households is significantly higher than in the general population

- The number of apprentices identifying as LGB in the 25-34 age range is significantly higher than in the general population
- The majority of Modern Apprentices consult their parent/guardian/carer to obtain career guidance
- There is a gendered dimension to whom Modern Apprentices consult to obtain career guidance
- The number of respondents identifying as trans is higher than population average estimates, but response rate is too small to attribute significance
- The data shows expected trends in relation to gender and an expected gender split in response rate, with no marked anomalies
- Modern Apprentices' knowledge of their framework and industry is inconsistent and inaccurate

The findings are presented in the order the corresponding questions appeared in the online survey sections.

Age

A snapshot of the age of the respondents was taken on the date the survey closed, 1st November 2018. The survey respondent age will never precisely correlate to the annual Modern Apprenticeship in progress figures as data are not available on the specific month by month breakdown of numbers in progress and this is affected by Modern Apprenticeship duration, starts and completion, and travel between the age bands; however these figures can be used to give an indication of the age of survey respondents for the purpose of the research.

The mean age of survey respondents on the closing date was 22.8 years, with median 20.8 years and standard deviation 6.6 years. The maximum age was 63.3 years [Table 5.1 and Figure 5.1]. As statistical information on Modern Apprenticeship starts is not broken down by gender atypicality, it is worth exploring further whether there are any correlations between age and gender atypicality, using regression analysis.

Age Range	Number	% of valid sample (455)
16-19	178	39.1
20-24	184	40.4
25+	93	20.4

Table 5.1: Age of survey respondents
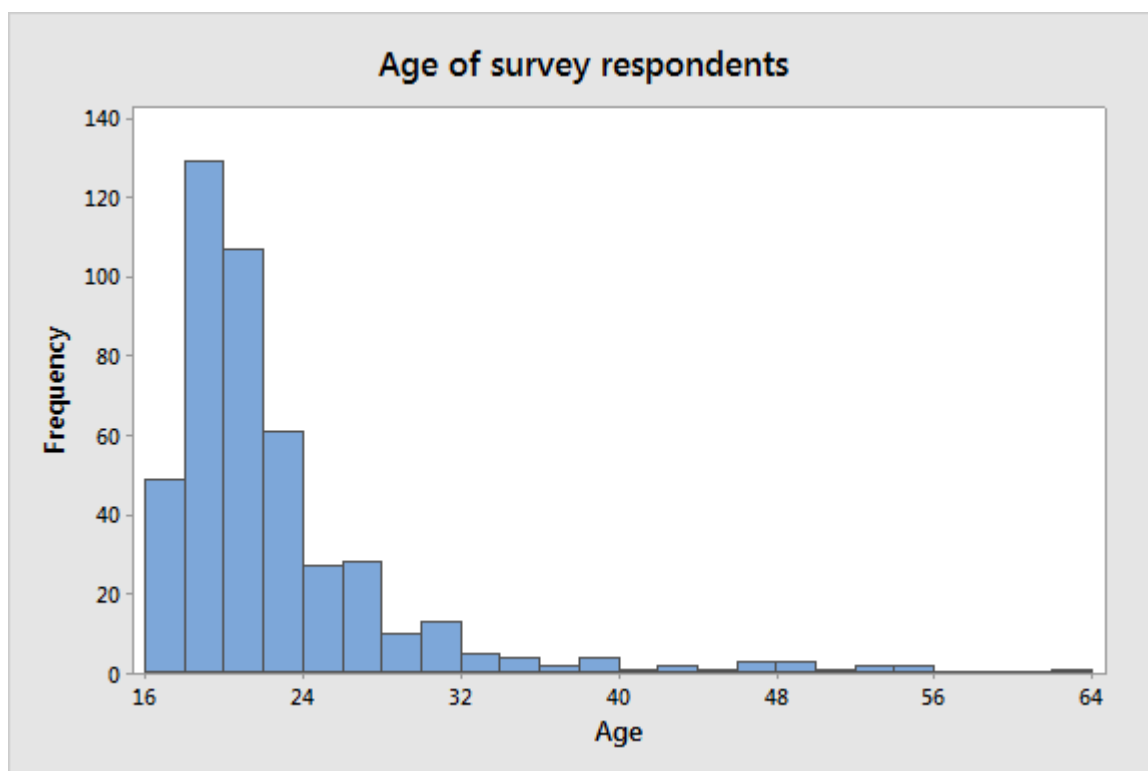
Figure 5.1: Age of survey respondents

Gender

Data published by Skills Development Scotland states that in the period 2017-18, the gender split for Modern Apprenticeship starts was 61.5% male to 38.5% female (Skills Development Scotland, 2018). Two survey respondents did not wish to answer in either the male or female category. The sample presented a similar spread by gender [Table 5.2 and Figure 5.2].

Gender	Number	% of sample
Male	268	58.4
Female	189	41.2
Prefer not to say	1	0.2
Own preferred term*	1	0.2

Table 5.2: Gender of survey respondents
*One response: "gender fluid"
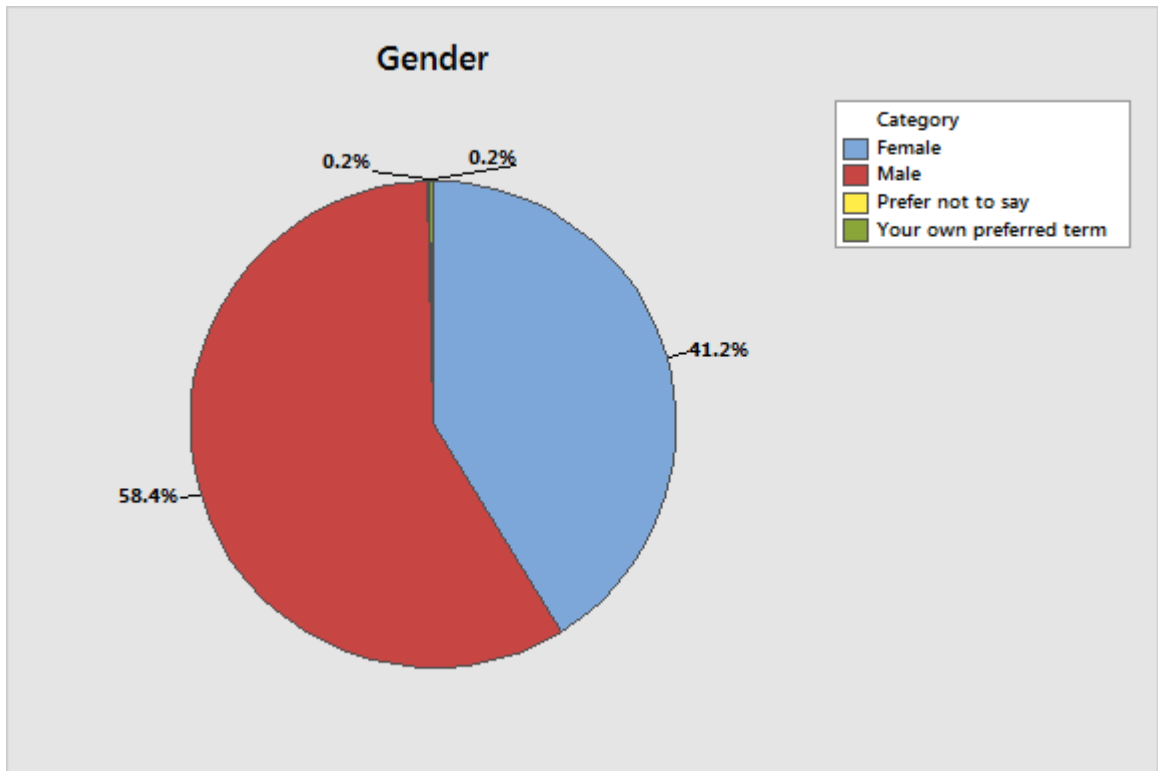
Figure 5.2: Gender of survey respondents

Gender identity

As gender is critical to this research, accurate data on individuals' personal characteristics, to include gender identities, is vital for subsequent robust analysis.

454 individuals responded to this optional question. Five respondents (1.1%) stated that their gender was not the same as when they were born. This is close to estimates of how many people identify as trans in the UK. While work has been undertaken to enable the obtaining of data on trans identity in the 2021 English and Welsh Census (ONS, 2017), at present data on trans identity in the UK is limited, as is the opportunity to disclose, and linked to the need for self-identification. Often cited is the United States population estimate of 0.6% (Flores et al., 2016). Data on Modern Apprenticeship gender identity is not published by Skills Development Scotland.

The availability in the UK of Gender Recognition Certificates (GRC) following the implementation of the Gender Recognition Act 2004 doesn't yet provide a robust baseline figure. While 4,910 trans people had been issued with a GRC to 2018, only 12% of trans respondents to the 2018 National Lesbian, Gay, Bisexual and Transgender (LGBT) survey stated they had obtained one (UK Government, 2018a). In the National LGBT

survey itself, considered to be the largest LGBT global survey to date, 13% of 108,000 respondents stated they were trans (UK Government, 2018b), approximately 14,000. With a UK population of circa 66.4 million, even the most conservative of estimates in upscaling these figures would suggest individuals identifying as trans in the UK sits below the 1.1% obtained in this survey.

Due to there being only five respondents who stated that their gender was not the same as when they were born, there are difficulties in attributing significance to this finding. The 95% confidence interval for the underlying Modern Apprenticeship population proportion was (0.01%, 2.06%), an interval within which the proportion for the general population likely lies. To further explore this trend, these five respondents could have been targeted for the qualitative data collection. However, as the thesis is not focused on gender identity and the author lacks specialist knowledge in this area, the decision was taken not to explore this finding any further other than to record the frequency within the sample. Interrogation of the data on Modern Apprenticeship gender identity collated by Skills Development Scotland in the Skills Development Scotland National Training Programmes Equality Monitoring Form[32] would allow for further exploration of this finding.

Sexual orientation

Table 5.3 presents breakdown of sexual orientation for survey respondents. ONS data (2019) suggests that the proportion of the UK population identifying as lesbian, gay or bisexual (LGB) is 2.0%. Most Modern Apprentices sit within the 16-24 age range, which ONS data states is the group most likely to identify as LGB (4.2%).

Since age is a known confounder with sexual orientation data, the dataset was stratified by the ONS age groupings for LGB data (16-24, 25-34, 35-49 and 50-64; 65+ was omitted as there were no survey respondents in the age group). There was strong evidence that the LGB proportion for Modern Apprenticeships is higher than the general population in the 25-34 age group. There was no evidence of a difference in proportion for the 16-24, 35-49 or 50-64 age groups. Only one respondent in the latter two age groups identified at LGB.

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[32] Completed as a mandatory requirement by all new Modern Apprenticeship starts. Question 5 is: "Have you ever identified as transgender? Yes/No/Prefer not to say" (document not publicly available, distributed directly to training providers).

In the 25-34 group, 11.8% identified as LGB with 95% confidence interval (5.6%, 31.3%). Only 2.9% of this age group identify as LGB in the general population (ONS, 2019). It is worth exploring further whether this correlates with any other variables in relation to gender atypicality within this group as a reason for the higher number of individuals in this age range.

Sexual Orientation	Number	% of sample
Bisexual	15	3.3
Gay man	4	0.9
Gay woman/lesbian	7	1.5
Heterosexual/straight	431	93.9
Your own preferred term**	2	0.4

Table 5.3: Sexual orientation of survey respondents
**Two responses: "prefer not to say" and "pansexual"

Modern Apprenticeship framework

In cleaning the data on Modern Apprenticeship framework, it became evident that, as signposted in the literature review and in the risks identified prior to the survey, many Modern Apprentices simply do not know what framework they are on.

Where respondents stated they did not know their framework and gave a description of the framework or their job role, a value-based assumption could be made to re-code the framework based on the author's expertise. The author, having worked at a senior level on Modern Apprenticeships in Skills Development Scotland, has the knowledge and specialist expertise to code this data. However, of those responding "other" (32) the responses included "don't know," and "Modern Apprenticeship" or broad descriptive terms that could not be easily coded to an existing live framework. This further demonstrates the use of outdated terminology by employers/training providers being passed on to Modern Apprentices or a general lack of knowledge by Modern Apprentices relating to the frameworks they are registered to.

Furthermore, in examining the data obtained, it became evident that a number of respondents stated they were working towards a specific framework, when they could not have been working towards that framework, according to the officially published data on

live framework numbers. A particular example of this is the childcare sector where a high number of respondents stated they were working towards a Children's Care, Learning and Development Modern Apprenticeship when in fact they would most likely have been on the newer framework Social Services (Children and Young People). Seven responses were made that could not be re-coded into the correct framework.

A high response rate was noted for the Career Development framework, which is likely attributed to goodwill; as the author works in this sector, respondents will have been more heavily encouraged to complete the survey by their training providers.

Moving to framework groupings, as has been previously discussed, would not have captured robust data as the groupings would have contained frameworks featuring those both segregated and not-significantly segregated by gender.

The framework data therefore is not presented here but becomes useful in the identification of individuals for qualitative interview, and for generating the response variable in the regression analysis.

Industry

Similarly, and as expected, dividing the data by industry is useful in giving an indication of response rates. 128 responses were listed as "Other/Not sure/Don't know" and were coded manually. 16 respondents had stated "Mining, energy and water supply", however water supply had been wrongly listed as Standard Industrial Classification B on the survey by the author. On checking which framework the responses matched up to, these were re-coded to E. A total of five responses could not be re-coded. Figure 5.3 presents a breakdown of repsonses by Standard Industrial Classification.
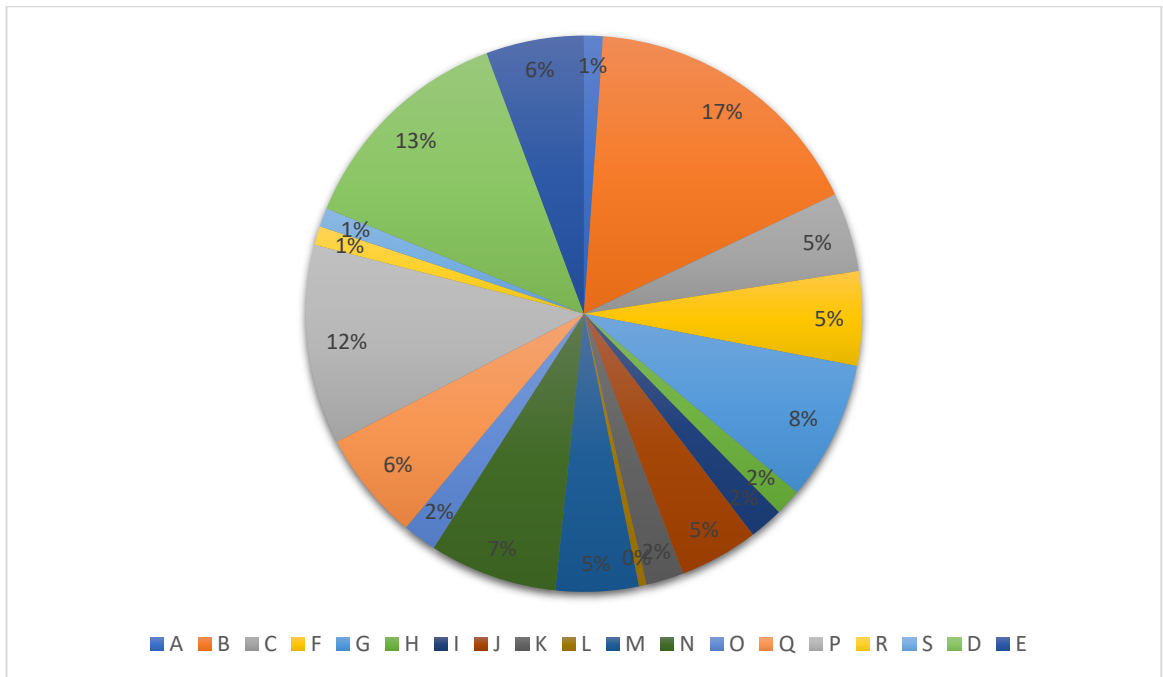
Figure 5.3: Survey responses by industry using Standard Industrial Classification

Beyond this, presenting and unpicking the data by industry along a single axis becomes troublesome. A higher number of responses were received from some sectors where apprenticeships have a stronger heritage, but not all. A broad view of industries can mask occupational segregation that may feature in the many and numerous roles within them. Industry data becomes more useful in hypothesis testing in conjunction with other findings.

Age at commencement of Modern Apprenticeship

The age distribution at start of the Modern Apprenticeship is compared with the published figures for Modern Apprenticeships new starts by age bands (tied to contribution rates) hence the categorisation in the data capture methods of the group aged 25+. The number of respondents shows a strong similarity at the 20-24 age bands [Tables 5.4 and 5.5; Figure 5.4] and therefore is useful in relation to asserting the validity of the data obtained via the survey instrument. There is an overrepresentation within the younger grouping (age 16-19) and an underrepresentation in the older (25+) grouping. As challenges in Modern Apprenticeship provision as a first entry route to the labour market is a prominent concern, this is a useful discrepancy as it may give a truer reflection of the influences on and influencers of school-leavers.

Age	Number	% of sample
16	35	7.7
17	80	17.6
18	92	20.2
19	59	13.0
20	33	7.3
21	30	6.6
22	17	3.7
23	14	3.1
24	24	5.3
25+	78	17.1

Table 5.4: Age of survey respondents at the start of their Modern Apprenticeship
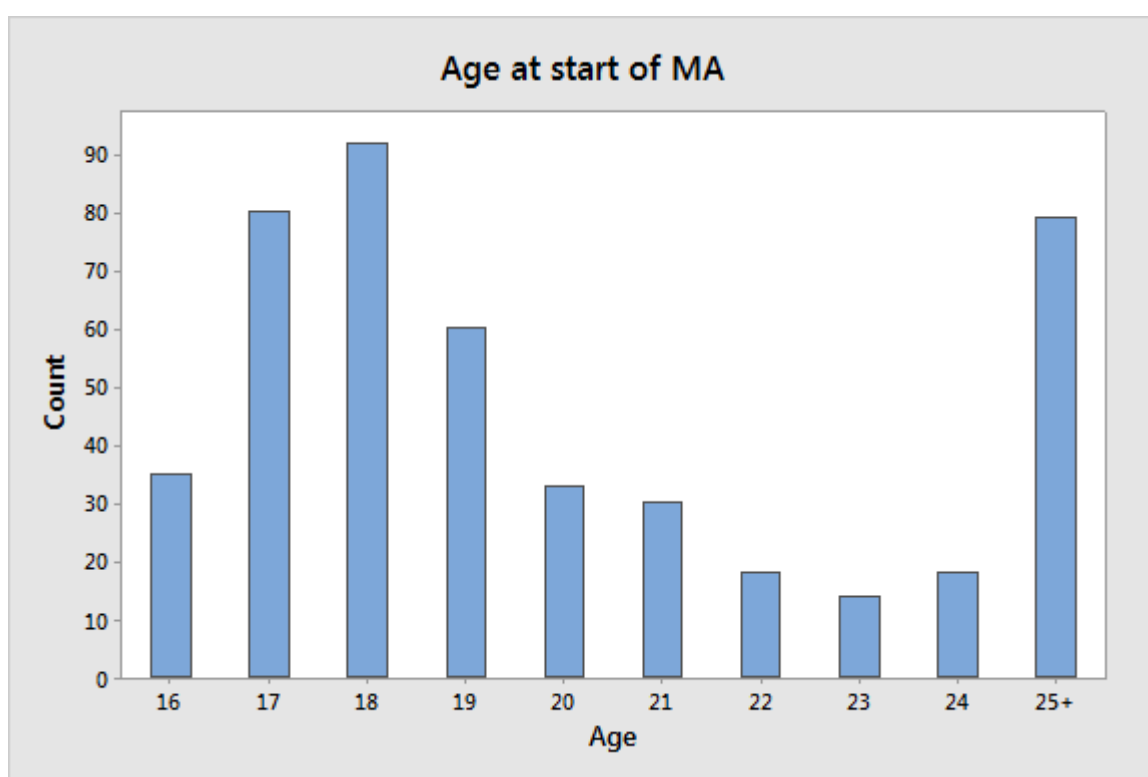
Figure 5.4: Age of survey respondents at the start of their Modern Apprenticeship

Age band	% of all MA starts (27,145)[33]	Number of respondents	% in this data
16-19	44.2% (12,009)	266	58.5%
20-24	25.8% (6,998)	111	24.4%
25+	30% (8,138)	78	17.1%

Table 5.5: Age of survey respondents at start of Modern Apprenticeship in comparison to overall Modern Apprenticeship starts by age band

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[33] Source: Skills Development Scotland, 2018.

Perception of gender underrepresentation and contradictions within the data

40 (8.7%) respondents stated that they felt they were underrepresented by gender in their sector. As occupational segregation is persistent within Modern Apprenticeship provision, this low percentage appears appropriate; however it should be further analysed against framework data and other variables to present a complete picture.

For gender-based analysis, there was the option to undertake research based on the responses of those who stated they believed themselves to be under-represented by gender in their framework. Although small, the sample size of 40 may still have yielded fruitful insights. However, anomalies presented within the data. As previously noted, the author's specialist knowledge of occupational segregation within Modern Apprenticeship frameworks meant it was possible to identify where apprentices might be under-represented by gender but were not aware of this phenomenon. It could also be used to identify where respondents had stated they felt they were underrepresented by gender but were in fact in the majority gender by framework. This knowledge can be validated by reference to the statistical publications of Skills Development Scotland. These results are significant, as they demonstrate that gendered career decisions may not be perceived as such by the individual.

Family background

In response to the question, "On the date of your 15th birthday, who did you live with?" a statistically significant finding occurs in relation to lone parenting. Table 5.6 presents the answers obtained overall.

The survey estimated the proportion of apprentices who lived in a lone parent household on the date of their 15th birthday was 0.204, with 95% confidence interval (0.167, 0.244). A two-proportion z-test[34] was carried out to determine if the proportion of Modern Apprentices from lone parent families was higher than 0.145, the average proportion of lone parent households from 2005-2015 (ONS, 2017).

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[34] *Postulation:* Lone parenting has an influence on an individual undertaking an apprenticeship
Null Hypothesis (H_0): The proportion of the sample from lone parent families is the same as in the general population
Alternative Hypothesis (H_1): The proportion of the sample from lone parent families is higher than in the general population (one-sided)

The one-sided test returned a *p*-value of 0.001 so there is strong evidence against the null hypothesis and therefore strong evidence in favour of the alternative hypothesis that the proportion of Modern Apprentices from lone parent families is higher than that in the general population.

Family environment	Number	% of sample
one parent or guardian (female)	82	17.9
one parent or guardian (male)	11	2.4
two parents or guardians (female – male)	355	77.3
two parents or guardians (female - female)	3	0.7
two parents or guardians (male - male)	1	0.2
in care ***	4	0.9
Other****	3	0.7

Table 5.6: Family background of survey respondents
***foster care, kinship care, looked after at home, residential care, with potential adopters
****3 responses: "mother and her male partner"; "shared between divorced parents and their partners"; "Gran"

The qualitative data collection is designed to create the opportunity to obtain further information on the importance placed on personal networks and family background to allow for more exploration of this question.

Siblings

Overall data on sibling frequency is presented in Table 5.7 and Figure 5.5. There is no publicly available reliable data on sibling frequency to compare this data to. Data on the gender of siblings and the position within the family of the siblings was obtained should it be relevant in relation to the findings of the qualitative interview data.

Number of siblings	Number	% of sample
0	39	8.5
1	196	42.7
2	123	26.8
3	53	11.5
4	27	5.9
5+	21	4.6

Table 5.7: Sibling frequency of survey respondents
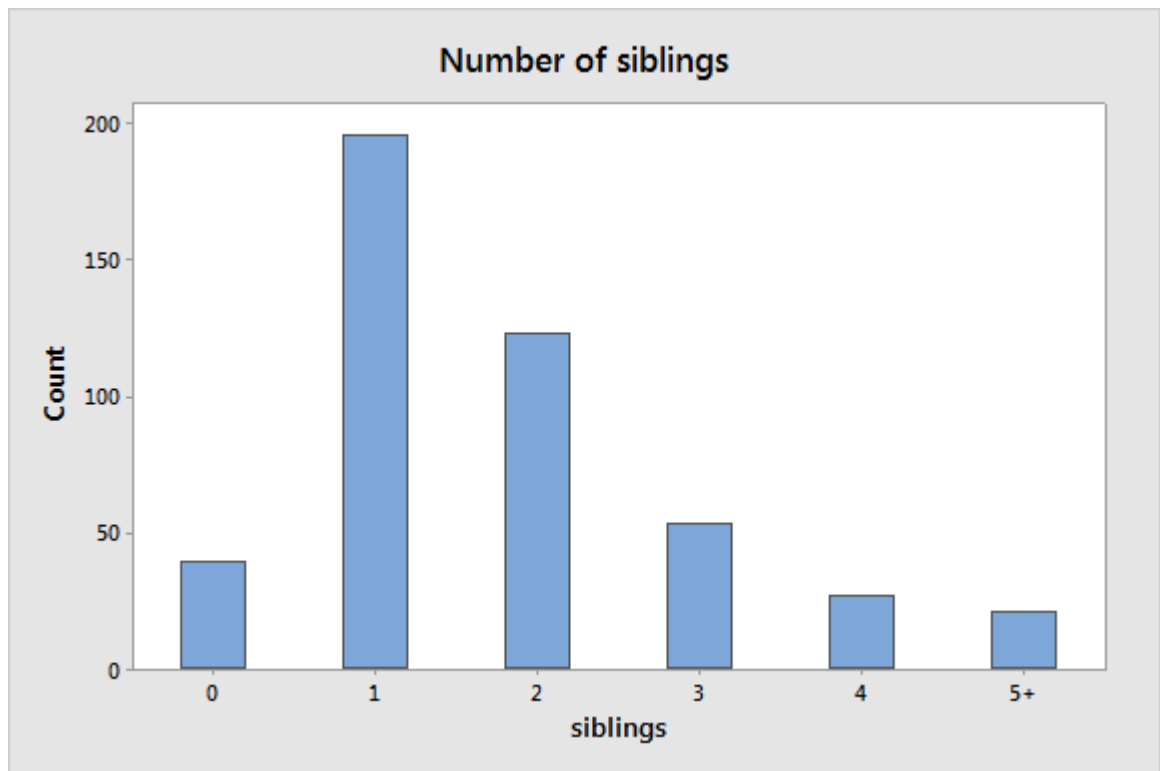
Figure 5.5: Sibling frequency of survey respondents

Multiple births

14 of 459 respondents (3.1%) stated they were twins or triplets. Year of birth for respondents ranged from 1953 to 2002. Historical data gave the average multiple birth rate in Scotland between 1951 and 2005 as 1.2%. This figure was used as a basis for hypothesis testing.

The survey estimated the proportion of apprentices born as part of a multiple birth as 0.031, with 95% confidence interval (0.017, 0.051). A two-proportion z-test[35] was carried out to determine if the proportion of Modern Apprentices born as part of a multiple birth was greater than 0.012, the multiple birth rate average in the Scottish population at the time respondents were born (National Records Scotland, no date). The one-sided test returned a *p*-value of 0.006 so there is strong evidence against the null hypothesis and therefore strong evidence in favour of the alternative hypothesis that the proportion of Modern Apprentices born in a multiple birth is higher than that in the general population.

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[35] *Postulation*: Being a sibling in a multiple birth affects likelihood of an individual undertaking an apprenticeship.
Null Hypothesis (H_0): The proportion of the sample who are a twin is the same as in the general population
Alternative Hypothesis (H_1): The proportion of the sample who are a twin is higher than in the general population (one-sided)

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This finding is worth exploring further as an overall trend and to examine whether there is a gendered dimension to this increased likelihood.

Asking people for career guidance

To analyse responses to the question, "Which adults in your family and among your friends have given you careers advice?" a series of two proportion z-tests[36] were carried out to determine whether the sample proportions for advice sought from males or females were significantly different. The three groupings were: parent/guardian/carer, other relatives, and friends. The *p*-values for the three groupings were: 0.669, 0.122 and 0.262 respectively. Therefore, there was no evidence against the null hypotheses to indicate significant underlying differences between the proportions. Table 5.8 presents the proportions of sample that sought advice from the different individuals.

Adult	Number	% of sample
male parent/guardian/carer	313	68.2
female parent/guardian/carer	319	69.5
other male relative	163	35.5
other female relative	141	30.7
male friend	161	35.1
female friend	145	31.6
not received career advice from any of these people	56	12.2

Table 5.8: Survey respondents' sources of career guidance

When analysed by gender, however, significant trends emerge.

Tests were repeated separately for male and female Modern Apprentices. Two respondents did not identify as either male or female so the totals for analysis were 268 and 189 for males and females respectively. In every case the proportion of Modern Apprentices seeking advice from a person of the same gender was higher than the proportion seeking advice from a person of the opposite gender, as presented in Tables 5.9 and 5.10.

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[36]*Postulation*: The gender of the parent/guardian/carer, other relatives, and friends being consulted for career guidance has an influence on an individual undertaking an apprenticeship
Null Hypothesis (H₀): The proportion of the sample seeking advice from a male and the proportion of the sample seeking advice from a female are the same
Alternative Hypothesis (H₁): The proportion of the sample seeking advice from a male and the proportion of the sample seeking advice from a female are not the same (two-sided)

	Number	% of sample
male parent/guardian/carer	204	76.12%
female parent/guardian/carer	174	64.93%
other male relative	115	42.91%
other female relative	77	28.73%
male friend	119	44.40%
female friend	72	26.87%

Table 5.9: Male Modern Apprentice sources of advice

	Number	% of sample
male parent/guardian/carer	115	60.85%
female parent/guardian/carer	138	73.02%
other male relative	48	25.40%
other female relative	64	33.86%
male friend	42	22.22%
female friend	72	38.10%

Table 5.10: Female Modern Apprentice sources of advice

For male Modern Apprentices, the *p*-values for the three groupings were 0.004, <0.001 and <0.001 respectively. There is strong evidence against the null hypothesis and therefore strong evidence in favour of the alternative hypothesis that the underlying population proportion of male Modern Apprentices seeking advice from other males is higher than the proportion of male Modern Apprentices seeking advice from females in all three groupings (parent/guardian/carer, other relative and friend).

