The Role and Effectiveness of Coaching in Increasing Career Decision Self-Efficacy, Outcome Expectations and Employability Efforts of Higher Education Students

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DECLARATION

I certify that the work contained in this thesis, or any part of it, has not been accepted in substance for any previous degree awarded to me, and is not concurrently being submitted for any degree other than that of Doctor of Philosophy being studied at the University of Greenwich. I also declare that this work is the result of my own investigations, except where otherwise identified by references and that the contents are not the outcome of any form of research misconduct.

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ABSTRACT

This quasi-experimental, longitudinal mixed-methods research study examines the link between career coaching, career self-efficacy, and the employability efforts of Higher Education (HE) students. It investigates the effectiveness of career coaching in increasing students' career self-efficacy and their employability efforts. It also examines what aspects of the coaching relationship are most effective in changing students' career self-efficacy beliefs, outcome expectations and the employability efforts.

The study analyses the above factors in the context of the changing role of Higher Education. It argues that the role of Higher Education is to empower students and it explores whether there is a need for the post-1992 universities to address the issues of gender, ethnicity, perceived social support, socioeconomic status, cultural influences and gender role models in their employability strategy. It positions coaching as an employability enhancing strategic tool. Social Cognitive Career Theory is used as the main theoretical framework as it recognises the links between psychological and social effects of gender and ethnicity, the social-cultural environment and career opportunity structures.

The study finds that students reported many benefits of career coaching, despite the lack of statistical significance of the impact of the career coaching intervention. Coaching in this research has been redefined as a relationship between an employee of an organisation (a career coach) and a student (a client) that has a strong underlying mentoring aspect. Ethnicity and the combination of gender and ethnicity are found to mediate and moderate students' career decision self-efficacy, vocational outcome expectations and their employability efforts. The study also finds evidence of students' perception of ethnic discrimination. The study explores environmental conditions and barriers that affect students' career decision self-efficacy, vocational outcome expectations and their employability efforts.

It is argued that currently post-1992 universities act as corporate entities and training wings of corporations. As universities are trying to rethink their role and their employability strategies they can either choose to empower their learners or they can continue with the prevailing instrumentalism and preoccupation with planning for skills gaps and graduate

jobs. Coaching, as part of a universities' employability strategy, might be a way to address students' lack of social capital and their lack of role models. Coaching interventions can have a positive impact on students' career-related behaviours as they can address incorrect self-efficacy or outcome expectancy beliefs, reduce students' perceived barriers to chosen careers, provide action plans to overcome these barriers, and help students to develop new experiences and to reframe their past experiences. Students from ethnic backgrounds benefit from examining their family expectations, their beliefs about themselves and from understanding the expectations and pressures from their families and communities. It is important to develop career services that are culturally sensitive and that are able to reach out to ethnic minority students.

The study contributes to coaching effectiveness research by using a quasi-experimental control-group as part of the longitudinal study design that is exploring the effectiveness of the coaching intervention. Measuring coaching effectiveness is an elusive concept in the coaching literature. Adopting a mixed method research design allows the researcher to understand the phenomenon in more depth and results in reaching conclusions that would be inaccessible should only one research approach be used.

The research also contributes to the employability literature by proposing an employability framework for post-1992 universities that incorporates self-efficacy, gender, ethnicity, perceived social support, socioeconomic status, cultural influences and gender role models, and vocational outcome expectations. The study also provides validated employability efforts outcomes measures.

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I. INTRODUCTION

This quasi-experimental, longitudinal mixed-methods research study examines the link between career coaching, career self-efficacy, and the employability efforts of Higher Education (HE) students. Specifically, the research investigates - both quantitatively and qualitatively - whether career coaching, used as an employability enhancing tool in Higher Education, can be effective in increasing students' levels of career self-efficacy and, as a result, their employability efforts. It explores quantitatively the relationships between students' career decision self-efficacy, vocational outcome expectations and employability efforts (preparatory job seeking behaviours, active job seeking behaviours and job search intensity). This research also examines qualitatively what aspects of the coaching relationship are most effective in changing students' career self-efficacy beliefs, outcome expectations and employability efforts. The research further explores, through interviews with students and career coaches, factors affecting students' self-efficacy beliefs and outcome expectations such as gender, ethnicity, perceived social support, socioeconomic status, cultural influences and gender role models.

The study analyses the above factors in the context of the changing role of Higher Education as a result of government pressure for Higher Education institutions to increase students' employability (HEA, 2012). It investigates whether these factors are relevant for post-1992 university students as, due to their socioeconomic background and their lower social capital, they often do not have the same vocational opportunities in the United Kingdom that are available to the elite Russell Group students (Nixon, 2011; Stevenson, 2011; Allen & Ainley, 2007; Sutton Trust, 2005). This study follows the perspective that the role of Higher Education is to empower students, to foster personal development, intellectual debate, self-actualisation and to offer opportunities to develop students' full potential, regardless of their background and wealth.

This research also explores whether there is a need, for the post-1992 Universities in particular, to address the issues of gender, ethnicity, perceived social support, socioeconomic status, cultural influences and gender role models and outcome expectations in the employability context. It positions coaching as a learning tool and an employability enhancing strategy to support students' employability efforts and their self-efficacy beliefs.

1.1. Aims and Objectives of the Study

The main aims of this research are to measure whether career coaching increases students' career self-efficacy and their employability efforts. It also explores what aspects of the career coaching relationship, from the students' perspective, make the career coaching process most effective in terms of increasing students' career self-efficacy, outcome expectations and their employability efforts.

The study also aims to explore students' self-efficacy and outcome expectation beliefs and their contribution to students' employability efforts. Finally, the research aims to create and develop new knowledge through introducing Social Cognitive Career Theory as an employability framework for post-1992 university students. This approach allows the study to explore whether ethnicity, gender, cultural and gender role models and socio-economic background are important factors contributing to students' employability efforts.

Finally, the study aims to examine how a mixed method research design can be applied to investigate different aspects of the same phenomenon, i.e. coaching effectiveness. The quantitative results were used to evaluate the career coaching effectiveness whereas the qualitative results are used to evaluate outcomes of the career coaching process and to provide depth of understanding (Palinkas et al. 2011).

The following research questions guided this study:

RQ1. Is career coaching effective in increasing students' self-efficacy, outcome expectations and their employability efforts?

> RQ1a. What aspects of the coaching relationship are most effective in increasing students' self-efficacy, outcome expectations and their employability efforts?
>
> RQ1b. What are students' self-efficacy and outcome expectation beliefs?

RQ2. Are students' career decision self-efficacy and vocational outcome expectations associated with their job seeking behaviours?

RQ2a. What cultural influences and environmental conditions (such as Perceived Barriers or Support to Preferred Careers, Cultural Influences, Family Expectations, Perceived Social Support, Socioeconomic Status, Family Role Models and Gender & Ethnicity Barriers to Chosen Careers) impact students' self-efficacy, outcome expectations and employability efforts?

RQ2b. What is the impact of gender and ethnicity on students' self-efficacy, outcome expectations and employability efforts?

1.2. Rationale and Significance of the Study

Firstly, given the increasing economic, political and environmental pressures imposed by governments on Higher Education Institutions (HEIs), a shift in an educational approach is needed to balance Higher Education's (HE) agenda of increasing employability efforts of students (Harvey, 2000) with the more traditional role of Higher Education as of a social-inequality moderator and a facilitator of knowledge (Faulkner, 2011; Stevenson, 2011).

Secondly, in the absence of a coherent model of employability (Dacre Pool & Sewell, 2007) and in the absence of consistent employability outcome measures (Blades, Fauth & Gibb, 2012)[1], there is a need - for the post-1992 Universities in particular - to incorporate the issues of gender, ethnicity, perceived social support, socioeconomic status, cultural influences and gender role models as moderating[2] variables in the employability efforts of students. Metheny & McWhirter (2013) call for exploring the importance of environmental variables such as perceived family support or perceptions of social status in the career development process. Chaney *et al*. (2007), Schunk & Pajares (2001) and Rottinghaus, Larson & Borgen (2003) claim that there is a need for research on self-efficacy in relation to ethnic differences as most career decision self-efficacy studies come from predominantly Caucasian groups of students. Research so far shows that minority students have lower self-efficacy than mainstream students, however, studies that have been conducted have not controlled for socioeconomic status. Schunk & Pajares (2001) also call for more studies on self-efficacy for different educational groups and domains. Ethnic barriers account for ethnic differences in career decision self-efficacy and Gloria & Hird (1999) call for university career development

[1] There are only a few studies that use theoretical models to examine job search process (Wang *et al.,* 2007).
[2] Moderator variables - a moderator is a qualitative (e.g., sex, race, class) or quantitative (e.g., level of reward) variable that affects the direction and/or strength of the relation between an independent or predictor variable and a dependent or criterion variable (Baron & Kenny, 1986).

services to address and integrate socio-cultural context into their interventions. More research is needed to explore the impact of career barriers on self-efficacy and outcome expectations and the impact of the subjective experience of social class on the career self-efficacy and outcome expectations (Ali, McWhirter & Chronister, 2005).

Finally, despite coaching being recognised as an effective learning tool (Griffiths, 2005) it has not been used to any significant extent, or researched for its effectiveness, in Higher Education. Also, coaching, as an industry, requires studies that aim to establish coaching effectiveness (de Haan, Culpin & Curd, 2011) as there is a lack of empirical data (Somers, 2010). In the last decade, there have been only seven empirically based research studies in coaching (Gray, 2011). De Haan *et al* (2013) found only 20 articles that are robust quantitative studies of coaching effectiveness. De Haan *et al.* (2011) found only one article looking at what modes of coaching are effective and concluded that outcome research in coaching is in its very early stages (De Haan *et al,* 2013). Gale *et al* (2002) claim that existing research has provided incomplete, contradictory and under-supported descriptions of coaching practices and its effectiveness. It is also important to note that coaching practice is open to anyone who wants to become an executive coach (Gray, 2011; Peltier, 2010; Visser, 2010; Grant, 2006). Empirical studies need to be carried out in order to address the lack of regulation in the industry and its anecdotal approach to the effectiveness of coaching (Visser, 2010; Whitney, 2001). As the coaching industry develops, it is necessary to develop coaching effectiveness measurements to sustain coaching credibility (Gray, 2011; Carter, 2006).

1.3. Research Contributions

Predominantly, the study examines the role of and effectiveness coaching in increasing students' employability efforts. The study contributes to the coaching effectiveness research by providing a quasi-experimental control-group longitudinal study of the effectiveness of coaching intervention. The research also provides an empirical study of the characteristics of a career coach and of the coaching relationship.

The research also contributes to the employability literature by proposing the Social Cognitive Career Theory (SCCT) framework as an employability framework for post-1992 university students. The proposed framework incorporates self-efficacy, gender, ethnicity, perceived social support, socioeconomic status, cultural influences and gender role models, and outcome expectations. The study also provides validated employability efforts outcomes measures.

This study also contributes to SCCT research by exploring the importance of environmental variables, by examining self-efficacy in relation to ethnic differences; by exploring the impact of career barriers on self-efficacy and outcome expectations. The study also examines the mediating or moderating effects of gender and/or ethnicity on self-efficacy, vocational outcome expectations and employability efforts of students. The study contributes both to the SCCT research and to the employability literature as it examines students' outcome expectations. It also tests mediating and moderating effect of outcome expectations.

1.4. Outline of the Thesis

This thesis is organised as follows. *The Literature Review* Chapter examines the changing role of Higher Education, provides definitions of employability available in the literature and existing models of employability and puts them in the Higher Education context. It also discusses the consequences of introducing employability into the HE agenda, such as marketisation, privatisation and Taylorism of Higher Education. It provides the rationale for using coaching in Higher Education in order to enhance students' self-efficacy. It also provides an overview of current uses of coaching in Higher Education. It discusses current coaching research and explores the issues of capturing coaching effectiveness. Finally, it provides an overview of its conceptual Social Cognitive Career Theory framework.

The Methodology chapter provides details procedures and methodologies used in the study. It discusses mixed methods research design, including research philosophy. It also describes the research site, the quantitative and qualitative samples, the sampling strategy, approaches to analysis, and research instruments. It discusses data analyses approach, ethical issues, issues of reliability, validity, generalisability and replication of the study. Finally, it provides an overview of the strengths and limitations of the adopted research design.

The Findings chapter provides the quantitative and qualitative findings and links the evidence to the hypotheses and research questions.

The Discussion & Final Conclusion chapter provides a discussion of the findings, a critical assessment of what has been found and provides links to the theory and prior research. It discusses

the implications of the results of this study. Implications for practice are discussed. Limitations of the study are addressed and recommendations for future research are provided.

II. LITERATURE REVIEW

2.1. Introduction

This chapter starts with a discussion of the changing role of Higher Education (HE), followed by an overview of the institutional pressures and current debates surrounding the introduction of the employability agenda into Higher Education, including the consequences of the instrumentalism of Higher Education, such as marketisation, privatisation and Taylorism. It provides an overview of challenges faced by Higher Education employability as a result of introducing a widening participation agenda and discusses how universities try to adapt employability into their curriculum. It then examines current definitions of employability and the existing models of employability in Higher Education. It also discusses the particular challenges faced by post-1992 university students in terms of their employability efforts.

Finally, it explains the role of coaching as a learning tool to provide help to overcome gender, ethnicity, perceived social support, socioeconomic status and cultural influences barriers and to help students to increase their self-efficacy and outcome expectations. As this study investigates whether coaching is effective in impacting students' self-efficacy and in increasing their employability efforts, this section discusses existing cases of coaching use in HE and provides rationale why coaching intervention has been chosen as a learning intervention.

2.2. The Background to the Study: Employability in Higher Education

2.2.1. 'The Big Picture': The Role of Higher Education

Higher Education Institutions (HEIs) have been facing increasing economic, political and environmental pressures, with a combination of higher fees and low economic growth changing the educational landscape (Freedman, 2011). The topic of the role of Higher Education has currently been very polarising – some argue that the purpose of Higher Education is the pursuit of knowledge for its own sake whereas others say that Higher Education should provide a skilled workforce to society (Artess, Hooley & Bellors-Bourne, 2017). Many Higher Education stakeholders see the

employability agenda as a threat to the pursuit of knowledge (Speight, Lackovic & Cooker, 2013). The government's 2010-2011 legislative programme initiated the withdrawal of public subsidies from universities, the increase of tuition fees and ultimately resulting in the marketisation[3] of Higher Education (Freedman, 2011). The government's rationale to cut public expenditure, including Higher Education, in order to combat the economic downturn is very problematic (Davis, 2011) as it challenges society's understanding of public goods as being accessible to all and is resulting in the widening of the social inequality gap (Nixon, 2011; Allen & Ainley, 2007). This widening of the social inequality gap is perpetuated and compounded by league tables. The top of the league tables is occupied by the Russell Group universities whose students mostly come from privileged, highly socially selected backgrounds, with an abundance of social capital (Nixon, 2011; Sutton Trust, 2005). Consequently, the choices of vocational professions and employability opportunities offered to students differ vastly – students from the leading universities occupy the top positions in the well-paid older professions (such as law for example) whereas working-class students study more vocational courses and struggle to find graduate employment (Nixon, 2011; Stevenson, 2011; Allen & Ainley, 2007; Sutton Trust, 2005).

Current government policies suggest a continuation of elite strategies from the past (Stevenson, 2011; Allen & Ainley, 2007). Subsequently, the current Higher Education system resembles Ancient Greece or the bourgeois' 'anti-Enlightenment' with 'higher' education being limited to social elites and abstract knowledge and theory being replaced with vocational knowledge to combat increased educational provision to working classes (Faulkner, 2011). As a result, the role of Higher Education has shifted from being a facilitator of knowledge to being a provider of vocational training to socially disadvantaged students occupying lower tiers of the league tables (Freedman, 2011; Allen & Ainley, 2007). The Russell Group universities attract most research funding (Nixon, 2011) and are able to focus on research and provide "niche offerings" (p.2) to their highly privileged students (Freedman, 2011; Nixon, 2011).

All these changes have serious implication for post-1992 universities, as they cannot afford to cater for students' individual needs and instead have to offer what is required of mass market education. The social capital of state school entrants, often forming a core of the post-1992 university students, is already much lower than that of the public-school entrants (Nixon, 2011; Allen & Ainley, 2007). Consequently, post-1992 universities, forced to act as corporate entities and to promote market-

[3] Conversion to market economy (Collins English Dictionary, 2017).

driven ideologies (Freedman, 2011), exhibit increasing pseudo-practical vocationalism, standardisation, managerialism, auditing and policing of students and lecturers (Walton, 2011).

These developments also mark the rise of McKinseyism[4] thinking amongst policy makers and academic managers producing universities without debates or political activity that resemble corporate institutions and that exude "numbing brainlessness, the same suffocating absence of thought and imagination, the same absoluteness about the unquestioning conformity. So drained of intellect, culture, and politics are they that many of these places are the very negation of 'universities'." (Faulkner, 2011, p.28). Ultimately, universities – and post-1992 universities in particular - are being transformed into the providers of narrow, utilitarian vocational training serving the corporate business environment (Walton, 2011, p.20):

> Even where the universities themselves, or departments within them, were able to resist these pressures (…) the greatest evil here was the rise of a narrow, utilitarian vocationalism – the notion that the only conceivable purpose of going to university is to get the right sort of corporate job, so that universities become the training wings of international corporations, supported partly by taxpayer (…) but paid for increasingly by the student themselves. The corollary of this was the denial of any notion that education was about personal development in a wider sense, the pursuit of understanding, humanity and enlightenment for their own sake, which had enlivened the tradition of adult education in the humanities for a century, and still endured within many universities.

As Higher Education faces its 'identity crisis' universities try to rethink their purpose (Couldry, 2011; Freedman, 2011). Nixon (2011) proposes that Higher Education needs a vision of what constitutes knowledge, public goods, cosmopolitan learning, democracy and global citizenship. Democratic societies need citizens who can think imaginatively, critically, and independently and who are driven by intellectual curiosity and passion rather than by their future salaries (Faulkner, 2011; Stevenson, 2011). Furthermore, the role of Higher Education is to provide access to the highest level of full range knowledge and to provide students with opportunities to develop their full potential, both creative and intellectual, regardless of their background and wealth (Couldry, 2011). Allen & Ainley (2007, p.132) call "to make education a form of liberation, rather than a means of social control". Kumar (2007) states that empowerment and self-actualisation of students is at the core of students' career development. Harvey (2000) argues that creating a relationship between the academy and employment can be perceived as an excuse for transforming higher

[4] The doctrine saying that what cannot be measured has no value (Walton, 2011).

education into training graduates for jobs whilst promoting anti-intellectualism and eroding academic freedom. He also proposes that the role of higher education is to empower students and to assist them into being lifelong learners. Employability of students is better placed as a subset of their transformative lifelong learning rather than as the whole focus of higher education (Harvey, 2000).

Empowering learners requires treating students as intellectual performers and not as a compliant audience – this is in direct opposition to the instrumentalism associated with employability such as predicting and planning for skills gaps, lecturers' preoccupation with graduates getting good jobs or the instrumental learning of the mass higher education (Harvey, 2000). Allen & Ainley's (2007) call for Higher Education to take a new direction that preserves the ideals of the Enlightenment and that allows Higher Education to regain its social-inequality moderator and a facilitator of knowledge status (Couldry, 2011; Freedman, 2011).

In summary, the role of HE has shifted from being a social-inequality moderator and a facilitator of knowledge to being a provider of vocational training. Post-1992 universities act as corporate entities and training wings of corporation, with students paying full fees for being offered vocational training and with policing lecturers preoccupied with students' skills gaps and with the instrumental learning of the mass higher education. The emphasis is no longer on intellect, culture and politics but instead on providing the narrow, utilitarian vocational training in order to get the right sort of corporate job. The government's rationale to cut public expenditure, including Higher Education, challenges society's understanding of public goods as being accessible to all and is resulting in widening of the social inequality gap. This stops universities from fostering personal development in a wider sense and rejects the pursuit of understanding and knowledge for their own sake. Ultimately, the government suppresses the real value of education and keeps social elites in their superior position. The result is, according to the Sutton Trust (2005) report, that Russell Group students occupy the top positions in the well-paid older professions whereas working-class students study more vocational courses and struggle to find employment (Couldry, 2011; Freedman, 2011; Nixon, 2011; Stevenson, 2011; Walton, 2011; Allen & Ainley, 2007).

Universities with their social purpose as knowledge facilitators and providers of opportunities to all students (regardless of their background and wealth) are trying to rethink their role and their employability strategies. Higher Education and, subsequently, employability of students has been

linked in the literature to personal growth, to opportunities to develop one's potential and to become self-actualised and empowered independent thinkers, intellectual performers and life-long learners. This is even more relevant for the post-1992 university students as, due to their students' socioeconomic background and lower social capital, they are much more vulnerable than Russell Group students and potentially denied vocational opportunities that are available to the elite students. This study examines whether there is a need for an employability model, that whilst it meets the government's agenda to increase students' employability efforts, it also empowers more disadvantaged post-1992 university students and addresses their individual needs and social capital gaps.

2.2.2. The Challenges of Implementing the Employability Agenda in Higher Education

This vocational agenda of increasing the employability of graduates has become a very important issue since the 1980s (HEA, 2012; Harvey, 2000). The Department for Education and Employment (DfEE, 1999) defined enhancing the employability of students as a key task for higher education. In order to address this issue - and as a part of government's strategy to expand the skill base in the UK (Harvey, 2000) – the government has imposed increasing graduate employability as a central part of HEI's agendas (HEA, 2012).

Molesworth, Nixon & Scullion, (2009) argue that the British government encourages competition amongst HEIs - reflected in cost-reduction exercises – to bring improved offering based on customer demand, i.e. students are seen as customers. Academics talk about 'academic orthodoxy' (Shaywitz, 2011; Molesworth *et al*., 2009) and argue that a liberal education should not be linked to government agendas but should be based on the pursuit of learning itself. The marketisation of HE and the corresponding employability agenda is being met with some skepticism by academics concerned that the erosion of academic autonomy is turning education into training (Harvey, 2000). Academics are reluctant to teach employability skills and attributes as they feel that the employability agenda is driven by government policy and employers (Lees, 2002). Gude (2013) and Mirrlees & Alvi (2014) argue that current practices of universities directly reflect the practices of the scientific management theory – *Taylorism* - where higher education, similarly to factory workers – becomes deskilled, fragmented and undergoing efficiency processes resulting in narrowing the curricula and making it less intellectually challenging. Taylorism aimed to rationalise the production process and to dispose of any inefficiencies. It eroded skilled workers' high degree

of autonomy and control of their work, transferred power over to management and created deskilled, and hence, easily replaceable labour (Gude, 2013).

There is also a worldwide concern that undergraduate programmes do not give students life-long learning and professional skills that they need to succeed in the workplace (de la Harpe, Radloff & Wyber, 2000). The 'education' versus 'training' debate can be traced back to the competence-based education and training (CBET) system that was formally established in October 1986 with its aim to implement occupational competence to meet the needs of employment (Bates, 1999). Bates (1999) views the emergence of competence-based pedagogy as a consequence of deeper changes in social control over work, education and training and predicts that competence-based education will grow stronger and stronger. The irony is that, most employers do not value vocational skills (Allen & Ainley, 2007).

Universities are forced to balance their academic educational agendas with work-related outcomes (Gunn, Kafmann & Bell, 2010) as students expect the universities to add value and provide graduates with a competitive advantage in the labour market (Tomlison, 2008). Employers, graduates and prospective students start expecting more assistance from universities in terms of employment opportunities (Tomlison, 2008). Universities take a proactive approach in assisting graduates with employment by typically offering modification to existing courses or by trying to 'embed' employability skills within courses; sometimes they offer 'stand-alone' skills courses or offer a mix of both (Mason, Williams & Cranmer, 2009).

2.2.3. Widening Participation, post-1992 Universities and Employability

Employability of students is further complicated by a government's widening participation agenda. Post-1992 university students are already very disadvantaged when it comes to the choices of vocational professions and employability opportunities that are offered to them in comparison to Russell Group students (Nixon, 2011; Stevenson, 2011; Sutton Trust, 2005).

Students recruited under a widening participation agenda[5] often lack social capital (Hill, 2011). Despite the efforts to increase students' employability skills (Yorke & Knight, 2004) research

[5] The participants of this study, the University of Greenwich Business School students, are a product of the widening participation policy and as such they are mostly from "working-class homes and ethnic minorities" (Scott, 2012). The University of Greenwich is a post-1992 university. Students are ethnically mixed, mainly living locally and from the working-class background (UoG, 2015). See Chapter 6 for more detailed demographic information.

shows that students are not sufficiently prepared for their work environment once they graduate (Hill, 2011). Students are lacking interpersonal skills, communication, team-working and time management skills (Hill, 2011; Harvey *et. al.,* 1997). Interpersonal skills are considered the most important – higher than a degree itself - element of students' career success (Hill, 2011). However, students who are first generation entrants to higher education - as a result of the widening participation agenda – struggle to find suitable employment after completing their degree due to their social background and age (Hill, 2011). Blasko *et al.* (2002) argue that 'widening participation' students (the first generation to attend or aspire to attend HE) are most disadvantaged in terms of their career perspectives due to a direct relationship between social background, age and unemployment rates, income level and prospects for promotion and job satisfaction. Smith (2003) attributes the lack of success of this particular group of students in finding employment to their lack of cultural or social capital[6].

The importance of social capital networks in relation to education has been confirmed by research. The direct links have been found between social capital and academic achievement, dropout rates, aspirations and lifelong learning (Hill, 2011). Social capital networks were also linked to socio-economic status and the presence of role models (Catts, 2009; Craig, 2003; Stanton-Salazar & Dornbusch, 1995). Hill (2011) finds that students, despite their academic achievements, are unable to demonstrate their skills to potential employers. He also claims that first generation entrants prefer to study close to home, even if they are offered places at more established and prestigious universities away from home, as they do not feel confident to get information and support in order to enable them to attend prestigious universities. Their family connections often provide part-time employment during their studies but not when they graduate. Students are more likely to make new connections if they are aware of the value of social networks. Most students show awareness of how their existing social networks often have a negative effect on their studies (Hill, 2011). Students also report positive changes in their thinking and behaviour as a result of being exposed to business people who often acted as new role models. Most participants show increased levels of confidence and a change in attitudes towards others as a result of networking with business people (Hill, 2011). Hill (2011) concludes that the ability to connect with diverse others is an important aspect of employability skills and universities should create opportunities for students to build social capital and to develop students' interpersonal skills. It is also important that students become aware of their relevance to employability.

[6] Defined as economic or collective benefits derived from social networks (Field, 2003).

The widening participation agenda has been reflected in a substantial increase in number of students attending university and in the number of graduates entering the labour market. At the same the market-led economies and computerised work environments cause the erosion of employees' autonomy and create a highly segmented labour force with not sufficient volume of intellectually challenging jobs (Lewis, 2007). Beduwe & Planas (2004) wonder whether this continued educational expansion, driven by the desire to promote equality of opportunity, can be matched by the economy and its needs and whether the labour market can absorb such high numbers of graduates. With such a high supply of qualifications employers treat these as a necessary condition of eligibility but, as a result, their selection criteria of graduate employment are based on other elements of competence, mostly unknown. Beduwe & Planas (2004) call for surveys of employers to better understand what their selection process is based on. A high supply of higher education qualifications also results in decreased chances for the new generations of being promoted to managerial positions and in a possibility of employers requiring even more qualifications to see some relative benefits of qualifications (Beduwe & Planas, 2004). Finally, Beduwe & Planas (2004, p.70) conclude that:

> Education systems cannot—for these fundamental reasons—be functionally at the service of companies. They therefore must, basing themselves on 'beliefs' concerning the future evolution of society and technology, define their strategy of educational supply (…).

Ball (2013) also argues against the UK government overloading Higher Education with its educational policies. He claims that knowledge and education should not be treated as a business product in the 'knowledge economy' where education's role is to produce knowledge that is treated as a competitive advantage to its nation in a process of wealth creation. Such an approach creates a narrow and instrumental approach to knowledge, brings education to an economic commodity and erases the social value of knowledge and of intellectual culture (Ball, 2013). It also promotes attitudes of students as consumers who seek to have a degree instead of being learners (Molesworth *et al.*, 2009). The further danger of the market-led HE is making education pedagogically constrained (Molesworth *et al.,* 2009).

In summary, as competing perspectives on employability have been emerging, employability continues to be a major issue for different stakeholders in higher education (Holmes, 2013). Government plans to increase students' employability and long-life learning require institutional

and organisational changes in higher education as well as developing a theory of learning (Lees, 2002). The employability agenda causes a discrepancy between some academics and the government as to the role of higher education. The widening participation policy does not address social capital issues that widening participation students face and is often government policies are often seen by some academics as Taylorism-based management strategies.

2.2.4. Definitions of Employability

The recent review of employability literature conducted by Artess, Hooley & Bellors-Bourne (2017) found out that employability is still poorly defined. Equally, employability skills are difficult to conceptualise as they are defined differently by different authors and are often referred to as capabilities, competencies or learning outcomes (Lees, 2002). According to HEA (2012) the most widely used definition of employability is Yorke's (2006) one, a definition that is skill-focused and, as such, potentially encouraging instrumentalism (Yorke, 2006).

This study adapts Harvey's (2003) definition of the employability as it puts emphasis on the empowerment of the learner and, as such, provides a rationale for using a coaching intervention as a learning tool. This definition is also recognised by the recent HEA's review of employability literature (Artess *et al*., 2017) as it puts an individual at the centre of its employability efforts, sees employability as a work in progress though a person's life and distinguishes between a job availability and an individual's employability:

> Employability is not just about getting a job. Conversely, just because a student is on a vocational course does not mean that somehow employability is automatic. Employability is more than about developing attributes, techniques or experience just to enable a student to get a job, or to progress within a current career. It is about learning and the emphasis is less on 'employ' and more on 'ability'. In essence, the emphasis is on developing critical, reflective abilities, with a view to empowering and enhancing the learner. (Harvey, 2003, p.3)

The issues of employability being poorly defined is compounded by the gap between the skills graduates poses and the skills employers need. Skills in the educational context are different to the employment context (Lees, 2002). Skills deficiencies of students are difficult to address given a lack of consensus as to what required generic skills are. The meanings differ not only from industry to industry but also from university to university. Problem-solving and communication skills as examples of skills that are understood differently in different disciplines (Jones, 2010). Graduate

attributes are becoming more important than the degree subjects (Harvey, 2000). Students' lack of confidence and intellectual maturity have also a negative impact on their abilities and attitude towards developing employability skills (Stoner & Milner, 2010).

2.2.5. Current Employability Models

This research argues that there is a need for a more comprehensive employability model that captures factors such as: gender, ethnicity, perceived social support, socioeconomic status, cultural influences and gender role models, self-efficacy and outcome expectations and that supports Higher Education in empowering students. Hence, this section will look at different models of employability available in the literature.

Dacre Pool & Sewell (2007) (see Figure 2.1. below) advocate for a coherent model of graduate employability.

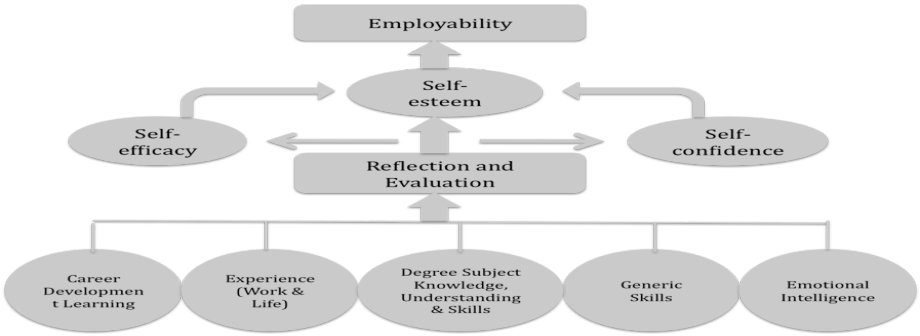

Figure 2.1: Dacre Pool & Sewell (2007)

Dacre Pool & Sewell (2007) see employability as a set of career development learning, experience (work and life), subject knowledge, generic skills and emotional intelligence. All of them are underpinned by reflection and evaluation that consists of self-efficacy and self-confidence. Self-efficacy is perceived as part of self-esteem. Kumar (2007) recognises that employability and graduate attributes are not well understood by academics and students. She advocates a SOAR model (an acronym for 'Self', 'Opportunity', 'Aspirations' and 'Result') as a way to integrate graduate skills needed to enhance students' employability. In Kumar's model 'Self' consists of self-assessment, self-efficacy, self-esteem and self-management. 'Opportunity' is defined as a critical awareness of options, occupations and opportunities related to a student's degree. 'Aspirations' is

defined as goal setting and action planning and 'Results' are defined as self-promotion and self-presentation through communication and presentation skills. Knight & Yorke (2001) in the Skills *Plus* project define four influences in employability, mainly: understanding of students as to where their degree is going to lead them in terms of their career; skilful practices defined as competencies by employers; self-efficacy beliefs that are considered to be critical and metacognition defined as self-awareness.

The models provided by Dacre Pool & Sewell (2007), Kumar (2007) or Knight & Yorke (2001) all capture self-efficacy but, similarly to other employability models, they fail to incorporate students' social and political context (McCash, 2006). Above all, they do not provide outcome measures for employability efforts.

In summary, curricula designed to increase employability lack a consistent approach to employability across universities and an alignment of expectations about generic and transferable skills between students and industry resulting in a mismatch of skills between students and the business environment and in students' inability to embrace employability as an important element of their personal and professional development (Hill, 2011). Wang *et al.* (2007) state that only a few studies used a theoretical model to examine job search process. Employability is adapted on at *ad hoc* basis and the effectiveness of different approaches is not empirically based. Most approaches to employability, however, have an element of self-efficacy. This shows some recognition as to the importance of self-efficacy in raising employability efforts of students.

The next sections will explore the role of career coaching as a learning tool to enhance students' employability efforts in terms of increasing their career self-efficacy and improving their job seeking behaviours. It will also explore the reasons why coaching intervention has been chosen as a learning intervention for this study.

2.2.6. The Definition of Career Coaching

This study explores the effectiveness of career coaching as a learning tool to increase students' self-efficacy and outcome expectation and to mitigate the impact of the socio-economic, cultural and environmental factors on students' employability efforts. This research looks at the effectiveness of *coaching*, defined as:

> a process limited to a specific period of time that supports individuals, teams or groups in acting purposefully and appropriately in the context they find themselves in. The coach supports clients in achieving greater self-awareness, improved self-management skills and increased self-efficacy, so that they develop their own goals and solutions appropriate to their context. (EMCC, 2013)

Career coaching is a new discipline with no widely accepted definitions as career coaches, similarly to coaches, come with different approaches, techniques and philosophies (Yates, 2014). It has been recognised as a distinct activity that is separate from other career development activities (Feldman & Moore, 2001). It consists of one-on-one career-related conversations, (Thach & Heinselman. 1999), carried over a short period of time (usually six months) that are structured in nature, scheduled on a regular basis and career-focused (Hall, Otazo & Hollenbeck, 1999; Kosan, 1999; Kram & Isabella, 1985). The other career development activities are: mentoring and counseling (Feldman & Moore, 2001).

Mentoring is different to coaching or career coaching as mentoring relates to an ongoing, long-term relationship (lasting from one to five years) between a junior and a senior colleague working in the same unit of an organisation (Kram, 1985) or between an employee and his/her supervisor (Feldman & Moore, 2001). *Career counselling* has a more external and wider focus than career coaching, i.e. the focus is to help individual to assess their strengths and weaknesses and to look for job alternatives outside current organizations or career paths (Feldman & Moore, 2001).

2.2.7. The Rationale for Using Career Coaching as an Employability Enhancing Tool

Provided that the Higher Education's role is to act as a facilitator of knowledge and that employability of students is about opportunities to develop students' potential (regardless of their background and wealth) then using career coaching might be one of the ways to address the issues of post-1992 students' lack of social capital and the lack of role models. Post 1992-university students, following Nixon (2011) and Sutton Trust (2005), are often socially disadvantaged in comparison to the Russell Group students (at the top of the league tables) who mostly come from privileged, highly socially selected backgrounds, with an abundance of social capital[7]. Students recruited under a widening participation agenda also tend to be working class (Scott, 2012). The

[7] The Russell Group universities attract most research funding (Nixon, 2011) and are able to focus on research and provide "niche offerings" (p.2) to their highly privileged students (Freedman, 2011; Nixon, 2011).

vocational professions and employability opportunities offered to them differ vastly from opportunities offered to students from the leading universities. Working class and widening participation students are offered more vocational courses to study and often struggle to find employment (Nixon, 2011; Stevenson, 2011; Allen & Ainley, 2007; Sutton Trust, 2005). This is often due to their social background, their lack of social capital (Hill, 2011; Smith, 2003; Blasko *et al.*; 2002) and their lack of the presence of role models (Catts, 2009; Craig, 2003; Stanton-Salazar & Dornbusch, 1995). Students recruited under a widening participation agenda, despite their academic achievements, are often unable to demonstrate their skills to potential employers (Hill, 2011). The ability to connect with diverse others is another important aspect of employability skills and universities should create opportunities for students to build social capital and to develop students' interpersonal skills. It is also important that students become aware of their relevance to employability (Hill, 2011).

Apart from the lack of social capital or the lack of role models, students' career choices might be influenced by their ethnic barriers as ethnicity accounts for different levels in career decision self-efficacy (Gloria & Hird, 1999). There is a need for career development interventions to address and integrate sociocultural context into career services (Gloria & Hird, 1999; Leung, 1995). Addressing ethnic identity provides a much more holistic and contextualised context (Gloria & Hird, 1999) and calls for asking the following questions (p.170): "What does it mean for you to be a Latino engineer? How does being Chinese American influence your career decision (…)? How do you interact with your White co-workers" as part of the career coaching intervention. Gloria & Hird (1999) also call for self-efficacy enhancing strategies and for in-depth evaluation of students' barriers - imposed by themselves and others - resulting in faulty self-efficacy beliefs in order to expand students' perceptions of possible career options. They also suggest that it is important for students to understand whether and how they integrate their cultural factor and ethnic group expectations into their career decision-making. Metheny & McWhirter (2013) call for increasing students' ability to influence their social standing in order to enhance their career self-efficacy and outcome expectations.

The recent review of employability literature (Artess *et al.*, 2017, p.7) emphasizes HEA's call to support "students to increase their confidence, self-belief and self-efficacy through their studies." as they recognize the importance of developing students' self-insight, self-awareness, self-efficacy and emotional intelligence as part of developing students' employability (Dacre Pool & Qualter,

2012). The HEA review (Artess *et al.,* 2017) also notes Hazenberg, Seddon & Denny's (2015) study, based on Bandura (1997a) that explored the relationship between self-efficacy and successful job-seeking behaviours.

A number of studies have confirmed that coaching has a significant positive effect on self-efficacy (Goldin *et al.*, 2012; Baron *et al.*, 2011; Baron & Morin, 2009; Moen & Skaalvik, 2009; Finn, 2007; Evers, Brouwers & Tomic, 2006). Baron & Morin (2009) have shown that client's self-efficacy explained 25 per cent of the coaching outcome variance. Recently, de Haan *et al.,* (2013) have found that self-efficacy had a strong mediating impact on the coaching relationship and on coaching outcomes. Social Cognitive Career Theory and psychotherapy research (both discussed more in the Common Factor section and in the Conceptual Framework chapter) recognise the link and applicability of self-efficacy and outcome expectations to certain behaviours, however, coaching effectiveness literature has only recently started researching this link. Ethnic barriers account for ethnic differences in career decision self-efficacy and Gloria & Hird (1999) call for university career coaching services to address and integrate sociocultural context into its interventions. However, psychological and social effects of gender and ethnicity and the social-cultural environment are never explored in the coaching effectiveness context. The EBSCOhost Research database search conducted on 8th January 2015 using words such as 'coaching', 'coaching effectiveness' and 'gender', 'race' and 'ethnicity' resulted in 0 results.

This study proposes that coaching, and career coaching in particular, is an opportunity for the post-1992 universities to provide tailored "niche offerings" for its disadvantaged students in order to address issues such as lack of social capital (Hill, 2011), interpersonal skills, communication, team-working and time management skills (Hill, 2011; Harvey *et. al.,* 1997). This study also proposes that career coaching can also address the lack of the presence of role models (Catts, 2009; Craig, 2003) and to create opportunities for students to build social capital, to develop students' interpersonal skills and to connect with diverse others (Hill, 2011).

In summary, post-1992 university students - recruited under the widening participation agenda - are much more likely to have a lower socioeconomic status, less access to social capital, fewer role models and less opportunities of getting into well-paid professions than Russell Group students. Career coaching creates opportunities for these students to build social capital and to develop their interpersonal skills. It might help them to become aware of the relevance of their interpersonal

skills to their potential employability. It might also increase their self-awareness of their ethnic or sociocultural context. Career coaching may offer self-efficacy enhancing strategies and encourage students' evaluation of their barriers in order to expand their perceptions of possible career options. It might guide students in understanding how they integrate their cultural factor and ethnic group expectations into their career decision-making. Career coaching might also develop their ability to influence their social standing in order to enhance their career self-efficacy and outcome expectations.

2.2.8. Coaching as a Learning Tool

Coaching has been confirmed as an effective learning tool (HEA, 2012; Griffiths, 2005; Skiffington & Zeus, 2003), it has been also linked to self-efficacy (Baron *et al*., 2011; Evers, Brouwers & Tomic, 2006) and to an increased self-awareness (Baek-Kyoo, 2005; Whitmore, 2002). Both Kumar (2007) and Dweck (2000) advocate empowering students through developing their self-awareness. Kumar (2007, p. 93) says:

> Bringing subconscious beliefs to conscious awareness through reflection is an important stage in converting random experiences into insights that enable students to identify and change the beliefs that subconsciously condition their actions. Inciting such insight is the first step in bringing about a change in behaviour.

The role of a coach is to look for future potential in the coachees rather than focus on their past performance (Whitmore, 2002). A coach needs to believe that a coachee can change and improve and needs to have an optimistic view of people's potential (Hardingham *et al.,* 2004; Miller *et al*, 1997). Jackson & McKergow (2007) claim that a coachee has all resources within and by finding what works and doing more of it makes progress possible a lot quicker.

Coaching practitioners generally agree that the formal process of setting goals and developing a plan to achieve them is believed to be a crucial element of an individual's success. A goal should be specific, measurable, fit with personal values and commitment should be made as public as possible in order to assure its successful achievement (Whitmore, 2002; Rogers, 2004). The most recent HEA employability review also recognizes the importance of developing students' self-belief, as part of their employability development, through goal attainment (Artess *et al*., 2017).

Coaching has been a part of the personal and professional development toolbox for many decades. In order to learn effectively one has to take an ownership of a situation and a responsibility for an outcome (NHS Leadership Centre, 2005; Edwards 2003). Coaching intervention had been initially used in sports[8] and, subsequently, was recognised as an effective intervention for managers and executives. Executive coaching has become a growing industry and the coaching market was worth USD 1 billion worldwide in 2003 (Bozer & Pirola-Merlo, 2007) and by 2014 it increased to USD 9 billion in the USA alone (Business Coaching Market Research Report, 2014). Since the 1990s there has been an explosion in coaching provision and coaching has been growing steadily with a significant increase in 2014. Coaching is mostly offered to senior managers and top executives. Managers, supervisors and executives are expected to 'coach' their peers through raising issues. Since 2008 there has been a steady decline in coaching offered to lower-level management. Since 2010 far fewer organisations have offered coaching 'at every level' (Executive Coaching Survey, 2014).

This study views that the role of Higher Education, and subsequently the employability agenda of Higher Education, is to provide students with opportunities to develop their full potential, regardless of their background and wealth (Couldry, 2011). The empowerment and self-actualisation of students is at the core of students' career development (Kumar, 2007). Treating students as intellectual performers and not as a compliant audience is in direct opposition to the employability-driven instrumentalism - characterised by predicting and planning for skills gaps (Harvey, 2000), standardisation, managerialism, auditing and policing of students and lecturers (Walton, 2011) - currently adopted by the post-1992 universities.

This study proposes that in order for Higher Education to facilitate imaginative, critical and independent learners and graduates needed in the globalised markets (Faulkner, 2011; Stevenson, 2011) Higher Education needs to regain its social-inequality moderator and a facilitator of knowledge status (Couldry, 2011; Freedman, 2011). This study approaches the employability of post-1992 university students from a society-driven perspective rather than from its current national economy and policy-making related stance (Couldry, 2011; Allen & Ainley, 2007). Post-1992 universities' students are disadvantaged, in comparison to Russell Group students, due to their social background and absence of social capital, the result of which reflects the types of

[8] Timothy Gallwey - a captain of the Harvard University Tennis Team in the 1960s – was a coaching pioneer who demonstrated how sport coaching could be applied in other life situations (Whitmore, 2002).

employment they are being offered (Nixon, 2011; Stevenson, 2011; Allen & Ainley, 2007; Sutton Trust, 2005).

2.2.9. Coaching in Higher Education

There is very little research that looks into the role of coaching in Higher Education. According to Grant (2011) and Stern & Stout-Rostron's (2013) comprehensive review of coaching research conducted from 2008 through June 2012 covering academic dissertations and peer-reviewed journal articles, there is no research on the role of coaching in increasing employability, either. Bettinger & Baker (2014) conducted analysis of the effectiveness of coaching on increasing students' retention rates. They used existing data where 8,049 college students were randomly assigned by a coaching company, InsideTrack, to receive coaching services and 5,506 students were randomly chosen not to receive coaching services. Bettinger & Baker (2014) conducted comparison of both statistically equivalent groups and found that coached students were more likely to be still enrolled at the university than non-coached students (63.2% versus 58.0%) and this effect was still present one year after coaching. More recently, Renn *et al.* (2014) measured the impact of career support (defined as mentoring) on students' career planning and job search intentions. Their study of 96 students at a large university in the south-eastern United States concluded that mentor career support is positively linked to students' job search intentions. The sample size, however, was relatively small and not diverse and, as such, their results cannot be generalised to other career coaching or mentoring programmes (Renn *et al.*, 2014).

The EBSCOhost Research database search (with sub-databases such as: Business and Economics, Education, Psychology/Sociology) conducted on 9th June 2014 using words such as 'coaching', 'students' and 'higher education' resulted in 550 results, of which 261 were in academic journals. Most entries referred to unrelated areas such as health studies, coaching of researchers, etc. One study related to first year students coaching each other as a formative assessment strategy (Asghar, 2010), one study and one Bloomberg article related to the effects of individual coaching on students' attendance rates (Bettinger & Baker, 2014), one Community College Week blog entry discussing coaches supporting failing students to graduate. One entry was a book discussing practical applications of coaching in education published by University of London as part of their professional coaching series (van Nieuwerburgh, 2012). In 2012, the 'International Journal of Mentoring and Coaching in Education" was launched which potentially shows a growing interest in this area. The same search, repeated on 18th April 2017, resulted in 700 entries, of which, 356

were academic journals. Most entries were not related to coaching students in Higher Education. The most relevant entries were: a reference to a Thomson's case study on coaching at the University of Warwick in the van Nieuwerburgh's (2012) book *Coaching in Education;* one academic article referencing coaching conversations as a way to promote students' reflexivity and action (Martiz & Jooste, 2011) and one periodical about coaching students at the University of South Carolina for academic success using goal setting and reflection (Robinson & Gahagan, 2010).

VITAE (2011) found that an increasing number of universities have been providing coaching for researchers. According to this report (p.16) "coaching is an innovative tool that can be used in an employability context". Increased emphasis is placed on research performance and employability skills enhancement (VITAE, 2011). The London School of Economics (2013) is one of the institutions that offer coaching to its PhD students. Their coaching is designed to increase their self-awareness and to guide them through their academic progress towards achieving their goals. The coaching programme is divided into four sections: the writing coaching group based on peer feedback; the coaching for completion designed to support students through performance anxiety and writing blocks one year prior to submitting their PhD; and coaching for the Viva programme. Leeds Metropolitan University has developed The Personalised Curriculum Creation through Coaching (PC3) project. The PC3 offers a framework that allows the university to incorporate coaching into the curriculum design and is seen as innovative by Leeds Metropolitan University (PC3, 2013). The University of Warwick introduced coaching to its academic staff in 2006 (Thomson, 2012).

According to VITAE (2013) coaching is becoming more used within UK higher education for higher level management such as Vice-Chancellors, Deans and Heads of Departments. More and more universities offer professional coaching to researchers and staff (University of Bath, University of Birmingham, University of East Anglia, Lancaster University, University of Northampton, University of Sheffield, University of Southampton, St George's, University of London). Out of the listed universities, the University of Birmingham, Lancaster University and the University of Southampton offer coaching to postgraduate students to develop and enhance their employability skills. VITAE's (2011) report and a review of all HE coaching provision shows that coaching intervention is offered mainly to researchers and postgraduate students, with only a few institutions providing coaching to enhance employability skills.

Burns & Gillon (2011) introduced a coaching psychology module into an undergraduate psychology programme at Glasgow Caledonian University and found, through semi-structured questionnaire feedback, that an experience of being both a coach and a coachee enabled students to make progress on personal goals. They discovered that coaching improved self-awareness related to their demonstrating of key employability competencies. However, the study involved a small sample of 20 students and was based on students' subjective feedback. They also found, through written self-reported feedback from students, that coaching improved self-awareness related to their demonstrating of key employability competencies. The evaluation of coaching was purely qualitative, based on researchers' observation and on qualitative feedback from a small group of students.

Chandler *et al.* (2011) discuss the need for leadership development and coaching of educational leaders and coaching in order to improve effectiveness of teachers and performance of students. In their view, coaching and building a school coaching culture is a necessity in an educational environment. They postulate that educators should use coaching in an educational context as business leaders use it for businesses. Their mixed method study examined the perceptions of managers of the value of coaching and found that educational leaders' perception of coaching value was very similar to the business leaders. The data in the study was obtained via self-report and the sample size was small (35 responses).

In summary, studies show that more and more universities started introducing coaching into UK higher education. However, it is mainly offered to researchers and higher-level management such as Vice-Chancellors, Deans and Heads of Departments (VITAE, 2013). This section provided an overview of the institutional pressures and current debates surrounding the introduction of the employability agenda into Higher Education, including the consequences of the instrumentalism of Higher Education, such as possible marketisation and Taylorism. It discussed how universities try to adapt employability into their curriculum, and examined current definitions and existing models of employability. It pointed out that, depending on the approach that Higher Education takes in terms of its role and on the definition of the employability, the employability agenda can either lead to the empowerment of students or to transforming Higher Education into training graduates for jobs whilst promoting anti-intellectualism and eroding academic freedom (Harvey, 2000). It explained the role of coaching in increasing students' employability. Finally, it discussed existing

cases of coaching used in HE and provided rationale why coaching intervention has been chosen as a learning intervention.

Since one of the objectives of this research is to provide empirical evidence for the effectiveness of coaching in increasing students' self-efficacy and employability efforts and to establish what aspects of the coaching relationship are most effective in increasing students' career self-efficacy, outcome expectations and employability efforts, the latter part of this chapter explores the issues of capturing coaching effectiveness in the current coaching research and provides a critique and a summary of current debates surrounding capturing coaching effectiveness.

2.3. Coaching Effectiveness

This study aims to examine whether coaching is effective in changing students' self-efficacy and outcome expectation beliefs in order to increase their employability efforts. This chapter examines the challenges of measuring coaching effectiveness and explores current research into the variables that make coaching effective.

2.3.1. Measuring Coaching Effectiveness

Measuring coaching effectiveness is an elusive concept (ECS, 2014) as coaching effectiveness research is lacking conclusive evidence (Jones *et al*., 2016; Grant *et al.*, 2010; Somers, 2010; Gale *et al.*, 2002; Kilburg, 1996). Coaching is mainly evaluated using feedback from participants (Jarvis, Lane & Fillery-Travis, 2006). Different approaches and methods are used to evaluate different aspects of coaching effectiveness and there is no methodological consistency amongst the studies.

In the last decade, there have been only seven empirically based research studies in coaching (Gray, 2011; Kampa-Kokesch & Anderson, 2001). De Haan & Duckworth (2012) argue that there are probably less than 20 robust quantitative coaching outcome studies. Feldman & Lankau (2005) analysed 20 empirical studies. Joo (2005) found only 11 journal-published articles for his review of coaching. Gray (2011) further identifies 27 empirical articles, mainly focused on the role of counselling and coaching, written by Passmore & Gibbes (2007) and another 6 empirical studies, focused on return on investment, conducted by De Meuse *et al.* (2009). In 2010, Ely *et al.* (2010) provided a comprehensive study of coaching effectiveness that incorporated the Kirkpatrick (1996)

framework designed to evaluate training programme. Ely *et al.* (2010) developed summative and formative evaluation frameworks. However, the summative evaluation framework provided a limited selection of variables that affect the quality of coaching relationships. Baron *et al*. (2011) examined empirically the effect of the coaching relationship (working alliance) assessment on coachees' self-efficacy. They found statistically significant correlation ($r=.51$, $p<0.001$) between coachees' working alliance assessment and post-coaching self-efficacy. However, their study's sample size was very small (30 coaches and 43 coachees). Fillery-Travis & Lane (2006) and Carter (2006) tried to provide frameworks for coaching evaluation that incorporated different supervision levels, different coaching agendas and developmental skills and roles. Both Carter (2006) and Fillery-Travis & Lane (2006) did not provide specific outcome measurements.

Other researchers also, tried to look at return of investment as a measure of success. Philips (2004) and McGovern *et al.* (2001) and Passmore & Gibbes (2007) used a ROI as a measure of coaching effectiveness. McGovern *et al.* (2001) used Kirkpatrick's model to assess the impact of coaching. However, in his study he asked clients to quantify the business impact of coaching and use their own calculations. Hence, their estimates of ROI were subjective and most likely failing to be consistent across the sample. Carter (2006) disagreed with using a ROI approach (a return on investment approach) provided by McGovern *et al.* (2001). Carter (2006) believed that a RoI approach is expensive, time-consuming and only as good as the quality of the subjective data.

McGovern *et al* (2001), Garman *et al.*, (2000), Hall *et al.* (1999), Laske (1999), Olivero, Bane & Kopelman (1997) also tried to evaluate coaching effectiveness but provided limited evidence. They all used different approaches and methods to evaluate different aspects of coaching effectiveness resulting in there being no consistency amongst the studies. Their approach to gathering information varied from 'quasi-experimental' to more informal. They all agreed that coaching can be effective but gave very little guidance - except McGovern *et al.* (2001) - on coaching evaluation within organizations (Carter, 2006).

Evers *et al.* (2006) conducted a purely quantitative quasi-experimental study measuring effectiveness of coaching in increasing self-efficacy and outcome expectations of managers at the Department of Housing and Urban Development in the United States. Their experimental group consisted of 30 managers undergoing coaching over a period of four months (from before the coaching program started at Time 1 to its finish at Time 2) and a control group also consisted of 30

managers. They created a questionnaire based on a coaching model designed by Whitworth, Kimsey-House & Sandhal (1998) that described three behavioural domains such as: setting one's goals, acting in a balanced way, and mindful living and linked them with outcome expectations and self-efficacy beliefs creating six variables. The questionnaire consisted of 35 items scored on a 10-point scale and had a Cronbach's α coefficient of .79. They compared mean analysis for both groups over time and found that the coached group's levels of self-efficacy increased significantly higher than the control group. They compared the means of both groups at Time 1 to determine whether the groups were equivalent in order to reduce the threat to the internal validity of the experiment and found that there were significant differences ($p<0.05$) for two out of six variables. Doyle & McDowall (2015) conducted a longitudinal study that measured effectiveness of coaching on improving work performance of 95 dyslectic employees. The study found significant differences in scores between Time 1 and Time 2, following the coaching intervention, for coachees ($t(92) = 19.35$, $p < .001$, $d = 1.94$) and as well as from their line manager perspective ($t(40) = 10.72$, $p < .001$, $d = 0.85$)). However, the study had no control group.

The lack of progress in coaching effectiveness research (Jarvis *et al.*, 2006) is compounded by the difficulties with measuring effectiveness of any intervention. Coaching effectiveness is usually measured via treating coaching as an intervention in experimental or quasi-experimental design. Grant, Curtayne & Burton (2009) or Evers *et al.*'s (2006) studies are a typical example of a randomised-control-trial study in which coaching effectiveness is measured against psychological scales (such as goal attainment, resilience, psychological well-being and perceived stress) and its effectiveness is captured via increase in the above scales. Theeboom *et al.* (2013) in their meta-analysis of 18 coaching effectiveness studies concluded that studies that included a control group as well as an experimental group showed smaller statistical effects as including a control group controlled for biases, for example maturing of coachees over time. Blades *et al.*'s (2012) review of effectiveness of intervention programmes[9] found that '*before and after*' assessments studies tend to see relatively small changes over time, possibly, due to the fact that students' have an inflated view of their skills at the beginning of the programme, resulting in higher than expected baseline scores, which allowed for little room for change as a result of the programme (Blades *et al.,* 2012). Flores & Obasi's (2005) study of effectiveness of mentoring of 714 Mexican American high school students typically found no significant effect on students' self-efficacy or career choices. The intervention studies in health sciences literature also suggests that capturing quantitatively the

[9] Blades *et al.* (2012) reviewed employability intervention programmes.

impact of any intervention can be quite problematic due to the nature of the interactions of examined variables at psychological, socioeconomic and environmental level (Campaner & Galavotti, 2012). In fact, even the medical field randomized control trials are facing knowledge gaps due to the complex interactions between the interventions and due to the impact of the contextual factors (Nordon *et al.*, 2016).

Most research on executive coaching has been published in practice journals such as *Harvard Business Review* and *Consulting Psychology Journal: Practice and Research* (Bozer & Pirola-Merlo, 2007). There is not enough rigorous academic literature and the coaching industry appears to be unregulated and unstructured (Blackman, 2006). A lack of funding for coaching effectiveness research, a relative lack of randomised-control-trial studies (de Haan & Duckworth, 2012) combined with the ethical issues of using randomly selected control groups, contributes to the lack of progress in coaching effectiveness research (Gray 2011; Stober & Parry, 2005). It is also difficult to provide a standardised ethical guidance for a coaching practice that is open to anyone who wants to become an executive coach (Gray, 2011; Peltier, 2010; Visser, 2010; Grant, 2006). Empirical studies need to be carried out in order to address the lack of regulation in the industry and its anecdotal approach to the effectiveness of coaching (Visser, 2010; Whitney, 2001).

As the coaching industry develops, it is necessary to develop coaching effectiveness measurements to sustain coaching credibility (Gray, 2011; Carter, 2006). However, there are no clear or agreed coaching outcome measurements in the literature (Jones, *et al.*, 2016; de Haan & Duckworth, 2012). A numerical approach to performance measurement is limited by its nature and makes it difficult to capture the impact of coaching (ECS, 2014). Increased self-awareness is also difficult to measure (ECS, 2014). The ROI measurements for coaching proved unsuccessful and only 11% of executive coaches attempt to use it (ECS, 2014). 360-degree feedback is the prevailing method used currently by external coaches (28%), followed by well-being and engagement framework (21%), performance reviews (20%) (ECS, 2014), impact on business (Sherpa method) (13%) and, lastly by Effectiveness of Learning (Kirkpatrick method) that is used by 7% of coaches (ECS, 2014). According to a recent report (Ridler Report, 2013), a leading international law firm, Freshfields Bruckhaus Deringer LLP, managed to develop a strong approach to coaching evaluation based on measuring return on expectations and objectives instead of return on investment. However, as the approach has strong elements of self-evaluation it is weakened by the subjectivity of self-reporting.

De Haan & Duckworth (2012) propose that research into coaching outcomes need to use findings from more advanced psychotherapy outcome research, mainly the concept of *common factors*[10], in order to develop meaningful coaching effectiveness measures. McKenna and Davis (2009) also recognise the importance and relevance of psychotherapy outcome research to coaching outcome research. The next section discusses common factors and their relevance to coaching effectiveness research.

2.3.2. Common Factors: What Makes Coaching Effective?

In recent years, there has been a lot of discussion in the psychotherapy literature with regard to common factors theory. De Haan *et al.* (2013) suggest that common factors are central to psychotherapy effectiveness and should be incorporated into coaching effectiveness research. De Haan & Duckworth (2012) and McKenna & Davis (2009) call for new ways of studying coaching effectiveness and for including psychotherapy outcome research. Most recently, Laska *et al.* (2014) conducted a review of effect sizes for common factors and concluded that a common factors approach is a useful way of testing the mechanism of change in psychotherapy. Duncan *et al.* (2010) call for reassessment of common factors.

The identification of common factors was one of the most significant trends in outcome therapy research and in thinking about therapies and their effectiveness (Bergin, 1982). The idea of common factors was first introduced by Rosenzweig (1936) who pointed out that effectiveness of different clinical therapies depended on their common elements and not on their theoretical differences. Rosenzweig's (1936) idea was further developed by Frank (1961, 1982) who recognised that a person entering psychotherapy is in a "demoralised state" and needs to believe that the therapist can help and offer hope. This is how expectations that things will improve are formed (Weinberg, 1993).

Lambert (1992) has reviewed over 40 years of psychotherapy outcome research and found four *common factors* that influence positive therapy outcomes: extra-therapeutic factors (account for 40 per cent of improvement that occurs in a treatment); therapy alliance (30 per cent of improvement), hope and expectation also called "placebo factors" (15 per cent) and therapy techniques (15 per

[10] *Common factors* are defined as aspects of coaching intervention (originally discussed in the psychotherapy contexts) that produce successful outcomes (de Haan *et al.,* 2013; de Haan & Duckworth, 2012; Weinberg, 1993).

cent). Lambert's (1992) findings - with hypothesised percentages – were originally depicted as a pie chart. Lambert's (1992) meta-analysis has inspired further research into the common factors and his findings are now widely recognised in the psychotherapy literature. However, percentages proposed by him are not statistically derived and they are merely suggestions based on his meta-analysis (Lambert, 1992). Lambert (1992) and Asay & Lambert (1999) do not offer any explanation as to how the therapy outcomes were measured in the reviewed cases. Therapy outcomes are referred to as 'improvement in clinical outcomes', 'assessed by patients' ratings and through independent evaluators' (Asay and Lambert, 1999), as 'positive outcomes', 'inferior outcomes', 'favorable outcomes'. Lambert (1992) makes one reference to Dobson's (1989) meta-analysis of 28 studies in which he specifically states that the outcome measure used for each of the 28 studies was the Beck Depression Inventory (Beck *et al.*, 1961). Other outcome measures discussed in the psychotherapy literature are the Outcome Questionnaire (Lambert *et al.,* 2003), the Symptom Checklist–90 (Derogatis, 1983), Inventory of Interpersonal Problems (Horowitz *et al.*, 1988). Miller *et al.* (1997) and Hubble *et al.* (1999) have further developed Lambert's (1992) work. Their discussion has been conceptualised in Figure 2.2. below. They have also not provided any discussion as to how successful therapy outcomes were measured.

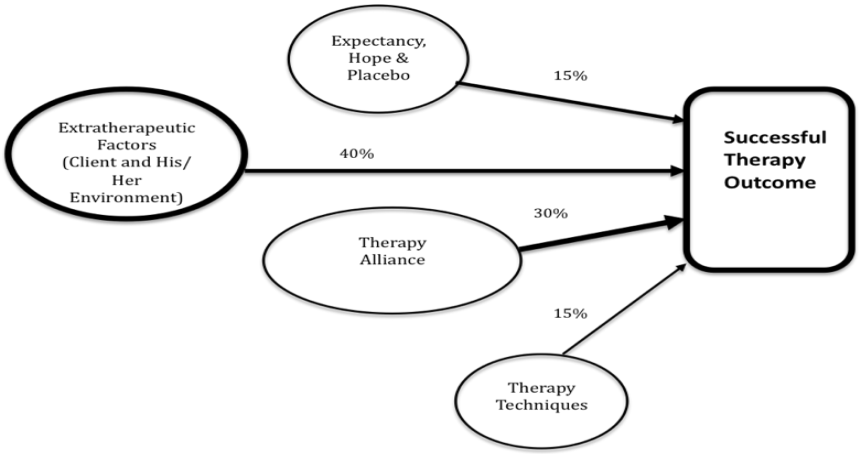

Figure 2.2: Common Factors Model conceptualised from Miller et al. (1997)

The next section discusses each element of coaching effectiveness as depicted in Figure 2.2.

The Coaching Relationship

There is a common agreement in the literature that the most critical factor of coaching effectiveness is the quality of the coach-coachee relationship (de Haan *et al.* 2011; Ely *et al.* 2010; Visser, 2010; Baron & Morin, 2009). Wampold (2001) argues that the coaching relationship accounts for 54% rather than 30%, as postulated by Lambert (1992), of the variance in coaching outcomes. According to Gyllenstern & Palmer (2007) and Miller *et al.* (1997) the quality of the client's participation in coaching "is the single most important determinant of outcome" (p.27) and it is strongly influenced by a client's perception of a coach. Trust, warmth, lack of judgment, empathy, respect and authenticity (de Haan, *et al.*, 2011; Duncan *et al.* 2010; Peltier, 2010; Blackman, 2006; Miller, *et al.*, 1997; Rogers, 1961) as well as listening, understanding and encouragement are the most helpful qualities of a coach. Clients who perceive practitioners as accepting, warm, showing positive regard and affirmation and sharing self-disclosure are much more likely to form a strong alliance with their coach and to participate in the process (Asay & Lambert, 1999; Miller, *et al.*, 1997).

However, O'Broin & Palmer (2008) point out that the importance of a coaching relationship is not addressed sufficiently in the coaching research. They offer the ideas of how evidence-based coaching research into the coach-client relationship should progress, drawing on the findings of psychotherapy and pointing towards questions such as (p.298): "What is known about the nature of the participants, relationships and procedures within treatment that induce positive effects across theoretical models and methods?" and "How do these factors or variables work together to enhance change?" The most recent meta-analysis on the effects of coaching on individual level outcomes call for shifting from the question 'does it work?' to 'how does it work?' and on building a firm theoretical framework that can be used to identify the underlying mechanisms and processes (Theeboom, Beersma & van Vianen, 2013). Stelter (2014) views coaching as a narrative and collaborative partnership between a coach and a coachee – where both parties contribute often equally to a dialogue - designed to generate meaning together with emphasis on aspiration, passion and values. He believes that a coach's ability to trigger a shift in perspective of a coachee makes coaching effective. The key goal of the coaching conversation is to strengthen the coachee's capacity for reflection.

Expectations, Placebo and Hope

Expectations (*outcome expectation* and *self-efficacy*[11]) are common factors that are of key importance to psychotherapeutic success (Weinberg, 1993; Bandura 1989, 1986, 1982; Shapiro, 1981).

Expectations were first discussed, in the context of a treatment's success, by Frank (1961) who has found that a person entering therapy is in a demoralised state and a role of the therapist is to provide hope and set up an expectation that things will improve. Goldstein (1960) has found that outcome expectations play an important part in the success of therapies. The importance of expectations was further confirmed by Frank *et al* (1963), Friedman (1963) and, independently, by Marcia, Rubin & Efran (1969).

Definitions of expectation vary across different models and theories (Fridrich, *et al.*, 2016). Constantino *et al*. (2011) comment on poor measurement issues in the expectation research. In their meta-analysis, 67.4% of cases had inadequate outcome expectation measures due to having one-item scales, measuring expectation using other constructs, confusing outcome with treatment expectations or the imbalanced reporting of findings (reporting only positive findings). Outcome expectations are often reported as negative or non-significant as they are most of the time not related to primary research questions. Outcome expectations are also often seen as a static construct and they are only assessed at baseline despite research suggesting that expectations change through the duration of treatment (Holt & Heimberg, 1990). Constantino *et al.* (2011) have recently conducted meta-analysis of outcome expectation research and found that outcome expectation research faces measurement and statistical limitations. There is not much research to support a direct causal relation between outcome expectations and favourable treatment outcomes and, equally, manipulation studies involving outcome expectations are "virtually nonexistent" (p.189). Expectations have been undervalued and there are only a few studies that actually assess expectations as their primary research questions (Weinberger & Eig, 1999). In recent years, a small number of studies have looked at outcome expectations in the organisational context (Fridrich, *et al.*, 2016). Expectations are not really discussed in the psychotherapy literature and are often discarded as placebo or error variance (Weinberg & Rasco, 2007). Delsignore & Schnyder (2007),

[11] These constructs will be explored in depth in this study as they are given an equal importance in Social Cognitive Career Theory.

following their meta-analysis of expectations, call for experimental design research that investigates the expectations and their effect on the outcome of therapy. They note (p.480):

> The expectations literature shows that measures focusing on specific outcome or process variables have been more likely to show significant links with therapy outcome. Some reasons for inconsistency can be found in the lack of appropriate assessment instruments as well as in the limited knowledge about mediating variables in the past. The use of modern, appropriate assessment instruments as well as the inclusion of recent findings from the therapy process research could reactivate the actuality of this promising and clinically relevant domain.

Recently, Constantino *et al.'*s (2011) meta-analysis of 8,016 patients across 46 samples confirms the importance of outcome expectations in bringing a therapeutic improvement. Lambert & Asay (1984) and Delsignore & Schnyder (2007) also find that client positive expectations have a positive impact on successful therapeutic outcome. However, the underlying mechanism that links outcome expectations to treatment outcome is still unclear (Constantino *et al.*, 2011). Constantino *et al*. (2011) note that the expectation-outcome link is possibly mediated by the therapy alliance. Weinberg (1993) suggests that, although the therapeutic relationship is a most critical common factor, it is *expectation* (defined as outcome expectation and self-efficacy expectation) that is a sufficient condition for a corrective emotional experience to occur. *Outcome expectations* will result in outcome therapy improvement regardless of other common factors being present and expectations of success of failure and *self-efficacy* are sufficient for lasting therapeutic change (Frank, 1973). Positive expectations are necessary for change to happen (Weinberg, 1993).

Self-efficacy is a person's belief or expectation that he or she can successfully perform some behaviour or behaviours (Bandura, 1977). Self-efficacy theory developed by Bandura (1977, 1982) postulates that a person's psychological processes of change are dependent on his/her sense of efficacy and a person's psychological changes can be explained by his/her expectations, such as: outcome expectation and self-efficacy expectation. *Outcome expectation* is concerned with expectations that a person can achieve planned goals (Bandura, 1977) and are linked to possible consequences of a person's actions (Schwarzer & Fuchs, 1995). Outcome expectations are also defined in the literature as expectations of improvement and describe patients' beliefs in the therapy's helpfulness (Delsignore & Schnyder, 2007). Snyder's (2002) definition of *hope* as a person's expectations with regard to his/her ability to achieve important goals, builds on Bandura's (1977) outcome expectation theory.

To summarise, expectation and self-efficacy are common factors that are of key importance to psychotherapeutic success (Weinberg, 1993; Bandura 1989, 1986, 1982; Shapiro, 1981). De Haan *et al* (2013) and Wampolod (2001) point out that the client's expectations are more important than has been previously accounted for. However, currently the only measures available in the literature are The Treatment Expectation (TES; Sotsky *et al*., 1991) and Devilly & Borkovec's (2000) Credibility/Expectancy scale. The Treatment Expectation is a single-item scale that measures clients' expectations about treatment outcome. Participants respond to the question, "Which of the following best describes your expectations about what is likely to happen as a result of your treatment?" Response options are on a 5-point scale (1 = I don't expect to feel any different, 5 = I expect to feel completely better). Single-item scales are considered unacceptable as one cannot estimate their internal consistency and they are presumed to have low reliability (Oshagbemi, 1999). Devilly & Borkovec's (2000) scale, used for clinical outcome studies, is a treatment expectancy measure that evaluates how believable, convincing, and logical a treatment is to a client. Its $\alpha = .85$ (Devilly & Borkovec, 2000).