For female Modern Apprentices, the *p*-values for the three groupings were 0.012, 0.072 and <0.001 respectively. For the parent/guardian/carer grouping, there is moderate to strong evidence against the null hypothesis and therefore in favour of the alternative hypothesis that the proportion of female Modern Apprentices seeking advice from female parents/guardians/carers is higher than the proportion seeking advice from male parents/guardians/carers.

However, for the other relative grouping, there is only weak evidence against the null hypothesis and therefore only weak evidence in favour of the alternative hypothesis that the proportion of female Modern Apprentices seeking advice from other female relatives is higher than the proportion seeking advice from other male relatives.

For the friend grouping, there is strong evidence against the null hypothesis and therefore in favour of the alternative hypothesis that the proportion of female Modern Apprentices seeking advice from female friends is higher than the proportion seeking advice from male friends.

Potential reasons for these findings are explored in the following discussion (6.3).

5.3   Regression model

Following the descriptive statistical analysis and simple hypotheses testing, regression modelling was used to explore whether there were any further correlations between demographics which might relate to gender atypicality. The following demographics of the apprentice sample were considered for their relevance to gender atypicality:

- gender
- gender identity
- sexual orientation
- age on commencement of apprenticeship
- parenting status
- number of siblings
- multiple births

The response variable

For the purposes of the regression model, gender atypicality was represented by a response variable, based on published data pertaining to Modern Apprenticeship framework participation by gender. Survey data had already been cleaned to ensure all respondents were matched to a Modern Apprenticeship framework. Using published data on percentage of gender segregation within Modern Apprenticeship frameworks for the period 2016-2019 (Skills Development Scotland, 2017b; 2018a; 2019b), an average proportion of Modern Apprenticeship starts by gender on live frameworks over these years was calculated. These dates were selected as gender balance data for Modern Apprenticeship starts prior to 2016 was not broken down by framework and the most recent data to Quarter 4 2020 had not yet been published at the point of undertaking

regression modelling. The data across these years was averaged, to ensure an accurate baseline of the gender balance for Modern Apprenticeship starts in the frameworks, which would prevent against any extremes in a single year. Some frameworks where disclosure control was applied due to low numbers meant they were not fully available for analysis across all years. Similarly, some frameworks were phased out and new ones introduced during this time period, so averages were based on the publicly available data. Some estimation was required in order to ensure a response variable was available for all survey participants. This process established a quantitative measure for each survey respondent, detailing the gender balance within their framework.

The survey data included two respondents who did not identify as either of the binary genders by which Modern Apprenticeship starts are measured. For the purposes of the regression model, these responses had to be temporarily disregarded.

Therefore, the response variable was the proportion of apprentices of the same gender as the respondent in their framework. In order to comply with the assumptions of regression modelling, the response variable was transformed using the logistic function within the statistical analysis software prior to fitting the model.

Process and summary findings

The seven candidate explanatory variables were first considered individually in turn. Next, the explanatory variables were considered collectively with their interactions. Finally, the explanatory variables were considered by forward selection, backward elimination and stepwise techniques. Following this process meant the final best fitting regression model was achieved.

The result of regression modelling was that there was no evidence to suggest age on commencement of apprenticeship, parenting status, number of siblings, multiple birth status or gender identity had any association with gender atypicality. However, there was very strong evidence that both gender and sexual orientation were associated with gender atypicality.

For gender, there was very strong evidence to suggest men have a higher proportion of other men in their Modern Apprenticeship frameworks than women have of other women

($p < 0.001$). That is, female apprentices experience greater gender atypicality than male apprentices. This may relate to the higher instance overall of men undertaking Modern Apprenticeships and/or to the number of participants making up the percentage level of segregation within frameworks.

For sexual orientation, there was very strong evidence that both gay men ($p < 0.001$) and lesbians ($p = 0.008$) have fewer people of their own gender in their frameworks than heterosexual apprentices. It was also found that bisexual apprentices had fewer people of their own gender in their frameworks than heterosexual apprentices, however there was only weak evidence for this finding ($p = 0.070$). This suggests that where gender balance is being improved within frameworks, it is being done so due to participation by non-heterosexual individuals.

Because the survey broke down sexual orientation in a gendered way (i.e. gay/lesbian rather than homosexual/heterosexual) the interaction between the gender and sexual orientation terms was not meaningful and so was not included in the model.

These findings are explored further in the discussion (6.4).

5.4   Qualitative findings

In the interviews conducted, the interviewees responded appropriately and as expected. The participants remained focused on the questions asked, and the author occasionally steered them back to the question asked, where necessary, to retain focus on the specific data to be obtained. The interview recordings were stopped once the data had been obtained, and as per the model used, any further personal career related queries and discussion were kept entirely confidential.

First, the interviewees are summarily presented independently. The prominent adaptive career behaviours exhibited by the interviewees are then introduced using the headings derived from the thematic coding template, as presented in section 4.7.2. Following this is a synthesis across the interviews of the prominent thematic concepts pertinent to the interviewees' gendered influences and influencers, and their transmission of gendered concepts.

5.4.1 Participant profiles

Demographic information pertaining to the interviewees, confirmed in the participant background survey completed prior to the interview, are presented in Table 5.11. All research participants stated their gender as male and their sexual orientation as heterosexual.

RP	Age at start of MA	Perceives self as under-represented by gender in the sector	Siblings	Domestic home age 15	Career advice given by
1	23	No	Two older male siblings, one older female sibling, one younger male sibling	Lived with a male and female parent	Female parent/guardian/carer Male parent/guardian/carer
2	25+	Yes	One younger female sibling	Lived with a male and female parent	None of those listed
3	25+	Yes	No siblings	Lived with a male and female parent	None of those listed
4	18	Yes	One younger female sibling	Lived with a male and female parent	Female parent/guardian/carer Male parent/guardian/carer
5	19	No	One younger male sibling, one younger female sibling	Lived with one female parent	Female parent/guardian/carer Male parent/guardian/carer Other male relative Other female relative

Table 5.11: Interviewees' demographic background

Research Participant 1 (RP.1)

Interview conducted June 2020, face-to-face (via video call).

RP.1 is aged 24 and is currently completing a Modern Apprenticeship in Career Development whilst working in the career development sector. He was 23 when he started his Modern Apprenticeship. On the date of interview, he had been on his apprenticeship for less than six months.

Research Participant 2 (RP.2)

Interview conducted June 2020, face-to-face (via video call).

RP.2 is aged 37 and is currently completing a Modern Apprenticeship in Career Development whilst working in the career development sector. He was 35 when he started his Modern Apprenticeship.

Research Participant 3 (RP.3)

Interview conducted June 2020, face-to-face (via video call).

RP.3 is aged 29 and is currently completing a Modern Apprenticeship in Career Development whilst working in the career development sector. He was 29 when he started his Modern Apprenticeship. On the date of interview, he had been on his apprenticeship for less than six months. RP.3 self-identifies as disabled.

Research Participant 4 (RP.4)

Interview conducted March 2020, face-to-face.

RP.4 is aged 24 and has completed two Modern Apprenticeships. He was 18 when he commenced the first of these, a Modern Apprenticeship in Customer Service (a framework which also has a persistent female gender imbalance). He later completed a Technical Apprenticeship in Career Development. RP.4 now works as a trainee careers adviser and is completing a Postgraduate Diploma in Career

Guidance and Development on a part-time basis in a work-based distance learning context.

Research Participant 5 (RP.5)

Interview conducted June 2020, face-to-face (via video call).

RP.5 is aged 22 and has completed two Modern Apprenticeships, a Modern Apprenticeship and a Technical Apprenticeship in Career Development. He was 19 when he commenced the first of these. RP.4 now works as a trainee careers adviser and on the date of interview was scheduled to start studying in three months' time for a Postgraduate Diploma in Career Guidance and Development on a part-time basis in a work-based distance learning context.

5.4.2 Proximal antecedents

Cognitive-person factors

Some recurring themes pertaining to efficacy and goal-directedness emerged in the interviews. RP.4 left school with what he felt to be little in the way of a clear direction but spoke repeatedly using language that later demonstrated clear goal-directedness, ownership of those goals and a conviction in his approach: "*I wanted to challenge myself*"; "*That was the thing that pushed me forward*"; "*I'm stubborn, I wanted to prove people wrong*"; "*I've always been confident*". While perhaps less demonstrative of efficacy aspects, RP.5 also demonstrated direction and a willingness to go against expectations, albeit without a known goal in sight, in his explicit rejection of his expected route into higher education, prior to leaving school.

RP.1 noted similar goal-directedness; while non-specific in terms of what his eventual job outcome might be, he was adamant that he had could recall specific career change decisions that would lead to outcomes that were within his control. RP.4's capacity to harness his individual agency to accomplish set goals was clear; on his timeline he clearly stated his "self" as a career influencer and repeatedly in his interview stated a

determination and capability to explicitly *not* fit the mould: "*I said I'm going to prove you wrong.*"

While RP.4 displayed general characteristics pertaining to the achievement of career satisfaction, RP.3 noted perhaps the most clarity in relation to career planning. He demonstrated self-efficacy in his clarity around a specific occupational end-goal of becoming a careers adviser and self-belief in achieving it: "*I had to figure out how to get there.*" RP.4's clear sense of self-belief is tempered only by an awareness of labour market limitations.

RP.2, the oldest of the interviewees and the only RP to commence his apprenticeship after the age of 30, noted little in the way of specific direction and career planning in his work history and more of a floating between roles until settling back where he had originally started, albeit with a sense of always being able to get by regardless of his current role.

Contextual and personality factors

A number of findings offer scope for further discussion in this section. Firstly, participants' contextual and personality factors were generally presented within a context of career maturity. RP.1 demonstrated melancholic reflection, considering themselves just over five years earlier in an abstract way, a tone which also emerged in RP.3's interview, with both having a sense of having missed opportunities earlier in life which they had been lucky to be able to pick up on in their 20s.

Financial concerns perhaps indirectly played some part in all RPs' career paths. All interviewees had held jobs prior to their apprenticeship and brought with them knowledge of the world of work. Apprenticeships, whilst commonly perceived as a school-leaver entry-route to the labour market can commence at any age, therefore this is not unusual. Opportunities within the workplace led RP.4 to complete a higher-level Technical Apprenticeship, which replicated his earlier career decisions; in his first job he worked part-time then went full-time after leaving school. RP.5 also went full-time in a job he had held during school immediately after leaving. Both showed an eagerness to progress in their workplaces where available and looked elsewhere when the work became static. RP.4's current workplace has offered a structured route to development, albeit an

unpredictable one at times. While content with his workplace and happy to bide his time there, RP.2 also awaited financial sponsorship to complete his Modern Apprenticeship.

Excluding RP.2, all were recruited directly as apprentices, and noted the draw of training whilst working and, in turn, receiving an income. RPs in some cases noted this in the context of peers who had taken alternative pathways in higher education and were accumulating student debt and living on restricted financial resources, without a necessarily higher wage guaranteed later in life: "*My pals, they were all just kind of jealous because I was earning decent money for that age while they were all at uni, you know*" (RP.5). This may be bolstered by supplemental knowledge of the self and career maturity; RP.4 demonstrated an understanding of where he gains career satisfaction ("*do what makes you happy*") contextualised in an understanding of salary differentials for people of a similar age to himself, stating: "*It's not all about money.*"

Issues pertaining to social support also emerged. In all cases the interviewees demonstrated the characteristic of going it alone, of being the first within school/friendship peer groups to take their specific pathway albeit with differing levels of control over the outcomes. RP.5 knew that his pathway would be different to his peers whilst sitting a leavers-year exam in school. RP.3 explicitly noted apprenticeships as uncommon within his peer group: "*I went to* [redacted school name] *and everyone gets Highers and goes to university. It's just expected of you.*"

RP.4 conveyed their undertaking of an apprenticeship as something that was "*brand new*" i.e. it wasn't something he or his friends had previously considered. He refers to a "*friend group*" without applying any gendered terminology. When asked about his peers on the customer service Modern Apprenticeship and whether they took the same pathway as him, of those he remains in contact with no others have progressed into the careers adviser trainee route.

RP.4 specifically noted the impact of the time period in which he grew up as a socioeconomic context to his career direction. He cited social and general media as the source from which he had picked up on the "*big message*" that "*you can do what you want to do.*"

Social networks were also cited, in relation to how the RPs found out about their apprenticeships. Only RP.1 actively sought out an apprenticeship opportunity, having seen their younger male sibling and a friend complete them. RP.3 learnt of his Modern Apprenticeship directly via a careers adviser, RP.5 via a member of staff working in the employing organisation, RP.2 learnt of the opportunity from his workplace and while RP.4 takes clear responsibility for taking control of his perceived career development, in the obtaining of information on his first apprenticeship, this came to him via his mother, as a suggestion of something might be of interest. RP.4 had not considered an apprenticeship before his mother suggested one to him and he later went on to address misconceptions of apprenticeships to his circle of friends. As RP.4's career developed he became more proactive, actively seeking opportunities to progress within his workplace similar to the in-work path followed by RP.2. Once RP.5's interest was piqued in working in the careers sector, he took it upon himself to find out more, stating he "*educated myself to what an apprenticeship is, what are the benefits of it.*"

Labour market conditions. i.e. that Modern Apprenticeships are currently prominent and promoted within Scotland, also played a part for all apprentices interviewed. Excluding RP.2, whose apprenticeship sits more as workplace CPD, the other interviewees were all directly recruited as apprentices, which offered scope to explore how they learned of and/or accessed them. RP.4's apprenticeship offered a route into working for an employer he had not previously considered, and a role and sector outwith his prior consideration. All interviewees (excluding RP.2) were within a targeted age range, linked to youth employment targets, with RP.3, the only interviewee to explicitly state a disability and eligible for funding at the age of 29 due to their disability status. RP.3 recalled an explicit statement pertaining to protected characteristics, in that their employer was "*welcoming applications from male applicants*" which they stated "*played to my advantage.*"

While also relevant as person inputs, worth noting here is that the main equality-orientated demographic characteristic aside from gender that was discussed in the interviews was age. Age appeared as a concern, in relation to being both too young and too old to be an apprentice. RP.3's concerns were about time passed and whether an apprenticeship for someone in their late 20s was too late: "*I thought, I'm a bit too old for this. Maybe in terms of level of experience and stuff…You're kind of wondering if you're taking x amount of steps backwards*".

The role of interests and abilities

RP.4 demonstrated a clear ability to reflect astutely on previous work, drawing on key skills and abilities gained: "*I was good at working with people*." He attributed his self-confidence to a clear understanding of the self. RP.4's confidence is perhaps based on knowledge of their abilities, position and workplace structures: "*I've always wanted to bring something*", "*a level of expertise…that maybe some people can't bring.*"

While the SCCT model of CSM does not explicitly include vocational interests, it is perhaps also worth noting vocational aptitude within this section. Four of the RPs stated an awareness of their aptitude for working in the careers sector. RP.5 took time to find out about the role, and by discussing with an experienced adviser, concluded that they would be good a match for it. RP.3 had direct experience of working with careers professionals as an adult. RP.1 specifically reflected on his own ability to support another person in their career planning and decision-making. RP.2 had worked in the sector, tried something else, and then returned.

5.4.3   Distal antecedents

Person inputs

In additional to the points already noted, which feed into the social address of the interviewees, all RPs were all clear in their understanding of core concepts of equality and diversity, particularly when pertaining to demographics and protected characteristics. Gender is not covered here as it is covered in detail in a later section.

While age has been previously discussed in a labour-market-opportunity context, it is worth highlighting here that RP.2, the oldest of the group, viewed his Modern Apprenticeship status slightly differently to the other RPs who were directly recruited as apprentices. He had no hang-ups about the Modern Apprenticeship term but saw his Modern Apprenticeship more as CPD than a form of employment in itself and referred to it primarily as doing "*the SVQ*" rather than a Modern Apprenticeship.

Personal family background offers some insight into the chronology of the development of career ideas and contact with career concepts within the family unit. RP.5 noted an early immature career plan to take over a family business which faltered quite swiftly during adolescence. When asked about people they would describe as career influencers, RP.3, the one interviewee who is an only child noted, "*It's interesting because that starts quite late on.*"

The research participants were asked about the support they had within their family unit for their position as apprentices. All noted a positive response from family members (and other peers), regardless of age. Three interviewees had younger siblings only, and the spread in ages was fairly close, no more than six years. RP.1, who has four siblings noted a large age gap between himself and his older brothers who are almost double his age and to an extent disregarded their career paths as lacking relevance and focused more on his closer-in-age siblings. RP.1's attribution and relation of his career decisions to the family unit in particular focused on his younger brother as an influence, who successfully completed an apprenticeship himself.

Contextual affordances

The implicit financial resource created by vocational education and training has already been noted and its value could be reiterated for this antecedent, in that all interviewees considered their Modern Apprenticeship as a route to improving both their educational and financial resources.

While, perhaps due to time passed, RP.2 glossed over leaving school and focused more on work experience, the interviewees surfaced some thoughts on their educational backgrounds, without prompting. Discussion of secondary education formed the basis of this and came in the context of the individual having been perceived to be lacking in potential upon school leaver age. RP.1 summarised this efficiently in their reflection on having left school with one Higher qualification, describing their then status as: "…*career prospects with one higher, unless you go to college or something. It's not very, very promising.*"

While role models could also be considered here as a resource, they are considered in a gendered context in the next section.

5.4.4 Transmission of gender concepts

Awareness of gender underrepresentation and recruitment to a gender-biased sector

> *"It has only crossed my mind when you've pointed it out. Like I've never really associated it as a sort of woman's role."* (RP.1)

RP.1 summarises the overall response of all interviewees effectively. The participants at no point demonstrated a conscious decision to enter a sector dominated by women. RP.1 and RP.5 did not perceive themselves to be under-represented in the sector. RP.1 noted he was unsure how to answer the question as in work he'd come into contact with more female than male careers staff, however on his Modern Apprenticeship training noted a split in entirely the opposite direction, noting a 70:30 split in favour of men. RP.5 was very firm about how he had never considered his gender underrepresentation. In response to the question of as to whether he felt underrepresented within in the sector or on his Modern Apprenticeship, he was clear; *"No. Absolutely not."* RP.1 noted explicitly that the gender balance of a workplace hadn't been something that he'd explicitly considered: *"Gender representation isn't really something I look at when I'm at a workplace."*

RP.5 cited friends who had gone to work in another professional sector, in teaching, and who explicitly conform to the gender biases seen therein but which he made no comment on. He noted that in his workplace, primarily a secondary school, he'd met male teachers and worked with both a female and male careers adviser.

RP.3 indicated how he had previous contact with his employing organisation, but that much of it had been by email so he hadn't considered the gender of the sender. When visiting the employer prior to applying to work for them he noticed more women than men and noticed on the vacancy advertisement that applications from men were encouraged, as already mentioned, and that the statement on the vacancy advertisement encouraging male applicants appealed to him. As with the other direct applicants, he was surprised to learn of the female bias in the sector: *"I hadn't really thought about it too much until I'd applied for the job"* and was surprised by the revelation of a gender bias therein: *"You think something like careers adviser would be quite down the middle."*

RP.4 showed awareness of gender as a bias in the workplace but emphatically prioritised age as a more pressing equality concern. Having worked in the sector for some time before moving on to a Modern Apprenticeship, RP.2 was perhaps the most aware of occupational segregation in the sector, and explicit in that the female bias had never been a concern to him. "*I've never really much about it…I'd never really given it much consideration, to be honest.*"

The gendering of career information advice and guidance support: mothers and other female family members as sources of CIAG

RP.1 stated he spoke to both his brother and his mother about his decision to apply for an apprenticeship. He spoke explicitly to his brother about apprenticeships, as his brother had completed one. The gendered aspect of this should be treated with caution in such a small sample; that his brother (male) was the apprentice may be irrelevant as had the RP had been interested in a higher education he would most likely have gone to his sister.

Outwith guidance on his Modern Apprenticeship, RP.1 cites female family members, his mother and sister, as his sources of CIAG, as those he has and would talk to about career ideas. RP.1 also noted his female partner as someone to consult but perhaps as much out of obligation as anything else. RP.2 looked back on earlier career decision points and cited close family as a point of support, in particular his female partner.

RP.5 spoke with his mother in detail about his career decisions upon leaving school and afterwards. To an extent he saw his mother a role model, in that she left school to go directly into work and in her promotion of others who upskilled whilst in the workplace. Similarly, he referenced his mother as having actively facilitated his access to his first employment opportunity, getting him started in the world of work. RP.5 however also consulted with his stepmother, who specifically signposted his Modern Apprenticeship opportunity to him, and later spoke with a female trainee careers adviser, although this may have been due to convenience rather than a gendered choice. There was also a gendering of the CIAG given to RP.4 in his mother's passing on of career information pertaining to his first apprenticeship opportunity.

Formal sources of CIAG

Overall the interviewees had limited contact with career professionals prior to working in the sector. RP.4 had met a female careers adviser in school, but never discussed progressing into work with his current employer or in the careers sector. While dismissive of the value of careers advice at school, post-school RP.3 had spoken with and valued the input of a female careers adviser and sought guidance on training routes into the sector from a female subject lecturer.

One participant's summary best summarised the challenges of the work of the careers profession and the scope of the work undertaken in this thesis. After discussing his career plans with their mother as a teenager, RP.5 reflected quite clearly on the experience: "*Looking back, I should have spoken to a careers adviser, ironically. But I didn't. I didn't.*"

Youth and gender

What is most notable in RP.4's interview is that he talks of his image in the workplace as being dominated by youth rather than gender. He is "*the boy*" at work and never the man. Not visible on the transcript is the weariness in RP.4's voice when he relays this point.

Role models within and outwith the workplace

Due to the impact of the COVID-19 pandemic, RP.3 and RP.1 had spent only minimal time in contact with colleagues in the workplace. RP.3 felt unable to cite current role models or mentors. RP.1 however had been allocated a female mentor in work. RP.2, with lengthier work experience overall cited various role models in the workplace over time, without any emphasis on gender.

RP.4 was very clear that his main workplace role model is male, the person to whom he credits what are clearly nurturing activities, mentoring and emotional support. RP.4 noted three female sources of workplace support alongside general 'colleagues' including female university lecturers and a female manager. RP.5 had been allocated a male mentor but also clearly noted a female role model in the workplace above their closest colleagues and two male supplementary role models from a wider colleague-base.

5.5 Testing of potential trends emerging from the qualitative interviews

From the interviews, it was possible to identify only one further focus point to review against the quantitative data obtained. All the gender atypical male apprentices interviewed had primarily obtained CIAG from their mother or another female relative.

Therefore, it was deemed viable to return to the survey data to explore whether gender atypical apprentices on other frameworks had obtained CIAG from someone of the opposite gender.

The survey respondents were split by gender (189 women, 258 men) for analysis. Again, as with the regression model, this meant the exclusion from the analysis of two respondents who did not identify as either of the binary genders by which Modern Apprenticeship starts are measured. Both women and men respectively were broken into groupings based on the gender atypicality of their framework. In line with the *Equalities Action Plan for Modern Apprenticeships in Scotland* (Skills Development Scotland, 2015b) targets, the groups for comparison were less than or equal to 30% of the same gender and greater than 30% of the same gender. For each of these groupings the proportions seeking advice from someone of the opposite gender were compared. The results are presented in Tables 6.12 and 6.13.

Women seeking advice from men				
	<30% Women		>30% Women	
	Count	Percentage	Count	Percentage
Male parent/guardian/carer	24	82.76%	129	80.63%
Male other relative	9	31.03%	40	25.00%
Male friend	13	44.83%	61	38.13%
Total respondents	29		160	

Table 5.12: Female Modern Apprentices sourcing career advice from men

Men seeking advice from women				
	<30% Men		**>30% Men**	
	Count	Percentage	Count	Percentage
Female parent/guardian/carer	5	83.33%	168	64.12%
Female other relative	4	66.67%	74	28.24%
Female friend	2	33.33%	73	27.86%
Total respondents	6		262	

Table 5.13: Male Modern Apprentices sourcing career advice from women

In each case the proportion seeking advice from the opposite gender was higher in the gender atypical group than in the gender typical group. In each case, a test for the difference between the two proportions was carried out to determine whether this was a statistically significant finding. The results are presented in Table 5.14.

Differences				
Women				
	Difference	95% Confidence Interval	*p*-value	Evidence
Male parent/guardian/carer	2.13%	(-12.92%, 17.18%)	0.788	None
Male other relative	6.03%	(-12.09%, 24.16%)	0.495	None
Male friend	6.70%	(-12.90%, 26.30%)	0.496	None
Men				
Female parent/guardian/carer	19.21%	(-11.17%, 49.59%)	0.331	None
Female other relative	38.42%	(0.03%, 76.53%)	0.041	Moderate to weak
Female friend	5.47%	(-32.64%, 43.58%)	0.768	None

Table 5.14: Differences in the gendering of sources of career advice by Modern Apprentices

Only the case of men seeking advice from other female relatives returned any evidence for a difference between the groupings. Due to the low number of men in gender atypical frameworks the evidence is only moderate to weak. Further research with more men in this category might further validate this finding.

However, this finding does correlate with the findings of the qualitative research in that the male apprentices stated that they sought CIAG from female relatives in addition to their mothers (sister, step-mother).

5.6   Conclusion

The initial descriptive analysis and simple hypotheses testing of the quantitative data presented in this chapter yields interesting findings in relation to family background including multiple births, lone parenting households, lesbian, gay, bisexual and transgender demographics, age, and sources of career guidance. It also offers supplementary findings, pertaining to knowledge of frameworks within Modern Apprentice cohorts.

The regression model enabled further testing of the data using additional hypotheses developed to interrogate trends and possible relationships based on the results of the descriptive statistical analysis.

The qualitative interviews surfaced issues pertaining to self-determination, career decision-making maturity, age and the gendering of CIAG. Furthermore, the qualitative interviews indicate broader supplementary issues pertaining to awareness and position of apprenticeships and the perceived value of vocational and educational training. The qualitative data analysis also created the opportunity to test additional propositions based on the findings.

In the following chapter the specific findings from the mixed methods research are discussed in detail.

6 Discussion

6.1 Approach

The themes raised in the literature review and investigated in this work remain contemporary, as demonstrated by the annual plethora of critical literature pertaining to Modern Apprenticeship provision (e.g. Bajgar and Criscuolo, 2019; OECD, 2020) and influences on career decision-making (e.g. Barnes et al., 2020). Relevant policy documentation continues to be produced by the Scottish Government (e.g. *Scotland's Careers Strategy: Moving Forward*, 2020a) and Skills Development Scotland (e.g. *The Careers Information Advice and Guidance Equality Action Plan*, December 2019) ensuring the themes remain prominent on political and economic agendas. Other policies and strategies continue or enter their reporting periods (e.g. *Equalities Action Plan for Modern Apprenticeships in Scotland* (Skills Development Scotland, 2015b); *Developing the Young Workforce - Scotland's Youth Employment Strategy* (Scottish Government, 2014a)).

Occupational segregation in Modern Apprenticeship provision, a stable and constant concern, has been a high-profile Scottish Government priority for 20 years and is without question a continuing policy focus; the word "gender" appears 92 times in the most recent annual progress report for *Developing the Young Workforce* (Scottish Government, 2019). However, as these annual reports show, despite the financing of approaches to addressing gender imbalances in education, work and training, through projects which engage with young people and their schools, colleges, employers and families, change remains slow and perhaps even imperceptible. It could be questioned whether any validity or long-term conclusions can be drawn from Modern Apprenticeship start numbers by gender shifting by less than a percentage point in either direction in any given year other than to draw attention to the futility of approaches to date. Similarly, promulgating an overall annual increase of 38 in the number of female Modern Apprenticeship starts, when the overall apprenticeship starts figure sits at 27,270 (ibid., reporting year 2018-19), may do little more than draw attention to a problem that simply will not go away.

Overall, all findings in this work pertaining to the Modern Apprentices surveyed and interviewed must be treated tentatively. Any trend may be context bound, potentially dependent on the sector or framework of the Modern Apprenticeship undertaken and the

response rates obtained. However, a robust methodology and thorough data analysis enables the author to present with a degree of confidence a discussion in which the points raised are relevant and valuable as a response to the aims and objectives of the work.

The overall aim of this thesis is to contribute to theoretical knowledge of gendered career decision-making within the career guidance and development discipline. During the research, novel supplemental findings emerged pertaining directly to apprenticeship provision, which cannot be overlooked and can be seen to contribute to career decision-making processes alongside gendered aspects. As such these are also addressed within the discussion. The work undertaken in this project surfaces under-explored or previously unexplored demographics relating to the Modern Apprenticeship population overall, in addition to those explicitly pertaining to gender. A cautious approach must be taken as what is discussed here can never be deemed exhaustive through an equality lens; to fully understand why people undertake apprenticeships requires comprehensive consideration of equality characteristics, diversity themes and matters of accessibility and inclusion. The discussion raises potential areas for further investigation in this respect; using the replicable methods additional qualitative interviews could be conducted or in the production of additional hypotheses it would be possible to continue to run queries against the existing or additional quantitative data.

Finally, to fulfil the intention of the author to make an explicit contribution to knowledge in relation to practitioner-researcher methodologies and practice, by enabling further practitioner-red research into career decision-making, the discussion includes reflection on the value of the approaches taken in the research process, where it concludes with an evaluation of methods. The intention of the discussion is also to link closely to practice and bring immediate value which engages potentially jaded practitioners: "Numbers of publications and citation counts may be de rigueur in academia but do not cut it in "the real world" of practice, where success is marked by one's ability to aid clients more directly and immediately" (Lent, 2017, p.23).

6.2   Apprenticeship provision

The research surfaces some general issues pertaining to knowledge and perceptions of and within Modern Apprenticeship provision. These help to provide context by demonstrating how issues pertaining to gender within apprenticeships can never be fully detached from wider issues pertaining to the position of apprenticeship provision within the labour market.

Modern Apprentices' survey responses highlight a lack of knowledge of their framework and industry, and their knowledge of their frameworks was shown to be at times inconsistent or inaccurate. This is likely related to the fact that many apprentices move on to a Modern Apprenticeship when they are in employment rather than applying directly or due to frameworks not directly correlating with all job titles in the labour market. As noted by one of the interviewees, there may even be a tendency for individuals to downplay that they are undertaking a Modern Apprenticeship, inadvertently contributing to this misconception. Recent UK-wide focus has been on perceived "misuse" of apprenticeship funds, suggesting that income from the employer-paid Apprenticeship Levy has been put towards generic training rather than explicitly structured apprenticeships (e.g. Richmond, 2020) which contributes to widespread misunderstanding of elements of apprenticeship provision. Any dialogue which overshadows robust knowledge about Modern Apprenticeships and those who undertake them can only contribute to a devaluing of the apprenticeship "brand", however the Modern Apprentices interviewed in the research demonstrate a strong tendency to advocate for apprenticeships.

The perceived value of apprenticeships was raised in the qualitative responses which highlight the appeal of "earn while you learn" slogans. This suggests that with experience of the labour market there comes increasing value placed on vocational education and training over other routes which the individual seeks out and pays for themselves. Evidence also emerges of the sense that Modern Apprenticeship provision offers a parity of esteem pathway, not least, one which offers an alternative route to those whose career needs were perhaps not met when they left their secondary education. In the qualitative research, participants highlighted their Modern Apprenticeship as having offered them something of a "second chance" in their career planning when they had not taken an academic route to gain workplace skills. This implies that Modern Apprentices are very

much aware of the status, dominance and perceived prestige of school-leaver qualifications and university-based education but that there are also indications of career maturity in their seeking out of other opportunities that better suited them. This both echoes and contrasts with the voices of apprentices collated in Ryan and Lőrinc's (2018) research into perceptions of apprenticeships wherein, "despite their earlier positive narratives, participants were aware of the prejudices and negativity surrounding apprenticeships" (p.769). In the qualitative interviews conducted, none of the participants raised concerns relating to stigmatisation of their status. Having experienced a Modern Apprenticeship they hold forth that they are a valid alternative parity-of-esteem pathway within the labour market that counters the common perception that only formal standalone education is a valid route to career transition: "Many students see no other choice but to rely on the promise that investment in education (i.e. certification) alone will ultimately pay off" (Hughes and Smith, 2020, p.38). It may be that the expansion and general promotion of Modern Apprenticeships in Scotland has had an impact on the general perception of their value and position.

Whether this perception has been adopted more widely remains to be seen, particularly by parents, a key career decision influencing group. The findings of the 2015 UK-wide Commission for Apprenticeships, emotively titled *Apprenticeships policy will have succeeded when most parents want their children to consider choosing an apprenticeship*… asserts that academic routes still enjoy higher status and esteem than vocational or technical routes, evidenced by parents being in favour of apprenticeships but not for their own children. 92% of parents surveyed thought apprenticeships were a good option for young people but only 32% thought they were the best option for their child. Parents surveyed also demonstrated a tendency to perceive apprenticeships as being for lower achievers and as a route to a stable job but not to the top of a profession (Commission for Apprenticeships, 2015). It's not difficult to find small-scale research which counters this being picked up within parent-focused popular media outlets. One report suggests there are changing perceptions amongst parents in relation to the popularity of apprenticeships, attributing this to, for example, better general awareness of apprenticeship options (Chartered Management Institute, 2019). Yet as soon as one popular research study into parents' opinions of apprenticeship is published, another seems to appear countering its findings, such as that conducted via a popular parenting website for the UK Department for Education which cites issues such as lower prestige and value being associated with apprenticeships by parents (Mumsnet, 2020). While the

focus of this work is not on apprenticeship perceptions *per se*, it is worth highlighting how continuous efforts to address misconceptions and maintain visibility of Modern Apprenticeships are required, particularly within broadcast, digital and print media popular with parents. This, in turn, must be cognisant of gender concerns.

Relevant to these points therefore are comments pertaining to how Modern Apprentices become aware of opportunities and the general communication of information about Modern Apprenticeships. In the qualitative research, interviewees listed a plethora of ways in which information about Modern Apprenticeships had reached them, suggesting that information about Modern Apprenticeships reaches individuals in different ways. In this cohort they all involve some personal active engagement, through either prior knowledge or encouragement, rather than merely through abstract promotion such as marketing materials. This finding has implications for how individuals make decisions about their career.

Rigid theorising of decision-making styles may not incorporate cognisance of the meso-level context in which an opportunity to make a career decision presents. In frontline careers practice, it is common to hear of decisions made in response to a dare ("they said I wouldn't be up to the challenge"), through pragmatism ("I went for the job that was closest to home"), through perceived spontaneity ("I had what was needed in the job specification") or for spiritual reasons ("I had to train to work in this job"). Career decisions may also relate to a wider lifestyle transition, which can be forced or voluntary (for example: illness, moving to a new area, relationships or caring responsibilities). In this example, human influencers are key sources of information affecting the availability heuristic, imparting easily recalled persuasive data on Modern Apprenticeship provision.

Impartiality and independence are core values upheld by those working within the CIAG sector (see, for example, the Career Development Institute *Code of Ethics* (2019a); *International Association for Educational and Vocational Guidance Ethical Guidelines* (2018)). As such, Modern Apprenticeship opportunities must be promoted with impartiality by professionals involved in supporting career planning. When information is conveyed it should be universally accessible and no assumptions made in relation to background and gender of potential apprentices or pressure to promote based on where government and labour market forces may direct resource. Hughes notes the vital role of careers professionals in enabling career decision-makers of all ages to consider

apprenticeship options, which requires them to have "access to informed, reliable and impartial career information advice and guidance, delivered by a triage system of suitably qualified and well-trained staff" (2016, p.277). This is of importance within Skills Development Scotland where Modern Apprenticeship management and national CIAG are delivered by the same umbrella organisation. In this setting, careers staff being professionally qualified and committed to ethical standards ensures a focus on impartiality, wider labour market knowledge of apprenticeship provision and equality concerns therein notwithstanding.

6.3   Apprentice personal background and family units

The quantitative research focused on the research question, **"Does personal background and the family unit structure affect the likelihood of an individual undertaking an apprenticeship in a gender (a)typical framework?"** and this section of the discussion looks at the research gaps that this question responds to: relationships and positioning within the family unit, the gendering of informal career guidance and support, the modern family unit, non-binary gender and other demographics.

The quantitative data surfaces a significant finding pertaining to lone parenting, with the data indicating that the proportion of Modern Apprentices coming from a lone parent family background is significantly higher than the instance in the general population. The regression model did not surface any statistically significant correlations to indicate that children from lone parent families present any marked difference in gender atypicality or perceived underrepresentation by gender. However, it is well-documented that women comprise the majority of parents in lone-parent families and that lone-parent families in the UK are at an increased risk of poverty (e.g. Joseph Rowntree Foundation, 2018), therefore there may be an underlying gender dimension to this finding. Issues pertaining to the Gender Pay Gap and to a disproportionate bearing of the cost of raising a child within a lone-parent family compared to dual parent families (Hirsch, 2019) may also play a part. To explore these findings further, different perspectives on the data must be considered and this is an area in which further focused research could be conducted, obtaining more data on children from lone-parent families and their parents.

There may also be further routes to explore concepts of general access to career support within the family unit. Children in lone parent households may or may not have fewer close role models who can demonstrate varied career options. The qualitative research also highlights this, when siblings are discussed. While only child status relates to just one interviewee, that interviewee cited fewer human career influences. It might be worth exploring further whether only children have fewer career supports or influencers and influences either within or outwith their family, as the other interviewees clearly referenced a much wider range of family-based career supports. The finding also conflicts with the literature on siblings; the literature review sourced evidence pertaining to older siblings' influence in career decision-making (Aaltonen, 2016), yet none of the interviewees mentioned older siblings as a direct influence on their decision to undertake a Modern Apprenticeship. Future work which builds on Aaltonen's research into the difference in style of CIAG given by siblings might yield more insight into how this influencing group is regarded by career decision-makers.

Another aspect of the family background of Modern Apprentices that the quantitative data indicates to be of importance is multiple births. The data indicate strong evidence that the proportion of Modern Apprentices born in a multiple birth is higher than that in the general population. This novel finding relates to data on an element of a person's family unit that might not generally be discussed by apprentices or those working to support them. While more research is needed to further validate this phenomenon, it is possible to consider reasons for this. The messaging of apprenticeship provision may be one way to contextualise this finding. For school leavers in particular, a popular parity of esteem route to a Modern Apprenticeship is to go to university. Funding of higher education is rarely out of popular media headlines. Many families continue to support individuals through their university education, through choice or necessity as household income (for young students, this usually means their parents' income) is included in calculations relating to the amount of financial support a student can receive (Student Awards Agency Scotland, 2020). This leads to an expectation that parents, a significant influence on career decision-making, will (or will be deemed to) contribute towards living costs. This is reiterated in media messaging directed towards parents (e.g. Young-Powell, 2019; Murray, 2020) which often raises the issue that the number of children in higher education at the same time is not taken into account for financial support eligibility. For parents of children from multiple births, entering higher education at the same time might be perceived to be prohibitively expensive. Alternatively, the common "earn while you

learn" phrasing pertaining to apprenticeship provision may be attractive, given the anticipated financial implications of higher education routes on an individual or household, which could be more strongly felt with two or more siblings of the same age.

Within both the quantitative and qualitative findings, there are clear indications that the majority of Modern Apprentices consult their parent/guardian/carer to obtain career guidance and that there is a gendered dimension to who Modern Apprentices consult to obtain career guidance. These findings require further consideration.

Parental influences have attracted significant attention, particularly in the literature on young people's career decision-making (e.g. McGinn, Castro and Lingo (2018); Education and Employers (2020); Barnes et al. (2020)). The findings in this study confirm the dominance of parents in the giving of informal CIAG. Barnes et al.'s *The role of parents and carers in providing careers guidance and how they can be better supported: Evidence report* (2020) offers a contemporary overview of exemplar initiatives to engage parents and carers in career learning activities, including guidance opportunities. The refreshed *Scotland's Careers Strategy: Moving Forward* (Scottish Government, 2020a) highlights this as a key consideration for future policy direction. However, ongoing continuous improvement of CIAG provision within education and training may benefit from the integration of wider family. While the data clearly indicate that parents/guardians and carers are the most consulted sources of informal guidance, guidance was also obtained from other relatives and friends.

While a focus of CIAG for the wider network is generally on young people's needs, and on what schools and further education colleges can do, the findings suggest it is also worth considering individuals who face longer career decision transitions or who wish to change direction later in life and whether they too have family members willing and able to provide informal support, given the high number of individuals undertaking an apprenticeship later in life. There is scant literature available on human formal and informal influencers in later-life career decision-making, and what exists is highly specific and limited in respect of gender, focusing for example on the male-dominated occupations of junior doctors (Cuesta-Briand et al., 2020) and academics (Tzanakou, 2017). In later life the involvement of family members beyond those most prominently referenced could be further explored to consider the impact of financial, emotional and practical constraints that create push or pull factors pertaining to career decisions and in

turn produce justification for the need for formal guidance services to target career information activity towards all influencing individuals, not just the career decision-maker who is the current point of contact.

Career related learning much earlier in life may also build the capacity in individuals to react against gender norms or to take alternative pathways from the outset. Young people demonstrate gendered aspirations about their futures from a young age (e.g. OECD 2019, OECD 2021). Work in primary schools by teachers engaged in career education can support other teachers to address this (Kashefpakdel, Rehill and Hughes, 2018); however, explicit training on how to tackle issues pertaining to gender is needed to ensure confidence in doing so and a clear focus. In Scotland Education Scotland's Improving Gender Balance[37] project is one example of an initiative to develop further: by creating resources and sharing research focused on practitioners to "challenge gender stereotypes; address unconscious bias; improve gender balance in subject uptake and learner pathways; promote whole-establishment approaches to equality" (Education Scotland/IGBE, 2021).

The gendering of advice is also of significance. The data obtained suggest that people go to individuals of the same gender to obtain career advice, and men and boys seek advice from other males in their lives, which has implications for the gender bias within careers professional roles. There may be links to the traditional perceptions of who does an apprenticeship at play too; with a persistent gender imbalance in participation rates, men are overall more likely to have done a Modern Apprenticeship, therefore it may be that potential Modern Apprentices go to men for CIAG as men are more likely to have done an apprenticeship themselves, and are seen as a valid source of advice. Additional research with more men in this category might further validate this finding. Gati et al. suggest women are more effortful, more likely to consult with others and consult with a wider group then men and are likely to take longer to make a final decision (2010, p.287). This may mean there are more opportunities for influencers and influences to dissuade as well as persuade women to follow a career path.

The findings of the quantitative and qualitative research correlate with the background literature (e.g. Phillips and Newton, 2014; Ginerva, Nota and Ferrari, 2015) in relation to gendered career supports. In the qualitative interviews, both informal and formal sources

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[37] Now expanded in its remit and renamed Improving Gender Balance and Equalities.

cited by the interviewees indicated reliance on women as sources of CIAG, where CIAG had been memorably obtained. Male Modern Apprentices stated that they sought CIAG from female relatives in addition to their mothers (sister, step-mother) noting a wide range of female influencers. While indicated in just one interview, one interviewee going to his brother for CIAG is a noteworthy anomaly. It may be that, due to Modern Apprenticeships overall being male dominated, any potential apprentice is more likely to go to a male peer to gain CIAG rooted in direct experience relating to apprenticeships. Similarly, that within the cohort formal CIAG had been with female careers professionals is indicative of the gender bias in the carer development sector. Continued investigation into who women and men, girls and boys consult for career information may be fruitful.

Additional investigation of trends seen in the qualitative interviews offered some scope however in the available survey data, there were low numbers of responses from men in gender atypical Modern Apprenticeship frameworks limiting expansion of this trend. More research into men on atypical frameworks would be advantageous.

Across the literature cited within the theoretical literature review, parents as a career influence are generally considered within heteronormative models, i.e. that children are born and raised within a nuclear family with one male and one female parent. Lone-parenting family models have already been raised within this discussion. However, four respondents to the survey stated that they had lived within a household with either two female or two male parents at the age of fifteen, four respondents stated they were in care and three fitted none of the ascribed categories. To ensure consideration of and messaging on parental influence includes diverse parenting roles (such as: same-sex/same-gender parents, kinship care, corporate parenting), further research into the wide range of family backgrounds may offer more inclusive underpinning theoretical postulations, which in turn inform service delivery models.

6.4   Lesbian, gay, bisexual and transgender identities

As noted in the descriptive statistical analysis, it is outwith the author's expertise and the scope of this thesis to offer detailed analysis of non-binary gender or trans identity in relation to individuals within the Modern Apprentice population. However, a simple response within the data was that two respondents wished to identify as neither male nor

female, the two binary gender measures by which Modern Apprenticeship data are publicly reported. These responses had to be removed from the regression model as there is no public data on non-binary gender by framework, which highlights the limitations of cis-normative collection and reporting of data. While there were too few respondents to have made any inferences from the data reported in this study, it highlights how this group's insights remain difficult to capture. In all data capture opportunities, the findings indicate that an option should be available for those who wish to declare their non-binary gender.[38] More inclusive public data reporting for Modern Apprentices may be of benefit, to demonstrate that within annually reported statistical data this group of individuals is neither overlooked nor required to state a gender by which they would not ordinarily be defined. This will help with the perception that Modern Apprenticeships are for everyone and bolster the argument that the intention is to recruit to them from a diverse population. Not least, the intersection between changing gender identity and Modern Apprenticeship provision may highlight any successes in this aspect, as the data obtained indicate the number of respondents identifying as trans may be higher than the population average estimates, albeit the response rate is too small to attribute significance.

Data on Modern Apprentices' broader equality characteristics offer further insight into inclusion and equity within the Modern Apprenticeship Programme. In the analysis of personal demographic background information robust positive findings appear, in relation to sexual orientation and lesbian, gay and bisexual (LBG) identity. There were indications in the descriptive data analysis that LGB identity may have a relationship with the uptake of apprenticeship provision generally, with the number of Modern Apprentices identifying as LGB in the 25-34 age range being significantly high.

It is reported that individuals' LGB identity can delay career planning and affect vocational intentions (e.g. Hetherington (1991); Schmidt & Nilsson (2006)). Reliance on heteronormative models that reinforce the idea that all aspects of identity are formed in youth and firm decisions made on career direction in later teenage years does not account for delayed shifting or acceptance of identity, which can be created by (but not only by) LGB status. While none of the interviewees identified as LGB, comments they made may also have relevance here; the peak in LGB status in the 25-34 age range may link with

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[38] A question pertaining to transgender identity is included in the Skills Development Scotland National Training Programmes Equality Monitoring Form, completed by Modern Apprentices at commencements of their Modern Apprenticeship.

the perception that Modern Apprenticeships offer a second chance to explore a career direction, for those who feel their options were limited in early adulthood. Furthermore, the regression model indicates that where gender balance is being improved within frameworks, it is being done so by non-heterosexual individuals. This aspect of demographics certainly requires further investigation in future research. The small numbers obtained in the sample, when supported with extended literature pertinent to LGB career decision-making, further data collection and analysis may be used to help build a clearer picture of how LGB identity interacts with gender atypicality in career choice.

6.5 Revisiting framework data

It is within the frameworks that detailed analysis must take place on where and how gender balance is being improved by atypicality. Within the regression model, there was very strong evidence to suggest men have a higher proportion of other men in their Modern Apprenticeship frameworks than women have of other women. That is, female Modern Apprentices experience greater gender atypicality than male Modern Apprentices. Men being more likely to be on Modern Apprenticeship frameworks with other men could relate to the higher instance overall of men undertaking Modern Apprenticeships but closer interrogation of the data on Modern Apprenticeship gender splits is required to clarify exactly how and where gender atypicality presents.

It is pertinent to consider this in the context of the *Developing the Young Workforce* targets for gender which feed into the *Equalities Action Plan for Modern Apprenticeships in Scotland* (Skills Development Scotland, 2015b). A review of the ten most populous Modern Apprenticeship frameworks overall for the year ending 2019-20 (Skills Development Scotland, 2020e) highlights how unpicking this at framework level is complex. Of the ten most populous frameworks, five (Construction, Freight Logistics, Construction: Civil Engineering, Construction: Technical, Engineering) present a significant male bias considered problematic in line with *Developing the Young Workforce* targets, i.e. a gender split greater than 75:25. Two frameworks, Social Service and Healthcare, and Social Services (Children and Young People), present a significant female bias and the remaining three frameworks (Hospitality, Business and Administration, Retail) also present a female bias, but it is not as marked nor, importantly, at sufficient a gender split to be covered by the *Developing the Young Workforce* targets. This highlights how the issue of female-swayed gender bias at framework level could possibly be overlooked by the set targets.

In the empirical literature review (Chapter 3) on Modern Apprenticeship occupational segregation, the author presented the 2019-20 framework data based on frameworks where it was possible to identify gender bias. To return to this is helpful at this point. The calculations made by the author in section 3.3.3 "Framework-level presentation of occupational segregation in Modern Apprenticeships" highlight the futility of the targets set by *Developing the Young Workforce* in relation to where the focus should be on gender bias within Modern Apprenticeships provision. Changes in the gender balance of such

low participation frameworks can have a disproportionately large effect towards the measurements of progress towards gender equity targets.

Table 6.1 presents the publicly reportable frameworks for 2019-20 Modern Apprenticeship starts in which the 75:25 gender bias is exceeded. 24 of the frameworks had fewer than 500 starts (Skills Development Scotland, 2020e). Those frameworks, with significant gender bias, could be artificially "fixed" by a few starts by gender atypical Modern Apprentices within heavily segregated frameworks with low start numbers. Notable is that 10 of these alone are at 100% male, and a targeted positive action project, for example, by one recruiter might remedy the balance, particularly on frameworks with low participation rate. That is not to say achieving this is in any way possible or the intention of those working on Modern Apprenticeship diversity, but it demonstrates the limitations of complex targets and a focus on reporting numbers if very large and very small frameworks are equated as equally valid in relation to meeting the *Developing the Young Workforce* targets. Targeting selected frameworks will not remedy deep rooted gender bias within the labour market. The effects of gender atypicality clearly vary by framework and while the end result of redressing gender bias in large frameworks may be harder to achieve, without specifically problematic frameworks being a focus point, the policy targets are of limited use in addressing broad gender atypicality. The breakdown of data in Table 6.1 also clearly highlights how the most segregated frameworks are male dominated overall, explaining why, as evidenced in the regression model, male Modern Apprentices experience greater gender typicality than female Modern Apprentices.

Frameworks	Female MA Starts	Male MA Starts	Total Starts	% Female MA starts	% Male MA Starts
Achieving Excellence in Sports Performance	0	134	134	0	100
Agriculture	11	54	65	17	83
Aquaculture	9	57	66	14	86
Automotive	56	1,067	1,123	5	95
Care Services Leadership and Management	41	8	49	84	16
Construction: Building	42	1,570	1,612	3	97
Construction: Professional Apprenticeship	7	259	266	3	97
Construction: Specialist	0	204	204	0	100
Construction: Technical	60	1,106	1,166	5	95
Construction: Technical Apprenticeship	21	698	719	3	97
Electrical Installation	15	701	716	2	98
Engineering	77	1,083	1,160	7	93
Extractive and Mineral Processing	0	49	49	0	100
Facilities Management	0	14	14	0	100
Firefighting	32	162	194	16	84
Freight Logistics	95	1,342	1,437	7	93
Game & Wildlife Management	0	14	14	0	100
Glass Industry Occupations	0	112	112	0	100
Hairdressing & Barbering	560	46	606	92	8
Healthcare Support	58	11	69	84	16
Heating, Ventilation, Air Conditioning and Refrigeration	6	89	95	6	94
Industrial Applications	6	30	36	17	83
IT and Telecommunications	115	625	740	16	84
IT and Telecommunications Technical Apprenticeship	19	173	192	10	90
Power Distribution	0	22	22	0	100
Process Manufacturing	9	59	68	13	87
Signmaking	0	17	17	0	100
Social Services (Children and Young People)	1,924	160	2,084	92	8
Social Services (Children and Young People) Technical Apprenticeship	292	13	305	96	4
Social Services and Healthcare	1,781	319	2,100	85	15
Social Services and Healthcare Technical Apprenticeship	79	16	95	83	17
Sustainable Resource Management	0	12	12	0	100
Upstream Oil and Gas Production	12	96	108	11	89
Water Industry	7	32	39	18	82
Wood and Timber Industries	0	11	11	0	100

Table 6.1: Modern Apprenticeship framework starts 2019-20 in which a 75:25 gender bias is exceeded (Source: Skills Development Scotland (2020e))

Does this suggest that it is easier or harder for male or female Modern Apprentices of either gender to infiltrate frameworks dominated by the opposite gender? At this point the mixed methods nature of this work becomes particularly valuable in offering broader insight into the career decision-making processes of gender atypical Modern Apprentices. The qualitative data provides an illuminating angle on the extent of the impact of knowledge of gender under-representation within some occupations.

6.6   Gendered influences and influencers on career decision-making

The qualitative research focused on the research question, **"**To what extent do gender atypical apprentices attribute and relate their career decisions to the family unit and gendered influences and influencers?" and while a number of points already noted in the discussion have drawn on the qualitative findings, some aspects of the data collected are outstanding. This section of the discussion looks at the research gaps that this question targets: the exploration of the impact of personal career decision-making that results in occupational segregation in Modern Apprenticeships. It does so in line with the SCCT thematic template used to code the data obtained.

The focus of the qualitative data collection being on the careers sector itself links directly to points already made pertaining to the dominance of women as career supports and its position as a gender biased profession. There is perhaps the greater validity of the data obtained by the interviewees compared to other frameworks that could have been chosen: as trainees working in the career development sector, the terms pertaining to career concepts and descriptions used by the interviewees are perhaps more precise, in that they have a subject-specific understanding of career terminologies themselves.

Reviewing the first six years of usage of the SCCT model of CSM, its creators note research findings that emphasise contextual variables as "important and multifaceted roles in career self-management" and the validity of, albeit indirectly, personality variables (Brown and Lent, 2019, p.572). This correlates well with the findings herein, not least in that the greatest amount of data obtained from the interviews undertaken and coded against the SCCT model of CSM thematic template is on contextual and personality factors and person inputs. These offer relevant findings in relation to gender atypicality in career decision-making.

There was limited transmission of explicitly gendered concepts, in relation to contextual and personality factors. One interviewee's observation highlighted their absorption of messaging online pertaining to "do what you want" ideals, a positive influence of social media. Research has been undertaken into young people's job searching behaviour using social media (Mowbray and Hall, 2020), into careers practitioners' experience of disseminating career information using social media tools (Kettunen, Sampson and Vuorinen, 2015) and into the validity of career information available on social media (Sampson et al., 2018). An exploration of what the end user takes from social media both in career and non-career focused realms, in relation to career decision-making efficacy as well as career information gathering, may be beneficial, using the SCCT model of CSM.

In the interviews, the individuals conveyed a sense of being a certain type of person suited to the work they do and the direction they have taken. Similar to the cognitive-person factors pointing towards a certainty of self-efficacy, there was a lack of concern pertaining to "going it alone" or a generalised need to follow the crowd in any respect, which extends to gender norms. While there was a willingness amongst the interviewees to take their own direction in life, older Modern Apprentices may be directed to or undertake training for different reasons. This may bring with it a different perspective on participation on a Modern Apprenticeship depending on nature of recruitment to it, which may contribute to individuals not realising that they are indeed undertaking one.

The person inputs offer some insight pertaining to age, which can be considered through a gendered lens. An interviewee in his early twenties noted repeated reference to himself as "the boy." A disenfranchising such as this taking place, in that an employee is unable to be that which he is in the workplace, a mature man, and only ever "the boy" cannot pass without comment. Reference to a woman in her early twenties as "the girl" would be considered inappropriate and unacceptable. This is clearly not respectful language use within the modern workplace. If Modern Apprentices are to be valued in the workplace, they cannot not be diminished in their status however "light-hearted" a joke appears to be on the surface. Workplace "banter" can easily escalate. Positive action training for employees must discourage banter which pertains to protected characteristics (Palmer, 2020) which include age, and as employees within the workforce, there is no question that this should extend to the apprentice population.

The data obtained from the qualitative interviewees highlights how gender bias within the careers sector simply hadn't been something the men interviewed had explicitly considered. Three out of five interviewees did not perceive themselves as being under-represented by gender in the sector in which they work, despite the sector being marked by a 70:30 split in favour of women. Returning to the quantitative data, this correlates with contradictions in the survey respondents' perception of gender underrepresentation wherein it was possible to identify apprentices who were under-represented by gender but unaware of this phenomenon. These results are significant, as they demonstrate that gendered career decisions may not be perceived as such by the individual. Is this because they *personally* perceive it as unimportant to them? Is this a perception held more widely by those who enter occupations within the underrepresented gender? While there is scope to further research the intentions of those who willingly entered a sector in which they knew they would be underrepresented, it would be worth exploring the stage at which gender segregation within an occupation or role becomes an issue.

Schweitzer et al.'s (2011) contention that limitations in pipeline approaches means they cannot provide a "fix" to issues of occupational segregation in male dominated sectors, as they do not enable a critical mass of women entering male dominated sectors, becomes relevant to this finding. A tipping point at which gender bias isn't seen to be detrimental as an issue or is most easily combatable has implications and again raises questions as to whether the *Developing the Young Workforce* targets equally weight those frameworks which may not require most attention. It is also important not to over-emphasise where good practice has led to changes within levels of segregation. Recent research notes that employer bias within employment persists even after a period in which occupational segregation reduces: "when issues of women's representation in a field have largely been resolved—even when there is a wealth of women who have made it into the field's "pipeline," with careers fully underway—gender biases can thrive" (Begeny, Ryan, Moss-Racusin, and Ravetz, 2020, p.8). Whether this applies when it is men who are underrepresented requires exploration. The authors note "a focal group of individuals who are perpetuating this bias, and it is perhaps ironically those who think it is not happening" (ibid.). Perhaps the greatest risk in future pertains to those whose awareness is not brought to gender imbalances in their occupations or sectors; this can be mitigated by an understanding that gender imbalance should be a topic for discussion in any workplace. In relation to the current study, Modern Apprentices being matched with workplace

mentors of the same gender might be an example of how to perpetuate such misconceptions.

Existing gender bias in the workplace may mean that there is an increased likelihood of people in the overrepresented gender being matched to mentors and role models of the same gender. However, this study suggests this also occurs within the gender groups as of those interviewed, in a sector dominated by women, two out of five men (40%) were allocated male mentors. This suggests a matching of underrepresented male Modern Apprentices with male advisers, whether intentional or linked to availability. The rationale for allocating mentors, role models and supervisees by gender in the workplace may be a fruitful topic for further exploration.