Extra-therapeutic Factors

Miller *et al.* (1997, p. 36) define extra-therapeutic factors as "events and processes that occur *outside* the context of treatment but which are still instrumental in producing change in clients". McKenna & Davis (2009) define extra-therapeutic factors as the client and his environment. Research shows that the client and not the therapist or a particular psychotherapy model is the single, most potent contributor to the success of the therapy (Cujipers *et al*., 2012; Wampold, 2001; Miller *et al*. 1997; Lambert, 1992). Clients' social support network, socio-economic status, personal motivation (Duncan *et al.,* 2010) and client's motivational level or readiness (Peltier, 2010; Miller *et al.*, 1997; Prochaska *et al.*, 1994) are other important extra-therapeutic factors.

However, according to Duncan *et al.* (2010) clients are the neglected critical factor in research. Miller *et al.* (1997) believe that research shows that a failure of most expensive, thoughtful and extensive treatment programmes can be attributed to failure of accommodating the client's state of readiness or motivational level. Also, despite extra-therapeutic factors being hypothesised to be the biggest contributor to the overall therapy outcome, there is little evidence as to how to incorporate them into the therapy process. A literature review into extra-therapeutic factors conducted by Miller *et al.* (1997) revealed only one single article written by Hunsley & Glueckauf (1988) that argues that a therapist who can successfully utilise chance events in therapy can produce

significant benefits for the client. Sprenkle *et al*. (1999) also confirmed that the various aspects of extra-therapeutic factors have not been explored in enough detail. Recently, Leibert & Dunne-Bryant (2015) conducted an outcome study that measured therapy alliance; placebo, hope and expectation and extra-therapeutic factors. Their sample consisted of adults, mostly students (n=79), seeking personal counselling for depression, anxiety, communication or interpersonal problems and grief. Extra-therapeutic factors were measured by looking at client motivation for therapy, perceived financial security, life role satisfaction and subjective social support. Outcome measures were based on the Beck Depression Inventory (Beck *et al.*, 1961), Outcome Questionnaire (Lambert *et al.,* 2003), the Symptom Checklist–90 (Derogatis, 1983) and Inventory of Interpersonal Problems (Horowitz *et al.*, 1988). Leibert & Dunne-Bryant (2015) found that placebo, hope and expectation and therapeutic alliance explained 4% and 3% of the outcome respectively but none of the measured extra-therapeutic factors (motivation for therapy, perceived financial security, life role satisfaction and subjective social support) were statistically significant. However, Roehrle & Strouse (2008) conducted a literature review of 1,125 studies and found 27 outcome studies that they explicitly meta-analysed for a link between social support as a possible extra-therapeutic factor and the outcome. Their result was statistically significant, i.e. social support correlates with the therapeutic outcome with r = .11. However, this is a small effect and the authors call for more research investigating the link between the therapy outcome and social support.

Coaching Techniques

Research that explored the efficacy of specific models and techniques of psychotherapy, including comparative studies and component analyses (Ogles *et.al.,*1999), consistently found that there are no significant differences between positive results and treatment approaches, i.e. the studies are inconclusive in showing that one technique is better than another (Duncan *et al.*, 2010; Miller *et al.,* 1997; Wampold *et al.*, 1997; Lambert & Bergin, 1994; Lambert, 1992).

In summary, there is a need for empirical studies that will examine the effectiveness of coaching. Coaching research could also benefit from incorporating common factors into its effectiveness studies (De Haan *et al.*, 2013; De Haan & Duckworth, 2012; McKenna & Davis, 2009). Psychotherapy outcome research suggests, apart from the coaching relationship, the importance of self-efficacy, outcome expectation and of extra-therapeutic factors. This study examines what aspects of a career coaching relationship are most helpful in increasing students' career self-

efficacy. It also explores students' self-efficacy, outcome expectations and students' extra-therapeutic factors[12].

These issues will be explored in the following research questions. The effectiveness of the coaching relationship will be explored via the following research questions:

RQ1. *Is career coaching effective in increasing students' self-efficacy, outcome expectations and their employability efforts?*

> RQ1a. *What aspects of the coaching relationship are most effective in increasing students' self-efficacy, outcome expectations and their employability efforts?*

Students' self-efficacy and outcome expectations will be explored via the following research question:

RQ1b. *What are students' self-efficacy and outcome expectation beliefs?*

Students' extra-therapeutic factors, such as their environment (McKenna & Davis, 2009), social support network and socio-economic status (Duncan *et al.* 2010) will be explored via the following research questions:

> RQ2a. *What cultural influences and environmental conditions (such as Perceived Barriers or Support to Preferred Careers, Cultural Influences, Family Expectations, Perceived Social Support, Socioeconomic Status, Family Role Models and Gender & Ethnicity Barriers to Chosen Careers) impact students' self-efficacy, outcome expectations and employability efforts?*
>
> RQ2b. *What is the impact of gender and ethnicity on students' self-efficacy, outcome expectations and employability efforts?*

The next section 'Conceptual Framework: Social Cognitive Career Theory' will argue that employability efforts are a case of vocational behaviour and, as such, the research should be analysed in a social cognitive behaviour context. It places research questions and hypothesis in the

[12] Extra-therapeutic factors are explored using Social Cognitive Career Theory described in the Conceptual Framework section.

Social Cognitive Career Theory framework and discusses self-efficacy, career self-efficacy, outcome expectations and issues of gender, ethnicity and role models. It explores the links between these factors and employability efforts and discusses the importance of addressing and integrating ethnicity and sociocultural context in the programmes aimed at increasing employability efforts of students.

2.4. Conceptual Framework: Social Cognitive Career Theory

As discussed previously in the chapter 'The Background of the Study: Employability in Higher Education', employability of students has become a very important strategic issue in HE (HEA, 2012). There are lot of different definitions and models of employability but there is neither one unified model nor outcome measurement nor theory of employability existing in the literature. Most approaches to employability have an element of self-efficacy, however, they fail to incorporate students' social and political context (McCash, 2006) and they do not provide outcome measures for employability efforts.

This study argues that the role of Higher Education is to foster personal development, intellectual debate, pursuit of understanding and to offer opportunities to develop students' full potential, regardless of their background and wealth. This is even more relevant for the post-1992 university students as, due to their socioeconomic background, lower social capital and due to governments' tendencies to restrict high quality education to elites, they are much more vulnerable than Russell Group students and potentially denied vocational opportunities that are available to the elite students.

Hence, this research proposes that there is a need for an employability model, that whilst meeting the government's agenda to increase students' employability efforts, it also empowers more disadvantaged post-1992 university students and addresses their individual needs and social capital gaps. In the following chapter, this research argues that students' employability efforts can be seen as a case of vocational behaviour and as such should be analysed in the social cognitive behaviour context. Social Cognitive Career Theory (SCCT) is a relatively new approach used in educational and career context that aims to unify earlier career theories (Lent, 2013). Each variable in the SCCT model such as: self-efficacy, career self-efficacy, outcome expectations, gender, ethnicity, socioeconomic factors and role models is discussed in the section 2.4.2. and linked to research questions and research hypotheses.

2.4.1. Social Cognitive Career Theory and Employability Efforts

The earlier career development theories available in the literature are briefly discussed below. This is followed by a detailed discussion of Social Cognitive Career Theory itself. Social Cognitive Career Theory has been chosen as a conceptual framework of this study as it is derived from Bandura's (1986) work (Lent, Brown & Hackett, 1994) and it incorporates factors such as gender, ethnicity and cultural and gender role models and influences into its framework. This is a relatively new approach used in the educational and career context that aims to unify earlier career theories (Lent, 2013). SCCT assumes that career behaviour is based on individual attributes (such as interests, values, abilities, etc.) as well as genetic and early conditioning (nature and nurture). It sees career choices as a dynamic interaction between people and their environments. It also focuses on cognitive factors that make people change and regulate their behaviour, such as: self-efficacy beliefs and outcome expectations (Lent, 2013). This approach is very consistent with the successful outcome in therapy research in psychotherapy, discussed in the previous chapter.

T*he Minnesota Theory of Work Adjustment* looks at the best match between a person and his/her environment. It emphasises the measurement of abilities and values such as: achievement, comfort, status, altruism, safety and autonomy and harmonises them with a person's environment. It is mainly applied in the context of work trends and stages in career development in culturally diverse population. It can be successfully used to help young adults to identify an occupation in which they can achieve most satisfaction (Swanson & Schneider, 2013).

The Holland Theory of Vocational Choice and Adjustment aims to match career development with people's personalities and corresponding preference for careers (realistic, artistic, enterprising, investigative, social and conventional). It is used to help people in their educational or career choices but it is limited in its assumption that people are free to choose their careers based on their personality congruence. It is particularly relevant for students who have constrained educational and career options due to family finances, parents' expectations or other barriers (Nauta, 2013).

The Life-Span, Life-Space Theory asserts that people develop a sense of self in contexts of time and space and particular occupations suit particular types of people. Individuals move through a sequence of jobs cultivating a career over time. This theory has been applied to help individuals to get ready for a chosen career in terms of learning the planning attitudes and beliefs in order to manage their careers over the life course. The self-concept aspect of this theory claims that

individuals develop and adjust their self-concept to optimally fit themselves to the social roles. This theory is used to help individuals to assess their developmental career concepts and their career maturity (Hartung, 2013).

Self-Efficacy Theory, originally proposed by Bandura (1977), forms a basis for Social Cognitive Theory, since this is a more general approach to the applicability of social learning or social cognitive behaviour to vocational behaviour (Betz & Taylor, 2001). Self-efficacy expectations, defined as a person's beliefs in his/her ability to successfully perform a task or behaviour that is required for an individual to move towards his/her achievement (Bandura, 1977), also form an important part of the coaching effectiveness research and provide an important link between social cognitive behaviour, coaching effectiveness and employability efforts.

The theory of self-efficacy has been widely recognised as a practical way of understanding the link between beliefs and behaviour. Job search self-efficacy is a person's confidence in undertaking activities and tasks that are important in the job search process (Saks & Ashforth, 1999). Self-efficacy has been linked as a predictor of career behaviour (Hackett & Betz, 1981; Lent & Hackett, 1987) and career self-efficacy has been linked to the career development process (Niles & Sowa, 1992). Bandura (1997a) claimed that individuals possessing high career self-efficacy levels are much more likely to seek positive outcomes for their career goals. Job search self-efficacy beliefs (or career self-efficacy) are also correlated with motivation to seek or avoid career behaviours (Betz & Taylor, 2001). Individuals with low levels of career self-efficacy tend to procrastinate or delay in making their career decisions and are less likely to follow their decisions through (Betz, 1992). Job search self-efficacy is a mediator between personality traits and job search outcomes (Zimmerman *et al*., 2012) and one of the best predictor of job-searching behaviours (Zimmerman *et al*., 2012; Niles & Sowa, 1992). Anderson & Betz (2001) linked social self-efficacy to career development and career activities. Career self-efficacy is negatively related to career indecision, to vocational identity, more adaptive career beliefs, fear of career commitment, career exploratory behaviour and academic persistence (Betz, Hammond & Multon, 2005). Self-efficacy is central to social cognitive career theory and to the career development of women, racial and ethnic minorities, elderly people, disabled people and female offenders (Betz *et al.,* 2005). Van Hoye (2013) proposes that strengthening individuals' self-efficacy beliefs should be part of the employment counsellors' agenda as it increases job-seeking behaviours.

Self-efficacy is a mediator of behavioural change (Betz & Hackett, 1981), i.e. a variable that is intermediate between an independent variable (a coaching intervention) and a final outcome (job seeking behaviours) (Olsen, 2004). Self-efficacy expectations are separate from outcome expectations and need to be differentiated as outcome expectations refer to the belief that certain results will follow a particular behaviour as a consequence of that behaviour (Hackett & Betz, 1981; Bandura, 1977). Individuals with low self-efficacy expectations may not perform a certain task even if a person is certain that performing a particular task would lead to a successful outcome. Hence, it is self-efficacy and not outcome expectation that is a primary cognitive determinant of a person's attempting of a certain behaviour (Hackett & Betz, 1981). Hackett & Betz (1981) propose that psychological interventions designed to change an individual's behaviour should focus on strengthening a person's self-efficacy.

Betz & Hackett (1981) link social cognitive theory to career behaviour and find that college women have higher self-efficacy in career areas that were traditionally occupied by women. SCCT maintains that people's behavioural choices are affected by their self-efficacy ("*Can I do this?*") and beliefs about the consequence or outcomes of performing particular behaviours (outcome expectations: "*If I do this, what will happen?"*). Social cognitive theory is an approach to understanding people's behaviour, actions and emotions that assumes that human beings are actively shaping their environment - rather than being passive recipients - through self-observation, self-reflection, environmental events and through one's perception of his/her patterns of behaviour in interactions with others (Maddux, 2005). Bandura's theory, however, has been directly critiqued by Biglan (1987), a behaviour-analyst, who argued that correlation between self-efficacy and other behaviours cannot be explicitly established and a role of environmental factors as mediating factors should be taken into account.

SCCT is also concerned with the psychological and social effects of gender and ethnicity as being important in career development due to the social-cultural environment that, in turn, links to the opportunity structure. It explicitly recognises that individual employability or career choice preferences are not always possible due to environmental factors such as: constraints by family wishes, economic situation of the individuals, quality of one's prior education (Lent, 2013). According to the SCCT theory gender and ethnicity impact self-efficacy and outcome expectations. They create biases in terms of career expectations (male and female professions) and in terms of culturally defined gender-appropriate roles (Hackett & Betz, 1981). Self-efficacy and outcome

expectations will influence individuals' goals and will impact a choice of career-oriented actions (job seeking behaviours). Students having difficulties completing their maths courses (learning experiences) will revalue their self-efficacy beliefs and outcome expectations and will revise their career paths accordingly. Also, cultural and gender role socialisation, types of careers available to role models and skill learning opportunities will have an impact on students' self-efficacy and outcome expectations, shaping their career interests.

Knight & Yorke (2001) base their employability concept, 'Skills *plus* Project', on Bandura (1987) and claim that self-efficacy as a significant part of an individual's employability and that the higher education curricula and teachers in higher education should appreciate the importance of personal beliefs and self-efficacy (Lees, 2002). Kumar (2007) claims that self-efficacy is a form of a 'can-do' attitude that plays a critical role in determining students' academic goals and paths, their career choices and their potential success or failure. Locke & Latham (1990) state that the stronger the perceived self-efficacy the higher the goals people set up for themselves and the firmer their commitment to these goals.

Betz & Voyten (1997) support the link between students' self-efficacy and their career indecisions. They advocate that career counsellors and educators should assess students' self-efficacy in order to be able to have conversations with students about their avoidance of certain career behaviours. Van Hoye (2013) proposes that strengthening individuals' self-efficacy beliefs should be part of the employment counsellors' agenda as it increases job-seeking behaviours. Self-efficacy has been widely recognized as a practical way of understanding the link between beliefs and behaviour, including job search behaviours. Self-efficacy is considered an important link between a person's confidence and their perceived abilities (Nasta, 2007). It influences how a person will feel, think, behave and motivate himself or herself (Bandura, 1993).

Daniels, D'Andrea & Gaughen (1998) and Washington (1999) treat self-efficacy and employability interchangeably by viewing employability as a reflection of a person's belief about possibilities of getting new employment. Knight & Yorke (2002) see self-efficacy as an important dimension of employability. Knight & Yorke (2004) view employability as an outcome of four different components, namely: understanding, skilful practice (including deployment of skills), efficacy beliefs (students' views of themselves and personal qualities) and metacognition (students' self-awareness regarding, and capacity to reflect on, their learning). Dacre Pool & Sewell (2000) also

place self-efficacy at the core of their model. Bandura (1997a) and Van der Velde & Van den Berg (2003) propose that employability is largely dependent on self-efficacy, which has been shown to be positively related to job seeking behaviours (Kanfer *et al*, 2001). Fugate, Kinicki & Ashforth (2004) link strengthening employability skills to a strengthening of efficacy beliefs. Bernston, Na Swall, & Sverke (2008), on the other hand, argue that employability and self-efficacy are two separate constructs that are possibly related. They believe that employability is not an expression of self-efficacy but that strengthening of employability perceptions might impact self-efficacy. Self-efficacy falls under personal attributes within the employability skills and is an important dimension of employability (Knight & Yorke, 2004).

Bandura's (1977) self-efficacy theory has been applied to the career development field by many others including mathematics self-efficacy, self-efficacy for specific occupations, career search efficacy (Betz *et al.*, 2005). Schunk & Pajares (2001) look at self-efficacy in an academic context. They state that females usually have higher self-efficacy than males. They note that much less research on self-efficacy has been done in relation to ethnic differences. Research so far shows that minority students have lower self-efficacy than non-minority students, however, studies that have been conducted have not controlled socioeconomic status (Schunk & Pajares, 2001). They also discuss that as students adapt through a school transition their self-efficacy decreases due to greater competition, less teacher attention to individual progress, increasingly challenging academic tasks. Ability grouping can also negatively impact students' self-efficacy (Schunk & Pajares, 2001). Schunk & Pajares (2001) call for more studies on self-efficacy for different educational groups and domains.

In summary, a person's gender, ethnicity, cultural background and learning experiences generate his/her self-efficacy beliefs and positive expectations for future outcomes that, in turn, generate his/her particular career interests leading to particular career goals, choices and actions (see Figure 2.3. in the next section).

2.4.2. Social Cognitive Career Theory as an Employability Efforts Conceptual Framework

Social Cognitive Career Theory provided a conceptual framework, with coaching as a learning tool and employability efforts added to the model in red font (see Figure 2.3. below), for this research as it has been designed specifically for the career development and employability efforts of

different groups of people (including students). In particular, it is concerned with the psychological and social effects of gender and ethnicity as being important in career development due to the social-cultural environment that, in turn, links to the opportunity structure. It explicitly recognises that individual employability or career choice preferences are not always possible due to environmental factors such as: constraints by family wishes, economic situation of the individuals, quality of one's prior education (Lent, 2013).

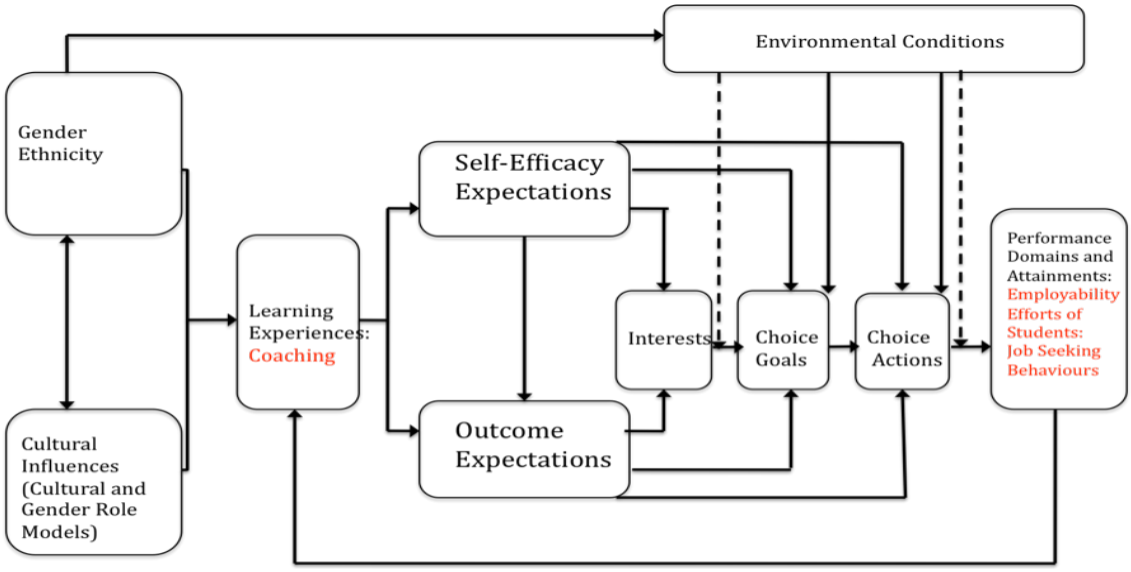

Figure 2.3: Conceptual Framework adapted from SCCT (Brown & Lent, 2013)

Learning Experiences: Coaching as a Learning Tool

As it has been discussed in the previous section people's choices and engagement in a particular behaviour are directly linked to their self-efficacy and outcome expectation. Faulty or incorrect self-efficacy or outcome expectation beliefs limit or eliminate occupational and vocational choices people will make (Brown & Lent, 1996). Certain interventions focused on eliminating or modifying faulty self-efficacy or outcome expectation beliefs, on reducing perceived barriers to an occupation, on action plans to overcome barriers, on helping students to develop new performance experiences and to re-analyse their past experiences can have a positive impact on their career-related behaviours (Brown & Lent, 1996).

A coaching intervention was being proposed as a proxy for Learning Experiences in this study. Coaching can be seen as a positive influence that helps individuals to align their behaviour with career goals (Shapiro *et al.*, 2015). Coaching has been confirmed as an effective learning tool

(HEA, 2012; Skiffington & Zeus, 2003) and has been also linked to increased self-efficacy (Baron *et al*., 2011; Evers *et al*., 2006). Evers *et al.* (2006) conducted a quasi-experimental study measuring the effectiveness of coaching in increasing self-efficacy and outcome expectations for sixty managers over a period of four months and found that the coached group's levels of self-efficacy increased significantly more than the control group. Dweck (2006) developed a series of growth mindset coaching workshops for students at Stanford University and found that students' academic performance increased significantly due to coaching. Baron *et al*. (2011), in their field study in a large North American manufacturing company, studied an effect of coaching relationship (working alliance) on coachees' self-efficacy. They examined junior and mid-level managers who received coaching over a period of eight months. The study concluded that individuals coached by coaches who put greater emphasis on the coaching relationship experienced a significant increase in self-efficacy. The study was statistically significant, although the sample size was small (30 managers and 43 coachees) and, being a field study with recently trained internal coaches, was not easily generalisable. Stewart, O'Riordan, & Palmer (2008a) found moderate positive correlation between client's self-efficacy and coaching outcome. Baron & Morin (2009) showed that client's self-efficacy explained 25 per cent of the coaching outcome variance. De Haan *et al.* (2013) found that self-efficacy had a strong mediating impact on coaching relationship and on coaching outcomes.

Effectiveness of coaching, as a learning tool to increase students' career self-efficacy and job seeking behaviours, will be explored in the following research questions:

RQ1. *Is career coaching effective in increasing students' self-efficacy, outcome expectations and their employability efforts?*

> RQ1a. *What aspects of the coaching relationship are most effective in increasing students' self-efficacy, outcome expectations and their employability efforts?*

Effectiveness of coaching intervention will be explored in the following hypothesis:

H_1: Coaching intervention increases career self-efficacy, outcome expectation and job seeking behaviours of HE students.

Career Self-Efficacy, Self-Efficacy and Outcome Expectations

SCCT claims that people's career decisions will be influenced by their self-efficacy and outcome expectations as individuals will be considering what their family wants them to do and whether their skills are sufficient for a given career choice. SCCT also points out that people who overestimate their abilities, resulting in unrealistic high self-efficacy, may attempt tasks for which they are not ready, leading to failure and discouragement (Lent, 2013). Brown & Lent (1996) claim that people might eliminate certain occupation choices as a result of their faulty self-efficacy and outcome expectation beliefs. Helms & Piper (1994) also claim that a person's expectation or belief of his or her race being a significant predictor of his/her career option is an important factor in his/her vocational behaviours, for example certain ethnicities might believe that certain careers are only available to White people or that some career options have less status in their communities. Ali *et al.* (2005) found that students with higher self-efficacy also have higher outcome expectations.

Goals are intentions, influenced by self-efficacy and outcome expectation, about doing something, and are sources of motivation to organise behaviours that link to actions (Jantzer *et al.,* 2009). In this study, self-efficacy and outcome expectations are hypothesised to be predictors of employability efforts (measured as job seeking behaviours). This is consistent with Betz & Hackett's (2006) claims that self-efficacy is a set of self-beliefs and as such needs to be measured against some type of behaviour or with reference to specific domains of behaviour using traditional methods of evaluation such as internal consistency, test-retest reliability or construct validity such as Cronbach alpha.

"Self-efficacy is concerned not with what I believe I *will* do but with what I believe I *can* do." (Maddux, 2005, p. 278). Bandura (1986, p. 391) defines self-efficacy as "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performance." Self-efficacy is not a perceived skill or predictions about behaviour. It is not a drive or motive. One can have a strong need for a particular behaviour but have a weak belief about one's efficacy in this domain. Self-efficacy is not an outcome-expectation or a personality trait. Self-efficacy beliefs develop over time, starting from infancy, and develop through life experiences. They are influenced by the capacity for symbolic thought and for understanding cause-and-effect relationship, by the capacity for self-observation and self-reflection and by the responsiveness of social environment to a person's (parents are the most responsive part of a

child's social environment) manipulation and control. Nonresponsive environments lower self-efficacy whereas responsive ones encourage stronger self-efficacy beliefs (Maddux, 2005). Outcome expectation and self- efficacy are often confused in the literature (Constantino *et al*., 2011; Maddux, Norton & Stoltenberg, 1986). The concepts are related but they are not the same (Pintrich & Schunk, 1996). Maddux, Sherer & Rogers (1982) postulate that self-efficacy and outcome expectation are independent of each other. Their study found that an increase in outcome expectation has a positive impact on participants' intentions to perform a certain behaviour and increase in self-efficacy expectation has no impact on participants' intentions to perform a certain behaviour. Participants are more likely to perform a relatively difficult behaviour if they believe it is going to result in a favourable outcome (Maddux *et al.,* 1992). Maddux *et al.*'s (1986) study confirms that outcome expectation and self-efficacy expectation are independent in predicting behavioural intentions.

This study assesses self-efficacy using a career self-efficacy concept that has been developed theoretically by Hackett & Betz (1981) and conceptually by Betz & Hackett (1981) as a result of the application of Bandura's (1997a) self-efficacy theory to career development. Betz & Hackett's (1981) original application of Bandura's (1977) work related to women's career development and progresses over time to career development of specific groups, including race, disability or female offenders (Betz & Hackett, 2006). Betz & Hackett (1981) and Betz & Hackett (2006) tested career-related self-efficacy expectations of 134 female and 101 male undergraduate students and found significant and consistent sex differences with respect to traditional and non-traditional occupations. Women had high self-efficacy expectations with regard to traditional female roles such as social workers, secretaries, dental hygienist whereas males' self-efficacy was much higher than females with regard to occupations such as accountants, mathematicians and engineers (Betz & Hackett, 1981). Career self-efficacy is an umbrella term, to be used for career self-efficacy beliefs, that relates to career-related domains of behaviour (Betz & Hackett, 2006).

Career self-efficacy beliefs are correlated with motivation to seek or avoid career behaviours (Betz & Taylor, 2001). Individuals with low levels of career self-efficacy tend to procrastinate or delay in making their career decisions and are less likely to follow their decisions through (Betz, 1992). Career self-efficacy is a mediator between personality traits and job search outcomes (Zimmerman *et al*., 2012) and one of the best predictor of job-searching behaviours (Zimmerman *et al*., 2012; Niles & Sowa, 1992). Anderson & Betz (2001) linked career self-efficacy to career development

and career activities. Career self-efficacy is negatively related to career indecision, to vocational identity, more adaptive career beliefs, fear of career commitment, career exploratory behaviour and academic persistence (Betz *et al.*, 2005). Zikic & Saks (2009) hypothesise that job search (or career) self-efficacy is positively linked to job search intention and job search intention is positively linked to job search intensity.

Feehan & Jonston (1999) also link career self-efficacy to job-seeking behaviours via looking at the career-efficacy in the context of a concept linked to career self-efficacy, a career choice that is an expression of a person's personality, known as Holland's Theory (Holland, 1997). They tested 237 high school students, who were underachieving academically and who participated in a career planning course. They quantitatively measured the task-specific self-efficacy of students and correlated it and regressed it against students' self-directed search (Holland, 1997) and found a statistically significant correlation between both concepts. They also confirmed Betz & Hackett's (1981) findings that there are gender differences in career self-efficacy. The major limitation of their study was a time-lag of 100 days in between distributing both measuring instruments to students.

These issues will be explored via the following research questions:

RQ1b. *What are students' self-efficacy and outcome expectation beliefs?*
RQ2. *Are students' career decision self-efficacy and vocational outcome expectations associated with their job seeking behaviours?*

The links between self-efficacy (measured as career decision self-efficacy), outcome expectations and students' employability efforts are explored through the following hypotheses:

H_2. Students' career decision self-efficacy is correlated with their job seeking behaviours.
H_3: Students' career decision self-efficacy is a predictor of their job seeking behaviours.
H_4: Students' vocational outcome expectations are a predictor of their job seeking behaviours.
H_5. Students' vocational outcome expectations are correlated with their job seeking behaviours.

Gender and Ethnicity and Cultural Influences

Students may rule out career choices due to their restricted gender views or due to unrealistically low career self-efficacy (Lent, 2013). This research aims to investigate the impact of gender and

ethnicity on students' career decision self-efficacy, and, subsequently, on students' employability efforts. Gender and ethnicity issues are clearly recognised in the SCCT (Lent, 2013). Gender stereotypes result in individuals' inaccurate self-efficacy beliefs and outcome expectations (Heppner, 2013). Heppner (2013) notes that according to a recent United Nations report women have not achieved equity with men in any country. The majority of women earn an average of three-quarters of the pay of men for doing the same work. Women are also underrepresented in STEM (science, technology, engineering and maths) careers across the world. Children learn occupational stereotypes early in life and their beliefs persist in the unconscious despite their later experiences (Heppner, 2013). Correll (2001) found that culturally held stereotypes about gender impact women competence at career-related tasks. Gender issues also affect men in the helping professions such as nursing or stay at home fathers (Heppner, 2013).

Ethnicity and culture influence learning experiences that a young person will be encouraged to have (Gushue, 2006). This study focused on ethnicity rather than race following Helms & Piper's (1994) view that racial classification is not the only valid predictor of vocational behaviours since vocational behaviour is not biogenetically determined by a person's biologically inherited features such as skin colour, i.e. race. Instead, cultural conceptualisations and dimensions of race impact vocational behaviours because of their emphasis on styles of behaviours. However, racial salience[13] is a crucial predictor of a person's vocational behaviour (Helms & Piper, 1994).

There is no one universal definition of ethnicity in the literature, however, the consensus is that ethnicity is characterised by a sense of group-belonging based on shared history, culture and language, with culture being most emphasised (Brown, 2010). Doornbos (1991) points out that ethnicity needs to be examined by research rather than being used as an explanatory variable.

Bandura (1997a) found that cultural constrains were influencing women's career development and that the parental attitudes, through gender socialisation, determined gender stereotypes in terms of career considerations. Social gender roles impact people's career choices and talents they develop as gender stereotypes form as early as age two (Jantzer, Stalides & Rottinghaus, 2009). Parental advice and media messages are also considered to be important factors shaping gender roles (Shapiro, *et al.*, 2015). Mothers' distribution of housework allocation will impact children's attitudes towards work (Raley & Bianchi, 2006) and parents' influence, as filters and interpreters

[13] A degree to which a person expects or believes that his/her race to be a significant factor with regard to his/her career options (Helms and Piper, 1994).

of reality, will also influence children's academic values, choices of extracurricular activities and their career goals and aspirations (Jodl *et al.*, 2001).

Career self-efficacy, outcome expectations and career progress of ethnic students (African American women, Hispanic and Asian American) are affected by role modelling, racist experiences and social expectations to pursue certain careers (Lent & Shau, 2010; Hackett & Byars, 1996). Culture also influences learning experiences of young people (Gushue, 2006).

These issues will be explored via the following research question:

RQ2b. *What is the impact of gender and ethnicity on students' self-efficacy, outcome expectations and employability efforts?*

The links between gender and ethnicity and students' career decision self-efficacy, outcome expectations and employability efforts will be explored in the following hypotheses:

H_6. Male students have higher career decision self-efficacy levels than female students.
H_7. Caucasian students have higher career self-efficacy than other ethnicities.
H_8. Male and Female students have different vocational outcome expectation levels.
H_9. Different ethnic groups of students have different vocational outcome expectation levels.

Interests, Choice Goals, Choice Actions

Bandura (1982) argues that although knowledge, transformational operations and skills are necessary elements for accomplished performance, they are not sufficient. People's judgement of their capabilities and their levels of self-efficacy will affect their motivation and behaviour. People do not behave optimally even when they know what they need to do. Bandura (1977) says that perceived self-efficacy is a better predictor of behaviour than past performance. He also says that perceived self-efficacy is a better predictor of future behaviour than actual performance, something that might be very important in terms of accounting students' attempts to seek employment.

Bandura (1977) recognises different sources of efficacy expectations, mainly: performance accomplishments, vicarious experience, verbal persuasion and emotional arousal. Performance accomplishment is based on a person's so-called mastery experiences. The more repeated success the person experiences the stronger his/her self-efficacy. Bandura (1977) notes that there is not

enough knowledge on how specific mastery experiences produce generalized and lasting changes in behaviour. Vicarious experiences can be defined as seeing others performing activities perceived by a person as threatening (Bandura, 1977). Levels of self-efficacy can be increased by an individual persuading himself/herself that if others can do it, he or she should be also able to achieve an improved performance. Bandura (1977) points out that vicarious experiences are less reliable than direct evidence of personal accomplishments and, subsequently, the efficacy expectations induced by modelling alone will be weaker and more prone to change. Verbal persuasion is described by Bandura (1977) as leading people to believe, through suggestion, that they can cope successfully with what they found overwhelming in the past. Bandura (1977) believes that efficacy expectations induced this way are again much weaker than those derived from a person's own accomplishments as they are not authentic and can be easily extinguished in the face of difficult and distressing events as a long history of failure will prevail. Bandura (1977) points out that the impact of verbal persuasion on self-efficacy depends on the perceived creditability, trustworthiness, prestige, expertise and assuredness of the person who acts as the persuader. Verbal persuasion can be contributed to increased self-efficacy if the person has some reason to believe that they can produce effects through their actions and it is within realistic bounds (Bandura, 1982).

According to Bandura (1977) lasting changes in self-efficacy and behaviour are only achieved when people master their perceived threats independently. Varied opportunities for self-directed accomplishments should be provided to individuals but any external aids to verify personal efficacy should be removed. This way self-directed mastery is borne and people are able to generalise their expectations of personal efficacy based on their independent achievements. Individuals with high-levels of self-efficacy are more likely to achieve tasks and goals whereas individual with low self-efficacy suffer from self-doubt that hinders their goal achievement (Bandura, 1977). Hence, self-efficacy beliefs influence people's behaviours and actions (Nasta, 2007). This belief is a function of direct and often transformational experiences, social influences and logical thinking. The person's judgement on his level of self-efficacy will determine whether he or she will initiate a behaviour, how much effort he/she will put into it, how long the person will persist despite obstacles or difficulties (Bandura, 1982, 1997a). The higher level of self-efficacy, the greater the performance accomplishment (Bandura, 1977, 1982, 1989).

The links between students' interests, choices of goals and corresponding actions were indirectly explored through the following research question:

RQ1b. *What are students' self-efficacy and outcome expectation beliefs*?

Environmental Conditions

Environmental Conditions (also called distal influences[14]) are defined by SCCT as both support and barriers leading to behaviours that align or not with career goals such as: social support, deferring career decisions to significant others in the family regardless of an individual's preference; financial and emotional support for a chosen career path and sociostructural barriers such as: discrimination, socioeconomic status, job and training opportunities, family training and resources, neighbourhood and community influences (Lent, 2013). Career barriers are defined as "events or conditions, either within the person or his environment, that make career progress difficult" (Swanson & Woitke, 1997, p.446). SCCT recognises that certain conditions may directly affect people's choice of career goals and actions depending on their culture and socioeconomic structure. Also, individuals are much more likely to obtain their goals if they experience strong environmental support and weak barriers into their preferred career paths. These barriers and contextual support are moderating factors in individuals attaining their employability goals (Shapiro *et al.,* 2015; Lent, 2013). Also, due to economic reasons, people often choose according to job availabilities and not according to their personal choices (Lent, 2013). Environmental factors that are distal, i.e. further removed, to career choices shape the development of self-efficacy and outcome expectations whereas environmental factors that are proximal, i.e. nearer to points of career choices moderate interest and goals and their transformation into actions (Marrow *et al.,* 1996). For example, Helms & Piper (1994) found that a person's perception of the ethnic climate in a particular workplace would affect his/her career choice. If a person perceived the workplace as racially hostile then he/she would develop less occupational interest in that particular field (an example of a distal influence) or apply for a particular position within this company (an example of a proximal influence). The distinction between distal and proximal environmental factors is often

[14] Environmental factors that are distal, i.e. further removed, to career choices shape the development of self-efficacy and outcome expectations whereas environmental factors that are proximal, i.e. nearer to points of career choices moderate interest and goals and their transformation into actions (Marrow et al. 1996). The distinction between distal and proximal environmental factors is often subjective as an environmental barrier can sometimes both directly affect actions and be also internalised as negative outcome expectations (Marrow et al. 1996).

subjective as an environmental barrier can sometimes both directly affect actions and be also internalised as negative outcome expectations (Marrow *et al.*, 1996).

Metheny & McWhirter (2013), who tested 270 male and female undergraduate students, found that family social status as well as family and parental support impact career decision self-efficacy and career outcome expectations and are mediated by college students' perception of their social standing. Low social economic status families have higher levels of perceived barriers to career choices, lower career self-efficacy and lower aspirations and expectations (Ali *et al.*, 2005). Parents' aspirations and expectations are more important in career choices than parents' education or occupation (Metheny & McWhirter, 2013). Supportive parents influence adolescents' expectations (McWhirter, Hackett & Bandalos, 1998) and result in higher career self-efficacy (Gushue & Whitson, 2006) and vocational outcome expectations (Isik, 2013). Peer support also influences career self-efficacy and both siblings and peers can act as influential role models and can be perceived as a valuable source of support and career information (Ali *et al.*, 2005).

Environmental conditions will be explored through the following research question:

RQ2a. *What cultural influences and environmental conditions (such as Perceived Barriers or Support to Preferred Careers, Cultural Influences, Family Expectations, Perceived Social Support, Socioeconomic Status, Family Role Models and Gender & Ethnicity Barriers to Chosen Careers) impact students' self-efficacy, outcome expectations and employability efforts?*

The mediating and moderating effect of gender and ethnicity on students' career decision self-efficacy, outcome expectations and employability efforts will be explored in the following hypotheses:

H_{10}. Gender is a moderator between students' career decision self-efficacy and their job seeking behaviours.
H_{11}. The combination of gender & ethnicity moderates students' career decision self-efficacy and their job seeking behaviours.
H_{12}. Students' ethnicity and job seeking behaviours are mediated by students' career decision self-efficacy.
H_{13}. Ethnicity moderates students' career decision self-efficacy and their job seeking behaviours.

H_{14}: The combination of gender & ethnicity moderates students' vocational outcome expectations and their job seeking behaviours.

H_{15}. Students' ethnicity and job seeking behaviours are mediated by students' vocational outcome expectations.

H_{16}. Ethnicity moderates students' vocational outcome expectations and their job seeking behaviours.

H_{17}. Vocational outcome expectations moderate students' career decision self-efficacy and their job seeking behaviours.

H_{18}. Vocational outcome expectations mediate students' career decision self-efficacy and their job seeking behaviours.

Performance Domains and Attainments: Employability Efforts as Job Search Behaviours

Employability Efforts were chosen to represent Performance Domains and Attainments from the original SCCT model. Employability and employment cannot be used interchangeably as being employed means a job acquisition whereas employability refers to graduates who are capable of being employed (Lees, 2002) and it encompasses different skills discussed in the previous section.

All models of employability discussed in Chapter II put employability as an outcome. Having said that, measuring employability skills and outcomes has been inconsistent and existing studies have failed to empirically evaluate changes in young people's employability skills as a result of interventions (Blades *et al.*, 2012). The surveys often do not provide a comparison group and use un-validated scales and there is a need to develop a coherent set of employability skills measures (Blades *et al.*, 2012). Since employability focuses on development of soft skills, it has been suggested by various government reviews that it is difficult to propose a generic model or a set of indicators for measurement of employability soft outcomes that would fit all learners (Lloyd & O'Sulivan, 2004). The Effective Intervention Unit (2009) suggests a list of core employability outcomes and indicators that fall into four categories: personal development and social competence; basic work skills and attributes; core skills; personal effectiveness and aptitude. Since the soft outcomes measures are not standardised it is difficult to compare different employability studies (Blades *et al.*, 2012). Deloitte's (2010) review found that although suitable measures for accessing soft skills might be available or designed, the problems lay in finding or designing measures that can be valid, reliable and used effectively. The problem of the lack of appropriate measurement methods of employability soft outcomes is compounded by a lack of funding (Blades

et al., 2012). Blades *et al.*'s (2012) review of the academic literature finds that employability as whole is focused on using career-self efficacy (Rothwell & Arnold, 2007) and on generic skills (Van Der Heijde & Van Der Heijden, 2006). Blades *et al.*'s (2012) review of recent employability programme evaluations found that most evaluations included generic quantitative and qualitative measurements of employability that included confidence, problem solving, interpersonal skills, planning, communication skills and self-awareness.

In summary, there is an absence in the employability literature of the recommended employability outcome measures since employability relates to soft skills and subjective evaluations. Attempted measures of employability skills and outcomes have been inconsistent, a generic model or a set of indicators for measurement of employability soft outcomes has not been constructed and there are issues with designing soft skill measures that are valid, reliable and used effectively.

Hence, job search behaviours were chosen in a behavioural domain that acted a proxy for employability efforts in this study. It is a multidimensional construct defined in many different ways in the literature (Van Hoye, 2013). Measures of job search focus on use of job sources, job search intensity, or specific job search behaviours (Blau, 1993). There are few studies that have used identical and common measures, variables and criterion (Kanfer *et al.*, 2001). Hence, due to differences in job search behaviour measures it is difficult to compare them (Van Hoye, 2013). Based on the literature review, it was found that most job search behaviours use a modified version of Blau's (1994) research. Blau (1994, 1993) divided job search behaviours into *preparatory job search behaviours* (such as gathering initial information about potential job leads) and into *active job search* (such as sending out CV, contacting prospective employers, applying for jobs and going through an interview process). Blau (1994) found that job search was sequential, i.e. a preparatory phase was followed by an active phase.

2.4.3. Studies in Social Cognitive Career Theory

A meta-analysis of SCCT theory of 60 empirical independent samples confirms that self-efficacy is a strong predictor of career-related behaviours. Rottinghaus *et al.*'s (2003) review of 53 samples with 37,829 participants show a strong relationship (r=.59) between self-efficacy and career interest. This result confirms Lent *et al.*'s (1994) findings that self-efficacy explains vocational interests in approximately 30 per cent. Research also shows that self-efficacy predicts academic (Multon, Brown & Lent., 1991) and occupational performance (Sadri & Robertson, 1993). Multon

et al. (1991) found that self-efficacy was a significant factor for older students and for low-achieving students. Self-efficacy is also a good predictor of outcome expectations and predicts career-related choices, hence, promoting self-efficacy is important for career outcomes interventions (Lent, 2013) and for improvement in career commitment (Chung, 2002).

Researchers examined demographic variables (age, gender, ethnicity) related to career decision self-efficacy and found no significant gender differences in terms of career self-efficacy (Betz & Klein, 1996). Rottinghaus *et al.*'s (2003) meta-analysis of gender and age, as being possible moderators of self-efficacy, also confirms that gender and age are not statistically related to different levels of career decision self-efficacy. Rottinghaus *et al.* (2003) call for research that examines possible gender differences in cases where SCCT suggest that there might be the possibility of gender-role socialisation. Saks & Ashford (1999) also found that gender and age were not significant predictors of job seeking behaviours. The lack of gender differences in terms of career self-efficacy is consistent with the other studies (Betz & Taylor, 2012).

Ethnicity differences in career self-efficacy have been found statistically significant in various studies (Chaney *et al*., 2007; Peterson, 1993) that have both reported higher scores for African American students than those of Caucasian students. Chaney *et al*. (2007), Schunk & Pajares (2001) and Rottinghaus *et al.* (2003) point out that there is a need for research on self-efficacy in relation to ethnic differences as most career decision self-efficacy studies come from predominantly Caucasian groups of students. In contrast, Gloria & Hird's (1999) study examined 687 undergraduate students (86% White and 14% ethnic minorities) and found Caucasian students to have higher career self-efficacy than mixed group students. However, this might be due to a fact that the percentage of Caucasian students in their sample is much higher than of other groups of students. Chung (2002) additionally explains these findings as a result of the sample being drawn from a Rocky Mountain university in the United States with predominantly White students (95%).

Chung (2002), on the other hand, who has replicated the original Betz *et al*.'s (1996) study evaluating gender as a moderator of self-efficacy and included ethnicity as another moderator of self-efficacy, examined 165 undergraduate students from a Southern University in the United States with a large representation of Black ethnicity students and found no ethnic group differences in CDSE scores. Betz *et al.* (2005) also reported similar results to Chung (2002).

Finally, the SCCT ethnicity-related research has a few implications for career coaching. As Gloria & Hird (1999) point out, ethnic barriers account for ethnic differences in career decision self-efficacy and it is imperative that career development interventions address and integrate sociocultural context into the interventions (Leung, 1995) in order to provide a more holistic service to students (Gloria & Hird, 1999).

2.5. Conclusion

In summary, employability efforts, treated as a case of vocational behaviour, were analysed in the social cognitive behaviour context. In this chapter Research Questions 1 and 2 were linked to the research study, expressed as hypotheses, within the framework of Social Cognitive Career Theory. It has discussed the theory and relevance of self-efficacy, career self-efficacy, outcome expectations and issues of gender, ethnicity and role models to employability efforts and related it to the research questions and to the hypotheses. It explored the links between these factors and employability efforts and discussed the importance of addressing and integrating ethnicity and socio-cultural context in the programmes aimed at increasing employability efforts of students. A summary of research questions and corresponding research hypotheses is provided in Table 2.1. below.

Table 2.1: The Summary of Research Questions and Research Hypotheses

Research Questions	**Corresponding Research Hypotheses**
RQ1. Is career coaching effective in increasing students' self-efficacy and their employability efforts?	H_1: Coaching intervention increases career self-efficacy, outcome expectation and job seeking behaviours of students.
RQ1a. What aspects of the coaching relationship are most effective in increasing students' self-efficacy, outcome expectations and their employability efforts?	
RQ1b. What are students' self-efficacy and outcome expectation beliefs?	
RQ2. Are students' career decision self-efficacy and vocational outcome expectations associated with their job seeking behaviours?	H_2: Students' career decision self-efficacy is correlated with their job seeking behaviours. H_3: Students' career decision self-efficacy is a predictor of their job seeking behaviours. H_4: Students' vocational outcome expectations are a predictor of their job seeking behaviours. H_5: Students' vocational outcome expectations are correlated with their job seeking behaviours. H_{17}. Vocational outcome expectations moderate students' career decision self-efficacy and their job seeking behaviours. H_{18}. Vocational outcome expectations mediate students' career decision self-efficacy and their job seeking behaviours.
RQ2a. What cultural influences and environmental conditions (such as Perceived Barriers or Support to	

Preferred Careers, Cultural Influences, Family Expectations, Perceived Social Support, Socioeconomic Status, Family Role Models and Gender & Ethnicity Barriers to Chosen Careers) impact students' self-efficacy, outcome expectations and employability efforts?	
Research Questions	**Corresponding Research Hypotheses**
RQ2b. What is the impact of gender and ethnicity on students' self-efficacy, outcome expectations and employability efforts?	H_6: Male students have higher career decision self-efficacy levels than female students. H_7: Caucasian students to have higher career self-efficacy than other ethnicities. H_8. Male and Female students have different vocational outcome expectation levels. H_9. Different ethnic groups of students have different vocational outcome expectation levels. H_{10}. Gender is a moderator between students' career decision self-efficacy and their job seeking behaviours. H_{11}. The combination of gender & ethnicity moderates students' career decision self-efficacy and their job seeking behaviours. H_{12}. Students' ethnicity and job seeking behaviours are mediated by students' career decision self-efficacy. H_{13}. Ethnicity moderates students' career decision self-efficacy and their job seeking behaviours. H_{14}: The combination of gender & ethnicity moderates students' vocational outcome expectations and their job seeking behaviours H_{15}. Students' ethnicity and job seeking behaviours are mediated by students' vocational outcome expectations. H_{16}. Ethnicity moderates students' vocational outcome expectations and their job seeking behaviours.

The Methodology chapter next will discuss the research strategy and the research design used for addressing these research questions and hypotheses. It will explain sampling, data collection and measurements of constructs. It will also discuss how data are to be analysed, what ethical issues are anticipated and how they will be addressed, and, finally, what the strengths and limitations of the chosen the methodology are.

III. METHODOLOGY

3.1. Introduction

Previous chapters discussed the background of the study and provided an overview of the employability agenda issues faced by Higher Education Institutions, and current debates surrounding these issues. The overview of coaching, its effectiveness and its role as a learning tool was provided. Finally, the Social Cognitive Career Theory conceptual framework was examined in depth.

This chapter first discusses the research epistemology for the study and examines how the research philosophy informed its mixed methods research (MMR) approach[15]. The research philosophy discussion is followed by the research design and then the description of the mixed methods procedures is given. The Sampling Design section provides the details of the case study and the research site as well as the description of the participant sampling and sampling phases. The Research Instrument section is followed by a discussion of the approaches to quantitative and qualitative analysis. Then the issues of reliability, validity and transferability of research results are discussed. The final sections discuss the ethical issues and limitations of the study.

This research examines the link between career coaching, career self-efficacy, and the employability efforts of Higher Education (HE) students. The following research questions informed this study (the types of research questions are stated in brackets as recommended by Plano Clark & Badiee, 2010):

RQ1. *Is career coaching effective in increasing students' self-efficacy, outcome expectations and their employability efforts?* [MM]

RQ1a. *What aspects of the coaching relationship are most effective in increasing students' self-efficacy, outcome expectations and their employability efforts?* [QUAL]

RQ1b. *What are students' self-efficacy and outcome expectation beliefs?* [QUAL]

[15] Denzin & Lincoln (2011) claim that MMR is both a methodology (that involves philosophical assumptions) as well as the methods that use qualitative and quantitative data.

RQ2. *Are students' career decision self-efficacy and vocational outcome expectations associated with their job seeking behaviours?* [QUAN]

RQ2a. *What cultural influences and environmental conditions (such as Perceived Barriers or Support to Preferred Careers, Cultural Influences, Family Expectations, Perceived Social Support, Socioeconomic Status, Family Role Models and Gender & Ethnicity Barriers to Chosen Careers) impact students' self-efficacy, outcome expectations and employability efforts?* [QUAL]

RQ2b. *What is the impact of gender and ethnicity on students' self-efficacy, outcome expectations and employability efforts?* [QUAN]

Specifically, the research investigates – using MM - whether career coaching, used as an employability enhancing tool in Higher Education, can be effective in increasing students' levels of career self-efficacy and, as a result, their employability efforts. It explores quantitatively the relationships between students' career decision self-efficacy, vocational outcome expectations and employability efforts (preparatory job seeking behaviours, active job seeking behaviours and job search intensity). This research also examines qualitatively what aspects of coaching relationship are most effective in changing students' career self-efficacy beliefs, outcome expectations and employability efforts. The research further explores, through interviews with students and career coaches, factors affecting students' self-efficacy beliefs and outcome expectations such as gender, ethnicity, perceived social support, socioeconomic status, cultural influences and gender role models. The study positions coaching as a learning tool and an employability enhancing strategy to support students' employability efforts, their self-efficacy beliefs.

The study contributes to mixed methods research as adopting a mixed method research design allows to examine quantitatively the relationships between students' career decision self-efficacy, vocational outcome expectations and employability efforts and to explore qualitatively what aspects of coaching relationship were most effective in changing students' career self-efficacy beliefs, outcome expectations and employability efforts.

3.2. Research Epistemology

Epistemology can be defined as "the theory of knowledge embedded in the theoretical perspective" (Crotty, 2003, p.3) as is concerned with the exploration of the socially constructed world (*social*

reality) in terms of its nature (*ontology*[16]) and a related set of assumptions about the way human beings can obtain the knowledge of the world around them (*epistemological assumptions*) (Blaikie, 2009). Epistemology is concerned with which scientific procedures provide reliable scientific knowledge. Any study that conducts a social enquiry faces epistemological dilemmas, for example whether it is possible to be objective in the social enquiry (*objectivism*) or whether it is possible to determine whether explanations are true or false (Blaikie, 2009). *Objectivism* views reality as independent of the observer - "a tree is a tree regardless of who observes it" (p.18) - and hence the role of the research is to discover the built-in meaning of an object they want to investigate. The discovered meaning of an object (the truth) should be the same for all researchers. *Subjectivism,* on the other hand, assumes that the truth depends on the observer, i.e. the researcher gives a meaning to a studied phenomenon and, hence, the discovered meaning of an object (the truth) will be different for different observers (Blaikie, 2009). This dualist view of reality and knowledge acquisition (mind and matter) forms the basis of modern epistemology (Biesta, 2010).

Dewey (1925), on the other hand, rejected the dualist view of the deterministic universe as he believed in the evolutionary universe in which human beings co-create reality (Biesta, 2010). As a result, he offered a different way of looking at knowledge and reality by proposing the theory of knowing which says that all experiences are real and an experience itself does not provide the researcher with knowledge (Biesta, 2010). Knowledge is acquired by "purposefully introducing changes which will alter the direction of the course of events" (Dewey, 1929, p.81) and, ultimately, knowledge is the relations between actions and consequences. The dualistic approach sees objects of knowledge as things that exist in the outside world to be discovered whereas Dewey sees the objects of knowledge as the outcomes of the process of inquiry (Biesta, 2010). As knowledge is gained by observing the relationship between actions and consequences the outcomes should be only seen as probabilities and not certainties (Biesta, 2010). As a result, Dewey's notion of truth is also different, i.e. the research can only provide insights into possibilities. The conclusion one reaches might apply to one situation but not necessarily to another as the determinants of the other situation might be different, however, the conclusions from one situation can be still transferred to another situation as a way to guide our perception and suggest possible ways forward (Biesta, 2010).

[16] It is difficult to separate ontology (the nature of what exists) and epistemology (how the social reality be known?) as the assumptions about social phenomena will impact the ways that knowledge can be gained about them (Blaikie, 2009).

This study, following Dewey's theory of knowing, adapts *pragmatism*[17] as its epistemology. Pragmatism was also proposed by Morgan (2014) and Onwuegbuzie, Johnson & Collins (2009) as a philosophical justification for MMR. Pragmatism, often overlooked as a philosophy for social research (Morgan, 2014), views knowledge as being socially constructed with the reality of the world based on one's experiences (Johnson, Onwuegbuzie & Turner, 2007). The truth and the world outside is described by sentences limited to human vocabularies and since vocabularies change, hence, truths will differ depending on historical periods (Macintosh & Baker, 2002). Pragmatism abandons arguments about the nature of reality as the essential determinant of the research approach (Morgan, 2014). It treats debates about quantitative and qualitative approaches as a false dichotomy based on a researcher community's shared beliefs (Kuhn, 1996) of what is meaningful or acceptable (Morgan, 2014). Instead, pragmatism emphasises that experience is the continual interaction of beliefs and action and recognises the value of utilising the strengths of different methods rather than starting research from a position of epistemological purity that is dictated by an abstract philosophical system (Morgan, 2014). Bryman (2007) argues that epistemological differences between quantitative and qualitative methods are inflated and the whole discussion about the differences between the two methods is artificial. Pragmatism is an alternative paradigm where knowledge results from taking action and experiencing outcomes (Hall, 2013).

Following its philosophical stance of pragmatism, the study further employs multiple paradigms - '*methodological eclecticism*[18]' – as this approach contributes to a greater understanding of a research problem (Denzin & Lincoln, 2011; Teddlie & Tashakkori, 2010). Denzin & Lincoln (2011) and Teddlie & Tashakkori (2010) discuss that the research paradigm changes depending on different stages of research design[19]. Typically, research literature connects MMR with *constructivism* (qualitative part) and *post-positivism* (quantitative part), in essence, combing two paradigms[20] (Morgan, 2014; Denzin & Lincoln, 2011; Onwuegbuzie *et al.*, 2009).

[17] Pragmatism views knowledge as being socially constructed with the reality of the world based on one's experiences (Johnson, *et al.,* 2007).
[18] Selecting and integrating the most appropriate techniques – QUAN, QUAL or MMR – not to cancel out weaknesses of any of the methods but in order to select the best technique and tools available for answering each research questions (Teddlie & Tashakkori, 2010).
[19] MMR allows the use of the range of paradigms as it is underpinned by *paradigm pluralism* (Teddlie & Tashakkori, 2010).
[20] Having said that, the MMR approach has strong opponents who see it as a postpositivistic pragmatic approach that either has all characteristics of positivism (Giddings, 2006) or that fails to understand the deeper epistemological roots of qualitative methods (Howe, 2004).

Hence, the quantitative stage of this study is grounded in *post-positivism*[21], recommended in the MMR literature as the best paradigm for a quantitative design (Denzin & Lincoln, 2011; Creswell *et al.* 2003). A *post-positivist* view of knowledge recognises that when it comes to human behaviour - students' job seeking behaviours in this study - one cannot be certain about the claims of knowledge as an independent reality can be only estimated but never explained completely (Onwuegbuzie *et al.*, 2009).

In a qualitative phase, this research adopts a *social constructionism*[22] approach. *Social constructionism* is characterised by understanding that the world is organised into meaning by each individual and each individual will have the unique experience of the world that is valid and worthy of respect (Denzin & Lincoln, 2011). Additionally, the meanings of objects have a social origin and are impacted by social culture, as 'meaningful reality, is socially constructed' (Crotty, 2003, p.55). Hence, this study appreciates that students' individual minds are shaped by culture and students will use their cultural lenses to organise their world and how they make sense of it (Crotty, 2003).

This MMR approach of this study recognises that qualitative and quantitative research can complement and inform one another (Archibald *et al*. 2015). This study is also aware of the importance and unique opportunities that qualitative research offers in order to deeply understand individual social realities of students and the impact of culture on students' experience of their reality (Dewey, 1922/2008; Morgan, 2014).

3.3. Research Design

The research is a case study of a post-92 university. Case studies play an important role in bringing an understanding of a complex issue, can add strength to what is already known through previous research and can emphasize detailed contextual analysis of a limited number of events or conditions and their relationships (Yin, 1984). Yin (1984) believes that case studies should be used to investigate contemporary issues that need to be examined in its real-life context. However, case

[21] Post-positivism recognises that the researcher's background, knowledge and values can influence what is observed. It further accepts that any theory is tentative and its hypotheses are also tentative. (Popper, 1963).
[22] Constructivism is an individualistic understanding of the constructionism – former is looking at an individual meaning making of the reality whereas the latter looks at the world created by the collective process of social exchange (Crotty, 2003). Social constructionist, similarly to constructivism, appreciate the uniqueness of individual experience of the world but it sees culture as a crucial factor shaping the unique experience of the world for every person (Crotty, 2003).

studies also bring issues of reliability, validity and transferability (for a detailed discussion in Section 3.7.) (Yin, 1984).

The previous section discussed pragmatism-based philosophy and the mixed-methods research (MMR) approach. This section explains the quasi-experimental research design and provides a detailed description of the career coaching intervention.

3.3.1. A Quasi-Experimental Research Design

The study chooses the quasi-experimental design as the main purpose of this study is to answer the research question RQ1. *Is career coaching effective in increasing students' self-efficacy, outcome expectations and their employability efforts?* As it can be seen from the literature review there is a gap in the literature in terms of measuring the effectiveness of coaching interventions. There is little guidance in the literature on how to evaluate coaching and there is a relative lack of randomised-control-trial (RCT) studies (de Haan & Duckworth, 2012). There are no clear or agreed coaching outcome measurements in the literature, either (de Haan & Duckworth, 2012). Coaching effectiveness is measured via treating coaching as an intervention in experimental or quasi-experimental designs (see Grant *et al*., 2009) where coaching effectiveness is measured against psychological scales (and its effectiveness is captured via increase in the above scales). There is a call in the coaching literature to carry out more empirical studies in order to address the anecdotal approach to the effectiveness of coaching (Visser, 2010; Whitney, 2001).

Hence, the purpose of the study is to acquire knowledge about the impact of career coaching on students' job seeking behaviours by "purposefully introducing changes which will alter the direction of the course of events" (Dewey, 1929, p.81) – using the quasi-experimental design[23] - and by observing the relationship between actions and consequences (Biesta, 2010). The study's *interventionalist*[24] design is consistent with pragmatism, i.e. knowledge can be only gained through intervention (Biesta, 2010). A quasi-experiment takes place when participants in one of the groups, experimental group or a control group, are not randomly assigned as they might already be in pre-formed groups as opposed to an experimental design in which both a control and an experimental group are assigned randomly (Saunders, *et al*., 2012).

[23] Quasi-experiments approximate true experiments when the differences between the experimental and the control group at the pre-test time are minimised (Hedrick *et al*.,1993).
[24] Terminology used by Biesta (2010) in the SAGE Handbook of Mixed Methods.
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The study uses a quasi-experimental design as opposed to an experimental design (see Figure 3.1. below) as the experimental group was formed through a process of self-selection, i.e. the career coaching scheme was made available to all students (see The Quantitative Sampling Strategy). Ethical problems would ensue if career coaching was withheld or enforced onto students. Despite the random selection of participants and the presence of a control group being the most desirable characteristics of a research design, often randomization is impractical or impossible (Salkind, 2006).

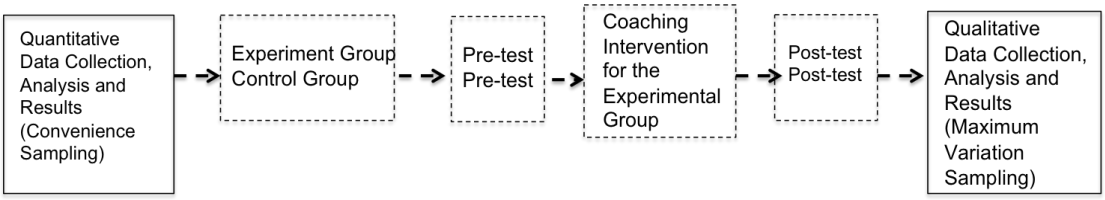

Figure 3.1: The Mixed Method Quasi-Experimental Intervention Design adapted from Creswell (2015)

A quasi-experiment allows the researcher to determine whether the coaching intervention is an effective tool in raising career decision self-efficacy of HE students as at the end of the experiment both groups are tested to see any differences in test scores. The possible issues of the experimental group being somehow different in terms of their career self-efficacy levels are overcome by matching both control and experimental groups in terms of their levels of pre-test career self-efficacy at the beginning of the experiment, at Time 1 (see Matching the Experimental and the Control Group section). Comparing the pre-test scores for both groups ensured that the groups were equivalent. Statistically measured absence of significant differences between both groups of students reduces the threat to the internal validity of the experiment (Salkind, 2006). As both groups were statistically equivalent from the start of the experiment, at Time 1, any observed differences at the end of experiment are rendered as due to career coaching (Salkind, 2006). This statistical approach helps to overcome the issue of the experimental sample being self-selected rather than selected randomly (Salkind, 2006).

The sub-question supporting the main research question RQ1a. *What aspects of the coaching relationship are most effective in increasing students' self-efficacy, outcome expectations and their employability efforts?* was developed as the coaching intervention called for capturing subtleties of the interaction in order to capture active ingredients of the interaction (Song, Sandelowski and Happ, 2010) following O'Broin & Palmer's (2008) call to explore the importance of a coaching

relationship at a detailed level of investigation and Theeboom, *et al*'s (2013) call to explore coaching effectiveness at a deeper level by not only addressing the questions 'does it work?' but also 'how does it work?' and on building a firm theoretical framework that can be used to identify the underlying mechanisms and processes.

The QUAL part of this research is designed to explain outcomes of the intervention study, such as: increased self-efficacy, increased job seeking behaviour and to assess the fidelity of the intervention (whether it followed the agreed structure). Song *et al.* (2013) critique using qualitative research in intervention studies unless its purpose is to explain the outcomes of the intervention study. In such cases they warrant a sequential data collection followed by interviews or survey questionnaires following the completion of the intervention (Song, *et al.*, 2013). They also point out that in order to explain the outcomes of the intervention the experimental group has to be selected based on the scores of their outcome measures (Song, *et al.*, 2013) (see the maximum variation sampling description in the Qualitative Sampling Strategy section). Palinkas *et al.*'s (2011) review of mixed methods intervention studies shows that qualitative methods are well suited to understand the intervention context whereas quantitative methods are used to measure aspects of the content of the intervention and the intervention outcomes.

The study has a longitudinal element (see Figure 3.1.), as students' career self-efficacy and job seeking behaviours are tested prior to and post a coaching intervention. Betz and Taylor (2012) identified a need for longitudinal research investigating changes following this type of career intervention.

The quasi-experimental research design is as follows (see Figure 3.1.):

1. Two samples: an experimental and a control sample are selected from the University of Greenwich Business School students' population of approximately 3,391 students (see the Sampling Design section).

2. Pre-intervention stage: Prior to starting an experiment (students being allocated a career coach) both samples complete the questionnaire measuring:

- A Career Decision Self Efficacy (Short Form, CDSE: Taylor & Betz, 1983) to measure their pre-intervention career decision self-efficacy (see Appendix 3.4. Time 1 Questionnaire);
- An Employability Efforts Scale consisting of the modified Saks & Ashforth's (1999) preparatory job seeking behaviour scale, active job seeking behaviour scale and job search intensity scale to measure their pre-intervention job seeking behaviours (see Quantitative Research Instruments and Appendix 3.4. Time 1 Questionnaire);
- Gender and ethnicity.

3. Intervention stage: the experimental group receives career coaching (see the next section Career Coaching Intervention).

4. *Post-intervention stage*: In the final stage, upon completion of career coaching, both groups of students are given the same questionnaire as at the pre-intervention stage. Additionally, the vocational outcome measurement scale is used to measure students' outcome expectations (see Appendix 3.5. Time 2 Questionnaire). A maximum variation sample was used to select students from the experimental and control group (see The Quantitative Sampling Strategy) for semi-structured 60 minute interviews. Interviews explore students' perception of the career coaching effectiveness, the aspects of coaching relationship that were most effective in increasing students' career self-efficacy, outcome expectations and employability efforts, students' self-efficacy and outcome expectation beliefs, environmental conditions (such as perceived barriers or support to preferred careers, cultural influences, family expectations, perceived social support, family role models and gender & ethnicity barriers) that affected students' self-efficacy, outcome expectancies and employability efforts, and the impact of gender and ethnicity on students' employability efforts. Eight career coaches and three senior managers were also interviewed to provide the background information to the case study.

3.3.2. The Career Coaching Intervention

The career coaching intervention is facilitated and run by the University of Greenwich Business School Employability Office (EO) and the Guidance & Employability Team (GET)[25]. The experimental group receives career-coaching lasting for 6 months from January 2015 – June 2015

[25] In 2011-12 the combined numbers of TEO and GET Business School students receiving one-to-one career coaching was 117. In 2012-13 this figure increased by 89 per cent to 221. It is predicted that this figure will continue to rise.

from professionals working in corporate companies, entrepreneurs or retired individuals who used to work in professional roles. All career coaches are volunteers who had experience of mentoring and coaching junior member of staff in their roles, either formally or informally[26]. As coaching is delivered by professionals and volunteers who are not professionally trained as coaches and hence their effectiveness, according to research, solely depended on the quality of the coach-coachee relationship and the coaches' ability to build trust (de Haan, Culpin & Curd, 2011; Ely *et al.* 2010; Visser, 2010; Baron & Morin, 2009). According to many commentators, the types of coaching or coaching approaches offered do not have a significant impact on outcome results, i.e. all approaches are more or less equivalent in their impact on outcome results (Duncan *et al.*, 2010; Miller *et al.*, 1997; Lambert & Bergin, 1994; Lambert, 1992). Hence, it is the career coach's ability to build trust with the students that is crucial to delivering successful career coaching. The role of career coaches in this study is not to mentor students but to enhance students' career self-efficacy and to develop students' key career skills and competencies (see Appendix 3.1: Career Coaching Application Form 2014-2015 for IBM UK and Appendix 3.2: Preparation for a Career Coaching Scheme). Students set up the agenda of the meetings.

Career coaching offered to the University of Greenwich students is partially standardised across the coaches through an 'Activity Guide' that is available to all participants (students and career coaches) prior to starting their career coaching. The 'Activity Guide' suggests a list of activities designed to develop students' key skills and competencies[27]. The competency framework is based on the summary of the compilation of top thirteen graduate competencies across private, public and non-profit sectors, such as *The SHL Universal Competency Framework* (Bartram, 2012) and *Leadership Qualities and Management Competencies for Corporate Responsibility* (Wilson, Lenssen & Hind, 2006). The Activity Guide also describes roles and responsibilities of students and career coaches.

[26] The companies that the career coaches work for are as follows: Akamai Technologies, Barclays, City University London, Informa, IBM, PWC, Northern Trust, GE, Coopers International Associates, Computa Center, Sallys Enterprise, University of Oxford, ASDA, CiPFA, Citi Group, Innovation Company, DG Law Solicitors, Morgan Stanley, Citeline, Critical Proof, Pernord Ricard, Design Academy of Art, a freelance business and marketing strategist, NHS Waltham Forest CCG, V&A, Royal London Asset Management, McMillan Williams Solicitors, South West London Environment Network as well as the University of Greenwich alumni.

[27] The key skills and competencies are: adaptability, communication skills, influencing and negotiation skills, problem solving skills, leadership skills, team working skills, planning and organisation skills, time management skills, decision making, ability to build relationships, continual improvement, business and organisational awareness, technical and professional skills.

The length of career coaching intervention is also standardized. All one-to-one coaching takes two hours per month for the duration of the six months. Face-to-face communication is the main form of contact supplemented by email, Skype or phone communication (for the structure of the meetings see Appendix 3.3: Career Coaching Workshop Presentation, 2014). Career-coaching involves meetings that were structured in nature, scheduled on a regular basis and career-focused. Prior to approaching the coaches and to starting career coaching students receive coaching guidelines from the Business School Employability Office. Prior to applying for a career coaching scheme, students' expectations are managed through a workshop presentation where the roles of students and career coaches are discussed in detail (see Appendix 3.3: Career Coaching Workshop Presentation, 2014).

Career coaches in this study are not expected to promote, shape the careers of their protégés, to act as protectors or champions or to provide intelligence about their company to the students (Siegel *et al.*, 1995; Klaus, 1982) This study is based on a model where the career coach's role is to facilitate learning and to ask high impact questions (Edwards, 2003). Students are expected to set their own goals and agenda and the coaches' role is to support and encourage them in their goals and agenda (Evers *et al.*, 2006).

This section explained the quasi-experimental research design and provided detailed description of the career coaching intervention. The next section discusses the mixed-methods partially mixed sequential dominant status research design *(QUAN → qual)*. It also gives an overview of the study's MM procedures, links the research questions with the QUAN and the QUAL methods and discusses issues of data triangulation.

3.3.3. A Mixed Methods Research Design

The MMR design is adopted in order to address both confirmatory and exploratory research questions[28] (Teddlie & Tashakkori, 2010) and to enrich the study by offering "multiple ways of seeing" (Denzin & Lincoln, 2011, p.272). Gorard (2010) argues that good intervention designs should use a variety of data collection techniques, including mixed methods, in order to guide understanding of the intervention and what makes it work or not work.

[28] Research Questions in this study are a mixture of confirmatory and exploratory questions.

The study MMR design is intentional, i.e. the quantitative phase is used to capture changes in students' career decision self-efficacy between Time 1 and Time 2. At the iteration stage (see Figure 3.2. The Diagram of the Study's Mixed Methods Procedures), based on students' quantitative scores, students with the highest and the lowest increase in career decision self-efficacy (a maximum variation sampling) are selected for interviews at the qualitative phase in order to "to maximize the range of perspectives investigated in the study" (Collins, 2010, p.358). As discussed in the previous section, Song *et al.* (2013) critique using qualitative research in intervention studies unless its purpose is to explain the outcomes of the intervention study. In such cases they warrant a sequential data collection followed by interviews or survey questionnaires following the completion of the intervention (Song, *et al.*, 2013). They also point out that in order to explain the outcomes of the intervention the experimental group has to be selected based on the scores of their outcome measures (Song, *et al.*, 2013).

The research adapted top-down deductive and bottom-up inductive processes in order to explore relationships between different constructs (Teddlie & Tashakkori, 2010). The findings that are obtained by deductive methods are then confirmed by the inductive methods (see Figure 3.1.). Qualitative data are used to support quantitative data (Bryman & Bell, 2015) and to provide important information that supplemented findings from the quantitative study and to fill in any gaps (Bryman & Bell, 2015). Both approaches complemented each other throughout the study (Greene, 2007).

This study's mixed method design typology is adapted from Leech & Onwuegbuzie (2009). Their typology looks at three elements, mainly: level of mixing QUAN and QUAL methods (partial or full[29]); whether data were collected simultaneously (concurrent) or one after another (sequential) and whether both approaches had an equal status in terms of addressing the research questions or one was dominant over the other. Based on Leech & Onwuegbuzie (2009)'s typology the study uses the *partially mixed sequential dominant status design (QUAN → qual[30])*. The QUAN and QUAL methods are partially mixed across the research objectives, across study stages, types of data (numerical and narrative) and across types of analysis (see Figure 3.2. on page 85). The QUAN phase is followed by another QUAN phase (due to the longitudinal intervention) and then by the QUAL phase, hence, the pacing of the study is sequential (Morse, 2010). The study adapts a

[29] A fully mixed sequential equal status design mixes qualitative and quantitative research within or across the stages of the research process (Leech & Onwuegbuzie, 2009)

[30] Terminology used in the SAGE Handbook of Mixed Methods by Leech & Onwuegbuzie (2009). It means that the study's theoretical drive is deductive with QUAN being a core component, *qual* being a supplemental component.

QUAN dominant status design. Although both QUAN and QUAL phases of the study have approximately equal emphasis when addressing the research questions (Leech & Onwuegbuzie, 2009) the study's theoretical drive is deductive with QUAN being a core component, *qual* being a supplemental component (Morse, 2010). The points of the interface are the design of the qualitative phase (see Figure 3.2 on page 85) and the results narrative (Morse, 2010) at the integration stage (Teddlie & Tashakkori, 2010).

The (QUAN → *qual*) sequential design structure is implemented in order to collect data and analyse the effectiveness of coaching (beginning with quantitative data) for primary purpose of the confirmation and hypothesis testing. The function of this design is *complementarity* (the QUAN questionnaire is used to measure students' self-efficacy and outcome expectancy and their influence on students' job seeking behaviours and QUAN results are used to evaluate the career coaching effectiveness whereas the *qual* results are used to evaluate outcomes of the career coaching process and to provide depth of understanding) (Palinkas *et al.*, 2011).

The QUAN results form the base and qualitative findings are used to enhance the understanding of the components and interactions (Morse, 2010). Typically for the MMR studies, this study's research questions determine the specific research methods employed (Teddlie & Tashakkori, 2010). The review of the coaching literature as well as of the study's SCCT conceptual framework (see Chapter 2.4.) also informs thinking about the research constructs that need to be tested or explored due to gaps in the literature (Plano Clark & Badiee, 2010). The main research question RQ1 and its sub-question RQ1a (see Table 3.1. below) require two types of information (numerical and narrative) to be addressed fully. The diagram of Mixed Methods Procedures conducted in this research adapted from Creswell (2010) is depicted in the Figure 3.2 below. The links between the Research Questions, Research Hypotheses and adapted Research Approaches are shown in Table 3.1. on page 85.

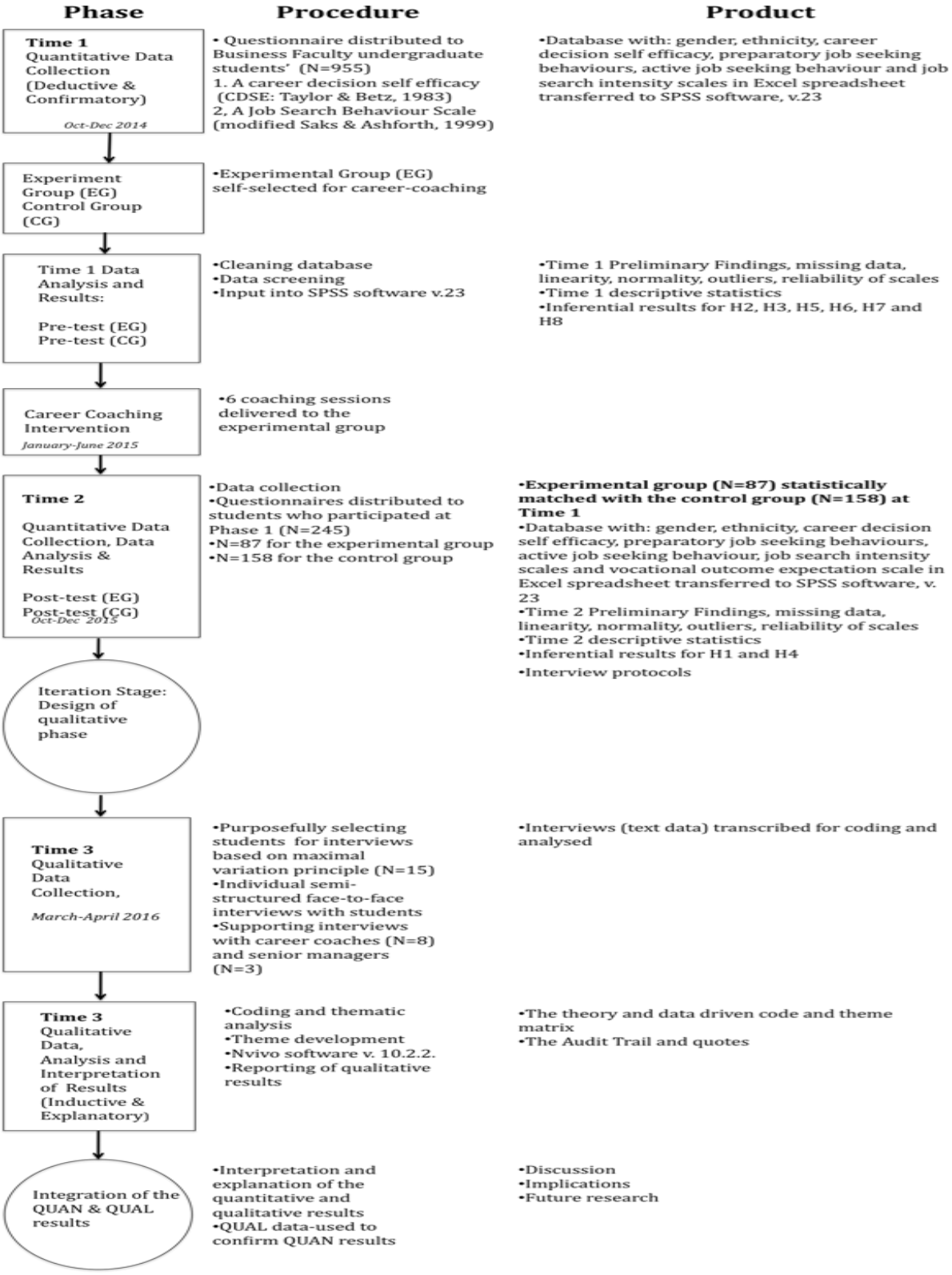

Figure 3.2: The Diagram of the Study's Mixed Methods Procedures

Table 3.1: The Links between Research Questions, Research Hypotheses and Research Approach

Research Questions	QUAN	QUAL
RQ1. Is career coaching effective in increasing students' self-efficacy, outcome expectations and their employability efforts? [QUAN]	Survey	Semi-Structured Interview
H_1: Coaching intervention increases career decision self-efficacy and job seeking behaviours of students. [QUAL]		
RQ1a. What aspects of the coaching relationship are most effective in increasing students' self-efficacy, outcome expectations and their employability efforts? [QUAL]		Semi-Structured Interview
RQ1b. What are students' self-efficacy and outcome expectation beliefs? [QUAL]		Semi-Structured Interview
RQ2. Are students' career decision self-efficacy and vocational outcome expectations associated with their job seeking behaviours? [QUAN]	Survey	
H_2. Students' career decision self-efficacy is correlated with their job seeking behaviours.	Survey	
H_3. Students' career decision self-efficacy is a predictor of their job seeking behaviours.	Survey	
H_4. Students' vocational outcome expectations are a predictor of their job seeking behaviours.	Survey	
H_5. Students' vocational outcome expectations are correlated with their job seeking behaviours.	Survey	
RQ2a. What cultural influences and environmental conditions (such as Perceived Barriers or Support to Preferred Careers, Cultural Influences, Family Expectations, Perceived Social Support, Socioeconomic Status, Family Role Models and Gender & Ethnicity Barriers to Chosen Careers) impact students' self-efficacy, outcome expectations and employability efforts? [QUAL]		Semi-Structured Interview
RQ2b. What is the impact of gender and ethnicity on students' self-efficacy, outcome expectations and employability efforts? [QUAN]	Survey	
H_6. Male students have higher career decision self-efficacy levels than female students.	Survey	
H_7. Caucasian students to have higher career self-efficacy than other ethnicities.	Survey	
H_8. Male and Female students have different vocational outcome expectation levels.	Survey	
H_9. Different ethnic groups of students have different vocational outcome expectation levels.	Survey	
H_{10}. Gender is a moderator between students' career decision self-efficacy and their job seeking behaviours.	Survey	
H_{11}. The combination of gender & ethnicity moderates students' career decision self-efficacy and their job seeking behaviours.	Survey	
H_{12}. Students' ethnicity and job seeking behaviours are mediated by students' career decision self-efficacy.	Survey	
H_{13}. Ethnicity moderates students' career decision self-efficacy and their job seeking behaviours.	Survey	
H_{14}: The combination of gender & ethnicity moderates students' vocational outcome expectations and their job seeking behaviours	Survey	
H_{15}. Students' ethnicity and job seeking behaviours are mediated by students' vocational outcome expectations.	Survey	
H_{16}. Ethnicity moderates students' vocational outcome expectations and their job seeking behaviours.	Survey	
H_{17}. Vocational outcome expectations moderate students' career decision self-efficacy and their job seeking behaviours.	Survey	
H_{18}. Vocational outcome expectations mediate students' career decision self-efficacy and their job seeking behaviours.	Survey	

The study takes the *nesting integrated mixed methods design* (qual within QUAN) (Greene, 2007), i.e. the study's conceptual framework guides the primary QUAN method study (Greene, 2007). The study's *iteration* stage occurs when the results of the QUAN are used to select a QUAL sample (see Table 3.1.) and the integration occurs at the findings and the discussion phase in order to answer the research questions (Greene, 2007).

The main research question RQ1. *Is career coaching effective in increasing students' self-efficacy, outcome expectations and their employability efforts?* - a deductively-based confirmatory question - is a MM question. At Time 2 it is tested using a QUAN method (see Table 3.1. H1). RQ1 is then further explored at Time 3 using a QUAL method. The QUAN and QUAL results are integrated at the findings phase. The purpose of the MM design is to seek elaboration and clarification of the coaching effectiveness findings from QUAL method with results from the other method as well as to assess the fidelity of coaching intervention (Onwuegbuzie & Johnson, 2006).

The sub-question RQ1a. *What aspects of the coaching relationship are most effective in increasing students' self-efficacy, outcome expectations and their employability efforts?* is a QUAL inductive, exploratory question, investigated at Time 3 and informed by the review of the coaching effectiveness literature.

RQ1b. *What are students' self-efficacy and outcome expectation beliefs?* is a QUAL inductive, exploratory question that was developed as the phenomena was investigated (Nastasi, Hitchcock & Brown, 2010) as it is informed by the SCCT conceptual framework (see Section 2.4) and explored at Time 3.

RQ2. *Are students' career decision self-efficacy and vocational outcome expectations associated with their job seeking behaviours?* is a deductively-based confirmatory question that is tested at Time 1 using a QUAN method (see Table 3.1. H2 – H5).

Sub-questions RQ2a. *What cultural influences and environmental conditions (such as Perceived Barriers or Support to Preferred Careers, Cultural Influences, Family Expectations, Perceived Social Support, Socioeconomic Status, Family Role Models and Gender & Ethnicity Barriers to Chosen Careers) impact students' self-efficacy, outcome expectations and employability efforts?* is an inductive, exploratory question that was developed as the phenomena was investigated (Nastasi

et al., 2010) in order to explore the SCCT conceptual framework (see Section 2.4) in the post-1992 university students' context. The question is explored using QUAL at Time 3.

The sub-question RQ2b. *What is the impact of gender and ethnicity on students' self-efficacy, outcome expectations and employability efforts*? is an inductive, exploratory question that is addressed using MM. It is tested using a QUAN method (see Table 3.1. H6-H18). It was then further explored at Time 3 using a QUAL method. The QUAN and QUAL results are integrated at the findings phase.

In summary, the QUAN method tests causal and predictive relationships between independent and dependent variables such as: a coaching intervention, career decision self-efficacy, outcome expectations and job seeking behaviours of students (employability efforts). It also measures the effectiveness of coaching intervention and the impact of gender and ethnicity on students' employability efforts. The QUAL phase explores the aspects of coaching relationship that are most effective in increasing students' career self-efficacy, outcome expectations and employability efforts; students' self-efficacy and outcome expectation beliefs; environmental conditions (such as perceived barriers or support to preferred careers, cultural influences, family expectations, perceived social support, family role models and gender & ethnicity barriers) that affected students' self-efficacy, outcome expectancies and employability efforts; and the impact of gender and ethnicity on students' employability efforts.

The quasi-experimental MM design is appropriate for addressing the overall research question of the career coaching effectiveness (RQ1). Research Question 2 is addressed using appropriate quantitative and qualitative methods that fit together as they addressed separate but interrelated research questions (O'Cathain, 2010).

Combining and converging findings obtained from different methods aids triangulation[31] (see Table 3.1.), at the same time any divergent results provide insights into the studied phenomenon (Teddlie & Tashakkori, 2010). Data gathering methods are triangulated through the parallel use of quantitative and qualitative techniques, i.e. using *between-methods* triangulation as recommended by Denzin (1978) who found this method most powerful and least prone to bias. Triangulation is

[31] Triangulation occurs when different methods are used to research the same concept and it ensures that weaknesses of one methods are compensated by use of the other whilst keeping both methods autonomous. (Flick, 2009).

done in order to increase confidence in the findings derived from the study and to improve quantitative reliability and qualitative validity of the study (Bryman & Bell, 2015).

This section discussed the mixed-methods partially mixed sequential dominant status design *(QUAN → qual)*. It gave an overview of the study's MM procedures, linked the research questions with the QUAN and the QUAL methods and discussed the issues of data triangulation. The next section discusses the sampling design. It provides a detailed description of the case study and then describes how the sampling design fitted with the MM approach. The QUAN and QUAL sampling strategies are discussed and details of both samples are provided. The issues of access to data are also described.

3.4. Sampling Design

3.4.1. The Research Site

The University of Greenwich is a post-1992 university located in South East London, UK (UoG, 2016). The university has three campuses. Maritime Greenwich and Avery Hill campuses are situated within the London Borough of Greenwich and the Medway campus is located 28 miles to the South East, nearby Chatham. The Maritime Greenwich campus is a world heritage site next to the river Thames. The Avery Hill campus is a semi urban campus and the Medway campus is shared with the University of Kent and Canterbury Christ Church University (UoG, 2016).

University of Greenwich occupied 99th position in the league tables in 2015[32] (out of 126 UK universities) (CUG, 2017). In 2014-2015 it had 21,274 enrolled students (19,671 university based) and 16,689 students enrolled in overseas partner institutions. Out of 21,274 students 76 per cent are undergraduate students and 24 per cent are postgraduate students. Most students study full time (15,411 enrolled students) and most students study Subjects Allied to Medicine (5,238) followed by Business and Administrative Studies (4,407) and then Education (1,861) (UoG, 2016). Female students are a majority (56 per cent). Most students are 21 years old or younger (34 per cent), and ethnically mixed: White (50 per cent), Asian (20 per cent), followed by Black (13 per cent). For the full breakdown of ethnicities and ages see Table 3.2. in the next section.

[32] 107th in 2016 and 98th in 2017 (CUG, 2017).

Historically, the university has been successful in meeting benchmarks for widening participation (UoG, 2015). Students who are a product of the widening participation policy are mostly from ethnic minorities, mainly living locally and from working-class backgrounds (Scott, 2012). The University of Greenwich league table position and post-1992 university status suggests, the University of Greenwich students are socially disadvantaged in comparison to the Russell Group students as vocational professions and employability opportunities offered to them differ vastly from opportunities offered to students from the leading universities (Nixon, 2011; Sutton Trust; 2005).

3.4.2. Participant Sampling

The sampling design follows the overall QUAN→ *qual* direction of the study, i.e. the SCCT was a theoretical framework developed for the QUAN component at the beginning of the study, in order to keep its validity (Morse, 2010). The principles of deduction and quantitative inquiry are kept for the QUAN phase and the principles of induction and qualitative inquiry are adhered to when sampling for supplementary components in the *qual* phase (Morse, 2010). The QUAN phase uses the *convenience sampling*[33] (see The Quantitative Sampling Strategy for more details) whereas when sampling for the *qual* supplemental component is conducted the qualitative sample is drawn from the quantitative sample using participants scores as the basis for selection (Morse, 2010) (see The Iteration Stage in Figure 3.2. and The Qualitative Sampling Strategy for more details) in a *maximum variation*[34] sampling. The *qual* component is then imported into the QUAN core component for analysis at the point of interface findings section (Morse, 2010). Additionally, following Onwuegbuzie & Collins' (2007) conceptualised sampling design the sampling design is sequential and the relationship between the QUAN and QUAL samples are identical, i.e. the same sample participated in the QUAN and the QUAL phase (Collins, 2010).

The overall sampling strategy is depicted in Figure 3.3. below.

[33] Convenience sampling is one of major sampling methods used in MMR and is defined as choosing groups or individuals who "are conveniently available and willing to participate in the study" (Collins, 2010, p.359). Saunders *et al*. (2012) argue that this type of sampling is prone to bias unless the sample represents the whole population and no approximations are made, e.g. treating managers on an MBA course as a proxy for all managers. As there is little variation in this studies sample and it approximates the study's Year 1, 2 and 3 undergraduate population, hence, the statistical generalization are valid (see the Generalizability and Transferability of the Study section).

[34] Maximum variation sampling is one of major sampling methods used in MMR and is defined as choosing groups or individuals "to maximize the range of perspectives investigated in the study" (Collins, 2010, p.358).

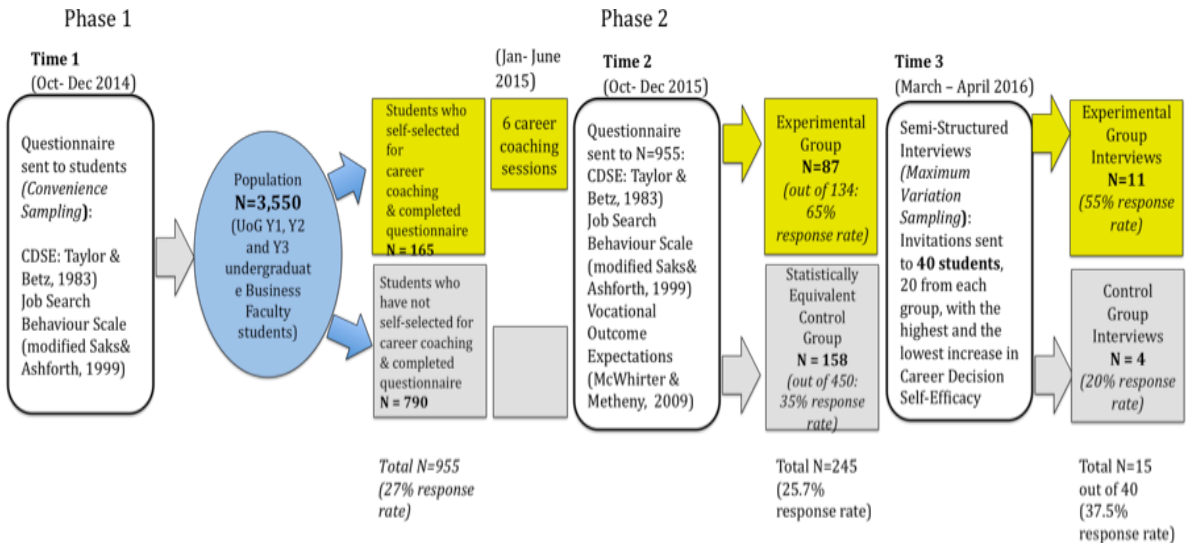

Figure 3.3: The Sampling Strategy

The Quantitative Sampling Strategy

The participants consist of Year 1, Year 2 and Year 3 undergraduate Business Faculty students[35] attending the University of Greenwich in London. Demographic information, including participants' age, gender and ethnicity were collected prior to the experiment. 955 students participated in the study, the majority of students in the sample were 18-21 years of age (67%). 52.5% were females. 38% students were Caucasian (British, Irish or any other White background), followed by Asian or Asian British (Indian, Pakistani, Bangladeshi or other) (26%), Chinese (15.3%), Black or Black British (Caribbean, African or other) (14.5%), Mixed (White and Black Caribbean, White and Black African, White and Asian and other) (3.9%) and Other Ethnic Groups that do not fall into any of the above category (0.7%).

A profile of sampled Business Faculty students compared with the University of Greenwich population is depicted in Table 3.2. below to check on extent to which the sample was representative of its population.

[35] University of Greenwich undergraduate students consist of 78% of the whole student population (HESA, 2014).

Table 3.2: Year 1, 2 and 3 Business Faculty (BF) Sample Profile compared against Year 1, 2 and 3 Business Faculty Population in 2014 and a University of Greenwich Population (UoG) Profile (HESA, 2014)

Characteristics	Time 1 BF Sample Frequency	Time 1 BF Sample % of Total	Time 2 BF Sample Frequency	Time 2 BF Sample % of Total	Time 3 BF Sample Frequency	Time 3 BS Sample % of Total	Year 1, 2 & 3 BS Population Frequency in 2014	Year 1, 2 & 3 BS Population % of Total	UoG Population Frequency	UoG Population % of Total
Age										
< 21	639	67%	122	49.8%	10	67%	1,577	46.5%	7,174	34%
21-24	200	21%	83	33.9%	2	13.3%	1,355	40%	5,985	28%
25-29	34	3.6%	16	6.3%	1	6.67%	237	7%	2,960	14%
>29	74	8%	24	9.8%	2	13.3%	222	6.5%	5,155	24%
Gender										
Male	450	47.5%	110	44.9%	8	53.3%	1,613	48%	9,292	44%
Female	498	52.5%	134	54.7%	7	46.7%	1,778	52%	11,982	56%
Ethnicity										
White	364	38.1%	104	42.4%	8	53.3%	n.a. [36]	-	10,567	50%
Asian	249	26.1%	68	27.8%	5	33.3%	n.a.	-	4,455	20%
Black	137	14.3%	41	16.7%	1	6.67%	n.a.	-	3,761	17%
Chinese & Other	154	16.1%	18	7.3%	1	6.67%	n.a.	-	769	7%
Mixed	37	3.9%	8	3.3%	0	0%	n.a.	-	898	4%
Total	**955**	**100%**	**245**	**100%**	**15**	**100%**	**3,391**	**100%**	**21,274**	**100%**

At Time 1, in October – November 2014, students were given a questionnaire to complete to assess their pre-coaching intervention levels of career self-efficacy and job seeking behaviours (see Figure 3.3: The Sampling Strategy). The hard copies of the questionnaires were left in the box outside the Business School office and an email, inviting completion, was sent to all Business School students (N= 3,391). Students were encouraged to complete the questionnaires and lecturers were encouraged to bring hard copies to their lectures and tutorials. Once questionnaires were completed they were returned either by students or lecturers in a collection box in the Business School office. The questionnaires were also emailed to Business School students and staff. Towards the end of data collection, the survey (using the Survey Monkey program) was also created and emailed to students. Hence, the questionnaire (see Appendix 3.4. Time 1 Questionnaire) was distributed amongst 3,391 students using *convenience sampling*[37]. This approach yields 955 responses (28% response rate). See Section 3.7.2: Reliability of the Quantitative Study for the discussion about the sample's representativeness.

[36] The University of Greenwich Business Faculty population (N=3,391) database records did not provide ethnicity (only nationality).

[37] Blumberg, Cooper & Schindler (2005) point out that convenience sampling can be useful at the exploratory stages of the research despite being less strategic than other types of sampling (Bajpai, 2010).

A self-selected experimental group of students received a treatment (career-coaching) whereas a control group (selected randomly) received no treatment (no career-coaching). De Haan *et al*. (2013) comment on the importance of having a control group when investigating the impact of coaching studies. The Career Coaching Scheme was announced to students via emails and workshops in May 2014 and again in November 2014 in order to capture the interest of the maximum number of students. All interested students were required to complete an application form stating their reasons for applying and expected benefits of career coaching. All legitimate students were accepted and matched, as far as possible, with a career coach within the same discipline area.

Out of 261 students self-selected and registered for the career coaching scheme, 165 students were included in the experimental group. Students were excluded from the experimental group if they were Erasmus students; postgraduate students; if they had already been in contact with or met their career coach; or if they did not complete the questionnaire. The rest of the sample, 790 students, was defined as the rest of the population that formed a basis for the control group.

At Time 2, following the 6 months post-coaching intervention, in October – November 2015, the Time 2 questionnaire with repeated measures from Time 1 and with an additional Vocational Outcome Expectation measure (VOE) (see Appendix 3.5.) was distributed to the same groups of students using the same methods as at Time 1, i.e. via email, Survey Monkey, during tutorials, lectures or using a hard copy provided in the Business School office. Students who graduated or left the university were excluded from the sample. The sampling strategy is discussed in detail in the next section. The sample design is *identical*, i.e. exactly the same members of the population take part in the study (Collins, Onwuegbuzie, & Jiao, 2006). There were 87 responses from students who completed career coaching (out of 134 students - 65% response rate). This formed the experimental group. The control group was selected from 158 responses (out of 450 students - 35% response rate). It was ensured that the control group was equivalent with the experimental group at Time 1 (Salkind, 2006) in terms of the dependent variables such as: self-appraisal, occupational information, goal selection, planning, problem solving, CDSE, PJSB, AJSB and JSI means. For the detailed discussion of the matching strategy see Section 3.6.1. Matching the Experimental and the Control Group.

The Time 1 sample consisted of 955 students: 448 Male and 500 Female (47.3 per cent and 52.7 per cent respectively) with 7 entries missing (see Appendix 3.6: Time Gender Descriptive Statistics). The ethnicity descriptive statistics are depicted in Table 3.3. below.

Table 3.3: The Ethnicity Descriptive Statistics at Time 1

ETHNICITY

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 White	364	38.1	38.7	38.7
	2 Black or Black British	137	14.3	14.6	53.2
	3 Asian or Asian British	249	26.1	26.5	79.7
	4 Mixed	37	3.9	3.9	83.6
	5 Chinese or Other Ethnic Group	154	16.1	16.4	100.0
	Total	941	98.5	100.0	
Missing	System	14	1.5		
Total		955	100.0		

At Time 2[38], the sample consisted of 245 students, 110 Male and 134 Female (45.1 per cent and 54.9 per cent). The breakdown of the ethnicity descriptive statistics is also very similar to Time 1 statistics (see Table 3.4. below).[39]

Table 3.4: The Ethnicity Descriptive Statistics Time 2

ETHNICITY

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 White	104	42.4	42.4	44.9
	2 Black or Black British	41	16.7	16.7	61.6
	3 Asian or Asian British	68	27.8	27.8	89.4
	4 Mixed	8	3.3	3.3	92.7
	5 Chinese or Other Ethnic Group	18	7.3	7.3	100.0
	Total	245	100.0	100.0	
Missing	System	-	-		
Total		245	100.0	100.0	

[38] At Time 1, the figures were very similar: 47.3 per cent and 52.7 per cent respectively.

[39] See Chapter 7.1.2.1. Descriptive Statistics for Categorical Variables for the ethnicity statistics at Time 1

The Qualitative Sampling Strategy

At Time 3, at the qualitative stage, in March 2016, maximum variation sampling was used based on a diverse range of changes in students' self-efficacy levels. This sampling approach seeks to study a diverse range of cases so that common patterns that emerge can be identified, capturing core values and experiences (Gray, 2014). This allows the study to overcome problems of heterogeneity for small qualitative research (Gray, 2014). 40 students, 10 with the highest and 10 with the lowest increase in career self-efficacy[40] in both groups were invited for the semi-structured one-to-one face-to-face 60 minute interviews (for the interview schedule see Appendix 3.7). Six students from the control group replied and agreed to take part in the in interview, however, 2 of them subsequently cancelled their interview. Five students from the experimental group agreed to take part in the study and two students asked to be removed from the mailing list. In order to increase the sample size, the invitations for the interview were sent to the rest of the experimental group, 63 students in total. This approach yielded 6 more responses resulting in the total interview sample of 15 students: 4 from the control group and 11 from the experimental group[41]. The semi-structured interview questions were tested with the pilot group of 4 students. As students understood the questions the pilot students are included for analyses in the final sample of 15 students (see Table 3.5. below). Two students from the experimental group opted out of the study after being invited for an interview.

Table 3.5: The Qualitative Sample Description

	Students Invited for an Interview based on CDSE levels		**Interviewed Students**	
	Control Group (N=20)	Experimental Group (N=20)	Control Group (N=4)	Experimental Group (N=11)
White	8	5	2	5
Asian	4	7	2	3
Black	6	4	-	1
Chinese	1	-	-	-
Other	1	2	-	2
Male	10	9	3	5
Female	10	11	1	6

[40] Song *et al.* (2013) critique using qualitative research in intervention studies unless its purpose is to explain the outcomes of the intervention study. In such cases they warrant a sequential data collection followed by interviews or survey questionnaires following the completion of the intervention (Song, *et al.*, 2013). They also point out that in order to explain the outcomes of the intervention the experimental group has to be selected based on the scores of their outcome measures (Song, *et al.*, 2013)

[41] The "gold standard" for the qualitative sample size is saturation, i.e. the point when new information produces no changes to the codebook. According to researchers this typically occurs within 12 interviews (Collins, 2010).

In summary, 11 students from the experimental group were interviewed (55% response rate) and 4 students from the control group (20% response rate). Not all ethnicities are represented in the qualitative sample. In particular, Black or Black British Male students with the highest scores in career decision self-efficacy (M=3.71, SD = 0.58) and Chinese or Other Ethnic Groups Females with lowest scores in career decision self-efficacy (M=3.27, SD = .49) did not respond to any of the interview invitations. The follow up personalised email invitation was sent to both ethnic groups from a control group (20 students) and from the experimental group (13 students) in April 2016 but none of the students replied. The second follow-up email was sent on 3 October 2016 to the 17 students from the underrepresented groups (3 Chinese or Other Ethnic Groups Females and 14 Black or Black British Male students) resulting in no response (6 out of 17 students had left the university at this point). 19 career coaches were also invited for an interview and, as a result, 8 interviews were conducted in May 2016.

On 29 November 2016 the University of Greenwich senior management team, Jon Sibson[42], Professor Susan Lee[43] and Professor Javier Bonet[44] were also invited for interviews[45]. Senior management interviews were conducted in December 2016 – February 2017. This completed the qualitative data collection stage.

Access to Data

The access to students participating in the career-coaching scheme was problematic and delayed due to logistical problems in coordinating actions with the Business School Employability Office. As a result, data that are used for the analysis are mainly based on the questionnaires collected in the period from October – November 2014. 14 entries are used from the SurveyMonkey distributed in December 2014. The Employability Office distributed the questionnaire to students in January 2015. These data were not used as some students had already contacted their coaches and also because it was assumed that students' levels of self-efficacy and job-seeking behaviour might have started transitioning as the term progressed.

[42] Jon Sibson is Pro Vice-Chancellor at Faculty of Business at the University of Greenwich (UoG, 2016)
[43] Professor Susan Lea is Deputy Vice-Chancellor (Academic) at the University of Greenwich (UoG, 2016)
[44] Professor Javier Bonet is Deputy Vice-Chancellor, Research & Enterprise, at the University of Greenwich. He leads all aspects of Greenwich's research and enterprise activities and contributes to the strategic leadership of the institution (UoG, 2016)
[45] Crwesell (2005) recommends 3-5 participants in case studies.

The next section discusses the quantitative and qualitative research instruments and approaches to data analysis. It further discusses the issues of reliability, validity, generalisability and replication of the study. It then gives an overview of ethical issues and how they were addressed. Finally, it discusses the strengths and limitations of the adapted methodology.

3.5. Research Instruments

3.5.1. Quantitative Research Instruments: Scales

The Career Decision Self-Efficacy Scale (CDSE: Taylor & Betz, 1983): Time 1 and Time 2 Measure

This study used a Career Decision Self-Efficacy Scale Short Form (the original scale consists of 50 items) to measure students' self-efficacy. The short, 25-item, form is recommended by Betz & Taylor's (2012) manual to be used as a measure for the evaluation of career interventions. The Cronbach's α coefficient for the short scale is 0.95 (Betz & Taylor, 2001).

The Career Decision Self-Efficacy Scale (CDSE: Taylor & Betz, 1983) is used most often in career counselling, and measures an individual's levels of career decision self-efficacy (Miller *et al.*, 2009). It measures a person's belief that he or she can engage in activities such as career planning, self-appraisal, problem-solving skills acquisition, gathering relevant occupational information and selecting appropriate goals (Betz & Taylor, 2001). Originally, the scale examined a sample of 346 college students. The CDSE scale is reliable for different languages with a Cronbach's α coefficient of .94 (Nam *et al.,* 2011). The reliability generalisation study shows high internal consistency (Nam *et al.*, 2011; Nilsson, Schmidt & Meek, 2002).

The CDSE scale consists of five competencies, such as:

1. accurate self-appraisal
2. gathering occupational information
3. goal selection
4. making plans for the future
5. problem solving

Job Search Behaviour Scale (modified Saks & Ashforth, 1999): Time 1 and Time 2 Measure

Job search behaviour is a multidimensional construct defined in many different ways (Van Hoye, 2013). Measures of job search focus on use of job sources, job search intensity, or specific job search behaviours (Blau, 1993). There are few studies that used identical and common measures, variables and criteria (Kanfer *et al.*, 2001). Hence, due to differences in job search behaviour measures it is difficult to compare them (Van Hoye, 2013). Based on the literature review, it was found that most job search behaviours were using a modified version of Blau's (1994) scale.

Employability Efforts of Students are measured using a Job Search Behaviour Scale as a proxy measurement[46] for students' employability efforts. Saks & Ashforth (1999) combined Blau's[47] (1994) job search scale and Blau's (1993) general effort job search scale and created an 18-item job search scale measuring job search behaviours consisting of the 8-item *preparatory job search behaviour scale* (PJSB) (α =.74), the 6-item *active job search behaviour scale* (AJSB) (α = .75) and of the Blau's 4-item *job search intensity scale* (JSI) (α = .94). This study uses this modified Saks & Ashforth's (1999) scale as it was adapted for university students and also because it provides an important distinction between different stages of the job process as well as job search specific activities linked to each stage (Saks & Ashforth, 1999; Blau, 1994).

The Preparatory Job Search Behaviour scale is modified in this study by adding social networking searches of students. Although academic research has not yet looked at the students' usage of social media in order to find employment, practitioner-oriented journals started offering advice to companies as to how use social networks to hire graduates (Herbould & Douma, 2013). LinkedIn, Facebook and Twitter are the social networking sites that should be used by students and career centres for career information and job seeking activities (Osborn & LoFrisco, 2012). Students were asked to indicate the frequency with which they performed each task in the last 3 months on a 5-point scale where 1= Never (0 times), 2=rarely (1 or 2 times), 3 = occasionally (3 to 5 times), 4=frequently (6 to 9 times), 5 = very frequently (at least 10 times). Two questions, added to the Preparatory Job Search Behaviour scale, account for students' information gathering during the

[46] A proxy measurement is a variable that represents a single component of a larger concept (i.e. employability efforts) (Hair, *et al*. 2007).

[47] Blau (1994, 1993) defined *preparatory job search behaviours* as gathering initial information about potential job leads. *Active job search* was defined as sending out CV, contacting prospective employers, applying for jobs and going through an interview process. Blau (1994) found that job search was sequential, i.e. a preparatory phase was followed by an active phase.

planning phase of the job process, using social media ("Posted that you were looking for a job in social media such as Facebook, Twitter, LinkedIn." and "Searched social media such as Facebook, Twitter, LinkedIn about possible job leads."). They are not considered to be active job search behaviours as active job search behaviours involve the actual job search, sending CV and talking with prospective employers (Blau, 1994; Saks and Ashforth, 1999). The internal validity of an updated scale was tested at the pilot stage. The scale has been piloted and tested for internal consistency using a Cronbach's alpha[48] (for results see The Validity of Scales section in the Findings chapter).). The additional items are not negatively worded and, hence, do not need to be reversed (Pallant, 2016).

Vocational Outcome Expectations Scale (McWhirter & Metheny, 2009): Time 2 Measure

Vocational outcome expectations, 12-item measure, scale (McWhirter & Metheny, 2009) is used to measure students' outcome expectations. The scale assesses the individual's level of positive expectations with regard to his/her career choice and his/her belief that his/her actions will lead to a positive result. It also reflects Bandura's three types of outcome expectations. Items are specific to outcomes related to the career decision-making process. A 4-point Likert scale with anchors from 1 (*Strongly disagree*) to 4 (*Strongly agree*) measures items such as: "My career planning will lead to a satisfying career for me." "I will be successful in my chosen career/occupation.", "I have control over my career decisions.", "I will get the job I want in my chosen career." A total score is calculated by summing up all the responses. Higher scores indicate more positive outcome expectations. McWhirter, Rasheed & Crothers (2000) reported a Cronbach's α of .83. Metheny & McWhirter's (2013) study reported α of .93.

The scale was only introduced at Time 2. This was due to the fact that the permission from Professor Ellen Hawley McWhirter to use the scale was only obtained, via ResearchGate, in August 2014.

3.5.2. A Qualitative Research Instrument

The interview schedule is based on research questions and research constructs. The link between the SCCT constructs, research questions and interview questions is depicted in Table 3.6. below.

[48] The Cronbach alpha coefficient measures the degree to which the items that make up the scale measure the same underlying attribute (Pallant, 2007). Ideally, the Cronbach alpha coefficient of the scale should be above .7.

Table 3.6: The Link between the SCCT Constructs, Research Questions and Interview Questions

Research Questions/Research Hypothesis	SCCT Constructs	Semi-Structured Interview Questions
RQ1. Is career coaching effective in increasing students' self-efficacy, outcome expectations and their employability efforts?	Learning Experience: Coaching	Experimental Group only: Tell me about your relationship with your career coach. Did you feel that your coach tried to establish a trusting relationship with you? How?
RQ1a. What aspects of the coaching relationship are most effective in increasing students' self-efficacy, outcome expectations and their employability efforts?	Trustworthy Warm No judgmental Empathic Respectful Genuine	During the period of coaching, did your beliefs about your potential to succeed in your chosen career path change? [if yes] How do you think coaching helped? [if not] why not? What aspects of your conversations with the coach helped your beliefs about seeking a job?
RQ1b. What are students' self-efficacy and outcome expectation beliefs?	Self-Efficacy Expectation Outcome Expectations Interest/Choice Goals/Choice Actions	Experimental and Control Group: What would you like to achieve in your professional life? Some people claim that if you want a job you can get it. What do you think? Have there been any experiences in your life that have damaged your self-confidence? Can you describe them?
RQ2a. What cultural influences and environmental conditions (such as Perceived Barriers or Support to Preferred Careers, Cultural Influences, Family Expectations, Perceived Social Support, Socioeconomic Status, Family Role Models and Gender & Ethnicity Barriers to Chosen Careers) impact students' self-efficacy, outcome expectations and employability efforts?	Cultural Influences (Cultural and Gender Role Models) Environmental Conditions	Experimental and Control Group: Do you have anybody amongst friends and family that you can turn for help in getting a job you want? Do you have any family role models in your life that have inspired you? What are the expectations in your family with regard to you pursuing certain careers? Experimental and Control Group: In the recent past, can you tell me about your efforts to get a job? Have you ever had an experience of being turned down for a job which made you think that discrimination may have been occurring? If yes, can you tell me why? Do you believe that you have as many career options as others? Can you tell me why?

The previous section discussed the quantitative and qualitative research instruments. The next section discusses the approaches to data analysis. It further discusses the issues of reliability,

validity, generalisability and replication of the study. It then gives an overview of ethical issues and how they were addressed. Finally, it discusses the strengths and limitations of the adapted methodology.

3.6. Approaches to Data Analysis

3.6.1. Quantitative Data

Time 1 Analysis: Quantitative Data

The quantitative analyses that are conducted at Time 1 are listed in the Table 3.7 below.

Table 3.7: Time 1 Quantitative Analysis Approach (N=955)

Research Hypothesis	Time 1 Quantitative Analyses
H_2: Students' career decision self-efficacy is correlated with their job seeking behaviours.	Bivarate Pearson product-moment correlation coefficient to measure how much variance in students' preparatory job seeking behaviours, active job seeking behaviours and job search intensity is explained by their career self-efficacy.
H_3. Students' career decision self-efficacy is a predictor of their job seeking behaviours.	Standard multiple regression analysis: regressing sub-scales of CDSE scale (accurate self-appraisal, gathering occupational information, goal selection, making plans for the future, problem solving to identify predictors of job search behaviours (preparatory job seeking behaviours, active job seeking behaviours and job search intensity)
H_6: Male students have higher career decision self-efficacy levels than female students.	The independent-samples t-test.
H_7. Caucasian students to have higher career self-efficacy than other ethnicities.	Multivariate analysis of variance (MANOVA) conducted to reduce the risk of an 'inflated Type 1 error', i.e. of finding a significant result despite no differences between groups (Pallant, 2007) with ethnicity chosen as a categorical, independent variable and tested against CDSE and one other continuous variable[49]. ANOVA, a two-way between-groups analysis of variance conducted for the combined effects of gender and ethnicity on career decision self-efficacy.
H_{10}. Gender is a moderator between students' career decision self-efficacy and their job seeking behaviours. H_{11}. The combination of gender & ethnicity	The mediation and moderation testing using PROCESS[50] coding in SPSS 20 (Hayes, 2018). Mediation analysis measure and test the direct and indirect pathways through which an antecedent variable

[49] MANOVA analyses require a minimum of two continuous variables to be tested against one categorical, independent variable (ethnicity in this case) (Pallant, 2007).

[50] PROCESS is a regression path analysis modelling tool used for SPSS and widely used in social sciences for estimating direct and indirect effects in mediation and moderation models (Hayes, 2018). Traditionally mediation was tested using the Four Step method as described by Baron & Kenny (1986). However, the Four-Step method is inefficient and it increases a chance of error as using multiple hypothesis test for a single hypothesis increases the probability of an incorrect decision (Stride, 2017).

moderates students' career decision self-efficacy and their job seeking behaviours. H_{12}. Students' ethnicity and job seeking behaviours are mediated by students' career decision self-efficacy.	influences a subsequent dependent variable through one or more mediating variables. Moderation examines how moderators influence the strength and/or the direction between an independent and a dependent variable (Hayes, 2018). Literature does not advise how to treat ethnicity in mediation or moderation analysis, i.e. as a dichotomous or a multicategorical variable. In fact, Hayes (2018, pers. comm, 23 March) treats this dilemma as a "a substantive question and not a statistical one". Hence, ethnicity in this study is treated as one categorical independent variable with several categories and, as such, it is coded as a dummy dichotomous variable.

Additionally, at Time 1, the following analyses are conducted:

- The independent t-test[51] for equality of means to test the hypothesis that the two samples have the same mean (Field, 2009) to see whether the self-selected experimental group is the same as the rest of the sample in terms of their career self-efficacy and job seeking behaviours (Pallant, 2016).
- MANOVA analysis to compare both groups and to see whether the mean differences between the groups on the combination of different variables (the total CDSE scale and subscales, PJSB, AJSB and JSI) are likely to have occurred by chance (Pallant, 2016).

Time 2 Analysis: Quantitative Data

Matching the Experimental and the Control Group

At Time 2, in October 2015 questionnaires were distributed to the same students who completed the questionnaire at Time 1, yielding 245 responses in total (out of $N_{T1Total} = 955$; 25.7% response rate) (see Section 3.4.2. Participant Sampling). 87 students[52] who respond completed career coaching and completed Time 1 and Time 2 questionnaire ($N_{T2E} = 87$). 158 students[53] who responded had not completed career coaching but completed Time 1 and Time 2 questionnaire ($N_{T2C} = 158$). This sample of 245 students forms the initial bases of the experimental ($N_{T2E} = 87$) and the control group ($N_{T2C} = 158$) that are subsequently used for the quasi-experimental part of the research design (the assessment of the career coaching intervention).

[51] Independent-sample t-test is used to compare the mean scores of two different groups (Pallant, 2007).
[52] At Time 1, 165 students had selected for career-coaching and completed the questionnaire ($N_{T1E} = 165$). At Time 2, 30 students left or graduated and were non-contactable and 1 student had requested to be removed from the study, reducing the available sample of the experimental group to 134 students. 87 students completed the questionnaire at Time 2 giving a response rate of 65% for an experimental group.
[53] At Time 1, 790 students had not selected for career-coaching and completed the questionnaire ($N_{T1C} = 790$). At Time 2 340 students had left or graduated and were non-contactable, reducing the group to 450 students. 158 students completed the questionnaire at Time 2, giving a response rate of 35% for a group that was going to form a control group, subject to matching.

In order to ensure that both groups are statistically equivalent at Time 1 the characteristics of the experimental sample (N_{T2E} = 87) and the control group sample (N_{T2C} = 158) drawn at Time 2 are statistically compared as at Time 1 (the Excel and SPSS data are entered sequentially for participants for both Time 1 and Time 2, hence, it is possible to look at the Time 2 sample's Time 1 characteristics).

At Time 1, MANOVA analysis (see Appendix 3.8: Time 1 Group Comparison) between the self-selected experimental group (N_{T1E} = 165) and the rest of the sample (N_{T1} = 790) (see Appendix 3.9: Time 1 Independent-Samples t-Test for the Self-Selected Group and the Rest of the Sample) showed that the Time 1 experimental group had different *Problem Solving* and *Preparatory Job Seeking Behaviours*[54] than the rest of the sample. These findings suggested that at Time 2, in order for both the experimental and the control group to be equivalent at Time 1, the matching should be done using *Problem Solving* and *PJSB* as variables (see Table 3.8. below for the summary of the results). This approach produces a much more precise match than the initial approach of matching both groups by their Time 1 *Career Decision Self Efficacy* levels.

Table 3.8. Summary of the results for the independent-sample t-test for the experimental group and the rest of the sample

Scale	**Self-Selected Group (E)**		**Rest of the Sample (R)**		**Statistics**	**Statistically Significant Results**
	M_E	SD	M_R	SD		
Problem Solving	3.45	.63	3.33	.66	t(835) = -2.09, p = .037, two-tailed	Yes (p<0.05)
PJSB	1.45	.23	1.41	.24	t(835) = -1.988, p = .047, two-tailed	Yes (p<0.05)
CDSE	3.495	55	3.568	.55	t(835) = -1.482, p = .139, two-tailed	No (p>0.05)
AJSB	1.84	.70	1.90	.62	t(835) = -.955, p = .34, two-tailed	No (p>0.05)
JSI	3.07	1.07	3.11	1.01	t(835) = -.474, p = .636, two-tailed	No (p>0.05)

[54] Initially the experimental and the control group were going to be matched in terms of their Career Decision Self-Efficacy due to the theoretical framework and research questions. However, as the sample of students who self-selected for career coaching at Time 1 (N=165) had a statistically significantly higher *Problem Solving* mean (M=3.45) and *Preparatory Job Search Behaviours* mean (M =1.45) than the sample of students who had not self-selected for career coaching (N=790) (M=3.33 and M=1.45 respectively). Both samples of students were statistically equivalent in terms of their total Career Decision Self-Efficacy, Active Job Seeking Behaviours and Job Search Intensity.

MANOVA analysis confirmed statistically significant differences between both groups in terms of *Problem Solving* (sig. value of .023) and *PJSB* (sig. value of .009).[55] (see Appendix 3.10: Time 1 MANOVA Group Comparison.).

Hence, the two-way ANCOVA analyses[56] (Salkind, 2006) were conducted to compare the experimental and the control group at Time 1 *Problem Solving* and *Preparatory Job Seeking Behaviours* levels for the Time 2 experimental group (N_{T2E} = 87) and the Time 2 control group (N_{T2C} = 158) (see Figure 3.4. below.). The results show that both groups were equivalent in terms of their *Problem Solving* F(7, 217) = .504, p = .831 and for *Preparatory Job Seeking Behaviour* F(7, 216) = 1.287, p = .258.

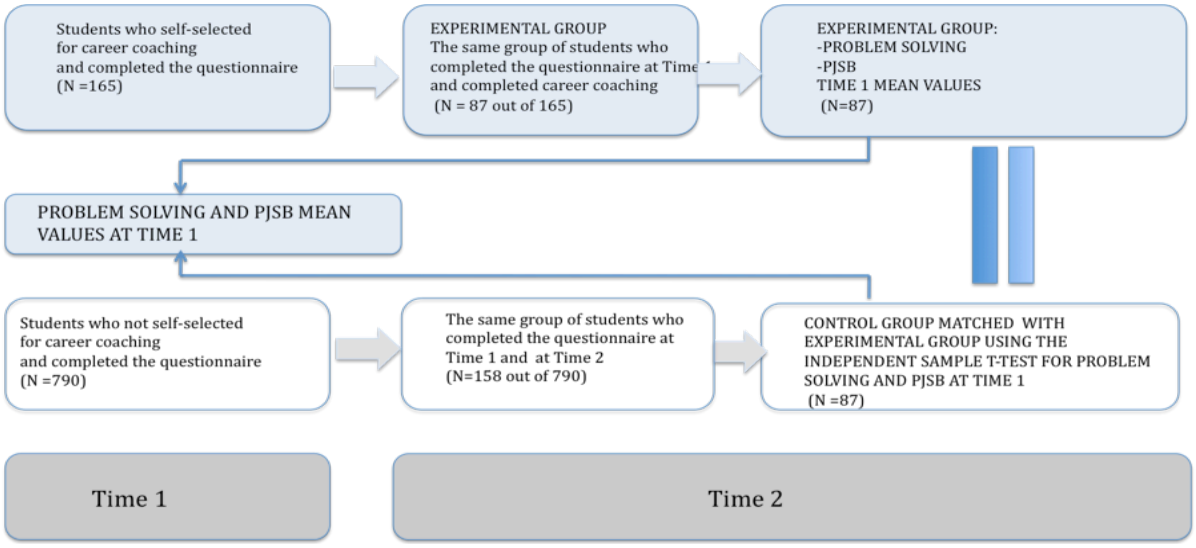

Figure 3.4: Matching the Experimental and the Control Group Strategy

Additionally, both the experimental and the control group were compared at Time 1, using MANOVA, against all other dependent variables such as: self-appraisal, occupational information, goal selection, planning, problem solving, CDSE, PJSB, AJSB and JSI means. There were no statistical differences at Time 1 between the experimental and control group (NE = 80, NC = 151), Wilks' Lambda = .974; partial eta squared = .026 (see Appendix 3.11. Time 2 MANOVA Comparison between the Experimental and Control Group at Time 1). Hence, both the control and

[55] Statistically significant as less than <.05 (Pallant, 2007)
[56] ANCOVA is normally used for a two group, pre-test/post-test design to compare the impact of an intervention when, in order to control for pre-existing differences between the groups that may be influencing the relationship between independent and dependent variables (Pallant, 2016) and has been recommended by Salkind (2006) to use for groups that are not randomly selected, and hence assumed not equivalent, from the start of the experiment.

the experimental group are completely matched in terms of all their dependent variables at Time 1 (see Figure 3.5. and Table 3.9 below).

Finally, both groups were tested, using two-way ANCOVA, for the influence of Ethnicity at the post-intervention stage for the control and the experimental group on the Career Decision Self-Efficacy levels at Time 2. The Test of Between-Subjects Effects shown there is no significant effect between independent variables (group type and ethnicity), F(2,198) = 1.098, p=.366 (see Appendix 3.12. Time 2 Two-Way ANCOVA for the Experimental and Control Group for the impact of the Ethnicity on CDSE). Hence, the interaction between the ethnicity and CDSE levels at Time 2 for the experimental group and the control group is also not statistically significant.

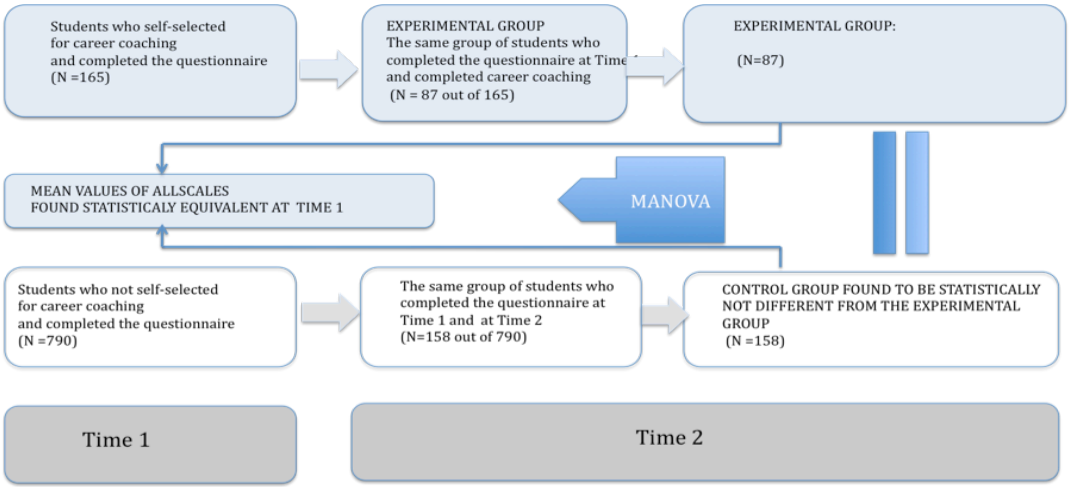

Figure 3.5: The Equivalence of the Experimental and the Control Group at Time 1

Table 3.9: Experimental and Control Group Differences at Time 1

T1 Scales	F(1,229) value	p. value[57]
Self-appraisal	1.208	.273
Occupational information	1.792	.182
Goal selection	1.059	.305
Planning	3.145	.078
Problem solving	.053	.818
CDSE	1.665	.198
PJSB	.955	.330
AJSB	.141	.707
JSI	.956	.329

[57] Differences are statistically significant for p values < an alpha level of .05. Given that there are 9 dependent variables Pallant (2007) recommends to further adjust the alpha levels by dividing .05 by the number of dependent variables being investigated (9 in this case). Hence, a new alpha level in this case is .006.

As both the experimental and the control group were equivalent from the start of the experiment (see Appendix 3.11. Time 2 MANOVA Comparison between the Experimental and Control Group at Time 1), any observed differences at the end of experiment are rendered as due to career coaching (Salkind, 2006). No further matching of the Experimental and the Control Group was necessary. Statistically measured absence of significant differences between both groups of students reduces the threat to the internal validity of the experiment and renders any observed differences between the control and the experimental group at the end of experiment to be due to a career coaching intervention (Salkind, 2006)[58].

Following the successful matching of the experimental and the control group the following quantitative analyses are conducted at Time 2 (see Table 3.10. below).

Table 3.10: Time 2 Quantitative Analysis Approach

Research Hypothesis	Time 2 Quantitative Analysis
H_1: Coaching intervention increases career decision self-efficacy and job seeking behaviours of students.	H_1: MANOVA analyses to compare the experimental and control group at Time 1 in terms of Time 1 self-appraisal, occupational information, goal selection, planning, problem solving, CDSE, PJSB, AJSB and JSI means to see whether groups are equivalent at Time 1. H_1: MANOVA analyses to compare means of Time 2 self-appraisal, occupational information, goal selection, planning, problem solving, CDSE, PJSB, AJSB and JSI of the experimental and control group at Time 2 to measure the effectiveness of coaching. As the samples come from the same population, it is expected that their means will be almost equal. Under the null hypothesis it is assumed that the experimental manipulation (i.e. receiving career coaching) had no effect on the students' career self-efficacy. The standard error will be used to determine the variability between sample means. The larger the standard error the more confident one is that two samples come from different population but are typical of their original population, i.e. the null hypothesis is incorrect and the two sample means differ as a result of the experimental manipulation (i.e. career coaching) (Field, 2009). H_1: Independent samples t-test to compare differences between the sample means of the Vocational Outcome Expectations for the Experimental Group and the Control Group at Time 2. This test is appropriate to use to examine differences between two conditions or groups of people.
H_4. Students' vocational outcome expectations are a predictor of their job seeking behaviours.	H_4: Standard multiple regression analysis to regress VOE against PJSB, AJSB and JSI.
H_5. Students' vocational outcome expectations are correlated with their job seeking behaviours.	H_5: A bivarate Pearson product-moment correlation coefficient to measure how much variance in students' preparatory job seeking behaviours, active job seeking behaviours and job search intensity is explained by their Vocational Outcome Expectations.
H_8. Male and Female students have different vocational outcome expectation levels.	The independent-samples t-test.
H_9. Different ethnic groups of students have different vocational outcome expectation levels.	Multivariate analysis of variance (MANOVA) with ethnicity chosen as a categorical, independent variable.
H_{14}: The combination of gender & ethnicity moderates students' vocational outcome expectations	The mediation and moderation testing using PROCESS coding in SPSS 20 (Hayes, 2018)

[58] Quasi-experiments approximate true experiments when the differences between the experimental and the control group at the pre-test time are minimised (Hedrick et al. 1993).

and their job seeking behaviours H_{15}. Students' ethnicity and job seeking behaviours are mediated by students' vocational outcome expectations. H_{16}. Ethnicity moderates students' vocational outcome expectations and their job seeking behaviours. H_{17}. Vocational outcome expectations moderate students' career decision self-efficacy and their job seeking behaviours. H_{18}. Vocational outcome expectations mediate students' career decision self-efficacy and their job seeking behaviours.	

The conceptual path model for Time 1 and Time 2 analysis is depicted in Figure 3.6. below.

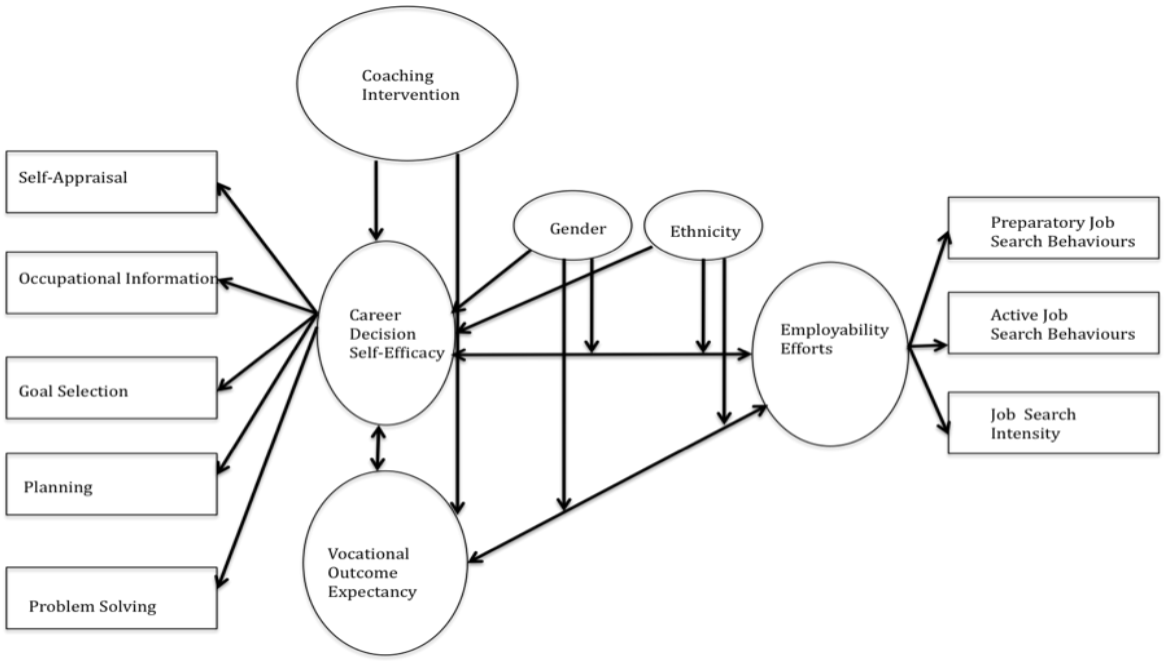

Figure 3.6: The Conceptual Path Model

3.6.2. Qualitative Data

Data Analysis Approach

This study adapts a deductive approach (Boyatzis, 1998) resulting in a theoretical thematic analysis. It focuses on a detailed analysis of some aspects of the data (Braun and Clarke, 2006) and is driven by the study's theoretical constructs and themes derived from the Social Cognitive Career Theory aspects of the data (Braun and Clarke, 2006).

The research interprets the themes and constructs at the underlying or hidden level, i.e. it tries not just to organise and summarise the data at the explicit level to show patterns but also to interpret the patterns in the context of previous literature (Boyatizis, 1998). Braun & Clarke (2006) claim thematic analysis is conducted within a constructionist framework. The analyses do not focus on individual motivations or psychologies but instead on theories derived from the SCCT contexts. This approach is consistent with the pragmatist philosophy of this research since the qualitative stage of the mixed-methods research (MMR) shifts into social constructionist (Crotty, 2003). The study's pragmatist epistemology allows for a '*methodological eclecticism*' - the aim of which is to contribute to a greater understanding of a research problem (Denzin & Lincoln, 2011; Teddlie & Tashakkori, 2010). The post-positivist paradigm - appropriate for quantitative part of the study - is subsequently complemented by a social constructionism paradigm in the qualitative part of the research.

Qualitative data are analysed, using the thematic analysis approach, in the following phases (Taylor and Gibbs, 2010; Braun & Clarke, 2006; Carney, 1990):

Level 1a. **Summarising and packaging data: Reconstructing interviews**

Interviews with students conducted at Time 3 were transcribed by an external agency in May 2016. Interviews with career coaches conducted in May 2016 were transcribed by the professional transcribing agency in August 2016. From July – August 2016 students' interview data were read, re-read and reflected upon.

Level 1b. **Summarising and packaging data: Data coding and linking to a theoretical framework**

Coding is both deductive (concept driven), i.e. it used the concepts from the SCCT and from the research questions (Taylor and Gibbs, 2010) and inductive, codes being driven by the data themselves. For the concept-driven codes, social constructionism is the coding filter applied by the researcher when coding data (Saldana, 2013) as the researcher believes that students' minds are shaped by their culture and that students use their cultural lenses to organise their world and how they make sense of it (Crotty, 2003). Most of the transcripts are coded in order to avoid deleting any unknown units of data that could be meaningful or any data that included discrepancies and might lead to rethinking of a code or themes (Saldana, 2013). The coding is developed using the existing theory (Weber, 1990), i.e. categories are based on the SCCT theory (see Figure 3.7.

below), the coaching effectiveness literature (see Table 2.1. in The Coaching Relationship Section) and on the research questions (see Table 3.11. below).

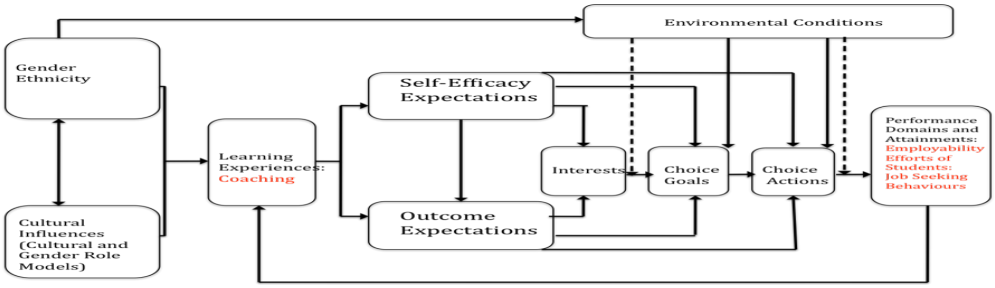

Figure 3.7: The SCCT Conceptual Framework

Table 3.11: The Link between the Research Questions, the SCCT and Coaching Effectiveness Constructs and Theory Driven Codes

Research Questions	**SCCT & Coaching Effectiveness Constructs**	**Theory Driven Codes**
RQ1. Is career coaching effective in increasing students' self-efficacy, outcome expectations and their employability efforts?	Learning Experience: Coaching	Impact on SE, OE and Employability Efforts
RQ1a. What aspects of the coaching relationship are most effective in increasing students' self-efficacy, outcome expectations and their employability efforts?	Learning Experience: Coaching	Quality of Coaching Relationship Trust Warmth No judgment Empathy Respect
RQ1b. What are students' self-efficacy and outcome expectation beliefs?	Self-Efficacy Expectation Outcome Expectations (and Interest/Choice Goals/Choice Actions)	Self-Efficacy Outcome Expectations Goals Choices & Actions
RQ2a. What cultural influences and environmental conditions (such as Perceived Barriers or Support to Preferred Careers, Cultural Influences, Family Expectations, Perceived Social Support, Socioeconomic Status, Family Role Models and Gender & Ethnicity Barriers to Chosen Careers) impact students' self-efficacy, outcome expectations and employability efforts?	Cultural Influences (Cultural and Gender Role Models) Environmental Conditions	Family Role Models Family Expectations Perceived Barriers to Preferred Careers Perceived Social Support Socioeconomic Status Perceived Gender & Ethnicity Barriers to Preferred Careers

These a *priori codes* are used in advance of the analysis process in order to ensure that key constructs are included in analysis and to build on the existing theory (Brooks, *et. al.*, 2015). Hence, constructs such as *Learning Experience: Coaching*, *Self-Efficacy Expectations*, *Outcome Expectations*, *Environmental Conditions* and *Cultural Influences (Cultural and Gender Role Models)* are converted into the theory driven codes. The codes are descriptive, i.e. they are construct-based and not open to interpretation (Miles & Huberman, 1994). Data is grouped, segregated and based on the descriptive coding (Saltana, 2013). Descriptive coding is considered to be appropriate for semi-structured interview transcripts and for theory (hypothesis) testing (Saltana, 2013).

In July 2016 data driven codes and themes were created in NVivo v.10.2.2. The *priori* coding was used to group, segregate and link data (Saltana, 2013) and to categorise similar data chunks (Miles, Huberman & Saldana, 2014). However, data driven codes were also generated in NVivo v.10.2.2. - when a new code was identified in data and was absent in the existing theory driven code list (Saunders *et al.*, 2012) and integrated with the priori codes (see The Qualitative Coding Section in Findings). The sub-coding was used in order to avoid coding that is too broad, to explore emerging interrelationships (Gibbs, 2007) and to allow for content analysis at a later stage (Schreier, 2012). Simultaneous coding was used in instances where the data's context had more than one meaning justifying more than one code (Saldana, 2013).

Level 2. **Repackaging and cumulating data: Searching for relationships, meanings and patterns**

A theoretical thematic analysis was used as a method to identify and analyse patterns and themes (Braun & Clarke, 2006)[59]. At the second cycle coding data were analysed based on thematic or conceptual similarities (Saldana, 2013). Valid themes were kept whereas themes with insufficient data to support them were renamed, integrated or removed (Saldana, 2013, Charmaz 2006). The search for meaning was conducted by aggregating frequencies (categorical aggregation) in a search for patterns and consistency (correspondence) in order to find significant meanings in reoccurring instances (Stake, 1995). Some of the patterns were known in advance as they were drawn from the research questions and as they use the conceptual framework as a template for the analysis,

[59] A thematic analysis approach can be used within most theoretical frameworks and when using different methods (Braun & Clarke, 2006). There is no clear agreement in the qualitative literature as to how thematic analysis should be applied to research (Braun and Clarke, 2006; Tuckett, 2005) and it is often claimed to be discourse analysis or content analysis (Meehan, Vermeer & Windsor, 2000). Braun & Clarke (2006) claim that a lot of analyses are thematic but they are often called or identified as something else.

however, as expected, new patterns emerged from the data (Stake, 1995). As the weakness of this thematic analyses approach is that data is mostly paraphrased without developing an analytic narrative it was important that the themes, that capture something of importance in relation to the research questions and form a pattern within the data set, were identified. As there are no rules as to of how much of a theme needs to be presented in the data set to be considered a theme, the researcher needed to use his/her judgment to decide on the themes (Braun & Clarke, 2006).

Level 3a. **Developing and testing propositions to explain framework and to test and confirm the theory: Cross-checking findings and creating a matrix analysis of major themes in the data**

All the individual quotes for each theme are gathered in the tables, cross referenced with research questions and with relevant literature. The Theory and Data Driven Code Matrix is created (see The Qualitative Coding in the Findings chapter). The 'story' for each theme is identified (Bazeley & Jackson, 2013). The analytical account is developed using the following stages (Bazeley & Jackson, 2013):

1. *Description* of significant themes that were identified.
2. *Clustering* in order to group and conceptualise data and to subsum particulars into the general (Miles & Huberman, 1994).
3. *Relating* the connections and relationships across themes were explored in terms of differences or similarities of views across participants and making comparisons and contrasts.

Level 3b: **Developing and testing propositions to explain framework and to test and confirm the theory: Synthesis & Aggregation**

The final analysis is written using extracts from the interviews and providing a realist type narrative (Stake, 1995) which is direct and matter-of-fact. Narrative descriptions are typical for a constructivist (and constructionism) perspectives as it is expected that each reader will receive unique meanings (Stake, 1995). The discussion section provides findings in the context of the existing literature. In order to avoid paraphrasing data without developing a narrative the themes are fitted together around a central concept or idea (Braun & Clarke, 2006). The discussion section provides the reader with a deep understanding of the case study, including its origin and discussing any issues that might help the readers to understand the case. A body or data with some interpretation is provided and extreme or controversial cases are discussed. Key issues for

understanding the complexity of the case are provided and findings are related to other research (Stake, 1995).

The aim of this process is to develop an analytical account of the data showing a range of arguments and supporting evidence in order to answer the original research questions, to defend the arguments and to demonstrate connections (via rigorous presentation of the data and coding), to test theory and to extend the findings to a broader context (Bazeley & Jackson, 2013). As the research is the case study (see the Validity and Reliability of the Case Study for a detailed discussion) with the goal to provide the context for the quantitative findings and to sharpen understanding of the SCCT theory and coaching effectiveness theory the narratives are created to provide the reader with a deeper understanding of the case (Stake, 1995).

This section discussed the quantitative and qualitative research instruments and approaches to data analysis. The next section discusses the issues of reliability, validity, generalisability and replication of the study. It then gives an overview of ethical issues and how they were addressed. Finally, it discusses the strengths and limitations of the adapted methodology.