The findings suggest there is scope to build on what appears to already be good practice in provision demonstrated by the Modern Apprenticeship routes in the career development sector in Scotland. As clearly stated in the *Skills Development Scotland Careers Information Advice and Guidance Equality Action Plan*, when viewed via an equality lens, the profile of the national skills body's CIAG staff replicates trends seen in the wider sector. It is gender imbalanced (72% female) and, relevant to the data collected in this research, only 2.4% of staff declared themselves to be lesbian, gay or bisexual. Within the plan, the Modern/Technical Apprenticeship route is clearly cited as a mechanism via which the organisation seeks "to increase the percentage of colleagues from under-represented groups in our CIAG workforce" (Skills Development Scotland, 2019e, p.11). In another example of a SCCT model of CSM person input, some interviewees directly recruited to their Modern Apprenticeship were clear that their vacancies were specifically targeted for "people like them," which encouraged them to apply. One interviewee, for example, explicitly noted that the Modern Apprenticeship offered a route into working for an employer he had not previously considered, in a role and sector outwith his prior consideration.

Although the numbers on this framework are small scale, this evidences success in positive action within Modern Apprenticeship recruitment, in relation to both gender and extension of the full funding contribution to other equality characteristics. As noted by Neary (2020) there are many challenges for the career development sector in relation to a lack of diversity in CIAG roles. Any success in work undertaken to diversity the workforce must be harnessed.

6.7   Methodological review

This project highlights the value of diverse research methodologies within the field. Recent literature is scant on the linking of career behaviours to labour market outcomes and mixed methods research into career decision-making may be able to address this gap. The methods used in this project are replicable and robust. In the creation of an ethical research framework, the project creates a structured tool to support practitioner-led research in the sector. Similarly, the development of the practice-informed biographical interview model for the qualitative interview methods provides career researchers and guidance interviewers with a model to obtain clients' career histories in a concise manner. The adaptable model enables the efficient capture of core data on demographics, personal networks and background, career transitions, labour market conditions, and equality, diversity and inclusion issues where no such model previously existed.

Reflecting on the SCCT model of CSM a limitation worth review relates to when notions of aptitude overrode cultural and societal influences within the interviews. While these could be deemed to feed into the person inputs of the research participants' distal antecedents this felt like a clumsy approach to take. To remedy this, the SCCT model of CSM might benefit from reintegration or supplementation with vocational aptitude antecedents or concepts from within theoretical positions based on career matching. Further study of the trends might then be possible. While still a relatively recent iteration of SCCT, the SCCT model of CSM used in the project worked well and could be utilised again in the same form to test for adaptive career behaviours within a cohort, perhaps even with large scale qualitative data collection.

In recruitment of participants for any research project, inroads must continue to be made to better engage diverse research participants. In this study, translation was considered as a potential route. Since the Gaelic Language Act 2005, Gaelic has been recognised as an official language of Scotland. The survey was conducted in Gaelic and English, to encourage accessibility and engagement with the Gaelic language in line with current Gaelic Language Plan (2018). The costs and time to do this were not prohibitive but as noted in the findings, response levels were low and flawed. While it may not be advantageous to replicate this for similar target cohorts there may be benefits to Gaelic-language translations for bespoke groups, such as those who have been through Gaelic Medium education or who live in areas with high use of the language.

6.8   COVID-19

It is not possible to conclude this discussion without acknowledging the impact of the COVID-19 pandemic on the labour market, on education and training opportunities and on the lives of individuals. Early indications suggest it will disproportionality affect young people entering the labour market (Costa Dias, Joyce and Norris Keiller, 2020; HMRC, 2020) and Modern Apprenticeship provision is an example of an access route. For those already facing challenges in the school-workplace transition, there can be no doubt that "the virus will almost certainly exacerbate existing problems faced by young people" (Hughes and Smith, 2020, p.7). Furthermore, the pandemic is expected to disproportionality affect women, due to the location and nature of their work, and perpetuate existing inequality (Close the Gap, 2020). Women in the UK appear to be more likely to have lost or be about to lose their jobs, especially if they do not hold a university degree (Adams-Prassl, Boneva, Golin and Rauh, 2020) which most apprentices do not. Rapid response papers (e.g. Youth Employment UK et al., 2020; Engender, 2020) offer principles for economic recovery with young people and women at the forefront and indicate the impact will be long-lasting but while the impact cannot be understated, neither can it yet be accurately measured. As start and completion rates of Modern Apprenticeships are already closely monitored, in the short and medium-term it will be possible to look for specific detrimental effects to provision.

6.9   Conclusion

This chapter has discussed in detail the findings and analysis of the mixed methods research. In doing so it revisited relevant aspects of the literature critiqued in the earlier theoretical and empirical literature reviews and, where appropriate, introduced new sources to validate the points raised.

On apprenticeships in general, confusion amongst the apprentice population in relation to framework undertaken was highlighted as a challenge for those researching trends. The value placed on funded training and parity of esteem routes in the labour market was reviewed, as were the perceptions of apprenticeships held by parents, a group who carry significant influence on career decision-making of young people. The gaining of awareness and knowledge pertaining to Modern Apprenticeships was also discussed along with the importance of impartial CIAG in relation to labour market opportunities.

Analysis was undertaken of family composition, focusing on findings relating to lone parenting and other non-heteronormative family units, which have often been overlooked in the wider literature. Later life-span career transitions were also explicitly considered, as were the broad range of individuals who can influence career decision-making at any age. The impact of age and the transmission of and receiving of gender concepts pertaining to work, educational and training were also examined.

Trends in relation to multiple births within the cohort and dependence on informal female sources of career advice provided scope for interesting exploration of Modern Apprentices' personal background. The critique showed that while there is some correlation with existing research into the consultation of family members in relation to career decision-making, the research pinpoints a potentially gendered dimension to this.

LGB and transgender identities were raised as a potential factor impacting on gender atypical decision-making. The findings within the research pertaining to transgender identity and the novel data pertaining to LBG identity formed an important part of the discussion. This was highlighted as an area of Modern Apprentice demographics offering capacity for future research.

On Modern Apprenticeship provision, the discursive critique focused on the validity of gender targets and the impact of knowledge of gender bias amongst the workforce. The chapter offered a re-evaluation of Modern Apprenticeship Framework data and policy targets in the context of the findings of the mixed methods research.

Picking up on the earlier discussion points relating the gender of career influencers, the giving of formal and informal CIAG was considered. The value of looking at professional development within the CIAG sector itself was noted.

The conveying of gendered concepts and gender atypicality in career decision-making within the qualitative interviews were presented in line with the SCCT model of CMS. Diverse topics raised therein include social media messaging, personality and character, age, awareness of occupational segregation, mentoring and role models and existing good practice in Modern Apprenticeship equality measures (wherein Modern Apprenticeship routes to accessing the CIAG sector itself were noted).

The discussion concluded with a review of the approach of the research and a specific acknowledgement of the challenging context created by the COVID-19 pandemic.

In the following, final, chapter of the thesis, conclusions and recommendations are made which draw on the discussion undertaken in this chapter.

7 Conclusion

7.1 Introduction

This thesis makes a significant contribution to theoretical knowledge of gendered career decision-making. This concluding chapter covers the broad scope of the work and summarises how the thesis has achieved its intention of being a valuable addition to the career guidance and development field. In doing so, it offers a new perspective on a longstanding issue of labour market inequality, of interest to wider stakeholders, that of occupational segregation within Modern Apprenticeship provision.

This chapter summarises the project outcomes and demonstrates the validity of the unique research perspective of a practitioner-researcher. The proximity to practice of the researcher underpins the concluding recommendations, making their realisation more probable. The empirical and theoretical findings of the research create specific tangible recommendations for apprenticeship programmes, CIAG provision and create opportunities for follow-up research. However, throughout this chapter the parallel methodological learning and its value to the discipline are frequently spotlighted, demonstrating the value of the project to the career guidance and development discipline and the practitioner-researchers therein.

In a post-pandemic landscape, high quality career information, advice and guidance is more valuable than ever. A rapidly evolving labour market creates challenges and opportunities; forced transitions offer the opportunity to re-evaluate career aspirations. Apprenticeship provision enables individuals to take a new direction, opposite to those expected of an individual by gender.

The thesis ends with a personal reflection conducted in line with the expectations of the career guidance and development discipline.

7.1.1 Revisiting the aim and objective of the thesis

In its overall **aim**, this thesis sought to contribute to theoretical knowledge of gendered career decision-making within the career guidance and development discipline. The work,

in turn, was undertaken with the intention to develop routes to create professional practice resources within the field of career information, advice and guidance which offer scope for mitigating gender bias in career decision-making.

To achieve this an underpinning **objective** of the thesis was set: to conduct new research into gender atypical career decision-making, which could contribute to the research agenda within the field. The meeting of this objective has been demonstrated within the literature review, methodology, findings and analysis, and the preceding discussion chapter signposts their potential relevance in professional, organisational and theoretical contexts.

Occupational segregation in Modern Apprenticeships is a manifestation of gendered career decision-making within the labour market which won't dissipate without intervention. Tackling perceived notions of gender in career decision-making and occupational segregation should be a consideration in career information, advice and guidance (CIAG) policy and practice, so how can formal CIAG provision address gender bias in career decision-making?

A demonstrable commitment can be shown, such as in the *Skills Development Scotland Careers Information Advice and Guidance Equality Action Plan* which states clear intentions in relation to gender pertaining to staff capacity, competence and confidence in relation to gendered notions of work and learning with clients and in engagement with parents/carers (Skills Development Scotland, 2019e). However, proposed outcomes are difficult to meet without exemplars to follow which integrate gender cognisance from within the discipline and offer evidenced and useable practical approaches. In this sense, gender aware careers practice is not limited to scholars and professionals. It must enable the review of career decisions through a gendered lens by all individuals.

In this conclusion, the intention is to review the work, indicate how the specific research objectives have been met and look for ways forward which can further operationalise the learning.

7.2 Contribution

As an original contribution to knowledge, the thesis addresses gender and career decision-making, an area in which the existing literature on career development theory is limited by a lack of empirical testing. Its contribution is to the contemporary career guidance and development canon in the context of equality and inclusion in career decision-making and in the expansion of frameworks and models which better enable practitioners to engage in practice-orientated research. The study speaks to equality and inclusion agendas in education, vocational training, further and higher education and employment and related issues pertaining to the economic impact of skills under-utilisation. The thesis adopts a unique position, as career development theory has not previously been utilised in research into the mitigating of occupational segregation in Modern Apprenticeships, further highlighting the value of career theory-led research.

This section summarises the ways in which this thesis makes a significant and broad contribution to the field.

7.2.1 Positioning the thesis

This inquiry contributes to a growing body of doctoral and post-doctoral research into practice-orientated career education, information, advice and guidance in Scotland, the wider-UK and on a European and international level. Career guidance and development research responds directly to the needs of education and industry, offering timely and relevant research which could lead to measurable benefits. Such research has the potential to inform policy and practice in the delivery of CIAG and career education, has implications for skills training and utilisation and creates the potential to change culture and attitudes and build capacity for all involved in career decision-making support. In contributing to both career guidance and development theory and practice in the CIAG sector, the thesis correlates with the work of professional organisations such as the Career Development Institute (UK) and The Network for Innovation in Career Guidance and Counselling in Europe. Research with the potential to inform practice can be utilised by organisations such as Skills Development Scotland, The National Careers Service in England, The Association of Graduate Careers Advisory Services, The Careers and Enterprise Company and The National Institute for Career Education and Counselling.

7.2.2 Value to the sector

It has been the intention throughout the project for the final thesis and subsequent academic output building on the work herein to speak to para-academic communities within the field of career guidance, a professional group who have a wealth of experience and knowledge but who have limited opportunity to engage in a research culture. To meet an increasing demand for practitioner-led research in professional fields, a supplementary **aim** of the thesis was to make an explicit contribution to knowledge in relation to practitioner-researcher methodologies and practice in the career guidance and development sector. "A body of practitioners with skills, passion and the resource to undertake more practice based research would greatly contribute to the credibility of a professional image sought by the sector as a whole" (Neary and Hutchinson, 2009, p.43) and the production within this work of accessible and adaptable research tools provides practical resource for practitioner-researchers.

The learning from the work has the potential to contribute to contemporary best practice approaches in the sector. The recommendations offer routes for directly building gender competence within career development professionals in training and continuous professional development, and direct towards the creation of tangible and practice-orientated best practice resources. Furthermore, several opportunities for further research are pinpointed, offering scope to further test new trends emerging from the research and respond to new gaps which have emerged, expanding the potential for future practitioner-led research.

Not least, in limiting the qualitative data collection to one specific area the discussion also offers a first opportunity to engage in critical insight into the nature and efficiency of work undertaken to address occupational segregation with the CIAG sector itself via Modern Apprenticeship provision.

7.2.3 Methodological contribution to the field: new methodology

It is in its methodology that this thesis offers its most immediate and lasting contribution to the sector. In this work a replicable model for mixed methods research in career decision-making is espoused. The literature review highlighted a dependency on research

emerging from small scale qualitative projects and quantitative research which focuses on the initial validation of career measurements rather than longitudinal outcomes. The adaptable mixed methods approach used here could be expanded to integrate continuing research. By adopting a mixed methods approach, the work undertaken in this thesis also complements the existing work being undertaken by Skills Development Scotland and other independent researchers and evaluators. This thesis offers new, structured, insight beyond the raw data obtained on the 100,000+ Modern Apprentices who have undertaken Modern Apprenticeships since the modernised programme was implemented in Scotland.

The immediate value to the sector of the work undertaken and its methodological contribution to the sector, can be evidenced by implementation of aspects of the work to date:

- Building on the work undertaken on the ethical approach to research herein, an article examining the application of the Career Development Institute Code of Ethics to Practitioner Research was published in the April 2019 issue of Career Matters, the Career Development Institute's professional development and practice publication. The article promotes the value of mapping the Career Development Institute Code of Ethics against practitioner-research, as presented within the methodology chapter.

- The practice-informed biographical interview model created for the qualitative interview methods of this study has been adapted by the author for use as part of postgraduate training in careers research on the MSc Career Guidance and Development at the University of the West of Scotland. The model was first used in academic year 2019-20 and feedback obtained from students who piloted the model was positive in relation to the value of the model and its applicability in practice.

- Dissemination of accessible and practical summary information for stakeholders and career development professionals has also been undertaken. This includes directly with policy makers and service-delivery managers with the intention of actioning the recommendations of the work (The Scottish Apprenticeships Advisory Board Gender Commission (February 2021); Roundtable discussion with Skills Development Scotland senior management (May 2021). A presentation relating to the methodological approaches used in this study, focusing on ethics within CIAG practitioner research, was presented to aspiring

practitioner-researchers at the CDI/AGCAS/iCeGS National Research Conference 2021.

7.2.4 Contribution to career development theory and practice

Within the CIAG professional practice-orientated discipline, theory and practice inform one another in a cyclical process therefore the contribution made to both aspects of the discipline should be considered concurrently.

One thesis alone cannot demand the formulation of a new gender inclusive career development theory to underpin gender-cognisant guidance models, frameworks and practice. The theoretical literature review within this work also highlights the unlikelihood of any new or existing explicitly gendered theory being fully cognisant of both gender typical and gender atypical career decision-making; those already in existence are firmly rooted in the delineation of women's career decision-making from that of men. In offering recommendations for practice, it is better perhaps to reflect on inclusivity in the application of all career theory and the implications that can be drawn in relation to contemporary policy and practice.

As noted within the literature reviews and analysis of the findings within this thesis, models adopted by policy-setting career experts and used by practitioners, whether they are based on new or adapted theoretical positions, should be located within a context of equality and inclusion in career decision-making, particularly if they are to link with the prominent social justice agenda in the field (Hooley, Sultana and Thomsen, 2017). Theory and practice should account for the challenges faced by individuals taking any atypical route, and gender is but one equality concept, in a field where ethical and inclusive practice must be at the core. To promote mechanisms for change, rather than perpetuate the fulfilling of norms, practice must counteract any individual's willingness to adapt and compromise to suit oppressive structures. Sited within a broadly inclusive standpoint, there are specific actions that can be taken, in practice and training, to address issues rooted in gender bias in career decision-making which are raised within the author's recommendations section later in this chapter.

7.3   Limitations

In any research the data obtained are time and context bound and restricted in their precise relevance being only to a specific cohort.

Reflecting on the data sample in this work, the only way to ever obtain conclusive data would be to link their responses to research tools with their own unique personal identifiers as Modern Apprentices. This would require the consent of the whole Modern Apprentice population, current and past, which is not obtainable. Therefore, caution must be taken in relation to the generalisability of findings.

A tentative approach was taken to the language used within the presentation of findings, with caution to ensure all data is explicitly related only to the cohort sampled prior to drawing any inferences from the collated data and critique of literature within the discussion. The findings could be strengthened by higher participation. Replication of the quantitative and qualitative approaches with Modern Apprentices from a targeted range of frameworks would add further insight. Crucially, due to the robust design of the qualitative methods, this is practicable. Not least, the methods used offer scope for further research in other apprenticeship populations and across the broader labour market.

7.4   Reviewing the research gaps, research objectives and research questions

In response to research gaps identified in the theoretical and empirical literature reviews, objectives and research questions for the mixed methods research were formulated. Table 7.1 summarises the new research undertaken.

Objective	Research question	Research approach
Quantitative Research		
To obtain and examine quantitative data relevant to gender typicality and atypicality of individuals completing Modern Apprenticeships.	Does personal background and the family unit structure affect the likelihood of an individual undertaking an apprenticeship in a gender (a)typical framework?	A quantitative survey achieved 462 valid responses, and the responses were analysed for statistical significance. Data were transferred into a regression model for robust interrogation. In line with the integrated mixed methods approach, data were later re-examined.
Qualitative Research		
To obtain and examine qualitative data on the career decision-making processes of apprentices in gender atypical Modern Apprenticeship frameworks.	To what extent do gender atypical apprentices attribute and relate their career decisions to the family unit and gendered influences and influencers?	Qualitative interviews were conducted with five individuals who had made gender atypical career decisions.

Table 7.1: Summary of the research undertaken in the thesis

Table 7.2 presents how the new research undertaken directly responded to the gaps

identified in the literature, within the theoretical and empirical literature reviews.

Identified limitations of existing theoretical and empirical literature: summary points	How the research conducted, analysed and discussed in this thesis addresses the research gaps identified
Career development theory	
Career guidance and development has a limited heritage as an academic discipline and modest focus on inclusion and diversity	*Response*: research undertaken with a focus on gender as an inclusion and diversity theme *Intention*: to contribute to an identified lack of literature on inclusion and diversity themes within the discipline
Existing career development theories demonstrate limited applicability to the diverse career patterns of women in the contemporary (and historical) labour market	*Response*: research undertaken to produce quantitative data for analysis pertaining to the backgrounds of women who have made gender atypical career decisions (based on their completion of a Modern Apprenticeship in a gender atypical framework or sector) *Intention*: to demonstrate the diversity of women's career decision-making and its diversion from homogeneously defined pathways
Career development theory is an evolving theoretical area, wherein pluralist application could be further exploited	*Response*: research undertaken using a new iteration of SCCT *Intention*: to consider a recently developed theoretical position's validity and applicability within the pluralist theoretical landscape
Gendered career development theory	
There is a lack of empirical testing of the often rapidly outmoded gendered career development theories	*Response*: research undertaken without reference to gendered theory *Intention*: to evidence the potential for and value of universality in popular theoretical positions
Gendered theories focus on typically gendered decisions, resulting in an	*Response*: research undertaken with a focus on gender atypicality

under-exploration of gender atypical career decisions	*Intention*: to gain new insight into career decision-making processes through investigation of atypical rather than typical (and potentially *stereotypical*) career decision-making
Sexual orientation and gender (including non-binary gender) as interacting variables defining gender atypical career choice are under-explored	*Response*: inclusion within the quantitative survey tool of specific questions pertaining to sexual orientation and gender *Intention*: to contribute to knowledge pertaining to specific and potentially intersectional equality characteristics within the literature in relation to inclusion and diversity themes
The contemporary family unit as a career decision-making influence	
Relationships and positioning within the family unit are underexplored in career decision-making literature	*Response*: inclusion of questions in the quantitative survey pertaining to a wide group of constituent members of the family unit *Intention*: to gain better understanding of whether birth-order and sibship has an impact on gender atypicality in career decision-making
The gendering of formal and informal career guidance and support is underexplored	*Response*: data collected via the survey tool and qualitative interviews pertaining to the gender of human sources of career guidance and support *Intention*: to explore whether CIAG sector-specific gender biases in themselves affect career guidance and support mechanisms
Existing career development theory may not fully integrate the context of the modern family unit	*Response*: mixed methods research tools designed to capture broad data related to family composition *Intention*: to expand the focus of career decision-making influence/influencers beyond immediate family members and frequently noted peers
The presence and persistence of occupational segregation in Modern Apprenticeships	
The presentation of gender bias in Modern Apprenticeships and wider apprenticeship provision is critiqued	*Response*: a mixed methods approach designed to focus on the personal career decision-making and demographic

from a primarily economic perspective while the impact of personal career decision-making that results in occupational segregation in apprenticeships is underexplored	background of gender typical and atypical career decision-makers undertaking or who have undertaken a Modern Apprenticeship *Intention*: to shift the focus away from the economic analysis of occupational segregation in apprenticeship provision and offer a more nuanced analytical approach using a unique theoretical perspective
Non-binary gender has not been considered in relation to occupational segregation in Modern Apprenticeships	*Response*: option within the quantitative survey tool for respondents to declare non-binary gender *Intention*: to contribute to knowledge pertaining to specific and potentially intersectional equality characteristics within the literature in relation to inclusion and diversity themes, and to highlight the value of intersectional analysis

Table 7.2: How the new research undertaken directly responds to identified theoretical and empirical gaps

7.5   Summary of new knowledge obtained

The research indicates novel findings in areas pertaining to general apprenticeship provision, family units and demographics of Modern Apprentices, Modern Apprentice gender diversity and inclusion activity and CIAG. The analysis also offers direction for future research within the career guidance and development discipline. This section recaps the key points analysed.

Supplementary findings pertaining to general apprenticeship provision
- Modern Apprentices may have incorrect or indeed no knowledge of the framework they are working towards
- There is value placed on training that is paid for by others
- Snobbery persists in relation to vocational education and training routes to the labour market but as a parity of esteem route Modern Apprenticeships are valued by Modern Apprentices themselves
- Information on Modern Apprenticeships generally reaches individuals via personal communication rather than marketing routes.

Modern Apprentice background and family unit

- Multiple births are more commonly seen within Modern Apprenticeship cohorts than in the general population
- Lone parent family backgrounds are more commonly seen within Modern Apprenticeship cohorts than in the general population
- Most Modern Apprentices continue to consult a parent/guardian or carer for career information advice and guidance, however there is a gendered dimension to this, in that individuals tend go to a person of same gender for CIAG
- Men tend to go to other men for Modern Apprenticeship-specific advice
- More research is needed into the career decisions of individuals who identify as trans and other non-binary identities
- Lesbian, gay and bisexual individuals make up a significantly higher proportion of Modern Apprentices in the 25-34 age range in comparison to the general population
- Lesbian, gay and bisexual individuals tend to be the source of gender atypicality which rebalances gender bias
- More research is needed into the impact of and interaction between sexual orientation and gender on gender atypical career decision-making
- More research is needed into the phenomenon of delayed transitions into vocational education and training of non-heterosexual individuals.

Modern Apprenticeship gender activity

- Targets for gender in *Developing the Young Workforce* are flawed and encourage gender activity to be sited at misleading focus points
- To address gender atypicality, short term work needs to avoid the easily "fixed" smaller frameworks or those at the borderline for gender targets
- Women are more likely than men to experience gender atypicality within a Modern Apprenticeship framework
- There may be a "tipping point" or critical mass at which point people do not realise there is gender imbalance within their sector or role
- The allocation of role models requires review to ensure justification for the greater frequency of same gender role models or mentors.

The career information advice and guidance sector

- The formal CIAG sector and the informal giving of career support is marked by a dependence on female sources

- There has been some success in addressing gender diversity within the sector via the Modern/Technical Apprenticeship in Career Development pathway

- The impact of COVID-19 cannot yet be measured but will affect the labour market, with specific impact on issues pertaining to gender and other equality and diversity characteristics therein.

Methodological learning

- The SCCT model of CSM offers a valid structure for career decision-making research and can be adapted to specifically include categorisation of decision factors such as transmission of gender concepts

- The SCCT model of CSM may benefit from pluralist application alongside matching models

- Research within a practice-orientated professional discipline requires robust ethical compliance

- Language translation of research tools may be valuable in the appropriate circumstances

- The practice-informed biographical interview model created for the qualitative research offers a workable and adaptable model for future use.

7.6 Recommendations and final remarks

Recommendations

Based on the findings of this research project, the research suggests recommending the following concepts be integrated into initial training and continuing professional development for practitioners:

- equality, diversity and inclusion education which explicitly integrates gender competence

- critique of theory through a gender lens
- approaches to addressing the impact of sociological and psychological gender-based challenges such as:
  - knowledge of discrimination
  - structural barriers
  - resistance to change
  - self-fulfilling prophecies
  - playing to stereotypical social identities
- partnership work with specialist bodies who work on occupational segregation and other gender-based education, training and workplace issues
- intersectional approaches to understanding disadvantage
- employer perspectives on gender bias in recruitment
- avoidance of heteronormative models when discussing the contemporary family unit in a CIAG context.

Based on the findings of this research project, the research suggests recommending activity be undertaken to better understand and counteract gender bias in career decision-making to help inform and respond to policy objectives, for example through:

- targeted engagement within underrepresented groups to counteract the homogenous approach to underrepresentation
- promotion of apprenticeships as a life-long option with targeted funding for career changers who enter frameworks/occupations where there is a marked gender split
- consideration of more robust and inclusive data collection, broader categorisation of cohorts and intersectional use of data
- integration of the wider family unit and other influencers in targeted CIAG activity that builds the capability of others within individuals' networks to offer unbiased careers support.

Based on the findings of this research project, the research suggests recommending that within the CIAG sector, further work can be undertaken to ensure the profession better represents the diverse population it serves through positive action in the recruitment of future career development professionals to training routes and in the recruitment of career development professionals to employment. This might include, but is not limited to, the following focus points:

- language use within promotional material and vacancy advertisements
- targeted advertising to underrepresented groups
- professional networks for underrepresented groups.

Based on the findings of this research project, the research suggests recommending the following concepts be considered in future research:

- replication of the integrated mixed methods approach to further explore gendered career decision-making, including the conscious decision to enter a sector in which the individual will be underrepresented by gender
- replication of the integrated mixed methods approach to explore other aspects of career decision-making
- empirical testing of gendered career development theories with greater consideration of the diverse career patterns of women
- empirical testing of pluralist theoretical positions in a gendered context
- gender analysis in all research which asks individuals about career influences and influencers
- career decision-making by apprentices from multiple births
- gender distribution of workplace role models
- frequency and availability of cited human influencers in career decision-making, with specific focus on lone parent and only child family units
- sexual orientation and gender (including non-binary gender) as interacting variables affecting gender atypical career choice
- continued consideration of a broad range of equality and diversity concepts in career decision-making.

Final remarks

Like the non-conforming individuals who are the focus point of this project, this thesis demonstrates that researchers in the career guidance and development field should move away from well-trodden pathways and seek to do something that is, using the words of one research participant, "brand new". This chapter has demonstrated the value of mixed methods study to the career guidance and development field and of practitioner-

researchers utilising their unique understanding of different perspectives on complex labour market problems to direct formal study.

Researchers must be open minded to new explanations, willing to accept answers that do not meet expectations. Notwithstanding this, the practitioner-researcher is uniquely placed to sees the subtleties of career decision-making on a personal level through their frontline practice; structured research offers the opportunity to explore hunches, surface and evidence trends, and illustrate subtleties that are being overlooked by established, albeit valid, research approaches. The author of this thesis has achieved this in their exploration of the interaction of gender with other variables that influence career decision-making.

7.7   Author's reflections

It would not be in-keeping with the discipline of career guidance and development to conclude this thesis with anything other than a reflective first-person review of the work undertaken. In this final narrative account, I will critically and reflectively review the work using applicable tools and techniques of the discipline and review my own career development in relation to the contribution of the work and the learning undertaken.

The work undertaken herein fulfils two specific forms of continuing professional development (CPD), experiential and formal (Neary, 2016). CPD is an essential component within professional practice and, not least, a requirement of those who have professional status.[39] However, CPD must also be meaningful to have value; how else would it be possible to see it through to successful completion? In a project such as a doctoral thesis undertaken on a part-time basis, a minimum 6-year dedication to ongoing CPD must have significant meaning and purpose.

To review my professional development over the past six years of doctoral study, I have referred to the National Occupational Standards (NOS) for career development practitioners and have specifically focused on the most applicable of the NOS within the suite, which is CDICRD02: *Reflect on, develop and maintain own skills and practice in career development* (Career Development Institute, 2014b). In this section, I will review how I have met the Performance Criteria of CDICRD02 by responding to each criteria point with a brief reflective statement pertaining to competency (Table 8.3).

The type of reflection required for doctoral study is somewhat different to the type of reflection I would generally engage in whilst working as a lecturer/tutor or in a career development professional capacity. I am very much an individual who fits into Schön's description of someone who reflects *in* action, that is, someone who "thinks on their feet" and applies existing knowledge to the situation in hand, considering issues as they act. This approach is not without value within doctoral research and was beneficial for example when interviewing the research participants. Doctoral study however requires much more in the way of reflection *on* action, that is, conscious standalone thinking and reflecting on actions or experiences, considering outcomes and alternatives (Schön, 1983;

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[39] I am a Career Development Institute Registered Career Development Professional and member of the Association of Graduate Career Advisory Services.

1987). In this context reflection is a retrospective process concerning not just what I did, but how I went about it and why.

Performance Criteria of CDICRD02	Reflection
Review and evaluate own skills, knowledge and career development practice against current performance requirements	As an academic, my work role requires me to instigate and produce research pertinent to my discipline. To do so generally requires ability within one or more methodological specialisms. When I commenced my PhD, I came to my studies with experience of qualitative research. In the process of undertaking this project, I pushed myself to develop new knowledge and skills in quantitative research methods. I would struggle to ever consider myself an expert in quantitative research, but I feel far better equipped to know what to ask for or look for when working on partnership research projects in future. Equipped with this new knowledge, I will go forward with a wider ability to conduct and supervise research in the sector.
Identify trends and developments relevant to own skills, knowledge and career development practice	In conducting this project, I have been particularly keen to identify new areas for best practice in relation to matters of equality, diversity and inclusion. Competence in this area is always an ongoing process and what may have appeared to be the "right" or "best" approach to specific inclusion issues at the outset may be somewhat removed from contemporary practice. Undertaking this research project has taught me to be ever mindful of new approaches and new ideas and to continually seek out new sources of insight.
Identify and critically reflect on how own values, beliefs and attitudes influence own career development practice	It is worth returning to the very beginning here. Six years ago, I might had said that my gender had not had a major impact on my career. Now, I think that this belief would be misplaced. Allowing my own biases, which have changed during the research period, to filter into the research would have led the production of a thesis which was clearly skewed by me personal opinions. How have I prevented this from happening? Gender atypicality is something I know I have demonstrated in my own career and is perhaps a driver to the research undertaken. We all seek to find out why we have ended up where we are. Throughout the research I have limited my own biases and let the voices of the research participants lead the findings. My bias limitation is rooted in my own understanding of unconscious bias, a clear example of a threat to professionalism which counteracts a guiding principle of career guidance practice in the need for person-centred, individual focus. Knowledge of personal biases is a small part of the

	concept and it is in taking action to manage the impact of bias on your behaviour that professional values become paramount. I believe this demonstrates once again the crossover of skills between professional practice and academic research and not least, both require reflexivity. Having worked on concepts pertaining to bias in careers practitioner training, I have been approached to deliver work on this topic based on the expertise I have gained concurrent to working on this thesis.
Seek feedback to reflect on and evaluate own performance	With career guidance and development being a small discipline, it follows that there is a small population of careers professionals out there who share the same background and potential future career direction as me. Throughout this study I have engaged with other academics and professionals completing doctoral study to obtain feedback. Social media has been a source of peer support, both academic and personal. I have found women's and parents' groups particularly helpful. I have discussed the work undertaken with leading experts in careers and gender fields and presented work-in-progress research posters at various conferences and events within the UK and in Europe.
Ensure own career development practice is inclusive and promotes equality and diversity	Since moving into an academic lecturer post at UWS, I have redeveloped the core module for the Career Guidance and Development programme, a gateway qualification to careers professional practice, renaming it from Reflective Guidance Practice to Ethical and Inclusive Practice. This undertaking was undoubtedly informed by the research I've undertaken as part of this study. This expanded the module to explicitly consider equality and diversity legislation and wider inclusion models. The work undertaken in this thesis has fed into not just my own practice but will inform that of those who go into the profession in the future.
Address internal and external constraints that impact on own practice	The concept of being an active bystander is well understood but is not an easy role to take on. Similarly, it is not one that should only occur in times when intimidating or threatening behaviours are heightened. Positive action is rooted in the concept of not being a passive bystander. Being the person to step up and challenge norms does not always make me popular, but it is an ethical responsibility I must carry if I am to truly be seen to uphold professional status.
Plan and access development opportunities needed to keep own knowledge, skills and	Throughout my studies, I have regularly engaged in research methods training and conference attendance. Back in 2014, I set up a blog where I reflected on practice. The blog has broadened in scope and

practice up to date and enable own work to be carried out more effectively	developed over time but at the outset very much enabled me to think objectively about the nature of doctoral research early in my studies. I will continue to engage with and reflect on new approaches to research methodologies in particular in the future. I regularly check within my networks for news, events and opportunities and I am signed up to many mailing lists. I have a particular interest in Open Educational Resources and always complete those which I recommend to others in the sector and to clients.
Use records of own actions, development plans and progress to support and inform ongoing reflective practice	Throughout my period of doctoral study, I have kept accurate records of progress, updated after every writing or research session. The focus on my planning has been divided between clear tasks: administrative tasks, researcher presence, researcher training, knowledge expansion, research and writing and output and with flexibility for other ad-hoc tasks spilling in from my wider work and personal commitments. I've kept ongoing planning documents for each period of study which I have reviewed whilst writing this final reflection. I have also gained supplementary practical skills. For example, I have learnt how to build an effective data management plan and to help ensure that all research activity is compliant with the General Data Protection Regulation.
Apply new knowledge and skills to consolidate learning and improve own practice	I feel this is another point that pertains to both my own practice and my ability to influence the practice of others. I believe the work I have undertaken enables me to take forward arguments for better cognisance of equality, diversity and inclusion in CIAG research, teaching and practice.
Review the effectiveness of newly acquired knowledge and skills	As I have developed knowledge throughout my PhD, I've sought to verify it and obtain feedback from others. For example, I have presented discussion groups based on the findings of my literature review and I've sought to test the models I've created for this study with fellow practitioner-researchers, to ensure effectiveness.
Engage positively with opportunities for support and supervision	The supervisory relationship is the lynchpin in doctoral study. A benefit of ongoing reflective practice is that it shows you when and why you might need to ask for help and I have continuously sought to the support of my supervisors as required. I have gained great benefit from having a primary supervisor who understands the context whilst not being fully embedded within it. Following completion of this work, I do however have concerns. Returning to the point above, that there is a small population of individuals undertaking CIAG-focused doctoral work, I feel opportunities for support

	and supervision beyond doctoral study may need to be sought from those who operate in the wider professional disciplines.
Share effective practice with other practitioners	The learning from this thesis has already been shared with fellow practitioners and other stakeholders through conference presentations, webinars and professional publications. This will continue beyond the thesis submission date, in the production of further conference papers and other output.

Table 7.3: Reflection on NOS CDICRD02 performance criteria Source: Career Development Institute (2014)

The reflection above further evidences that the most original parts of my thesis pertain to process and professional practice and a contribution to the discipline more broadly.

The scope and focus of the work have been through several iterations since I first responded to the call for applications in 2014. What interested me then and still does now, is creating the opportunity to combine career development theoretical positions with labour market outcomes. I feel I have achieved this and hope to continue to work in this way on future research.

If I encountered a similar task again, would I act differently or in the same way? In an ideal world, what would I do differently? These are the questions we are encouraged to ask ourselves at the end of a PhD project. As a careers professional, my position is to offer reassurance rather than rueful engaging of hindsight, and I will apply this reasoning to myself here. I believe that we do what we do based on the knowledge we have available at the time. I have made many decisions as I've completed this project. Without getting too bogged down in language and starting a new philosophical debate when this thesis has already reached its conclusion, I will simply say this:

I wouldn't be where I am now if I hadn't done what I did.

References

Aaltonen, S. (2016) 'My mother thought upper secondary school was OK, but then my sibling said no' - Young People's Perceptions of the Involvement of Parents and Siblings in their Future Choices', *Sociological Research Online*, 21(1) 65–76.

Acker, J. (2009) 'From glass ceiling to inequality regimes', *Sociologie du Travail*, 51, 199–217.

Adams-Prassl, A., Boneva, T., Golin, M. and Rauh, C. (2020) 'Inequality in the Impact of the Coronavirus Shock: Evidence from Real Time Surveys,' *Cambridge-INET Working Paper Series No: 2020/18*, Cambridge: University of Cambridge, Available at: https://www.inet.econ.cam.ac.uk/working-paper-pdfs/wp2018.pdf (Accessed: 19 July 2020).

Ali, L. and Graham, B. (1996) *The counselling approach to careers guidance*, London: Routledge.

Amundson, N. (2003) *Active engagement: enhancing the career counselling process, 2nd ed.*, Richmond, Canada: Ergon Communications.

Arthur, M. B. and Parker, P. (2004) 'Giving voice to the dual-career couple', *British Journal of Guidance and Counselling*, 32(1), 3–23.

Arthur, N. and McMahon, M. (2019) *Contemporary Theories of Career Development,* Oxon: Routledge.

Arthur, N., Neault, R. and McMahon, M. (eds.) (2019) *Career Theories and Models at Work*, Toronto: CERIC.

Artz, B., Goodall, A. H. and Oswald, A. J. (2018) 'Do Women Ask?', *Industrial Relations: A Journal of Economy and Society*, 57(4), 611–636.

Audit Scotland (2014) *Modern Apprenticeships*, Audit Scotland: Edinburgh. Available at: http://www.audit-scotland.gov.uk/report/modern-apprenticeships (Accessed: 20 July 2020).

Bajgar, M. and Criscuolo, C. (2019) 'Designing Evaluation of Modern Apprenticeships in Scotland' in Crato, N. and Paruolo, P. (eds.) *Data-Driven Policy Impact Evaluation*, Springer Open: Switzerland.

Barnes, S-A., Bimrose, J., Brown, A., Gough, J. and Wright, S. (2020) *The role of parents and carers in providing careers guidance and how they can be better supported: Evidence report*. Coventry: University of Warwick. Available at: https://warwick.ac.uk/fac/soc/ier/research/careerguidanceparents (Accessed 09 August 2020)

Baruch, Y., Szűcs, N. and Gunz, H. (2014) 'Career studies in search of theory: the rise and rise of concepts', *Career Development International*, 20(1), 3–20.

Beavis, A. (2007) 'Evidence in support of Gottfredson's common cognitive map of occupations', *Australian Journal of Career Development*, 16(1), 38–44.

Begeny, C. T., Ryan, M. K., Moss-Racusin, C. A., and Ravetz, G. (2020) 'In some professions, women have become well represented, yet gender bias persists—Perpetuated by those who think it is not happening', *Science Advances*, 6(26). doi: 10.1126/sciadv.aba7814

Betz, N. E. and Hackett, G. (2006) 'Career Self-Efficacy Theory: Back to the Future', *Journal of Career Assessment*, 14(1), 3–11.

Biesta, G. (2010) 'Pragmatism and the Philosophical Foundations of Mixed Methods Research' in Tashakkori, A. and Teddlie, C. (eds.) *SAGE Handbook of Mixed Methods in Social and Behavioral Research (2nd edition),* Thousand Oaks: SAGE Publications.

Bimrose, J. (2001) 'Girls and women: challenges for careers guidance practice', *British Journal of Guidance and Counselling*, 29(1).

Bimrose, J. and Mulvey, R. (2016) 'Exploring career decision-making styles across three European countries', *British Journal of Guidance and Counselling*, 43(3), 337–350.

Bimrose, J., McMahon, M. and Watson, M. (2013) 'Career trajectories of older women: implications for career guidance', *British Journal of Guidance and Counselling*, 41(5), 587–601.

Bimrose, J., McMahon, M. and Watson, M. (2015) *Women's Career Development Throughout the Lifespan*, Oxon: Routledge.

Bimrose, J., Watson, M., McMahon, M., Haasler, S., Tomassini, M. and Suzanne, P.A. (2014) 'The problem with women? Challenges posed by gender for career guidance practice', *The International Journal for Educational and Vocational Guidance*, 14, 7–88.

Bòrd na Gàidhlig (2018) *National Gaelic Language Plan 2018-23*. Available at: https://www.gaidhlig.scot/wp-content/uploads/2018/03/BnG-NGLP-18-23-1.pdf (Accessed: 20 July 2020).

Bordin, E. S. (1990) 'Psychodynamic model of career choice and satisfaction' in Brown, D. and Brooks, L. (eds.) *Career choice and development: Applying contemporary theories to practice (2nd edition),* San Francisco: Jossey-Bass, 102–144

British Psychological Society (2014) *BPS Code of Human Research Ethics (2nd edition)*. Available at https://www.bps.org.uk/news-and-policy/bps-code-human-research-ethics-2nd-edition-2014 (Accessed 18 February 2019)

Brown, S. D., Lent, R. W. and Knoll, M. (2013) 'Applying Social Cognitive Career Theory to Criminal Justice Populations: A Commentary,' *The Counseling Psychologist*, 41(7) 1052–1060.

Brown, S. D. and Lent, R. W. (2019) 'Social Cognitive Career Theory at 25: Progress in Studying the Domain Satisfaction and Career Self-Management Models', *Journal of Career Assessment*, 27(4), 563–578.

Bryman, A. (2016) *Social Research Methods (5th edition)*, Oxford: Oxford.

Campbell, J., and Gillespie, M. (2017) 'Gender analysis of spending on the Scottish Modern Apprenticeship programme', *Local Economy,* 0(0) 1–13.

Campbell, J., Gillespie, M., McKay, A. and Meikle, A. (2009) 'Jobs for the boys and the girls: promoting a smart successful Scotland three years on', *Scottish Affairs*, 66(4), 40–58.

Campbell, J., McKay, A. and Thomson, E., (2006) 'From Gender Blind to Gender Focused: Re-Evaluating the Scottish Modern Apprenticeship Programme', *Scottish Affairs*, 57(1), 70–89.

Campbell, J., McKay, A., Ross, S. and Thomson, E. (2013). *Briefing: How Modern is the Modern Apprenticeship in Scotland?* Glasgow: Women in Scotland's Economy Research Centre, Glasgow Caledonian University. Available at: http://www.gcu.ac.uk/media/gcalwebv2/theuniversity/centresprojects/wise/A4%20WiSE%20Briefing%20Paper%20v3.pdf (Accessed 20 July 2020).

Campbell, J., Thomson, E. and Pautz, H., (2011) 'Apprenticeship Training in England: Closing the Gap?', *Journal of Contemporary European Studies*, 19(3), 365–378.

Campbell, J., Thomson, E. and Ross, S. (2017) 'Recession and recovery in Scotland: the impact on women's labor market participation beyond the headline statistics', *Journal of Research in Gender Studies*, 7(1), 123–136.

Career Development Institute (2014a) *National Occupational Standards*. Available at: https://www.thecdi.net/Download-the-NOS (Accessed: 20 July 2020).

Career Development Institute (2014b) *National Occupational Standard CDICRD02: Reflect on, develop and maintain own skills and practice in career development.* Available at: https://www.thecdi.net/write/Register/NOS/CDICRD02.pdf (Accessed: 20 July 2020).

Career Development Institute (2015a) Email to members, CDI response to Scottish Government Consultation on draft Career Education Standard, June.

Career Development Institute (2015b) *The CDI 9 step framework for ethical decision making*. Available at: https://www.thecdi.net/Code-of-Ethics---Case-Studies (Accessed: 20 July 2020).

Career Development Institute (2019a) *Code of Ethics*. Available at: https://www.thecdi.net/write/Documents/Code_of_Ethics_update_2018-web.pdf (Accessed: 20 July 2020).

Career Development Institute (2019b) *Code of Ethics: Case Studies.* Available at: https://www.thecdi.net/Code-of-Ethics---Case-Studies (Accessed: 20 July 2020).

Career Ready (no date) *About us.* Available at: https://careerready.org.uk/about-us (Accessed: 20 July 2020).

Cedefop/European Commission/ETF/OECD/ILO/UNESCO (2019) *Investing in career guidance*. Available at: https://www.cedefop.europa.eu/en/publications-and-resources/publications/2227 (Accessed: 20 July 2020).

Chambers, N., Percy, C and Rogers, M. (2020) *Disconnected: Career aspirations and jobs in the UK*, London: Education and Employers. Available at: https://www.educationandemployers.org/wp-content/uploads/2020/01/Disconnected-Career-aspirations-and-jobs-in-the-UK-1.pdf (Accessed: 20 July 2020).

Chartered Management Institute (2019) *Apprenticeships make the grade.* Available at: https://www.managers.org.uk/about-us/media-centre/cmi-press-releases/apprenticeships-make-the-grade (Accessed: 23 August 2020).

Cheyne, S. (2020) Personal communication to author (email), 26 June.

Chronister, K. M. and McWhirter, E. H. (2003) 'Applying Social Cognitive Career Theory to the Empowerment of Battered Women', *Journal of Counseling and Development*, 81, 418–425.

Chronister, K. M., and McWhirter, E. H. (2006) 'An Experimental Examination of Two Career Interventions for Battered Women', *Journal of Counseling Psychology*, 53(2), 151–164.

Chronister, K. M., McWhirter, E. H. and Forrest, L. (2006) 'A Critical Feminist Approach to Career Counseling With Women' in Bruce Walsh, W. and Heppner, M. J. (eds.) *Handbook of Career Counseling for Women (2nd edition),* New Jersey: Lawrence Erlbaum Associates.

Chudzikowski, K. and Mayrhofer, W. (2011) 'In search of the blue flower? Grand social theories and career research: The case of Bourdieu's theory of practice', *Human Relations*, 64(1), 19–36.

Clark, M. and Bower, J. (2016) 'Career Experiences of Women With Major Financial Barriers,' *The Career Development Quarterly*, 64(4), 373–386.

Close the Gap (2018) *The Gender Penalty: Exploring the causes and solution to Scotland's gender pay gap*. Available at: https://www.closethegap.org.uk/content/resources/The-Gender-Penalty-Feb-2018.pdf (Accessed: 20 July 2020).

Close the Gap (2020) *Disproportionate disruption: The impact of COVID-19 on women's labour market equality.* Available at: https://www.closethegap.org.uk/content/resources/Disproportionate-Disruption---The-impact-of-COVID-19-on-womens-labour-market-equality.pdf(Accessed: 20 July 2020).

Commission for Apprenticeships (2015) *Apprenticeships policy will have succeeded when most parents want their children to consider choosing an apprenticeship…* DEMOS: London Available at: http://www.demos.co.uk/files/476_1504_CoA_WEB_2_.pdf?1425489134 (Accessed 20 July 2020).

Costa Dias, M., Joyce, R. and Norris Keiller, A. (2020) *COVID-19 and the career prospects of young people.* London: Institute for Fiscal Studies

Creswell, J. W. (1998) *Qualitative Inquiry and Research Design*, London: Sage.

Creswell, J. W. (2015) *A Concise Introduction to Mixed Methods Research*, London: Sage.

Cuesta-Briand, B., Coleman, M., Ledingham, R., Moore, S., Wright, H., Oldham, D., and Playford, D. (2020) 'Understanding the Factors Influencing Junior Doctors' Career Decision-Making to Address Rural Workforce Issues: Testing a Conceptual Framework', International Journal of Environment Research and Public Health, 17(2), 537–. doi: 10.3390/ijerph17020537.

Culley, S. and Bond, T. (2006) *Integrative counselling skills in action*, London: Sage.

Cytrynbaum, S. and Crites, J. (1989) 'The utility of adult development theory in understanding career adjustment process' in Arthur, M. B, Hall, D. T. and Lawrence, B. S. (eds.) *Handbook of Career Theory,* Cambridge: Cambridge University Press.

Datti, P. A. (2009) 'Applying Social Learning Theory of Career Decision-making to Gay, Lesbian, Bisexual, Transgender, and Questioning Young Adults', *The Career Development Quarterly*, 58, 54–64.

Davidson, M. M., Nitzel, C., Duke, A., Baker, C. M., and Bovaird, J. A. (2012) 'Advancing Career Counseling and Employment Support for Survivors: An Intervention Evaluation'*, Journal of Counseling Psychology*, 59(2), 321–328.

Davies, C. (2018) *Equality at work? Positive action in gender segregated apprenticeships.* London: Young Women's Trust. Available at: https://www.youngwomenstrust.org/assets/0000/9389/Equality_at_work_Positive_action_in_gender_segregated_apprenticeships_-_Full_report.pdf (Accessed: 20 July 2020).

Davies, C. (2019) *Exploring positive action as a tool to address under-representation in apprenticeships.* Manchester: Equality and Human Rights Commission. Available at: https://www.equalityhumanrights.com/en/publication-download/exploring-positive-action-tool-address-under-representation-apprenticeships (Accessed: 20 July 2020).

Dawis, R. V. and Lofquist, L. H. (1984) *A psychological theory of work adjustment,* Minneapolis: University of Minnesota Press.

Diamond, E. E. (1987) in 'Theories of Career Development and the Reality of Women at work' Gutek, B. A. and Larwood, L. (eds.) *Women's Career Development*, California: Sage.

Easterby-Smith, M., Thorpe, R. and Jackson, P. (2011) *Management Research (4th edition)*, London: Sage.

Economic and Social Research Council (no date) *Our core principles*. Available at: https://esrc.ukri.org/funding/guidance-for-applicants/research-ethics/our-core-principles (Accessed: 20 July 2020).

Economic and Social Research Council (no date) *What to expect as a research participant.* Available at: https://esrc.ukri.org/funding/guidance-for-applicants/research-ethics/what-to-expect-as-a-research-participant (Accessed: 20 July 2020).

Education Scotland (2015a) *Draft Career Education Standard (3-18). Available at:* https://www.education.gov.scot (Accessed: 30 June 2015)

Education Scotland (2015b) *Career Education Standard (3-18).* Available at: https://www.education.gov.scot/Documents/dyw2-career-education-standard-0915.pdf (Accessed: 20 July 2020).

Education Scotland (2020) *Work placements and work-related learning*. Available at: https://education.gov.scot/improvement/learning-resources/work-placements-and-work-related-learning (Accessed: 20 July 2020).

Education Scotland/IGBE (2021) Improving gender balance and equalities 3-18. Available at: https://education.gov.scot/improvement/learning-resources/improving-gender-balance-3-18 (Accessed 11 May 2021).

Education Scotland (no date) *Careers Service Reviews*. Available at: https://www.education.gov.scot/education-scotland/what-we-do/inspection-and-review/inspection-and-review-sector-specific-guidance/careers-service-reviews (Accessed: 20 July 2020).

Egan, G. (2014) *The Skilled Helper (10th edition)*, USA: Brooks/Cole.

Engender and Close the Gap (2020) *Gender and Economic Recovery.* Available at: https://www.engender.org.uk/content/publications/Gender--Economic-Recovery---Engender-and-Close-the-Gap.pdf (Accessed: 20 July 2020).

Equality and Human Rights Commission (2007) *Daring to be different.* Middlesex/London: Apprenticeship Ambassadors Network/EHRC.

Equality and Human Rights Commission (2013) *Modern Apprenticeships.* Available at: https://www.equalityhumanrights.com/en/our-work-scotland/our-work-scotland/research-scotland/modern-apprenticeships (Accessed: 07 September 2020).

Equality Challenge Unit (2013a) *Unconscious bias in colleges and higher education: literature review*. Available at: https://www.ecu.ac.uk/wp-content/uploads/2014/07/unconscious-bias-and-higher-education.pdf (Accessed: 20 March 2018).

Equality Challenge Unit (2013b) *Unconscious bias in colleges and higher education: training pack*. Available at: https://www.ecu.ac.uk/publications/unconscious-bias-colleges-he-training-pack/ (Accessed: 20 March 2018).

Fialkov, E. D., Jackson, M. A. and Rabinowitz, M. (2014) 'Effects of Experience and Surface-Level Distraction on Ability to Perceive Ethical Issues', *Training and Education in Professional Psychology,* 8(4), 277–284.

Finch, N. (2014) 'Why are women more likely than men to extend paid work? The impact of work–family life history', *European Journal of Ageing*, 11(1), 31–39.

Flores, A. R., Herman, J. L., Gates, G. J., and Brown, T. N. T. (2016) *How many adults identify as transgender in the United State*s? Los Angeles: UCLA, The Williams Institute. Available at: https://williamsinstitute.law.ucla.edu/wp-

content/uploads/How-Many-Adults-Identify-as-Transgender-in-the-United-States.pdf (Accessed: 20 July 2020).

Fong, B. and Phelps, A. (2008) *Apprenticeship Pay: 2007 Survey of Earnings by Sector.* Department for Innovation Universities and Skills Research Report 08 05. Available at: http://dera.ioe.ac.uk/8726 (Accessed: 20 July 2020).

Foskett, N. and Hemsley-Brown, J. (2001) *Choosing Futures Young People's Decision-Making in Education, Training and Careers Markets*, Routledge: Oxon.

Fuller, A. and Unwin, L. (2003) 'Creating a modern apprenticeship: a critique of the UK's multi-sector, social inclusion approach', *Journal of Education and Work*, 16(1), 5–25.

Fuller, A. and Unwin, L. (2007) 'What counts as good practice in contemporary apprenticeships?: Evidence from two contrasting sectors in England', *Education + Training*, 49(6), 447–458.

Fuller, A. and Unwin, L. (2013) *Gender segregation, apprenticeship and the raising of the participation age in England: are young women at a disadvantage?* Centre for Research on Learning and Life Chances Research Paper 44. Available at: http://www.llakes.org/wp-content/uploads/2013/12/44.-Fuller-and-Unwin.pdf (Accessed 24 May 2017)

Fuller, A. and Unwin, L. (2014) 'The challenges facing young women in apprenticeships' in Schoon, I. and Eccles, J. (eds.) *Gender Differences in Aspirations and Attainment*, Cambridge: Cambridge University Press.

Gambin, L. (2013) *Review of Apprenticeships Research Final Report*. Warwick Institute for Employment Research. Available at: http://www2.warwick.ac.uk/fac/soc/ier/research/reviewapprenticeship (Accessed: 20 July 2020).

Gati, I., Landman, S., Davidovitch, S., Asulin-Peretz, L. and Gadassi, R. (2010) 'From career decision-making styles to career decision-making profiles: A multidimensional approach', *Journal of Vocational Behavior*, 76(2), 277–291.

Ginerva, M. C., Nota, L. and Ferrari, L. (2015) 'Parental Support in Adolescents' Career Development: Parents' and Children's Perceptions', *The Career Development Quarterly*, 63, 2–15.

Gothard, B., Mingot, P., Offer, M. and Rugg, M. (2001) *Careers Guidance in Context,* London: Sage.

Gottfredson, L. S. (1981) 'Circumscription and Compromise: A developmental theory of occupational aspirations', *Journal of Counselling Psychology*, 28, 545–579.

Greene, J. C. and Hall, J. N. (2010) 'Dialectics and Pragmatism: Being of Consequence' in Tashakkori, A. and Teddlie, C. (eds.) *SAGE Handbook of Mixed Methods in Social and Behavioral Research (2nd edition),* Thousand Oaks: SAGE Publications.

Greene, J. C., Caracelli, V. J. and Graham, W. F. (1989) 'Towards a Conceptual Framework for Mixed-method Evaluation Designs', *Educational Evaluation and Policy Analysis*, 11(3), 255–274.

Grinberg, A. (2015) 'The Effect of Birth Order on Occupational Choice', *Atlantic Economic Journal*, 43, 463–476.

Gutek, B. A. and Larwod, L. (1987) (eds.) *Women's Career Development*, California: Sage.

Hackett, G. and Betz, N. (1981) 'A Self-Efficacy Approach to the Career Development of Women', *Journal of Vocational Behavior*, 18, 329–339.

Hackett, G. and Kohlhart, J. D. (2012) 'Feminist Vocational/Career Theory and Practice' in Enns, C. Z, and Williams, E. N. (eds.) *The Oxford Handbook of Feminist Multicultural Counseling Psychology*, New York: Oxford University Press USA.

Hakim, C. (1996) *Key Issues in Women's Work*, London: Glasshouse Press.

Hakim, C. (2006) 'Women, careers and work-life preferences', *British Journal of Guidance and Counselling*, 34(3), 279–294.

Hancock, A. (2019) 'The career development of gay men, lesbians and bisexuals', *Journal of the National Institute for Career Education and Counselling*, 44, 47–55.

Hartung, P. J. and Blustein, D. L. (2002) 'Reason, Intuition, and Social Justice: Elaborating on Parson's Career Decision-Making Model', *Journal of Counseling and Development*, 80, 41–47.

Haug, E. H., and Plant, P. (2016) 'Research-based knowledge: researchers' contribution to evidence-based practice and policy making in career guidance', *International Journal for Educational and Vocational Guidance*, 16(1) 137–152.

Hetherington, C. (1991) 'Life Planning and Career Counseling with Gay and Lesbian Students' in Evans, N. J. and Wall, V. A. (eds.) *Beyond Tolerance: Gays Lesbians and Bisexuals on Campus,* Alexandria: American College Personnel Association.

Hirsch, D. (2019) *The cost of a child in 2019*. London: Child Poverty Action Group.

HMRC (2020) *Coronavirus Job Retention Scheme statistics: July 2020.* Available at: https://www.gov.uk/government/publications/coronavirus-job-retention-scheme-

statistics-july-2020/coronavirus-job-retention-scheme-statistics-july-2020#demographics--age-and-gender-breakdown (Accessed: 20 July 2020).

Hodkinson, P. and Sparkes, A. C. (1997) 'Careership: A Sociological Theory of Career Decision-making', *British Journal of Sociology of Education*, 18(1), 29–44.

Holland, J. L. (1985) *Making vocational choices: A theory of vocational personalities and work environments*, Odessa: Psychological Assessment Resources.

Holland, J. L. (1996) 'Exploring Careers With A Typology: What we have learned and some new directions', *American Psychologist*, 51(4), 397–409.

Hooley, T. (2015) *The Evidence Base on Lifelong Guidance*, Finland: The European Lifelong Guidance Policy Network.

Hooley, T. and Sultana, R. (2016) 'Career guidance for social justice', *Journal of the National Institute for Career Education and Counselling*, 36, 2–11.

Hooley, T., Sultana, R. and Thomsen, R. (eds.) (2017) *Career Guidance for Social Justice: Contesting Neoliberalism*, London: Routledge.

Hughes, D. (2016) 'Bridging the information gap: addressing market failure?' in Way, D. (ed.) *A Race to the Top Achieving Three Million More Apprenticeships by 2020*, Winchester: Winchester University Press.

Hughes, D., Mann, A., Barnes, S., Baldauf, B. and McKeown, R. (2016) *Careers Education: International Literature Review*, Warwick: Warwick Institute for Employer Research/Education and Employers Research.