3.6.3. Data Screening

Time 1 Data Screening

This section summarises the process of data screening conducted prior to starting the Time 1 statistical analysis. For the detailed discussion see Appendix 3.14: Time 1 Data Screening. All data collected during October – November 2014 have been examined, using SPSS 20 software, for missing values[60], data accuracy, outliers, errors in coding and the normality of distribution.

Many statistical techniques performed in social research assume that data are normally distributed (Pallant, 2016). Zimmerman (1998) discusses that both non-parametric statistical tests' quality decreases (as much as this is a case for parametric statistics assuming normality) if normality assumptions are violated. However, the analyses of the Tests of Normality that have been conducted for the dataset showed that Self-Appraisal, Occupational Information, Goal Selection, Planning and Problem-Solving Scales, as well as Preparatory Job Search, Active Job Search and

[60] Missing data cases were excluded pairwise, i.e. cases were included in the analysis only if they have full data on all the variables necessary to compute required information[60]. This was following Pallant's (2013) recommendation to exclude cases pairwise, i.e. exclude cases only if they miss data required for specific analysis, to keep the sample size as large as possible.

Job Search Intensity Scales were not normally distributed (See Appendix 3.15: Time 1 Kolmogorov-Smirnov and Shapiro-Wilk Tests for Normality). Sig. value of .000 suggests a violation of the assumption of normality, this is however common for larger samples (Pallant, 2016). The only normally distributed variable was the Total CDSE Scale (Sig = .065[61]).

All scales were also tested for skewness and kurtosis[62] (See Appendix 3.16: Time 1 Skewness and Kurtosis Test). Problem Solving, Total CDSE Scale and PJSB scale were positively skewed[63] whereas Self-Appraisal, Occupational Information, Goal Selection, Planning, as well as Active Job Search and Job Search Intensity Scales were negatively skewed[64]. Positive values of kurtosis[65] were found for Goal Selection, Total CDSE and PJSB scales. Planning, Occupational Information, Self-Appraisal, Problem Solving, AJSB and JSI had a platykurtic distribution[66]. According to Tabachnick & Fidell (2007) and Pallant (2013) kurtosis and skewness tests tend to too sensitive with large samples and with large samples skewness does not affect the analysis (Tabachnick & Fidell, 2007; Pallant, 2016).

Given that the tests of the sample data suggested both a violation of the assumption of normality and skewness and kurtosis and given the large sample size (N=955), the decision was taken to follow Fidell & Tabachnick's (2003) suggestion for large samples (300 or larger) to assess normality through inspection of the shape of the distribution and of the normal quantile-quantile QQ plots. The visual inspection of the Q-Q plots showed reasonably straight lines indicating that all variables, except Preparatory Job Search Behaviour (PJSB) were normally distributed and that the violation of the assumption of normality and skewness and kurtosis of the sample was due to its large size (see Appendix 3.17: Time 1 Normal Q-Q Plots for Continuous Variables). Preparatory Job Search Behaviour (PJSB), positively skewed, was the only variable that needed to be transformed[67]. For the detailed discussion on the transformation of the PJSB scale (see Appendix 3.18: Time 1 Data Screening Transformed Variables).

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[61] A normally distributed variable has a Sig. value of more than .05 (Pallant, 2007)
[62] Skewness values provide indication of the symmetry of the distribution whereas kurtosis show how peaked the distribution is (Pallant, 2016).
[63] This indicates scores being clustered to the left of low values in the distribution, i.e. the most frequent scores are lower ones.
[64] This indicates scores being clustered at the high end of the distribution, at the upper end (Field, 2009; Pallant, 2016)
[65] This indicates that these distributions are clustered in the center with long tails and that they do not have many extreme cases (either 1s or 5s) (Pallant, 2016)
[66] Negative kurtosis means that most of the values share almost the same frequency of occurrence.
[67] According to Micceri (1989) it is often very difficult to find normal distribution in education and psychology and, hence, the need for data transformation to improve the normality of variables.

The assumption of homogeneity of variance (the assumption that samples are obtained from populations of equal variances with the variability of scores for each group being similar) was tested using Levene's test (Pallant, 2016). The results showed that for all scales the variances were not significantly different and that the homogeneity of variance assumption was justifiable and plausible (Field, 2007). Results also revealed no collinearity among the variables of interest (see the Appendix 3.19: Time 1 Testing for Homogeneity of Variance).

Time 2 Data Screening

This section will first discuss the process of data screening conducted prior to starting the Time 2 statistical analysis. All data collected during October – November 2015 were examined, using SPSS 20 software, for missing values, data accuracy, outliers, errors in coding and the normality of distribution. The analyses of the Tests of Normality have been conducted for all continuous variables in the dataset (see Appendix 3.20: Time 2 Kolmogorov-Smirnov and Shapiro-Wilk Tests for Normality[68]). Again, the same as during the Time 1 analyses, the only normally distributed variable was the Time 2 Total CDSE Scale (Sig = .077[69]). All scales were also tested for skewness and kurtosis[70]. All scales, similarly as at Time 1, were skewed and had a degree of kurtosis (See Appendix 3.21: Time 2 Skewness and Kurtosis Testing). PJSB, AJSB were positively skewed whereas Vocational Outcome Expectations was negatively skewed.

Given that the tests of the sample data suggested both a violation of the assumption of normality and skewness and kurtosis and given the large sample size (N=245), the decision – the same as at Time 1 - was taken to follow Fidell and Tabachnick's (2003) suggestion for large samples to assess normality through inspection of the shape of the distribution and of the normal quantile-quantile QQ plots (see Appendix 3.22. Time 2 Normal Q-Q Plots for Continuous Variables)[71]. The visual inspection of the normal Q-Q showed reasonably straight lines for most variables - except Preparatory Job Search Behaviour (PJSB), Active Job Search Behaviour (AJSB) - indicating that except these variables - the others were normally distributed and that the violation of the

[68] Sig. value of .000 suggests a violation of the assumption of normality, which is common for larger samples (Pallant, 2007).
[69] A normally distributed variable has a Sig. value of more than .05 (Pallant, 2007)
[70] Skewness values provide indication of the symmetry of the distribution whereas kurtosis show how peaked the distribution is (Pallant, 2007).
[71] Field (2007) also comments that for samples larger than 200 to inspect the shape of distribution visually rather than to rely on the values of skewness and kurtosis statistics, as large samples sizes result in significant values even for small deviations from reality.

assumption of normality and skewness and kurtosis of the sample was due to its large size. PJSB and AJSB, due to its distribution shape, were transformed. For a detailed discussion see Appendix 3.23: Time 2 Data Screening Transformed Variables.

3.6.4. Pilot Study Results

The pilot of the study was conducted in June 2014. 20 questionnaires were emailed to students who had completed their career coaching programme in May 2014. The approach yielded seven responses (3.5%). All respondents claimed that the questionnaire was straightforward, clear, and easy to understand. However, a low number of responses resulted in a review of strategy in terms of distributing hard copies to students during their core lectures, in order to obtain as a high rate of responses as possible. Another pilot study was conducted at the end of September 2015 with two randomly selected groups of Year 1 undergraduate students. Pilot questionnaires were distributed to 30 students in total - from the SMS and to the Accounting and Finance Department departments studying either for a Business with Finance, Accounting & Finance or Financial Information Systems degree - at the beginning of their first 'Quantitative Analysis and Systems' classes. Students were observed to capture their reactions during completing the questionnaire and asked to give feedback with regard to the constructs in the questionnaires. In order to ensure anonymity and confidentiality, pilot data was stored in three separate files: one consisted of students' names and corresponding pilot IDs (expressed as P* and a random selection of letters), the next set consisted of students' IDs and contact details and the final set consisted of pilot IDs and the actual data. All three databases were password protected and stored in different locations. This ensured no access to a complete set of information.

The Pilot feedback was positive and students reported that they found the questions easy to answer. It took them 10-15 min to complete the questionnaire. During a pilot, a few students commented in the additional comments section. P*AD commented: "It's easy to get through. The questions are straight-forward.", P*J student also noted: "It was a pleasure to complete this questionnaire. I found the questions straightforward." A male, Bangladeshi student, P*L pointed out in the comment box: "I applied for many jobs but no-one gave me interviews, because of lack of experience etc. It's a hypocritical double standard they don't take me but they take people who can hardly talk English?" The dataset was complete and there was no missing data.

As the questionnaire consists of the US scale (Questions 1-25 (CDSE: Taylor & Betz, 1983) the note added at the beginning of questions 1-25 said: "NB: Please note the following: Questions 2, 4, 7,13, 20, 25: a US 'major' is equivalent to a UK 'degree'. Questions 12, 28: a US 'resume' is equivalent to a UK 'CV'. Question 23: a US 'graduate or professional schools' is equivalent to a UK 'postgraduate studies or professional qualifications'[72]."

The Qualitative Sample Pilot

The total interview sample consisted of 15 students: 4 from the control group and 11 from the experimental group. The semi-structured interview questions were tested with the pilot group of 4 students. As students understood all the questions the pilot was included for analyses in the final sample of 15 students.

3.7. Issues of Reliability, Validity and Transferability

3.7.1. Across Methods

In order to assess the quality of the MMR the Tashakkori and Teddlie's (2008) framework is utilized in the Table 3.12. below (O'Cathain, 2010).

Table 3.12: Quality Framework for Mixed Methods Research

Domains of Quality	*Items within Domain*	*Description of Item*
Planning quality	*Foundation element*	The study is planned as a MM design. A comprehensible and critical literature review, shaped by research questions is provided (see Chapter II) and the design is guided by the SCCT conceptual framework (see Section 2.4) (O'Cathain, 2010).
	Rationale transparency	A justification for a MM approach is provided in the Methodology chapter and it can be seen that MM is used in order to address research questions (O'Cathain, 2010).
	Planning transparency	The details of paradigm, design, data collection, data analysis and reporting are provided (O'Cathain, 2010).
	Feasibility	Despite the longitudinal sequential MM design the study is feasible and there is plenty of expertise between three supervisors and the researcher to deliver the study (O'Cathain, 2010).
Design quality	*Design transparency*	A visual diagram describing key aspects of the design, sequencing of methods and stages at which integration takes place is provided in Figure 3.2. in the Methodology chapter (O'Cathain, 2010).
	Design suitability	Table 3.1. in the Methodology chapter discusses how the MM design is used to address the overall research question. The appropriateness of the design is shown. The design also fits with the pragmatic and MM paradigm (O'Cathain, 2010).
	Design strength	The MM design seeks elaboration and clarification of the coaching effectiveness findings from *qual* method with results from the QUAN method as well as

[72] This conversion was taken from Fulbright Commission (2014). CDSE scale (Taylor & Betz, 1983) was not altered but, instead the note was added to account for differences in the US and UK educational system.

		assessment of the fidelity of coaching intervention (Onwuegbuzie & Johnson, 2006). The goal of the MM design is to utilise the strengths of both approaches (Onwuegbuzie & Johnson, 2006) and to optimize the breadth and depth of the study (O'Cathain, 2010).
	Design rigor	It is ensured by implementing quantitative and qualitative methods that are appropriate for the quantitative and qualitative designs. The quasi-experimental MM design is appropriate for addressing the overall research question of the career coaching effectiveness (RQ1). Research Question 2 is addressed using appropriate quantitative and qualitative methods that fit together as they address separate but interrelated research questions (O'Cathain, 2010).
Domains of Quality	*Items within Domain*	*Description of Item*
Data Quality	*Data transparency*	Sampling procedures, sample sizes and analysis for both methods are fully described in the Methodology chapter (O'Cathain, 2010).
	Data rigor/design fidelity	The research design is implemented rigorously and is described in detail in the Research Design section. All phases of the research strategy are implemented as planned (O'Cathain, 2010).
	Sampling adequacy	Both sampling techniques and sample sizes are adequate for each method and are discussed in detail in the Participant Sampling section (O'Cathain, 2010).
	Analytic adequacy	Data analysis techniques are described in the Approaches to Data Analysis. Approaches are appropriate for research questions and executed properly (O'Cathain, 2010).
	Analytic integration rigor	The findings from QUAN data are used to draw a *qual* sample and described in detail in the Qualitative Sampling Strategy section. There is no other integration at the analysis stage (O'Cathain, 2010).
Interpretive Rigor	See Interpretive Rigour of the Study section in the Discussion and Final Conclusion chapter	

Generalisability and Transferability of the Study

This section explores issues of generalisability of quantitative and qualitative part of the study. This is followed by a discussion of the issues of generalizability of the case studies.

Generalisability and Transferability of the Quantitative and Qualitative Findings

Generalisability (also called *external validity*[73]) is concerned with the degree to which conclusions and interferences from one study can be generalised to other situations and people (Polit & Beck, 2010; Meredith, 1998). It is considered to be one of the major criteria when assessing the quality of any study (Polit & Beck, 2010).

Polit & Beck (2010) argue that generalisation in qualitative studies is controversial as qualitative studies are always to be seen within a particular context and, hence, extrapolation of the results is very problematic. However, as it is increasingly important for studies to be evidence-based and to provide information for policy and decision makers, the issues of generalisability of qualitative

[73] Teddlie and Tashakkori (2003) suggest not using the term validity in mixed methods research due to its broad range of meanings that prevents effective communication of this concept.

studies are becoming ever more important (Polit & Beck, 2010). Polit & Beck (2010) and Collins (2010) discuss Firestone's (1993) framework as a way to assess generalisation of qualitative and quantitative studies. Within Firestone's (1993) framework there are three different generalisation models.

The first model, *statistical generalisation*[74]*,* defined as making inferences about the population from a sample, is suitable for quantitative studies (Polit & Beck, 2010). The statistical inferences about the population are based on exactly identified parameters and variables (for more detailed discussion see section 3.7.2. Quantitative Methods) (Meredith, 1998). In this study, the inferences are made about the students' population based on the study's sample (Polit & Beck, 2010). As the student sample is characteristic of its population (see The Quantitative Sampling Strategy) statistically significant findings in this study can be generalised to other populations (Polit & Beck, 2010). Also, the generalisability of this effectiveness study is enhanced by ensuring that the study participants are representative of the population (Polit & Beck, 2010). The study's large sample sizes at both Time 1 and Time 2 increase its statistical power and reduce the standard error (Collins, 2010; Creswell & Plano Clark, 2007).

The second model, *analytic generalisation,* is concerned with generalising from particulars to theory and is relevant for both qualitative and quantitative studies. Researchers must discriminate between that information or experience relevant to all studied individuals and what the information that is unique to them (Polit & Beck, 2010). Polit & Beck (2010) state that rigorous inductive studies combined with the use of confirmatory analysis allow for good quality generalisations of qualitative studies. However, they point out that this kind of generalisation can be sabotaged if the sample has not reached its saturation. Due to this study's relatively small qualitative sample size[75] that might have limited theoretical saturation and, hence, compromised development of theory (Collins, 2010) the study is employing the third model of generalisation (see below). Having said that, maximum variation sampling used in the qualitative part of the study supports its analytic generalisation through strengthening the study's replication aspect (Polit & Beck, 2010). The details of both the quantitative and the qualitative sampling are provided in the Participant

[74] Collins (2010) distinguishes *internal statistical generalisation* from *internal generalisation*. Internal statistical generalisation is concerned with making conclusions about the sample based on an elite subset of that sample that is representative of the sample (Onwuegbuzie & Leech, 2007). Internal generalisation is concerned with making conclusions based on the whole sample and not on an elite subset of that sample (Maxwell, 1992).

[75] According to Creswell (2005) a case study needs 3-5 participants for qualitative data whereas interviews, used as data procedure, need 6-12 participants (Johnson & Christensen, 2008). This study interviewed 15 students, 8 career coaches and 3 senior managers.

Sampling section. Teddlie & Tashakkori (2009) claim that mixed method research strengthens analytic generalisation by enhancing proximal similarities[76]. This study gives the reader a detailed description of the setting (see the Research Site section), including: the city in which the study is conducted, timings of data collection and characteristics of participants, hence, aiding the readers' assessment of *proximal similarity*[77] (Polit & Beck, 2010). Also, using a case study compensates for potential disadvantages encountered in the quantitative part[78] of the study as it provides depth and context that is normally missing in quantitative research (Meredith, 1998). Analytical generalisation of the study is further strengthened by paying attention to conceptual aspects of the research throughout the study (Polit & Beck, 2010). The conceptual phase (see Conceptual Framework: SCCT chapter) is reflected in the Methodology chapter where it can be seen quantitatively in the Conceptual Path Model (see Figure 3.7) and in the Qualitative Data section where the links between the Research Questions, the SCCT theory, the constructs and theory driven codes are illustrated.

The third model of generalisation (Collins, 2010; Polit & Beck, 2010; Firestone, 1993) is called *case-to-case translation* or t*ransferability* and it involves applying findings from one study to another group or setting, i.e. transferability of qualitative research is concerned with the degree to which the results of the study apply or transfer to settings other than the original setting (Pearson, Parkin & Coomber. 2011).

The main criterion for transferability is providing 'thick description' (Polit & Beck, 2010; Miles & Huberman; 1994; Firestone, 1993) in the study. Thick description relates to detailed, rich and descriptive information about the research site, study participants, demographic information and observed processes (Polit & Beck, 2010). The detailed, rich and descriptive information about the University of Greenwich has been provided in the Research Site section. The Participant Sampling section provides characteristics of the study participants, including comprehensive demographic information for both qualitative and the quantitative samples (including age, the sex distribution and ethnic distribution). The qualitative part of the study also offered rich description of the

[76] Proximal similarity is another approach to generalizability (or external validity), proposed by Donald T. Campbell, that allows the reader to decide how the study can be applied to another setting by comparing and looking at the study's context in terms of its timing, people and settings (Polit & Beck, 2010).
[77] Another approach to generalizability, proposed by Donald T. Campbell, that allows the reader to decide how the study can be applied to another setting by looking at its context: times, people and settings (Polit & Beck, 2010).
[78] Bailey (1992) argues that quantitative research cannot be really extrapolated to other studies as quantitative data is often collected out of context producing reliable but meaningless results whereas Benbasat *et al.* (1987) point out 'thin results' and abstract character of quantitatively studied variables.

experiment context (see Research Design: The Career Coaching Intervention section). The research '*thick description*' offers enough information to allow readers to understand the study's context and participants in order to be able to assess the study's potential for transferability to their own settings (Polit & Beck; 2010; Miles & Huberman, 1994). The qualitative part of the study embedded in *social constructionism* assumes, as does the constructivist view typical for case studies, that the readers will reach his/her own generalisation if he/she is given the 'thick description' (see the previous section). This is consistent with Polit & Beck's (2010) view of transferability.

Generalisability and Reliability of the Case Study

External validity (or generalisation) is often difficult to achieve when using small samples or case studies (Gray, 2014)[79]. Hence, transferability is a more suitable choice for case studies (see the transferability discussion in the previous section). However, Meredith (1998) argues that the theory developed in a case study can be generalised to the similar population that have the same parameters. The University of Greenwich is a post-1992 university that is London - based and occupies 98th position in the league tables in 2017. Its students are socially disadvantaged in comparison to the Russell Group students, and are ethnically mixed (UoG, 2015). Hence, the suggested scope of generalisation of this study (Miles & Huberman, 1994) is other post-1992 universities (Miles & Huberman, 1994). Based on the University of Greenwich post—1992 status and key characteristics of its students, the London South Bank University or the University of East London are suggested examples that lend suitable generalisation.

Meredith (1998) and Yin (1994) argue that a case study can be 'analytically generalized' in terms of its external validity in a process of generalising its findings to create or develop theory (this research applies the SCCT theory to students' employability efforts and, hence, it can be argued that it aims to develop the SCCT theory for the post-1992 population) that is relevant to the case study's population. If the same theory is then tested in other settings and the similar findings are found, the theory replication or extension is claimed, i.e. the theoretic generalisability is established (Meredith, 1998). Furthermore, a goal of the case study is to understand the studied phenomenon through 'perceptual triangulation' (Bonoma, 1985, p.203). Case studies allow generation of meaningful and relevant theory, as they focus on *why* rather than only on *what* or

[79] Despite single cases not being very suitable for generalisation there is still a lot of knowledge to be gained from a single case study when it can be added to similar cases in future research as it creates opportunities for new and modified generalisations (Stake, 1996).

how questions, and are suitable for studies that explore variables and phenomena that are not well understood (Meredith, 1998).

> The real business of case study is particularization, not generalization. We take a particular case and come to know it well, not primarily as to how it is different from others but what it is, what it does. (Stake, 1995, p.8)

As can be seen from the literature review, employability efforts of students are not well understood and have not been yet examined in the SCCT context. Equally, coaching effectiveness is still poorly understood and Theeboom *et al.* (2013) call for shifting from the question 'does it work?' to 'how does it work?' and on building a firm theoretical framework to understand the effects of coaching on individual level outcomes. According to Meredith (1998, p.445) case studies are very useful for 'testing particular issues or aspects of an existing theory' and for extending existing theories. This study generates new knowledge about students' employability efforts by testing the SCCT theory quantitatively and then by extending it using a depth of the case study.

Case studies offer deep understanding and relevance but they require triangulation (Stake, 1995; Benbasat *et al.*, 1987). Firstly, all measurements have to be reliable and valid (Stake, 1995). The MM approach and interviews with students, career coaches and senior managers ensured theory triangulation (Yin, 2009; Miles & Huberman, 1994). Using MMR aids triangulation (Teddlie & Tashakkori, 2010). Triangulation increases confidence in the findings derived from the study and improves quantitative reliability and qualitative validity of the study (Bryman & Bell, 2015). The conceptual framework (see Chapter 2.4.) provides causal networks and constructs that are explored by the case study. The case study quantitative construct validity is discussed in the section Validity of the Quantitative Data. The internal validity of the case study is ensured by formulating a clear research framework that discussed how independent variables led to the dependent variables (Gibbert *et al*., 2008).

3.7.2. Within Methods

Quantitative Method

Reliability of the Quantitative Study

Reliability is concerned with consistency of measurements of constructs in terms of their stability over time (i.e. the results do not fluctuate over time) (Field, 2009), i.e. repeating the study's methods, data collection and data analysis produces the same results (Saunders & Rojon, 2014). At Time 1, the population consists of approx. 3350 students. The sample collected from the population

consists of 955 students (27% response rate). According to Saunders *et al.* (2012) the minimum sample size required to achieve a 95% confidence level for a population of 5,000[80] is 357. The sample size of 879 for a population of 5,000 is required to achieve a 98% confidence level. Hence, the Time 1 sample size is large enough to represent the population. The required sample size to achieve a 95% confidence level for a population of 1,000 is 278 (Saunders *et al.*, 2012). The sample size at Time 2 is 245 (25.7% response rate), hence, it is sufficiently large enough (Saunders *et al.*, 2012).

For the comparison of age, gender and ethnicity between the Time 1 sample and the population (Saunders & Rojon, 2014) see Table 3.2. in the Sampling Design section. It can be seen that the collected sample is representative of its population. Students under 21 are slightly overrepresented if compared to the Business Faculty population and the 21-24 age group was slightly underrepresented compared to the Business Faculty population but not if compared to the UoG population. However, the study's focus was on the undergraduate students. Chinese students were slightly overrepresented at Time 1 and Mixed students were underrepresented at Time 3. This is discussed under limitations of the study in the section 3.9.

The used data codes are numerical (the code for male is 1, for female is 2[81], etc). The researcher does all the coding. Having only one person coding this study improves the study's reliability (Saunders & Rojan, 2014).

Internal reliability, is concerned with whether items in the scale are consistent and respondents' score on one item are related to their score on the other items (Bryman & Bell, 2015). Cronbach's alpha is the most commonly used indicator of internal reliability (or internal consistency) (Saunders & Rojon, 2014). A figure of 0.7 of Cronbach's alpha (α) is considered to be efficient (Bryman & Bell, 2015). This study uses a Career Decision Self Efficacy scale (CDSE: Taylor & Betz, 1983). The Cronbach's α coefficient for the used CDSE scale is 0.95 (Betz and Taylor, 2001). The scale that measures students' job seeking behaviours is called a Job Search Behaviour Scale. It consists of two sub-scales: preparatory job search behaviour scale (α = .74) and an active job search behaviour scale (α = .75) (Saks & Ashforth, 1999) and a Job Search Intensity Scale (α = .94) Blau's (1994). The Vocational Outcome Expectations scale's α = .93 (Metheny & McWhirter's, 2013). Additionally, the internal reliability of each scale is recalculated for the

[80] Saunders *et al.* (2012) do not provide tables for 2,000 and then 5,000
[81] This is recoded for mediation and moderation variables when dummy variables are introduced.

University of Greenwich sample and the results are reported in the Section Time 1 Reliability of Scales. All scales have a high internally reliable Cronbach's α.

Validity of the Quantitative Study

Validity[82] is concerned with research observations and measures being what the researcher claims he/she is measuring or observing (Mason, 2002). It is also concerned with ensuring that the collected sample is representative of its population, that measurements used are valid and that hypotheses are answered using correct statistical analysis (Saunders & Rojon, 2014; Field, 2009). See the Reliability of the Quantitative Study section for the discussion on the sample's representativeness. The study's hypotheses and links to analysis as well as its constructs and research instruments are discussed in detail in the Research Design section – this increases the study's repeatability (Saunders & Rojon, 2014).

Internal validity is concerned with the quality of interference about causal link between an intervention (the career coaching in this research) and measured outcomes (employability efforts of students) (Polit & Beck, 2010) and whether a proxy variable measures the underlying construct (Bryman & Bell, 2015)[83]. A quasi-experimental design has a higher level of internal validity than a pre-experimental design (a design that does not include a control group) but it has less internal validity than a true experimental design (which assigns participants to both groups randomly). Quasi-experimental designs, however, can have levels of external validity as high as true experimental designs. A well-designed quasi-experiment enables a researcher to demonstrate that other interpretations are considered to be unlikely (Salkind, 2006). Internal validity of a quasi-experiment is addressed in this study by matching both control and experimental groups in terms of their levels of pre-test career self-efficacy at the beginning of the experiment. True experimental designs are preferable to quasi-experimental designs as their samples are selected randomly and they have a control group, hence, providing a more robust argument for a cause-and-effect relationship (Salkind, 2006). The potential weakness of the quasi-experimental design of this study is addressed by firstly providing a control group and secondly by ensuring that both groups are statistically equivalent (see Matching the Experimental and the Control Group section for details and statistics). This approach ensures that the study's quasi-experiment approximated a true

[82] External validity (or generalizability) has been discussed in section 3.7.1.
[83] Career Decision Self-Efficacy, vocational outcome expectancy and job seeking behaviour constructs are well-researched constructs in the Social Cognitive Career Theory with high Cronbach's alpha's coefficients (see Research Instruments section).

experimental design (Hedrick, Bickman, & Rog, 1993) and reduces the threat to the internal validity of the experiment (Salkind, 2006).

Fidelity of the Career Coaching Intervention

Intervention fidelity, i.e. assessing whether the study intervention follows the agreed structure forms a key component of intervention effectiveness studies (Song *et al.,* 2013). All career coaches in the study are volunteers who have experience of mentoring and coaching junior members of staff in their roles, either formally or informally. Some career coaches are professionally trained in coaching although most of them are not formally trained as coaches.

Qualitative Method

The quality of the study's conclusions is discussed using Miles & Huberman's (1994) method in Table 3.13 below. For the detailed discussion about the issues regarding generalizability and transferability see section 3.7.1. above.

Table 3.13. Standards for the Quality of Qualitative Conclusions (Miles & Huberman, 1994)

Issue	Relevant Queries	Evidence
Objectivity– neutrality and freedom from biases	1. Are the study's methods and procedures described in detail to provide a full picture? 2. Is the actual sequence of data collection, data processing and conclusion drawing provided? 3. Is the 'audit trail' provided? 4. Are study data retained and available to be analysed by other researchers?	1. Methods and procedures are described fully in the Methodology chapter. 2. The sequence of data collection, data processing and conclusion drawing is described fully in the Methodology chapter. 3. The audit trail is provided in Appendix 3.13. 4. All conversations are also recorded and transcribed, hence, providing more reliable evidence (Gray, 2016).
Reliability[84] – consistency of the study's process over time and across methods	1. Are the research questions clear and is the study design compatible with them? 2. Are paradigms and constructs clearly specified? 3. Were data collected across the full range of respondents? 4. Were any forms of peer review conducted? 5. Were data quality checks made? 6. Were coding checks made?	1. Research questions are clear and suitable for the study design. 2. Paradigms are discussed in the Research Epistemology section. All constructs are discussed in detail in the Conceptual Framework Section and the Coaching Relationship section. 3. Data are collected from 15 students, 8 career coaches and 3 senior managers to ensure triangulation. 4. Internal reliability of this study is improved by having multiple researchers looking at the interpretation of the qualitative findings (Gray, 2017). 5. Constant data comparisons are made, comprehensive data are used (including unusual cases) and tables are used to increase reliability of qualitative data (Silverman, 2009). The tables are used (Silvermann, 2009) to see the links between categories, codes, constructs and research questions (see Table 3.6. in the Qualitative Instrument section). 6. The researcher shares coding schemes with the

[84] Reliability of qualitative data is concerned with consistency and stability of findings (Leung, 2015).

		supervisors in order to achieve a higher degree of agreement and consistency. The use of NVivo v.10.2.2. software for qualitative data analysis ensures more rigour, transferability, and credibility (Gray, 2017) as well as constant data comparisons and comprehensive data use.
Issue	**Relevant Queries**	**Evidence**
Internal Validity - the degree of convincing evidence showing the strong link between research evidence and the theoretical ideas developed from it (Whittemore *et al.*, 2001)	1. How context reach are the descriptions? 2. Does the account seem plausible? 3. Did method triangulation produce generally converging conclusions? If not, is there a coherent explanation provided? 4. Are data well linked to categories and the theory? 5. Are areas of uncertainly identified? 6. Was negative evidence sought for? 7. Were any predictions made in the study and how accurate were they?	*Internal validity* of qualitative data, is achieved by: *Analytics*: checking for accuracy and interpretation, writing notes during coding process, testing hypotheses in data collection, analysing negative cases that contradict the analysis, performing a literature review to compare findings with those of previous studies; *Presentation*: acknowledging the researcher's perspective, providing evidence that supports interpretations, providing an audit trail between the analysis and the data so that others can check the connection between the two.

3.8. Ethical Issues

The aim of the study is to advance knowledge in research in effectiveness of coaching and research in students' employability. The ethics application form can be seen in the Appendix 3.24. The University Research Ethics Committee Application Form.

The main ethical issues and risk that may have arisen in the research are seen as follows:

- Students, who were invited for an interview, might find the subject-matter sensitive and might be reluctant to self-disclose and to discuss the self-efficacy, expectation and confidence to undertake certain activities, tasks and behaviours. In order to address this issue, students were informed - prior to being selected for an interview– that their participation is voluntary and there are no penalties if they do not want to attend an interview or a focus group see Appendix 3.7.5. Information Sheet for an Experimental Group and Appendix 3.26. Information Sheet for a Control Group).
- Students might have felt obliged to participate in the study if they knew the investigator as a lecturer. In order to address this issue, the information sheet states very clearly that students can choose not to take part in the study without any penalty. Students are allowed

to withdraw at any time (see Appendix 3.7.5. Information Sheet for an Experimental Group and Appendix 3.7.6. Information Sheet for a Control Group).

The personal data are dealt with in the following manner:

- Consent for collecting and processing the qualitative data was obtained prior to starting the interviews. Students were asked to sign the Participant Consent Form attached at the bottom of the Interview Schedule (see the Appendix 3.7: The Interview Schedule).
- Consent for collecting and processing the quantitative data was obtained by placing the consent text within the questionnaires as many of them are sent via email (see the Appendix 3.4: Time 1 Questionnaire and Appendix 3.5: Time 2 Questionnaire).
- Enough information was provided about the project for the participants to be able to give informed consent (see Appendix 3.7.5: Information Sheet for an Experimental Group and Appendix 3.7.6: Information Sheet for a Control Group).
- Data are held in a secure location on a work computer with password-protected files. Data are not carried on a USB stick and are not stored on a laptop. They are not to be shared with anyone except the supervisors.
- Retention of the data: data and administrative records are kept for the whole duration of the project and will be destroyed after the PhD is completed.
- After completing the PhD data will be disposed securely and will be erased from the work computer.
- Confidentiality of the data: data are anonymised, i.e. students are coded as letters and numbers in separate documents that only the researcher has access to. Participants are allowed to choose codes / passwords to enable them to access to their data if necessary or withdraw from the project within certain timescales.
- Data to be published only in anonymised form and never be used to influence any decisions relating to researched individuals.
- Collected data and the contact details of participants to be only used for the purpose of this research. Contact details will not be used for any marketing reasons.

The researcher ensured that respondents, before agreeing to take part in the research, had been made fully aware of the nature of the research and their role within in. The researcher prepared an information sheet about the research to be distributed to potential respondents. This ensured that everyone was given the same information. When contacting prospective respondents, first orally

and then via email, the researcher provided students with a summary of the key aspects of the research. For the copies of the information sheets see the Appendix 3.7.5. Information Sheet for an Experimental Group and Appendix 3.7.6. Information Sheet for a Control Group.

Finally, the researcher ensured that her ethical integrity was maintained despite the challenges of having a power relationship with students as a university lecturer (Bond, 2013). This was done by making boundaries very clear (Bond, 2013) at the beginning of the interviews, i.e. the students were made aware that the interviewer was acting as a researcher and not a lecturer or a counsellor. Also, at the beginning of the project the detailed description of research was given to all invited students in which the researcher referred to herself as a doctoral student. The study's research design was adequately described to students. They were also explicitly told about confidentiality and about their right to withdraw at any time from the study (see Appendix 3.7.5. Information Sheet for an Experimental Group and Appendix 3.7.6. Information Sheet for a Control Group). Students were also given a university-approved informed consent form (see Appendix 3.7 for the Participant Consent Forms) at the beginning of the project and prior to commencing interviews. In order to ensure that the interview questions were not direct or intrusive – as a researcher's interviewing style is culturally more direct - all questions were reviewed by three supervisors (see Appendix 3.7 for The Interview Schedule). In case of any instances during interviews that required students receiving a form of emotional support (Bond, 2013) the researcher made sure that she had up-to-date details of the University's Mental Health Advisor and its Wellbeing Team.

3.9. Limitations of the Study

3.9.1. The MMR Debate

The main critique of the MMR research is that the QUAN and QUAL methods should not be mixed as they are derived from different paradigms (Teddlie & Tashakkori, 2010). The critique arises from the purist stance of researchers and postmodern communities (e.g. Giddings, 2006; Denzin & Lincoln, 2005; Howe, 2004) who believe that paradigms determine research designs, i.e. epistemologies and ontologies are linked with particular methodologies (Teddlie & Tashakkori, 2010). Others argue that epistemological differences between quantitative and qualitative methods are inflated and artificial (Bryman, 2007) and that theorists should look at philosophical assumptions and not at paradigm 'packages' (Teddlie & Tashakkori, 2010, p.13). However, a well-

conducted MMR allows a researcher to make insights that would be otherwise inaccessible through one method alone and to provide a more in-depth understand of the phenomena (Dahlberg, Wittink & Gallo, 2010). MMR research, that is driven by the research questions and where the researcher can choose the best methodological tools to answer the research questions (Teddlie & Tashakkori, 2010), enables the researcher to gain a much more comprehensive understanding and a fuller picture of the studied phenomenon or a relationship; to compensates the weaknesses of one approach with the other; or to obtain the conflicting or opposing views of the same phenomenon or a relationship (Tashakkori & Teddlie, 2009) and it strengthens their study's analytic generalisation by enhancing proximal similarities (Teddlie & Tashakkori, 2009).

3.9.2. The Single Case Study Design

A single case study design is less likely to be generalised, however, increasingly the number of case studies does not always provide a solution for increased generalisation as:

> Case study research is not sampling research. We do not study a case primarily to understand other cases. Our first obligation is to understand this one case. (Stake, 1995, p. 4)

Meredith (1998) argues that case studies provide rigorous data collection, triangulation and logic to arrive at its conclusion and the significance levels and effect sizes are evaluated analytically as opposed to using statistics in quantitative studies. Hence, they are as rigorous as quantitative studies (Meredith, 1998; Yin, 1994). Rigorous interpretation in the case studies, based on observations and examinations of meanings to reach conclusions (called assertions), is a form of generalisation. Assertions happen beyond observations and the logic behind them is difficult to isolate. Hence, analysing a case study is a matter of being reflective and willing to see another point of view – providing interpretations of the researcher as well as of the study's participants (Erickson, 1986).

3.9.3. Qualitative Sample

The qualitative sample size (15 students) is relatively small as Saunders *et al*. (2012) recommend conducting 25 to 30 interviews if the sample is drawn from a large and diverse population and if the research questions cover a broad area. However, using the maximum variation sampling maximized the range of perspectives investigated in the study (Collins, 2010). This is consistent with Patton (2002) who argues that maximum variation sampling justifies a smaller sample size as

its strength lies in including diverse cases. Reaching the qualitative sample size saturation, when new information produces no changes to the codes, is a highly debated topic and Mason's (2010) review of five hundred and sixty studies shows no clear guidelines or agreements as to when the saturation is reached. According to researchers this typically occurs within 12 interviews (Collins, 2010). As the sample is fairly homogenous and the focus of research questions is not wide ranging the sample size is considered to be adequate (Saunders *et al*., 2012).

Additionally, not all ethnicities were represented in the qualitative sample. In particular, Black or Black British Male students with the highest scores in career decision self-efficacy (M=3.71, SD = 0.58) and Chinese or Other Ethnic Groups Females with lowest scores in career decision self-efficacy (M=3.27, SD = .49) did not respond to any of the interview invitations. The follow up invitation was sent to these students in April 2016 but none of the students replied. The second follow-up email was sent on 3 October 2016 to the 17 students from the underrepresented groups (3 Chinese or Other Ethnic Groups Females and 14 Black or Black British Male students) resulting in no responses (6 out of 17 students had left the university at this point).

3.9.4. Quasi Experimental Research Design

The study is not an experimental design (both a control and an experimental group are assigned randomly). This can compromise the study's internal validity (Saunders, *et al*., 2012). However, this issue is overcome by making both the experimental and the control group statistically equivalent at the beginning of the experiment (Salkind, 2006). Hence, any observed differences at the end of experiment are due to career coaching. (Salkind, 2006)

3.9.5. Intra-Judge Reliability[85] of the Questionnaire Data

As students submit self-administered questionnaires, there was a possibility that scores might have been changing over time, i.e. students might have felt differently about their career self-efficacy at different times. Self-administered questionnaires have two possible sources of error: the questionnaire and the students' response (Domholdt, 2005). Items contained in the questionnaires may have ambiguous meanings or may be interpreted in different ways by different students or by the same students over time (Bindra *et al*, 2003). The reduction of random errors associated with questionnaires is a responsibility of questionnaire developers who must define the person's

[85] The consistency of measurement obtained when different judges or examiners independently administer the same test to the same subject (Enclo, 2015).

characteristics for each questionnaire (such as literacy required levels and language comprehension) and to conduct reliability tests (Bindra *et al*, 2003). Reliability of the Study, the internal consistency of all measures was high (as discussed in Chapter 6.9.1). Additionally, random errors were reduced by providing a quiet, non-distracting environment (Bindra *et al*, 2003) for the students, i.e. students were asked to complete the questionnaire during lectures and tutorials. However, some students have completed the questionnaires via email – increasing the possibility of the random error.

3.9.6. Thematic Analyses and Researcher's Cultural Bias

The theory-driven approach to coding within a thematic analysis approach might results in lower consistency of judgments as theory-driven codes are influenced by the researcher's cultural bias (Boyatzis, 1998). This is particularly true for qualitative research exploring issues not very well understood or examined (Boyatzis, 1998). To minimise this risk, as well as inductive codes, this study uses the established SCCT constructs in its deductive approach (Saunders *et al.*, 2012).

3.9.7. Sampling Strategy

At Time 1 quantitative data were collected using *convenience sampling*. This approach yields 955 responses out of 3,391 (28% response rate). Saunders *et al.* (2012) recommend using random sampling for statistical analysis in order to ensure that the sample is representative of the population. However, as it can be seen from Table 3.2. in the Sampling Design section the chosen sample was, in fact, representative of the population. The under 21 age group was overrepresented compared to the University of Greenwich whole population, however, the study investigated the Business School Year 1, 2 and Year 3 population of students. Chinese students were slightly overrepresented at Time 1 and Mixed student were underrepresented at Time 3 due to the maximum variation sampling[86].

3.9.8. Coaches' Lack of Formal Training

The absence of coaches' formal training, despite there being no conclusive proof that one coaching technique is better than others (Miller *et al.* 1997; Lambert, 1992; Lambert & Bergin, 1994), might have potentially impacted students' experience of career coaching. Having said that, this is not

[86] This is despite the maximum variation sampling being considered appropriate for qualitative parts of mixed methods research (Polit & Beck, 2010).

considered a threat to the intervention fidelity as, according to the coaching literature, the quality of coaching relationships is the most significant factor of coaching effectiveness (de Haan *et al.* 2011; Ely *et al.* 2010; Visser, 2010; Baron & Morin, 2009). Hence, the coach's ability to build a relationship with the student is the main requirement for a successful career coaching intervention and this element is investigated through the qualitative research. This study's career-coaching intervention is described in detail in the Research Design Career Coaching Intervention section.

3.9.9. Vocational Outcome Expectations Scale

The vocational outcome expectations scale (McWhirter & Metheny, 2009) was only introduced at Time 2. This was due to the fact that the permission from Professor Ellen Hawley McWhirter to use the scale was only obtained, via ResearchGate, in August 2014. As a result, it was also impossible to examine students' changes in outcome expectations from Time 1 to Time 2. Also, all vocational outcome expectations' hypotheses were tested using a smaller sample, i.e. at Time 2 the sample is (N=245) as opposed to N=955 at Time 1. As outcome expectations have not been really discussed in the literature the researcher could not tell, based on the literature, whether a particular ethnic group or gender had higher outcome expectations.

3.9.10. Environmental Conditions in the SCCT Model

The Time 1 questionnaire consists of 59 questions in total (see Appendix 3.4: Time 1 Questionnaire) and Time 2 questionnaire consists of 65 questions (see Appendix 3.4: Time 2 Questionnaire) in total. In order to limit the length of the questionnaire, as they were mostly distributed during the lectures and tutorials, the SCCT *environmental conditions* construct is only explored quantitatively during the interviews. Zimet *et al.*'s (1988) Perceived Social Support Scale measures respondents' perception of social support from his/ her family, friends, and significant others has 12 items and was considered too long to be included, given the length of lectures and tutorials. Additionally, socioeconomic status was also only explored qualitatively. Socioeconomic status (SES) is a variable that is difficult to measure directly (Oakes & Rossi, 2003) as there are many definitions and synonyms of SES and nuances of social stratification and social mobility are hard to capture and differentiate (Smith *et al.*, 2011; Van Leeuwen & Maas, 2010).

SCCT claims that people develop goals that are aligned with their interests and that these interests are aligned with their self-efficacy and outcome expectations (Lent *et al.*, 2000). The links between

students' interests, choices of goals and corresponding actions were also explored only qualitatively through the RQ1b. *What are students' self-efficacy and outcome expectation beliefs*?

3.10. Conclusion

This research examined the link between career coaching, career self-efficacy, and the employability efforts of Higher Education (HE) students. Specifically, the research investigated – using both QUAN and QUAL - whether career coaching, used as an employability enhancing tool in Higher Education, can be effective in increasing students' levels of career self-efficacy and, as a result, their employability efforts. It explored quantitatively the relationships between students' career decision self-efficacy, vocational outcome expectations and employability efforts (preparatory job seeking behaviours, active job seeking behaviours and job search intensity). This research also examined qualitatively what aspects of the coaching relationship were most effective in changing students' career self-efficacy beliefs, outcome expectations and employability efforts. The research further explored, through interviews with students and career coaches, factors affecting students' self-efficacy beliefs and outcome expectations such as gender, ethnicity, perceived social support, socioeconomic status, cultural influences and gender role models. The study positioned coaching as a learning tool and an employability enhancing strategy to support students' employability efforts, their self-efficacy beliefs.

The research questions drove the mixed methods quasi-experimental longitudinal research design. The rationale for using mixed methods was to gain complementary views about students' employability behaviours in the SCCT context and to understand the effectiveness of career coaching relationship in depth. Additionally, it was important to understand students' diverse views about career coaching relationship and to explore their different self-efficacy and outcome expectancy beliefs. Hence, the study's rationale was complementarity and diversity (Tashakkori & Teddlie, 2008).

The MMR approach requires from a researcher to become '*a connoisseur of method's* (Teddlie & Tashakkori, 2010, p. 29) due to MMR's methodological eclecticism (Teddlie & Tashakkori, 2010). Developing this dual competency, through the combined expertise of research supervisors, offers potential for wider understanding of social concerns and for developing more effective practices and policies and research outcomes (Tashakkori & Teddlie, 2010). Equally, designing the quasi-experimental longitudinal design required a detailed and carefully executed sampling strategy (see

the Sampling Design section). The high response rates add to the confidence in the study findings. Integrated findings are presented in the next chapter.

IV. FINDINGS

4.1. Introduction

This chapter first provides validity of scales results. The findings in relation to two research questions and sub-questions are discussed. The findings integrate qualitative and quantitative references by first discussing findings generated from each method of study in relation to each research question and then by comparing and contrasting both inferences (Tashakkori & Teddlie, 2009). The inferences are followed by the discussion of the interpretive rigor of the study.

The main purpose of the study was to acquire knowledge about the impact of career coaching on students' job seeking behaviours by observing the relationship between actions and consequences (Biesta, 2010) and to assess the fidelity of the coaching intervention (Onwuegbuzie & Johnson, 2006). The other aims of the research were to examine what aspects of the coaching relationship were most effective in changing students' career self-efficacy beliefs, outcome expectations and employability efforts, to explore students' self-efficacy and outcome expectancy beliefs and to investigate factors affecting students' self-efficacy beliefs and outcome expectations such as gender, ethnicity, perceived social support, socioeconomic status, cultural influences and gender role models. The QUAN results formed the base and qualitative findings were used to enhance the understanding of the components and interactions resulting in the QUAN and *qual* approach (Morse, 2010).

Following Morse's (2010) mixed methods research (MMR) recommendations the write up part of the study combines QUAN and *qual* components in order to show the complementary and integrated nature of the study. The MMR approach was utilised in order to obtain complementary, diverse as well as a complete picture and views of the related aspects of research questions (Tashakkori & Teddlie, 2009). The inferences in the findings chapter are design to answer the research questions as well as to deepen the understanding of studies phenomena and relationships (Tashakkori & Teddlie, 2009). Quality of internal validity of quantitative inferences was ensured by using statistical testing whereas quality of internal validity of qualitative inferences was ensured by reflecting as accurately as possible the meanings of studied relationships and phenomenon by

bearing in mind the participants' (i.e. students) perspectives whilst deriving inferences presented in this chapter (Tashakkori & Teddlie, 2009).

4.1.1. Reliability Analysis for the Modified Saks and Ashforth (1999) Scale

The reliability analyses were conducted for the pilot (N=30) of the CDSE scale (CDSE: Taylor & Betz, 1983) and for the modified Saks & Ashforth (1999) using Cronbach's α. The Saks & Ashforth (1999) scale, that looks at the frequency with which a student has performed each task in the last 3 months, was modified by adding two questions (40 and 41) about Internet searches: Q40. *Posted that you were looking for a job in social media such as Facebook, Twitter, LinkedIn.* Q41. *Search social media such as Facebook, Twitter, LinkedIn* about possible job leads. Pilot values for updated scale were slightly higher than the original scale for the Active Job Search Behaviours and Job Search Intensity and the same for Preparatory Job Search Behaviours (see Table 4.1. below).

Table 4.1: Cronbach's Alpha Reliability Analysis for the Original and Pilot Scales

Scale Name	Original Scale α values	Pilot's α values (n=30)
CDSE total scale (CDSE: Taylor & Betz, 1983)	.95	.92
Preparatory Job Search Behaviours Scale (Saks & Ashforth, 1999)	.74	.74
Active Job Search Behaviours Scale (Saks & Ashforth, 1999)	.75	.76
Job Search Intensity Scale (Saks & Ashforth, 1999)	.94	.96

4.1.2. Validity of Scales Results

The internal reliability of each scale was calculated at Time 1 using the whole sample (N=955) (see Appendix 4.1: Time 1 The Study Reliability of Scales). The Cronbach αs reported for this study showed that all the measures had high levels of internal validity. High scores for coefficient alphas might indicate that some scale items are testing the same question and are worded in a similar way (Tavakol & Dennick, 2001) or by increasing a number of items in a scale (Morera & Stokes, 2016). These redundant items increase a coefficient alpha (Morera & Stokes, 2016). High alpha scores

can, in fact, be attained for scales that violate an unidimensionality assumption[87] (Morera & Stokes, 2016). Hence, it is important to establish, using a confirmatory factor analysis, that the scale items are unidimensional (Morera & Stokes, 2016). In fact, high alpha scores may create a downward bias in observed correlations due to attenuation – a reduction of the effect - resulting from a measurement error (Schmidt & Hunter, 1996).

CDSE Scale

Validity of Career Decision Self-Efficacy Scale (CDSE: Taylor & Betz, 1983) original scale and subscales is compared against the study scale in Table 4.2. below.

Table 4.2: The comparison of the internal reliability of the original CDSE scale and the study scale

Scale	Betz and Taylor (2013) reported alpha (α)	This study alpha (α)
Self-Appraisal Scale (questions: 5,9,14,18,22)	.81	.72 (n=937)
Occupational Information (questions: 1, 10, 15, 19, 23)	.82	.71 (n=943)
Goal Selection (questions: 2, 6, 11, 16, 20)	.87	.73 (n=921)
Planning Scale (questions: 3, 7, 12, 21, 24)	.82	.94 (n=940)
Problem Solving (questions: 4, 8, 13, 17,25)	.81	.73 (n = 939)
Total Score	.95	.93 (n=879)

The Cronbach Alpha (α) for the total CDSE-SF score was subsequently re-calculated for questions: 2, 4, 7, 12, 13, 20, 23 and 25. These questions were kept the same as in the original CDSE-SF questionnaire (Taylor & Betz, 1983) but at the beginning of the questionnaire an explanation was offered following the conversion of the US versus UK educational system via the Fulbright Commission (Fulbright Commission, 2014). The explanation converted a US 'major' to a UK 'degree' equivalent, a US 'resume' to a UK 'CV' and a US 'graduate or professional schools' is equivalent to a UK 'postgraduate studies or professional qualifications'. Pallant (2016) recommends removing any items from the scale if they are lower than the final alpha value (0.927). The statistical analysis showed that all questions in the scale were relevant and removing them would have negatively impacted the final alpha value. This suggested that students understood the US to UK conversion and it did not affect their answers.

[87] Each of the constructs only measures one variable (Morera & Stokes, 2016)

Job Seeking Behaviour Scales

Employability Efforts of Students were measured quantitatively using a Job Search Behaviour Scale, divided into preparatory, active and job search intensity measures separately as advocated by Saks & Ashforth (1999) who have warned against combining them into one job search measure. The scales were checked for reliability and all scales showed high internal consistency (see Table 4.3.).

Table 4.3: Cronbach's Alpha Reliability Analysis for the Job Search Behaviour Scale

Saks & Ashforth (1999) Sub-scales	Saks & Ashforth (1999) reported Alpha (α)	This study Alpha (α)
Preparatory Job Search Behaviours Scale (questions 26, 27, 28, 29, 30, 31, 38, 39, 40, 41)	.74 (original scale)	.823 (N=927) (updated for Internet searches)
Active Job Search Behaviours Scale (questions 32, 33, 34, 35, 36, 37)	.75	.83 (n=939)
Job Search Intensity Scale[88] (questions 42, 43, 44, 45)	.94	.938 (n=943)

Preparatory Job Search Behaviour was measured by using six-item scales developed by Blau (1994) – questions 26, 27, 28, 29, 30, 31 and modified by Saks & Ashforth (1999) - questions 38 and 39.

The Modified Preparatory Job Search Behaviour Scale

The PJSB scale (Saks & Ashforth, 1999) was modified and updated for Internet searches. The updated PJSB scale has resulted in a higher internal consistency (α = .74 for the original scale and α = .823 for the updated one) (see Appendix 4.2: Time 1 Updated PJSB Scale).

Preparatory Job Search Behaviour was measured by using six-item scales developed by Blau (1994) – questions 26, 27, 28, 29, 30, 31 and modified by Saks & Ashforth (1999) - questions 38 and 39. Questions 40 and 41 were added to update the scale for social media preparatory job search behaviour. The internal consistency for the updated 10-item preparatory job search behaviour scale was α =.845 (n=923). The updated scale questions 40 and 41 contribute to a higher value of alpha. Removing these questions would result in the final lower final alpha value of .831. Modifying a Job Search Behaviour Scale (Saks & Ashforth, 1999) by adding two questions (40 and 41) that

[88] *Job Search Intensity* was measured using Blau's (1993) scale adapted to a 3-months' time frame by Saks and Ashforth (1999)

include Internet searches[89] resulted in a higher internal consistency of the preparatory job search behaviour part of the scale than the original scale (α. = .823 and α.=74 respectively) (see Appendix 4.2: Time 1 Updated PJSB Scale).

Time 2 Reliability of the Outcome Expectation Scale (McWhirter & Metheny, 2009).

An internal reliability of other scales was not calculated at Time 2 as they were already analysed at Time 1 (see the previous section) and all the Crobnach αs reported for this study at Time 1 had the adequate levels of internal consistency (α higher than <0.7).

The Cronbach α was calculated for the newly introduced at Time 2 Outcome Expectation Scale (McWhirter & Metheny, 2009). The Cronbach's α for this scale was .90 (N=237) (see Appendix 4.3: Time 2 Study Cronbach's α for the Outcome Expectation Scale).

4.1.3. Data Driven Coding

The text was analysed using theory driven codes (i.e. codes derived from SCCT framework). Subsequently, most significant data driven codes were identified (Saldana, 2013, Charmaz 2006). The themes and subthemes were identified and the matrix of themes and transcripts was created to direct further analysis and the writing of the final report. The results are presented in Table 4.4 below, showing theory driven codes (**in bold**) and data driven codes (*in italics*).

Table 4.4: Interviews with Students: The Theory and Data Driven Code Matrix

Coding Category/ **Theory Driven Codes/** *Data Driven Codes/*	**Transcripts**
RQ1. Is career coaching effective in increasing students' self-efficacy, outcome expectations and their employability efforts?	
Coaching Effectiveness/ **Impact on SE, OE and Employability Efforts**	
Improved Confidence	Laura, Nadia, Jenny, Chante, Andy, Ian, Viktor, Mark, Sarah
Thinking Differently	Mark, Sarah, Laura, Ian, Viktor, Beth, Jenny, Chante, Kevin
More Focused Employability Efforts	Nick, Laura, Nadia, Beth, Jenny, Andy, Chante
Increased Resilience	Andy, Ian, Nadia
More Realistic Expectations	Andy, Nadia, Kevin
RQ1a. What aspects of the coaching relationship are most effective in increasing students' self-efficacy, outcome expectations and their employability efforts?	

[89] Q40. Posted that you were looking for a job in social media such as Facebook, Twitter, LinkedIn. Q41. Search social media such as Facebook, Twitter, LinkedIn about possible job leads.

Coding Category/ **Theory Driven Codes/** *Data Driven Codes/*	**Transcripts**
Coaching Effectiveness/ **Quality of Coaching Relationship/**	
Practical Advice	Mark, Nick, Sarah, Ian, Viktor, Beth, Nadia, Jenny, Kevin, Laura, Chante
Ability to Identify with a Coach	Andy, Mark, Nick, Ian, Nadia, Kevin
Trust	Mark, Nick, Laura, Beth, Nadia, Jenny, Kevin, Viktor
Commitment of the Coach	Mark, Nick, Laura, Beth, Nadia, Jenny, Kevin, Viktor
Coach as a Role Model	Nadia, Ian, Viktor, Beth, Laura, Mark
Continued Relationship	Andy, Sarah, Kevin
Honest Feedback	Chante, Kevin, Laura
No Judgement	Andy, Sarah
Goal Orientated Coach	Jenny, Andy, Kevin
Warmth	Andy, Sarah, Viktor, Jenny, Kevin, Laura
RQ1b. What are students' self-efficacy and outcome expectation beliefs?	
Outcome Expectations/	
Lack of Direction	Anna, Andy, Mark, Sarah, Laura, Chante, Nick, Kevin
Low Skilled Jobs	Anna, Jenny, Ian, Viktor, John, Nick, Sarah, Mark
Corporate Jobs	Kevin, Andy, John, Viktor, Jenny
Focus on University	Chante, Viktor, Sarah
Graduate Scheme	Kevin, Nadia, Jenny
Entrepreneurial	John, Kevin, Jenny
Further Qualifications	Ian, John, Viktor
Unrealistic Expectations	Andy, Tom, John
Low Outcome Expectations	Kevin, John, Ian
Self-Efficacy/	
Importance of Effort & Motivation	Viktor, Kevin, Beth, Anna, Andy, Ian, Tom
External Locus of Control	Tom, Nadia, Beth
I Can Do Anything/You can get any job you want	Nick, Nadia, Anna, John
Negative self-perception of UoG Students	Tom, John, Kevin
Lack of Work Experience as a Foreigner	Jenny, Andy, Ian, Laura
RQ2a. What cultural influences and environmental conditions (such as Perceived Barriers or Support to Preferred Careers, Cultural Influences, Family Expectations, Perceived Social Support, Socioeconomic Status, Family Role Models and Gender & Ethnicity Barriers to Chosen Careers) impact students' self-efficacy, outcome expectations and employability efforts?	
Cultural Influences	
Family Expectations	
Degree Completion	Anna, Andy, Tom, John, Mark, Laura, Nadia, Jenny, Viktor
Non-Specific Expectations	Victor, Anna, Andy, Tom, John, Mark, Laura, Nadia, Jenny
To Be a Professional	Nadia, Chante, Beth
Family Role Models	
Hard Working Parents	Anna, Andy, Nadia, Tom, John, Mark, Nick, Beth, Jenny, Kevin

Coding Category/ **Theory Driven Codes/** *Data Driven Codes/*	**Transcripts**
Hard Working Other Family Members	Laura, Ian, Viktor, Nadia, Jenny, Chante
Environmental Conditions/	
Perceived Barriers to Preferred Careers	
Difficult Online Application Process	Andy, Tom, John, Viktor, Nadia, Jenny
Preferential Application and Selection Treatment of Russell Group Students	John, Kevin, Jenny
Competition from Russell Group	John, Kevin, Jenny
Negative perception of UoG students	Jenny, John, Kevin
Lack of Work Experience	Nick, Viktor, Laura, Andy
Quality of English	Ian, Viktor, Laura
Negative perception/fear of corporate environment	Jenny, Nadia, John
Perceived Social Support	
Absence of Networks	Anna, Andy, Mark, Sarah, Ian, Viktor, Nadia, Chante
Relatives or Family Friends	Anna, Laura, Andy, John, Mark, Jenny, Nadia, Kevin
Acquaintances	Beth, Tom, John, Viktor
Socioeconomic Status	
Parents as Professionals or Business Owners	John, Jenny, Kevin, Beth
Parents in Low Skilled Jobs or Unemployed	Mark, Anna, Nadia, Chante, Jenny
Perceived Gender and Ethnicity Barriers	
Ethnic Discrimination	Mark, Sarah, Beth, Nadia, John
No perception of discrimination	Laura, Andy, Nick

At Phase 4, an audit trail with examples of a theory-driven and data-driven codes and sub-codes was created to assist in the writing of findings. Table 4.5. below illustrates how the audit trail Table was constructed. For a more illustrative version see Appendix 3.13. Interviews with Students: The Audit Trail.

Table 4.5: An Example of the Audit Trail

Examples of theory-driven codes (bold*)* and *data-driven codes* **(**italics*)* & SUB CODES	**Selected Data**	**Transcript**
Change in Self-Efficacy or Outcome Expectancy		
Improved Confidence	she helps me to improve my self confidence (...) she was like this can be a good answer and this was motivating me (...)	Laura
	she (...) changed my way of thinking (…) showed me that I actually can do some more (…)	Nadia
More Focused Employability Efforts	she motivated me to get- to make me apply for a placement and try to get one (…)	Nick

	Recently I'm applying for some internships so I have written my CV and adjusting cover letters as well for particular job roles so I'm applying since December (…)	Laura
Examples of theory-driven codes (bold***)*** and *data-driven codes* **(**italics***)*** & SUB CODES	**Selected Data**	**Transcript**
Increased Resilience	I think that's the main thing we took out from the coaching scheme. Nothing's going to come straightaway or they're not going to come to you, you have to go to them like, you have to keep- be willing and be prepared to you know, just like sacrifice and apply and yes, rejection's just a part of it but you've just got to keep- yes, just keep going really	Andy
	I've seen it affect my uni work like I'm more focussed this year, I'm more prepared this year; I'm finding it hard but I'm dealing with it better.	Nadia
Thinking Differently	I think yes it made me a bit more proactive (…) yes it was the first time I'd done something like that (…)	Mark
	she (...) changed my way of thinking about what I actually want to do because I understood that actually I can do something more than I was thinking of (…)	Laura
Coaching Effectiveness: Quality of Relationship		
Practical Advice	It help me to you know how I can write my CV up and it gave me someone else's view as well and how they got their job and how long it took for them	Chante
	he look at our CV, restructured those, um, told us er, presentation tips, interview tips, just things like that.	Andy
Commitment of the Coach	(…) he responded quickly to emails, we had his phone number so we could .. like, message each other	Andy
	we were supposed to meet like two hours per month but we were meeting every week so yes I think he was good he was prepared to do you know (…)	Mark

The links between research questions, SCCT, coaching effectiveness constructs and inductive codes are presented in Table 4.6. below.

Table 4.6: The Link between the Research Questions, the SCCT and Coaching Effectiveness Constructs and Inductive Codes

Research Questions	**SCCT & Coaching Effectiveness Constructs**	**Inductive Codes**[90]
RQ1. Is career coaching effective in increasing students' self-efficacy, outcome expectations and their employability efforts?	Learning Experience: Coaching	*Improved Confidence* *Thinking Differently* *More Focused Employability Efforts* *Increased Resilience* *More Realistic Expectations*
RQ1a. What aspects of the coaching relationship are most effective in increasing students' self-efficacy, outcome expectations and their employability efforts?	Learning Experience: Coaching	*Practical Advice* *Ability to Identify with a Coach* *Commitment of the Coach* *Coach as a Role Model* *Continued Relationship*

[90] Generated from data

		Honest Feedback *Goal Orientated Coach*
Research Questions	**SCCT & Coaching Effectiveness Constructs**	**Inductive Codes**[91]
RQ1b. What are students' self-efficacy and outcome expectation beliefs?	Self-Efficacy Expectation Outcome Expectations (and Interest/Choice Goals/Choice Actions)	*Importance of Effort & Motivation* *External Locus of Control* *I Can Do Anything/You can get any job you want* *Negative self-perception of UoG Students* *Lack of Work Experience as a Foreigner* *Lack of Direction* *Low Skilled Jobs* *Focus on University* *Graduate Scheme* *Entrepreneurial* *Further Qualifications* *Unrealistic Expectations* *Low Expectations*
RQ2a. What cultural influences and environmental conditions (such as Perceived Barriers or Support to Preferred Careers, Cultural Influences, Family Expectations, Perceived Social Support, Socioeconomic Status, Family Role Models and Gender & Ethnicity Barriers to Chosen Careers) impact students' self-efficacy, outcome expectations and employability efforts?	Cultural Influences (Cultural and Gender Role Models) Environmental Conditions	*Hard Working Parents* *Hard Working Other Family Members* *Degree Completion* *Non-Specific Expectations* *To Be a Professional* *Difficult Online Application Process* *Preferential Application and Selection Treatment of Russell Group Students* *Competition from Russell Group* *Negative perception of UoG students* *Lack of Work Experience* *Quality of English* *Negative perception/fear of corporate environment* *Absence of Networks* *Relatives or Family Friends* *Acquaintances* *Parents as Professionals or Business Owners* *Parents in Low Skilled Jobs or Unemployed* *Ethnic Discrimination* *No perception of discrimination*

[91] Generated from data

4.2. Research Question 1

The umbrella research question RQ1. *Is career coaching effective in increasing students' self-efficacy, outcome expectations and their employability efforts*? was a deductively-based confirmatory question that was tested for causality using QUAN (see H1. Coaching intervention increases career decision self-efficacy and job seeking behaviours of students.). At the QUAL stage the quantitative results were compared. The sub-question RQ1a. *What aspects of the coaching relationship are most effective in increasing students' self-efficacy, outcome expectations and their employability efforts?* was an inductive, exploratory question developed as a reaction to the interferences from the main research question (Teddlie & Tashakkori, 2010). The question was answered using QUAL and its results were used to deepen the understanding of the main RQ1. RQ1b. *What are students' self-efficacy and outcome expectation beliefs?* was an inductive, exploratory question and was addressed using QUAL methods. For each QUAL part, the 'story' for each theme was identified and reflected upon. The final findings were supported by using quotes (in italics) from the interviews.

4.2.1. RQ1. Is career coaching effective in increasing students' self-efficacy, outcome expectations and their employability efforts?

RQ1 Quantitative Findings

Time 2 Testing H_1: Coaching intervention increases career decision self-efficacy and job seeking behaviours of students.

MANOVA analyses were conducted to compare the experimental and control group at Time 2 against all independent variables such as: self-appraisal, occupational information, goal selection, planning, problem solving, CDSE and against dependent variables such as: PJSB, AJSB and JSI means. There were no differences at Time 2 between the both groups (NE = 79, NC = 134) Wilks' Lambda = .983; partial eta squared = .017 (see Appendix 4.4. Time 2 MANOVA Comparison between the Experimental and Control Group at Time 2). Both the control and the experimental group were equivalent in terms of their variables at Time 2. The statistics for the Experimental and Control Group Differences at Time 2 are depicted in Table 4.7. below).

Table 4.7: The Effectiveness of Career Coaching: Experimental and Control Group Differences at Time 2

T2 Scales	F(1,211) value	p. value[92]
Self-appraisal	.227	.634
Occupational information	.282	.596
Goal selection	.351	.554
Planning	1.117	.279
Problem solving	1.533	.217
CDSE	.807	.370
PJSB	.215	.643
AJSB	.25	.874
JSI	.985	.322

Additionally, independent samples t-test was calculated to compare differences between the sample means of the Vocational Outcome Expectations for the Experimental Group and the Control Group at Time 2 (see Appendix 4.5. Independent-Samples T-test for Vocational Outcome Expectations of the Experimental and Control Group at Time 2). It was found that there was no statistically significant difference in the mean scores of Vocational Outcome Expectations for the Experimental Group (ME= 3.53, SDE = .565) and the Control Group (MC=3.50, SDC = .550; t(235) = 1.398, p = . 16 (two-tailed) (Pallant, 2016). The variability between sample means was very small (SEE = .02 and SEC = .01). The larger the standard error the more confident one is the null hypothesis[93] is incorrect and the two sample means differ as a result of the experimental manipulation, i.e. career coaching (Field, 2009).

Therefore, Hypothesis 1 was rejected. The study data do not support the claim that the career coaching intervention increases career self-efficacy and job seeking behaviours of HE students.

RQ1 Qualitative Findings

Coaching Effectiveness: Impact on Self Efficacy, Outcome Expectancies and Employability Efforts

During semi-structured interviews students reported changes in self-efficacy and outcome expectations as they found career coaching *improved confidence* [94] and increased their belief in their own potential and ability to succeed regardless of their grades. There was a sense of feeling grateful for being given this increased confidence. As a result of career coaching *students'*

[92] An alpha level adjusted to .006
[93] As the samples came from the same population, under the null hypothesis, it was expected that their means would be almost equal (Field, 2009).
[94] For examples of qualitative finding see Appendix 3.13. Interviews with Students: The Audit Trail

employability efforts became more focused. Students talked about being more motivated to apply for placements or internships. They also reported *increased resilience* and talked about *the importance of effort and preparation* (see Appendix 3.13. Interviews with Students: The Audit Trail, Andy[95], p. 290):

> *I think that's the main thing we took out from the coaching scheme. Nothing's going to come straightaway or they're not going to come to you, you have to go to them like, you have to keep- be willing and be prepared to you know, just like sacrifice and apply and yes, rejection's just a part of it but you've just got to keep- yes, just keep going (...)*

Coaching made some students *more proactive*, enabled them to *think differently* or broaden their vision (Beth). As a result, students became *more realistic* in their career plans *'I maybe think differently about how I will do it and what is actually achievable realistically*' (see Appendix 3.13. Interviews with Students: The Audit Trail, Kevin, p. 291).

4.2.2. RQ1a. What aspects of the coaching relationship are most effective in increasing students' self-efficacy, outcome expectations and their employability efforts?

The most often mentioned feature of coaching relationship was being given *practical advice*[96]. Students found help with: writing CVs, job applications interview preparation and psychometric tests very important. They also appreciated being given general tips. Practical advice was followed by the importance of **trust**. Coaches who had shared their personal experiences and stories were seen as more trustworthy. Similar backgrounds ('*he's been in the same spot as well*' – see Appendix 3.13. Interviews with Students: The Audit Trail, Andy, p. 292), age, gender or ethnicity were also an important factor in building trust with their coaches. The ability to build a trusting relationship with students was enhanced if students felt able to *identify with a coach* either through education '*I find it a lot- a lot more easier to talk to because she's been to this uni, she's faced the problems that we've had (...)*' (see Appendix 3.13. Interviews with Students: The Audit Trail, Nadia, p. 292), starting their career in the low skilled jobs, coming from the same country of origin or with whom students felt that they had a sense of shared common ground or being on the same wavelength.

[95] The study does not use real names.
[96] Theory driven codes are presented **in bold** and data driven codes are presented *in italics*.

The commitment of the coach came across as a very significant factor determining the quality of students' relationship with the coach. The coach was perceived to be committed if a student had all his/her attention during a meeting and was seen as offering his/her time despite being busy. Showing interest in a student, coming prepared to the scheduled meetings showed students that the coaches cared '*she cares so she's taking this as seriously'* (see Appendix 3.13. Interviews with Students: The Audit Trail, Nadia, p. 292) was also seen as part of being committed to a student. Students stopped seeking contact with coaches who they did not perceive as committed to them.

Students perceived their *coach as a role model*. These types of coaches motivated them, inspired them '*you want to be that person that lives in London, in the City and has a really great job and work in a big company like they do*' (see Appendix 3.13. Interviews with Students: The Audit Trail, Nadia, p. 292) or made them believe in themselves '*I think yes if he did it I think I can do this as well*' (see Appendix 3.13. Interviews with Students: The Audit Trail, Ian, p. 291). Students also felt they were able to relate to the professional environment by seeing their coaches in their work environment.

Some students also talked about the importance of coaches being **warm**, **non-judgemental** and *goal-orientated*[97]. *Honest feedback* was really appreciated by students. Students also expressed a desire to be able to have a *continued relationship* with their coaches after completing their coaching sessions as coaches' support became an important part of their educational experience.

4.2.3. RQ1b. What are students' self-efficacy and outcome expectation beliefs?

Self-Efficacy Beliefs of Students

Students display high **self-efficacy beliefs**, (see Appendix 3.13. Interviews with Students: The Audit Trail), '*I can do anything! So I think I have an as good chance as anyone else does*.' (see Appendix 3.13. Interviews with Students: The Audit Trail, Nadia, p. 293). Overall, students believe that they have as many career options as others as long as they put *effort & motivation* into it. Having said that, a few students displayed an *external locus of control*[98] as they placed the

[97] Theory driven codes are presented **in bold** and data driven codes are presented *in italics*.
[98] A belief that the outcomes one achieves are a function of uncontrollable/incomprehensible forces (Phares, 1962)

successful achievement of their goals in the hands of external forces such as destiny or the law of attraction (see the Discussion chapter for more detailed analysis).