Hughes, D. and Smith, G. (2020) *Youth transitions: creating pathways to success*. Reading: Education Development Trust

Inda, M., Rodríguez, C. and Peña, J. V. (2013) 'Gender differences in applying social cognitive career theory in engineering students', *Journal of Vocational Behavior*, 83, 346–355.

Indecon (2019) *Review of Career Guidance.* Available at: https://www.education.ie/en/Publications/Education-Reports/indecon-review-of-career-guidance.pdf (Accessed: 20 July 2020).

Institut für Demoskopie Allensbach (ed.) (2014) 'Schule, und dann? Herausforderungen bei der Berufsorientierung von Schülern in Deutschland', Düsseldorf: Vodafone Stiftung Deutschland.

International Association for Educational and Vocational Guidance (2018) *Ethical Guidelines*. Available at: https://www.vkotocka.si/wp-content/uploads/2018/09/IAEVG-EthicsNAFeb2018Final.pdf (Accessed: 23 August 2020).

Jeffrey, C. and McDowell, L. (2004) 'Youth in a Comparative Perspective Global Change, Local Lives', *Youth and Society*, 36(2), 131–142.

Johnson, B. and Gray, R. (2010) 'A History of Philosophical and Theoretical Issues for Mixed Methods Research' in Tashakkori, A. and Teddlie, C. (eds.) *SAGE Handbook of Mixed Methods in Social and Behavioral Research (2nd edition)*, Thousand Oaks: SAGE Publications.

Johnson, C. and Neary, S. (2016) *CPD for the Career Development Professional*, Bath: Trotman.

Johnson, K. F. (2013) 'Preparing ex-offenders for work: applying the self-determination theory to social cognitive career counselling', *Journal of Employment Counseling*, 50(2) 83–93.

Joseph Rowntree Foundation (2018) *UK Poverty 2018*, York: Joseph Rowntree Foundation.

Katsarov, J. and Christen, M. (2018) 'Promoting the Moral Sensitivity of Police and Military Personnel', *Necesse 2018*, 3(1), 114–120.

Kenyon, R. (2005) 'The business benefits of apprenticeships: the English employers' perspective', *Education + Training*, 47(4/5), 366–373.

Kettunen, J., Sampson J. P. and Vuorinen, R. (2015) 'Career practitioners' conceptions of competency for social media in career services', *British Journal of Guidance and Counselling*, 43(1), 43–56.

Kidd, J. M. (2006) *Understanding Career Counselling*, London: Sage.

Klein, J., Ohlemann, S. and Driesel, K. (2019) *Adolescents in one parent families: A previously unnoticed group in inclusive career education?:Career Guidance for Inclusive Society: 43rd IAEVG International Conference*. University of Economics in Bratislava, 11-13 September. Slovakia: IAEVG.

Krumboltz, J. (2009) 'The Happenstance Learning Theory', *Journal of Career Assessment*, 17(2), 135–152.

Krumboltz, J., Foley, P. F., and Cotter, E. W. (2013) 'Applying the Happenstance Learning Theory to Involuntary Career Transitions', *The Career Development Quarterly*, 61, 15–26.

Kuczera, M. (2013) *A Skills Beyond School Commentary on Scotland*, OECD Reviews of Vocational Education and Training Background. Available at: https://www.oecd.org/education/skills-beyond-school/ASkillsBeyondSchoolCommentaryOnScotland.pdf (Accessed: 20 July 2020).

Kvale, S. (1996) *Interviews: An introduction to qualitative research interviewing*, Thousand Oaks, CA: SAGE Publications.

Lauder, L. and Neary, S. (2020) 'The role and relevance of theory in careers professionalisation and practice', *British Journal of Guidance and Counselling*, 1-12. doi.org/10.1080/03069885.2020.1750560.

Law, B. (1981) 'Community interaction: a 'mid range' focus for theories of career development in young adults', *British Journal of Guidance and Counselling*, 9(2), 142–158.

Law, B. (1993) 'Community Interaction - a mid range focus for theories of career

development in young adults – postscript' in W. Dryden and A.G. Watts (eds.) *Guidance and counselling in Britain: a 20 year perspective*, Cambridge: CRAC/Hobsons.

Lawson, K. M., Crouter, A. C. and McHale, S. M. (2015) 'Links between family gender socialization experiences in childhood and gendered occupational attainment in young adulthood', *Journal of Vocational Behaviour*, 90, 26–35.

Lehmann, J. K., Nuevo-Chiquero, A. and Vidal-Fernandez, M. (2018) 'The Early Origins of Birth Order Differences in Children's Outcomes and Parental Behavior', *The Journal of Human Resources*, 53(1), 123–153.

Lent, R. W. and Brown, S. D. (2013) 'Social Cognitive Model of Career Self-Management: Towards a Unifying View of Adaptive Career behaviour Across the Life Span,' *Journal of Counselling Psychology*, 60(4) 557–568.

Lent, R. W. (2017) 'Integration of Theory, Research, and Practice: A Social Cognitive Perspective' in Sampson, J. P., Bullock-Yowell, E., Dozier, V. C., Osborn, D. S. and Lenz J. G. (eds.) *Integrating theory, research, and practice in vocational psychology: Current status and future directions*, Tallahassee, FL: Florida State University.

Lent, R. W., Brown, S. D. and Hackett, G. (1994) 'Toward a Unifying Social Cognitive Theory of Career and Academic Interest, Choice, and Performance', *Journal of Vocational Behavior*, 45, 79–122.

Lent, R. W., Ezeofor, I., Morrison, M. A., Penn, L. T. and Ireland, G. W. (2016) 'Applying the social cognitive model of career self-management to career exploration and decision-making', *Journal of Vocational Behavior*, 93, 47–57.

Lent, R. W., Hackett, G. and Brown, S. D. (1999) 'A Social Cognitive View of School-to-Work Transition', *The Career Development Quarterly*, 47(4), 297–311.

Lent, R. W., Ireland, G. W, Penn, L. T., Morris, T. R. and Sappington, R. (2017) 'Sources of self-efficacy and outcome expectation for career exploration and decision-

making: A test of the social cognitive model of career self-management', *Journal of Vocational Behavior*, 99, 107–117.

Leong, F. T. L, Hartung, P., Goh, D. and Gaylor, M. (2001) 'Appraising Birth Order in Career Assessment: Linkages to Holland's and Super's Models', *Journal of Career Assessment*, 9 (1), 25–39.

Leung, S. A. (2008) 'The Big Five Career Theories' in Athanasou, J. A. and Van Esbroeck, R. (eds.) *International Handbook of Career Guidance*, Sydney: Springer.

Liu, J. I. and McMahon, M. 'Child career development in family contexts' in Watson, M. and McMahon, M. (eds.) (2018) *Career exploration and development in Childhood,* London: Routledge.

Lustig, D. C., Xu, Y. J. and Strauser, D. R. (2017) 'The Influence of Family of Origin Relationships on Career Thoughts', *Journal of Career Development*, 44 (1) 49–61.

Lyonette, C. (2015) 'Part-time work, work–life balance and gender equality', *Journal of Social Welfare and Family Law*, 37(3), 321–333.

Mainiero, L. A., and Sullivan, S. E. (2005) 'Kaleidoscope careers: An alternative explanation for the opt-out revolution,' *Academy of Management Executive*, 19, 106–123.

Mann, S. (2016) *The Research Interview: Reflective practice and reflexivity in research process*, Hampshire: Palgrave Macmillan.

Marangozov, R., Bates, P., Martin, R., Oakley, J., Sigala, M. and Cox, A. (2009) *Research to Shape Critical Mass Pilots to Address Under-Representation in Apprenticeships* Brighton: Institute for Employment Studies. Available at: http://www.employment-studies.co.uk/resource/research-shape-critical-mass-pilots-address-under-representation-apprenticeships (Accessed: 20 July 2020).

McGinn, K. L., Castro, M. R. and Lingo, E. L. (2018) 'Learning from Mum: Cross-National Evidence Linking Maternal Employment and Adult Children's Outcomes Work', *Employment and Society*. doi: 10.1177/0950017018760167.

McIntosh, S. (2007) *A Cost Benefit Analysis of Apprenticeship and Other Vocational Qualifications.* Department for Education and Skills Research Report RR834. Available   at: http://www.education.gov.uk/publications/eOrderingDownload/RR834.pdf (Accessed: 20 July 2020).

McKay, A., Campbell, J., Thomson, E. and Ross, S. (2013) 'Economic Recession and Recovery in the UK: What's Gender Got to Do with It?' *Feminist Economics*, 19(3), 108–123.

McMahon, M. (2008) 'Qualitative Career Assessment: A Higher Profile in the 21st Century?' in Athanasou, J. A. and Van Esbroeck, R. (eds.) *International Handbook of Career Guidance*, Sydney: Springer.

McMahon, M. and Patton, W. (1995) 'Development of a systems theory framework of career development', *Australian Journal of Career Development*, 4, 15–20.

McMahon, M. and Patton, W. (eds.) (2006) *Career Counselling Constructivist Approaches*, Abingdon: Routledge.

McRae, S. (2003) 'Constraints and choices in mothers' employment careers: a consideration of Hakim's Preference Theory', *British Journal of Sociology*, 54 (3), 317–338.

Mowbray, J. A. and Hall, H. (2020) 'Using social media during job search: The case of 16–24 year olds in Scotland', *Journal of Information Science*. doi.org/10.1177/0165551520927657.

Mumsnet (2020) *Apprenticeships: what parents think about them and what you need to know*. Available at: https://www.mumsnet.com/education/apprenticeships (Accessed 23 August 2020).

Murphy, E. and Oesch, D. (2016) 'The Feminization of Occupations and Change in Wages: A Panel Analysis of Britain, Germany, and Switzerland', *Social Forces*, 94(3), 1221–1255.

Murray, J. (2020) 'Parents' guide to university 2020', *Save the Student*, 7 September Available: https://www.savethestudent.org/student-finance/parents-guide-tips-university.html (Accessed: 10 September 2020).

National Records of Scotland (2013) *Census data 2011, Statistical Bulletin - Release 2A Figure 17: Household size, Scotland, 1961 to 2011*. Available at: http://www.scotlandscensus.gov.uk/documents/censusresults/release2a/rel2asbfigure17.pdf (Accessed 20 July 2020).

National Records Scotland (2017) *2016 Births, Deaths and Other Vital Events - Preliminary Annual Figures*. Available at: https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/general-publications/births-deaths-and-other-vital-events-preliminary-annual-figures/2016 (Accessed: 20 July 2020).

Neary, S. (2016) 'Only qualifications count: exploring perceptions of continuing professional development within the career guidance sector', *British Journal of Guidance and Counselling*, 44(4) 466–476.

Neary, S. (2020) 'Diversifying the careers workforce: opportunities and challenges', Journal for Perspectives of Economic, Political and Social Integration, 25 (2), 65–81.

Neary, S. and Hutchinson, J. (2009) 'More questions than answers: the role of practitioner research in professional practice' in Reid, H. (ed.) *Constructing the Future: Career Guidance for Changing Contexts,* Stourbridge: Institute of career Guidance.

Newton, B., Miller, L., Oakley, J. and Hicks, B. (2012) *Good Practice Evaluation of the Diversity in Apprenticeship Pilots*. Report for the National Apprenticeship Service. Brighton: Institute for Employment Studies. Available at: http://www.employment-studies.co.uk/system/files/resources/files/496.pdf (Accessed: 20 July 2020).

Nye, C. D., Perlus, J. G. and Rounds, J. (2018) 'Do ornithologists flock together? Examining the homogeneity of interests in occupations', *Journal of Vocational Behavior*, 107, 195–208.

O'Brien, K. M. (2001) 'The Legacy of Parsons: Career Counselors and Vocational Psychologists as Agents of Social Change', *Career Development Quarterly*, 50, 66–76.

OECD (2004) *Career Guidance and Public Policy: Bridging the Gap*, Paris: OECD Publishing.

OECD (2018) *Working it out: career guidance and employer engagement OECD Education Working Paper No. 175*. doi: https://doi.org/10.1787/51c9d18d-en.

OECD (2019) Envisioning the future of Education and Jobs: Trends, Data and Drawings. Available at: https://www.oecd.org/education/envisioning-the-future-of-education-and-jobs.pdf (Accessed 11 May 2021)

OECD (2020) *Strengthening Skills in Scotland: OECD Review of the Apprenticeship System in Scotland*. Paris: OECD Publishing.

OECD (2021) *The Future at Five: Gendered aspirations of five-year-olds*. Available at: https://www.oecd.org/education/school/early-learning-and-child-well-being-study/ (Accessed 11 May 2021)

Office for National Statistics (2009) *UK Standard Industrial Classification of Economic Activities 2007 (SIC 2007) Structure and explanatory notes*, Basingstoke: Palgrave Macmillan.

Office for National Statistics (2016) *UK families and households Dataset*. Available at: https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/families/datasets/familiesandhouseholdsfamiliesandhouseholds (Accessed: 20 July 2020).

Office for National Statistics (2017) *2021 Census topic research.* Available at: https://www.ons.gov.uk/census/censustransformationprogramme/questiondevelopment/2021censustopicresearchdecember2017 (Accessed: 20 July 2020).

Office for National Statistics (2017) *Families and Households: 2017 Dataset*. Available at:
https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/families/bulletins/familiesandhouseholds/2017 (Accessed: 20 July 2020).

Office for National Statistics (2019) *Sexual orientation, UK, Dataset, 2017*. Available at: https://www.ons.gov.uk/peoplepopulationandcommunity/culturalidentity/sexuality/bulletins/sexualidentityuk/2017 (Accessed: 20 July 2020).

Oomen, A. M. F. A. (2018) *Parental involvement in career education and guidance in senior general secondary schools in the Netherlands,* PhD thesis. University of Derby. Available at: https://derby.openrepository.com/handle/10545/623103 (Accessed 20 July 2020)

Otto, L. B. (2000) 'Youth Perspectives on Parental Career Influence', *Journal of Career Development*, 27(2) 111–118.

Palladino Schultheiss, D. E., Palma, T. V., Predragovich, K. S. and Glasscock, J. M. (2002) 'Relational Influences on Career Paths: Siblings in Context', *Journal of Counseling Psychology*, 49 (3), 302–310.

Palmer, S. (2020) *When is 'just banter' not just banter?* Available at: https://www.peoplemanagement.co.uk/long-reads/articles/when-just-banter-not-just-banter (Accessed: 20 July 2020).

Parsons, F. (1909) *Choosing a Vocation*, Boston: Houghton Mifflin.

Patton, W. (2013) *Conceptualising Women's Working Lives*, Rotterdam: Sense

Patton, W. and McMahon, M. (1999) *Career Development and Systems Theory: A new relationship*, Australia: New Hobsons Press.

Patton, W. and McMahon, M. (2006) *Career Development and Systems Theory: Connecting Theory and Practice (2nd edition),* Rotterdam: Sense Publications.

Patton, W. and McMahon, M. (2015) 'The Systems Theory Framework of career development: 20 years of contribution to theory and practice', *Australian Journal of Career Development*, 24(3), 141–147.

Patton, W. and McMahon, M. (2005) '(En)gendering socially just approaches to career guidance' in Irvin, B., A. and Malik, B. (eds.) *Critical Reflections on Career Education and Guidance: Promoting social justice within a global economy*, Oxon: Routledge Farmer.

Peavy, R. V. (2000) 'A Sociodynamic Perspective for Counselling', *Australian Journal of Career Development*, 9(1), 17–24

Perera, K. (2019) 'The interview as an opportunity for participant reflexivity', *Qualitative Research*, 20(2), 143–159.

Phillips, C. and Newton, E. (2014) *Parental influence on children's academic and employment choices*, Oxon: GTI Media.

Plano Clark, V. L. and Ivankova, N. V. (2016) *Mixed Methods research: A Guide to the Field*, London: Sage.

Plant, P. and Kjaergård, R. (2016) 'From mutualism to individual competitiveness: Implications and challenges for social justice within career guidance in neoliberal times', *Journal of the National Institute for Career Education and Counselling*, 36, 2–11.

Plowright, D. (2011) *Using Mixed Methods Frameworks for an Integrated methodology*, London: Sage.

Proyer, R. T. and Häusler, J. (2007) 'Gender differences in vocational interests and their stability across different assessment methods', *Swiss Journal of Psychology*, 6(4), 243–247.

Reid, H. (2016) *Introduction to Career Counselling and Coaching*, London: Sage.

Richmond, T. (2000) *Runaway training Why the apprenticeship levy is broken and how to fix it*, London: EDSK. Available at: https://www.edsk.org/wp-content/uploads/2020/01/EDSK-Runaway-training.pdf (Accessed: 23 August 2020).

Roantree, B. and Vira K. (2017) 'The rise and rise of women's employment in the UK', *Briefing Note BN234*, London: Institute of Fiscal Studies. Available at: https://www.ifs.org.uk/uploads/BN234.pdf (Accessed: 19 July 2020).

Roberts, K. (2009) 'Opportunity structures then and now', *Journal of Education and Work*, 22(5), 355–368.

Rogers, C. R. (1962) 'The interpersonal relationship: The core of guidance', *Harvard Educational Review*, 32, 416–429.

Ryan, L. and Lőrinc, M. (2018) 'Perceptions, prejudices and possibilities: Young people narrating apprenticeship experiences', *British Journal of Sociology of Education*, 39(6), 762–777.

Ryan, P., Gospel, H. and Lewis, P. (2006) 'Educational and contractual attributes of the apprenticeship programmes of large employers in Britain', *Journal of Vocational Education and Training*, 58(3), 359–383.

Sammons, P., Siraj-Blatchford, I., Sylva, K., Melhuish, E., Taggart B. and Elliot, K. (2005) 'Investigating the Effects of Pre-school Provision: Using Mixed Methods in the EPPE Research', *International Journal of Social Research Methodology*, 8(3), 207–224.

Sampson, J. P., Osborn, D. S., Kettunen, J., Pei-Chun, J., Miller, A. K. and Makela, J. P. (2018) 'The Validity of Social Media–Based Career Information', *The Career Development Quarterly*, 66(2), 121–134.

Savickas, M. L., Nota, L., Rossier, J., Dauwalder, J., Duarte, M. E., Guichard, J., Soresi, S., Van Esbroeck, R., van Vianen, A. E. M. (2009) 'Life designing: A paradigm for career construction in the 21st century', *Journal of Vocational Behavior*, 75, 239–250.

Schmidt, C. and Nilsson, J. (2006) 'The Effects of Simultaneous Development Processes: Factors Relating to the Career Development of Lesbian, Gay, and Bisexual Youth'. *The Career Development Quarterly*, 55, 22–37.

Schön, D. A. (1983) *The reflective practitioner: how professionals think in action,* New York: Basic Books.

Schön, D. A. (1987) *Educating the Reflective Practitioner*, San Francisco: Jossey-Bass.

Schweitzer, L., Ng, E., Lyons, S. and Kuron, L. (2011) 'Exploring the Career Pipeline: Gender Differences in Pre-Career Expectations', *Journal of Relations Industrielles/Industrial Relations*, 66(3), 422–444.

Scottish Apprenticeship Advisory Board (2019a) *The Apprenticeship Approvals Group Terms of Reference 2019/2020* Available at: https://www.skillsdevelopmentscotland.co.uk/media/46221/aag-tor.pdf (Accessed: 20 July 2020).

Scottish Apprenticeship Advisory Board (2019b) SAAB Gender Commission: Terms of Reference Available at:

https://www.skillsdevelopmentscotland.co.uk/media/46268/saab-gender-commission-terms-of-reference.pdf (Accessed: 20 July 2020).

Scottish Government (2011) *Career Information, Advice and Guidance in Scotland - A Framework for Service Redesign and Improvement*. Edinburgh: Scottish Government.

Scottish Government (2014a) Developing the Young Workforce Scotland's Youth Employment Strategy, Edinburgh: Scottish Government Available at: https://www.gov.scot/publications/developing-young-workforce-scotlands-youth-employment-strategy (Accessed 20 July 2020)

Scottish Government (2014b) Education Working For All! Commission for Developing Scotland's Young Workforce Final Report, Edinburgh: The Scottish Government

Scottish Government (2014c) *Response To The Wood Commission On The Young Workforce (Statement to Parliament)* Available at: https://news.gov.scot/speeches-and-briefings/response-to-the-wood-commission-on-the-young-workforce (Accessed 20 July 2020).

Scottish Government (2014d) *Equality Statement Scottish Draft Budget 2015-16*, Edinburgh: The Scottish Government.

Scottish Government (2015a) *Letter of Guidance to Skills Development Scotland for 2015-2016*, Edinburgh: Scottish Government.

Scottish Government (2015b) *Developing the Young Workforce: Scotland's Youth Employment Strategy: Annual Report 2014/15*. Available at: http://www.gov.scot/Resource/0049/00490597.pdf (Accessed 20 July 2020).

Scottish Government (2016a) Annual Letter of Guidance for 2016-2017, Edinburgh: Scottish Government.

Scottish Government (2016b) *Developing the Young Workforce Scotland's Youth Employment Strategy 2nd Annual Progress Report 2015-16*. Available at: http://www.gov.scot/Resource/0051/00511602.pdf (Accessed 20 July 2020).

Scottish Government (2019) *Developing the Young Workforce Scotland's Youth Employment Strategy Fifth Annual Progress Report 2018-2019.* Available at: https://www.gov.scot/publications/developing-young-workforce-fifth-annual-progress-report-2018-19 (Accessed 20 July 2020).

Scottish Government (2020a) *Scotland's Careers Strategy: Moving Forward*. Scottish Government: Edinburgh. Available at: https://www.gov.scot/publications/scotlands-careers-strategy-moving-forward (Accessed 20 July 2020).

Scottish Government (2020b) *Summary Statistics for Attainment and Initial Leaver Destinations, No. 2: 2020 Edition* Scottish Government: Edinburgh. Available at: https://www.gov.scot/publications/summary-statistics-attainment-initial-leaver-destinations-no-2-2020-edition/ (Accessed 07 September 2020).

Scottish Parliament (2017) *No Small Change: The Economic Potential of Closing the Gender Pay Gap.* Available at: http://www.parliament.scot/S5_EconomyJobsFairWork/Reports/EJFWS052017 R06.pdf (Accessed 20 July 2020).

Scottish Women's Budget Group (2002) *Accounting for Gender: A Response to the Annual Expenditure Report of the Scottish Executive: The Scottish Budget 2003-4*, Edinburgh: Scottish Women's Budget Group.

SCQF (no date) *The Scottish Credit and Qualifications Framework*. Available at: https://scqf.org.uk (Accessed 20 July 2020).

Sharf, R. S. (2006) *Applying Career Development Theory to Counseling*, Belmont: Thomson.

Shaw, I. and Lunt, N. (2018) 'Forms of Practitioner Research', *British Journal of Social Work*, 48(1), 141–157.

Simpson, R. (2005) 'Men in Non-traditional Occupations: Career entry, Career Orientation and experience of Role Strain', *Gender, Work and Organization*, 12(4) 363–380.

Singh, K. (2007) *Quantitative social research methods*, London: Sage

Skills Development Scotland (2012a) *Corporate Strategy 2012-2015*, Glasgow: Skills Development Scotland.

Skills Development Scotland (2012b) *Career Management Skills Framework for Scotland,* Available at: https://www.skillsdevelopmentscotland.co.uk/media/34749/career_management _skills_framework_scotland.pdf (Accessed 20 July 2020)

Skills Development Scotland (2014) *Operating Plan 2014/15*, Glasgow: Skills Development Scotland.

Skills Development Scotland (2015a) *Corporate Strategy 2015-2020*, Glasgow: Skills Development Scotland.

Skills Development Scotland (2015b) Equalities Action Plan for Modern Apprenticeships in Scotland, Glasgow: Skills Development Scotland.

Skills Development Scotland (2015c) *Modern Apprenticeship Statistics 2014/15 Q4.* Available at: http://www.skillsdevelopmentscotland.co.uk/statistics/modern-apprenticeships (Accessed 20 July 2020).

Skills Development Scotland (2016a) *Modern Apprenticeship Programme – Service Delivery Policy Statement 2017/18* Available at: http://www.skillsdevelopmentscotland.co.uk/media/42841/ma-service-delivery-policy-statement-201718.pdf (Accessed 25 July 2017).

Skills Development Scotland (2016b) *Modern Apprenticeship Statistics 2015/16 Q4.* Available at: http://www.skillsdevelopmentscotland.co.uk/statistics/modern-apprenticeships (Accessed 20 July 2020).

Skills Development Scotland (2016c) *Modern Apprenticeship Statistics 2015/16 Q4.* Available at: http://www.skillsdevelopmentscotland.co.uk/media/41669/ma-by-age-framework-and-gender-2015-2016-q4.pdf (Accessed 20 July 2020).

Skills Development Scotland (2017a) *Equality action plan – Year 1 update: For Modern Apprenticeships in Scotland*, Glasgow: Skills Development Scotland.

Skills Development Scotland (2017b) *Modern Apprenticeship Statistics, 2016/17 Q4.* Available at: http://www.skillsdevelopmentscotland.co.uk/statistics/modern-apprenticeships (Accessed 20 July 2020).

Skills Development Scotland (2018a) *Modern Apprenticeship Statistics, 2017-18 Q4.* Available at: http://www.skillsdevelopmentscotland.co.uk/statistics/modern-apprenticeships (Accessed 20 July 2020).

Skills Development Scotland (2018b) *Equality Action Plan for Modern Apprenticeships in Scotland Annual Report 2018.* Available at: https://www.skillsdevelopmentscotland.co.uk/media/44830/apprenticeship-equality-action-plan.pdf (Accessed 20 July 2020).

Skills Development Scotland (2019a) *A Human Future Strategic Plan 2019–2022*, Glasgow: Skills Development Scotland.

Skills Development Scotland (2019b) Modern Apprenticeship Statistics, 2018-19 Q4 Available at: http://www.skillsdevelopmentscotland.co.uk/statistics/modern-apprenticeships (Accessed 20 July 2020).

Skills Development Scotland (2019c) *Equality Action Plan for Modern Apprenticeships in Scotland Annual Report 2019.* Available at: https://www.skillsdevelopmentscotland.co.uk/media/45850/apprenticeship-equality-action-plan-annual-report-2019.pdf (Accessed 20 July 2020).

Skills Development Scotland (2019d) *Equality and Diversity Mainstreaming Report 2019-21*, Glasgow: Skills Development Scotland.

Skills Development Scotland (2019e) *Careers Information Advice and Guidance Equality Action Plan 2019-21*, Glasgow: Skills Development Scotland.

Skills Development Scotland (2020a) *Delivering Scotland's Career Service A Focus on Career Management Skills*, Glasgow: Skills Development Scotland.

Skills Development Scotland (2020b) *Scotland's Employer Recruitment Incentive*. Available at: https://www.skillsdevelopmentscotland.co.uk/what-we-do/our-products/scotlands-employer-recruitment-incentive (Accessed 20 July 2020).

Skills Development Scotland (2020c) *Adopt an Apprentice - Guidelines* Available at: https://www.ourskillsforce.co.uk/invest-in-young-people/adopt-an-apprentice (Accessed 20 July 2020).

Skills Development Scotland (2020d) *The Scottish Apprenticeship Advisory Board* Available at: https://www.skillsdevelopmentscotland.co.uk/what-we-do/apprenticeships/the-scottish-apprenticeship-advisory-board (Accessed 19 August 2020).

Skills Development Scotland (2020e) *Modern Apprenticeship Statistics, 2019-20* Q4. Available at: http://www.skillsdevelopmentscotland.co.uk/statistics/modern-apprenticeships (Accessed 20 July 2020).

Skills Development Scotland (2020f) *Equality Action Plan for Modern Apprenticeships in Scotland Annual Report 2020*. Available at: https://www.skillsdevelopmentscotland.co.uk/media/47244/equality-action-plan-2020.pdf (Accessed 15 March 2021).

Skills Development Scotland (no date) Modern Apprenticeships Statistics. Available at: http://www.skillsdevelopmentscotland.co.uk/publications-statistics/statistics (Accessed 20 July 2020).

Skills Development Scotland/Career Development Institute (2015a) *Modern Apprenticeship in Career Development – Framework Document.* Available at: https://www.skillsdevelopmentscotland.co.uk/media/41564/career-development-l3.pdf (Accessed 20 July 2020).

Skills Development Scotland/Career Development Institute (2015b) *Technical Apprenticeship in Career Development – Framework Document.* Available at: https://www.skillsdevelopmentscotland.co.uk/media/44132/modern-apprenticeship-framework-career-development-technical-apprenticeship-at-scqf-9.pdf (Accessed 20 July 2020).

Sosenko, F. and Netto, G. (2013) *Scotland-focused analysis of statistical data on participation in apprenticeships in four UK countries*. Report of the project: Modern Apprenticeships Equality and The Economy: Spreading The Benefits. Edinburgh: Equality and Human Rights Commission Scotland. Available at: https://www.equalityhumanrights.com/en/our-work-scotland/our-work-scotland/research-scotland/modern-apprenticeships (Accessed 20 July 2020).

Spokane, A. R. and Glickman, I. T. (2001) 'Light, Information, Inspiration, Cooperation: Origins of the Clinical Science of Career Intervention', *Journal of Career Development*, 20, 295–304.

Stanley-Stevens, L. and Kaiser, K. (2011) 'Decisions of first time expectant mothers in central Texas compared to women in Great Britain and Spain: testing Hakim's Preference Theory', *Journal of comparative family studies*, 42(1), 113–130.

Student Awards Agency Scotland (2020) *Household Income*. Available at: https://www.saas.gov.uk/need-to-know/household-income (Accessed 10 September 2020).

Super, D. (1980) 'A life-span, life-space approach to career development', *Journal of Vocational Behaviour*, 16, 282–298.

Super, D. (1990) 'A life-span, life-space approach to career development' in Brown, D. and Brooks, L. (eds.), *Career choice and development: Applying contemporary theories to practice (2nd edition)*, San Francisco: Jossey-Bass, 197–261.