However, students' high self-efficacy beliefs are inhibited by students' *negative self-perception* of themselves as the University of Greenwich students. There is a strong sense that the University of Greenwich students are perceived as inferior to Russell Group students. Students felt that they would not fit into the corporate environment as they were not from a Russell Group university. The Russell Group is perceived by students as the elite group that is smarter and somehow better than the University of Greenwich students.

Outcome Expectations of Students

Students display *low expectations* of themselves and of fellow students. Kevin's reflection (see Appendix 3.13. Interviews with Students: The Audit Trail, Kevin, p. 293) below illustrates how students feel about their peers:

> *lots of people will end up in jobs that they don't really want to take (...) I feel like a lot of people will not use their degrees properly when they leave (...) they're just one of those people who has done the degree they've done it they've completed it but haven't put their heart and soul into it they haven't looked into things outside of it because they're probably not interested in it and as a result they have except a job at which is probably very low pay (...)*

This might be potentially due to the fact that many of the interviewed students hold *low skilled jobs* such as: a bar worker, a supervisor in a cleaning company, a waiter, a sales assistant, a shop assistant, a cleaner or a babysitter.

Some students have *unrealistic expectations* as they either wanted to become a CEO (Andy) or a director (John) by the age of forty or a millionaire by the age of thirty (Tom). Students, regardless of the year of study, demonstrate *a lack of direction* with regard to their plans or their future career. Their career plans are very generic '*I just want to like, have a good, stable job and provide for my family and just like, be happy*' (see Appendix 3.13. Interviews with Students: The Audit Trail, Laura, p. 292) and often they do not know what career they want after completing their degree. Some students do not want to think about their career until the end of their studies and, instead, they want to *focus on university* or their exams. A few students after completing their degree are planning to apply for a *graduate scheme* or to *further their qualifications* by studying for

professional bodies or by doing a postgraduate degree. Others are thinking about *applying for corporate jobs* or becoming *entrepreneurs*, mostly if their parents were entrepreneurs.

4.2.4. RQ1 Integration of Findings

The comparison of the mean scores for the experimental and control group against the mean scores at Time 1 (both groups were statistically equivalent at Time 1) shows that the experimental group achieved a large number of increments across all scales and the overall averages were higher as compared with the control group (see Table 4.8. below). The AJSB scale for White ethnicity was the only scale where the control group outperformed the experimental group over time in comparison to baseline values at Time 1.

Table 4.8: Cross Tabulation of Mean Values for the Experimental and Control Group Compared against the Baseline Value at Time 1.

ETHNICITY	Gender	CDSE (scale 1-5)			PJSB (scale 1-5)			AJSB (scale 1-5)			JSI (scale 1-5)			VOE (scale 1-4)		
		Time 1	Exp Group at Time 2	Control Group at Time 2	Time 1	Exp Group at Time 2	Control Group at Time 2	Time 1	Exp Group at Time 2	Control Group at Time 2	Time 1	Exp Group at Time 2	Control Group at Time 2	Time 1	Exp Group at Time 2	Control Group at Time 2
White	M	3.54	3.81	3.62	2.06	2.18	2.17	1.83	1.81	2.05	2.94	2.92	2.95	n.a.	2.99	3.13
	F	3.64	3.47	3.61	2.14	2.33	2.24	1.87	1.95	2.00	3.24	3.31	3.16	n.a.	3.23	3.33
Black or Black British	M	3.69	4.35	3.64	2.39	2.43	2.35	2.29	1.94	2.11	3.13	3.83	3.00	n.a.	3.31	3.20
	F	3.57	3.71	3.59	2.06	2.22	1.99	1.92	2.17	1.89	3.06	3.64	2.93	n.a.	3.33	3.28
Asian or Asian British	M	3.48	3.65	3.38	2.06	2.00	2.34	1.91	1.87	2.12	3.09	3.69	3.20	n.a.	3.29	3.25
	F	3.38	3.46	3.51	1.94	2.43	1.96	1.76	2.25	1.74	3.04	3.38	3.17	n.a.	3.04	3.24
Mixed	M	3.63	3.61	n.a	2.08	1.80	1.20	1.92	1.58	1.50	3.04	2.67	2.25	n.a.	3.17	2.83
	F	3.28	n.a.	3.90	1.76	3.00	1.43	1.57	1.50	1.44	2.57	4.75	2.00	n.a.	2.91	3.08
Chinese or Other Ethnic Group	M	3.37	4.12	3.49	2.08	2.30	2.18	1.89	1.67	2.00	3.17	3.25	3.15	n.a.	3.33	3.10
	F	3.27	3.10	2.90	1.87	1.97	1.85	1.65	2.00	1.42	3.01	3.17	3.00	n.a.	3.00	2.96
Overall Mean		**3.49**	**3.70**	**3.52**	**2.04**	**2.27**	**1.97**	**1.86**	**1.87**	**1.83**	**3.03**	**3.46**	**2.88**	n.a.	**3.16**	**3.14**

The visual comparison of mean values at Time 2 with Time 1 shows that all mean values of the experimental group have increased and that all of them have outperformed the control group (see Figure 4.1 below).

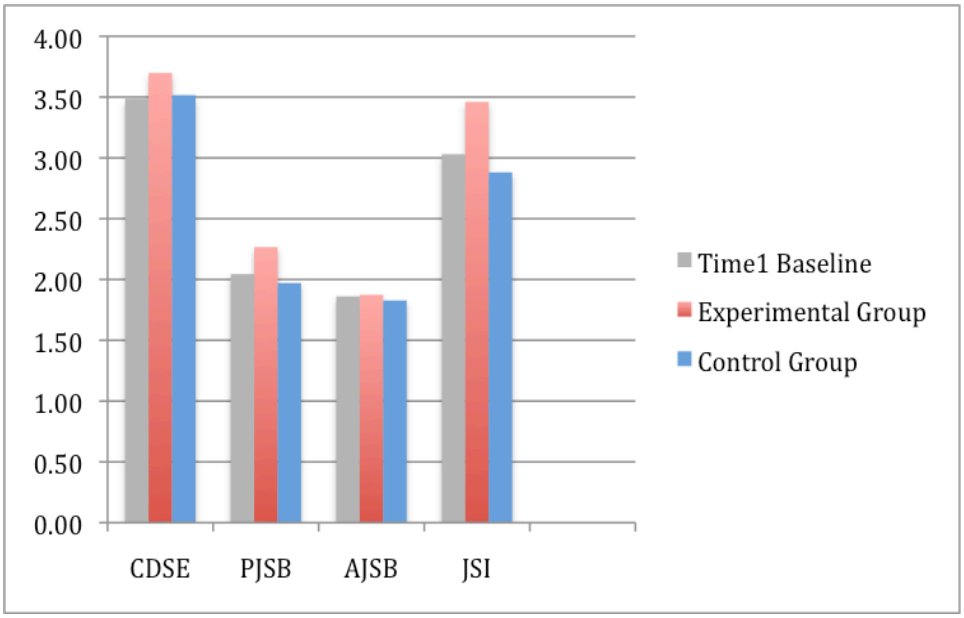

Figure 4.1: Post-Coaching Mean Values for the Experimental and Control Group Compared with Time 1 Values.

Despite the lack of the statistical significance of the career coaching intervention, students reported many benefits of career coaching. Qualitative findings show changes in self-efficacy and outcome expectations. Students feel that due to career coaching their confidence and belief in their own potential improved, their employability efforts became more focused, their motivation to apply for placement or internship increased and they became more resilient in their employability efforts. Students learnt the importance of effort and preparation in order to achieve their goals and recognised that rejection is part of applying for jobs. They started thinking differently and considering options that they had not thought about before and their goals became more realistic. Coaches who acted as role models motivated and inspired students and enabled them to relate to the professional work environment more effectively.

The quality of the coaching relationship determines coaching outcomes such as increased self-efficacy, outcome expectancy and employability efforts. The quality of the coaching relationship was affected by the coaches' ability to build trust, to offer practical advice and to show commitment to students. Similar backgrounds or experiences were an important factor in building trust with students.

Students display high self-efficacy beliefs ('*I can do this*') during the interviews. None of the students believe that they have no option or could not achieve their goals as long as they put effort

and motivation into them. This is consistent with Time 1 and Time 2 quantitative findings. The study's mean values for the Career Decision Self-Efficacy Scale (see Table 4.9. below) show that students' levels of career decision self-efficacy are at the 'Good confidence: comfortable with this skill set' level at both Time 1 and Time 2. *Problem solving* was the only sub-scale of CDSE that had a moderate confidence level at both Time 1 and Time 2. Quantitative data suggest that students feel that they needed some help with their problem solving. At Time 1 students who self-selected for career coaching had statistically higher *problem solving* levels (M_E = 3.45, SD = .63) than the rest of the sample (M_R = 3.33, SD = .66) (t(835) = -2.09, p = .037, two-tailed)[99].

Table 4.9: Career Decision Self-Efficacy Mean Values at Time 1 and Time 2

Career Decision Self-Efficacy	Time 1			Time 2		
	Mean	*SD*	*N*	*Mean*	*SD*	*N*
1. Self-Appraisal	3.62	.62	937	3.66	.62	239
2. Occupational Information	3.57	.65	942	3.68	.64	235
3. Goal Selection	3.54	.62	921	3.58	.61	240
4. Planning	3.44	.67	940	3.51	.62	240
5. Problem Solving	3.36	.66	939	3.43	.64	240
6. Career Decision Self-Efficacy	3.51	.56	879	3.58	.55	224

Score Interpretation (Betz and Taylor, 2012):

1.0 -2.5: Low to Little confidence: intervention needed
2.5 -3.5: Moderate Confidence: may need some help
3.5 -5.0: Good confidence: comfortable with this skill set

Students expressed low outcome expectation beliefs ('*If I do this, what will happen?'*) during interviews. Qualitative findings show that students display *low expectations* of themselves meaning that their beliefs about the consequence or outcomes of performing particular behaviours were negative. Students' high self-efficacy beliefs are inhibited by students' negative self-perception of themselves as being inferior to Russell Group students. Equally, many of the interviewed students already work in low skilled jobs. They have very unclear career goals, indeed, often they do not think about their career at all. Their main focus is to finish their degree and to be happy in life. Additionally, as some students display an external locus of control, i.e. they place the successful achievement of their goals in the hands of external forces such as destiny or the law of attraction. In contrast to these qualitative findings, Time 2 quantitative vocational outcome expectations results are shown in Table 4.10. below.

[99] MANOVA analysis confirmed statistically significant differences between both groups in terms of Problem Solving (sig. value of .023) (see Appendix 3.10: Time 1 MANOVA Group Comparison.).

Table 4.10: Vocational Outcome Expectations at Time 2

Vocational Outcome Expectations Scale	Time 1		Time 2	
	M	SD	M	SD
4. Vocational Outcome Expectations[100] (N = 247)	-	-	3.20	.41

Students on average agree that their career planning would lead to a satisfying career. They also believe that they would be successful in their chosen career/occupation and that their talents and skills will be used in their career/occupation. They agree that they have control over their career decisions, that they can make their future a happy one and they will get the job they want in their chosen career. Finally, the results show that students believe that they would achieve their career/occupational goals.

4.3. Research Question 2

RQ2. *Are students' career decision self-efficacy and vocational outcome expectations associated with their job seeking behaviours?* was a deductively-based, theory-based confirmatory question that was tested for causality using QUAN (see H2 – H5). Sub-questions RQ2a. *What cultural influences and environmental conditions (such as Perceived Barriers or Support to Preferred Careers, Cultural Influences, Family Expectations, Perceived Social Support, Socioeconomic Status, Family Role Models and Gender & Ethnicity Barriers to Chosen Careers) impact students' self-efficacy, outcome expectations and employability efforts?* is an inductive, exploratory question explored using QUAL. The final findings were supported by using quotes (in italics) from the interviews. The sub-question RQ2b. *What is the impact of gender and ethnicity on students' self-efficacy, outcome expectations and employability efforts*? is an inductive, exploratory question that is addressed using MM. It was tested using a QUAN method (see Table 3.1. H6-H18). It was then further explored at Time 3 using a QUAL method. The QUAN and QUAL results are integrated at the findings phase.

[100] Students were asked to describe how they felt about the vocational outcome expectation statements on a 4-point Likert scale with anchors from 1 (Strongly disagree) to 4 (Strongly agree).

4.3.1. RQ2. Are students' career decision self-efficacy and vocational outcome expectations associated with their job seeking behaviours?

RQ2 Quantitative Findings

Time 1 Inferential Statistics and Hypothesis Testing

I. Testing H_2: Students' career decision self-efficacy is correlated with their job seeking behaviours.

Bivariate Pearson product-moment correlation coefficient analyses were conducted to measure to measure how much variance in students' preparatory job seeking behaviours, active job seeking behaviours and job search intensity is explained by their career self-efficacy. The findings (see Appendix 4.6: Time 1 Correlations between Career Decision Self-Efficacy and Job- Seeking Behaviours) show that:

- There is a positive correlation between the students' career decision self-efficacy and preparatory job seeking behaviours (r= .329, N = 856, p<.01[101]). Career self-efficacy helps to explain 10.62 per cent of the variance in students' preparatory job seeking behaviours.
- There is a positive correlation between students' career decision self-efficacy and students' active job seeking behaviours (r =.265, N = 868, p<.01). Career self-efficacy helps to explain 7.049 per cent of the variance in students' active job seeking behaviour (Pallant, 2016; Cohen, 1988).
- There is a positive correlation between students' career decision self-efficacy and students' job search intensity (r =.213, N = 873, p<.01). Career self-efficacy helps to explain 4.54 per cent of the variance in students' active job search intensity (Pallant, 2016; Cohen, 1988).

Hence, the findings support H_2: Students' career decision self-efficacy is correlated with their job seeking behaviours.

II. Testing H_3: Students' career decision self-efficacy is a predictor of their job seeking behaviours.

Standard multiple regression was conducted to identify predictors of job search behaviours, i.e. CDSE scales were regressed against Preparatory Job Search Behaviours (PJSB), Active Job Search Behaviours (AJSB) and Job Search Intensity (JSI) (see Appendix 4.7: Regression Analysis: Predictors of Job Search Behaviours):

[101] Correlation is significant at 0.01 level (two-tailed)

- **Planning** (a sub-scale of CDSE) is a statistically significant predictor of PJSB **(**Beta of .288, p<.001). The model value R Square is .126. The model is statistically significant (ANOVA *Sig.* = 000, p<.0005). There is also a positive correlation between students' planning and their PJSB, r =.343, N= 911, p<.001 (see Appendix 4.6: Time 1 Correlations between Career Decision Self-Efficacy and Job-Seeking Behaviours).
- **Planning** (Beta of .315, *Sig*. = 000) and **occupational information** (Beta of .119, p<.001) are statistically significant predictors of Active Job Seeking Behaviours (AJSB). The model value R Square is .10. The model is statistically significant (ANOVA *Sig.* = 000, p<.0005). There is also a positive correlation between students' planning and their AJSB, r =.306, N= 927, p<.001 (see Appendix 4.6: Time 1 Correlations between Career Decision Self-Efficacy and Job- Seeking Behaviours). Career self-efficacy helps to explain 11.63 per cent of the variance in students' active job search intentions (Pallant, 2016; Cohen, 1988).
- **Planning** (a sub-scale of CDSE) is a statistically significant predictor of Job Search Intensity (JSI) (Beta of .215, p<.001). The model value R Square is .058. The model is statistically significant (ANOVA *Sig.* = 000, p<.0005). There is also a positive correlation between students' planning and their JSI, r =.225, N= 930, p<.001 (see Appendix 4.6: Time 1 Correlations between Career Decision Self-Efficacy and Job Seeking Behaviours). Career self-efficacy helps to explain 11.63 per cent of the variance in students' active job search intentions (Pallant, 2016; Cohen, 1988).

These findings indicate that *career decision self-efficacy* (and its sub-scales: *planning* and *occupational information*) is the statistically significant predictor of all students' job search behaviours (PJSB, AJSB and JSI).

Hence, the findings support H_3: Students' career decision self-efficacy is a predictor of their job seeking behaviours.

Time 2 Inferential Statistics and Hypothesis Testing

III. Time 2 Testing H_4. Students' vocational outcome expectations are a predictor of their job seeking behaviours.

Standard multiple regression analysis found that the Vocational Outcome Expectations is the statistically significant predictor of Preparatory Job Seeking Behaviours (Beta of .303, Sig. =.000), Active Job Seeking Behaviours (Beta of .238, p<.001) and of Job Search Intensity (Beta of .321, p<.001). (see Appendix 4.7: Regression Analysis: Predictors of Job Search Behaviours).

Standard multiple regression analysis, with both Career Decision Self-Efficacy and Vocational Outcome Expectations as predictors, also found that both Vocational Outcome Expectations and Career Decision Self-Efficacy are statistically significant predictors of Preparatory Job Seeking Behaviours (Beta of .144, p<.001 and Beta of .258, p<.001 respectively); Vocational Outcome Expectations is a statistically significant predictor of Active Job Seeking Behaviours (Beta of .176, p<.001); both Vocational Outcome Expectations and Career Decision Self-Efficacy are statistically significant predictors of Job Search Intensity (Beta of .209, p<.001 and Beta of .187, p<.001 respectively).

Additionally, the mediation testing for vocational outcome expectations acting as a mediator between ethnicity and students' job seeking behaviours shows that vocational outcome expectations impacted students' job seeking behaviours (see Table 4.15. in the Findings' chapter for more details).

These findings support H_4 research hypothesis: Students' vocational outcome expectations are a predictor of their job seeking behaviours.

IV. Time 2 Testing H_5. Students' vocational outcome expectations are correlated with their job seeking behaviours.

There is a positive correlation between students' Vocational Outcome Expectations and students' Preparatory Job Seeking Behaviours (r=.294, N= 229, p<.01[102]) (see Appendix 4.8). This suggests that the higher the students' Vocational Outcome Expectations the higher their Preparatory Job Seeking Behaviours and vice versa (Pallant, 2016; Cohen, 1988).

There is a positive correlation between students' Vocational Outcome Expectations and students' Active Job Seeking Behaviours (r=.232, N= 234, p<.01). This suggests that the higher the students' Vocational Outcome Expectations the higher their Active Job Seeking Behaviours and vice versa (Pallant, 2016; Cohen, 1988).

There is a positive correlation between students' Vocational Outcome Expectations and students' Job Search Intensity (r=.321, N= 236, p<.01). This suggests that the higher students' Vocational

[102] **Correlation is significant at 0.01 level (two-tailed)

Outcome Expectations the higher their Job Search Intensity and vice versa (Pallant, 2016; Cohen, 1988).

There is also a positive correlation between students' VOE and CDSE (r=.497, N= 219, p<.01). VOE and CDSE share 24.7 per cent of variance (see Appendix 4.9. Time 2 Correlations between Vocational Outcome Expectations and Career Decision Self-Efficacy).

Hence, the findings support H_5. Students' vocational outcome expectations are correlated with their job seeking behaviours.

4.3.2. RQ2a. What cultural influences and environmental conditions (such as Perceived Barriers or Support to Preferred Careers, Cultural Influences, Family Expectations, Perceived Social Support, Socioeconomic Status, Family Role Models and Gender & Ethnicity Barriers to Chosen Careers) impact students' self-efficacy, outcome expectations and employability efforts?

Perceived Barriers or Support to Preferred Careers

One of the major perceived barriers to students' preferred careers is a *difficult online application process* (see Appendix 3.13. Interviews with Students: The Audit Trail). Students talked extensively about difficulties with passing psychometric tests. There is a strong sense of students feeling unable to pass these tests and of trying to avoid them whenever possible. The assessment centre and the application process is quite intimidating for them as well.

'*I'd rather just go and look for one locally and try and get an interview straight off rather than having to go through all this online stuff (...).*' (see Appendix 3.13. Interviews with Students: The Audit Trail, Tom, p. 294).

Viktor told a story of his university friend who spent three weeks non-stop practicing psychometric tests. As he was unemployed he treated this as a job in itself.

Some students also feel very strongly that *Russell Group students were given preferential treatment*. John (see Appendix 3.13. Interviews with Students: The Audit Trail, John, p. 294) told a story of being invited to the PWC assessment centre. He was the only University of Greenwich student. All others were from the Russell Group universities. He felt that they were looking down on him because he was from the University of Greenwich:

> *they were very you know, full of pride, half of them, and the either don't want to be associated with well, someone from the University of Greenwich because they was not Russell group (...) the conversations when you greeted them were hi, my name's [...] what university do you come from? Um, what are you applying and then like, it gets pretty awkward from there (...)*

John also believes, based on his PWC application process experience, that Russell Group students were fast tracked in their application process. According to John, they were approached by big firms during the career fairs and interviewed '*on the spot*' (John). He believes that they did not have to complete the online tests as the companies assumed they would pass them anyway. John believes companies target the Russell Group students as they see them as future leaders. These regular future leadership annual events are exclusively offered to the Russell Group students and the University of Greenwich is completely unaware of them. Kevin (see Appendix 3.13. Interviews with Students: The Audit Trail, Kevin, p. 294), who applied to Goldman Sachs, JP Morgan and Barclays, also believes that these companies had contacted Russell Group applicants three to four months before they called him for an interview:

> *(...) when I was applying to places like Goldman Sachs, JP Morgan, Barclays and all those places I didn't received any contact from them for about three or four months and I'm aware of people that were going to other universities, better universities or high regarded uni's that were getting responses very, very quickly so they were getting called for interview or something like that and they applied at the same time as me so when I got my reply saying there are no further places it felt that they were prioritising (...) places like Harvard, London School of Economics that was kind of the places they go for (...)*

Some students are very aware of the *competition from the Russell Group*. In their view, the Russell Group students are perceived by the employers as being superior to the University of Greenwich students and seen as '*gold*' (Jenny). This is combined with a *negative perception of the University of Greenwich students* who are of no interest to employers. Students also think that employers relate better to the Russell Group students as opposed to the ones from 'a *polytechnic'* (Kevin).

As a result, the University of Greenwich students often do not tell anyone when they apply for a placement to corporate companies as they do not believe that they will be successful in their application (see Appendix 3.13. Interviews with Students: The Audit Trail, John, p. 293):

> *apply in secret (...) well for PWC especially (...) they just apply because they feel obliged to apply so they don't- they don't regret like, not applying for anywhere but it also believe that they don't- they wouldn't fit in to the organisation because like, people are like, come up from the top universities (...)*

Other perceived barrier to students' preferred careers is *lack of work experience*. This is followed by students' *quality of English.* Students feel that they have fewer career opportunities because of the quality of their English. Viktor (p. 295) feels that as he cannot express himself properly during interviews and that the interviewers are not getting the best impression of him '*I am so confident but sometime for me the barrier me is the language I can't express everything that I know and I can do for any organisation (...)'*. One female Muslim student feels limited in her career options due to her Muslim *religion* and the limited ability to pray at work.

Negative perception of the corporate environment and fear of the professional organisations is another perceived barrier to students' preferred career. Students perceived corporate companies as ruthless and backstabbing and they are sometimes unsure whether they wanted to work in this kind of work environment.

Cultural Influences

Students feel that they *had limited opportunities in their home countries*. Sarah had to stay in London as in her home country, unless one had networks and contacts, there were no work opportunities for her. According to Kevin many University of Greenwich students do not have tangible goals (Kevin, p.296):

> *a lot of the people that go to Greenwich are people who they're the first people in their family to go to university so for them maybe their goal is not tangible (...)*

Some students are encouraged by their parents to depart from their original culture. For example, Jenny (p.296) was encouraged by both her parents (her mother has lived in the UK for 20 years but

she has never worked and she does not have a good command of the English language) to become financially independent from her future husband and to *stand on her feet*:

> *in my culture it's more like the husband obviously brings the you know, the money ... and you stay at home but my family's always motivated me it's not like that (...)*

Family Expectations

Most parents expect students *to complete their degree* (see Appendix 3.13. Interviews with Students: The Audit Trail). Occasionally, students are put under pressure to perform exceptionally well. However, most students report that their parents have *no specific expectations* of them. Parents seem to have very general expectations of students to complete their degree, to have a good job and be happy. They have low aspirations for their children's university outcomes.

Some parents expect students to continue with their education and to have a postgraduate degree or to become a professional (a doctor, an engineer, a musician or an accountant). In one instance, Ian's (p.298) father had very negative expectations of him '*my father '(...) told me you're never going to be no one in life (...)*'.

Perceived Social Support

Most interviewed students (see Appendix 3.13. Interviews with Students: The Audit Trail) report that they have *no networks*. Viktor's (p.296) situation is fairly typical for most of the interviewed students:

> *No, no, no, no not any at all even my coach he was advising me but he say anything you have to do by yourself (...) because that was my only option and I don't have any family here to get this kind of experience or help, not at all.*

However, students feel that if they needed professional help and advice they can ask *relatives/family friends* or *acquaintances* such as compatriots met on Facebook, LinkedIn professionals, friends of friends or other students. These people are there to offer advice but not job leads.

Socioeconomic Status

Students were not particularly forthcoming in describing their socioeconomic status, although they revealed some information when asked about their family role models. Some parents of

interviewed students are *businesses owners* with businesses such as a Chinese takeaway or a Turkish café. A couple of parents *work as professionals* in the finance sector or work as engineers or conduct clinical trials. Others work in *low skilled jobs* such as cleaners or some other non-specified physical jobs or were *unemployed*. Students' answers suggest that many parents work in low skilled jobs but students were vague and were hesitant in disclosing what these jobs were.

Family Role Models

For the majority of students their *hard-working parents* are their main role models. Students talk about their deep appreciation for their parents' hard work and efforts to support them. They are inspired by their parents' strength and ability to overcome a difficult start:

> *I look up to my Dad and um, because he's obviously basically got on- he had a Masters in Chemistry in India when he was- obviously he was born and raised there, and um, but when he came to this country, those degrees didn't count so even when he came to this country he had to start from the very bottom (...) so yes, I admire his hard work and how he was able to come to a completely different environment and be successful, um, yes I think he probably is the biggest role model (...)* (Andy, p.297)

Other family members such as grandparents, uncles and cousins are also seen as positive role models. The shared theme is a parent or a family member who had a very difficult start, often moved to another country, and – despite all obstacles and difficulties - succeeded professionally.

One student, Sarah (p.2987), had no role models in her family. In the *absence of the family role models,* she had chosen Angela Merkel as her role model '*I don't really have family like, who to follow (...) Angela Merkel, she was my mother since I was in ... 10th grade (...)*'.

Gender and Ethnicity Barriers

Some students feel that there is *ethnic discrimination* due to gender and/or ethnicity (see Appendix 3.13. Interviews with Students: The Audit Trail). John was subject to prejudice when a customer presumed he could not speak English properly because of his ethnicity whereas Nadia feels that neither she nor her colleagues were offered a job due to their ethnicity (Nadia, p.298):

> *they didn't get the role like, none of us did except one person and I met like, he's the like, you could see that he would fit into that [....] he's um, Caucasian (...) I do feel like I was discriminated because of my race* [Asian female] *(...) because I didn't think they could see that I'd fit into the*

whole- they had like an image that you could see they all look the same and I don't think I would have fit in there (...)afterwards when I spoke to my friends about it even my friends felt the same so it wasn't just me (...) All the friends that applied. Male and female, Asian ... none of us got it so yes.

Students who did not experience ethnic discrimination themselves witnessed that happening to others. Sarah (p.299), who was friends with the personnel staff in her company[103] and built trust with them over time, witnessed their ethnic prejudice. Her perception was that personnel department would not employ black people as they would not trust them:

if you don't have a nice background as a black person (...) they [HR department] won't accept your application (...) Er, I just saw, like, one of my friends, he is black and he lives in Abbey Wood so when they saw .. they told that oh you live in Abbey Wood, oh so that area is not very nice known or something like that so they were like, OK, even if you have a strong CV they don't trust you (...) they will find just excuses (...) they just find reasons like, because when I been- I was working there, I'm getting very well with the personnel (...) I was like, OK, you can't say anything (...) they say that maybe because they do like say they can steal or they don't trust the- they don't trust them like, I don't know.

Other students do not feel discriminated against at all and put their lack of success at securing a job due to lack of experience, their inadequate GCSE and A levels results or other factors. They were Asian and White European students.

4.3.3. RQ2b. What is the impact of gender and ethnicity on students' self-efficacy, outcome expectations and employability efforts?

I. Time 1 Testing H_6: Male students have higher career decision self-efficacy levels than female students

The independent-samples t-test found that there is no statistically significant difference in the mean career decision self-efficacy scores for males (M= 3.53, SD = .565) and females (M=3.50, SD = .550; t(872) = .65, p = . 516 (two-tailed) [104]. The magnitude of the differences in the means (mean difference = 0.03, CI: -.05 to 0.99) is very small (eta squared = 0.00048). Only 0.00048 per cent of

[103] *William Hill* plc is a bookmaker based in London, England.
[104] In the conducted independent-samples t-test all scales had equal variances (Levene's tests were higher than .05). This means that the assumption of equal variances has not been violated (Pallant, 2007).

variance in career decision self-efficacy is explained by gender (Pallant, 2016; Cohen, 1988) (see Appendix 4.10: Time 1 Independent-Samples t-testing for Gender Differences).

A two-way between-groups analysis of variance (MANOVA) was also conducted with gender as categorical, independent variable and CDSE and PJSB as continuous variables. The result shows that the gender effect is not statistically significant F(1, 849)=.588, p=.455; Wilks' Lambda = .998; partial eta squared = .002 (see Appendix 4.11: MANOVA to Compare the Career Decision Self-Efficacy Scores for Males and Females at Time 1.)

Therefore, Hypothesis 6 was rejected. The study data do not support the claim that Male and Female students have different career self-efficacy levels.

II. Time 1 Testing H_7. Caucasian students to have higher career self-efficacy than other ethnicities.

Multivariate analysis of variance (MANOVA) were conducted in order to reduce the risk of an 'inflated Type 1 error', i.e. of finding a significant result despite no differences between groups (Pallant, 2016) with ethnicity chosen as a categorical, independent variable and tested against all dependent variables)[105]. It resulted in the significant result for career decision self-efficacy, F(5, 840) = 7.324, p = .000; Wilks' Lambda = .882, partial eta squared = .025 and also for all subscales of career decision self-efficacy. Means for career decision self-efficacy for different ethnicities are depicted in Table 4.11. below.

Table 4.11. Mean Statistics for the Ethnicity

Ethnicity	CDSE Mean
Black or Black British	3.65
White	3.64
Mixed	3.45
Asian or Asian British	3.44
Chinese or Other Ethnic Groups	3.31

Data show (see Appendix 3.8: Time 1 MANOVA Career Decision Self-Efficacy Mean Values for Different Ethnic Groups) that Black or Black British is the ethnic group that has the highest mean for career decision self-efficacy and all its subscales. This is followed by White students.

[105] MANOVA analyses require a minimum of two continuous variables to be tested against one categorical, independent variable (ethnicity in this case) (Pallant, 2007).

Therefore, H_7 was rejected. The study data do not support the claim that Caucasian students to have higher career self-efficacy than other ethnicities.

III. Time 2 Testing H_8: Male and Female students have different vocational outcome expectation levels.

The independent-samples t-test (N= 236) found that there were is no statistically significant difference in the mean career decision self-efficacy scores for males (M= 3.17, SD = .37) and females (M=3.23, SD = .44; t(234) = -1.22, p = .23 (two-tailed)[106]. The magnitude of the differences in the means (mean difference = 0.06, CI: -.17 to 0.04) is very small (eta squared = 0.006).

Therefore, Hypothesis 8 was rejected. The study data do not support the claim that Male and Female students have different vocational outcome expectation levels.

IV. Time 2 Testing H_9. Different ethnic groups of students have different vocational outcome expectation levels.

Multivariate analysis of variance (MANOVA) were conducted with ethnicity chosen as a categorical, independent variable. It resulted in no significant results for vocational outcome expectations.

Hence, Hypothesis 9 was rejected. The data do not support the claim that different ethnic groups of students have different vocational outcome expectancy levels.

V. Time 1 Testing H_{10}. Gender is a moderator between students' career decision self-efficacy and their job seeking behaviours.

The moderation (Model 1, Stride *et al.*, 2015c) testing (N=856) using PROCESS coding in SPSS 20 shows no statistically significant results for gender as a moderator between students' career decision self-efficacy and their employability efforts.

Therefore, H_{10} was rejected. The study data do not support the claim that gender is a moderator between students' career decision self-efficacy and their job seeking behaviours.

[106] In the conducted independent-samples t-test all scales had equal variances (Levene's tests were higher than .05). This means that the assumption of equal variances has not been violated (Pallant, 2016).

VI. Time 1 Testing H_{11}. The combination of gender & ethnicity moderates students' career decision self-efficacy and their job seeking behaviours.

The moderation analysis, using PROCESS coding in SPSS 20 (Hayes, 2018), was conducted in order to examine how gender and ethnicity together influence the strength and/or the direction of the relationship between students' career decision self-efficacy and their employability efforts (measured as job seeking behaviours). The path diagram Model 2[107] (Stride *et al.*, 2015a) was used to test this hypothesis (see Figure 4.2 below).

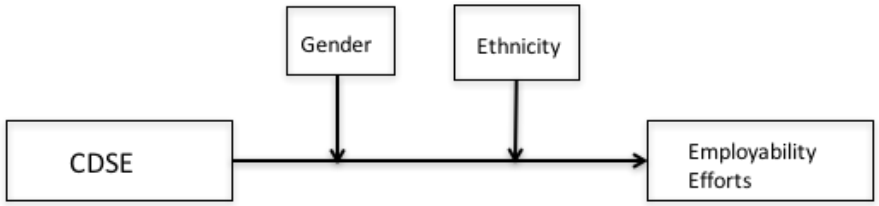

Figure 4.2: The Path Diagram of Gender and Ethnicity as Moderators between Students' CDSE and their Employability Efforts (adapted from Stride *et al*., 2015a)

Firstly, the relationship between students' career decision self-efficacy (a primary independent continuous variable) and students' preparatory job seeking behaviours was examined, with the gender and ethnicity acting as moderators (see Appendix 4.13 for an example of the PROCESS output).

The overall model was statistically significant for Black or Black British ethnicity (N=856): $F(5, 850) = 22.76$, $p<.001$, $R^2 = .12$. The interaction (CDSE x Black or Black British) was statistically significant with b=.0834 $t(850) = 2.24$, p=.0256 95% CI [.0102 to .1567]. The interaction (CDSE x Gender) was not statistically significant with b=-.02 $t(850) = -.76$, p=.4461, 95% CI [-.0754 to .0332].

The overall model was also statistically significant for Chinese and Other Ethnic Groups ethnicity (N=856): $F(5, 850) = 22.92$, $p<.001$, $R^2 = .12$. The interaction (CDSE x Chinese and Other Ethnic Groups) was statistically significant with b=-.1228 $t(852) = -2.94$, p=.0034 95% CI [-.2048 to -

[107] The assumptions made (Stride *et al.*, 2015a):
- The primary Independent Variable (CDSE) is continuous
- The moderators (Ethnicity and Gender) are dichotomous.
- The Dependent Variable (PJSB, AJSB, JSI) are continuous and satisfy the assumptions of standard multiple regression.

.0407]. The interaction (CDSE x Gender) was not statistically significant with b=-.02 t(850) = -.73, p=.4629, 95% CI [-.0748 to .0340].

Secondly, the relationship between students' career decision self-efficacy (a primary independent continuous variable) and students' active job seeking behaviours was examined, with the gender and ethnicity acting as moderators (see Appendix 4.13 for an example of the PROCESS output).

The overall model was statistically significant for Black or Black British ethnicity (N=856) F(5, 862) = 19.73, p<.001, R^2 = .10. The interaction (CDSE x Black or Black British) was statistically significant with b=.3718 t(862) = 3.39, p=.0007 95% CI [.1569 to .5866]. The interaction (CDSE x Gender) was not statistically significant with b=-.0803 t(862) = -.9905, p=.3222, 95% CI [-.2393 to .0788].

The overall model was also statistically significant for Chinese and Other Ethnic Groups ethnicity (N=868): F(5, 862) = 16.26, p<.001, R^2 = .09. The interaction (CDSE x Chinese and Other Ethnic Groups) was statistically significant with b=-.3696 t(862) = -3.06, p=.0023 95% CI [-.6067 to -.1325]. The interaction (CDSE x Gender) was not statistically significant with b=-.07 t(850) = -.84, p=.4020, 95% CI [-.2293 to .0920].

Finally, the relationship between students' career decision self-efficacy (a primary independent continuous variable) and students' job search intensity was examined, with the gender and ethnicity acting as moderators (see Appendix 4.13 for an example of the PROCESS output).

The overall model was statistically significant for White ethnicity (N=873): F(5, 867) = 9.33, p<.001, R^2 = .05. The interaction (CDSE x White) was statistically significant with b=-.01078 t(867) = -.0802, p=.0000 95% CI [.3348 to .7318]. The interaction (CDSE x Gender) was also statistically significant with b=-.2488 t(867) = -1.9676, p=.0494, 95% CI [-.4969 to -.0006].

The overall model was statistically significant for Asian or Asian British ethnicity (N=873): F(5, 867) = 9.34, p<.001, R^2 = .05. The interaction (CDSE x Asian or Asian British) was not statistically significant with b=.24 t(867) = 1.68, p=.0926 95% CI [-.0397 to .5181]. However, the interaction (CDSE x Gender) was statistically significant with b=-.2609 t(867) = -2.07, p=.0386, 95% CI [-.5080 to -.0137].

The overall model was statistically significant for Chinese and Other Ethnic Groups ethnicity (N=873): F(5, 867) = 10.11, p<.001, R^2 = .06. The interaction (CDSE x Chinese and Other Ethnic Group) was not statistically significant with b=-.27 t(867) = -1.43, p=.1517 95% CI [-.6317 to .0982]. However, the interaction (CDSE x Gender) was statistically significant with b=-.2556 t(867) = -2.03, p=.0422, 95% CI [-.5022 to -.0090].

In summary, the moderation testing, using PROCESS coding in SPSS 20 (Hayes, 2018), shows statistically significant results for the combination of gender & ethnicity as moderators between students' career decision self-efficacy and their job seeking behaviours for *Preparatory Job Seeking Behaviours* for *Black or Black British* and *Chinese and Other Ethnic Groups,* for *Active Job Seeking Behaviours* for *Black or Black British* and *Chinese and Other Ethnic Groups;* and for *Job Search Intensity* for *White*, *Asian or Asian British*, and *Chinese and Other Ethnic Groups* (see Table 4.12 below for the summary of the findings).

Table 4.12. Summary of Statistically Significant Results (p-values <.05) for Gender and Ethnicity Moderation Effect on CDSE and Employability Efforts

Ethnicity	PJSB (N=856)	AJSB (N= 856)	JSI (N=873)
Black or Black British	moderation effect	moderation effect	-
White	-	-	moderation effect
Mixed	-	-	-
Asian or Asian British	-	-	moderation effect
Chinese or Other Ethnic Groups	moderation effect	moderation effect	moderation effect

Hence, the findings support H_{11}: The combination of gender & ethnicity moderates students' career decision self-efficacy and their job seeking behaviours.

VII. Time 1 Testing H_{12}. Students' ethnicity and job seeking behaviours are mediated by students' career decision self-efficacy.

The mediation analysis, using PROCESS coding in SPSS 20 (Hayes, 2018), was conducted in order to measure and test the direct and indirect pathways through which an antecedent variable (ethnicity) influences a subsequent dependent variable (employability efforts measured as job seeking behaviours) through students' career decision self-efficacy in order to understand why a

relationship between the antecedents and outcomes exists (Stride, 2017). The path diagram, Model 4a[108] (Stride *et al.*, 2015b), that was used to test this hypothesis, is depicted in Figure 4.1 below.

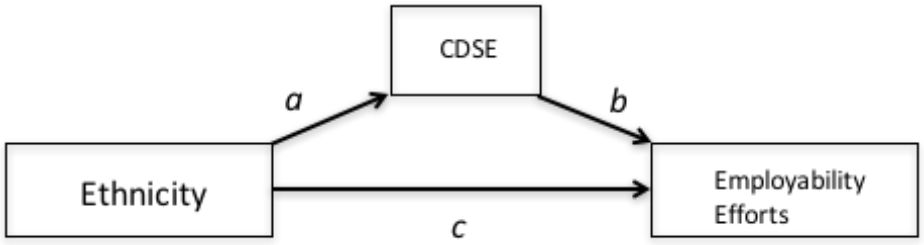

Figure 4.3: The Path Diagram of CDSE mediating Ethnicity and Employability Efforts (adapted from Stride *et al.*, 2015b)

The relationship between students' ethnicity (an independent dichotomous variable) and students' preparatory job seeking behaviours was examined, with career decision self-efficacy acting as mediator (see Appendix 4.14 an example of the PROCESS output).

The mediation testing, using PROCESS coding in SPSS 20 (Hayes, 2018), shows statistically significant results for career decision self-efficacy[109] as a mediator between all ethnicities and all students' job seeking behaviours. The observed effects were statistically significant for all ethnicities except Mixed ethnicity. Black or Black British ethnicity was the only ethnicity that had a statistically significant direct effect of ethnicity on job seeking behaviours. The summary of results of direct and indirect effects of ethnicity on job seeking behaviours is provided in the Table 4.13 below.

[108] The assumptions made (Stride *et al.*, 2015b):

- The Independent Variable (Ethnicity) is dichotomous
- The mediator (CDSE) is continuous.
- The DV (variable Y) is continuous and satisfies the assumptions of standard multiple regression.

[109] The PROCESS mediation models do not allow for a mediator being dichotomous in SPSS(Stride *et al.* 2015b). Hence it was impossible to test for Ethnicity being a moderator between CDSE and job seeking behaviours.

Table 4.13. Statistically Significant Direct and Indirect Effects of Career Decision Self-Efficacy Mediating Ethnicity (X) and Employability Efforts (Y)

Ethnicity	PJSB (N=856)		AJSB (N= 868)		JSI (N=873)	
	Direct Effect of X on Y (95%CI)	*Indirect Effect of X on Y (95% CI)*	*Direct Effect of X on Y (95%CI)*	*Indirect Effect of X on Y (95% CI)*	*Direct Effect of X on Y (95%CI)*	*Indirect Effect of X on Y (95% CI)*
Black or Black British	-	.0213 (.0054 to .0387)	.02521 (.1223 to .03818)	.0483 (.0130 to .0913)	-	.0619 (.0169 to .0913)
White	-	.0188 (.0088 to .0306)	-	.0495 (.0242 to .0808)	-	.0591 (.0275 to .0997)
Mixed	-	-	-	-	-	-
Asian or Asian British	-	-.0135 (-.0271to -.0021)	-	.0345 (-.0695 to -.0075) -	-	-.0416 (-.0827to -.0083)
Chinese or Other Ethnic Groups	-	-.0318 (-.0489 to -.0179)	-	-.0767 (-.1196 to -.0437)	-	-.0416 (-.0827 to -.0083)

Hence, the findings support H_{12}. Students' ethnicity and job seeking behaviours are mediated by students' career decision self-efficacy.

VIII. Time 1 Testing H_{13}. Ethnicity moderates students' career decision self-efficacy and their job seeking behaviours

The moderation analysis, using PROCESS coding in SPSS 20 (Hayes, 2018), was conducted in order to examine how ethnicity influences the strength and/or the direction of the relationship between students' career decision self-efficacy (CDSE) and their employability efforts (measured as job seeking behaviours). The path diagram, Model 1[110] (Stride *et al.*, 2015c), is illustrated in Figure 4.4 below.

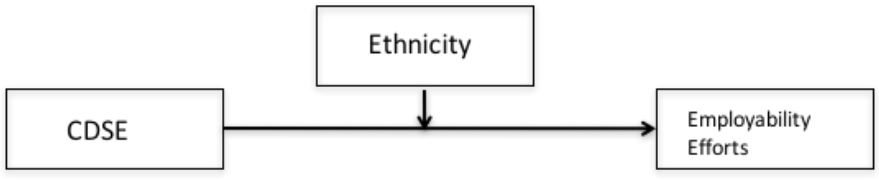

Figure 4.4: The Path Diagram of Gender and Ethnicity as Moderators between Students' CDSE and their Employability Efforts (adapted from Stride *et al*., 2015a)

[110] The assumptions made (Stride *et al.*, 2015c):

- The primary Independent Variable (CDSE) is continuous
- The moderator (Ethnicity) is dichotomous.
- The Dependent Variable (PJSB, AJSB, JSI) are continuous and satisfy the assumptions of standard multiple regression.

Firstly, the relationship between students' career decision self-efficacy (a primary independent continuous variable) and students' preparatory job seeking behaviours was examined, with the ethnicity acting as moderators.

The overall model was statistically significant for Black or Black British ethnicity (N=856): F(3, 852) = 37.5, p<.001, R^2 = .12. The interaction (CDSE x Black or Black British) was statistically significant with b=.0835 t(852) = 2.24, p=.0254, 95% CI [.0103 to .1567].

The overall model was also statistically significant for Chinese and Other Ethnic Groups ethnicity (N=856): F(3, 852) = 37.57, p<.001, R^2 = .12. The interaction (CDSE x Chinese and Other Ethnic Groups) was statistically significant with b=-.1188 t(852) = -2.85, p=.0045, 95% CI [-.2007 to -.0369].

Secondly, the relationship between students' career decision self-efficacy (a primary independent continuous variable) and students' active job seeking behaviours was examined, with ethnicity acting as moderator.

The overall model was statistically significant for Black or Black British ethnicity (N=868): F(3, 864) = 31.32, p<.001, R^2 = .098. The interaction (CDSE x Black or Black British) was statistically significant with b=.3768 t(864) = 3.44, p=.0006, 95% CI [.1617 to .5918].

The overall model was also statistically significant for Chinese and Other Ethnic Groups ethnicity (N=868): F(3, 864) = 25.25, p<.001, R^2 = .08. The interaction (CDSE x Chinese and Other Ethnic Groups) was statistically significant with b=-.3579 t(864) = -2.96, p=.0032, 95% CI [-.5952 to -.1205].

Finally, the relationship between students' career decision self-efficacy (a primary independent continuous variable) and students' job search intensity was examined, with ethnicity acting as moderator. There were no statistically significant results found for this moderation.

In summary, the moderation testing, using PROCESS coding in SPSS 20 (Hayes, 2018), shows statistically significant results for ethnicity as moderators between students' career decision self-

efficacy and their job seeking behaviours for *Preparatory Job Seeking Behaviours* and *Active Job Seeking Behaviours* for *Black or Black British* and *Chinese and Other Ethnic Groups* (see Table 4.14 below).

Table 4.14. Summary of Statistically Significant Results (p-values <.05) for Gender and Ethnicity Moderation Effect on VOE and Employability Efforts.

Ethnicity	PJSB (N=856)	AJSB (N= 856)	JSI (N=873)
Black or Black British	moderation effect	moderation effect	-
White	-	-	-
Mixed	-	-	-
Asian or Asian British	-	-	-
Chinese or Other Ethnic Groups	moderation effect	moderation effect	-

Hence, the findings support H_{13}: Ethnicity moderates students' career decision self-efficacy and their job seeking behaviours.

IX. Time 2 Testing H_{14}. The combination of gender & ethnicity moderates students' vocational outcome expectations and their job seeking behaviours.

The moderation analysis, using PROCESS coding in SPSS 20 (Hayes, 2018), was conducted in order to examine how gender and ethnicity together influence the strength and/or the direction of the relationship between students' vocational outcome expectations and their employability efforts (measured as job seeking behaviours). The path diagram Model 2[111] (Stride *et al.*, 2015a) was used to test this hypothesis (see Figure 4.5 below).

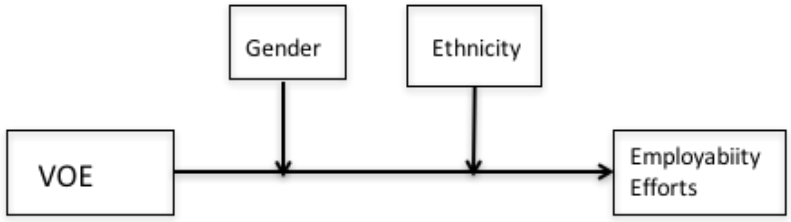

Figure 4.5: The Path Diagram of Gender and Ethnicity as Moderators between Students' VOE and their Employability Efforts (adapted from Hayes, 2012)

[111] The assumptions made (Stride *et al.*, 2015a):

- The primary Independent Variable (CDSE) is continuous
- The moderators (Ethnicity and Gender) are dichotomous.
- The Dependent Variable (PJSB, AJSB, JSI) are continuous and satisfy the assumptions of standard multiple regression.

Firstly, the relationship between students' vocational outcome expectations (a primary independent continuous variable) and students' preparatory job seeking behaviours was examined, with the gender and ethnicity acting as moderators (N=216). There were no statistically significant results found for this moderation.

Secondly, the relationship between students' vocational outcome expectations (VOE) and students' active job seeking behaviours was examined, with the gender and ethnicity acting as moderators.

The overall model was statistically significant for Black or Black British ethnicity (N=234): F(5, 228) = 3.69, p<.001, R^2 = .075. The interaction (VOE x Black or Black British) was not statistically significant with b=.0023 t(228) = .0233, p=.9814 95% CI [-.1885 to .1930]. However, the interaction (VOE x Gender) was statistically significant with b= .1587 t(228) = 2.03, p=.0439, 95% CI [.0044 to .3130].

The overall model was statistically significant for White ethnicity (N=234): F(5, 228) = 4.55, p<.001, R^2 = .09. The interaction (VOE x White) was statistically significant with b=-.1529 t(228) = -1.99, p=.0481 95% CI [-.3045 to -.0013]. The interaction (VOE x Gender) was not statistically significant with b=.1531 t(228) = 1.95, p=.0529, 95% CI [-.0020 to .3082].

The overall model was not statistically significant for Asian or Asian British ethnicity (N=234): F(5, 228) = 4.16, p=.0012, R^2 = .08. The interaction (VOE x Asian or Asian British) was not statistically significant with b=-.4012 t(228) = -1.49, p=.1131 95% CI [-.0386 to .2900]. However, the interaction (VOE x Gender) was statistically significant with b=.1632 t(228) = 2.08, p=.0389, 95% CI [.0084 to .3180].

The overall model was statistically significant for Mixed ethnicity (N=234): F(5, 228) = 4.43, p<.001, R^2 = .09. The interaction (VOE x Mixed) was statistically not significant with b= -.1078 t(228) = -.5535, p=.5804, 95% CI [-.4916 to .2760]. However, the interaction (VOE x Gender) was statistically significant with b=.1590 t(228) = 2.04, p=.0429, 95% CI [.0052 to .3128].

The overall model was statistically significant for Chinese and Other Ethnic Groups ethnicity (N=234): F(5, 228) = 4.55, p<.001, R^2 = .09. The interaction (VOE x Asian or Asian British) was statistically significant with b= -.1529 t(228) = -.1.99, p=.0481, 95% CI [-.3045 to -.0013]. The

interaction (VOE x Gender) was not statistically significant with b= .1531 t(228) = 1.95, p=.0529, 95% CI [.0020 to .3082].

Finally, the relationship between students' career decision self-efficacy (a primary independent continuous variable) and students' job search intensity was examined, with the gender and ethnicity acting as moderators. There were no statistically significant results found for this moderation.

In summary, the moderation testing, using PROCESS coding in SPSS 20 (Hayes, 2018), shows statistically significant results for the combination of gender & ethnicity as moderators between students' vocational outcome expectancies and their job seeking behaviours for *Active Job Seeking Behaviours* for all ethnicities (see Table 4.15 below).

Table 4.15. Statistically Significant p-values (<.05) for Gender and Ethnicity Moderation Effect between Students' Vocational Outcome Expectations and their Employability Efforts

Ethnicity	PJSB (N=216)	AJSB (N= 234)	JSI (N=236)
Black or Black British	-	moderation effect	-
White	-	moderation effect	-
Mixed	-	moderation effect	-
Asian or Asian British	-	moderation effect	-
Chinese or Other Ethnic Groups	-	moderation effect	-

Hence, the findings support H_{14}: The combination of gender & ethnicity moderates students' vocational outcome expectations and their job seeking behaviours.

X. Time 2 Testing H_{15}. Students' ethnicity and job seeking behaviours are mediated by students' vocational outcome expectations.

The mediation analysis, using PROCESS coding in SPSS 20 (Hayes, 2018), was conducted in order to measure and test the direct and indirect pathways through which an antecedent variable (ethnicity) influences a subsequent dependent variable (employability efforts measured as job seeking behaviours) through students' vocational outcome expectations in order to understand why a relationship between the antecedents and outcomes exists (Stride, 2017).

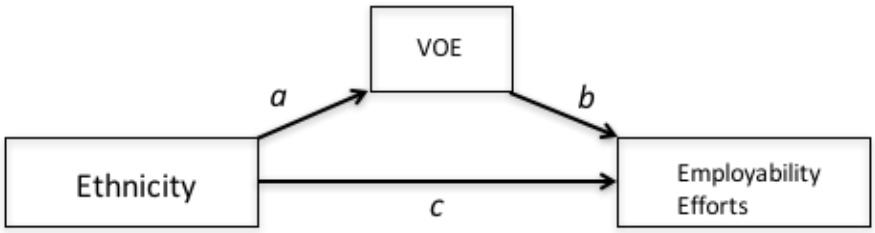

Figure 4.6: The Path Diagram of VOE mediating Ethnicity and Employability Efforts (adapted from Stride *et al*., 2015b)

The relationship between students' ethnicity (an independent dichotomous variable) and students' preparatory job seeking behaviours was examined, with vocational outcome expectations acting as mediator. No statistically significant results were found for this mediation (all confidence intervals included zero). The summary of results of direct and indirect effects of ethnicity on job seeking behaviours is provided in the Table 4.16 below.

Table 4.16. Statistically Significant Direct and Indirect Effects of Vocational Outcome Expectations Mediating Ethnicity (X) and Employability Efforts (Y)

Ethnicity	**PJSB (N=856)**		**AJSB (N= 868)**		**JSI (N=873)**	
	Direct Effect of X on Y (95%CI)	*Indirect Effect of X on Y (95% CI)*	*Direct Effect of X on Y (95%CI)*	*Indirect Effect of X on Y (95% CI)*	*Direct Effect of X on Y (95%CI)*	*Indirect Effect of X on Y (95% CI)*
Black or Black British	-	-	-	-	-	-
White	-	-	-	-	-	-
Mixed	-	-	-	-	-	-
Asian or Asian British	-	-	-	-	-	-
Chinese or Other Ethnic Groups	-	-	-	-	-	-

In summary, the mediation testing, using PROCESS coding in SPSS 20 (Hayes, 2018), shows no statistically significant results for vocational outcome expectations [112] as a mediator between all ethnicities and all students' job seeking behaviours.

Hence, Hypothesis 15 was rejected. The data do not support the claim that students' ethnicity and job seeking behaviours are mediated by students' vocational outcome expectations.

[112] The PROCESS mediation models do not allow for a mediator being dichotomous in SPSS(Stride *et al.* 2015b). Hence it was impossible to test for Ethnicity being a moderator between CDSE and job seeking behaviours.

XI. Time 2 Testing H_{16}. Ethnicity moderates students' vocational outcome expectations and their job seeking behaviours.

The moderation analysis, using PROCESS coding in SPSS 20 (Hayes, 2018), was conducted in order to examine how ethnicity influences the strength and/or the direction of the relationship between students' vocational outcome expectations (VOE) and their employability efforts (measured as job seeking behaviours). The path diagram, Model 1[113] (Stride *et al.*, 2015c), is illustrated in Figure 4.7 below.

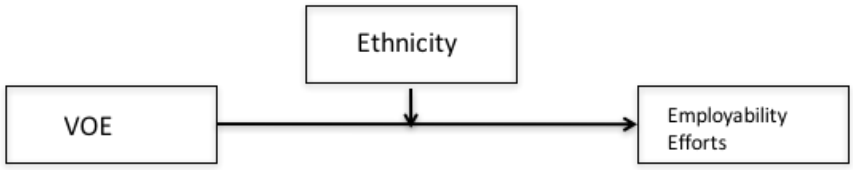

Figure 4.7: The Path Diagram of Gender and Ethnicity as Moderators between Students' VOE and their Employability Efforts (adapted from Stride *et al*., 2015a)

Firstly, the relationship between students' vocational outcome expectations (a primary independent continuous variable) and students' preparatory job seeking behaviours was examined, with the ethnicity acting as moderators. There were no statistically significant results found for this moderation.

Secondly, the relationship between students' vocational outcome expectations (a primary independent continuous variable) and students' active job seeking behaviours was examined, with ethnicity acting as moderator.

The overall model was statistically significant for White ethnicity (N=234): F(3, 230) = 6.27, p<.001, R^2 = .08. The interaction (VOE x White) was statistically significant with b= -.1649 t(230) = -2.16, p=.0315, 95% CI [-.3150 to -.0148].

The overall model was also statistically significant for Chinese and Other Ethnic Groups ethnicity (N=234): F(3, 230) = 6.27, p<.001, R^2 = .08. The interaction (VOE x Chinese and Other Ethnic Groups) was statistically significant with b= -.1649 t(230) = -2.16, p=.0315, 95% CI [-.3150 to -.0148]. The statistics were exactly the same as for the White ethnicity.

[113] The assumptions made (Stride *et al.*, 2015c):

- The primary Independent Variable (VOE) is continuous
- The moderator (Ethnicity) is dichotomous.
- The Dependent Variable (PJSB, ACJB, JSI) are continuous and satisfy the assumptions of standard multiple regression.

Finally, the relationship between students' vocational outcome expectations (a primary independent continuous variable) and students' job search intensity was examined, with ethnicity acting as moderator. There were no statistically significant results found for this moderation.

In summary, the moderation testing, using PROCESS coding in SPSS 20 (Hayes, 2018), shows statistically significant results for ethnicity as a moderator between students' vocational outcome expectations and their job seeking behaviours for *Active Job Seeking Behaviours* for *White* and *Chinese and Other Ethnic Groups* (see Table 4.17 below).

Table 4.17. Statistically Significant p-values (<.05) for Ethnicity Moderation between VOE and Employability Efforts

Ethnicity	PJSB (N=856)	AJSB (N= 856)	JSI (N=873)
Black or Black British	-	-	-
White	-	moderation effect	-
Mixed	-	-	-
Asian or Asian British	-	-	-
Chinese or Other Ethnic Groups	-	moderation effect	-

Hence, the findings support H_{16}: Ethnicity moderates students' vocational outcome expectations and their job seeking behaviours.

XII. Time 2 Testing H_{17}. Vocational outcome expectations moderate students' career decision self-efficacy and their job seeking behaviours.

The moderation testing, using PROCESS coding in SPSS 20 (Hayes, 2018), Model 1, shows no statistically significant results for the vocational outcome expectations as a moderator between students' career decision self-efficacy and their job seeking behaviours.

Therefore, H_{17} was rejected. The study data do not support the claim that vocational outcome expectations moderate students' career decision self-efficacy and their job seeking behaviours.

XIII. Time 2 Testing H_{18}. Vocational outcome expectations mediate students' career decision self-efficacy and their job seeking behaviours.

The mediation analysis, using PROCESS coding in SPSS 20 (Hayes, 2018), was conducted in order to measure and test the direct and indirect pathways through which an antecedent variable (career decision self-efficacy) influences a subsequent dependent variable (employability efforts measured as job seeking behaviours) through students' vocational outcome expectations in order to understand why a relationship between the antecedents and outcomes exists (Stride, 2017). The path diagram, Model 4a[114] (Stride *et al.*, 2015b), is depicted in Figure 4.8 below.

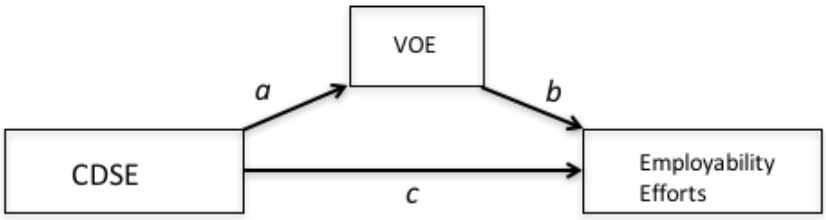

Figure 4.8: The Path Diagram of VOE as a Mediator between Students' CDSE and their Employability Efforts (adapted from Stride *et al*., 2015a)

The relationship between students' career decision self-efficacy (an independent continuous variable) and students' preparatory job seeking behaviours was examined, with vocational outcome expectations acting as mediator. The overall model was statistically significant for preparatory job seeking behaviours: (N=234): $F(1, 210) = 65.31$, $p<.001$, $R^2 = .24$; for active job seeking behaviours: (N=216): $F(1, 214) = 68.64$, $p<.001$, $R^2 = .24$; and for job search intensity: (N=218): $F(1, 216) = 70.92$, $p<.001$, $R^2 = .25$.

The summary of results of direct and indirect effects of vocational outcome expectations on job seeking behaviours is provided in the Table 4.18 below.

[114] The assumptions made (Stride *et al.*, 2015b):

- The Independent Variable (CDSE) is continuous
- The mediator (VOE) is continuous.
- The DV (variable Y) is continuous and satisfies the assumptions of standard multiple regression.

Table 4.18. Statistically Significant p-values (<.05) for Ethnicity Mediation Effect (controlled for Gender) on VOE and Employability Efforts (N= 856)

	PJSB (N=212)		**AJSB (N= 216)**		**JSI (N=218)**	
	Direct Effect of X on Y (95%CI)	*Indirect Effect of X on Y (95% CI)*	*Direct Effect of X on Y (95%CI)*	*Indirect Effect of X on Y (95% CI)*	*Direct Effect of X on Y (95%CI)*	*Indirect Effect of X on Y (95% CI)*
CDSE	.1133 (.0496to .1170)	.0351 (.0007 to .0672)	-	.0389 (.0011 to .0746)	.3803 (.0845 to .6762)	.2114 (.0768 to .3739)

In summary, the mediation testing, using PROCESS coding in SPSS 20 (Hayes, 2018), shows statistically significant results for vocational outcome expectations as a mediator between career decision self-efficacy and students' job seeking behaviours for all job seeking behaviours. The direct and indirect effects are the strongest for the job search intensity.

Hence, the findings support H_{18}: Vocational outcome expectations mediate students' career decision self-efficacy and their job seeking behaviours.

4.3.4. RQ2 Integration of Findings

The quantitative findings support *H_2: Students' career decision self-efficacy is correlated with their job seeking behaviours; H_3: Students' career decision self-efficacy is a predictor of their job seeking behaviours; H4: Students' vocational outcome expectations are a predictor of their job seeking behaviours; H_5. Students' vocational outcome expectations are correlated with their job seeking behaviours.*

However, students' moderate levels of career decision self-efficacy (see Table 4.9. in the RQ1 Integration of Findings section) correspond with low employability efforts (see Table 4.19 below) at both Time 1 and Time 2.

Table 4.19: Employability Efforts and Outcome Expectancy Mean Values

Employability Efforts Scales	Time 1			Time 2		
	Mean	SD	N	Mean	SD	N
1. Preparatory Job Search Behaviours[115]	2.07	.71	923	2.21	.72	236
2. Active Job Search Behaviours[116]	1.87	.70	939	1.98	.71	241
3. Job Search Intensity[117]	3.08	1.06	943	3.18	1.13	243

The Time 1 and Time 2 PJSB findings show that students on average rarely (1-2 times) prepared or revised their CV, sent out their CV to potential employers, filled out a job application, conducted information interviews to find out about careers and jobs that they were interested in pursuing, analysed their interests and abilities to determine the best job for them, posted that they were looking for a job on social media such as Facebook, Twitter, LinkedIn or searched social media such as Facebook, Twitter, LinkedIn about possible job leads. The Time 1 and Time AJSB findings show that students on average rarely (1-2 times) talked with friends or relatives about possible job leads, had a job interview with a prospective employer, rarely contacted an employment agency, previous employers, prospective employers or colleagues about potential job leads. At Time 1 and Time 2, students also described on average their job search intensity as neutral, i.e. they neither spent a lot of effort on no effort on looking for job opportunities.

These findings suggest that there are other variables that mediate or moderate the relationships between students' self-efficacy and their employability efforts. Indeed, the quantitative findings support H_{11}. *The combination of gender & ethnicity moderates students' career decision self-efficacy and their job seeking behaviours*; H_{12}. *Students' ethnicity and job seeking behaviours are mediated by students' career decision self-efficacy*.; and H_{13}. *Ethnicity moderates students' career decision self-efficacy and their job seeking behaviours*. The quantitative findings show (see Table 4.2 in the previous section) that the combination of gender and ethnicity moderates career decision self-efficacy and students' employability efforts (see the Figure 4.9. below) for *Preparatory Job Seeking Behaviours* and *Active Job Seeking Behaviours* for *Black or Black British* and *Chinese and Other Ethnic Groups,* for *Active Job Seeking Behaviours* for *Black or Black British;* and for *White*,

[115] Students were asked to indicate the frequency with which they performed each task in the last 3 months on a 5-point scale where 1= Never (0 times), 2=rarely (1 or 2 times), 3 = occasionally (3 to 5 times), 4=frequently (6 to 9 times), 5 = very frequently (at least 10 times).
[116] Students were asked to indicate the frequency with which they performed each task in the last 3 months on a 5-point scale where 1= Never (0 times), 2=rarely (1 or 2 times), 3 = occasionally (3 to 5 times), 4=frequently (6 to 9 times), 5 = very frequently (at least 10 times)
[117] Students were asked to provide the answer that describes best their job search activities in the last 3 months on a 5-point scale where 1= Strongly disagree, 2=Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

Asian or Asian British, and *Chinese and Other Ethnic Groups* for *Job Search Intensity*. Interestingly, *Black or Black British Male* students reported the highest scores in career decision self-efficacy (M=3.71, SD = 0.58) and *Chinese or Other Ethnic Groups Females* reported the lowest scores in career decision self-efficacy (M=3.27, SD = .49). The combination of gender and ethnicity mediates *Job Search Intensity* for all ethnic groups.

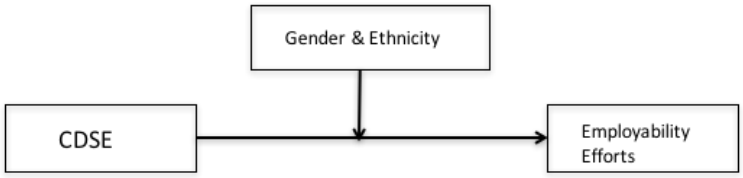

Figure 4.9: Gender and Ethnicity as Moderators between Career Decision Self-Efficacy and Students' Employability Efforts

Career decision self-efficacy mediates between all ethnicities and all students' job seeking behaviours. *Black or Black British* is the only ethnicity that has both the indirect effect on students' CDSE and the direct effect on students' *Active Job Seeking Behaviours* (see Table 4.10 and Figure 4.3 in the previous section).

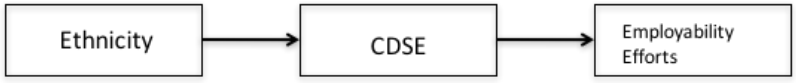

Figure 4.10: Ethnicity as a Mediator between Career Decision Self-Efficacy and Students' Employability Efforts

Descriptive Statistics showing average scores for different ethnicities and genders for Career Decision Self-Efficacy and Job Seeking Behaviours are depicted in Table 4.20. below. Data show that Black or Black British Male reported the highest scores for both career decision self-efficacy and all job seeking behaviours whereas Mixed Female reported the lowest scores for all job seeking behaviours.

Table 4.20: Cross Tabulation for Different Ethnicities and Genders for Career Decision Self-Efficacy and Job Seeking Behaviours at Time 1 (N=955).

ETHNICITY	Gender	CDSE (scale 1-5)			PJSB (scale 1-5)			AJSB (scale 1-5)			JSI (scale 1-5)		
		Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N
White	M	3.54	0.54	150	2.06	0.67	154	1.83	0.65	155	2.94	1.08	156
	F	3.64	0.50	195	2.14	0.70	201	1.87	0.66	201	3.24	1.16	203
Black or Black British	M	3.69	0.59	61	2.39	0.91	68	2.29	0.85	69	3.13	1.17	69
	F	3.57	0.62	57	2.06	0.78	64	1.92	0.85	68	3.06	1.08	67
Asian or Asian British	M	3.48	0.57	123	2.06	0.73	128	1.91	0.73	131	3.09	0.98	130
	F	3.38	0.55	105	1.94	0.54	112	1.76	0.52	112	3.04	1.05	113
Mixed	M	3.63	0.60	17	2.08	0.74	16	1.92	0.78	18	3.04	0.95	18
	F	3.28	0.55	19	1.76	0.67	18	1.57	0.49	18	2.57	1.09	18
Chinese or Other Ethnic Group	M	3.37	0.54	58	2.08	0.73	63	1.89	0.74	65	3.17	0.89	65
	F	3.27	0.49	77	1.87	0.62	79	1.65	0.60	81	3.01	0.89	84

Time 2 data cross tabulation showing average scores for different ethnicities and genders for Career Decision Self-Efficacy and Job Seeking Behaviours are depicted in Table 4.21. below. Data show that at Time 2 Mixed Female reported the highest scores for career decision self-efficacy (M=3.90, S.D. = 0.54) whilst Chinese or Other Ethnic Group Female reported the lowest score (M=3.02, S.D. = 0.74), a decrease of 7.65% from Time 1 (M=3.27, SD = .49).

ETHNICITY	Gender	CDSE (scale 1-5)			PJSB (scale 1-5)			AJSB (scale 1-5)			JSI (scale 1-5)			VOE (scale 1-4)		
		Mean	S.D	N	Mean	S.D	N	Mean	S.D	N	Mean	S.D	N	Mean	S.D	N
White	M	3.70	0.50	39	2.17	0.72	41	1.96	0.66	41	2.93	1.21	41	3.08	0.36	38
	F	3.56	0.53	60	2.27	0.72	62	1.98	0.69	63	3.21	1.16	62	3.29	0.41	62
Black or Black British	M	3.76	0.69	19	2.36	0.81	18	2.08	0.72	20	3.11	1.26	21	3.22	0.39	21
	F	3.65	0.49	18	2.10	0.58	20	2.02	0.81	20	3.25	1.16	20	3.30	0.48	20
Asian or Asian British	M	3.48	0.56	22	2.23	0.73	25	2.04	0.79	28	3.36	1.04	28	3.26	0.38	27
	F	3.49	0.53	38	2.18	0.74	38	1.96	0.72	38	3.26	1.10	39	3.14	0.45	37
Mixed	M	3.61	0.36	3	1.65	0.52	4	1.55	0.42	3	2.56	1.21	4	3.08	0.29	4
	F	3.90	0.54	2	1.82	0.81	4	1.46	0.34	4	2.69	1.56	4	3.04	0.65	4
Chinese or Other Ethnic Group	M	3.54	0.59	12	2.19	0.74	13	1.97	0.77	13	3.15	0.98	13	3.12	0.36	13
	F	3.02	0.74	5	1.92	0.33	5	1.77	0.38	5	3.10	0.14	5	2.98	0.18	5

Table 4.21: Cross Tabulation for Different Ethnicities and Genders for Career Decision Self-Efficacy and Job Seeking Behaviours at Time 2 (N=245).