Swanson, J. L. and Fouad, N. (1999) *Career theory and practice: Learning through case studies,* London: Sage.

Tanggaard, L. (2006) 'Situating gendered learning in the workplace', *Journal of Workplace Learning*, 18(4), 220–234.

Tashakkori, A. and Creswell, J. W. (2007) 'Editorial: The New Era of Mixed Methods', *Journal of Mixed Methods Research*, 1, 4–7.

Tashakkori, A. and Teddlie, C. 'Quality of inferences in Mixed Methods Research: Calling for an Integrative Framework' in Bergman, M. M. (eds.) (2009) *Advances in Mixed Methods Research*, London: Sage.

Thomson, E., Campbell, J. and Gillespie, M. (2005) *Jobs for the Boys and the Girls: Promoting a Smart, Successful and Equal Scotland*, Glasgow: Equal Opportunities Commission.

Thomson, E., Campbell, J. and McKay, A. (2005) 'How 'modern' is the Modern Apprenticeship?', *Local Economy*, 20, 294–304.

Trades Union Congress (2008) *Still more (better paid) jobs for the boys.* Available at: https://www.tuc.org.uk/sites/default/files/extras/genderreport.pdf (Accessed 20 July 2020).

Trades Union Congress and YWCA (2010) *Apprenticeships and gender*. Available at: https://www.unionlearn.org.uk/sites/default/files/apprenticeships_and_gender_tu c_format1.pdf (Accessed 24 May 2017).

Tzanakou, C. (2017) 'Dual career couples in academia, international mobility and dual career services in Europe'. *European Educational Research Journal*, 16(2–3), 298–312.

UK Government (2018a) *Trans People in the UK.* Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/atta chment_data/file/721642/GEO-LGBT-factsheet.pdf (Accessed 20 July 2020).

UK Government (2018b) *National LGBT Survey*. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/atta chment_data/file/722314/GEO-LGBT-Survey-Report.pdf (Accessed 20 July 2020).

Universities UK (2012) *Concordat to support research integrity*, London: Universities UK. Available at: https://www.universitiesuk.ac.uk/policy-and-analysis/reports/Pages/the-concordat-for-research-integrity.aspx (Accessed 20 July 2020).

University of Glasgow Training and Employment Research Unit (2017) *Evaluation of the Skills Development Scotland Equality Action Plan for Modern Apprenticeships in Scotland: Final Report*. Unpublished Report.

Valcour, M. and Ladge, J. (2008) 'Family and career path characteristics as predictors of women's objective and subjective career success: Integrating traditional and protean career explanations', *Journal of Vocational Behavior*, 73(2), 300–309.

van der Vleuten, M., Steinmetz, S. and van de Werfhorst, H. (2019) 'Gender norms and STEM: the importance of friends for stopping leakage from the STEM pipeline', *Educational Research and Evaluation*, 24(6), 417–436.

van der Vleuten, M., Jaspers, E., Maas, I. and van der Lippe, T. (2018) 'Intergenerational transmission of gender segregation: How parents' occupational field affects gender differences in field of study choices', *British Educational Research Journal*, 44(2), 294–318.

van der Vleuten, M., Maas, I. and Weesie, J. (2019) *Sibling Influence in Field of Study Choices: Europe and Beyond: Boundaries, Barriers and Belonging: the 14th European Sociological Society Conference*. 20-23 August. Manchester.

Walker, I. and Zhu, Y. (2007) *The Labour Market Effects of Qualifications*, Glasgow: Futureskills Scotland.

Ward, R. (2012) 'The Women and Work Commission legacy in the age of austerity', *Local Economy*, 27(8), 864–871.

Wheeldon, J. and Ahlberg, M. K. (2012) *Visualizing Social Science Research*, London: Sage.

Whitmarsh, L. and Keyser Wentworth, D. (2016) 'Gender Similarity or Gender Difference? Contemporary Women's and Men's Career Patterns', *The Career Development Quarterly*, 60(1), 47–64.

Whitmarsh, L., Brown, D., Cooper, J., Hawkins-Rodgers, Y. and Keyser Wentworth, D. (2007) 'Choices and Challenges: A Qualitative Exploration of Professional Women's Career Patterns', *The Career Development Quarterly*, 55(3), 225–236.

Williams, J., Foley, B. and Newton, B. (2013) *Research into under-representation, by gender and ethnicity, in Apprenticeships*. Brighton: Institute for Employment Studies, available: http://www.employment-studies.co.uk/resource/research-under-representation-gender-and-ethnicity-apprenticeships (Accessed 20 July 2020).

Women and Work Commission (2009) *Shaping a fairer future*. Available at: http://webarchive.nationalarchives.gov.uk/20100212235759/http:/www.equalities.gov.uk/pdf/297158_WWC_Report_acc.pdf (Accessed 20 July 2020).

Working Families (2011) Working and fathers: Combining family life and work, Lancaster Management School.

Yerkes, M. (2010) 'Diversity in Work: The Heterogeneity of Women's Employment Patterns', *Gender, Work and Organization*, 17(6), 696–720.

Young Women's Trust (2016) *Apprenticeship gender pay gap grows amidst concerns about quality*. Available at: https://www.youngwomenstrust.org/what_we_do/media_centre/press_releases/1079_apprenticeship_gender_pay_gap_grows_amidst_concerns_about_quality (Accessed 20 July 2020).

Young-Powell, R. (2019) 'How much should parents pay for university?' The Guardian, 9 July. Available: https://www.theguardian.com/education/2019/jul/09/how-much-should-parents-pay-for-university (Accessed 10 September 2020)

Youth Employment Group, Youth Futures Foundation, Impetus, Youth Employment UK, The Princes Trust and the Institute for Employment Studies (2020) *Securing a place for young people in the nation's economic recovery A rapid response to COVID-19 Online*. Available at: https://www.employment-studies.co.uk/system/files/resources/files/Young%20people%20employment%20response%20paper.pdf (Accessed 20 July 2020).

Websites

Apprenticeships.Scot	apprenticeships.scot
Fatherhood Institute	www.fatherhoodinstitute.org
Fathers Network Scotland	www.fathersnetwork.org.uk/research
Find and Apprenticeship	findapprenticeship.service.gov.uk/
My World of Work	myworldofwork.co.uk
My World of Work (parents' site)	myworldofwork.co.uk/parents
Our Skillsforce	ourskillsforce.co.uk/modern-apprenticeships
Skills Development Scotland	skillsdevelopmentscoland.co.uk

Appendices

Appendix A: The policy context

Appendix A provides further information on the policy context for the research. It begins with an overview of careers policy and provision in Scotland and then introduces pertinent aspects of other key policy drivers and their monitoring and reporting mechanisms. It concludes by summarising apprenticeship provision in Scotland and the wider UK and defines the Scottish Modern Apprenticeship Programme, including its purpose, structures, financing, equality and inclusion trends and future strategic direction.

Careers policy and provision in Scotland

This section presents a summary of the contemporary provision and delivery of CIAG services and career education in Scotland.

Career information, advice and guidance: Scottish Government strategy

In Scotland, Skills Development Scotland, the national skills body, is the strategic lead in the delivery of the Scottish Government's statutory CIAG provision. Skills Development Scotland career services operate independently (for example, high street careers centres) and in partnership (for example, in schools). Skills Development Scotland was formed in 2008 as a non-departmental national body. Prior to this date, Scotland's careers, skills, training[40] and funding services operated separately, with career education, information, advice and guidance the responsibility of Careers Scotland.

In March 2011, the Scottish Government published a careers strategy, aiming to modernise statutory careers provision across the country and informing the delivery of CIAG in Scotland. The strategy, *Career Information, Advice and Guidance in Scotland: A Framework for Service Redesign and Improvement* (Scottish Government, 2011), defines the Scottish Government's vision for CIAG, as a service to support economic growth and increase employment. It commits to deliver CIAG through "all-age, universal provision" (ibid., p.6) delivered by Skills Development Scotland. In modernising CIAG provision, the framework defines a move towards innovative and varied CIAG services, increasing partnership working and better use of resources underpinned by principles of impartiality and equality (ibid.).

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[40] Prior to 2008, the Modern Apprenticeship Programme was independent. Amongst other skills remits, Skills Development Scotland now manage and deliver Modern Apprenticeships in Scotland.

An ongoing continuous improvement agenda relating to Scotland's statutory careers provision is present in Skills Development Scotland strategy publications: the *Skills Development Scotland Corporate Strategy* (2012-15) notes the need for a modernisation of CIAG provision, streamlining, greater accessibility and adaptive delivery methods (Skills Development Scotland, 2012a, p.11). Skills Development Scotland's position at the outset of this study was to ensure "delivery of targeted and universal CIAG and employability services in line with service offers" as an output of the organisation's performance framework (Skills Development Scotland, 2015a, p.58). The current (2019-22) *Skills Development Scotland Strategic Plan* reinforces an ongoing commitment: "The provision of high quality, independent and impartial career information, advice and guidance remains core to our services to individuals" (Skills Development Scotland, 2019a, p.24). December 2019 saw the publication of the first *Skills Development Scotland Careers Information Advice and Guidance Equality Action Plan* for the period 2019-21 (2019e).

Ongoing broad CIAG services delivered by Skills Development Scotland include the My World of Work web service, high-street careers offices, a telephone contact centre, schools-based careers advisers, post-school careers advisers and redundancy support. Service provision and delivery is externally inspected by Education Scotland at Local Authority level (Education Scotland, no date).

In 2020, Scottish Government published an updated version of the previous careers strategy, *Scotland's Careers Strategy: Moving Forward* (Scottish Government, 2020a). The new strategy builds on previous policy and delivery models and includes emphasis on uniformity and coordination across all provision (with a focus on the use of the term "careers system") and the establishment of an implementation group and implementation plan for the strategy by the end of 2020. As this is outwith the time period of this thesis, the policy context referred to herein focuses on the period in which the research takes place, 2014-2020, and the established models of delivery of careers provision.

The Career Management Skills Framework for Scotland

The role of Skills Development Scotland in developing and delivering CIAG services incorporates various activities which support career progression. Skills Development Scotland staff advocate for and deliver careers activity in line with the *Career*

Management Skills Framework for Scotland (Skills Development Scotland, 2012b). The framework responds to the requirements set out by the Scottish Government for modernised CIAG provision that transfers responsibility to the individual to develop their career management skills. In developing the framework, Skills Development Scotland drew on existing national and international career management approaches (ibid., p.1).

While used primarily by Skills Development Scotland, the framework is not Skills Development Scotland-specific; it is aimed at organisations across Scotland who plan, manage and deliver CIAG services and career related learning and may be of practical relevance to other organisations, including employers' human resources functions and training providers (ibid., p.7). In developing the framework, Skills Development Scotland undertook a six-week consultation in 2012 gathering information on how partners planned to use it. Respondents suggested that the framework would enable them to use CIAG to a greater extent within their organisations, in a range of areas including skills and human resource management (ibid., p.14). It is however still used primarily by Skills Development Scotland, with other CIAG services utilising alternatively orientated, independent models.

Adopting a coaching approach to CIAG, the Skills Development Scotland implementation of career management skills focuses on the "increasing importance of helping people to help themselves" (ibid., p.11). The *Career Management Skills Framework for Scotland* is promoted as competency based, adaptable and applicable throughout an individual's life and career stages. The seventeen competencies presented within the framework are grouped by applicability to an understanding of the "self", in relation to personal "strengths", in the context of individual "horizons", and own "networks" (ibid., pp.8-9). The framework is deemed to guide innovation in careers provision and provides a route to articulate and clarify CIAG in practice (ibid., p.13).

The *Career Management Skills Framework for Scotland* is implemented across Skills Development Scotland CIAG services. It shapes the resources used to support Skills Development Scotland career services, to include in person (face-to-face and telephone), internet and partner delivery and creates parameters for success measures of career competency. The framework underpins Skills Development Scotland careers practitioner work and training, partnership delivery of CIAG and is used as a means of monitoring and assuring quality. Pertaining to quality assurance and success measures, publication

of a Skills Development Scotland-authored review of the framework's delivery, *Delivering Scotland's Career Service: A Focus on Career Management Skills* (Skills Development Scotland, 2020a) evidences the organisation's commitment to it as a delivery model and markers of its success in the period 2012-2020.[41]

Education Scotland and the Career Education Standard

Skills Development Scotland works with Education Scotland, the executive agency of the Scottish Government responsible for quality and improvement in education, to clarify and improve CIAG provision at school-level. This activity is primarily informed by the findings in *Education Working For All! The Commission for Developing Scotland's Young Workforce Final Report* (Scottish Government, 2014a). Recommendation 2 of the report presented the need for "a more comprehensive standard for careers guidance" in schools, citing a need for teachers to understand more about the labour market, for closer partnership links with industry, for earlier careers intervention and the involvement of Education Scotland in the evaluation and quality assessment of careers provision in schools (ibid., pp.22-23).

In 2014-15 an Education Scotland-led review of Skills Development Scotland CIAG services commenced, with the aim of having a Career Education Standard put into place for 2015-16. The draft *Career Education Standard* (3-18) (Education Scotland, 2015a) was presented for consultation in May 2015. Open feedback was requested from (but not limited to) careers practitioners, education professionals, employers and CIAG organisations using an online survey.

The professional body for CIAG in the UK, the Career Development Institute, disseminated their detailed organisational response to the survey to members by email. Whilst the Career Development Institute response was favourable overall in relation to the creation of the standard, it was critical of its positioning as lacking a clear link to other policy areas and therefore potentially undervaluing CIAG. The response also challenged the low visibility of career management skills within the standard and a lack of clarity in relation to equality issues other than gender. The Career Development Institute also

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[41] While it is intended to present only the landscape in Scotland rather than a critique of policy and delivery, independent scrutiny of the adoption of the *Career Management Skills Framework for Scotland* may offer robust evaluation measures and feed in effectively to the continuous improvement agenda for Scotland's CIAG provision.

questioned the involvement of parents and employers in the standard, and partnership working, from the standpoint that there is insufficient detail in the delivery of the standard (Career Development Institute, 2015a). No other organisation made their response public and the overall feedback gained from the survey was not made publicly available.

The Developing the Young Workforce Career Education Standard[42] was published in September 2015 (simultaneously with the *Developing the Young Workforce Work Placements Standard*) and lists specific entitlements for children and young people and expectations of parents/carers, teachers/practitioners, Skills Development Scotland and employers in the context of career education (Education Scotland, 2015b). A review was scheduled to be undertaken in March 2017 following 18 months of practical usage however this remains unpublished. Lobbying organisation Close the Gap have urged Education Scotland to "review the *Career Education Standard* and *Work Placement Standard* to make gender explicit" and designate "addressing the causes of gender segregation a priority" (2018, p.35). While both the *Career Education Standard* and *Work Placements Standard* remain operational, with information updated on an ongoing basis and available via the Education Scotland National Improvement Hub (Education Scotland, 2020), they have a comparatively low profile.

Other career information, advice and guidance provision in Scotland

As noted at the opening of this section, other organisations in Scotland provide explicit CIAG services[43]. CIAG professionals can also be found within higher and further education institutions, third sector organisations and charities. Independent CIAG practitioners and organisations offer services that are usually paid for by the individual.

Until 2019, Inspiring Futures delivered school-based career education and guidance services in independent schools. Its career planning and guidance service from age fifteen until the client is twenty-three, utilised psychometric assessments and profiling (which are not offered under the Skills Development Scotland statutory duty) alongside career guidance interviews and group work sessions. Inspiring Futures also offered careers-focused courses and events for students and CIAG support for staff. Since the demise of

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[42] *Developing the Young Workforce: Scotland's Youth Employment Strategy* is introduced in section 1.4.2
[43] Not included here are related services, such as welfare-orientated JobCentre Plus provision, employability agencies and training providers, teaching and other career related information and learning providers such as sector skills bodies.

the organisation, some Inspiring Futures staff have been retained as independent practitioners within independent schools.

Career Ready is an example of a charity operating throughout the UK, which includes a focus on young people from lower-income families. They deliver careers work in schools, often with a specific aim, such as working closely with employers or in partnership with higher education providers (Career Ready, no date).

In Scottish further and higher education, while employability work may be embedded within the curriculum, colleges offer CIAG as part of a wider student services offer. Universities offer their own career services, usually as a member service of the Association of Graduate Careers Advisory Services (AGCAS).

Scotland's Youth Employment Strategy and Skills Development Scotland obligations

Following the 2016 Scottish Parliament election, the restructuring of Scottish Government led to the creation of new directorates, with responsibility for Skills Development Scotland split between the Fair Work, Employability and Skills Directorate (under the Minister for Employability and Training) and the Children and Families Directorate (under the Cabinet Secretary for Education and Skills). Scottish Government issues Skills Development Scotland with an annual Letter of Guidance which states key targets and goals for Skills Development Scotland and the comprehensive list of service requirements that directly shapes Skills Development Scotland provision. A specific requirement in the 2016 letter of "Supporting the Delivery of Developing the Young Workforce: Scotland's Youth Employment Strategy" (Scottish Government, 2016a) heralded the beginning of Skills Development Scotland activity relating to this strategy, activity which takes a cross-directorate position. The following sections highlight key elements of this strategy pertinent to the research in this study.

The Commission for Developing Scotland's Young Workforce

In June 2014, the Commission for Developing Scotland's Young Workforce, led by Sir Ian Wood, delivered its findings[44]. The final report of the 18-month long Commission,

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[44] Known informally as 'The Wood Commission'.

Education Working For All![45], contained 39 recommendations for stakeholders including, but not limited to, education and training providers, public sector bodies and employers (Scottish Government, 2014a). Eleven of these recommendations demonstrate a direct relationship to careers, Modern Apprenticeship (MA) provision and/or gender (Table 1.1) (ibid.). In the context of this study, recommendations 27, 28 and 30 specifically refer to gender bias in Modern Apprenticeships. In addition to these recommendations, the report set targets in relation to Modern Apprenticeships, gender and career guidance provision for young people and suggestions for future development.

Scottish Government commenced activity to respond to the recommendations in *Education Working For All!* and on 24 June 2014 announced its initial goal of reducing youth unemployment in Scotland by 40% by 2020, with immediate action to be taken in apprenticeship provision to meet this aim (Scottish Government, 2014c). This was followed in October 2014 with a clear commitment in response to the recommendations of the Commission in *The Equality Statement Scottish Draft Budget*, an annual publication which accompanies the Scottish Draft Budget (Scottish Government 2014d). Chapter 16 of the Statement was dedicated to Modern Apprenticeships and equalities issues and challenges present within the Programme. The Draft Budget 15-16 committed £16.6 million, an addition to the £12 million allocated in 2014-15 Draft Budget, towards the implementation of recommendations from *Education Working For All!* Of the first allocation, £3 million was designated to Skills Development Scotland to support early action on issues including equality (ibid., p.92).

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[45] Known informally as 'The Wood Report'.

Education Working For All! recommendations specific to careers, gender and Modern Apprenticeships

Recommendation 2: A focus on preparing all young people for employment should form a core element of the implementation of Curriculum for Excellence with appropriate resource dedicated to achieve this. In particular local authorities, Skills Development Scotland and employer representative organisations should work together to develop a more comprehensive standard for careers guidance which would reflect the involvement of employers and their role and input.

Recommendation 7: Modern Apprenticeships should be aligned with the skills required to support economic growth.

Recommendation 8: Development of Modern Apprenticeship access processes and progression pathways should be prioritised.

Recommendation 9: An industry-led quality improvement regime should be introduced to oversee the development and promotion of Modern Apprenticeships.

Recommendation 10: If employers can be encouraged to offer significantly more good quality apprenticeships, the Scottish Government should consider a carefully managed expansion of the annual number of Modern Apprenticeship starts.

Recommendation 20: A small business Modern Apprenticeship recruitment incentive package should be developed to equip and support smaller and micro businesses to recruit and train more young people.

Recommendation 27: Promotion and communication of career options should actively target equalities groups to promote diverse participation across gender, Black & Minority Ethnic groups, young people with disabilities and care leavers. The promotion of Modern Apprenticeship opportunities should be to the fore of this activity.

Recommendation 28: Senior phase vocational pathways should be designed to encourage more gender balance across occupations.

Recommendation 29: The Scottish Funding Council and colleges should develop an action plan to address gender disparities within college education. This should be underpinned by realistic but stretching improvement targets. The Scottish Funding Council should report on this annually.

Recommendation 30: Skills Development Scotland should develop an action plan to address gender disparities within Modern Apprenticeships. This should be underpinned by realistic but stretching improvement targets. Skills Development Scotland should report on this annually.

Recommendation 31: A targeted campaign to promote the full range of Modern Apprenticeships to young people and parents from the BME community should be developed and launched to present the benefits of work based learning as a respected career option and alternative to university.

Recommendation 32: Skills Development Scotland should set a realistic but stretching improvement target to increase the number of young people from BME groups starting Modern Apprenticeships. Progress against this should be reported on annually.

Recommendation 33: Career advice and work experience for young disabled people who are still at school should be prioritised and tailored to help them realise their potential and focus positively on what they can do to achieve their career aspirations.

Recommendation 35: Within Modern Apprenticeships, Skills Development Scotland should set a realistic but stretching improvement target to increase the number of young disabled people. Progress against this should be reported on annually.

Table 1.1: Relevant *Education Working For All!* recommendations, (Scottish Government, 2014a, pp.11, 13, 14).

Developing the Young Workforce

In December 2014, The Scottish Government released *Developing the Young Workforce*[46] - *Scotland's Youth Employment Strategy* detailing its implementation of the recommendations of *Education Working For All!* (Scottish Government, 2014a). The timeframe for the achievement of a 40% reduction in youth unemployment is extended by one year to 2021 in the strategy (ibid., Foreword), with a requirement for government to report annually on progress. *Developing the Young Workforce* has been a key influence on the work of Skills Development Scotland since publication.

The strategy shows that implementation of the findings of *Education Working For All!* is intended to strongly engage with vocational education and training:

> Our objective is a world-class system of vocational education, in which colleges work with schools and employers to deliver learning that is directly relevant to getting a job, as a mainstream option for all pupils in the senior phase of secondary school (Scottish Government, 2014a, p.15).

The strategy incorporates Government work with partners to "break down some of the preconceptions surrounding the [MA] programme," with the purpose of encouraging "groups that are currently under-represented to participate in future…challenging gender and cultural stereotypes and removing barriers where they exist for those who require additional support" (Scottish Government, 2014a, p.20). There is clear acknowledgement that, in line with early findings of The Commission for Developing Scotland's Young Workforce, "Gender stereotyping in education exists as does gender segregation in a significant number of the occupations and careers young people pursue" (ibid., p.30).

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[46] Hereafter referred to as *Developing the Young Workforce*.

Developing the Young Workforce also specifically addresses the influence of others in the career decision to undertake a Modern Apprenticeship, referring to "young people, parents, carers, teachers and practitioners and employers who are all crucial to the development of Modern Apprenticeships" with success dependent on "ensuring that they are central to what is offered and how it is delivered and promoted" (ibid., p.17). In addition, the strategy addresses the need to enhance the overall perceptions of Modern Apprenticeships, vocational and work-based learning through "the engagement of parents, teachers and practitioners and other influencers to understand better the benefits of these options to both those who participate and for their employers" (ibid., p.21).

A headline commitment made in the publication is "a year on year increase" to take Modern Apprenticeship starts to 30,000 per year by 2020 (ibid., p.1). Section 3 of *Developing the Young Workforce* addresses apprenticeships and the strategy presents a broad expansion of apprenticeship provision, with the introduction of foundation and advanced[47] apprenticeships alongside a growth in Modern Apprenticeship provision. The strategy's Key Performance Indicators (KPIs) include a requirement (KPI7) to "reduce to 60 per cent the percentage of Modern Apprenticeship frameworks where the gender balance is 75:25 or worse by 2021" (ibid., p.23).

Developing the Young Workforce also makes specific commitments to careers provision for young people. By the third year of implementation of the strategy it is predicted that "With the support of careers professionals, teachers and other practitioners, young people and parents will be more informed about routes into work, careers planning and employment opportunities" (ibid., p.11). A specific theme of this activity is to provide "earlier relevant labour market focussed careers advice when young people need it, leading to better outcomes" (ibid., p.12).

Implementation and reporting

Scottish Government produce progress reports annually on overall implementation of the strategy across work, employment, skills and education and progress against the KPIs therein (e.g. Scottish Government, 2016b, 2019) with final reporting due at its conclusion in 2021. As a direct response to the equality issues pertinent to Modern Apprenticeships

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[47] Also referred to Graduate Level Apprenticeships (GLAs).

presented in *Developing the Young Workforce*, Skills Development Scotland produced the *Equalities Action Plan for Modern Apprentices in Scotland* in December 2015 (Skills Development Scotland, 2015b). The strategy and the equalities action plan for Modern Apprentices are key publications relating to the national policy context for the work undertaken in this thesis in the period 2014-2020.

The Scottish Modern Apprenticeship Programme

Modern Apprenticeships are co-funded by public funding, private sector businesses and public sector bodies, the public funding element being heavily subsidised by Scottish Government (bringing with it a focus on sixteen to twenty-four year olds) and administered by Skills Development Scotland since the skills body was formed in 2008. It is to be noted, however, that "some employers may also use modern apprenticeships but do not apply for, or receive, public sector funding" (Audit Scotland 2014, p.40). As thousands of apprenticeships exist across Scotland, other employers may use the term "modern apprenticeship" flexibly without being part of the Modern Apprenticeship programme.

As a provision of vocational education and training in Scotland, the Modern Apprenticeship Programme gives Modern Apprentices aged sixteen and above "the knowledge and skills required to access and progress in a given job role or occupation" (Kuczera, 2013, p.1). A Modern Apprenticeship "can include an element of work-based learning, relevant technical skills acquisition and the opportunity to develop or enhance employability skills and core skills relevant to employment" (ibid.).

Modern Apprenticeship frameworks: approval and delivery

The employer-led Apprenticeships Approvals Group (AAG)[48] approves (and rejects) Modern Apprenticeship frameworks, ensuring their content aligns with Scottish Government policy and strategy on apprenticeships (Scottish Apprenticeship Advisory Board, 2019a). The frameworks[49] are developed by the Sector Skills Councils (SSCs) and

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[48] From April 2020 onwards, previously the Modern Apprenticeship Group (MAG)
[49] Usually 80+ frameworks are live at any one time

other sector bodies. Within each framework the variations in qualification routes are known as pathways. While a Modern Apprenticeship framework does not have a specific time-period for completion attached to it, a Modern Apprentice will generally complete a pathway in one to four years, depending on Modern Apprenticeship level, sector and individual ability.[50]

In line with recommendations in *Developing the Young Workforce*, The Scottish Apprenticeship Advisory Board (SAAB) was set up in 2016:

> to provide employer leadership and contribution to the development of apprenticeships in Scotland; ensuring they are aligned with industry and economic need, Fair Work and job opportunities…providing advice and making recommendations on the guiding principles, operational policy, systems and structures supporting apprenticeships in Scotland (Skills Development Scotland, 2020d).

Registered training providers manage the Modern Apprenticeship on behalf of employers. This includes registering a Modern Apprentice with relevant bodies including Skills Development Scotland and the relevant sector skills organisation. The training provider also manages a Modern Apprentice's training and assessment as they progress through the pathway. While Skills Development Scotland contracts primarily with registered training providers (further education colleges, independent and third sector training organisations, local authorities) to manage Modern Apprenticeships, the organisation can contract directly with large employers if they have the capacity to act as registered training providers. Programme rules and contracting information are available on the www.apprenticeships.scot website.

There are four levels of Skills Development Scotland Modern Apprenticeship frameworks. Their position on the SCQF and Scottish Vocational Qualification (SVQ) levels are presented in Table 1.2. Table 1.3 presents the shared elements and differences between the standard Modern Apprenticeship and the Technical and Professional Apprenticeships.

Foundation and Advanced/Graduate Level Apprenticeships are separate provisions to Modern Apprenticeships and are not National Training Programmes. Following their introduction in response to the recommendations of the *Commission for Developing Scotland's Young Workforce Final Report* (Scottish Government, 2104a) and *Education*

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[50] This is not publicly stated and is opaque within programme rules

Working For All! (Scottish Government, 2014b), Skills Development Scotland now use the term "the apprenticeship family" to describe the full scope of apprenticeship provision.

MA Framework	SCQF Level
Modern Apprenticeships at SVQ 2	5
Modern Apprenticeships at SVQ 3	6/7
Technical Apprenticeships	8/9
Professional Apprenticeships	10+

Table 1.2: Modern Apprenticeship Frameworks and Levels (SCQF, no date)

	Modern Apprenticeship	Technical and Professional Apprenticeships
Mandatory Qualification	SVQ or competency based qualification	SVQ, competency based qualification, Higher National qualifications, professional qualifications Or any other qualifications based on NOS at SCQF Level 8+
Skills	Core Skills: skills suitable for any work environment, based on National Occupational Standards (NOS)	Career Skills: higher level work-based skills, based on NOS
Training	On-the-job and/or off-the-job industry-specific training	On-the-job and/or off-the-job industry-specific training
Other	Technical certificates, role-specific qualifications Can be academic (national certificate or HNC)	Technical certificates, role-specific qualifications Can be academic (national certificate or HNC)

Table 1.3: The elements of the Skills Development Scotland Modern, Technical and Professional Apprenticeships

Financing a Modern Apprenticeship: employers

As the Modern Apprentice is an employee, the employer is liable to pay the Modern Apprentice's salary and must meet national minimum wage criteria for apprentices. When the Modern Apprentice is enrolled in training with an approved provider, the employer becomes eligible to receive a public financial contribution towards the part-cost of training. It is this funding that is administered by Skills Development Scotland on behalf of the Scottish Government. The public financial contribution is not expected to cover the training costs entirely; Skills Development Scotland pay the training provider directly and the employer pays the remainder.