The quantitative findings also show (see Table 4.13 in the previous section) that ethnicity moderates students' career decision self-efficacy and their job seeking behaviours for *Preparatory*

Job Seeking Behaviours and *Active Job Seeking Behaviours* for *Black or Black British* and *Chinese and Other Ethnic Groups* (see Figure 4.11. below).

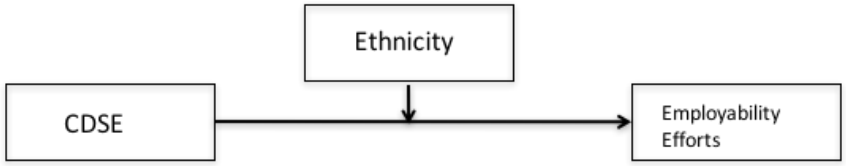

Figure 4.11: Ethnicity as a Moderator between Career Decision Self-Efficacy and Students' Employability Efforts

As it can be seen from the quantitative findings ethnicity acts as a mediator and a moderator with regard to students' self-efficacy and employability efforts. This link is supported by qualitative findings as students recalled experiences of perceived ethnic discrimination (see Gender and Ethnicity Barriers section). However, some students have no perception of ethnic discrimination and instead put their lack of success at securing a job due to lack of experience, their inadequate GCSE and A levels results or other factors.

Similarly to students' self-efficacy levels their Time 2 vocational outcome expectations results (M= 3.20, S.D. = .41, N = 237) do not correspond with their employability efforts. The vocational outcome expectations are found to mediate students' career decision self-efficacy and their preparatory and active job search behaviours (see Table 4.17 and Figure 4.8). The vocational outcome expectations quantitative results show that students on average agree that their career planning would lead to a satisfying career, that students believe that they would be successful in their chosen career/occupation, that their talents and skills will be used in their career/occupation, that they have control over their career decisions, that they can make their future a happy one and get the job they want in their chosen career and that they will achieve their career/occupational goals. These findings suggest that other variables mediate or moderate the relationships between students' outcome expectancies and their employability efforts. The quantitative findings also supported H_{14}*: The combination of gender & ethnicity moderates students' vocational outcome expectations and their job seeking behaviours* (for *Black* or *Black British* and for *Chinese* or *Other Ethnic Groups* for their Active Job Search Behaviours). and H_{16}: *Ethnicity moderates students' vocational outcome expectations and their job seeking behaviours*. (see Table 4.16 and Figure 4.12 below). Unfortunately, both Black or Black British students and Chinese students did not respond

to any of the interview invitations. There was only one Chinese student in the qualitative sample (see Time 3 Sample Characteristics section).

Figure 4.12: Ethnicity as a Mediator between Students' Outcome Expectancy and Employability Efforts

The combination of gender and ethnicity moderates students' vocational outcome expectancies and their job seeking behaviours for *Active Job Seeking Behaviours* for all ethnicities (see Figure 4.13. below)

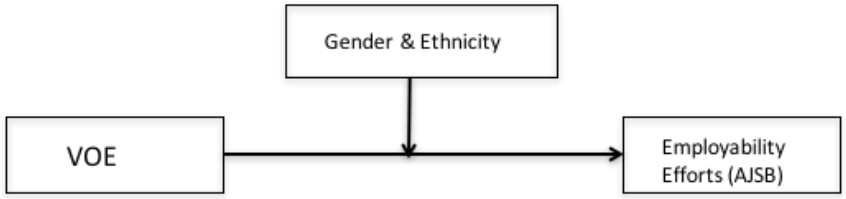

Figure 4.13: Gender and Ethnicity as moderators between Students' Vocational Outcome Expectations and their Employability Efforts.

Despite, quantitative findings showing high outcome expectations students expressed low outcome expectation ('*If I do this, what will happen?'*) during interviews

In summary, the qualitative findings identified the following Cultural Influences and Environmental Conditions that might act as mediators or moderators between students' self-efficacy, outcome expectancy and the employability efforts: Difficult Online Application Process, Preferential Application and Selection Treatment of Russell Group Students, Competition from Russell Group, Negative perception of UoG students, Lack of Work Experience, Quality of English, Negative perception/fear of the corporate environment, Absence of Networks, Parents as Professionals or Business Owners, Parents in Low Skilled Jobs or Unemployed, Ethnic Discrimination and No perception of Discrimination. Quantitative findings confirm that *Perceived Gender & Ethnicity Barriers* act as a mediator and a moderator for students' self-efficacy, outcome expectancy and employability efforts.

4.4. Conclusion

This chapter presented the findings in relation to two research questions and four sub-questions. The summary of the findings in relation to hypotheses is provided in the Table 4.22 below. This is followed by the summary of main findings section.

Table 4.22: The Summary of Findings of the Research Hypotheses

Research Hypotheses	Findings
H_1. Coaching intervention increases career decision self-efficacy and job seeking behaviours of students.	Not supported by the study data.
H_2. Students' career decision self-efficacy is correlated with their job seeking behaviours.	Supported by the study data.
H_3. Students' career decision self-efficacy is a predictor of their job seeking behaviours.	Supported by the study data.
H_4. Students' vocational outcome expectations are a predictor of their job seeking behaviours.	Supported by the study data.
H_5. Students' vocational outcome expectations are correlated with their job seeking behaviours.	Supported by the study data.
H_6. Male students have higher career decision self-efficacy levels than female students.	Not supported by the study data.
H_7. Caucasian students to have higher career self-efficacy than other ethnicities.	Not supported by the study data.
H_8. Male and Female students have different vocational outcome expectation levels.	Not supported by the study data.
H_9. Different ethnic groups of students have different vocational outcome expectation levels.	Not supported by the study data.
H_{10}. Gender is a moderator between students' career decision self-efficacy and their job seeking behaviours.	Not supported by the study data.
H_{11}. The combination of gender & ethnicity moderates students' career decision self-efficacy and their job seeking behaviours.	Supported by the study data.
H_{12}. Students' ethnicity and job seeking behaviours are mediated by students' career decision self-efficacy.	Supported by the study data.
H_{13}. Ethnicity moderates students' career decision self-efficacy and their job seeking behaviours.	Supported by the study data.
H_{14}: The combination of gender & ethnicity moderates students' vocational outcome expectations and their job seeking behaviours	Supported by the study data.
H_{15}. Students' ethnicity and job seeking behaviours are mediated by students' vocational outcome expectations.	Not supported by the study data.
H_{16}. Ethnicity moderates students' vocational outcome expectations and their job seeking behaviours.	Supported by the study data.
H_{17}. Vocational outcome expectations moderate students' career decision self-efficacy and their job seeking behaviours.	Not supported by the study data.
H_{18}. Vocational outcome expectations mediate students' career decision self-efficacy and their job seeking behaviours.	Supported by the study data.

The combination of gender and ethnicity and ethnicity on its own are found to be statistically significant mediators and moderators between both career decision self-efficacy and vocational outcome expectations and students' employability efforts. Students' career decision self-efficacy and vocational outcome expectations are also found to be statistically significant predictors of their employability efforts.

Quantitative data show that students display high self-efficacy and vocational outcome expectations. These results, however, do not correspond with students' employability efforts and are also contradicted by qualitative findings. Students' high self-efficacy beliefs are inhibited by their negative self-perception of themselves and by factors such as: being inferior to Russell Group students; competition from Russell Group students; perceived ethnic discrimination; and a difficult online application process. Qualitative findings also show that students display unrealistic vocational outcome expectations or low outcome expectations of themselves. The Contribution to Methods section in the Discussion chapter will provide an overview of how a synergistic mixed methods approach was applied to reconcile contradictory findings.

The effectiveness of career coaching in increasing students' career decision self-efficacy and employability efforts is not confirmed by quantitative data. Once again, the quantitative findings are contradicted by qualitative data as students reported many benefits of career coaching. The qualitative findings show that trust, no judgement and ability to identify with the coach are important factors when deciding about the quality of coaching relationship. Students also value the coaches' commitment and ability to offer practical advice.

The next chapter will offer a discussion of findings followed by a conclusion and recommendations for future research.

V. DISCUSSION & FINAL CONCLUSION

5.1. Introduction

The purpose of this study was to examine the link between career coaching and students' career self-efficacy, outcome expectations and their employability efforts. Specifically, the research investigated whether career coaching can be effective as an employability-enhancing tool in post-1992 universities.

The study explored the relationships between students' career decision self-efficacy, vocational outcome expectations and employability efforts and examined what aspects of the coaching relationship were most effective in changing these variables. Finally, the research investigated the impact of cultural and environmental factors on students' self-efficacy beliefs, outcome expectations and their employability efforts.

This chapter discusses the implications of the findings within the framework of the study's original research questions and in the context of the broader literature. It then considers the study's contribution to mixed method research and to theory. Finally, recommendations for future research are offered and the limitations of the study are discussed.

5.2. Discussion of the Findings

5.2.1. RQ1: Is Career Coaching Effective in Increasing Students' Self-Efficacy, Outcome Expectations and their Employability Efforts?

Coaching is an effective learning tool (HEA, 2012; Griffiths, 2005; Skiffington & Zeus, 2003) linked to self-efficacy (Goldin, *et al.*, 2012; Baron *et al.*, 2011; Baron & Morin, 2009; Moen& Skaalvik, 2009; Stewart *et al.*, 2008b; Amstrong, Melser, & Tooth, 2007; Evers *et al.*, 2006). However, the coaching effectiveness concept is based mainly on anecdotal evidence (Jones *et al*., 2016) and it is lacking in conclusiveness (Grant *et al.*, 2010). Measuring effectiveness of coaching interventions is equally elusive for various reasons. Theeboom *et al.* (2013) in their meta-analysis of 18 coaching effectiveness studies found that those that included a control group as well as an

experimental group showed smaller statistical effects as including a control group controlled for biases, for example maturing of coachees over time. Similarly, Blades *et al.*'s (2012) review of effectiveness of employability intervention programmes found that '*before and after*' assessments studies tend to see relatively small changes over time (Blades *et al.,* 2012). Flores & Obasi's (2005) study of effectiveness of mentoring of 714 Mexican American high school students found no significant effect on students' self-efficacy or career choices. The intervention studies in health sciences literature also suggests that capturing quantitatively the impact of any intervention can be quite problematic (Campaner & Galavotti, 2012).

The current study did not manage to capture quantitatively the effectiveness of coaching intervention, either. The study's quantitative data did not support the claim that coaching intervention is an effective tool in increasing students' career decision self-efficacy and their job seeking behaviours. The Time 2 MANOVA comparison showed no differences between the both groups (NE = 79, NC = 134) (Wilks' Lambda = .983; partial eta squared = .017) (see Appendix 4.4. Time 2 MANOVA Comparison between the Experimental and Control Group at Time 2). The independent samples t-test (see Appendix 4.5. Independent-Samples T-test for Vocational Outcome Expectations of the Experimental and Control Group at Time 2) also found no statistically significant difference in the mean scores of Vocational Outcome Expectations for the Experimental Group (ME= 3.53, SDE = .565) and the Control Group (MC=3.50, SDC = .550; t(235) = 1.398, p = . 16 (two-tailed) at Time 2 (Pallant, 2016). The variability between sample means was very small (SEE = .02 and SEC = .01).

Apart from the difficulties of capturing the effectiveness of any intervention, since '*no survey instrument is sufficient for measuring the human experience of coaching (the 'immeasurables')*' (Tooth, Nielsen, & Amstrong, 2013, p.137), the possible explanation for these findings might be that people overestimate their abilities, resulting in unrealistically high self-efficacy[118] (Lent, 2013). It is possible that students overestimated their Time 1 career decision self-efficacy resulting in higher than expected baseline scores leaving little room for change as a result of the intervention (Blades *et al.,* 2012). Hair *et al.* (2007) recommend using at least a seven-point scale in order to improve the precision of measurements. In fact, Pajares, Hartley, and Valiante (2001) recommended using a self-efficacy scale ranging from 0 to 100 as this range is congruent with the

[118] The Black or Black British male students reported the highest scores in their career decision self-efficacy and job seeking behaviours at Time 1 and Time 2 and yet they have not accepted any of the invitations for the qualitative interviews.

grading system to which students are used, and hence should result in greater discrimination than scales with a narrower range of response options. Bandura (1997b) also cautioned that shorter scales should be avoided as they are less sensitive and less reliable, hence, creating the possibility of incorrect results as people who use the same response category may in fact differ if additional intermediate steps were included. However, the scales for career decision self-efficacy and job seeking behaviours were all a five-point scales. This might have resulted in the baseline scores for self-efficacy being artificially higher at Time 1 and, hence, making it less likely to show substantial increases. In fact, the inspection of the CDSE scale frequency distribution at Time 1 and Time 2 for both groups showed that the scores were normally distributed. That indicates that the majority of students chose an average score of 3-4 on a five-point scale. Additionally, *Black or Black British Male* students reported the highest scores in career decision self-efficacy (M=3.71, SD = 0.58) and *Chinese or Other Ethnic Groups Females* reported the lowest scores in career decision self-efficacy (M=3.27, SD = .49). As research confirms that gender only sporadically accounts for differences in self-reported self-efficacy (Chen & Zimmerman, 2007), hence, this finding suggests that the self-reported scores might have been also influenced by cultural factors. In fact, Klassen (2004) and Early (1994) suggests that cultural beliefs and values affect self-efficacy formation. Klassen (2004) proposes that Western participants might approach self-efficacy differently to non-Western participants. Non-Western individuals often report lower self-efficacy beliefs than Western ones (Kalssen, 2004; Eaton & Dembo, 1997). However, Klassen (2004) points out that there is very little research conducted that explores self-efficacy of individuals from non-Western backgrounds or of adolescents below college age and calls for further research on how culture influences self-efficacy beliefs. Pajares (2000) also calls for cross-cultural research on self-efficacy as a function of culture.

On the other hand, the qualitative data showed that students identified many benefits of career coaching, including improved confidence and increased belief in their own potential. As a result of coaching their employability efforts became more focused. Students felt more motivated to apply for placements or internships. They also reported increased resilience as they showed a recognition of the importance of effort and preparation in achieving their goals (see Appendix 3.13. Interviews with Students: The Audit Trail, Andy, p. 290):

> *I think that's the main thing we took out from the coaching scheme. Nothing's going to come straightaway (...) rejection's just a part of it but you've just got to keep- yes, just keep going (...)*

Coaching made some students more proactive, it also enabled them to think differently and to broaden their vision. As a result, students reported that they became more realistic in their career plans. Additionally, many students in this study perceived their coach as a *role model.* Coaches who acted as role models motivated and inspired students and enabled them to relate to the professional work environment more effectively, '*you want to be that person that lives in London, in the City and has a really great job and work in a big company like they do*' or made them believe in themselves '*I think yes if he did it I think I can do this as well*'. Students also felt they were able to relate to the professional environment by seeing their coaches in their work environment. This is consistent with Flores & Obasi's (2005) findings about the impact of role models. Hill (2011) noted the importance of exposing post-1992 university students to business people who become their role models. Students appreciated having these role models possibly due to their own lack of role models (Catts, 2009; Craig, 2003). Post-1992 university students often lack social capital, interpersonal skills, communication, team-working and time management skills and often they are not sufficiently prepared for their work environment once they graduate (Hill, 2011). Interpersonal skills are the most important element of students' career success (Hill, 2011). Business people often act as new role models to students and networking with them increases levels of confidence and results in a change in attitudes (Hill, 2011).

These contradictory findings are similar to the findings of the Moffatt *et al.*'s (2006) mixed methods pilot study that evaluated the impact of welfare rights advice intervention in health and social outcomes. Their quantitative data showed no impact whereas qualitative data showed extensive impacts indicating an effective intervention. Moffatt *et al*. (2006) argued that qualitative data uncovered variables that were not measured by the questionnaires[119].

5.2.2. RQ1a: What Aspects of the Coaching Relationship are Most Effective in Increasing Students' Self-Efficacy, Outcome Expectations and their Employability Efforts?

There is a common agreement in the literature that the most critical factor of coaching effectiveness is the quality of the coach-coachee relationship (de Haan *et al.*, 2011; Ely *et al.* 2010; Visser, 2010; Baron & Morin 2009). The most successful outcomes are achieved when a coach is perceived as "warm, trustworthy, non-judgmental and empathic" (Miller, *et al.*, 1997, p.28).

[119] Their approach to reconciling contradicting findings in mixed methods research is discussed in detail in the Contribution to Method section.

Coaches who are accepting, showing positive regard and affirmation and sharing self-disclosure are much more likely to form a strong alliance with their coachees (Asay & Lambert, 1999). In the more recent study de Haan *et al.* (2011) found that listening, understanding and encouragement are the most helpful qualities of a coach. These are followed by knowledge, empathy, authenticity and involvement with warmth being less relevant.

The current study found that being given *practical advice* was considered by students as the most important element of the effective coaching relationship. Students found help with writing CVs and with job applications extremely important. Being given general tips, including preparation for job interviews, was a significant element of a successful career coaching experience as perceived by students. This is possibly due to the fact that students lack professional work experience. Another possible explanation for this might be students' lack of social capital (The Audit Trail, Kevin, p.296 & Laura, p. 297) and lack of interpersonal skills (Hill, 2011; Harvey, *et. al.,* 1997) as well as lack of role models (Catts, 2009; Craig, 2003; The Audit Trail, Sarah, p. 297).

In the light of this finding the definition originally adapted by this study to examine effectiveness of *coaching*[120] needs to be revisited to reflect students' experience more accurately. Despite a common agreement in the literature that a coach should not provide advice (Whitmore, 2002) or act as an expert (Hardingham *et al.*, 2004) students identified being given practical advice as a very important aspect of their coaching relationship. This suggest that the coaching intervention had a strong mentoring aspect. This might be due to the fact that career coaches who took part in the research were professionals working in corporate companies, entrepreneurs or retired individuals who used to work in professional roles. All career coaches were volunteers who had experience of mentoring and coaching junior member of staff in their roles, either formally or informally. As pointed out by Gray, Garvey and Lane (2016) the self-narrative or a reflective identity of a practitioner – '"I the coach or mentor' (p.63) – will influence the relationship between the client (a student) and a practitioner (a career coach in this study). Consequently, it is important for a student (a client) and a career coach (a practitioner) to agree on a shared narrative prior to starting the sessions (Gray, *et al.*, 2016).

[120] A process limited to a specific period of time. The coach supports clients in achieving greater self-awareness, improved self-management skills and increased self-efficacy, so that they develop their own goals and solutions appropriate to their context. (EMCC, 2013).

Hence, despite the fact that the investigated coaching process technically was not considered to be be mentoring[121] the reviewed definition of career-coaching in the HE context of this study has some elements of mentoring. Subsequently, coaching in this research is redefined as a relationship between an employee of an organisation (a career coach) and a student (a client) that is designed to enhance a student's career self-efficacy, to define goals, to provide clarity and direction and to increase his/her self-awareness. This relationship has a strong underlying mentoring reflective narrative of a practitioner as well as a shared mentoring narrative (Gray *et al.*, 2016).

Practical advice was followed by the importance of *trust*. Coaches who had shared their personal experiences and stories were seen as more trustworthy. Similar backgrounds, '*he's been in the same spot as well*', age, gender or ethnicity were also an important factor in building trust with their coaches. The ability to build a trusting relationship with students was enhanced if students felt able to identify with a coach through similar education, similar beginnings, or coming from the same country of origin or with whom students felt that they had a sense of shared common ground or being on the same wavelength. The importance of trust is commonly recognised in the coaching literature (Gyllenstern & Palmer, 2007; Blackman, 2006; Bluckert, 2005; Rogers, 2004; Kampa-Kokesh & Anderson, 2001; Hall *et al.*, 1999; Miller, *et al.*, 1997). Flores & Obasi (2005) also reported that having similar backgrounds, in particular in terms of gender and ethnicity, was an important factor in career coaching[122] relationships.

The commitment of the coach came across as a very significant factor determining the quality of students' relationship with the coach. The coach was perceived to be committed if a student had all his/her attention during a meeting, if a coach showed interest in a student and came prepared to the scheduled meetings. Students stopped seeking contact with coaches who they did not perceive as committed to them. De Haan, *et al* (2011) found involvement of the coach being one of the important qualities. Flores & Obasi (2005) also discussed that the career coaches' willingness to be available to support students whenever they needed was very important to students.

[121] Mentoring normally takes place over a longer period, and tends to be carried out in the same company between a junior and a senior colleague (Kram & Isabella, 1985). Career coaching lasts for a period of less than one year (usually six months), it consists of one-on-one career-related conversations (Thach & Heinselman. 1999) that are structured in nature, scheduled on a regular basis and career-focused (Hall, Otazo & Hollenbeck, 1999; Kosan, 1999; Kram & Isabella, 1985).

[122] Their study used a terminology of 'mentor' instead of 'career coach'.

Non-judgement is another important characteristic of the successful coaching relationship (Rogers, 2004; Miller *et al*., 1997, Horvath & Luborsky, 1993). It was also identified as important in this study by a few students, '*be open like, don't be scared to ask a question even if it sounds you know, silly or stupid, just ask the question because he's not going to judge you'* (Andy, p.291).

The characteristics of the coach, recognised by the literature but not identified in the qualitative data, were: empathy (Gyllenstern & Palmer, 2007; Kilburg, 1997; Miller *et al*., 1997; Horvath & Luborsky 1993), respect (Jackson & McKergow, 2007; Hardingham *et al.*, 2004; Kilburg, 1997; Miller *et al*. 1997) and warmth (Miller *et al*., 1997; Horvath & Luborsky, 1993; Rogers, 1961).

5.2.3. RQ1b: What are Students' Self-Efficacy and Outcome Expectation Beliefs?

There are currently no studies in the literature that examine students' self-efficacy and outcome expectations beliefs qualitatively. The EBSCOhost Research database and Google Scholar searches conducted on 22nd June 2017 using terms such as: '*students' career decision self-efficacy*', '*students' self-efficacy*, '*self-efficacy and post-1992 university students*', '*students' outcome expectations*', '*outcome expectations and post-1992 university students*' resulted in 0 entries. Self-efficacy and outcome expectations are typically measured quantitatively in the literature. Equally, there are no similar studies that investigate students' career-decision self-efficacy and vocational outcome expectations in the SCCT context or studies that measure students' employability efforts as an outcome measure. Hence, this part of the discussion is only able to compare and contrast the study's quantitative findings with the SCCT literature in the next section.

Overall, students displayed moderate to high self-efficacy beliefs, '*I can do anything! So I think I have an as good chance as anyone else does*.' (see Appendix 3.13. Interviews with Students: The Audit Trail, Nadia, p. 293). They believed that they had as many career options as others as long as they put effort & motivation into it. Students, on average, agreed that their career planning would lead to a satisfying career. They also believed that they would be successful in their chosen career/occupation and that their talents and skills will be used in their career/occupation. They agreed that they have control over their career decisions, that they can make their future a happy one and they will get the job they want in their chosen career. Interestingly, a few students

displayed an *external locus of control*[123] as they placed the successful achievement of their goals in the hands of external forces such as destiny or the law of attraction. Similarly to Moffatt *et al*.'s (2006) study that the qualitative part of the study uncovered variables that were not measured by the questionnaires. Locus of control positively affects self-efficacy (Zimmerman, 2000; Landine & Stewart, 1998; Phillips & Gully, 1997). External locus of control suppresses self-directed courses of action (Zimmerman, 2000). External locus of control is linked to passivity and learned helplessness (Rotter, 1992) whereas having a perception of control over one's environmental controllability is linked to greater self-efficacy (Wood & Bandura, 1989). Phillips & Gully (1997) claim that an individual with an internal locus of control will have higher self-efficacy than an individual exhibiting an external locus of control.

Students' moderate to high self-efficacy beliefs were inhibited by students' *negative self-perception* of themselves as being the University of Greenwich students. There was a strong sense that the University of Greenwich students are perceived as inferior to Russell Group students. Students felt that they would not fit into the corporate environment as they were not from a Russell Group university. The Russell Group was perceived by students as the elite group that was smarter and somehow better than the University of Greenwich students. Students career decision self-efficacy was also mediated by students' ethnicity. These findings are discussed in detail in the next section.

Students displayed *low expectations* of themselves and of fellow students. Some students had *unrealistic expectations* as they either wanted to become a CEO (Andy) or a director (John) by the age of forty or a millionaire by the age of thirty (Tom). Students, regardless of the year of study, demonstrated *a lack of direction* with regard to their plans or their future career. Their career plans were very generic '*I just want to like, have a good, stable job and provide for my family and just like, be happy*' (see Appendix 3.13. Interviews with Students: The Audit Trail, Laura, p. 292) and often they did not know what career they wanted after completing their degree. Students vocational outcome expectations were also mediated by ethnicity. These findings are discussed in detail in the next section.

[123] A belief that the outcomes one achieves are a function of uncontrollable/incomprehensible forces (Phares, 1962)

5.2.4. RQ2: Are Students' Career Decision Self-Efficacy and Vocational Outcome Expectations Associated with their Job Seeking Behaviours?

The SCCT theory recognises the importance of self-efficacy and outcome expectations and their impact on people's behaviours (Lent, 2013). The SCCT literature claims that there are positive relationships between self-efficacy beliefs, outcome expectations and career orientated actions (Lent *et al*., 1994). Career self-efficacy beliefs were found to mediate between personality traits and job search outcomes (Zimmerman *et al*., 2012) It was one of the best predictors of job-searching behaviours (Zimmerman *et al*., 2012; Niles & Sowa, 1992). Zikic & Saks (2009) found that job search (or career) self-efficacy is positively linked to job search intention and job search intention is positively linked to job search intensity. Bandura's (1997a) claimed that individuals possessing high career self-efficacy levels are much more likely to seek positive outcomes for their career goals. Rottinghaus *et al.*'s (2003) meta-analysis of 53 samples with 37,829 participants show a strong relationship (r=.59) between self-efficacy and career interest. High self-efficacy has been linked to seeking positive outcomes for career goals (Betz & Taylor, 2001; Betz, 1992; Bandura, 1997a). Ali *et al*.'s (2005) study also confirmed that self-efficacy was an important predictor of students' vocational outcome expectations. Feehan & Johnston (1999) tested 237 high school students and found a statistically significant correlation between career self-efficacy and job seeking behaviours.

The study's findings are consistent with the SCCT literature. The study confirmed that students' career decision self-efficacy was associated with their employability efforts. The study found a positive correlation between the students' career decision self-efficacy and students' preparatory job seeking behaviours (r= .329, N = 856, p<.01); active job seeking behaviours (r =.265, N = 868, p<.01); and students' job search intensity (r =.213, N = 873, p<.01). Planning (a sub-scale of CDSE) is a statistically significant predictor of students' preparatory job seeking behaviours **(**Beta of .288, p<.001); of active job seeking behaviours (Beta of .207, p<.001); and of job search intensity (Beta of .215, p<.001). Planning is also positively correlated with students' preparatory job seeking behaviours (r =.288, N= 911, p<.001); their active job search behaviours (r =.306, N= 927, p<.001); and with their job search intensity (r =.225, N= 930, p<.001).

Sheu *et al.*'s (2010) meta-analysis of SCCT's model variables showed that outcome expectations are as important as self-efficacy in predicting interests and goals. They also confirmed that in some

cases outcome expectations had larger direct path coefficients than self-efficacy. Morrow, Gore & Campbell (1996) argued that for marginalized groups outcome expectations may be in fact a more powerful predictor of vocational behavior than self-efficacy beliefs. The results of the current study also confirmed that the students' vocational outcome expectations were associated with all their employability efforts. The study found a positive correlation between the students' career decision self-efficacy and students' preparatory job seeking behaviours ($r=.329$, $N= 856$, $p<.01$); active job seeking behaviours ($r=.265$, $N= 868$, $p<.01$); and students' job search intensity ($r=.213$, $N= 873$, $p<.01$). Vocational outcome expectations were also found to be the statistically significant predictor of students' preparatory job seeking behaviours (Beta of .303, $p<.001$); active job seeking behaviours (Beta of .238, $p<.001$); and of job search intensity (Beta of .321, $p<.001$). Vocational outcome expectations mediated all students' employability efforts which is consistent with the SCCT model (Amstrong & Vogel, 2010). There was also a positive correlation between students' vocational outcome expectations and their career decision self-efficacy ($r=.497$, $N= 219$, $p<.001$). SCCT proposes that self-efficacy is positively related to outcome expectations (Morrow *et al.* 1996; Lent *et al.*, 1994).

Despite students' moderate to high self-efficacy levels their employability efforts were low. This is potentially due to their low outcome expectations. This is consistent with Lent *et al*.'s (1994, p. 93) observation, ''An individual with high perceived efficacy but low outcome expectations relative to a given activity may be less likely to develop an enduring interest in that activity since the latter is seen as offering limited potential for reinforcement''. Qualitative findings confirmed that overall students displayed low expectations of themselves and of fellow students. Also, some students had unrealistic expectations of becoming a CEO, a director or a millionaire by the age of thirty or forty. SCCT theory recognises that people often overestimate their abilities, resulting in unrealistic high self-efficacy, or rule out their career choices due to their restricted gender views or due to unrealistically low career self-efficacy (Lent, 2013). This seems also to be a case for outcome expectations.

5.2.5. RQ2a: What Cultural Influences and Environmental Conditions (such as Perceived Barriers or Support to Preferred Careers, Cultural Influences, Family Expectations, Perceived Social Support, Socioeconomic Status, Family Role Models and Gender & Ethnicity Barriers to Chosen Careers) Impact Students' Self-Efficacy, Outcome Expectations and Employability Efforts?

Social Cognitive Career Theory, used as a conceptual framework in this study to analyse students' employability efforts, recognises that individual employability or career choice preferences are not always possible due to environmental factors (Lent, 2013). Career self-efficacy, outcome expectations and career progress of ethnic students are affected by role modelling, perceived experiences of racial discrimination and stereotyping and social expectations to pursue certain careers (Lent & Shau, 2010; Hackett & Byars, 1996). Biglan (1987) argues that when looking at correlation between self-efficacy and other behaviours one should examine the mediating role of environmental factors. The mediating role of environmental conditions has been quantitatively and qualitatively confirmed by the study findings.

Gender and Ethnicity

Social Cognitive Career Theory was designed specifically for the career development and employability efforts of different groups of people (including students) and it is concerned with the psychological and social effects of gender and ethnicity and associated opportunity structures (Lent, 2013). The literature suggested that gender and ethnicity create biases in terms of career expectations (Hackett & Betz, 1981). Students may also rule out career choices due to their restricted gender views or due to unrealistically low career self-efficacy (Lent, 2013). Gender stereotypes result in individuals' inaccurate self-efficacy beliefs and outcome expectations (Heppner, 2013). Helms & Piper's (1994) claim that a person's expectation or belief of his or her ethnicities is a significant predictor of his/her career option is, in itself, and an important factor in predicting vocational behaviours - for example certain ethnicities might believe that certain careers are only available to White people or that some career options have less status in their communities. A person's perception of the ethnic climate in a particular workplace would also affect his/her career choice. If a person perceived the workplace as racially hostile then he/she would develop less occupational interest in a particular field (an example of a distal influence) or

apply for a particular position within a company (an example of a proximal influence) (Helms & Piper, 1994). Hughes (2011) found that the link between lower outcome expectations and perceived career racial discrimination.

The current study confirmed the SCCT literature (Lent, 2013) as it found ethnicity to act as a distal environmental factor[124] as it directly mediated students' career decision self-efficacy. Ethnicity also acted in this study as a proximal environmental factor as it moderated both students' career decision self-efficacy and vocational outcome expectations and their employability efforts. This was also true for the combination of gender and ethnicity, hence, it also acted as a proximal environmental factor. The statistical findings are discussed in more detail in the next section. Qualitative findings showed that some students felt that there was *ethnic discrimination*. John was subject to prejudice when a customer presumed he could not speak English properly because of his ethnicity whereas Nadia felt that neither she nor her colleagues were offered a job in a predominantly 'Caucasian' company due to being Asian "*because I didn't think they could see that I'd fit into the whole- they had like an image that you could see they all look the same (...)*(Nadia, p.298). Sarah (p.299) came across the personnel department's ethnic prejudice towards Black Males who were seen as untrustworthy and capable of stealing:

> *if you don't have a nice background as a black person (...) they [HR department] won't accept your application (...) Er, I just saw, like, one of my friends, he is black and he lives in Abbey Wood (...) even if you have a strong CV they don't trust you (...) they will find just excuses (...) maybe because they do like say they can steal or they don't trust the- they don't trust them like, I don't know.*

Competition from Russell Group Students

Nixon (2011) and Sutton Trust (2005) claim that Russell Group students - who mostly come from privileged, highly socially selected backgrounds, with an abundance of social capital – are offered superior career opportunities to post-1992 university students. They also claim that post-1992 university students - often socially disadvantaged and coming from a working-class background –

[124] Environmental factors that are distal, i.e. further removed, to career choices shape the development of self-efficacy and outcome expectations whereas environmental factors that are proximal, i.e. nearer to points of career choices moderate interest and goals and their transformation into actions (Marrow *et al*., 1996). The distinction between distal and proximal environmental factors is often subjective as an environmental barrier can sometimes both directly affect actions and be also internalised as negative outcome expectations (Marrow *et al*., 1996).

are struggling against a widening social inequality gap as their employability opportunities tend to be limited to vocational professions.

The quantitative findings showed that moderate to high levels of students' career decision self-efficacy and vocational outcome expectations were not matched by their employability efforts, as it can be seen from the Findings section. The qualitative findings showed that students' moderate to high self-efficacy and moderate to high outcome expectations beliefs were inhibited by their negative self-perception and negative outside perception of the University of Greenwich students compared to Russell Group students. Some students were very aware of the competition from the Russell Group. In their view, the Russell Group students are perceived by the employers as being superior to the University of Greenwich students and seen as '*gold*'. The study found that students felt that employers had a negative perception of the University of Greenwich students who were of no interest to them. Students felt they were competing against Russell Group students to whom they felt inferior. Many of the interviewed students held low skilled jobs such as: a bar worker, a supervisor in a cleaning company, a waiter, a sales assistant, a shop assistant, a cleaner or a babysitter. Some students also felt very strongly that Russell Group students were given preferential treatment. For example, John believed, based on his PWC application process experience, that the Russell Group students were fast tracked in their application process. According to John, they were approached by big firms during the career fairs and interviewed '*on the spot*'. He believed that they did not have to complete the online tests as the companies assumed they would pass them anyway. This finding was significant as one of the major perceived barriers to students' preferred careers was a difficult online application that students often felt unable to pass. John believed companies target the Russell Group students as they see them as future leaders. These regular future leadership annual events are exclusively offered to the Russell Group students and the University of Greenwich is completely unaware of them. Kevin who applied to Goldman Sachs, JP Morgan and Barclays, also believed that these companies had contacted Russell Group applicants three to four months before they called him for an interview.

Parental Support

Rivera *et al.* (2007) discuss the importance of parents, mothers in particular, who act as role models and who initiate the process of acculturation, i.e. of changes in values and behaviours as a result of adapting to a different culture. This process impacts individuals' self-efficacy and the types of careers they will consider (Rivera, *et al.* 2007). Parental advice is considered to be important in shaping gender roles (Shapiro, *et al.* 2015). Mothers' distribution of housework

allocation will impact children's attitudes towards work (Raley & Bianchi, 2006) and parents' influence, as filters and interpreters of reality, also affect children's academic values, choices of extracurricular activist and their career goals and aspirations (Jodl, *et al.* 2001). Parents' aspirations and expectations are more important in career choices than their parents' education or occupation (Metheny & McWhirter, 2013). Supportive parents influence adolescents' expectations (McWhirter, Hackett & Bandalos, 1998) and result in higher career self-efficacy (Gushue & Whitson, 2006) and vocational outcome expectations (Isik, 2013). Gushue & Whitson (2006) found that parental support was positively correlated to career decision self-efficacy and outcome expectations for African American students. Whiston & Keller (2004) reported the importance of parental aspirations and expectations in forming higher expectations in adolescents. Ma & Yeh (2010) also found that parental support and verbal encouragement were associated with Chinese students' higher career aspirations.

Most parents of interviewed students wanted them or expected students to complete their degree, '*my parents expect me to finish uni first this is what they really wanted me to do (...)*.' (Laura). Occasionally, students were put under pressure to perform exceptionally well, *'(...) expectations through degree is that I should get a first because my brother got a first-class degree as well (...)*' (Andy). Parents seemed to have very general expectations of students to complete their degree, to have a good job and be happy. Some parents expected students to continue with their education and have a postgraduate degree or to become a professional**.** However, overall parents seemed to have low aspirations for their children's university outcomes. In one instance, Ian's father had very negative expectations of Ian '*my father '(...) told me you're never going to be no one in life (...)'***.** Some students were encouraged by their parents to depart from their original culture in order to become financially independent. For example, Jenny was encouraged by both her parents (her mother has lived in the UK for 20 years but she has never worked and she does not have a good command of the English language) to become financially independent from her future husband and to *stand on her feet* (Jenny, p. 296):

> *they always say to me, (...) stand on your own feet, when you get married (...) - that's one of the main cultural things that they would say, don't look at your husband's pocket for money, always have your own (...) so if you do have any problems you know that you don't have to be kind of- under the hands of your husband so you can look after yourself, (...) in my culture it's more like the husband obviously brings the you know, the money ... and you stay at home but my family's always motivated me (...) my Mum doesn't work at all, she's never worked in her life, so it's always-*

she's always looked at my Dad for money (...) she's like, OK it's quite good because I've got four kids, (...) but I don't think that (...) it kind of puts your confidence down I think when I see it to my Mum, (...), she's lived in the country for about 20 years and she doesn't have full English either (...)

Perceived Social Support, Socioeconomic Status and Role Models

SCCT recognises that certain conditions may directly affect people's choice of career goals and actions depending on people's culture and socioeconomic structure. Individuals are much more likely to obtain their goals if they experience strong environmental support and weak barriers into their preferred career paths. Lent *et al*. (1994) conceptualized that socioeconomic status influences career interests through access to learning opportunities. This was empirically confirmed by Thompson & Dahling (2012) who found that perceived social status related positively to learning experiences. Low social economic status families have higher levels of perceived barriers to career choices, lower career self-efficacy and lower aspirations and expectations (Ali *et al.*, 2005). These are moderating factors in individuals attaining their employability goals (Shapiro, *et al.* 2015; Lent, 2013). Metheny & McWhirter (2013), found that family social status, family and parental support impacted career decision self-efficacy and career outcome expectations and are mediated by college students' perception of their social standing. Social support has been found to be very important for enabling students to overcome barriers to their career choices (Ali *et al.*, 2005; Lent *et al.*, 2002). Flores & Obasi (2005) found social support, parental role models and influence of significant others being an important factor in Mexican American students' educational aspirations. Family support has been also found to be instrumental for people who have limited access to resources (Metheny & McWhirter, 2013). Ali & McWhirter (2005) and Lent *et al.* (2002) argued that higher support from parents resulted in the lower perception of barriers. Kenny *et al.* (2003) found that family was the main source of support for ethnic minority students. Flores & Obasi (2005) discovered that parents' expectations, level of education and income had an impact on students' educational aspirations as students modelled their educational attainment on their parents. They also found that mothers as role models were very influential in terms of students' career decision making. Role models were also a source of support and encouragement (Rivera *et al.* 2007). Both siblings and peers can act as influential role models and can be perceived as a valuable source of support and career information (Ali *et al.*, 2005). Flores & Obasi's (2005) found that it was important for the role model to overcome personal struggles in order to be emulated.

The study's qualitative findings confirmed the SCCT literature. Students were not particularly forthcoming in describing their socioeconomic status. Some parents owned a takeaway or a café and some worked as professionals. Others worked in low skilled jobs such as cleaners or some other non-specified physical jobs, '*I'm thinking about my mum because now she's past her 40's (...) Yes physically* [working] (…)' (Mark), or were unemployed. Most interviewed students reported that they had no access to networks. They could ask relatives/family friends or acquaintances such as compatriots met on Facebook, LinkedIn professionals, friends of friends or other students if they needed professional help and advice. These people were there to offer advice but, crucially, not job leads. For the majority of students their hard-working parents were their main role models. Students talked about their deep appreciation for their parents' hard work and efforts to support them. They were inspired by their parents' strength and ability to overcome a difficult start. Other family members such as grandparents, uncles and cousins (both male and female) were also seen as positive role models. The shared theme was a parent or a family member who had a very difficult start, often moved to another country, and – despite all obstacles and difficulties - succeeded professionally. Sarah who had no role models in her family had chosen Angela Merkel as her role model '*I don't really have family like, who to follow (...) Angela Merkel, she was my mother since I was in ... 10th grade (...)*'.

The social capital of state school entrants, often forming a core of the post-1992 university students, is often much lower that of the public-school entrants (Nixon, 2011; Allen & Ainley, 2007). Hill (2011) found that post-1992 students often lack social capital and that students' family connections often provide part-time employment during their studies but not when they graduate. Smith (2003) attributed the lack of success of this particular group of students in finding employment due to their lack of cultural or social capital.

5.2.6. RQ2b: What is the Impact of Gender and Ethnicity on students' Self-Efficacy, Outcome Expectations and Employability Efforts?

Schunk & Pajares (2001) and Rottinghaus *et al.* (2003) pointed out that there is a need for research on self-efficacy in relation to ethnic differences as most career decision self-efficacy studies come from predominantly Caucasian groups of students. Ethnicity differences in career self-efficacy

have been found statistically significant in various studies[125] (Chaney *et al*., 2007; Peterson, 1993). Gloria & Hird's (1999) study examined 687 undergraduate students (86% White and 14% ethnic minorities) and found Caucasian students to have higher career self-efficacy than mixed group students. However, this might be due to a fact that the percentage of Caucasian students in their sample was much higher than of other groups of students. Chung (2002) additionally explains these findings as a result of the sample being drawn from a Rocky Mountain university in the United States with predominantly White students (95%). Gainor & Lent (1998) studies maths choice intentions for black student and found that male students had higher maths/science self-efficacy expectations than female students.

This study provided strong evidence that students' ethnicity impacts their employability efforts. The statistical findings confirmed that different ethnicities not only had different career decision self-efficacy levels but different outcome expectations and employability efforts. *Black or Black British* students (both genders) reported the highest score in career decision self-efficacy at Time 1 (M_M=3.69, $S.D_M$ = 0.59; M_F=3.57, $S.D_F$ = 0.62); the highest scores in all job seeking behaviours at Time 1 (M_{PJSB}=2.39, $S.D_{PJSB}$ = 0.91; M_{AJSB}=2.29, $S.D_{PJSB}$ = 0.85; M_{JSI}=3.13, $S.D_{PJSB}$ = 1.17); and the highest scores in preparatory and active job seeking behaviours (M_{PJSB}=2.36, $S.D_{PJSB}$ = 0.81; M_{AJSB}=2.08, $S.D_{PJSB}$ = 0.72) at Time 2. *Black or Black British* ethnicity was the only one that mediated[126] directly students active job seeking behaviours. This result is consistent with Chaney *et al*. (2007) and Peterson (1993) who both reported higher scores for African American students than those of Caucasian students. Different ethnic groups also reported different career-decision self-efficacy levels.

Lent & Shau (2010) and Hackett & Byars (1996) found that career self-efficacy, outcome expectations and career progress of ethnic students (African American women, Hispanic and Asian American) was affected by experiences of ethnic discrimination. Helms & Piper (1994) claimed that a degree to which a person expects or believes that his/her ethnicity[127] to be a significant factor with regard to his/her career options (Helms & Piper, 1994) was a crucial predictor of a person's

[125] Chung (2002), on the other hand, who have replicated the original Betz et al.'s (1996) study evaluating gender as a moderator of self-efficacy and included ethnicity as another moderator of self-efficacy, examined 165 undergraduate students from a Southern University in the United States with a large representation of Black ethnicity students and found no ethnic group differences in CDSE scores. Betz et al. (2005) also reported similar results to Chung (2002).
[126] "(…) a given variable may be said to function as a mediator to the extent that it accounts for the relation between the predictor and the criterion. (…) moderator variables specify when certain effects will hold, mediators speak to how or why such effects occur. " (Baron & Kenny, 1986:174)
[127] They used race instead of ethnicity.

vocational behaviour). Gloria & Hird (1999) also believed that students' career choices might be influenced by their ethnic barriers. The SCCT literature often examines gender or ethnicity as a perceived barrier but none of the SCCT studies examined both gender and ethnicity concurrently (McWhirter, 1997). The Sage and ScienceDirect database search conducted on 1 June 2017 with search words such as 'gender and ethnicity' AND 'SCCT' or 'gender and ethnicity' AND 'SCCT' AND 'mediate' showed no results, hence, it was concluded that currently there are no studies that examine the mediating or moderating effects of gender and/or ethnicity on self-efficacy, vocational outcome expectations or employability efforts. The recent study by Lipshits-Braziler & Tatar (2012) investigated gender and ethnic differences in relation to career barriers for 406 university students but it used 2-way MANOVA with Gender and Ethnicity as independent variables against their perceptions of personal career barriers. They found that the perception of career barriers and the sense of efficacy was different for men and women and for different ethnic group.

The current study found statistically significant results for the combination of gender & ethnicity as moderators between students' career decision self-efficacy and their job seeking behaviours for *Preparatory Job Seeking Behaviours* and *Active Job Seeking Behaviours* for *Black or Black British* and *Chinese and Other Ethnic Groups,* for *Active Job Seeking Behaviours* for *Black or Black British;* and for *White*, *Asian or Asian British*, and *Chinese and Other Ethnic Groups* for *Job Search Intensity*. The study also found statistically significant results for career decision self-efficacy being a mediator between all ethnicities and all students' job seeking behaviours. The study also showed statistically significant results for the ethnicity as moderators between students' career decision self-efficacy and their job seeking behaviours for *Preparatory Job Seeking Behaviours* and *Active Job Seeking Behaviours* for *Black or Black British* and *Chinese and Other Ethnic Groups*. The combination of gender & ethnicity was found to moderate between students' vocational outcome expectancies and their job seeking behaviours for *Active Job Seeking Behaviours* for all ethnicities. Students' vocational outcome expectations and employability efforts were also mediated by ethnicity for all students' job seeking behaviours. The ethnicity also moderated between students' vocational outcome expectations and their job seeking behaviours for *Active Job Seeking Behaviours* for *White* and *Chinese and Other Ethnic Groups.* Finally, it was found that the vocational outcome expectations mediated between students' career decision self-efficacy and students' active job seeking behaviours.

The summary of quantitative findings for each job seeking behaviour outcome is depicted in Figures 5.1., 5.2 and 5.3 below. The dashed lines signify results that are not statistically significant.

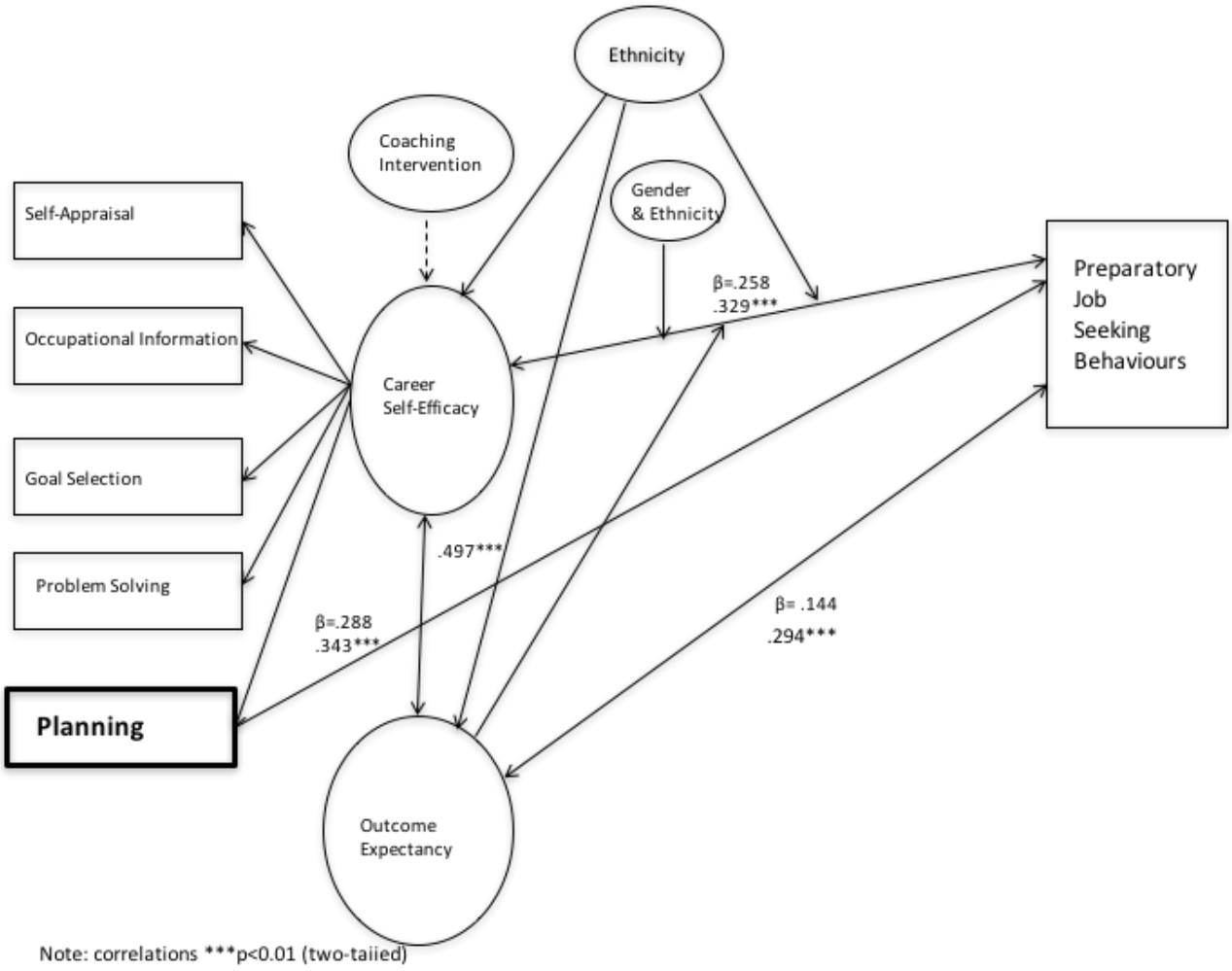

Figure 5.1: Summary of Quantitative Findings for Preparatory Job Seeking Behaviours

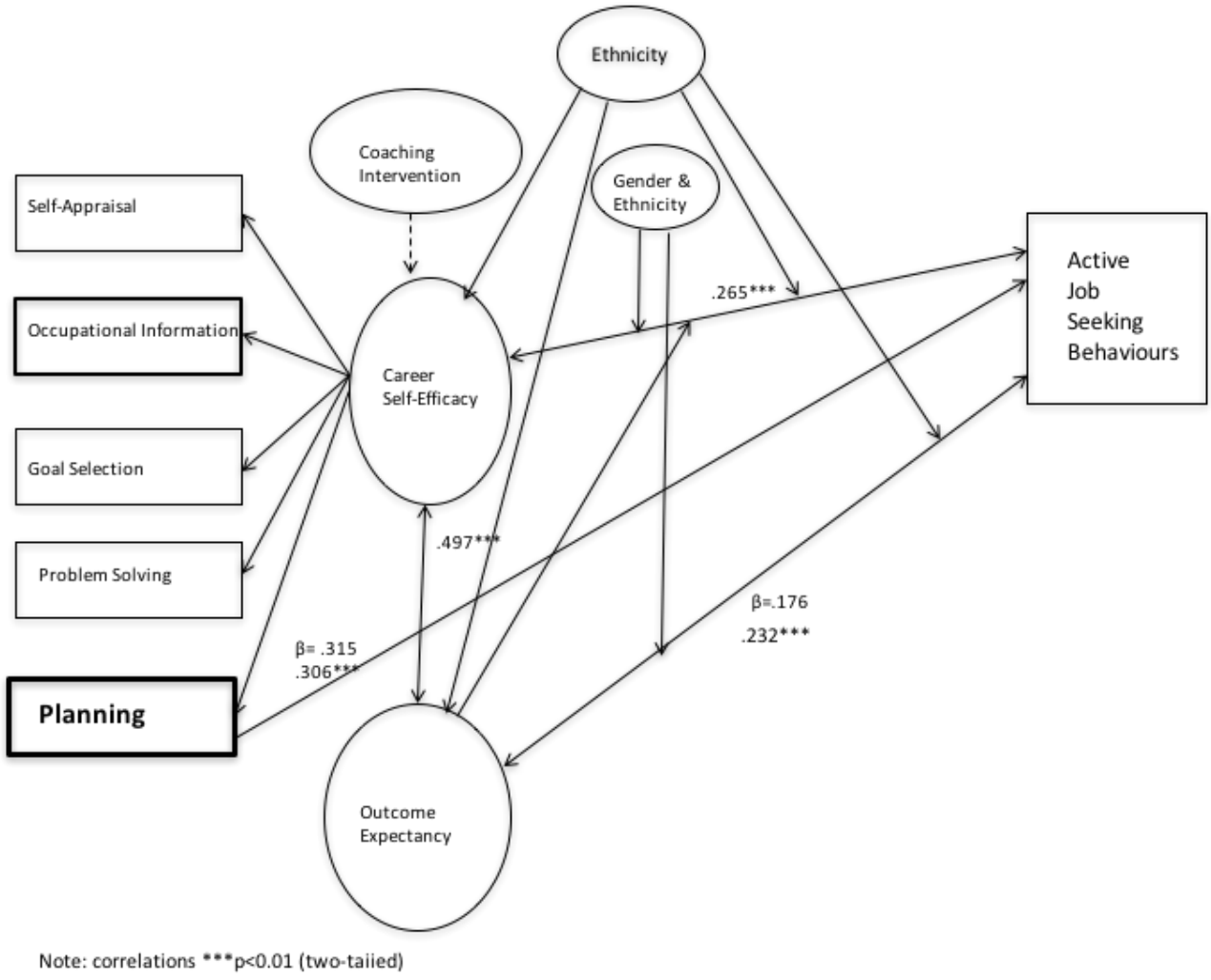

Figure 5.2: Summary of Quantitative Findings for Active Job Seeking Behaviours

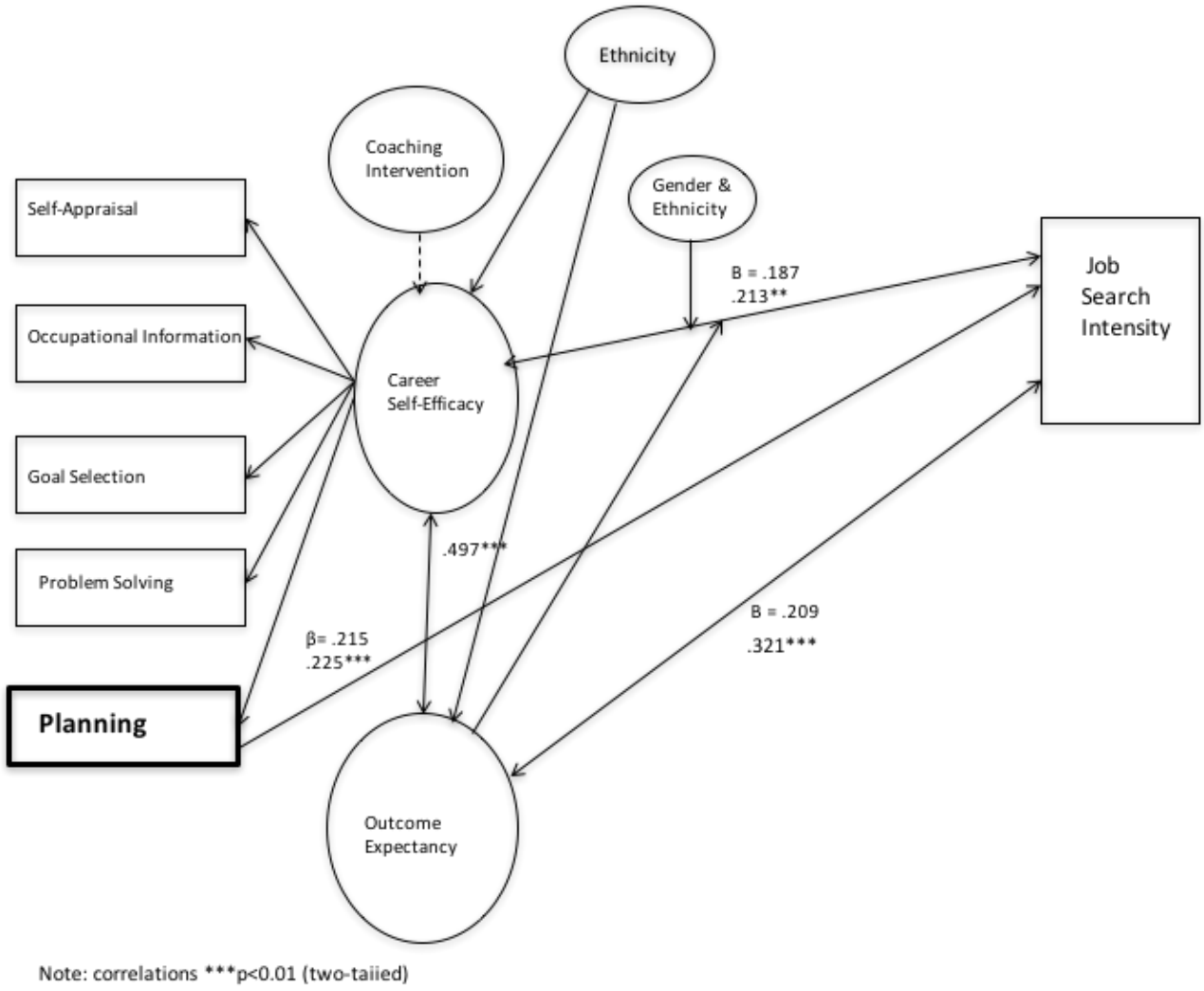

Figure 5.3: Summary of Quantitative Findings for Job Search Intensity

5.3. Research Contributions

5.3.1. Contribution to Method

The quantitative and qualitative findings of the study contradicted each other when it came to the effectiveness of career coaching. Quantitative data showed that students displayed high self-efficacy and vocational outcome expectations. These results, however, did not correspond with students' employability efforts and were also contradicted by qualitative findings. Analysing quantitative findings on their own would result in confirmation that self-efficacy is associated with employability efforts. However, qualitative examination of findings showed that students' self-efficacy beliefs were inhibited and employability efforts were moderated by other variables. Qualitative findings revealed that these were environmental conditions such as, for example,

competition from Russell Group students. Qualitative findings also provided evidence of perceived ethnic discrimination. However, only quantitative analyses allowed the study to discover the true magnitude of the impact of ethnicity on students' self-efficacy, outcome expectations and employability efforts.

Moffatt *et al.* (2006) and Johnstone (2007) discuss the synergistic value of mixed methods when results negate each other. The study's approach to contradictory findings followed Moffatt *et al.*'s (2006) approach. Similarly to their study, the quantitative data showed no evidence that coaching intervention had an impact on students' self-efficacy and employability efforts whereas qualitative data suggested that the career coaching intervention had a lot of benefits and an overall positive effect. The overall result was 'more than the sum of its parts' (Moffatt *et al.*, 2006, p.7). This also shows the value of collecting qualitative and quantitative data within one case study (Moffatt *et al.*, 2006). Moffatt *et al.* (2006) argue that using mixed methods to analyse interventions increases the overall quality of the study and point out that there are not many studies that describe the methodological implication of using MMR in intervention studies. Moffatt *et al.*'s (2006) approach in dealing with divergent data discussed below demonstrates how combining both types of data results in illumination of the findings and in conclusions that would have been unattainable if only one method was used.

Firstly, both quantitative and qualitative methods produced different findings due to the different paradigms they emerged from (Moffatt *et al.*, 2006). Hence, it would be incorrect trying to integrate the contradictory findings (Moffatt *et al.*, 2006). Instead they were used to complement each other. It allowed *post-positivism* and its assertion that one cannot be certain about the claims that knowledge - as an independent reality can be only estimated but never explained completely (Onwuegbuzie *et al.*, 2009) - to be illuminated by *social constructionism* and its understanding that the world is organised into meaning by each individual (Denzin & Lincoln, 2011). Secondly, it followed Moffatt *et al.*'s (2006) recommendation for each method's data analysis approach and interpretation to be thoroughly inspected for methodological rigour, as both the qualitative and quantitative instruments were piloted as well. Thirdly, datasets were explored for their comparability (Moffatt *et al.*, 2006). All samples were derived from the same population, hence, there were no major discrepancies in the overall characteristics of the samples. The under 21 age group was slightly overrepresented in the quantitative sample, however, this was due to the fact that the study investigated undergraduate students. However, using the maximum variation

sampling that is considered appropriate for the qualitative parts of mixed methods research (Polit & Beck, 2010) resulted in some ethnicities being underrepresented or absent in the qualitative sample, such as Black or Black British or Chinese or Other Ethnic Groups students. *Black or Black British* Male students had the highest scores in career decision self-efficacy (M=3.71, SD = 0.58) and ten people were invited for an interview. However, only one accepted the invitation. On the other hand, the maximum variation sampling resulted in only one *Chinese or Other Ethnic Groups* student being selected for invitation to interview. Despite Chinese or Other Ethnic Groups Females reporting the lowest scores in career decision self-efficacy (M=3.27, SD = .49) none of them replied to the interview invitations. This suggests that one has to be aware of the possible ramifications of the maximum variation sampling when analysing diverse populations. Fourthly, the qualitative part of the study allowed the researcher to assess the fidelity of coaching intervention (Moffatt *et al.*, 2006). This is another important role of using MMR in intervention studies (Onwuegbuzie & Johnson, 2006). The qualitative part revealed that most interviewed students had similar career coaching experiences, however, some of them left their first career coach due to his/her lack of engagement and were involved in coaching with the second, more committed, career coach.

Finally, the qualitative study outcomes were explored to see if there were any dimensions in the quantitative study that were not explored (Moffatt *et al.*, 2006). As a result, it was found that *the locus of control* (see the Students' Self-Efficacy, Outcome Expectations and Employability Efforts Discussion section for more details), a variable linked to self-efficacy (Zimmerman, 2000; Landine & Stewart, 1998; Phillips & Gully, 1997; Rotter, 1992; Wood & Bandura, 1989), emerged from qualitative data as an important variable that was not part of the SCCT framework.

5.3.2. Contribution to Theory

Empirical Study of Coaching Effectiveness

The study examined the role and effectiveness of coaching in increasing students' employability efforts. The research provided an empirical study of the characteristics of a career coach and of the coaching relationship perceived by students as most effective in increasing students' career self-efficacy and employability efforts. The study also examined quantitatively, through a control-trial intervention, the effectiveness of coaching. Lack of funding for coaching effectiveness research, a relative lack of randomised-control-trial studies (de Haan & Duckworth, 2012) combined with the ethical issues of using randomly selected control groups, contributes to a lack of progress in

coaching effectiveness research (Gray 2011; Stober & Parry, 2005). Empirical studies need to be carried out in order to address the anecdotal approach to the effectiveness of coaching (Visser, 2010; Whitney, 2001).

There is also very little research that looks into the role and effectiveness of coaching in Higher Education. In 2012, the 'International Journal of Mentoring and Coaching in Education" was launched showing growing interest in the area of using coaching use in education. VITAE's (2011) review of all HE coaching provision showed that coaching intervention is offered mainly to researchers and postgraduate students, with only a few institutions providing coaching to enhance employability skills. Chandler *et al.* (2011) discussed the need for building a coaching culture in an educational environment.

Contribution to Employability in Higher Education

The study proposes the SCCT framework as an employability framework for post-1992 university students. It also examines qualitatively students' self-efficacy and outcome expectation beliefs. There are currently no employability models in the literature that address the needs of socially disadvantaged post-1992 university students and that incorporate self-efficacy, gender, ethnicity, perceived social support, socioeconomic status, cultural influences and gender role models, and outcome expectations. SCCT theory maintains that people's behavioural choices are affected by their self-efficacy ("*Can I do this?*") and beliefs about the consequence or outcomes of performing particular behaviours (outcome expectations: "*If I do this, what will happen?"*) (Lent, 2013). It further recognises that self-efficacy and outcome expectations are a function of a person's environment factors such as gender, ethnicity as well as environmental and socioeconomic conditions (Lent, 2013).

Dacre Pool & Sewell (2007) advocate for a coherent model of graduate employability in Higher Education. They see employability as a set of skills and competencies, including self-efficacy. Kumar (2007) proposes a SOAR model (an acronym for 'Self', 'Opportunity', 'Aspirations' and 'Result') as a way to integrate graduate skills. In Kumar's model 'Self' consists of self-assessment, self-efficacy, self-esteem and self-management. Knight & Yorke (2002) see self-efficacy as an important dimension of employability. Daniels *et al*. (1998) and Washington (1999) treat self-efficacy and employability interchangeably by viewing employability as a reflection of a person's belief about possibilities of getting new employment. Van der Velde & Van den Berg (2003) propose that employability is largely dependent on self-efficacy, which has been shown to be

positively related to job seeking behaviours (Kanfer *et al*, 2001). Fugate *et al*. (2004) link strengthening employability skills to a strengthening of efficacy beliefs. There is also a need for career development interventions to address and integrate students' sociocultural context into career services (Gloria & Hird, 1999; Leung, 1995). Gloria & Hird (1999) called for self-efficacy enhancing strategies and for in-depth evaluation of students' barriers in order to expand their perceptions of possible career options. It is all the more important for students to understand whether and how they integrate their cultural factors and ethnic group expectations into their career decision-making (Metheny & McWhirter, 2013; Gloria & Hird, 1999). Betz & Voyten (1997) advocate that career counsellors and educators should assess students' self-efficacy in order to be able to have conversations with students about their avoidance of certain career behaviours. Van Hoye (2013) proposes that strengthening individuals' self-efficacy beliefs should be part of the employment counsellors' agenda as it increases job-seeking behaviours. However, psychological and social effects of gender and ethnicity and the social-cultural environment are never explored in the coaching effectiveness context. The EBSCOhost Research database search conducted on 8th January 2015 using words such as 'coaching', 'coaching effectiveness' and 'gender', 'race' and 'ethnicity' yielded 0 results.

Apart from current employability models in the literature failing to recognise SCCT environmental conditions affecting students, employability skills and outcome measures have been inconsistent in the literature and existing studies have failed to empirically evaluate changes in young people's employability skills as a result of interventions (Blades *et al.,* 2012). The surveys often do not provide a comparison group and use un-validated scales, hence, there is a need to develop a coherent set of employability skills measures (Blades *et al.,* 2012). Blades *et al.*'s (2012) review of the academic literature finds that employability as a whole is focused on using career-self efficacy (Rothwell & Arnold, 2007) and on generic skills (Van Der Heijde & Van Der Heijden, 2006). Blades *et al.*'s (2012) review of recent employability programme evaluations found that most evaluations included generic quantitative and qualitative measurements of employability that included confidence, problem solving, interpersonal skills, planning, communication skills and self-awareness. Due to differences in job search behaviour measures it is difficult to compare them (Van Hoye, 2013).

The current study used validated job search behaviours scales as a proxy for students' employability efforts. The scale based on Saks & Ashforth's (1999) scale derived from Blau (1994;

1993) consists of a *preparatory job search behaviour scale* (α =.74), an *active job search behaviour scale* (AJSB) (α = .75) and of a *job search intensity scale* (α = .94). Furthermore, the Preparatory Job Search Behaviour scale was modified in this study by adding social networking searches of students. Although academic research has not yet looked at the students' usage of social media in order to find employment practitioner-oriented journals started offering advice to companies as to how use social networks to hire graduates (Herbould & Douma, 2013). LinkedIn, Facebook and Twitter are the social networking sites that should be used by students and career centres for career information and job seeking activities (Osborn & LoFrisco, 2012). The updated PJSB scale has resulted in a higher internal consistency (α =74 for the original scale and α = .82 for the updated one).

Contribution to the SCCT Theory

This research also attempted to constructs new knowledge through investigating post-1992 university students' career decision self-efficacy beliefs, vocational outcome expectations and employability efforts. The study also contributes to the research on the relationships between career-self efficacy beliefs and job search behaviours. The SCCT authors called for exploring the importance of environmental variables (such as perceived family support or perceptions of social status in the career development process) (Metheny & McWhirter, 2013); for research on self-efficacy in relation to ethnic differences (Chaney *et al*., 2007; Rottinghaus *et al.,* 2003; Schunk & Pajares, 2001); for studies on self-efficacy for different educational groups and domains (Schunk & Pajares, 2001); ethnic barriers and career decision self-efficacy (Gloria & Hird, 1999); the impact of career barriers on self-efficacy and outcome expectations and the impact of the subjective experience of social class on the career self-efficacy and outcome expectations (Ali *et al.*, 2005); and for SCCT research across all racial-ethnic groups (Flores *et al.*, 2017). Currently, most research into self-efficacy predominantly focuses on uniform samples of Caucasian participants (Chaney *et al*., 2007, Rottinghaus *et al*., 2003, Schunk & Pajares, 2001). The only study that investigated career self-efficacy in a multicultural context was done by Hackett *et al*. (1992). Zikic & Saks (2009) identified the need for research to identify what job seekers can do in order to improve their self-efficacy. Van Hoye (2013) and Betz & Voyten (1997) propose that self-efficacy should be examined in further research and embraced by academic career counsellors as to its effect on individuals' job search behaviour. India *et al.* (2013) call for qualitative research that furthers understanding of different social support and barriers and that investigates women's and men's beliefs about the influence of contextual factors on their self-efficacy beliefs, outcome expectations and their career decisions. The SCCT literature often examined gender or ethnicity as

a perceived barrier but none of the SCCT studies examined both gender and ethnicity concurrently (McWhirter, 1997). The Sage and ScienceDirect database search conducted on 1 June 2017 with search words such as 'gender and ethnicity' AND 'SCCT' or 'gender and ethnicity' AND 'SCCT' AND 'mediate' showed no results, except the recent study by Lipshits-Braziler & Tatar (2012) that investigated gender and ethnic differences in relation to career barriers for 406 university students using 2-way MANOVA with Gender and Ethnicity as independent variables. Hence, this study contributes to the SCCT literature discussion about gender and ethnicity as distal and proximal factors as there are currently no studies that examine the mediating or moderating effects of gender and/or ethnicity on self-efficacy, vocational outcome expectations or employability efforts.

Finally, this study examined outcome expectations both quantitatively and qualitatively. This had not been done so far in SCCT research. Constantino *et al*.'s (2011) meta-analysis comment on poor measurement issues in the expectation research. Outcome expectations are often reported as negative or non-significant as they are most of the time not related to primary research questions. Constantino *et al.* (2011) also found that there is not much research to support a direct causal relation between outcome expectations and favourable treatment outcomes and manipulation studies involving outcome expectations are "virtually nonexistent" (p.189). Historically outcome expectations were seen as a variable that had to be controlled during clinical trials rather than an independent variable itself (Constantino *et al.*, 2011). As a result, expectations have been undervalued and there are only a few studies that actually assess expectations as their primary research questions (Weinberger & Eig, 1999). In recent years, only a few studies have looked at outcome expectations in an organisational context (Fridrich, *et al.*, 2016). Expectations are not really discussed in the coaching literature, either, and are often discarded as placebo or error variance (Weinberg & Rasco, 2007). Sheu *et al.*'s (2010) meta-analysis of SCCT's model variables showed that outcome expectations are as important as self-efficacy in predicting interests and goals. Morrow, Gore & Campbell (1996) argued that for marginalized groups outcome expectations may be in fact a more powerful predictor of vocational behavior than self- efficacy beliefs.

Hence, this study contributed both to the SCCT research and to the employability literature as it examined students' outcome expectations both quantitatively and qualitatively and found outcome expectations to be an important predictor of students' employability efforts. The current study also tested the mediating and moderating effect of outcome expectations.

5.4. Implications for Practice

By gaining a better understanding of the factors that influence post-1992 university students' self-efficacy, outcome expectations career and employability efforts, coaching interventions can be tailored to students' specific needs in order to enhance their employability efforts. Coaching, as part of a universities' employability strategy, might be a way to address students' lack of social capital, lack of role models, as well as their lack of interpersonal skills, communication, team-working and time management skills (Hill, 2011; Harvey, *et al.,* 1997). For disadvantaged students, career coaching conversations may act as a substitute of meaningful career conversations with role models that the Russell Group students who mostly come from privileged, highly socially selected backgrounds, with an abundance of social capital (Nixon, 2011; Sutton Trust, 2005) already have access to. The ability to connect with diverse others is an important aspect of employability skills and universities should create opportunities for students to build social capital and to develop students' interpersonal skills (Hill, 2011). The effectiveness of career coaching can be also increased by allocating to immigrant students career coaches who are also immigrants and who are professionally successful (Ma & Yeh, 2010).

It is also recommended that effectiveness of the career coaching could be further increased by focusing on planning (for example, making a plan of students' goals for the next five years; preparing a good CV; identifying employers, firms, and institutions relevant to their career possibilities; and successfully managing the job interview process) as planning is a statistically significant predictor of all job seeking behaviours. Employability intervention can also benefit from focusing on students' problem solving skills since students who self-selected for career coaching had statistically higher *problem solving* levels (M_E = 3.45, SD = .63) than the rest of the sample (M_R = 3.33, SD = .66) (t(835) = -2.09, p = .037, two-tailed). Equally, qualitative data showed that a difficult online application process – psychometric tests in particular – were one of the major barriers to students' chosen career.

Brown & Lent (1996) claim that interventions that address incorrect self-efficacy or outcome expectancy beliefs, reduce perceived barriers to chosen careers, provide action plans to overcome barriers, and help students to develop new experiences and to reframe their past experiences can have a positive impact on their career-related behaviours. There is a need for career development interventions to address and integrate students' sociocultural context into career services (Gloria &

Hird, 1999; Leung, 1995), particularly for post-1992 universities. Training of career coaches should include self-efficacy enhancing strategies (Van Hoye, 2013; Betz & Voyten, 1997), outcome expectancy strategies and for in-depth evaluation of students' barriers in order to expand students' perceptions of possible career options. It is all the more important for students to understand whether and how they integrate their cultural factors and ethnic group expectations into their career decision-making (Metheny & McWhirter, 2013; Gloria & Hird, 1999). Addressing ethnic identity provides much more holistic and contextualised coaching (Gloria & Hird, 1999). Ethnicity cannot be changed but other mediating variables, such as socioeconomic status, can be manipulated in order to affect the outcomes (VanderWeele & Robinson, 2014). Students from ethnic backgrounds will benefit from examining their family expectations, their beliefs about themselves and from understanding the expectations and pressures from their families and communities (Falconer & Hays, 2006). It will be very useful for them to hear how other students with similar background overcame these career issues (Falconer & Hays, 2006).

Strengthening social support for lower social status students (Lent *et al.*, 2002) should also become an important part of the universities' employability agenda. Students from lower socioeconomic backgrounds would benefit from interventions that increase their social support, strengthen their self-efficacy and indirectly influences their outcome expectations. This might be provided by role models with whom they can identify (Ali *et al.*, 2005). Career coaching interventions for post-1992 students should be rooted in vocational counselling and provide students with 'a clear understanding of yourself, your aptitudes, abilities, interests, ambitions, resources, limitations, and their causes' (Parsons, 1909, p.5). Having said that, this might be difficult to achieve due to the recent funding cuts which impact newer universities the most (Guardian, 2016) causing post-1992 universities to drastically cut costs and to focus even more on grading and rankings rather than improved teaching (Scott, 2017). This will potentially increase the already wide gap between post-1992 universities and Russell Group universities even further.

Hackett & Byars (1996) discussed that women who are not only from ethnic minorities but who are also immigrants are subjected to a double disadvantage and career services should be able to address their career barrier perceptions via using culturally sensitive coping self-efficacy[128] strategies aimed to reduce ethnic women's perception of career barriers. It is also important for

[128] The coping self-efficacy is defined as a person's perceived ability to cope effectively with life challenges (Chesney, *et al.* (2006).

ethnic minorities to be encouraged to identify and connect to support networks in their environment (Hackett & Byars, 1996). Support networks are an important extra-therapeutic factor in the common factors therapy outcome literature (Duncan *et al.* 2010). Extra-therapeutic factors are considered in the coaching and psychotherapy literature as one of the most important factors in producing behavioural change (Cuijpers *et al*., 2012; Wampold, 2001; Miller *et al*. 1997; Lambert, 1992). Roehrle & Strouse (2008) found social support to be a statistically significant extra-therapeutic outcome.

It is important to develop career services that are culturally sensitive (Ma & Yeh, 2010; Hackett & Byars, 1996) in order to enhance universities employability strategies. For example, Ma & Yeh (2010) point out Asian immigrants often have to consider the influence of their family, language barriers and financial hardship and any employability enhancing strategies should be aware of that. These students would benefit from English language support as part of career coaching services (Ma & Yeh, 2010) and from being exposed to mock job interviews (Shea *et al*., 2007). Chow (1999) reported that fluency of language is a very important factor when undertaking new career opportunities in a foreign country. Ma & Yeh (2010) found that self-reported English fluency was positively correlated with Chinese students' vocational aspirations ($r=.34$, $p<.001$).

It is also important that career services use different strategies to reach out to ethnic minority students as these students tend to underuse them (Falconer & Hays, 2006). Interestingly, Black or Black British Male students in this study did not respond to any of the interview invitations. Hence, it is important that the universities' employability services develop relationships with Black student organisations (Falconer & Hays, 2006). Falconer & Hays (2006) found that African Americans were reluctant to ask for help or seek career counselling. The African American students in their study stated they would benefit most by having career coaches in the same field of study and being exposed to alumni and professionals in their field. African American students also believed that job preparatory courses should be mandatory. Gushue & Whitson (2006) note that career interventions for African American students should focus on overcoming ethnic and cultural stereotypes. These recommendations might also apply for Black or Black British students.

Finally, in the light of the study's literature review and findings it is argued that Higher Education needs to develop a vision of what constitutes knowledge, public goods, cosmopolitan learning, democracy and global citizenship (Nixon, 2011). It needs to provide students with opportunities to

develop their full potential, both creative and intellectual, regardless of their background and wealth (Couldry, 2011; Kumar (2007; Harvey, 2000). Equally, governments need "to make education a form of liberation, rather than a means of social control" (Allen & Ainley, 2007, p.132).

Currently post-1992 universities act as corporate entities and training wings of corporations. The emphasis is no longer on intellect, culture and politics but instead on providing the narrow, utilitarian vocational training in order to get the right sort of corporate job. Academic managers are producing universities without debates or political activity that resemble corporate institutions and that exude "numbing brainlessness, the same suffocating absence of thought and imagination, the same absoluteness about the unquestioning conformity. So drained of intellect, culture, and politics are they that many of these places are the very negation of 'universities'." (Faulkner, 2011, p.28). The government's rationale to cut public expenditure, including Higher Education, challenges society's understanding of public goods as being accessible to all and is resulting in widening of the social inequality gap. Ultimately, the government suppresses the real value of education and keeps social elites in their superior position. As can be seen from interviews with students the post-1992 students are very aware of that social gap and they realise that Russell Group students occupy the top positions in the well-paid professions (Sutton Trust, 2005) whereas the destiny of working-class students is much less appealing (Couldry, 2011; Freedman, 2011; Nixon, 2011; Stevenson, 2011; Walton, 2011; Allen & Ainley, 2007).

As universities are trying to rethink their role and their employability strategies they can either choose to empower their learners by treating students as intellectual performers (Harvey, 2000) or they can continue with the prevailing instrumentalism that treats students (and lecturers) as a compliant audience and attempts to increase students' employability by planning for skills gaps and by only being concerned only with graduates getting good jobs (Harvey, 2000). If universities choose the former as their employability strategy they need to adapt an employability model that recognises socioeconomic, cultural and ethnic barriers students in order to effectively addresses their individual needs and social capital gaps.

5.5. Utility of the Study

The utility of studies is treated as an indicator of their quality (O'Cathain, 2010). The findings of this study can inform university policy with regard to selection criteria and training of potential career coaches. The SCCT framework may be integrated in the coaching effectiveness frameworks

as it incorporates self-efficacy, outcome expectancies and gender and ethnicity factors. The SCCT may be also used in the post-1992 universities as an employability framework as it integrates students' gender, ethnicity and environmental conditions (such as perceived barriers or support to preferred careers, cultural influences, family expectations, perceived social support, family role models and gender & ethnicity barriers). The results from the study may also inform future intervention programmes that seek to promote the self-efficacy of disadvantaged and marginalised groups such as women, racial and ethnic minorities, elderly people, disabled people and female offenders (Betz *et al.* 2005).

5.6. Interpretive Rigour of the Study

Interpretive Rigor framework from adapted from Tashakkori and Teddlie (2009) was utilized below (O'Cathain, 2010).

Firstly, in the Findings chapter the study demonstrated the i*nterpretive transparency* and i*nterpretive consistency* (O'Cathain, 2010) as it is transparent how findings transpired from each method and it can be seen in the findings section how inferences were derived with findings and how conclusions were consistent with findings and inferences (O'Cathain, 2010). *Interpretive correspondence* was achieved by making sure that the inference corresponded to the main research question (O'Cathain, 2010).

Secondly, in the Discussion chapter the study demonstrates the *theoretical consistency* (O'Cathain, 2010) as the consistency of conclusions was compared within the study and with the state of current academic knowledge (Teddlie & Tashakkori, 2010; O'Cathain, 2010). It can be seen that a range of authors reported similar findings (Miles & Huberman, 1994). The lack of gender differences in terms of career self-efficacy is consistent with the other studies (Betz and Taylor, 2012; Rottinghaus *et al*., 2003; Saks & Ashford, 1999; Betz & Klein, 1996). Ethnicity differences in career self-efficacy are consistent with Chaney *et al*. (2007), Schunk & Pajares (2001), Gloria & Hird (1999) and Peterson (1993). The coaching effectiveness findings are consistent with Blades *et al.*'s (2012) review of effectiveness of employability intervention programmes that has found that 'before and after' assessments studies tend to see relatively small changes over time. Retrospective reports can also be subject to respondent bias such that respondents may be invested in 'proving' that the programme was effective (Blades, *et al*., 2012). The higher scores for problem solving and preparatory job seeking behaviours of the experimental group are consistent with

Chung (2002) and Lent *et al*. (1996) who found that students with higher career decision self-efficacy are more committed to career planning and goal settings. The finding that self-efficacy is a strong predictor of career-related behaviours is also consistent with Lent (2013), Rottinghaus *et al.* (2003), Lent *et al.* (1994) and Niles & Sowa (1992). Coaching relationship findings are also consistent with the coaching literature (Lambert, 1992; Lambert & Bergin, 1994; Miller *et al.* 1997). The link between outcome expectation, self-efficacy and employability efforts is consistent with Maddux *et al.*'s (1992) findings that participants are more likely to perform a relatively difficult behaviour if they believe it is going to result in a favourable outcome and that outcome expectation and self-efficacy expectation are independent in predicting behavioural intentions. The correlation that was found between self-efficacy and outcome expectations was consistent with Lent (2013).

Finally, *interpretive bias reduction* was demonstrated in the Discussion chapter as non-convergent findings were plausibly explained and inconsistencies between inferences in research questions were discussed (O'Cathain, 2010).

5.7. Recommendations for Future Research

The study resulted in gaining a better understanding of the factors that influence post-1992 university students' self-efficacy, outcome expectations career and employability efforts and the role and potential of coaching interventions in addressing these challenges as well as implications for practice.

The study recognizes, however, that further research is needed to explore Higher Education students' self-efficacy, outcome expectations and environmental factors. The findings of the study can be further expanded by comparing this case study's results with Russell Group universities. It is also important for post-1992 universities, in particular, to explore the effective ways of changing students' self-efficacy and outcome expectations; reducing students' perceived barriers to chosen careers; and integrating students' sociocultural context into career services (Gloria & Hird, 1999; Leung, 1995) as part of their employability agenda.

As there is very little research in the coaching effectiveness literature about the importance of extra-therapeutic factors, as "events and processes that occur *outside* the context of treatment but which are still instrumental in producing change in clients" (Miller *et al.*, 1997, p.36) it might be

useful to incorporate the SCCT distal and proximal environmental factors into the common factors theory in the coaching literature. It is also recommended that if similar coaching effectiveness intervention studies are conducted they use at least seven-point scales in order to improve the precision of measurements (Hair *et al.*, 2007), a self-efficacy scale should be from 0 to 100 in order to accurately capture any changes (Pajares *et al.*, 2001; Bandura, 1997b).

Additionally, the qualitative part of the study uncovered the *locus of control* as another variable that was part of students' self-efficacy. Locus of control positively affects self-efficacy (Landine & Stewart, 1998; Phillips & Gully, 1997), however, it is not mentioned by SCCT theory. It is recommended that future studies explore this link further.

Finally, it is recommended that future studies qualitatively examine outcome expectations and self-efficacy of Black Male students. It is believed that understanding the environmental and extra-therapeutic factors that impact this group of students would be expanded if more representative samples of this group were drawn. Similarly to Falconer & Hays (2006), it is believed that it is important to understand the socioeconomic factors that affect this group in order to overcome economic barriers they face and support they might need in order to plan their career. There is little research done about career exploration of Black British students and further research is needed to address their motivational factors.

5.8. Conclusion & Final Reflection

This quasi-experimental, longitudinal mixed-methods research study examined the links between career coaching, career self-efficacy, and the employability efforts of Higher Education (HE) students. Specifically, the research investigated - both quantitatively and qualitatively - whether career coaching, used as an employability enhancing tool in Higher Education, can be effective in increasing students' levels of career self-efficacy and, as a result, their employability efforts. It explored quantitatively the relationships between students' career decision self-efficacy, vocational outcome expectations and employability efforts (preparatory job seeking behaviours, active job seeking behaviours and job search intensity).

This research also examined qualitatively what aspects of the coaching relationship are most effective in changing students' career self-efficacy beliefs, outcome expectations and

employability efforts. The research further explored, through interviews with students and career coaches, factors affecting students' self-efficacy beliefs and outcome expectations such as gender, ethnicity, perceived social support, socioeconomic status, cultural influences and gender role models. In the light of the findings, the original definition of coaching (see page 30) had to be revisited to reflect students' experience more accurately. Despite a common agreement in the literature that a coach should not provide advice (Whitmore, 2002) or act as an expert (Hardingham *et al.*, 2004) students identified being given practical advice as a very important aspect of their coaching relationship. This suggested that the coaching intervention had a strong mentoring aspect. Hence, coaching in this research has been redefined as a relationship between an employee of an organisation (a career coach) and a student (a client) that is designed to enhance a student's career self-efficacy, to define goals, to provide clarity and direction and to increase his/her self-awareness. This relationship has a strong underlying mentoring reflective narrative of a practitioner as well as a shared mentoring narrative (Gray *et al.*, 2016).

The study analysed the above factors in the context of the changing role of Higher Education as a result of governments' pressuring of Higher Education institutions to increase students' employability (HEA, 2012). It investigated whether these factors are relevant for the post-1992 university students as, due to their socioeconomic background and their lower social capital, they often do not have the same vocational opportunities in the United Kingdom that are available to the elite Russell Group students (Nixon, 2011; Stevenson, 2011; Allen & Ainley, 2007; Sutton Trust, 2005).

This research also explored whether there is a need, for the post-1992 Universities in particular, to address the issues of gender, ethnicity, perceived social support, socioeconomic status, cultural influences and gender role models and outcome expectations in the employability context. It positioned coaching as a learning tool and an employability enhancing strategy to support students' employability efforts, their self-efficacy beliefs.

Finally, this study followed the perspective that the role of Higher Education is to empower students, to foster personal development, intellectual debate, self-actualisation and to offer opportunities to develop students' full potential, regardless of their background and wealth.

During the process of conducting qualitative interviews with students and career coaches it became

apparent that the motivation to research this particular topic was coming from the researcher's personal experiences and beliefs. The researcher, being a foreigner and Eastern European, found herself strongly identifying and emphasizing with some students' experiences. The experiences of being turned down for a job because of the lack of fluency in English evoked the researcher's early experiences of arriving to the UK in 1994, applying for many jobs and hearing on one occasion in particular, "if you can't pronounce *available* the job is not available to you." One of the students spoke about him having a different social status in his home country than in the UK. This experience felt particularly relevant to the researcher and to the research quest itself and made the researcher often wonder on the different social standing in home country versus the country of residence and its impact on individual choices of careers. Presenting the research at the Black and Ethnic Minorities conference (Molyn, 2016) made the researcher realise that, as an Eastern European in the UK, she has always felt like an ethnic minority. All of the above, have provided foundations for starting the research in the first place as the researcher was always interested as to how individuals' beliefs about what they can or cannot do (self-efficacy) and what will happen as the result of their behaviour (outcome expectation) shapes people's realities. The researcher's epistemological approach has remained consistent throughout the study, as can be seen by comparing pre- and post- data collection perspectives and beliefs (Gray, 2014; Dupuis, 1999). The personal reflectivity suggests that the researcher, at the post data collection stage, still sees the world and analyses its data through a *social constructionism* lens, i.e. she appreciates that individual minds are shaped by culture and that students – as well as the researcher herself - will use their culture lenses to organise their world and how they make sense of it and that one's understanding of the world is limited by one's interpretations of one's own experiences (Dewey, 1925/2008; Morgan, 2014). The danger of becoming nihilistic and paralysed in the research reflexivity process, i.e. seeing one's study as limited due to the limitations of research methods and the underlying assumptions was counteracted by using the mixed methods approach that allows for *methodological eclecticism* (Denzin & Lincoln, 2011; Teddlie & Tashakkori, 2010).

The study found that ethnicity and the combination of gender and ethnicity acted as a distal environmental factor, as it directly mediated students' career decision self-efficacy, as well as a proximal environmental factor as it moderated both students' career decision self-efficacy and vocational outcome expectations and their employability efforts. This was also true for the combination of gender and ethnicity. The study also found the evidence of students' perception of ethnic discrimination. Apart from gender and ethnicity barriers, the study also uncovered other environmental conditions that affected students' career decision self-efficacy, vocational outcome

expectations and their employability efforts. Students' self-efficacy and outcome expectations beliefs were inhibited by the negative perception of the University of Greenwich among students and the competition from the Russell Group and perceived preferential treatment of Russell Group students by prospective employers. Parental support and parents' expectation were other environmental conditions that potentially mediated students' employability efforts. Perceived deficiencies in social support, socioeconomic status and parents as role models were other important environmental conditions that acted as barriers to students' career options.

The results of this study confirmed that the students' self-efficacy was associated with their employability efforts. Overall, students displayed high self-efficacy beliefs, i.e. an *I can do this* attitude. They believed that they had as many career options as others as long as they put their effort and motivation in. A few students displayed an *external locus of control* when discussing their self-efficacy. The study also confirmed the importance of outcome expectation in predicting students' employability efforts. However, students displayed either unrealistic or low expectations of themselves and of fellow students. This finding was significant as outcome expectations are as important as self-efficacy in predicting interests and goals (Sheu *et al.*, 2010).

The study contributed to coaching effectiveness research by providing a quasi-experimental control-group as part of a longitudinal study of the effectiveness of the coaching intervention. The research also provided an empirical study of the characteristics of a career coach and of the coaching relationship perceived by students as most effective in increasing students' career self-efficacy and employability efforts. There is very little research that looks into the role of coaching in Higher Education and this study researched the role of coaching as a tool to enhance employability efforts of students.

The research also contributed to the employability literature by proposing the SCCT framework as an employability framework for post-1992 university students. The proposed framework incorporated self-efficacy, gender, ethnicity, perceived social support, socioeconomic status, cultural influences and gender role models, and outcome expectations. The study also provided validated employability efforts outcomes measures that looked at different aspects of jobs search behaviours, i.e. preparatory job search behaviours, active job search behaviours and job search intensity. The preparatory job search behaviours modified in this study by adding social

networking searches of students. The updated scale has resulted in a higher internal consistency than the original scale (α =74 for the original scale and α = .82 for the updated one).

This study also contributed to SCCT research by exploring the importance of environmental variables, by examining self-efficacy in relation to ethnic differences; by exploring the impact of career barriers on self-efficacy and outcome expectations. Most research into self-efficacy predominantly focuses on uniform samples of Caucasian participants, however, this study investigated career self-efficacy in a multicultural context. The study also examined both gender and ethnicity concurrently and established statistically the mediating or moderating effects of gender and/or ethnicity on self-efficacy, vocational outcome expectations and employability efforts of students. The study also examined the importance of outcome expectations, hence, contributing to SCCT theory and to the coaching effectiveness literature as expectations are considered one of the common factors that are of the key importance to the successful outcome (Weinberg, 1993; Bandura 1989, 1986, 1982; Shapiro, 1981). (Holt & Heimberg, 1990).

The study found that despite the lack of the statistical significance of the career coaching intervention, students reported many benefits of career coaching. Students' confidence and belief in their own potential improved, their employability efforts became more focused and they became more resilient and able to think differently about their career options. However, in this study the most often mentioned feature of the coaching relationship by students was being given practical advice. This finding contradicted the coaching literature as there is common agreement that a coach should not provide advice (Whitmore, 2002) or act as an expert, "Coach and coachee are both tempted by the hope for the answer. But if it comes from the coach it can lessen the coachee's confidence in her own problem-solving ability." (Hardingham *et al.*, 2004, p.14). Practical advice was followed by the importance of trust and commitment of the coach. Coaches also acted as role model for students. They motivated and inspired students and enabled them to relate to the professional work environment more effectively.

Despite the quantitative and qualitative findings of the study showing different results in some of the findings, adapting the mixed methods approach resulted in the overall outcome of the study being 'more than the sum of its parts' (Moffatt *et al.*, 2006:7). Quantitative data showed that students displayed high self-efficacy and vocational outcome expectations. Analysing quantitative findings on their own would have resulted in confirmation that self-efficacy is associated with

employability efforts. However, qualitative examination of findings showed that students' self-efficacy beliefs were inhibited and employability efforts were moderated by other variables such as, for example, competition from Russell Group students. The qualitative findings also revealed a new variable, such as *the locus of control*, that was not originally a part of the SCCT framework. Finally, qualitative findings also provided evidence of perceived ethnic discrimination. However, only quantitative analyses allowed the study to discover the true magnitude of the impact of ethnicity on students' self-efficacy, outcome expectations and employability efforts.

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VII. APPENDICES

Appendix 3.1.: Career Coaching Application Form 2014-2015 f or IBM UK

University of Greenwich and IBM UK
Business School and School of Computing and Mathematical Sciences
Career Coaching Application Form 2014-2015

UNIVERSITY of GREENWICH

Your full name:	
Student ID Number:	
Programme of Study:	
Year of Study:	
Mobile number:	
Student e-mail address:	

Q1 - Why would you like to participate in this career coaching scheme? (150 words)
Q2 - What are your aims for taking part in this scheme? (150 words)
Q3 - The recommended time commitment to meet/contact your coach is around two hours of contact time each month for six months. What sort of questions would you aim to ask/explore during your time with your coach? (please list 6 questions)
Q4 - Please mark from 1-5 your preferred business line: - Business - Finance - Technical - Marketing - Consulting
Q5 - Are you planning on applying to the IBM Placement year? If so, why? (150 words)

Q6 - In your ideal job, what would be the top three reasons for making it ideal? e.g. lots of variety, working with people, high paid salary etc. (150 words)
By completing and returning this document, you are agreeing to the terms and conditions below: 1) I understand that a successful career coaching scheme does not require the coach to be working in the same job or career area that their coachee has chosen for themselves. It is the coach's supportive character, their interpersonal skills and their broad professional experience that encourages their coachees progress. 2) I understand that my coach will either be a current placement student or a graduate from IBM 3) I accept that coachs on the scheme do not offer employment opportunities, work experience or non-career-focused support 4) I am prepared to spend a reasonable time travelling (e.g. up to an hour each way), at my own expense, in order to meet with my coach at their place of work or other agreed location 5) I will respond promptly and professionally to communications form my coach and the coordinators of the career coaching scheme 6) I understand that the coordinators of the career coaching scheme can withdraw my application or membership at any time if I do not follow the above rules. 7) I understand that by completing this form there is no guarantee that I will be matched with a coach during academic year 2014-2015

Please upload to the PPD1 Moodle site by 10th November 2014.

Appendix 3.2: Preparation for a Career Coaching Scheme

Business School Employability Office
Helping you achieve your career potential

UNIVERSITY of GREENWICH

10 TOP TIPS FOR COACHEES

How can you make career coaching experience more meaningful?

Think About What you Want.

Think carefully about what you want out of the coachship. What are the questions you would like answered. You may want to discuss career opportunities, get your CV and Cover Letter checked, ask for suggestions on how to present more confidently and engage an audience or treat it as a networking exercise. The more you know your own goals, the more your coach can help you to achieve these.

Long Distance Relationships?

Think carefully about what kind of interactions you'd like with your coach. Having face to face meetings with your coach is an effective strategy. If this is not possible then Skype is a great tool to connect with a coach.

Don't Delay.

Once you get a coach match, try to contact your coach within two days of getting matched. Keep on top of things. **Remember your coach has taken time out of their busy work schedule to help YOU.**

Establish Expectations.

When you make contact with your coach for the first time, take some time to establish expectations of how you'd like your relationship to be. For example, do you want more personal advice vs. more career advice/professional advice, will you meet once a week vs. once a month, will you meet in person, over the phone or Skype.

Key Skills of Coachee.

Listening in order to understand

Questioning to clarify and make sure you've understood correctly

Questioning to explore additional options and consequences

Being prepared to act on what has been agreed with their coach

Be Proactive.

If your coach hasn't responded to you in a while, don't be shy about emailing or calling him/her again. He/she may be very busy or they may have missed your email. Remember, your coach signed up for the program because of his/her interest in career coaching. If you don't hear after several attempts, contact the program staff at: busemployability@gre.ac.uk.

Make It Personal.

Be sure to get to know your coach on a personal level. While coachs are excellent career resources, you can learn a lot from their personal stories as well. Remember they have experience similar concerns.

Build successful relationship

Draw up regularly spaced timetable of meeting with your coach

Ensure that you keep up with the time commitment

Keep notes of your meetings, and use these as the basis for ongoing discussions

If getting delayed for a meeting, remember to send a text message in advance

If unable to attend a meeting, remember to send an email 24 hours prior to the meeting. Don't forget to state the reason for non-attendance

Keep It Consistent.

Even if you are unable to establish a mutual time to meet with your coach face to face always maintain contact via Skype or email every couple of weeks. If you don't maintain regular contact you may run the risk of the coachship failing altogether.

Let BSEO Help!

If you ever face problems making contact with your coach or if you have any concerns, please contact the BSEO team for advice and help. The team is here to help you build a good relationship with your coach.

Contact us at: busemployability@gre.ac.uk

Business School Employability Office
Helping you achieve your career potential

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Your First Conversation

Getting Started

Your first meeting with the coach should ideally be a face to face, either in his office space or coffee shop nearby. Under no circumstances should the meetings take place in a personal home.

The most important thing to do in your first conversation is to introduce yourself and build rapport. Building rapport simply means attempting to get to know someone on a personal level. It might be helpful to reread your coach's profile and ask questions based on the information he/she provided. You can think about what you want to share with your coach about your background, Greenwich experience and interests.

Following are some question ideas to ask your coach. Choose a few beforehand and then let the conversation flow.
Can you share your experience of finding your first job?
How do you maintain a balance between your work life and social life?
Where do you live? Do you find it easy to travel between places?
I would like to have a career in…….What would be a best way to start job search?
What should I do to expand my network and meet people from the industry?

The coachs are excited to talk with you so don't worry too much about saying the right thing. Remember to communicate your enthusiasm and gratitude about working with your coach.

Setting Goals and Expectations

Treat your first meeting as an ice-breaker. However, it's a great opportunity for you to set goals and expectations for future meeting. Make a list of your days and time of availability before meeting your coach and check if he can accommodate during those times. If not, then discuss possibility of skype calls or emails. This is a critical step in developing your relationship with the coach.
Discuss the agenda for each of the meetings or atleast the next meeting. Obviously, there will always be space for additional discussions. Don't be shy to talk to your coach about any concerns. You never know your coach might have faced similar situations in the past or might help by connecting you to the right person.

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INTRODUCTORY EMAIL TEMPLATE

Dear _____,

My name is _____, and I received your contact details from the BSEO Career Career coaching Team. Thank you for accepting me as your coachee. I attended a workshop by BSEO on Career Career coaching Scheme and how it benefitted students in the previous cohort towards developing clarity on career goals, networking and job search.

I am a second year student majoring in international business. Outside of classes I volunteer in the Sustainability Hub through the Student Union from University of Greenwich. I am also very involved in the Greenwich Undergraduate Sports Association, primarily helping with the marketing and communications.

I am interested in learning about the rewards and challenges of working in an organization, and how I can best prepare while at Greenwich, to work in this environment after graduation.

The BSEO staff suggested that the first step is for us to talk over the phone, via Skype or in person and go over the questions on the Career coaching Agreement form. I look forward to hearing from you to arrange a time to talk.

Thank you again for agreeing to be my coach. I look forward to hearing from you.

Sincerely,

Introduction: Who are

Share your background: year, major, activities, jobs, clubs.

Share what you hope to gain from the career coaching experience –

In closing, ask to set up a time to talk, and mention the Career coaching Agreement form.

Appendix 3.3: Career Coaching Workshop Presentation, 2014

One to one meetings with professionals in industry

6 months, from January to June 2015

Career focused

Open to all students of the Business School

Two hours of contact time per month for the six month career coaching scheme.

Contact time = meetings/e-mails/phone calls.

Meetings ideally at coach's offices.

Scheme formally ends on 30 June 2015.

Appendix 3.4: Time 1 Questionnaire

Hello and thank you for taking time to fill in this questionnaire.

First Name: _____

Surname: _____

Student ID: _____

Your University Email address: _____

Your Personal Tutor: _____

Have you completed a placement or an internship or a Mentoring Scheme at the University of Greenwich?

Yes ❒ No ❒

Have you completed a placement or an internship or a Mentoring Scheme elsewhere?

Yes ❒ No ❒

If yes, please provide details here (where, when and what type):

……

Are you an Erasmus student?

Yes ❒ No ❒

By completing this questionnaire, you are giving permission for your data to be used in this academic study by the researcher, Joanna Molyn, from the University of Greenwich. Please email Joanna (mj59@gre.ac.uk) if you have any questions about the research or wish to receive the summary of the results.

Please take care to answer every question, as missing data will impact the quality of the research results. Individual responses will be only used to identify changes in self-efficacy and job seeking behaviour levels and will remain anonymous. This questionnaire has four sections.

Please return this completed questionnaire to the Queen Mary Business School Office, QM Building, 2nd Floor. Please put it in the box titled 'Students' Self-Efficacy and Job Seeking Behaviours Research Data Collection Point'. Ask members of staff for assistance if you need any help.

Thank you for your participation.

Joanna Molyn

Student
University of Greenwich Business School, HH202
Park Row, London SE10 9LS
tel. +44 208 331 9864
email. mj59@gre.ac.uk

Section 1.

INSTRUCTIONS: For each statement below, please read carefully and indicate how much confidence you have that you could accomplish each of these tasks by marking your answer according to the following 5-point continuum. Mark your answer by ticking the correct box in the answer sheet.

NB: Please note the following:

Questions 2, 4, 7,13, 20, 25: a US 'major' is equivalent to a UK 'degree'

Questions 12, 28: a US 'resume' is equivalent to a UK 'CV'

Question 23: a US 'graduate or professional schools' is equivalent to a UK 'postgraduate studies or professional qualifications'.

		No Confidence at All	**Very Little Confidence**	**Moderate Confidence**	**Much Confidence**	**Complete Confidence**
1.	Use the internet to find information about occupations that interest you.	❒	❒	❒	❒	❒
2.	Select one major from a list of potential degrees you are considering.	❒	❒	❒	❒	❒
3.	Make a plan of your goals for the next five years.	❒	❒	❒	❒	❒
4.	Determine the steps to take if you are having academic trouble with an aspect of your chosen major.	❒	❒	❒	❒	❒
5.	Accurately assess your abilities.	❒	❒	❒	❒	❒
6.	Select one occupation from a list of potential occupations you are considering.	❒	❒	❒	❒	❒
7.	Determine the steps you need to take to successfully complete your chosen major.	❒	❒	❒	❒	❒
8.	Persistently work at your degree or career goal even when you get frustrated.	❒	❒	❒	❒	❒
9.	Determine what your ideal job would be.	❒	❒	❒	❒	❒
10.	Find out the employment trends for an occupation in the next decade.	❒	❒	❒	❒	❒
		No	**Very**	**Moderate**	**Much**	**Complete**

		Confidence at All	Little Confidence	Confidence	Confidence	Confidence
11.	Choose a career that fit your preferred lifestyle.	❒	❒	❒	❒	❒
12.	Prepare a good resume.	❒	❒	❒	❒	❒
13.	Change majors if you did not like your first choice.	❒	❒	❒	❒	❒
14.	Decide what you value most in an occupation.	❒	❒	❒	❒	❒
15.	Find out about average yearly earnings of people in an occupation.	❒	❒	❒	❒	❒
16.	Make a career decision and then not worry about whether it was right or wrong.	❒	❒	❒	❒	❒
17.	Change occupations if you are not satisfied with the one you enter.	❒	❒	❒	❒	❒
18.	Figure out what you are and are not ready to sacrifice to achieve your career goals.	❒	❒	❒	❒	❒
19.	Talk with a person already employed in a field you are interested in.	❒	❒	❒	❒	❒
20.	Choose a major or career that will fit your interest.	❒	❒	❒	❒	❒
21.	Identify employers, firms, and institutions relevant to your career possibilities.	❒	❒	❒	❒	❒
22.	Define the type of lifestyle you would like to live.	❒	❒	❒	❒	❒
23.	Find information about graduate or professional schools.	❒	❒	❒	❒	❒
24.	Successfully manage the job interview process.	❒	❒	❒	❒	❒
25.	Identify some reasonable major or career alternatives if you are unable to get your first choice.	❒	❒	❒	❒	❒

Section 2.

Please indicate the frequency with which you have performed each task in the last 3 months:

		0 times	1 or 2 times	3 to 5 times	6 to 9 times	at least 10 times
26.	Read the help wanted/classified ads in a newspaper, journal, or professional association.	❒	❒	❒	❒	❒
27.	Listed yourself as a job applicant in a newspaper, journal, or professional association.	❒	❒	❒	❒	❒
28.	Prepared/revised your resume.	❒	❒	❒	❒	❒
29.	Sent out your resume to potential employers.	❒	❒	❒	❒	❒
30.	Filled out a job application.	❒	❒	❒	❒	❒
31.	Read a book or article about getting a job or changing jobs.	❒	❒	❒	❒	❒
32.	Had a job interview with a prospective employer.	❒	❒	❒	❒	❒
33.	Talked with friends or relatives about possible job leads.	❒	❒	❒	❒	❒
34.	Contacted an employment agency, executive search firm, or state employment service.	❒	❒	❒	❒	❒
35.	Spoke with previous employers or business acquaintances about their knowing of potential job leads.	❒	❒	❒	❒	❒
36.	Telephoned a prospective employer.	❒	❒	❒	❒	❒
37.	Used current within company resources (e.g., colleagues) to generate potential job leads.	❒	❒	❒	❒	❒
38.	Conducted information interviews to find out about careers and jobs that you are interested in pursuing.	❒	❒	❒	❒	❒
39.	Analyzed your interests and abilities to determine the best job for you.	❒	❒	❒	❒	❒
40.	Posted that you were looking for a job in social media such as Facebook, Twitter, LinkedIn.	❒	❒	❒	❒	❒

		0 times	1 or 2 times	3 to 5 times	6 to 9 times	at least 10 times
41.	Searched social media such as Facebook, Twitter, LinkedIn about possible job leads.	❒	❒	❒	❒	❒

Section 3.

Please tick each column with the answer that describes best your job search activities in the last three months:

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
42.	Spent a lot of time looking for job opportunities.	❒	❒	❒	❒	❒
43.	Devoted much effort to looking for a job.	❒	❒	❒	❒	❒
44.	Focused my time and effort on job search activities.	❒	❒	❒	❒	❒
45.	Gave best effort to find a new job.	❒	❒	❒	❒	❒

Section 4.

Please indicate the answer that classifies you best.

WHAT IS YOUR ETHNIC GROUP?

Choose one section from (a) to (e) and tick the appropriate box to indicate your cultural background

(a) WHITE
- ☐ British
- ☐ Irish
- ☐ Any other White background *please write in below*

……

(b) BLACK or BLACK BRITISH
- ☐ Caribbean
- ☐ African
- ☐ Any other Black background *please write in below*

…….

(c) ASIAN or ASIAN BRITISH
- ☐ Indian
- ☐ Pakistani
- ☐ Bangladeshi
- ☐ Any other Asian background *please write below*

……..

(d) MIXED
- ☐ White and Black Caribbean
- ☐ White and Black African
- ☐ White and Asian
- ☐ Any other Mixed background *please write below*

(e) CHINESE or OTHER ETHNIC GROUP
- ☐ Chinese
- ☐ Any other Mixed background *please write below*

……

AGE		**DATE of BIRTH (day/month/year) for example example 1st January 1996 will be 01/02/1996**	../../….	MALE ❒	FEMALE ❒

WHAT IS YOUR CURRENT YEAR OF STUDY?	☐ Year 1 ☐ Year 2 ☐ Year 3
WHAT IS YOUR PROGRAMME OF STUDY AND YOUR DEGREE? Choose one section from (a) to (i) and tick the appropriate box to indicate your programme of study and your corresponding degree	
(a) ACCOUNTING & FINANCE PROGRAMME ☐ Accounting & Finance, BA Hons ☐ Accounting & Financial Information Systems, BA Hons ☐ Finance, BSc Hons	(b) ADVERTISING, PUBLIS RELATIONS AND MARKETING PROGRAMME ☐ Advertising and Marketing Communications with Language, BA Hons ☐ Advertising and Marketing Communications, BA Hons ☐ Marketing (Year 3 Entry), BA Hons (Top-up) ☐ Marketing with Language, BA Hons ☐ Marketing, BA Hons ☐ Public Relations and Communications, BA Hons ☐ Public Relations, BA Hons
(c) BUSINESS AND MANAGEMENT ☐ Business Entrepreneurship and Innovation, BA Hons ☐ Business Management, BA Hons ☐ Business Psychology, BA Hons ☐ Business Studies (Year 3 Direct Entry), BA Hons ☐ Business with Finance, BA Hons ☐ Business with Human Resource Management, BA Hons ☐ Business with Law, BA Hons ☐ Business with Marketing, BA Hons ☐ Business, BSc Hons ☐ Business, BSc Hons (part-time) ☐ International Business with Language, BA Hons ☐ International Business, BA Hons ☐ Business Law, BA Hons ☐ Business with Language, BA Hons ☐ Business Studies, BA Hons	(d) ECONOMICS PROGRAMME ☐ Business Economics, BA Hons ☐ Economics with Banking, BSc Hons ☐ Economics with Languages, BA Hons ☐ Economics, BSc Hons
(e) EVENTS MANAGEMENT PROGRAMME ☐ Events Management, BA Hons ☐ Hospitality Management, BA Hons ☐ Tourism Management with Language, BA Hons	(f) HUMAN RESOURCE MANAGEMENT PROGRAMME ☐ Human Resource Management, BA Hons

☐ Tourism Management, BA Hons	
(g) LOGISTICS AND SUPPLY CHAIN MANAGEMENT PROGRAMME ☐ Business Logistics and Transport Management, BA Hons ☐ Business Purchasing and Supply Chain Management, BA Hons	h) OTHER (write the details below if none of the options above apply to you): ……

Appendix 3.5: Time 2 Questionnaire

Hello and thank you for taking time to fill in this questionnaire.

First Name: _____

Surname: _____

Student ID: _____

Your University Email address: _____

By completing this questionnaire, you are giving permission for your data to be used in this academic study by the researcher, Joanna Molyn, from the University of Greenwich. Please email Joanna (mj59@gre.ac.uk) if you have any questions about the research or wish to receive the summary of the results.

Please take care to answer every question, as missing data will impact the quality of the research results. Individual responses will be only used to identify changes in self-efficacy and job seeking behaviour levels and will remain anonymous. This questionnaire has five sections.

Please return this completed questionnaire to the Queen Mary Business School Office, QM Building, 2nd Floor. Please put it in the box titled 'Students' Self-Efficacy and Job Seeking Behaviours Research Data Collection Point'. Ask members of staff for assistance if you need any help.

Thank you for your participation.

Joanna Molyn

Student
University of Greenwich Business School, HH202
Park Row, London SE10 9LS
tel. +44 208 331 9864
email. mj59@gre.ac.uk

Section 1.

Are you currently a placement student?

Yes ❒ No ❒

Have you completed Mentoring Scheme at the University of Greenwich in the 2014-2015 academic year?

Yes ❒ No ❒

If your answer is No, go to Section 2 on page 3 now.

If your answer is Yes:

Please provide the name of your mentor here:

……

Please provide your mentor's company here:

……

Section 2

NB: Please note the following:

Questions 2, 4, 7,13, 20, 25: a US 'major' is equivalent to a UK 'degree'

Questions 12, 28: a US 'resume' is equivalent to a UK 'CV'

Question 23: a US 'graduate or professional schools' is equivalent to a UK 'postgraduate studies or professional qualifications'.

INSTRUCTIONS: For each statement below, please read carefully and indicate how much confidence you have that you could accomplish each of these tasks by marking your answer according to the following 5-point continuum. Mark your answer by ticking the correct box in the answer sheet.

		No Confidence at All	**Very Little Confidence**	**Moderate Confidence**	**Much Confidence**	**Complete Confidence**
1.	Use the internet to find information about occupations that interest you.	❒	❒	❒	❒	❒
2.	Select one major from a list of potential degrees you are considering.	❒	❒	❒	❒	❒
3.	Make a plan of your goals for the next five years.	❒	❒	❒	❒	❒
		No Confidence at All	**Very Little Confidence**	**Moderate Confidence**	**Much Confidence**	**Complete Confidence**

4.	Determine the steps to take if you are having academic trouble with an aspect of your chosen major.	❒	❒	❒	❒	❒
5.	Accurately assess your abilities.	❒	❒	❒	❒	❒
6.	Select one occupation from a list of potential occupations you are considering.	❒	❒	❒	❒	❒
7.	Determine the steps you need to take to successfully complete your chosen major.	❒	❒	❒	❒	❒
8.	Persistently work at your degree or career goal even when you get frustrated.	❒	❒	❒	❒	❒
9.	Determine what your ideal job would be.	❒	❒	❒	❒	❒
10.	Find out the employment trends for an occupation in the next decade.	❒	❒	❒	❒	❒
11.	Choose a career that fit your preferred lifestyle.	❒	❒	❒	❒	❒
12.	Prepare a good resume.	❒	❒	❒	❒	❒
13.	Change majors if you did not like your first choice.	❒	❒	❒	❒	❒
14.	Decide what you value most in an occupation.	❒	❒	❒	❒	❒
15.	Find out about average yearly earnings of people in an occupation.	❒	❒	❒	❒	❒
16.	Make a career decision and then not worry about whether it was right or wrong.	❒	❒	❒	❒	❒
17.	Change occupations if you are not satisfied with the one you enter.	❒	❒	❒	❒	❒
18.	Figure out what you are and are not ready to sacrifice to achieve your career goals.	❒	❒	❒	❒	❒
19.	Talk with a person already employed in a field you are interested in.	❒	❒	❒	❒	❒
20.	Choose a major or career that will fit your interest.	❒	❒	❒	❒	❒

		No Confidence at All	Very Little Confidence	Moderate Confidence	Much Confidence	Complete Confidence
21.	Identify employers, firms, and institutions relevant to your career possibilities.	❒	❒	❒	❒	❒
22.	Define the type of lifestyle you would like to live.	❒	❒	❒	❒	❒
23.	Find information about graduate or professional schools.	❒	❒	❒	❒	❒
24.	Successfully manage the job interview process.	❒	❒	❒	❒	❒
25.	Identify some reasonable major or career alternatives if you are unable to get your first choice.	❒	❒	❒	❒	❒

Section 3.

Please indicate the frequency with which you have performed each task in the last 3 months:

		0 times	1 or 2 times	3 to 5 times	6 to 9 times	at least 10 times
26.	Read the help wanted/classified ads in a newspaper, journal, or professional association.	❒	❒	❒	❒	❒
27.	Listed yourself as a job applicant in a newspaper, journal, or professional association.	❒	❒	❒	❒	❒
28.	Prepared/revised your resume.	❒	❒	❒	❒	❒
29.	Sent out your resume to potential employers.	❒	❒	❒	❒	❒
30.	Filled out a job application.	❒	❒	❒	❒	❒
31.	Read a book or article about getting a job or changing jobs.	❒	❒	❒	❒	❒
32.	Had a job interview with a prospective employer.	❒	❒	❒	❒	❒
33.	Talked with friends or relatives about possible job leads.	❒	❒	❒	❒	❒
34.	Contacted an employment agency, executive search firm, or state employment service.	❒	❒	❒	❒	❒

		0 times	**1 or 2 times**	**3 to 5 times**	**6 to 9 times**	**at least 10 times**
35.	Spoke with previous employers or business acquaintances about their knowing of potential job leads.	❒	❒	❒	❒	❒
36.	Telephoned a prospective employer.	❒	❒	❒	❒	❒
37.	Used current within company resources (e.g., colleagues) to generate potential job leads.	❒	❒	❒	❒	❒
38.	Conducted information interviews to find out about careers and jobs that you are interested in pursuing.	❒	❒	❒	❒	❒
39.	Analyzed your interests and abilities to determine the best job for you.	❒	❒	❒	❒	❒
40.	Posted that you were looking for a job in social media such as Facebook, Twitter, LinkedIn.	❒	❒	❒	❒	❒
41.	Searched social media such as Facebook, Twitter, LinkedIn about possible job leads.	❒	❒	❒	❒	❒

Section 4.

Please tick each column with the answer that describes best your job search activities in the last three months:

		Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
42.	Spent a lot of time looking for job opportunities.	❒	❒	❒	❒	❒
43.	Devoted much effort to looking for a job.	❒	❒	❒	❒	❒
44.	Focused my time and effort on job search activities.	❒	❒	❒	❒	❒
45.	Gave best effort to find a new job.	❒	❒	❒	❒	❒

Section 5.

Please tick each column with the answer that describes best how you feel about the following statements:

		Strongly Disagree	**Disagree**	**Agree**	**Strongly Agree**
46.	My career planning will lead to a satisfying career for me.	❒	❒	❒	❒
47.	I will be successful in my chosen career/occupation.	❒	❒	❒	❒
48.	The future looks bright for me.	❒	❒	❒	❒
49.	My talents and skills will be used in my career/occupation.	❒	❒	❒	❒
50.	I have control over my career decisions.	❒	❒	❒	❒
51.	I can make my future a happy one.	❒	❒	❒	❒
52.	I will get the job I want in my chosen career.	❒	❒	❒	❒
53.	My career/occupation choice will provide the income I need.	❒	❒	❒	❒
54.	I will have a career/occupation that is respected in our society.	❒	❒	❒	❒
55.	I will achieve my career/occupational goals.	❒	❒	❒	❒
56.	My family will approve of my career/occupation choice.	❒	❒	❒	❒
57.	My career/occupation choice will allow me to have the lifestyle that I want.	❒	❒	❒	❒

Appendix 3.6: Time 1 Gender Descriptive Statistics

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Male	448	46.9	47.3	47.3
	2 Female	500	52.4	52.7	100.0
	Total	948	99.3	100.0	
Missing	System	7	.7		
Total		955	100.0		

Appendix 3.7: The Interview Schedule

3.7.1. The Interview Schedule Experimental Group

Theme: The Role and Effectiveness of Career Coaching in Increasing Career Self-Efficacy, Outcome Expectancies and Employability Efforts of the Higher Education Students.

Note to Interviewer: *Instructions to you are in italics. Questions for you to read out are in* normal *print.*

Interview Reference Number:

Read out the following:

I am conducting a doctoral research study about students' career self-efficacy **(Can I do this?)**, outcome expectancy **(If I do this, what will happen?)** and employability efforts. I am also investigating the role and effectiveness of career coaching in increasing students' career self-efficacy, outcome expectancies and employability efforts.

Would you mind answering a few questions? (*If they decline, discontinue the interview and thank them.*)

Your answers will be treated with confidentiality. All responses will remain anonymous. Can I have your permission to record this interview?

Prior to starting the interview ask the student to sign the Participant Consent Form attached at the bottom of the Interview Schedule.

1. In the recent past, can you tell me about your efforts to get a job?
2. Have you ever had an experience of being turned down for a job which made you think that discrimination may have been occurring? If yes, can you tell me why?
3. Do you believe that you have as many career options as others? Can you tell me why?
4. What would you like to achieve in your professional life?
5. Some people claim that if you want a job you can get it. What do you think?

6. Have there been any experiences in your life that have damaged your self-confidence? Can you describe them?
7. Tell me about your relationship with your career coach. Did you feel that your coach tried to establish a trusting relationship with you? How?
8. During the period of coaching, did your beliefs about your potential to succeed in your chosen career path change?

[if yes] How do you think coaching helped?

[if not] why not?

9. What aspects of your conversations with the coach helped your beliefs about seeking a job?
10. Do you have anybody amongst friends and family that you can turn for help in getting a job you want?
11. Do you have any family role models in your life that have inspired you?
12. What are the expectations in your family with regard to you pursuing certain careers?

Thank you very much for taking the time to answer my questions.

(*Double check their phone number or other contact details on the first page)*

3.7.2. Experimental Group Participant Consent Form

To be completed by the participant. If the participant is under 18, to be completed by the parent / guardian / person acting *in loco parentis*.

- I have read the information sheet about this study
- I have had an opportunity to ask questions and discuss this study
- I have received satisfactory answers to all my questions
- I have received enough information about this study
- I understand that I am / the participant is free to withdraw from this study:
    - At any time (until such date as this will no longer be possible, which I have been told)
    - Without giving a reason for withdrawing
    - (If I am / the participant is, or intends to become, a student at the University of Greenwich) without affecting my / the participant's future with the University
    - Without affecting any medical or nursing care I / the participant may be receiving.
- I understand that my research data may be used for a further project in anonymous form, but I am able to opt out of this if I so wish, by ticking here. ☐
- I agree to take part in this study
- I agree for the interview to be recorded

Signed (participant)	Date
Name in block letters	
Signed (parent / guardian / other) (if under 18)	Date
Name in block letters	
Signature of researcher	Date
This project is supervised by: Professor David Gray, Dr Lesley Catchpole, Dr Julia Mundy	
Researcher's contact details (including telephone number and e-mail address): Joanna Molyn Student University of Greenwich Business School, HH202 Park Row, London SE10 9LS tel. +44 208 331 9864 email. mj59@gre.ac.uk	

3.7.3. Experimental Group Information Sheet

Dear Student,

I would like to invite you to take part in my research project that is going to investigate employability efforts of the University of Greenwich, Business School students.

I am a doctoral student at the University of Greenwich engaged in research for the purpose of satisfying a requirement for a Doctor of Philosophy degree.
This project is designed to examine your self-belief, expectations and confidence that make you undertake certain activities, tasks and behaviours in order to seek employment and to develop your career. I will be also looking at the career coaching scheme (known as a mentoring scheme) to see how effective it is in helping you to develop your beliefs, expectations and confidence for you to develop your career.

If you agree to participate, you will be asked to complete the attached questionnaire. It should take the maximum of 20 minutes to fill in. This questionnaire will help me to identify your levels of self-belief and your levels of engagement in job-seeking behaviours prior to starting your mentoring scheme either in November 2014 or January 2015. This questionnaire will measure your level of self-belief, expectations and confidence with regard to your career. It will also measure your job search intensity and effort.

In October 2015 you will be asked to fill in this questionnaire again – after you have finished their mentoring scheme - for me to be able to measure any changes in your level of self-belief, expectations and confidence with regard to your career and job searches. This will help me to identify any changes in your levels of self-belief and in your job-seeking behaviours. I will be able to compare your levels of change with students who have not attended a mentoring scheme. This will allow me to measure the impact and effectiveness of the mentoring scheme. Depending on your level of change I may invite

you in the period October 2015-December 2016 for a 30 min interview to discuss in more detail your views about your career, about effectiveness of career coaching and reasons why you have self-selected yourself for a career coaching scheme. You might be also invited to take part in a focus group.

The examples of self-belief questions you will receive and will have to indicate a response on a scale from 'Not at all true' to 'Exactly true' are as follows: "I can always manage to solve difficult problems if I try hard enough" or "It is easy for me to stick to my aims and accomplish my goals'.
The job search intensity questions will ask you to indicate how frequently (from 'Never' to 'Very Frequently' in the last three months you have performed the following activities, for example: "Prepared/revised your CV." or "Filled out a job application."
You will be also asked about your effort with regard to job search when you indicate whether you "Spent a lot of time looking for job opportunities."(from 'Strongly Disagree' to 'Strongly Agree').
In the final section you will be asked to give general information about your age, sex and your ethnic group.

Benefits: There are no direct benefits to for agreeing to be in this study. Please understand that although you may not benefit directly from participation in this study, you have the opportunity to enhance knowledge necessary to select and pair mentors to students and also the type of training needed by mentors and students in order to help students with their confidence levels and job seeking activities. If you have any concerns about the risks/benefits of participating in this study, you can contact the investigator and/or the university's research committee.

Cost and Payments to the Participant: There is no cost for participation in this study. Participation is completely voluntary and no payment will be provided.

Confidentiality: I would like to reassure you that all data will be confidential and anonymised, i.e. fictional names or a mixture of letters or numbers will be used to represent your name. The file will be locked in a secure filing cabinet. Published researched will be anonymised. The members of the public will be able to read the thesis but the data will not be traceable back to you. You will have the opportunity to read the

data if you wish to do so. Your details will be used only for the purpose of this research and will not be used for any other reasons, marketing or otherwise. You will be able to access your data if necessary.

Participant's Right to Withdraw from the Study: You have the right to refuse to participate in this study and the right to withdraw from the study at any time without penalty.

Should you have any more questions please do not hesitate to contact me on my email mj59@gre.ac.uk or book an appointment to see me in person.

Yours faithfully,

Joanna Molyn
Student
University of Greenwich
Business School, HH202
Park Row, London SE10 9LS
tel. +44 208 331 9864
email. mj59@gre.ac.uk

3.7.4. The Interview Schedule Control Group

Theme: The Role and Effectiveness of Career Coaching in Increasing Career Self-Efficacy, Outcome Expectancies and Employability Efforts of the Higher Education Students.

Note to Interviewer: *Instructions to you are in italics. Questions for you to read out are in* normal *print.*

Interview Reference Number:

Read out the following:

I am conducting a doctoral research study about students' career self-efficacy **(Can I do this?)**, outcome expectancy **(If I do this, what will happen?)** and employability efforts. I am also investigating the role and effectiveness of career coaching in increasing students' career self-efficacy, outcome expectancies and employability efforts.

Would you mind answering a few questions? (*If they decline, discontinue the interview and thank them.*)

Your answers will be treated with confidentiality. All responses will remain anonymous. Can I have your permission to record this interview?

Prior to starting the interview ask the student to sign the Participant Consent Form attached at the bottom of the Interview Schedule.

1. In the recent past, can you tell me about your efforts to get a job?
2. Have you ever had an experience of being turned down for a job which made you think that discrimination may have been occurring? If yes, can you tell me why?
3. Do you believe that you have as many career options as others? Can you tell me why?
4. What would you like to achieve in your professional life?
5. Some people claim that if you want a job you can get it. What do you think?
6. Have there been any experiences in your life that have damaged your self-confidence? Can you describe them?
7. Do you have anybody amongst friends and family that you can turn for help in getting a job you want?
8. Do you have any family role models in your life that have inspired you?

9. What are the expectations in your family with regard to you pursuing certain careers?

Thank you very much for taking the time to answer my questions.

(*Double check their phone number or other contact details on the first page)*

3.7.5. Control Group Participant Consent Form

To be completed by the participant. If the participant is under 18, to be completed by the parent / guardian / person acting *in loco parentis*.

- I have read the information sheet about this study
- I have had an opportunity to ask questions and discuss this study
- I have received satisfactory answers to all my questions
- I have received enough information about this study
- I understand that I am / the participant is free to withdraw from this study:
    - At any time (until such date as this will no longer be possible, which I have been told)
    - Without giving a reason for withdrawing
    - (If I am / the participant is, or intends to become, a student at the University of Greenwich) without affecting my / the participant's future with the University
    - Without affecting any medical or nursing care I / the participant may be receiving.
- I understand that my research data may be used for a further project in anonymous form, but I am able to opt out of this if I so wish, by ticking here. ☐
- I agree to take part in this study
- I agree for the interview to be recorded

Signed (participant)	Date
Name in block letters	
Signed (parent / guardian / other) (if under 18)	Date
Name in block letters	
Signature of researcher	Date
This project is supervised by: Professor David Gray, Dr Lesley Catchpole, Dr Julia Mundy	
Researcher's contact details (including telephone number and e-mail address): Joanna Molyn Student University of Greenwich Business School, HH202 Park Row, London SE10 9LS tel. +44 208 331 9864 email. mj59@gre.ac.uk	

3.7.6. Control Group Information Sheet

Dear Student,

I would like to invite you to take part in my doctorate research project "Measuring the Effectiveness of Career Coaching in Increasing Higher Education Students' Career Self-Efficacy and Job Search Behaviour".
This invitation is open to you if you have **never** taken part in the Business School or GET career coaching scheme (known as a mentoring scheme) during your studies at the Business School at the University of Greenwich.

I am a doctoral student at the University of Greenwich engaged in research for the purpose of satisfying a requirement for a Doctor of Philosophy degree. The purpose of this study is to examine your self-belief, expectations and confidence that make you undertake certain activities, tasks and behaviours in order to seek employment and to develop your career. I will be also looking at the career coaching scheme to see how effective it is in helping you to develop your beliefs, expectations and confidence for you to develop your career.

If you agree to participate, you will be asked to complete the attached questionnaire. It should take the maximum of 20 minutes to fill in. This questionnaire will help me to identify your levels of self-belief and your levels of engagement in job-seeking behaviours at the point of time equivalent to other Business School students who will be starting their career coaching scheme in November 2014 or January 2015.

In October 2015 you will be asked to fill in this questionnaire again - at the point of time equivalent to other Business School students who have finished their mentoring scheme - for me to be able to measure any changes in your level of self-belief, expectations and confidence with regard to your career and job searches. This will help me to identify any changes in your levels of self-belief and in your job-seeking behaviours. I will be able to

compare your levels of change with students who have attended a career coaching scheme. This will allow me to measure the impact and effectiveness of the career coaching scheme. Depending on your level of change I may invite you in the period October 2015-December 2016 for a 30 min interview to discuss in more detail your views about your career, about effectiveness of career coaching and reasons why you not self-selected yourself for a career coaching scheme.

The examples of self-belief questions you will receive and will have to indicate a response on a scale from 'Not at all true' to 'Exactly true' are as follows: "I can always manage to solve difficult problems if I try hard enough" or "It is easy for me to stick to my aims and accomplish my goals'.
The job search intensity questions will ask you to indicate how frequently (from 'Never' to 'Very Frequently' in the last three months you have performed the following activities, for example: "Prepared/revised your CV." or "Filled out a job application."
You will be also asked about your effort with regard to job search when you indicate whether you "Spent a lot of time looking for job opportunities."(from 'Strongly Disagree' to 'Strongly Agree').
In the final section you will be asked to give general information about your age, sex and your ethnic group.

Benefits: There are no direct benefits to for agreeing to be in this study. Please understand that although you may not benefit directly from participation in this study, you have the opportunity to enhance knowledge necessary to select and pair mentors to students and also the type of training needed by mentors and students in order to help students with their confidence levels and job seeking activities. If you have any concerns about the risks/benefits of participating in this study, you can contact the investigator and/or the university's research committee.

Cost and Payments to the Participant: There is no cost for participation in this study. Participation is completely voluntary and no payment will be provided.

Confidentiality: I would like to reassure you that all data will be confidential and anonymised, i.e. fictional names or a mixture of letters or numbers will be used to represent your name. The file will be locked in a secure filing cabinet. Published

researched will be anonymised. The members of the public will be able to read the thesis but the data will not be traceable back to you. You will have the opportunity to read the data if you wish to do so. Your details will be used only for the purpose of this research and will not be used for any other reasons, marketing or otherwise. You will be able to access your data if necessary.

Participant's Right to Withdraw from the Study: You have the right to refuse to participate in this study and the right to withdraw from the study at any time without penalty.

Should you have any more questions please do not hesitate to contact me on my email mj59@gre.ac.uk or book an appointment to see me in person.

Yours faithfully,

Joanna Molyn
Student
University of Greenwich
Business School, HH202
Park Row, London SE10 9LS
tel. +44 208 331 9864
email. mj59@gre.ac.uk

Appendix 3.8: Time 1 MANOVA Career Decision Self-Efficacy Mean Values for Different Ethnic Groups

Descriptive Statistics

	ETHNICITY	Mean	Std. Deviation	N
SelfAppraisal		3.6400	.67856	10
	1 White	3.7086	.57752	337
	2 Black or Black British	3.7897	.67236	116
	3 Asian or Asian British	3.5586	.59750	222
	4 Mixed	3.6000	.67689	34
	5 Chinese or Other Ethnic Group	3.4173	.57791	127
	Total	3.6314	.61176	846
OccupationalInformation		3.6600	.75454	10
	1 White	3.6463	.61062	337
	2 Black or Black British	3.6897	.65639	116
	3 Asian or Asian British	3.5171	.69333	222
	4 Mixed	3.5000	.72069	34
	5 Chinese or Other Ethnic Group	3.4331	.58758	127
	Total	3.5806	.64689	846
GoalSelection		3.4200	.41580	10
	1 White	3.6018	.56495	337
	2 Black or Black British	3.6448	.68326	116
	3 Asian or Asian British	3.5027	.63037	222
	4 Mixed	3.4176	.73091	34
	5 Chinese or Other Ethnic Group	3.3496	.61617	127
	Total	3.5343	.61909	846
Planning		3.7000	.62716	10
	1 White	3.5751	.62228	337
	2 Black or Black British	3.5621	.75431	116
	3 Asian or Asian British	3.3387	.67444	222
	4 Mixed	3.4000	.68755	34
	5 Chinese or Other Ethnic Group	3.2126	.60828	127
	Total	3.4513	.66987	846
ProblemSolving		3.4200	.56921	10
	1 White	3.4439	.65007	337
	2 Black or Black British	3.5345	.66713	116
	3 Asian or Asian British	3.2459	.65402	222
	4 Mixed	3.2941	.69148	34
	5 Chinese or Other Ethnic Group	3.1732	.57535	127
	Total	3.3574	.65408	846
TotalCDSE		3.5680	.57094	10
	1 White	3.5951	.51070	337
	2 Black or Black British	3.6441	.61043	116
	3 Asian or Asian British	3.4326	.55755	222
	4 Mixed	3.4424	.60822	34
	5 Chinese or Other Ethnic Group	3.3172	.50967	127
	Total	3.5110	.55238	846
PJSBtransformed		1.5403	.22949	10
	1 White	1.4340	.23176	337
	2 Black or Black British	1.4711	.28358	116
	3 Asian or Asian British	1.3906	.21163	222
	4 Mixed	1.3595	.24989	34
	5 Chinese or Other Ethnic Group	1.3857	.23326	127
	Total	1.4187	.23725	846
AJSB		2.4167	1.01607	10
	1 White	1.8492	.64415	337
	2 Black or Black British	2.1293	.90652	116
	3 Asian or Asian British	1.8033	.60049	222
	4 Mixed	1.7353	.67435	34
	5 Chinese or Other Ethnic Group	1.7454	.67938	127
	Total	1.8621	.69701	846
JSI		3.5500	.77996	10
	1 White	3.1172	1.12615	337
	2 Black or Black British	3.0366	1.11719	116
	3 Asian or Asian British	3.0608	1.01695	222
	4 Mixed	2.7794	1.04404	34
	5 Chinese or Other Ethnic Group	3.1024	.91306	127
	Total	3.0807	1.06076	846

Between-Subjects Factors

	Value Label	N
ETHNICITY		10
1	White	337
2	Black or Black British	116
3	Asian or Asian British	222
4	Mixed	34
5	Chinese or Other Ethnic Group	127

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
SelfAppraisal	1.295	5	840	.264
OccupationalInformation	2.232	5	840	.049
GoalSelection	2.001	5	840	.076
Planning	2.017	5	840	.074
ProblemSolving	1.062	5	840	.380
TotalCDSE	1.833	5	840	.104
PJSBtransformed	3.718	5	840	.002
AJSB	7.153	5	840	.000
JSI	2.452	5	840	.032

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + ETHNICITY

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.953	2097.874[b]	8.000	833.000	.000	.953
	Wilks' Lambda	.047	2097.874[b]	8.000	833.000	.000	.953
	Hotelling's Trace	20.148	2097.874[b]	8.000	833.000	.000	.953
	Roy's Largest Root	20.148	2097.874[b]	8.000	833.000	.000	.953
ETHNICITY	Pillai's Trace	.123	2.630	40.000	4185.000	.000	.025
	Wilks' Lambda	.882	2.659	40.000	3633.757	.000	.025
	Hotelling's Trace	.129	2.682	40.000	4157.000	.000	.025
	Roy's Largest Root	.076	7.910[c]	8.000	837.000	.000	.070

a. Design: Intercept + ETHNICITY

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	SelfAppraisal	11.946[a]	5	2.389	6.595	.000	.038
	OccupationalInformation	6.777[b]	5	1.355	3.283	.006	.019
	GoalSelection	8.099[c]	5	1.620	4.309	.001	.025
	Planning	17.343[d]	5	3.469	8.053	.000	.046
	ProblemSolving	13.401[e]	5	2.680	6.467	.000	.037
	TotalCDSE	10.770[f]	5	2.154	7.324	.000	.042
	PJSBtransformed	.978[g]	5	.196	3.529	.004	.021
	AJSB	14.458[h]	5	2.892	6.133	.000	.035
	JSI	6.111[i]	5	1.222	1.087	.366	.006
Intercept	SelfAppraisal	3074.124	1	3074.124	8485.991	.000	.910
	OccupationalInformation	2998.707	1	2998.707	7262.770	.000	.896
	GoalSelection	2857.899	1	2857.899	7602.549	.000	.901
	Planning	2817.614	1	2817.614	6541.174	.000	.886
	ProblemSolving	2637.140	1	2637.140	6363.549	.000	.883
	TotalCDSE	2875.079	1	2875.079	9775.379	.000	.921
	PJSBtransformed	480.097	1	480.097	8657.173	.000	.912
	AJSB	889.319	1	889.319	1886.129	.000	.692
	JSI	2266.875	1	2266.875	2015.648	.000	.706
ETHNICITY	SelfAppraisal	11.946	5	2.389	6.595	.000	.038
	OccupationalInformation	6.777	5	1.355	3.283	.006	.019
	GoalSelection	8.099	5	1.620	4.309	.001	.025
	Planning	17.343	5	3.469	8.053	.000	.046
	ProblemSolving	13.401	5	2.680	6.467	.000	.037
	TotalCDSE	10.770	5	2.154	7.324	.000	.042
	PJSBtransformed	.978	5	.196	3.529	.004	.021
	AJSB	14.458	5	2.892	6.133	.000	.035
	JSI	6.111	5	1.222	1.087	.366	.006
Error	SelfAppraisal	304.297	840	.362			
	OccupationalInformation	346.826	840	.413			
	GoalSelection	315.767	840	.376			
	Planning	361.830	840	.431			
	ProblemSolving	348.107	840	.414			
	TotalCDSE	247.056	840	.294			
	PJSBtransformed	46.584	840	.055			
	AJSB	396.064	840	.472			
	JSI	944.696	840	1.125			
Total	SelfAppraisal	11472.760	846				
	OccupationalInformation	11200.000	846				
	GoalSelection	10891.360	846				
	Planning	10456.280	846				
	ProblemSolving	9898.000	846				
	TotalCDSE	10686.669	846				
	PJSBtransformed	1750.300	846				
	AJSB	3343.944	846				
	JSI	8979.813	846				
Corrected Total	SelfAppraisal	316.244	845				
	OccupationalInformation	353.602	845				
	GoalSelection	323.866	845				
	Planning	379.174	845				
	ProblemSolving	361.508	845				
	TotalCDSE	257.826	845				
	PJSBtransformed	47.562	845				
	AJSB	410.522	845				
	JSI	950.807	845				

a. R Squared = .038 (Adjusted R Squared = .032)
b. R Squared = .019 (Adjusted R Squared = .013)
c. R Squared = .025 (Adjusted R Squared = .019)
d. R Squared = .046 (Adjusted R Squared = .040)
e. R Squared = .037 (Adjusted R Squared = .031)
f. R Squared = .042 (Adjusted R Squared = .036)
g. R Squared = .021 (Adjusted R Squared = .015)
h. R Squared = .035 (Adjusted R Squared = .029)
i. R Squared = .006 (Adjusted R Squared = .001)

Appendix 3.9: Time 1 Independent-Samples t-Test for the Self-Selected Group and the Rest of the Sample

Group Statistics

	GROUP TYPE	N	Mean	Std. Deviation	Std. Error Mean
SelfAppraisal	Rest of the Sample	682	3.6276	.61737	.02364
	Experimental Group	155	3.6361	.59192	.04754
OccupationalInformation	Rest of the Sample	682	3.5592	.64754	.02480
	Experimental Group	155	3.6658	.64671	.05195
GoalSelection	Rest of the Sample	682	3.5214	.62200	.02382
	Experimental Group	155	3.5794	.60910	.04892
Planning	Rest of the Sample	682	3.4364	.65756	.02518
	Experimental Group	155	3.5058	.72158	.05796
ProblemSolving	Rest of the Sample	682	3.3326	.65797	.02519
	Experimental Group	155	3.4542	.63463	.05097
TotalCDSE	Rest of the Sample	682	3.4954	.55214	.02114
	Experimental Group	155	3.5683	.55331	.04444
PJSBtransformed	Rest of the Sample	682	1.4092	.23766	.00910
	Experimental Group	155	1.4509	.22675	.01821
AJSB	Rest of the Sample	682	1.8458	.70292	.02692
	Experimental Group	155	1.9043	.61866	.04969
PJSB	Rest of the Sample	682	2.0422	.70409	.02696
	Experimental Group	155	2.1561	.67527	.05424
JSI	Rest of the Sample	682	3.0682	1.07259	.04107
	Experimental Group	155	3.1129	1.00494	.08072
Age	Rest of the Sample	682	21.76	5.109	.196
	Experimental Group	155	21.35	4.456	.358
Gender	Rest of the Sample	682	1.52	.500	.019
	Experimental Group	155	1.54	.500	.040

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
SelfAppraisal	Equal variances assumed	.769	.381	-.157	835	.875	-.00856	.05452	-.11558	.09846
	Equal variances not assumed			-.161	236.295	.872	-.00856	.05310	-.11317	.09604
OccupationalInformation	Equal variances assumed	.000	.997	-1.850	835	.065	-.10657	.05761	-.21964	.00650
	Equal variances not assumed			-1.851	229.479	.065	-.10657	.05756	-.21998	.00684
GoalSelection	Equal variances assumed	.286	.593	-1.051	835	.294	-.05795	.05514	-.16617	.05028
	Equal variances not assumed			-1.065	232.691	.288	-.05795	.05441	-.16515	.04926
Planning	Equal variances assumed	2.718	.100	-1.165	835	.244	-.06944	.05960	-.18643	.04755
	Equal variances not assumed			-1.099	215.877	.273	-.06944	.06319	-.19400	.05511
ProblemSolving	Equal variances assumed	.005	.941	-2.091	835	.037	-.12164	.05817	-.23582	-.00747
	Equal variances not assumed			-2.139	235.257	.033	-.12164	.05686	-.23366	-.00962
TotalCDSE	Equal variances assumed	.100	.751	-1.482	835	.139	-.07283	.04915	-.16931	.02364
	Equal variances not assumed			-1.480	228.939	.140	-.07283	.04922	-.16981	.02414
PJSBtransformed	Equal variances assumed	.304	.582	-1.988	835	.047	-.04168	.02097	-.08285	-.00052
	Equal variances not assumed			-2.047	237.156	.042	-.04168	.02036	-.08179	-.00157
AJSB	Equal variances assumed	.812	.368	-.955	835	.340	-.05850	.06123	-.17869	.06169
	Equal variances not assumed			-1.035	252.704	.302	-.05850	.05651	-.16980	.05279
PJSB	Equal variances assumed	.106	.745	-1.832	835	.067	-.11390	.06219	-.23596	.00816
	Equal variances not assumed			-1.880	236.245	.061	-.11390	.06057	-.23323	.00543
JSI	Equal variances assumed	.673	.412	-.474	835	.636	-.04472	.09436	-.22993	.14049
	Equal variances not assumed			-.494	240.420	.622	-.04472	.09057	-.22313	.13368
Age	Equal variances assumed	.091	.763	.928	835	.353	.413	.444	-.460	1.285
	Equal variances not assumed			1.012	254.640	.313	.413	.408	-.391	1.216
Gender	Equal variances assumed	1.839	.175	-.547	835	.584	-.024	.044	-.112	.063
	Equal variances not assumed			-.547	229.341	.585	-.024	.044	-.112	.063

Appendix 3.10: Time 1 MANOVA Group Comparison

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	ProblemSolving	29.784[a]	22	1.354	3.336	.000	.077
	PJSBtransformed	3.019[b]	22	.137	2.499	.000	.059
	PJSB	27.756[c]	22	1.262	2.603	.000	.061
Intercept	ProblemSolving	1544.213	1	1544.213	3805.185	.000	.812
	PJSBtransformed	280.737	1	280.737	5111.811	.000	.853
	PJSB	635.651	1	635.651	1311.286	.000	.598
GROUPTYPE	ProblemSolving	2.101	1	2.101	5.178	.023	.006
	PJSBtransformed	.380	1	.380	6.924	.009	.008
	PJSB	3.189	1	3.189	6.579	.010	.007
Gender	ProblemSolving	.171	1	.171	.421	.517	.000
	PJSBtransformed	.018	1	.018	.336	.562	.000
	PJSB	.156	1	.156	.321	.571	.000
ETHNICITY	ProblemSolving	8.221	5	1.644	4.052	.001	.023
	PJSBtransformed	.405	5	.081	1.475	.195	.008
	PJSB	4.046	5	.809	1.669	.139	.009
GROUPTYPE * Gender	ProblemSolving	.160	1	.160	.393	.531	.000
	PJSBtransformed	.429	1	.429	7.810	.005	.009
	PJSB	3.868	1	3.868	7.979	.005	.009
GROUPTYPE * ETHNICITY	ProblemSolving	2.520	5	.504	1.242	.287	.007
	PJSBtransformed	.745	5	.149	2.712	.019	.015
	PJSB	6.814	5	1.363	2.812	.016	.016
Gender * ETHNICITY	ProblemSolving	3.479	5	.696	1.715	.129	.010
	PJSBtransformed	.291	5	.058	1.059	.382	.006
	PJSB	2.889	5	.578	1.192	.311	.007
GROUPTYPE * Gender * ETHNICITY	ProblemSolving	.857	4	.214	.528	.715	.002
	PJSBtransformed	.150	4	.037	.681	.605	.003
	PJSB	1.375	4	.344	.709	.586	.003
Error	ProblemSolving	357.120	880	.406			
	PJSBtransformed	48.329	880	.055			
	PJSB	426.583	880	.485			
Total	ProblemSolving	10567.440	903				
	PJSBtransformed	1871.500	903				
	PJSB	4333.090	903				
Corrected Total	ProblemSolving	386.904	902				
	PJSBtransformed	51.348	902				
	PJSB	454.339	902				

a. R Squared = .077 (Adjusted R Squared = .054)

b. R Squared = .059 (Adjusted R Squared = .035)

c. R Squared = .061 (Adjusted R Squared = .038)

MANOVA analysis has confirmed statically significant differences between both groups in terms of Problem Solving (Sig. value of .023) and PJSB (Sig. value of . 009).