The public funding contribution is not a fixed amount. The Skills Development Scotland contribution varies according to type, level and delivery complexity of the Modern Apprenticeship framework. It is also dependent on current Scottish Government policy, priorities and affordability. Sustainment and achievement are also considered. Skills Development Scotland primarily funds Modern Apprentices aged under twenty-five but in some sectors this funding can extend to those aged twenty-five and over.

Funding priorities and decisions focus on the employment of sixteen to twenty-four year olds, at SVQ Level 3 (SCQF level 6/7) where possible and a maximising of opportunities for the wider availability of STEM sector and higher-level Modern Apprenticeships (SCQF levels 8 and above). For those aged twenty-five and over funding is focused on supporting the Scottish Government's key sectors. While specific equalities priorities can change during contracting years, focus is currently on tackling the under-representation of black and ethnic minority groups, disabled people and care experienced individuals (Skills Development Scotland, 2017a).

Scotland's Employer Recruitment Incentive (SERI) has been available intermittently as financial support to private and third sectors employers, including those who employ Modern Apprentices. SERI rules are generally not prescriptive, giving the employer scope to use the incentive for the most appropriate purpose within their organisation in relation to a young person undertaking a Modern Apprenticeship (Skills Development Scotland, 2020b). SERI was replaced in 2020 by the No-One Left Behind Employability Funding Stream, which is under the control of local authorities. An additional incentive package, Adopt an Apprentice, contributes towards the cost of wages and recruitment of a Modern Apprentice made redundant by a previous employer (Skills Development Scotland, 2020c).

Modern Apprentices: salary, welfare and other benefits

All apprentices, including Modern Apprentices, are entitled to receive the National Minimum Wage (NMW). The NMW apprentice rate applies to those aged sixteen, seventeen and eighteen and over-nineteens in their first year of an apprenticeship and beyond this, apprentices are entitled to the age-appropriate NMW. An employer is permitted to pay more than the NMW; it is a baseline rather than a set wage.

As Modern Apprentices have employed status, they are privy to the same UK-wide welfare benefits, provisions and entitlements as the rest of the population, as appropriate to their age and in respect of any disability or caring responsibilities. The UK welfare benefits system is complex and special welfare rules apply to those under eighteen. For the purposes of welfare eligibility, dependants and non-dependants in a household are assessed within the calculation. The employed status of the apprentice can have financial implications for the entire household, not just the individual apprentice.

As Modern Apprentices have employed status they can join and access the services of a relevant trade union. Alongside other travel benefits and entitlements specific to young people (for example, the National 16-25 Railcard), apprentices in Scotland are able to apply for a Young Scot National Entitlement Card. This card offers sixteen to eighteen year olds discounted public transport (excluding the Glasgow Subway), on both a daily and season ticket basis. Apprentices can also apply for a National Union of Students (NUS) Apprentice extra card. This discount card offers discounts on shopping and leisure activities, similar to those available to holders of the higher education NUS extra card.

Modern Apprenticeships statistics

Skills Development Scotland produce quarterly reports on Modern Apprenticeship statistics which are available online via the Publications and Statistics section of the Skills Development Scotland website (Skills Development Scotland, no date) with the final quarterly report taking the form of a year-end report. Statistics are presented in a main report and supplementary tables. The quarterly report summarises Modern Apprenticeship data covering starts (age, level and framework), progression, time in employment prior to a Modern Apprenticeship, training (age, level and framework), achievement and equalities (gender, disability and ethnicity). Statistics published relate only to AAG approved Modern Apprenticeships (i.e. those in receipt of public funding).

Modern Apprenticeship information portals

Information regarding Modern Apprenticeships is available in a variety of forms and from numerous sources with a target audience including potential apprentices, parents and employers.

For potential apprentices, online information portals include www.apprenticeships.scot and the Skills Development Scotland career information, advice and guidance web service My World of Work. Information is also produced for print, audio and visual media. Young people looking for information on Modern Apprenticeships may visit a local Skills Development Scotland centre or speak to their school careers adviser. Information for parents and guardians is offered in print, online at www.apprenticeships.scot and via the parents' section on My World of Work and www.mykidscareer.com, by telephone and in person at Skills Development Scotland centres. Employers and training providers looking for information on Modern Apprenticeship funding and processes are directed online to the Our Skillsforce web service for employers and the employer and training provider sections of the www.apprenticeships.scot website. There is no Modern Apprenticeship information service specifically tailored towards teachers or other education and guidance workers.

There is no database of all publicly approved apprenticeships available in Scotland, unlike the UK Government's 'Find an apprenticeship' service for England. Vacancies can be advertised online by Skills Development Scotland on the www.apprenticeships.scot website, on general or apprenticeship-specific vacancy advertising services and may be advertised independently by an employer.

The Modern Apprenticeship Programme: expansion and equality

For Modern Apprenticeships, "Policy priority has been placed on increasing the number of frameworks relating to Government Economic Strategy growth sectors" (Skills Development Scotland, 2014, p.8). In 2014-15, Skills Development Scotland committed to preparing for an increase in both the volume of Modern Apprenticeship starts and development of the Modern Apprenticeship programme, with expansion into apprenticeships at foundation and advanced levels (ibid., p.16).

Developing the Young Workforce - Scotland's Youth Employment Strategy (Scottish Government, 2014a) has a series of Key Performance Indicators (KPIs) for Modern Apprenticeships to report annually against until 2021. KPI 5 is an increase in the number of higher level Modern Apprenticeships, with two thirds of Modern Apprenticeships to be delivered at level three and above. Regarding gender bias, KPI 7 is to "reduce the

percentage of Modern Apprenticeship frameworks where the gender balance is 75:25 or worse" to 60 percent from the baseline figure of 73 percent for 2013-14 (Scottish Government, 2014a, p.40). For other equalities groups, KPI 9 requires an increase in the number of Modern Apprenticeship starts to match population share from ethnic minority communities. KPI 10 is to "increase the employment rate for young disabled people to the population average" (ibid., p.41). There are measurable KPIs for gender and ethnic minority Modern Apprenticeship starts but not for young disabled people or other equalities groups in the Government's Youth Employment Strategy implementation plan.

The 2015-16 letter of guidance from Scottish Government to Skills Development Scotland made specific reference to equalities and Modern Apprenticeship provision, requiring the creation of a "Modern Apprenticeship Equalities Action plan to include improvement targets for gender; disability; BME and Care Leavers…supported by a dedicated budget of £500k in 2015-16" (Scottish Government, 2015b).

This initial budget allocation solely for equalities work in relation to Modern Apprenticeships marked the start of an ongoing expectation of work and commitment to equalities in Modern Apprenticeship provision. The 2015-16 budget allocation for improving equality across National Training Programmes directly led to the creation of a dedicated National Training Programmes Equality Team and the publication in December 2015 of the *Equalities Action Plan for Modern Apprenticeships in Scotland* (Skills Development Scotland, 2015b). Due to run until 2021, the plan focuses on increasing participation in Modern Apprenticeships by disabled people, ethnic minority groups and care leavers and addressing the gender balance across frameworks.

In the *Equality action plan – Year 1 update: For Modern Apprenticeships in Scotland* Skills Development Scotland introduced the equality regional pipeline approach for its delivery, documenting substantial activity to date (Skills Development Scotland, 2017a). The update summarises approaches and exemplifies project activities and partnership work with stakeholders. While demonstrating improvements for the target groups, the update also lists cross-cutting and targeted activity to be undertaken in 2017-18 (ibid.).

Alongside project activity, a growing requirement for equalities compliance is present across contracting processes within the Modern Apprenticeship Programme. From the 2016-17 contracting year onwards the Modern Apprenticeship Service Delivery Policy

Statement includes minimum expectations and requirements for Training Providers ("Advancing Equalities") relating to the target groups of the *Equalities Action Plan for Modern Apprenticeships in Scotland* (Skills Development Scotland, 2015b). From 2017-18 onwards this includes the requirement for all training providers to complete their own training provider equality action plan (Skills Development Scotland, 2016a). Additionally, external equalities competence is present within the organisation: the independent Skills Development Scotland Equalities Advisory Group critique and scrutinise Skills Development Scotland Modern Apprenticeship provision.

Independently, SAAB also continues to consider the impact apprenticeship provision can have on gender diversity within the labour market. In establishing the sub-Boards of SAAB, a specific Employer Equalities Group was created, to "address under-representation in apprenticeships and support better access to and participation in apprenticeships" with a specific focus on "challenges or good practice from employers" (Skills Development Scotland, 2020d). Following SAAB's specific exploration of gender imbalance in apprenticeship provision, the SAAB Gender Commission[51] was established in October 2019, with objectives to "develop recommendations and proposals" for employers and business to improve gender imbalances in the workforce through apprenticeships (SAAB, 2019b).

The Modern Apprenticeship and Technical Apprenticeship in Career Development

The Modern Apprenticeship/Technical Apprenticeship in Career Development is a focus point of the qualitative research undertaken in this thesis, so they require a brief introduction here.

The Modern Apprenticeship (SCQF Level 7) and Technical Apprenticeship (SCQF Level 9) in Career Development frameworks were developed by the Career Development Institute. Following stakeholder engagement, they were approved for delivery from 2016.

The Modern Apprenticeship and Technical Apprenticeship are designed "to upskill the diverse workforce who deliver employability support services" as apprenticeship provision with the intention to "greatly increase access to the career development sector

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[51] The findings of this thesis were presented and discussed at a meeting of the SAAB Gender Commission in March 2020.

for those unable to undertake full time courses and help to grow local talent at all levels on-the-job" (Skills Development Scotland/Career Development Institute, 2015a). The 9-12 months Modern Apprenticeship offers entry for school-leavers and above, with the Technical Apprenticeship operating as a progression route. In keeping with framework structures, the Modern Apprenticeship incorporates SVQ and Core Skills outcomes (ibid.) and the 12-18 months Technical Apprenticeship incorporates SVQ and Career Skills outcomes (Skills Development Scotland/Career Development Institute, 2015b). The framework documentation highlights how they were developed following Skills Development Scotland's request for a route to encourage and increase diversity in the career development workforce through new entrants and create a qualification route to recognise experienced staff within para-professional roles.

The Skills Development Scotland National Career Information Advice and Guidance Policy and Professional Practice Lead describes the organisation's commitment to supporting the Modern Apprenticeship/Technical Apprenticeship pathway as follows:

> As Scotland's national careers service, Skills Development Scotland is ambitious about diversity and inclusion and we want our organisation to reflect the people of Scotland to whom we serve.
>
> We believe that organisations who make real efforts to tackle equality issues in their recruitment and development programmes have employees who feel more confident and valued in their own working environment, and this in turn leads to higher productivity and improved professionalism. The Career Development apprenticeship pathway therefore has great value to us in enabling us to attract and grow our career professional talent.
>
> Diversity in the workforce brings creativity – people with different perspectives can bring new ideas and new ways of working. Research has shown that organisations with a diverse workforce are more creative, innovative and dynamic. As a national careers service this is exactly what we want and need to be (Cheyne, personal communication, 2020).

Appendix B: Pilot survey

Pilot Survey Content and Questions

Page	Question/Content		Notes
Page 1: **About this survey** Ethics and consent	This survey is for anyone who is currently completing a Modern Apprenticeship in Scotland. It should take you no more than 5 minutes to complete. You will be asked about your apprenticeship and about your personal and family background. There are no "right" or "wrong" answers! Your responses to this survey are confidential* and will be used only by the researcher, Emma Bolger, who is a PhD student at Heriot-Watt University and a lecturer at the University of the West of Scotland. Emma is researching how people make a career decision to do an apprenticeship. This study has been approved by the School of Social Sciences Research Ethics Committee** at Heriot-Watt University, Edinburgh. Emma can be contacted on eb8@hw.ac.uk if you have any questions about the survey. *You will never be publicly identifiable by your answers and all data collected will be used and stored securely in line with the General Data Protection Regulation (2018)		

	**Any ethical concerns relating to this survey can be directed by email to the researcher's supervisor m.danson@hw.ac.uk and/or the Ethics Committee j.richards@hw.ac.uk		
	Alternative formats		
	If you would like the survey in an alternative format (for example on paper, or if you would like to complete it over the phone) please email Emma at eb8@hw.ac.uk		
	Please click on "Next" to start the survey.		
Page 2: **About you**	Date of birth: *Ordinal variable*	Calendar	
Personal Factual Questions on gender and age	What is your gender? *Nominal variable*	Male Female Prefer not to say Your own preferred term	(In line with language guidance from Stonewall)
	If you selected "your own preferred term" please state it here:	Free text box	
	Is your description of your gender the same as when you were born? (This optional question relates to the gender transitioning process, for example if you were assigned male at birth but now identify as female) *Nominal variable*	Yes No Prefer not to say	
		Bisexual Gay man Gay woman/lesbian Heterosexual/straight Your own preferred term (please state below)	
	How do you describe your sexual orientation?	Other	

	Nominal variable	Free text box	
	If you selected "your own preferred term" please state it here:		
Part 2: **Your Modern Apprenticeship** Modern Apprenticeship Information Personal Factual Questions	Which Modern Apprenticeship framework are you working towards? If you don't know please tick the last box "not sure/don't know" and provide further details below. *Nominal variable* If you answered " Other/don't know/not sure" please type your current job title or describe your apprenticeship here: Do you know what industry you work in? *Nominal variable* If you selected "Other or "Don't know/not sure" please describe the industry you work in here:	List of all live MA frameworks, including "Other/don't know/not sure") Free text box SICs plus Other and Don't know/not sure Free text box	From Skills Development Scotland 17-18 Q3 listing of all live Frameworks NOS Standard Industrial Classifications
Page 4: **Your Modern Apprenticeship and You** Modern Apprenticeship Information Personal Factual Questions	How old were you when you started your apprenticeship? *Nominal variable* Do you think you are under-represented in your apprenticeship or in your sector by your gender? (e.g. you are female and the other apprentices you train with are male; you are	16 17 18 19 20 21 22 23 24 25+ Yes No	

	male and most of your colleagues are female) *Nominal variable*		
Page 5: **Your family background** Family information Factual questions about others	On the date of your 15th birthday, who did you live with? *Nominal variable*	one parent or guardian (female) one parent or guardian (male) two parents or guardians (female – male) two parents or guardians (female - female) two parents or guardians (male - male) in care (foster care, kinship care, looked after at home, residential care, with potential adopters) other	Care terms taken from those used by Who Cares? Scotland
	How many siblings (brothers and sisters) do you have? You should include half-siblings and step-siblings. *Nominal variable*	I am an only child 1 2 3 4 5+	
	Thinking about each of your siblings, what is the gender of your brothers and sisters, and are they older or younger than you? *Nominal variable*		

	Male or Female
Sibling 1	
Sibling 2	
Sibling 3	
Sibling 4	

	Are you a twin or triplet?	Yes No	
Part 6: **Asking People for Career Guidance** Personal Factual Questions	Which adults in your family and among your friends have given you careers advice? *Nominal variable*	female parent/guardian/carer male parent/guardian/carer other male relative other female relative male friend female friend	

Part 7: **Follow Up and Prize Draw** Self-identification for case study and incentive	If your answers make you suitable for a more in-depth research interview, would you be happy to take part? Please only complete the boxes below if you have answers yes to the above question. Your name Your email address or phone number	Yes No Free text Free text	
Page 8: **Thank you** Opportunity to highlight and survey gaps Ethics	Do you have any other comments to make about the survey questions? Were there any answers that you wanted to give but weren't able to? You have now completed the survey. Thank you for your time. To send your answers, click on OK. Thank you for completing this survey. Good luck with your Modern Apprenticeship.	Free text Ok	

Appendix C: Final survey

Final Survey Content and Questions

Page	Question/Content		Notes
Page 1: **About this survey** Ethics and consent	This survey is for anyone who is currently completing a Modern Apprenticeship in Scotland. It should take you no more than 5 minutes to complete. **By completing this survey, you can be entered into a prize draw to win one of 5 x £20 Amazon gift vouchers.** **You will be asked about your apprenticeship and about your personal and family background. There are no "right" or "wrong" answers!** Your responses to this survey are confidential* and will be used only by the researcher, Emma Bolger, who is a PhD student at Heriot-Watt University and a lecturer at the University of the West of Scotland. Emma is researching how people make a career decision to do an apprenticeship. This study has been approved by the School of Social Sciences Research Ethics Committee** at Heriot-Watt University, Edinburgh. Emma can be contacted on eb8@hw.ac.uk if you have any questions about the survey.		

	You will never be publicly identifiable by your answers and all data collected will be used and stored securely in line with the General Data Protection Regulation (2018)		
	**Any ethical concerns relating to this survey can be directed by email to the researcher's supervisor m.danson@hw.ac.uk and/or the Ethics Committee j.richards@hw.ac.uk		
	Alternative formats		
	If you would like the survey in an alternative format (for example on paper, or if you would like to complete it over the phone) please email Emma at eb8@hw.ac.uk		
	Please click on "Next" to start the survey.		
Page 2: **About you**	Date of birth: *Ordinal variable*	Calendar	
Personal Factual Questions on gender and age	What is your gender? *Nominal variable*	Male Female Prefer not to say Your own preferred term	(In line with language guidance from Stonewall)
	If you selected "your own preferred term" please state it here:	Free text box	
	Is your description of your gender the same as when you were born? (This optional question relates to the gender transitioning process, for example if you were	Yes No Prefer not to say	

	assigned male at birth but now identify as female) *Nominal variable* How do you describe your sexual orientation? (This data is being collected to establish whether sexual orientation could be better considered in relation to the Apprentice experience) *Nominal variable* If you selected "your own preferred term" please state it here:	Bisexual Gay man Gay woman/lesbian Heterosexual/straight Your own preferred term (please state below) Other Free text box	
Part 2: **Your Modern Apprenticeship** Modern Apprenticeship Information Personal Factual Questions	Which Modern Apprenticeship framework are you working towards? If you don't know please tick the last box "not sure/don't know" and provide further details below. *Nominal variable* If you answered " Other/Don't know/Not sure" please type your current job title or describe your apprenticeship here: Do you know what industry you work in? *Nominal variable* If you selected "Other/Not sure/Don't know" please describe the industry you work in here:	List of all live MA frameworks, including "Other/Don't know/Not sure") Free text box SICs plus "Other/Not sure/Don't know" Free text box	From Skills Development Scotland 17-18 Q3 listing of all live Frameworks NOS Standard Industrial Classifications

Page 4: **Your Modern Apprenticeship and You** Modern Apprenticeship Information Personal Factual Questions	How old were you when you started your apprenticeship? *Nominal variable* Do you think you are under-represented in your apprenticeship or in your sector by your gender? (e.g. you are female and the other apprentices you train with are male; you are male and most of your colleagues are female) *Nominal variable*	16 17 18 19 20 21 22 23 24 25+ Yes No	
Page 5: **Your family background** Family information Factual questions about others	On the date of your 15th birthday, who did you live with? *Nominal variable* How many siblings (brothers and sisters) do you have? You should include half-siblings and step-siblings. *Nominal variable* Thinking about each of your siblings, what is the gender of your brothers and sisters, and are they older or younger than you? *Nominal variable*	one parent or guardian (female) one parent or guardian (male) two parents or guardians (female – male) two parents or guardians (female - female) two parents or guardians (male - male) in care (foster care, kinship care, looked after at home, residential care, with potential adopters) other I am an only child 1 2 3 4 5+ |	Male or Female | |---|---| | Sibling 1 | | | Sibling 2 | |	Care terms taken from those used by Who Cares? Scotland

Thinking about each of your siblings, what is the gender of your brothers and sisters, and are they older or younger than you?

	Male or Female
Sibling 1	
Sibling 2	

		Sibling 3			
	Are you a twin or triplet?	Sibling 4			
		Yes No		
Part 6: **Asking People for Career Guidance** Personal Factual Questions	Which adults in your family and among your friends have given you careers advice? *Nominal variable*	female parent/guardian/carer male parent/guardian/carer other male relative other female relative male friend female friend	
Part 7: **Follow Up and Prize Draw** Self-identification for case study and incentive	If your answers make you suitable for a more in-depth research interview, would you be happy to take part? Would you like to be included in the prize draw? Please only complete the boxes below if you have answers yes to either or both of these questions. Your name Your email address or phone number	Yes No Yes No Free text Free text	
Page 8: **Thank you** Opportunity to highlight and survey gaps Ethics	Do you have any other comments to make about the survey questions? Were there any answers that you wanted to give but weren't able to? You have now completed the survey. Thank you for your time. To send your answers, click on OK.	Free text Ok	

	Thank you for completing this survey. Good luck with your Modern Apprenticeship.		

Pre-Interview Questionnaire

Page	Question/Content		Notes
Page 1: **About this questionnaire** Ethics and consent	This short questionnaire is designed to obtain background information on individuals who have been invited to take part in a research interview in Spring 2020 because they are completing or have completed a Modern Apprenticeship and their apprenticeship is in a framework, sector or role where their gender is under-represented. In this questionnaire you will be asked about your apprenticeship and about your personal and family background. There are no "right" or "wrong" answers! Your responses to this questionnaire are confidential* and will be used only by the researcher, Emma Bolger, who is a PhD student at Heriot-Watt University and a lecturer at the University of the West of Scotland. Emma is researching how people make a career decision to do an apprenticeship. Emma can be contacted on eb8@hw.ac.uk if you have any questions about the questionnaire.		Sent only to pre-screened participants

	*You will never be publicly identifiable by your answers and all data collected will be used and stored securely in line with the General Data Protection Regulation (2018) **Alternative formats** If you would like the questionnaire in an alternative format (for example on paper, or if you would like to complete it over the phone) please email Emma at eb8@hw.ac.uk **Ethics** This study has been approved by the School of Social Sciences Research Ethics Committee at Heriot-Watt University, Edinburgh. Any ethical concerns relating to this questionnaire can be directed by email to the researcher's supervisor m.danson@hw.ac.uk and/or the Ethics Committee j.richards@hw.ac.uk Please click on "Next" to start the questionnaire.		
Page 2: **About you** Personal Factual Questions on gender and age	Date of birth: *Ordinal variable* What is your gender? *Nominal variable*	Calendar Male Female Prefer not to say Your own preferred term Free text box	 (In line with language guidance from Stonewall)

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	If you selected "your own preferred term" please state it here:		
	Is your description of your gender the same as when you were born? (This optional question relates to the gender transitioning process, for example if you were assigned male at birth but now identify as female) *Nominal variable*	Yes No Prefer not to say	
	How do you describe your sexual orientation? (This data is being collected to establish whether sexual orientation could be better considered in relation to the Apprentice experience) *Nominal variable*	Bisexual Gay man Gay woman/lesbian Heterosexual/straight Your own preferred term (please state below) Other Free text box	
	If you selected "your own preferred term" please state it here:		
Part 2: **Your Modern Apprenticeship** Modern Apprenticeship Information Personal Factual Questions	Which Modern Apprenticeship framework are you working towards? If you don't know please tick the last box "not sure/don't know" and provide further details below. *Nominal variable*	List of all live MA frameworks, including "Other/Don't know/Not sure") Free text box	From Skills Development Scotland 17-18 Q3 listing of all live Frameworks
	If you answered " Other/Don't know/Not sure" please type your current job title or	SICs plus "Other/Not sure/Don't know"	NOS Standard Industrial Classifications

	describe your apprenticeship here: Do you know what industry you work in? *Nominal variable* If you selected "Other/Not sure/Don't know" please describe the industry you work in here:	Free text box	
Page 4: **Your Modern Apprenticeship and You** Modern Apprenticeship Information Personal Factual Questions	How old were you when you started your apprenticeship? *Nominal variable* Do you think you are under-represented in your apprenticeship or in your sector by your gender? (e.g. you are female and the other apprentices you train with are male; you are male and most of your colleagues are female) *Nominal variable*	16 17 18 19 20 21 22 23 24 25+ Yes No	
Page 5: **Your family background** Family information Factual questions about others	On the date of your 15th birthday, who did you live with? *Nominal variable* How many siblings (brothers and sisters) do you have? You should include half-siblings and step-siblings. *Nominal variable*	one parent or guardian (female) one parent or guardian (male) two parents or guardians (female – male) two parents or guardians (female - female) two parents or guardians (male - male) in care (foster care, kinship care, looked after at home, residential care, with potential adopters) other I am an only child	Care terms taken from those used by Who Cares? Scotland

		1 2 3 4 5+	
	Thinking about each of your siblings, what is the gender of your brothers and sisters, and are they older or younger than you? *Nominal variable* Are you a twin or triplet?	<table><tr><td></td><td>Male or Female</td></tr><tr><td>Sibling 1</td><td></td></tr><tr><td>Sibling 2</td><td></td></tr><tr><td>Sibling 3</td><td></td></tr><tr><td>Sibling 4</td><td></td></tr></table> Yes No	
Part 6: **Asking People for Career Guidance** Personal Factual Questions	Which adults in your family and among your friends have given you careers advice? *Nominal variable*	female parent/guardian/carer male parent/guardian/carer other male relative other female relative male friend female friend	
Part 7: **Identification and agreement** Informed consent agreement	Your name Can you confirm that you agree to the following points regarding the research interview: I confirm that I have read and understand the information sheet; I have had the opportunity to consider the information and ask questions; I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason; I consent to the processing of my personal information relating to my career history for the purposes explained to me; I understand that such	Free text Yes No	

	information will be handled in accordance with all applicable data protection legislation; I understand that my data will be treated confidentially and any publication resulting from this work will report only data that does not identify me; I agree to having my voice digitally recorded; I freely agree to participate.		
Page 8: **Thank you**	You have now completed the pre-interview survey. Thank you! To send your answers, click on "Finish". Thank you for completing the questionnaire. I look forward to interviewing you shortly!	Finish Ok	

Appendix D: Participant information sheet and consent form

Gender and career decision-making project:
information for interview participants

Overview of the project

You have been invited to take part in a research interview as you are completing or have completed a Modern Apprenticeship and your apprenticeship is in a framework, sector or role where your gender is under-represented.

Your participation is entirely voluntary and before you agree to be interviewed, I want you to understand what the research is about and what the interview will involve. The interview is part of my PhD project, which explores career decision-making, gender and Modern Apprenticeships.

The purpose of the research is to explore the reasons why people undertake apprenticeships in areas in which they are typically underrepresented by gender. For example, male apprentices working in early years education or female apprentices working in construction. I am keen to find out about your personal background and the career decisions you have made in the past. This will help me to explore which aspects of personal background have an impact on people following trends relating to their gender.

My name is Emma Bolger and I will conduct the interview. I am a lecturer and researcher in career guidance and development and a qualified careers adviser. My email address is eb8@hw.ac.uk and you can find out more about my work and research on my website at www.emmabolger.co.uk.

Your involvement

Please take time to read the information in this document carefully. You are free to discuss it with others if you want to. Please ask me if there is anything that is not clear or if you would like more information. If you decide to take part and then change your mind, you are free to withdraw from the research at any time and I will not store or use any of the data you have provided to me.

The focus of the interview

You will be asked some questions about your career history. You will be encouraged to highlight specific key points when you have made career decisions in the past. You may also mention how you plan to make career decisions in the future. You will be asked to complete a short questionnaire to confirm personal details.

Possible benefits of your participation

While this is not a career guidance interview you might find the interview helps you to make sense of your career journey to date. You may find it personally beneficial to have the opportunity to review and reflect upon your career history. This may also help you to plan your future career direction. At the end of the interview there will be the opportunity for you to identify any career information advice and guidance support you might need now or in the future.

The interview:

- Will take no more than 30 minutes
- Will be in person or via video call
- Will be recorded (audio only) and transcribed
- Will take place at a location that is convenient for you, and if travel expenses are incurred these will be refunded

Your data:

- Will be anonymised and a pseudonym used
- Will be deleted from the recording device used in the interview and moved to secure password protected storage
- Will be deleted upon completion of the research project (scheduled autumn 2020)

What are the possible risks of taking part?

In discussing your career history, you may revisit challenging times in your life or raise sensitive points. You may feel uncomfortable or emotional when considering these times in your life. If you do not wish to share specific details at any point, we will move on and I will deal with these moments empathetically.

Funding

This PhD research is project based at Heriot-Watt University and commenced in 2014. It has been co-funded by: Skills Development Scotland, The University of the West of Scotland and The Economic & Social Research Council.

Data Protection

Your responses in the interview are confidential* and will be used only by the researcher, Emma Bolger, who is a PhD student at Heriot-Watt University and a lecturer at the University of the West of Scotland.

This study has been approved by the School of Social Sciences Research Ethics Committee** at Heriot-Watt University, Edinburgh.

You will never be publicly identifiable by your answers and all data collected will be used and stored securely in line with the General Data Protection Regulation (2018)

**Any ethical concerns relating to this survey can be directed by email to the researcher's supervisor (m.danson@hw.ac.uk) and or the Heriot-Watt Ethics Committee (j.richards@hw.ac.uk)*

This final page of information contains an agreement between the researcher and interviewee. This can also be completed within the pre-interview questionnaire at: https://hw.onlinesurveys.ac.uk/ma-background-survey-interviewees-spring-2020.

Informed consent form

Please read the following statements and, if you agree, tick or initial the corresponding box to confirm agreement. If this interview is completed remotely (e.g. over the phone or via video call) verbal agreement will be made.

I confirm that I have read and understand the information sheet	
I have had the opportunity to consider the information and ask questions	
I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason	
I consent to the processing of my personal information relating to my career history for the purposes explained to me	
I understand that such information will be handled in accordance with all applicable data protection legislation	
I understand that my data will be treated confidentially and any publication resulting from this work will report only data that does not identify me	
I agree to having my voice digitally recorded	
I freely agree to participate in this research interview	

Interviewee	**Researcher**
Your Name	Emma Bolger
Signature	Signature

Interview details	
Date of interview:	
Location of interview:	