Appendix 3.11. Time 2 MANOVA Comparison between the Experimental and Control Group at Time 1

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.985	1865.210[b]	8.000	222.000	.000	.985
	Wilks' Lambda	.015	1865.210[b]	8.000	222.000	.000	.985
	Hotelling's Trace	67.215	1865.210[b]	8.000	222.000	.000	.985
	Roy's Largest Root	67.215	1865.210[b]	8.000	222.000	.000	.985
Groups	Pillai's Trace	.026	.732[b]	8.000	222.000	.664	.026
	Wilks' Lambda	.974	.732[b]	8.000	222.000	.664	.026
	Hotelling's Trace	.026	.732[b]	8.000	222.000	.664	.026
	Roy's Largest Root	.026	.732[b]	8.000	222.000	.664	.026

a. Design: Intercept + Groups
b. Exact statistic

Between-Subjects Factors

		Value Label	N
Group Type	1	Experimental Group	80
	2	Control Group	151

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
T1 self appraisal	.894	1	229	.345
T1 occupational information	.244	1	229	.622
T1 goal selection	.050	1	229	.824
T1 planning	.683	1	229	.409
T1 problem solving	.283	1	229	.595
T1 cdse	.174	1	229	.677
tr T1 pjsb	.693	1	229	.406
T1 ajsb	1.903	1	229	.169
T1 jsi	.721	1	229	.397

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Groups

Appendix 3.12. Time 2 Two-Way ANCOVA for the Experimental and Control Group for the impact of the Ethnicity on Time 2 CDSE

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	T1 self appraisal	.395[a]	1	.395	1.208	.273	.005
	T1 occupational information	.660[b]	1	.660	1.792	.182	.008
	T1 goal selection	.330[c]	1	.330	1.059	.305	.005
	T1 planning	1.377[d]	1	1.377	3.145	.078	.014
	T1 problem solving	.020[e]	1	.020	.053	.818	.000
	T1 cdse	.444[f]	1	.444	1.665	.198	.007
	tr T1 pjsb	.053[g]	1	.053	.955	.330	.004
	T1 ajsb	.061[h]	1	.061	.141	.707	.001
	T1 jsi	.993[i]	1	.993	.956	.329	.004
Intercept	T1 self appraisal	2697.355	1	2697.355	8244.672	.000	.973
	T1 occupational information	2656.521	1	2656.521	7209.918	.000	.969
	T1 goal selection	2602.397	1	2602.397	8358.103	.000	.973
	T1 planning	2391.320	1	2391.320	5462.202	.000	.960
	T1 problem solving	2329.673	1	2329.673	6226.917	.000	.965
	T1 cdse	2533.291	1	2533.291	9512.044	.000	.976
	tr T1 pjsb	413.505	1	413.505	7445.072	.000	.970
	T1 ajsb	673.353	1	673.353	1557.886	.000	.872
	T1 jsi	1942.060	1	1942.060	1870.616	.000	.891
Groups	T1 self appraisal	.395	1	.395	1.208	.273	.005
	T1 occupational information	.660	1	.660	1.792	.182	.008
	T1 goal selection	.330	1	.330	1.059	.305	.005
	T1 planning	1.377	1	1.377	3.145	.078	.014
	T1 problem solving	.020	1	.020	.053	.818	.000
	T1 cdse	.444	1	.444	1.665	.198	.007
	tr T1 pjsb	.053	1	.053	.955	.330	.004
	T1 ajsb	.061	1	.061	.141	.707	.001
	T1 jsi	.993	1	.993	.956	.329	.004
Error	T1 self appraisal	74.920	229	.327			
	T1 occupational information	84.376	229	.368			
	T1 goal selection	71.302	229	.311			
	T1 planning	100.255	229	.438			
	T1 problem solving	85.676	229	.374			
	T1 cdse	60.988	229	.266			
	tr T1 pjsb	12.719	229	.056			
	T1 ajsb	98.979	229	.432			
	T1 jsi	237.746	229	1.038			
Total	T1 self appraisal	3076.280	231				
	T1 occupational information	3047.200	231				
	T1 goal selection	2965.440	231				
	T1 planning	2781.520	231				
	T1 problem solving	2663.040	231				
	T1 cdse	2881.810	231				
	tr T1 pjsb	472.600	231				
	T1 ajsb	847.000	231				
	T1 jsi	2413.313	231				
Corrected Total	T1 self appraisal	75.316	230				
	T1 occupational information	85.036	230				
	T1 goal selection	71.632	230				
	T1 planning	101.632	230				
	T1 problem solving	85.696	230				
	T1 cdse	61.432	230				
	tr T1 pjsb	12.772	230				
	T1 ajsb	99.040	230				
	T1 jsi	238.739	230				

a. R Squared = .005 (Adjusted R Squared = .001)
b. R Squared = .008 (Adjusted R Squared = .003)
c. R Squared = .005 (Adjusted R Squared = .000)
d. R Squared = .014 (Adjusted R Squared = .009)
e. R Squared = .000 (Adjusted R Squared = -.004)
f. R Squared = .007 (Adjusted R Squared = .003)
g. R Squared = .004 (Adjusted R Squared = .000)
h. R Squared = .001 (Adjusted R Squared = -.004)
i. R Squared = .004 (Adjusted R Squared = .000)

Tests of Between-Subjects Effects

Dependent Variable: T2 CDSE

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	14.156[a]	14	1.011	4.368	.000	.237
Intercept	12.661	1	12.661	54.693	.000	.217
T1CDSE	11.988	1	11.988	51.785	.000	.208
ETHNICITY	.631	4	.158	.681	.606	.014
Groups	.400	2	.200	.864	.423	.009
ETHNICITY * Groups	1.779	7	.254	1.098	.366	.038
Error	45.605	197	.231			
Total	2779.416	212				
Corrected Total	59.761	211				

a. R Squared = .237 (Adjusted R Squared = .183)

Levene's Test of Equality of Error Variances[a]

Dependent Variable: T2 CDSE

F	df1	df2	Sig.
.987	13	198	.466

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + T1CDSE + ETHNICITY + Groups + ETHNICITY * Groups

Appendix 3.13. Interviews with Students: The Audit Trail (Selected Data)

Examples of theory-driven codes (bold***)*** and *data-driven codes* **(**italics***)***	**Selected Data**	**Transcript**
Impact on SE, OE and Employability Efforts		
Improved Confidence	she helps me to improve my self confidence (...) she was like this can be a good answer and this was motivating me (...)	Laura
	she (...) changed my way of thinking (…) showed me that I actually can do some more (…)	Nadia
Thinking Differently	I think yes it made me a bit more proactive (…) yes it was the first time I'd done something like that (…)	Mark
	I maybe think differently about how I will do it and what is actually achievable realistically	Kevin
	It's like broadened my visions I can tell that from previous before coaching I was thinking that I would do ACCA and start accounting but after that I said I need to try something new and something more so	Beth
More Focused Employability Efforts	she motivated me to get- to make me apply for a placement and try to get one (…)	Nick
	Recently I'm applying for some internships so I have written my CV and adjusting cover letters as well for particular job roles so I'm applying since December (…)	Laura
Increased Resilience	I think that's the main thing we took out from the coaching scheme. Nothing's going to come straightaway or they're not going to come to you, you have to go to them like, you have to keep- be willing and be prepared to you know, just like sacrifice and apply and yes, rejection's just a part of it but you've just got to keep- yes, just keep going really	Andy
	I think in the beginning I thought oh I'm going to do this because I need passport points and things like this (…) I think yes if he did it I think I can do this as well I think everyone can do it if you practice things	Ian
Quality of Coaching Relationship		
Practical Advice	It help me to you know how I can write my CV up and it gave me someone else's view as well and how they got their job and how long it took for them	Chante
	he look at our CV, restructured those, um, told us er, presentation tips, interview tips, just things like that.	Andy
Ability to Identify with a Coach	he was actually a student at Greenwich (…)I think that's why it quite helpful, it's not someone who hasn't been down the same road as you, they have so they know what we're going through and what questions we have at this particular age (...)	Andy
	he talked about his experiences so he mentioned how he worked his way up so he used to work places like McDonalds (…)	Mark

Examples of theory-driven codes (bold***)*** and *data-driven codes* **(**italics***)***	**Selected Data**	**Transcript**
	I find it a lot- a lot more easier to talk to because she's been to this uni, she's faced the problems that we've had	Nadia
Commitment of the Coach	(…) he responded quickly to emails, we had his phone number so we could .. like, message each other	Andy
	we were supposed to meet like two hours per month but we were meeting every week so yes I think he was good he was prepared to do you know (…)	Mark
	she cares so she's taking this as seriously	Nadia
Coach as a Role Model	(...) you want- you want to be that person that lives in London, in the City and has a really great job and work in a big company like they do (…)	Nadia
	I think yes if he did it I think I can do this as well (…)	Ian
Honest Feedback	He was very you know answered all my questions, replied back in detail and yes very forthcoming with his answers was quite honest with all the kind of experiences he went through in university	Chante
	(…) it's much better to just be brutally honest and go that was terrible and that comes with the longer because they know how they can talk to you and you know you can talk to them and things like that but yes I think often there's a lot of pressure to build up relationships really, really quickly and I think often that really doesn't work so that's been helpful	Kevin
Trust	he talked about his life a bit so do you know he had a kid - So he shared his yes- Yes he shared some of his experiences with me so I think that made it easier for me to just trust him a bit you know yes	Mark
	I kind of trusted his I don't know his kind of steer more than my parents to a certain extent	Kevin
Goal Orientated Coach	he was really helpful, he- he explained to me- because I wanted to apply for the IBM graduate scheme and I was thinking about the placement, he explained to me exactly how I could you know, do my application and everything and how it works	Jenny
	with your career coach, I think just being prepared to ask questions because they're very busy as well (...) he always taught us to bring something in which he could look at so maybe it was to see we had something prepared (...) if you just turn up you're wasting your own time and his time as well (…)	Andy
Continued Relationship	the best relationships I've got, industry relationships I've got are built up over several years they're not relationships that I've built up over six months they're just they're much, much longer than that	Kevin
	(…) Ithink it's a lot more helpful if you keep in contact with them constantly rather than just a one-off meeting you know.	Andy
No Judgement	be open like, don't be scared to ask a question even if it sounds you know, silly or stupid, just ask the question because he's not going to judge you. he's been in the same spot as well so ...	Andy
	he's just saying suddenly something about a subject ... newspaper- I had no idea because I didn't read the newspaper that day so he was like, OK, so you didn't read it OK, that's OK and I felt- OK!	Sarah
Outcome Expectations		

Examples of theory-driven codes (bold***)*** and *data-driven codes* (italics***)***	**Selected Data**	**Transcript**
Low Skilled Jobs	work in Heathrow .. checking the passport (…) I am looking for a new one like, sales assistants so I can keep progressing because as a supervior I think I'm going end up nowhere. I am looking for something when I can progress. (…) sales assistants or receptionist or something like	Anna
	I work at Euro Car Parts.(…)so I'm just a part time sales assistant so I just help out on the counter, that's about it.	Nick
Focus on University	That's recently looked into but I haven't really done that much research or effort into you know getting a job or looking into (…) I don't know to be honest with you I guess I could do that at the end towards year three but year one, year two just for focus on university	Chante
	I'm going to look after my exams, now I'm just focussed on my exams.	Sarah
Entrepreneurial	Um, well, OK, my first job would be to work with my parents' takeaway because my Mum owns a Chinese takeaway and I worked as a counter staff there for about 2 years (…) Um, but it wasn't paid because it was a family business.(...)	John
	I'd love to have my own company that's really what I want to do I'd love to have my own trading company that'll just be a dream be really good	Kevin
Lack of Direction	I study Business Management but I don't know where I want to end up- I would like to work in a bank or somewhere but I don't know, I don't know yet! (…)I want to work in a bank, I don't want to work as a supervisor cleaning	Anna
	I think (..) don't really know what I would like (...)I like to have a good job just I don't know maybe be recognised for some work I don't know yes and yes I'm not sure if I want to do it here or do it somewhere else I don't know (…) I don't know I haven't thought about it (…) I just want a graduate job and I want like my job (...)	Mark
	I just want to like, have a good, stable job and provide for my family and just like, be happy	Laura
Unrealistic Expectations	maybe being a CEO of a company	Andy
	I want to get a job in the Big Four ... either in the field of audit or tax um, I want to [...] either to be made director- but I could settle with manager, just a stable income, um, that's- hopefully I can achieve that by the age of about 35 or 40 –	John
Further Qualifications	I can just do ACCA I'm going to be really happy if I finish all the papers	Ian
	I'm going to get a first and then I'm going to do ACCA afterwards and hopefully that will make up for all of my A level grades.	John
Low Outcome Expectations	when I go to interview I don't put high expectation (…) it's just to if it's something goes wrong I'm going to say oh I wasn't expecting it so it's fine it's kind of defence though that I don't put high expectations.	Ian
	they're just one of those people who has done the degree they've done it they've completed it but haven't put their heart and soul into it they haven't looked into things outside of it because they're probably not interested in it and as a result they have except a job at which is probably very low pay	Kevin

Examples of theory-driven codes (bold***)*** and *data-driven codes* **(**italics***)***	**Selected Data**	**Transcript**
	I've never been rejected for a job because I hardly, I go for like, the jobs that I'm pretty certain I'm going to get .. so a sushi place, Japanese food, I'm sort of like, of Asian heritage	John
Self-Efficacy	So I think I have an as good chance as anyone else does	Nadia
Importance of Effort & Motivation	I saw in my experience and in my life when you put a lot of effort in something you got more probabilities not you get it but you increase your probabilities of getting something but if you feeling like a little bit lazy about something but you want it it's not going to come to you there is no way it's going to come to you, you just wish it but you don't do anything I think if you put a lot of effort you could definitely find the job you're looking for	Viktor
	I guess if you really do want something and you put everything towards it I guess you can get any job you want. (…)	Tom
External Locus of Control	(...) I kind of got into all of that about getting what you want ... I don't know if you ever heard about it but the door of attraction, not sure who theorised it but (...) still you can't just believe you've got to actually turn your thoughts into actual ... movements and stuff.	Tom
	I think if you focus on it then you can get it like, if you- I read a book once and it's called- I don't know if you've heard of it- The Secret? (…) I've read that and- it's like the power of the thought and law of attraction, and I think that if you have your set- focus on something, then you'll- you'll definitely get it no matter what, like comes your way, your outcome will be that because you focussed on it so hard so I think people work really hard towards a goal like getting a job, then you will get it, like I- I did have my eyes set on Disney and .. I'm going to get a placement at Disney	Nadia
Negative Self-Perception of UoG Students	(...) they all apply in secret (...) they don't really um, believe they could actually work in a place because it's like, the people that actually work there are like, to say smarter than them- no- no offence-	John
	they [UoG students] just apply because they feel obliged to apply so they don't- they don't regret like, not applying for anywhere but it also believe that they don't- they wouldn't fit in to the organisation because like, people are like, come up from the top universities ...	Tom
Perceived Barriers or Support to Preferred Careers/		
Difficult Online Application Process	passed through the online like, brain tests and one of them I didn't and then just after that they go back and check through the- all your- all the stuff you submitted and they came back and like, I'm sorry, no you haven't made the cut so I guess- I guess that in-knocked it the self-confidence a little bit and maybe it was just I was- I felt I was like, I'd rather just go and look for one locally and try and get an interview straight off rather than having to go through all this online stuff where the person doesn't really get to know who you are.	Tom

	But there was no numerical test so I found it easier to apply for that, it was just interviews (…) I didn't do an assessment centre,	Nadia
Examples of theory-driven codes (bold***)*** and *data-driven codes* **(**italics***)***	**Selected Data**	**Transcript**
	I was quite scared of how the application process is (…)	Jenny
Preferential Selection Treatment of Russell Group Students	well big firms um, have career days where they actually get a ... senior associate director to just go onto the campuses to interview people on the spot like what Computer Centre did for Greenwich. (…)- and then afterwards you already- in a way you go through the telephone interview already so you could go to the - so it shortcuts how many stages? Online –Online application, online tests, telephone interview but in a way- they way they think about it is that the online tests- the online test is about they've proven themselves to be academic so the online tests should be easy for them like, it's a maths test, it's a logical test – they were very you know, full of pride, half of them, and the either don't want to be associated with well, someone from the University of Greenwich because they was not Russell group (…) the conversations when you greeted them were hi, my name's [...] what university do you come from? Um, what are you applying and then like, it gets pretty awkward from there (…)	John
	They were from all over- all over England. (…)- not all of them are from London, there was people from Manchester University, many- all the Russell Groups basically um –- were there any other ... students like you, from- from post- former polytechnic universities like Greenwich or-? No.	Tom
	(..) when I was applying to places like Goldman Sachs, JP Morgan, Barclays and all those places I didn't received any contact from them for about three or four months and I'm aware of people that were going to other universities, better universities or high regarded uni's that were getting responses very, very quickly so they were getting called for interview or something like that and they applied at the same time as me so when I got my reply saying there are no further places it felt that they were prioritising (...) places like Harvard, London School of Economics that was kind of the places they go for (...)	Kevin
Lack of Work Experience	I have been turned down for a job but I didn't take- I didn't go that far. I just thought um, and because I didn't have any experience that's why I might have been turned down.	Nick
	if you don't go to university, you don 't have a degree you won't be able to get some of the higher roles as quickly but you could still get them through experience because- especially within accounting, you don't need a degree to become a Chartered Accountant, it's more about um, the experience (...)	Andy
	I think that I don't get a job because of lack of experience (…)	Laura
Quality of English	if I was trying to get in accountancy job I'd probably feel that because my English and I don't know my age but because I didn't try just tried other things like as a driver, as a catering or worse actually I tried to get like in health care and they were really nice they tried to help me and I didn't like the job (...) Yes kind of they can if they have a lot of people of course they're going to get who speaks well so they're going to decline your application things like that or they're probably going to say your English isn't enough	Ian

	this year I'm really looking for work a year placement because I think […] especially it's going to be tougher than the people who was born here - OK why is that?- Why because first of all my English is not really, really it's understandable but not really fluent some employers they feel like not really….when they listen to someone which is not probably fluent I don't know some of them they don't mind but I think it's a lot of competitiveness around this career so I need to take this year placement to improve my English (...) I am so confident but sometime for me the barrier me is the language I can't express everything that I know and I can do for any organisation(...) I need to get this practice and confidence talking with English speakers	Viktor
Examples of theory-driven codes (bold***)*** and *data-driven codes* **(**italics***)***	**Selected Data**	**Transcript**
Negative Perception of UoG Students	half of them and the either want to be associated with well, someone from the University of Greenwich because there was not Russell group	John
	(…) something like that so when they see somebody on the interview sheet that's gone to London School of Economics they relate to them and Greenwich well they don't so because it's a polytechnic (...) I just think that because I go to Greenwich I have to take a longer route to get to that (…) because of my university it means I have to take a different route but I don't think it's not achievable at all I just think I need to prove myself in industry	Kevin
Competition from Russell Group	when I went to the assessment centre most of the people there didn't actually go through the same application process because they had career fairs so they had an interview on the spot on the day in the university campus so yes, so um, so none of them actually went through the online test, they just got fast tracked –- ah that's –- they actually got fast tracked to the assessment centre. Ah, so- so they get fast tracked from their universities- what kind of-?- um, UCR, mainly the Russell Group universities.	John
	at Russell Groups people if they do work experience it's work experience that's useful they haven't got a part-time job in a shop they are doing, they are doing an internship in a big bank that's what they're doing to earn their money they don't need to work in the summer sorry they don't need to work in term time so I think it's just a very different kind of calibre of person difficult to pinpoint really	Kevin
Perceived Social Support		
Absence of Networks	private schools have huge networks because everybody works in finance to be able to afford private school fees you have to pretty much be working in finance I think or law or something like that because otherwise you can't afford it so they have very, very good networks seem to go into good jobs pretty quickly and easily after they go to university and even if they don't do well they seem to have no problem getting into good universities either	Kevin
	My parents will not be able to help me with them because they're working in a different field but I think that one of my relatives my aunt she has some networks which are people with good networks and they she's giving them my CV so I'm trying different methods	Laura

	No, no, no, no not any at all even my coach he was advising me but he say anything you have to do by yourself (…) because that was my only option and I don't have any family here to get this kind of experience or help, not at all.	Viktor
Examples of theory-driven codes (bold***)*** and *data-driven codes* **(**italics***)***	**Selected Data**	**Transcript**
Acquaintances	they're like also from my country when they came here before like many years ago so they are established here (…) For example in networking in Facebook we like put that we need to meet and different people from my country (…) I didn't knew them like initially we met through Facebook and social media	Beth
Family Role Models		
	at Greenwich a lot of the people that go to Greenwich are people who they're the first people in their family to go to university so for them maybe their goal is not tangible, maybe they're not…maybe they can't see how going to university and getting that job that they want is a really big benefit to them but so I think they lack motivation they can't see the end whereas at other universities obviously get people that have been going to…their family has been going to university for years so they're more likely to be able to see a it tangibly	Kevin
	they always say to me, you know, stand on your own feet, when you get married don't- that's one of the main cultural things that they would say, don't look at your husband's pocket for money, always have your own kind of you know, have your own you know, kind of something that you can look for- look back to so if you do have any problems you know that you don't have to be kind of- under the hands of your husband so you can look after yourself, um, that always kind of you know, motivates me because I know that obviously in my culture it's more like the husband obviously brings the you know, the money ... and you stay at home but my family's always motivated me it's not like that, you've got to work because my parent- my Mum doesn't work at all, she's never worked in her life, so it's always- she's always looked at my Dad for money and that kind of stuff and she's like, OK it's quite good because I've got four kids, it's amazing to have that, but don't think that this is not- it's not nice as the lady because I've always got to be waiting on your Dad and it's kind- it kind of puts your confidence down I think when I see it to my Mum, because she doesn't earn her own money it's kind of you know, oh it's only if my husband says yes, it's only if that, so it's of- it is kind of co- and she's you know, she's lived in the country for about 20 years and she doesn't have full English either (...) he always say as well you can't trust the guys nowadays when you could trust back then so you know, they could just tell you to go away if they didn't want, you know, to look after you.	Jenny
	Family. I don't really have family like, who to follow, I can always ask them but I'm not like, my mother was dancer on TV, there was like, Angela Merkel, she was my mother since I was in ... 10th grade	Sarah

Examples Of Theory-Driven Codes (Bold***)*** And *Data-Driven Codes* **(**Italics***)*** & SUB CODES	**Selected Data**	**Transcript**
	I look up to my Dad and um, because he's obviously basically got on- he had a Masters in Chemistry in India when he was- obviously he was born and raised there, and um, but when he came to this country, those degrees didn't count so even when he came to this country he had to start from the very bottom (…) so yes, I admire his hard work and how he was able to come to a completely different environment and be successful, um, yes I think he probably is the biggest role model (...)	Andy
Hard Working Parents	your Mum is trying to do everything just to get you into college and all that and get ready and did that so that's why that's my inspiration.	Anna
	my Dad- he inspires me because he- we used to own a company in South Africa and when we came here my Dad didn't have the best jobs, um, and there were some moments where he was treated really unfairly- which was discrimination, um, and no matter what –	Nadia
Hard Working Other Family Members	my grandparents from both sides my mum and dad they finished university as well and actually one of them even did economics which is what I am doing so and they inspired me by showing that actually it's good to go to university to get a degree (…)	Laura
Family Expectations		
Degree Completion	they always .. (…) whatever job I like but they wanted to see me graduate.	Anna
	my parents expect me to finish uni first this is what they really wanted me to do (…)	Laura
Non-Specific Expectation	There is no expectation, they say just be what you want but make sure it's not- make sure you're just happy with yourself and you're not forced into it	Nick
	I think they want me- they expect me to be successful and hopefully I will be successful and um, expectations through degree is that I should get a first because my brother got a first class degree as well (...) like, to be successful, to have a good job and um, yes hopefully it all pays off in the end.	Andy
Negative Expectations	my father (…) told me you're never going to be no one in life (…)	Ian
To Be a Professional	they wanted me to be a musician but I didn't really think that I would be so I said OK accounting is alright for me as well	Beth
	Definitely no because I'm by myself in this country and I also have some friends but they are not working in this industry	Ian
Socioeconomic Status		
	my first job would be to work with my parents' takeaway because my Mum owns a Chinese takeaway and I worked as a counter staff there for about 2 years	John
	he's [Dad] got a café	Jenny

	my Dad, he works as a cleaner because he doesn't have no English, he doesn't speak English (…) he has to wake up at 4 o'clock in am and then his salary- his- our pay is um, £66.70 so if like, it's not enough so I feel like they should something about ... because at that time you're supposed to be sleeping, not waking up to work!	Anna
Examples of theory-driven codes (bold***)*** and *data-driven codes* **(**italics***)***	**Selected Data**	**Transcript**
	I'm thinking about my mum because now she's past her 40's (…) Yes physically [working]	Mark
	he [Dad] was the owner of a company [in South Africa] and now he comes and he works for people but they're not treating him nicely, it must be- I can't imagine how hard it is for him	Nadia
	I guess most of them are kind of unemployed [Muslim local community]	Chante
	my dad's an engineer and my mum does clinical trials	Kevin
Perceived Gender & Ethnicity Barriers to Preferred Careers		
Ethnic Discrimination	he was going through my CV and picking up different situation and trying to catch me on something	Beth
	they didn't get the role like, none of us did except one person and I met like, he's the like, you could see that he would fit into that [....] he's um, Caucasian (...) I do feel like I was discriminated because of my race [Asian female] *(...) because I didn't think they could see that I'd fit into the whole- they had like an image that you could see they all look the same and I don't think I would have fit in there (...)afterwards when I spoke to my friends about it even my friends felt the same so it wasn't just me (...) All the friends that applied. Male and female, Asian ... none of us got it so yes.*	Nadia
	racially I think and um, it's always been difficult because you don't want to see your parents get treated badly and it's- they come home from work, they're tired and then they just go to sleep and they go back to work and it's horrible to see	Nadia
	(…) Er, I just saw, like, one of my friends, he is black and he lives in Abbey Wood so when they saw .. they told that oh you live in Abbey Wood, oh so that area is not very nice known or something like that so they were like, OK, even if you have a strong CV they don't trust you- I don't know why there's a problem but I saw a case like that - no they will find just excuses like, oh we can't [...] the personality's enough or because they usually applying that- because I lived in South East London so they usually apply in that area is kind of difficult to find someone to trust or- yes. So they- they just find reasons like, because when I been- I was working there, I'm getting very well with the personnel, I'm very interacting every time, I'm just- the person is like my friends, because it's even way much better to work like this in his team so when you get to know them very well is that .. that good as well so – - mm-hmm, yes a bit more, so I was like, OK, you can't say anything but it's [...] –No they say that maybe because they do like say they can steal or they don't trust the- they don't trust them	Sarah

	like, I don't know.	
No Perception of Discrimination	I think that I don't get a job because of lack of experience and if that can be counted as discrimination but I don't think so no, no	Laura

Appendix 3.14: Time 1 Data Screening

Missing Values

Missing data cases were excluded pairwise, i.e. cases were included in the analysis only if they have full data on all the variables necessary to compute required information[129]. This was following Pallant's (2013) recommendation to exclude cases pairwise, i.e. exclude cases only if they miss data required for specific analysis, to keep the sample size as large as possible.

Data Accuracy

Once data were transferred into the SPSS software (N=955) data were screened for errors. Categorical variables (Gender and Ethnicity) were screened using frequencies (maximum and minimum values) and compared with the codes. Gender values, expected to be either 1 or 2, and ethnicity values, coded as discrete values in a range of 1 to 5, were checked for errors. There were 14 missing cases for ethnicity and 7 cases for Gender and there were no errors in coding.

Similarly, continuous variables (Career Decision Self-Efficacy Total Scale and its subscales: Self-Appraisal, Occupational Information, Goal Selection, Planning and Problem Solving, as well as Preparatory Job Search, Active Job Search and Job Search Intensity Scales) were also analysed for errors in coding. All CDSE subscales were between 1 to 5, which are correct values. The total summed CDSE scores range was from 25 to 125, which was also correct (Betz and Taylor, 2012). Preparatory Job Search, Active Job Search and Job Search Intensity, which were all calculated as averages from initial scales, all had a '0' as a minimal value in them. After inspecting the original Excel sample it was discovered that the program had had calculated '0' if missing values in the scales were present and SPSS had recognised these values as 0 instead of as missing values. As a result, all scoring was re-done in SPSS with 0s being recorded as missing values. New descriptive statistics for checking continuous variables showed no errors.

Assessing Normality of Data Distribution

Many statistical techniques performed in social research assume that data are normally distributed (Pallant, 2013). Zimmerman (1998) discusses that both non-parametric statistical tests' quality decreases (as much as this is a case for parametric statistics assuming normality) if normality assumptions are violated. However, the analyses of the Tests of Normality that have been conducted for the dataset showed that Self-Appraisal, Occupational Information, Goal Selection, Planning and Problem Solving Scales, as well as Preparatory Job Search, Active Job Search and Job Search Intensity Scales were not normally distributed (See Appendix E1: Kolmogorov-Smirnov and Shapiro-Wilk Tests for Normality). Sig. value of .000 suggests a violation of the assumption of normality, which is common for larger samples (Pallant, 2013). The only normally distributed variable was the Total CDSE Scale (Sig = .065[130]).

[129] This resulted in different values for sample sizes (Ns) for different statistical tests.
[130] A normally distributed variable has a Sig. value of more than .05 (Pallant, 2007)

All scales were also tested for skewness and kurtosis (See Appendix E2: Time 1 Skewness and Kurtosis Test). Skewness values provide indication of the symmetry of the distribution whereas kurtosis show how peaked the distribution is (Pallant, 2013). Problem Solving, Total CDSE Scale and PJSB scale were positively skewed (this indicates scores being clustered to the left of low values in the distribution, i.e. the most frequent scores are lower ones) whereas Self-Appraisal, Occupational Information, Goal Selection, Planning, as well as Active Job Search and Job Search Intensity Scales were negatively skewed (indicating scores being clustered at the high end of the distribution, at the upper end (Field, 2009; Pallant, 2013).

The positive values of kurtosis for Goal, Total CDSE and PJSB scales indicate that these distributions are clustered in the centre with long tails and that they do not have many extreme cases (either 1s or 5s) (Pallant, 2013). Planning, Occupational Information, Self-Appraisal, Problem Solving, AJSB and JSI had a platykurtic distribution (negative kurtosis which mean that most of the values share almost the same frequency of occurrence). According to Tabachnick & Fidell (2007) and Pallant (2013) kurtosis and skewness tests tend to too sensitive with large samples and with large samples skewness does not affect the analysis (Tabachnick & Fidell, 2007; Pallant, 2013).

Given that the tests of the sample data suggested both a violation of the assumption of normality and skewness and kurtosis and given the large sample size (N=955), the decision was taken to follow Fidell & Tabachnick's (2003) suggestion for large samples (300 or larger) to assess normality through inspection of the shape of the distribution and of the normal quantile-quantile QQ plots. The visual inspection of the Q-Q plots showed reasonably straight lines indicating that all variables, except Preparatory Job Search Behaviour (PJSB) were normally distributed and that the violation of the assumption of normality and skewness and kurtosis of the sample was due to its large size (see Appendix E3: Time 1 Normal Q-Q Plots for Continuous Variables). Preparatory Job Search Behaviour (PJSB), positively skewed, was the only variables that needed to be transformed (see Chapter 4.1.1.4. Transformed Variables for more detailed discussion of the results). According to Micceri (1989) it is often very difficult to find normal distribution in education and psychology and, hence, the need for data transformation to improve the normality of variables.

Transformed Variables

PJSB variables, due to its distribution shape were transformed using Pallant's (2013) suggestion to use a square root formula: new variable = SQRT(old variable). Although, statistically the new result still showed non-normality (*Sig*. value less than .05 - see the Appendix H: Time 1 Kolmogorov-Smirnov and Shapiro-Wilk Tests for Normality for the Transformed PJSB Variable), possibly due to a large sample size, the visual inspection of the Normal Q-Q Plot for PJSB showed a significant approximation of normal distribution of the results (see Appendix I. Time 1 Transformed PJSB Normal Q-Q Plot). Hence, the transformed data for PJSB scale was used for statistical analyses. All other variables were normally distributed.

Homogeneity of Variance

The assumption of homogeneity of variance (the assumption that samples are obtained from populations of equal variances with the variability of scores for each group being similar) was tested using Levene's test (Pallant, 2013). All sub-scales in the Career Decision Self-Efficacy Scale, Preparatory Job Seeking Behaviour Scale, Active Job

Seeking Behaviour Scale and Job Search Intensity Scale had *Sig* values higher than .05 (see the Appendix J: Time 1 Testing for Homogeneity of Variance) indicating that the variances were not significantly different and that the homogeneity of variance assumption was justifiable and plausible (Field, 2007).

In addition, assumptions of multicollinearity were tested by using Variance Inflation Factor (VIF) and Tolerance values. Specifically, VIF values greater than 10 and Tolerance values below .10 indicate collinearity in the data (Field, 2000; Menard 1995). Results revealed no collinearity among the variables of interest.

Appendix 3.15: Time 1 Kolmogorov-Smirnov and Shapiro-Wilk Tests for Normality

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Self-Appraisal	.081	937	.000	.987	937	.000
Occupational Information	.066	943	.000	.988	943	.000
Goal Selection	.073	921	.000	.988	921	.000
Planning	.063	940	.000	.990	940	.000
Problem Solving	.083	939	.000	.988	939	.000
Total CDSE Scale	.030	879	.065	.997	879	.091
PJSB	.107	923	.000	.940	923	.000
AJSB	.114	943	.000	.963	943	.000
JSI	.116	950	.000	.967	950	.000

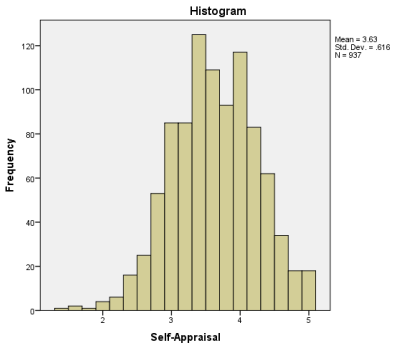
a. Lilliefors Significance Correction

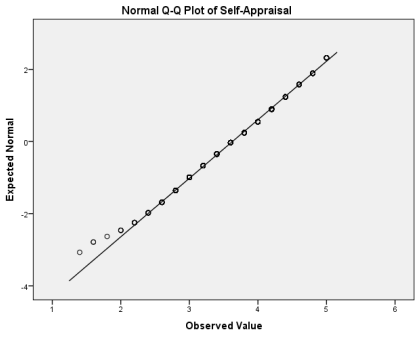
Appendix 3.16: Time 1 Skewness and Kurtosis Test

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Self-Appraisal	937	1	5	3.63	.616	-.125	.080	-.109	.160
Occupational Information	943	2	5	3.57	.648	-.028	.080	-.254	.159
Goal Selection	921	1	5	3.54	.622	-.156	.081	.148	.161
Planning	940	1	5	3.44	.671	-.073	.080	-.121	.159
Problem Solving	939	1	5	3.36	.658	.096	.080	-.110	.159
Total CDSE Scale	879	1	5	3.51	.556	.009	.082	.152	.165
PJSB	923	1	5	2.07	.715	.919	.080	.743	.161
AJSB	943	1	5	3.08	1.058	-.278	.080	-.489	.159
JSI	950	0	5	3.07	1.071	-.309	.079	-.416	.159
Summed CDSE	879	37	125	87.84	13.904	.009	.082	.152	.165
Valid N (listwise)	850								

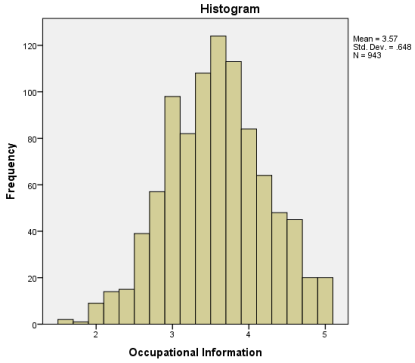
Appendix 3.17: Time 1 Normal Q-Q Plots for Continuous Variables

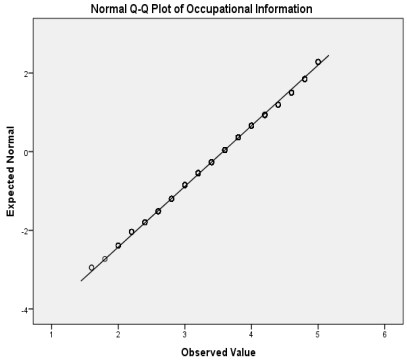
Self-Appraisal Scale



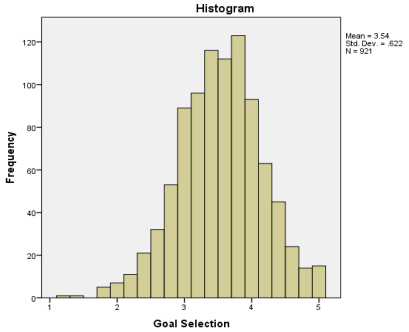


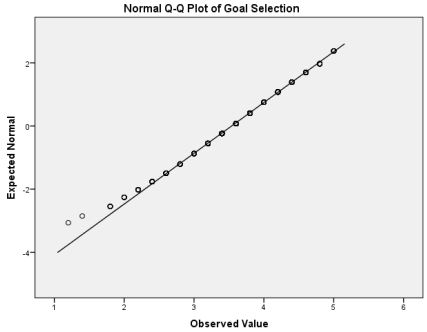
Occupational Information Scale



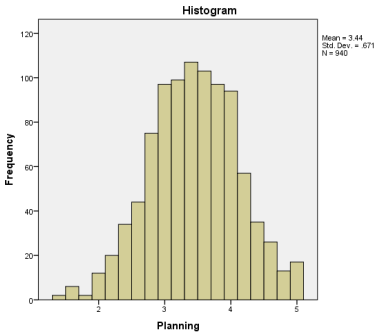


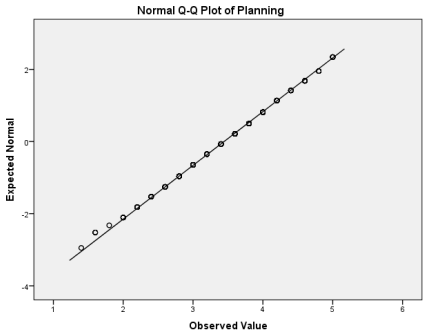
Goal Selection Scale



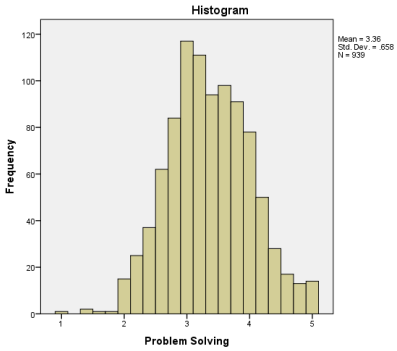


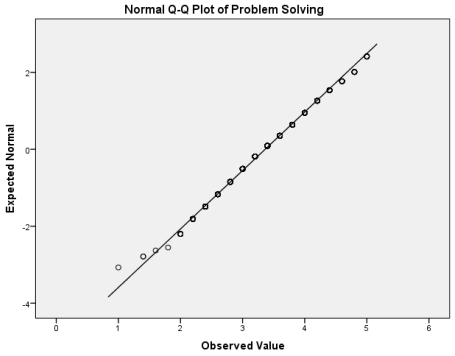
Planning Scale



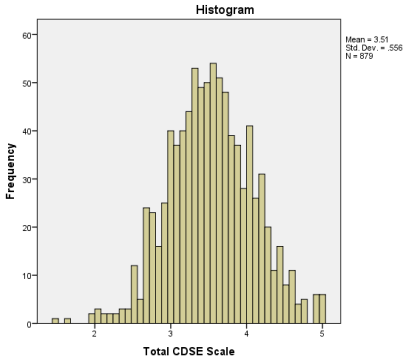


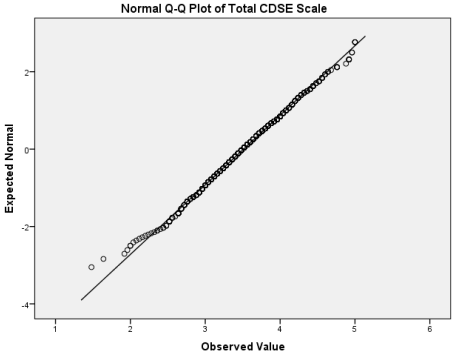
Problem Solving Scale



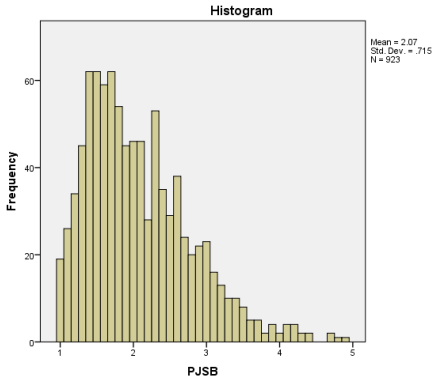


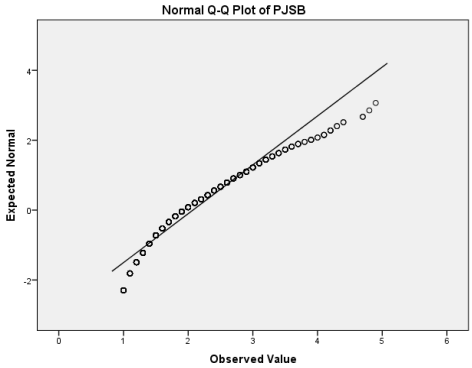
Total CDSE Scale



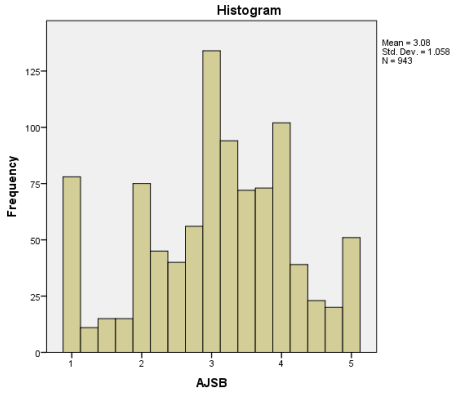


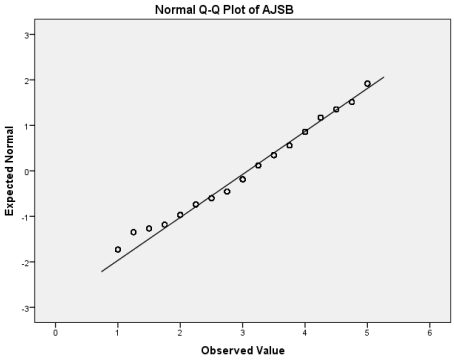
PJSB Scale



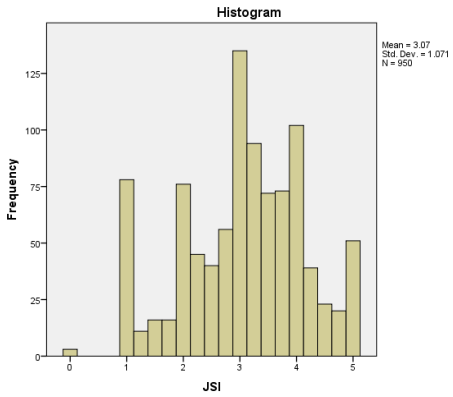


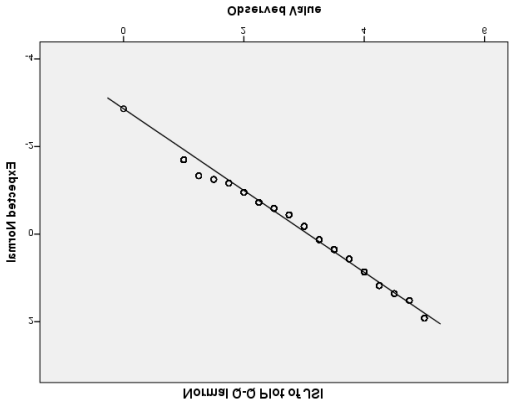
AJSB Scale





JSI Scale





Appendix 3.18: Time 1 Data Screening Transformed Variables

PJSB and AJSB, due to its distribution shape, were transformed using Pallant's (2013) suggestion to use a square root formula: new variable = SQRT(old variable). Although, statistically the new result still showed non-normality (*Sig.* value less than .05 - see Table 1: Time 1 Kolmogorov-Smirnov and Shapiro-Wilk Tests for Normality for the Transformed PJSB Variable), possibly due to a large sample size, the visual inspection of the Normal Q-Q Plot for PJSB and AJSB showed a significant approximation of normal distribution of the results (see Appendix V: Time 2 Normal Q-Q Plots for Transformed PJSB, AJSB and Outcome Expectation.

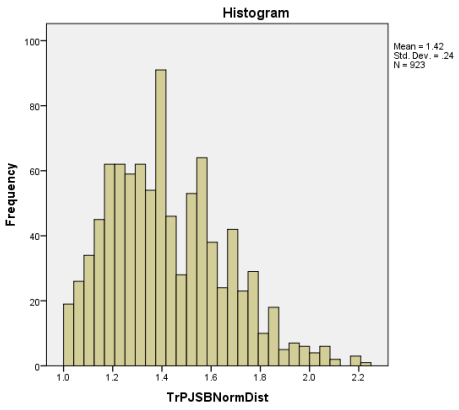
Table 1: Kolmogorov-Smirnov and Shapiro-Wilk Tests for Normality for the Transformed PJSB Variable

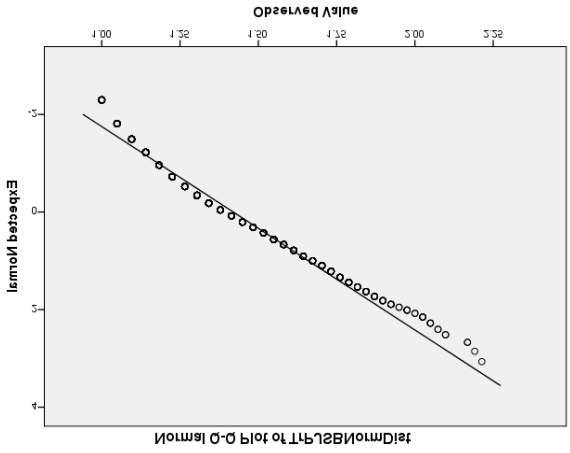
Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
TrPJSBNormDist	**.086**	**923**	**.000**	**.973**	**923**	**.000**

a. Lilliefors Significance Correction

Time 1 Transformed PJSB Normal Q-Q Plot





Appendix 3.19: Time 1 Testing for Homogeneity of Variance

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Total CDSE Scale	Based on Mean	.166	1	846	.684
	Based on Median	.180	1	846	.672
	Based on Median and with adjusted df	.180	1	844.996	.672
	Based on trimmed mean	.185	1	846	.667
PJSB	Based on Mean	.224	1	846	.636
	Based on Median	.256	1	846	.613
	Based on Median and with adjusted df	.256	1	841.490	.613
	Based on trimmed mean	.244	1	846	.621
AJSB	Based on Mean	3.377	1	846	.066
	Based on Median	2.895	1	846	.089
	Based on Median and with adjusted df	2.895	1	842.988	.089
	Based on trimmed mean	3.314	1	846	.069
JSI	Based on Mean	3.377	1	846	.066
	Based on Median	2.895	1	846	.089
	Based on Median and with adjusted df	2.895	1	842.988	.089
	Based on trimmed mean	3.314	1	846	.069
Self-Appraisal	Based on Mean	.015	1	846	.902
	Based on Median	.011	1	846	.916
	Based on Median and with adjusted df	.011	1	845.002	.916
	Based on trimmed mean	.024	1	846	.878
Occupational Information	Based on Mean	2.265	1	846	.133
	Based on Median	2.343	1	846	.126
	Based on Median and with adjusted df	2.343	1	843.753	.126
	Based on trimmed mean	2.133	1	846	.145
Goal Selection	Based on Mean	.044	1	846	.834
	Based on Median	.031	1	846	.859
	Based on Median and with adjusted df	.031	1	841.673	.859
	Based on trimmed mean	.045	1	846	.833
Planning	Based on Mean	.538	1	846	.463
	Based on Median	.449	1	846	.503
	Based on Median and with adjusted df	.449	1	845.114	.503
	Based on trimmed mean	.508	1	846	.476
Problem Solving	Based on Mean	.028	1	846	.868
	Based on Median	.031	1	846	.861
	Based on Median and with adjusted df	.031	1	841.360	.861
	Based on trimmed mean	.023	1	846	.879

Appendix 3.20: Time 2 Kolmogorov-Smirnov and Shapiro-Wilk Tests for Normality

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
T2 SelfAppraisal	.087	201	.001	.984	201	.024
T2 Occupational Information	.106	201	.000	.976	201	.002
T2 GoalSelection	.143	201	.000	.974	201	.001
T2 Planning	.099	201	.000	.982	201	.012
T2 ProblemSolving	.089	201	.001	.982	201	.013
T2 CDSE	.060	201	.077	.990	201	.158
T2 CDSETotal	.060	201	.077	.990	201	.158
T2 PJSB	.117	201	.000	.959	201	.000
T2 AJSB	.140	201	.000	.930	201	.000
T2 JSI	.092	201	.000	.960	201	.000
T2 Outcome Expectancy	.101	201	.000	.960	201	.000
T1 self appraisal	.089	201	.001	.983	201	.013
T1 occupational information	.089	201	.000	.986	201	.047
T1 goal selection	.112	201	.000	.982	201	.011
T1 planning	.099	201	.000	.985	201	.032
T1 problem solving	.102	201	.000	.978	201	.003
T1 cdse	.056	201	.200*	.990	201	.201
T1 cdsetotal	.056	201	.200*	.990	201	.201
T1 pjsb	.117	201	.000	.951	201	.000
T1 ajsb	.180	201	.000	.859	201	.000
T1 jsi	.122	201	.000	.965	201	.000

*. This is a lower bound of the true significance.

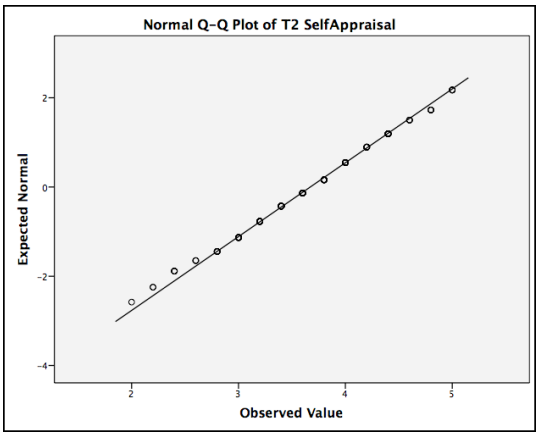
a. Lilliefors Significance Correction

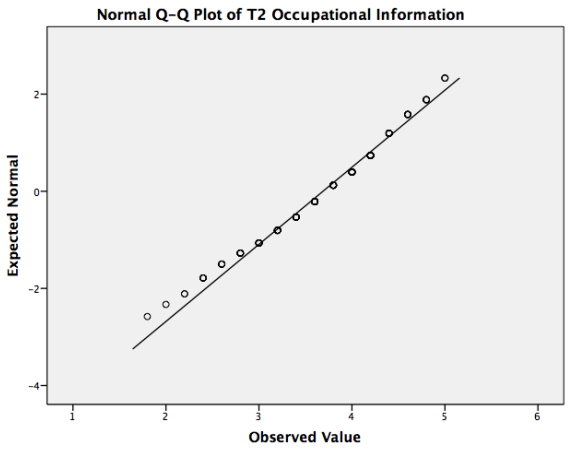
Appendix 3.21: Time 2 Skewness and Kurtosis Testing

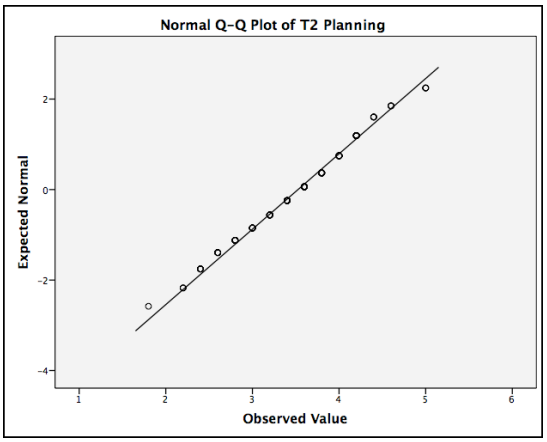
Descriptive Statistics

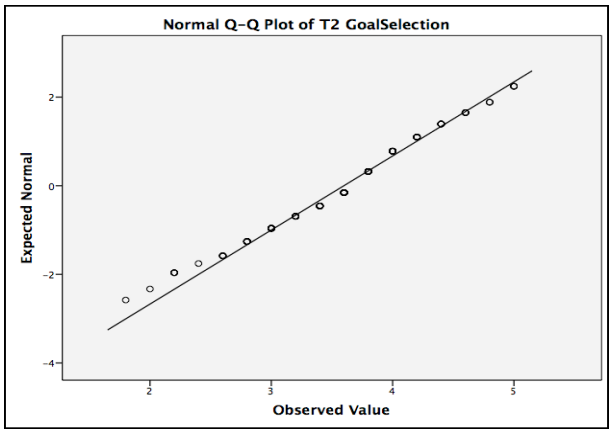
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
T2 SelfAppraisal	239	-.139	.157	-.143	.314
T2 Occupational Information	235	-.421	.159	-.096	.316
T2 GoalSelection	239	-.300	.157	.300	.314
T2 Planning	240	-.289	.157	-.026	.313
T2 ProblemSolving	240	-.245	.157	.206	.313
T2 CDSE	224	-.331	.163	.193	.324
T2 CDSETotal	224	-.331	.163	.193	.324
T2 PJSB	236	.650	.158	-.192	.316
T2 AJSB	241	.941	.157	.652	.312
T2 JSI	243	-.242	.156	-.674	.311
T2 Outcome Expectancy	237	-.318	.158	.893	.315
T1 self appraisal	243	-.103	.156	-.413	.311
T1 occupational information	244	.052	.156	-.337	.310
T1 goal selection	242	-.250	.156	.125	.312
T1 planning	242	-.166	.156	-.313	.312
T1 problem solving	242	.088	.156	-.607	.312
T1 cdse	234	-.074	.159	-.536	.317
T1 cdsetotal	234	-.074	.159	-.536	.317
T1 pjsb	242	.769	.156	.092	.312
T1 ajsb	244	1.382	.156	1.620	.310
T1 jsi	244	-.341	.156	-.504	.310
Valid N (listwise)	201				

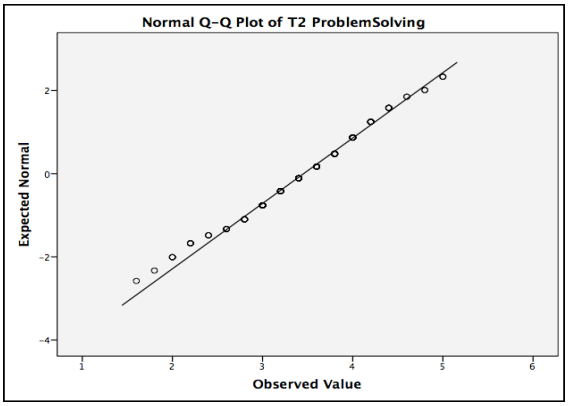
Appendix 3.22: Time 2 Normal Q-Q Plots for Continuous Variables

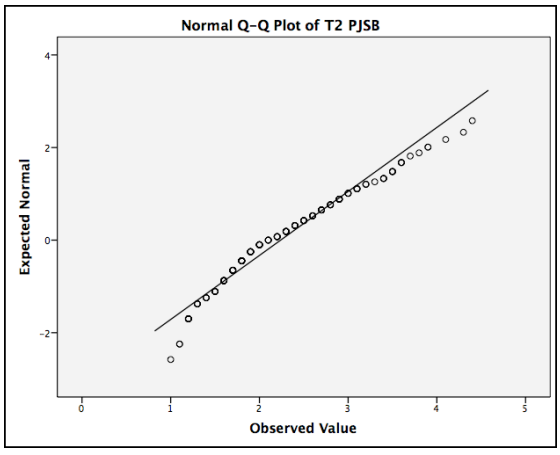


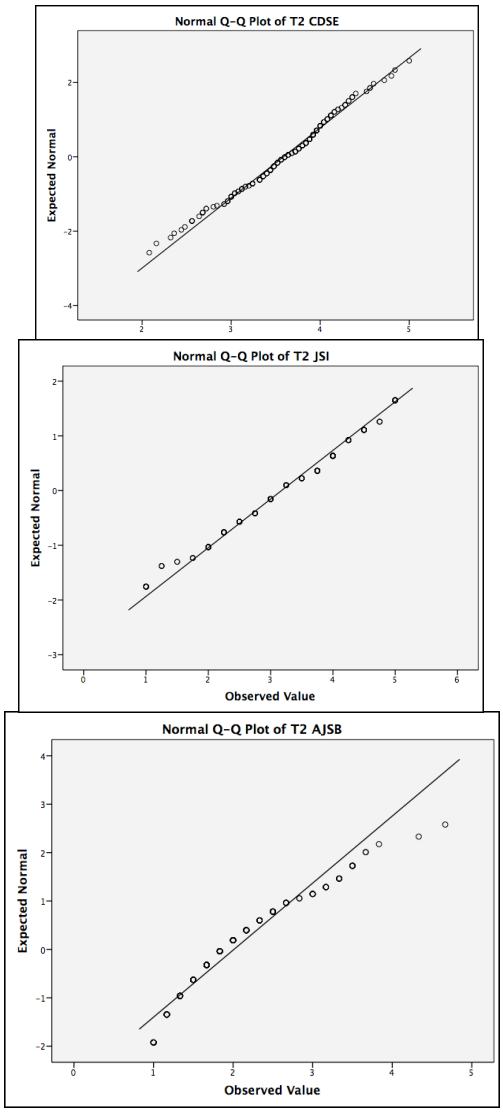




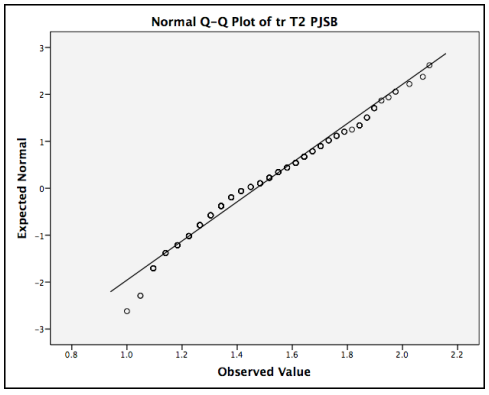


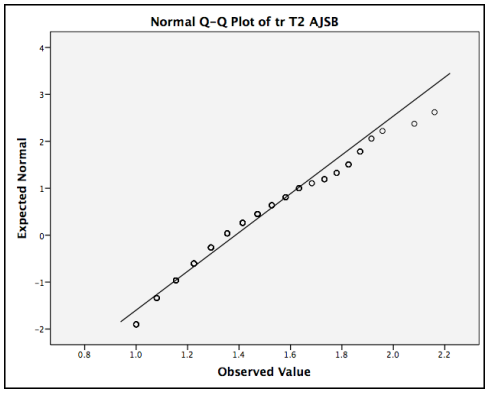






Time 2 Normal Q-Q Plots for Transformed PSJB, AJSB and Outcome Expectancy Variables





Appendix 3.23: Time 2 Data Screening Transformed Variables Time 2 Data Screening

Missing Values

Missing data cases were excluded pairwise, i.e. cases were included in the analysis only if they have full data on all the variables necessary to compute required information Pallant's (2013). Missing value justification was discussed in more detail in chapter 7.1.1.1. Time 1 Missing Values.

Data Accuracy

Data transferred into the SPSS software (N=245) were screened for errors. Categorical variables (Gender and Ethnicity) had one missing value for Gender. Continuous variables were also screened for errors in coding. All scales had correct values.

Assessing Normality of Data Distribution

The analyses of the Tests of Normality that have been conducted for all continuous variables in the dataset (see Appendix 3.20: Time 2 Kolmogorov-Smirnov and Shapiro-Wilk Tests for Normality[131]). Again, the same as during the Time 1 analyses, the only normally distributed variable was the Time 2 Total CDSE Scale (Sig = .077[132]).

All scales were also tested for skewness and kurtosis[133]. All scales, similarly as at Time 1, were skewed and had a degree of kurtosis (See Appendix T: Time 2 Skewness and Kurtosis Testing).

Given that the tests of the sample data suggested both a violation of the assumption of normality and skewness and kurtosis and given the large sample size (N=245), the decision – the same as at Time 1 - was taken to follow Fidell and Tabachnick's (2003) suggestion for large samples to assess normality through inspection of the shape of the distribution and of the normal quantile-quantile QQ plots (see Appendix U. Time 2 Normal Q-Q Plots for Continuous Variables)[134]. The visual inspection the normal Q-Q showed reasonably straight lines for most variables - except Preparatory Job Search Behaviour (PJSB), Active Job Search Behaviour (AJSB) and Vocational Outcome Expectation - indicating that except these variables - the others were normally distributed and that the violation of the assumption

[131] Sig. value of .000 suggests a violation of the assumption of normality, which is common for larger samples (Pallant, 2007).
[132] A normally distributed variable has a Sig. value of more than .05 (Pallant, 2007)
[133] Skewness values provide indication of the symmetry of the distribution whereas kurtosis show how peaked the distribution is (Pallant, 2007).
[134] Field (2007) also comments that for samples larger than 200 to inspect the shape of distribution visually rather than to rely on the values of skewness and kurtosis statistics, as large samples sizes result in significant values even for small deviations from reality.

of normality and skewness and kurtosis of the sample was due to its large size. PJSB, AJSB and were skewed, (this indicates scores being clustered to the left of low values in the distribution, i.e. the most frequent scores are lower ones) whereas Vocational Outcome Expectation was negatively skewed (this indicates scores being clustered at the high end of the distribution, at the upper end (Field, 2009; Pallant, 2013).

Appendix 3.24: The University Research Ethics Committee Application Form

University Research Ethics Committee Application Form

APPLICATION REFERENCE:

for office use only

Checklist

Name of applicant: Joanna Molyn	
School/Office: Business	
Title of research: Measuring the Effectiveness of Career Coaching in Increasing Higher Education Students' Career Self-Efficacy and Job Search Behaviour	
These papers must be attached to this application form (please tick):	
• Participant information sheet	x
• Participant consent form	x
These papers may be required (tick if included):	
• Letters (to participants, parents/guardians, participating institutions etc)	x
• Questionnaire(s) or indicative questions for interviews	x
• Advertisement /flyer/copy of message inviting participation	
• Annex I - Drugs and medical devices	
• Annex II - Research involving the storage of human tissue	
• Annex III - Ionising radiation	

Has the form been signed? **YES**
Have any annexes been signed where necessary? **YES**

SECTION 1: APPLICANT DETAILS

1.1 Surname	Molyn-Blanchfield	Forename	Joanna	Title Ms

School/Department
Business/ Accounting & Finance

University address
University of Greenwich
Park Row
London
SE10 9LS

University Tel 0208 331 8000 Fax E-mail mj59@gre.ac.uk

1.2 Are you a student?
A member of staff?
A member of staff applying as a student? **YES**
Other?

Programme of study (if applicable)
MPhil transfer to PhD

If you are a higher degree student, has your research project been approved by the University Research Degrees Committee? **YES**

If YES, when? 2013 What is the RDC reference number? RDC/12/M-4/3

If NO, why not?

1.3 What is the primary purpose of the research? (Please indicate YES or NO)

- Educational qualification **YES**
- Internally funded research
- Externally funded research
- Other (please specify)…….....

1.4 Project supervision – give the name of the research supervisor(s) and their contact information

Dr Lesley Catchpowle – L.Catchpowle@greenwich.ac.uk
Dr Julia Mundy – J.Mundy@greenwich.ac.uk
Professor David Gray - D.E.Gray@greenwich.ac.uk

1.5 Details of any other co-researchers within the university

1.6 Details of any other co-researchers external to the university

1.7 Experience and qualifications – include brief experience and qualifications, only where it is relevant to this study, of:
(i) The principal investigator

The principal investigator has an MBA degree from Cass Business School and a Coaching Certificate from Henley Business School. She has been trained as a Solutions Focus coached and as a part of her formal training coached professional clients.

The principal investigator has been involved in Professor David Gray's Leadership and Organisational Behaviour research group. She has developed a contact with Professor Rachel Mulvey, the Associate Dean from

the School of Psychology at the University of East London, who has expressed an interest in her research area and potential collaboration.
The principal investigator developed and conducted coaching workshops designed to assist lecturers with having more effective and self-efficacy focused conversations with students. The workshop was also provided for the A&F department during Induction week in September 2013.

(ii) Any co-researchers **NO**

(iii) Any supervisors (please include this if you are a student applicant)

Dr Lesley Catchpowle (PhD)
1st Supervisor
Principal Lecturer
University of Greenwich
Business School, HH201
Park Row, London SE10 9LS
tel. +44 208 331 8754
442083318754
email. L.Catchpowle@greenwich.ac.uk

Dr Julia Mundy (PhD)
2nd Supervisor
Principal Lecturer
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tel. +44 208 331 9695
email. J.Mundy@greenwich.ac.uk

Professor David Gray (PhD)
3rd Supervisor
Professor of Leadership and Organisational Behaviour
University of Greenwich
Business School, QM231
Park Row, London SE10 9LS
tel. +44 208 331 9023
email D.E.Gray@greenwich.ac.uk

1.8 Membership of professional bodies - are you or any co-researcher(s) a member of any professional, or other, bodies which set (i.e. require compliance with) ethical standards of behaviour or practice such as the British Psychological Society, Nursing and Midwifery Council, medical Royal Colleges etc.? If so, please specify.
NO

SECTION 2: PROJECT DETAILS

2.1 What are the principal research questions posed by this research? Describe briefly, in lay terms, the proposed research project including step by step methodology, and its potential outcomes and benefits (no more than 250 words).

This study will investigate a link between students' self-efficacy and their job seeking behaviours and a role of career coaching in raising self-efficacy. Self-efficacy is a person's beliefs in his/her capabilities that are required to move towards his/her achievement. It has been linked to career behaviours (Lent & Hackett, 1987) and to career development processes (Niles & Sowa, 1992).
The following research questions will guide this study:

1. Is coaching effective in raising career self-efficacy of students?
2. Is self-efficacy a significant factor in changing job search behaviours of students?
3. What are the self-efficacy beliefs and levels of students?

The pilot study, testing the internal consistency of an updated job search behaviour scale, will take place in May 2014. The questionnaire will be distributed to students currently participating in their mentoring scheme.
The research design is as follows:
Two samples: experimental and a random control sample of 200+ each will be selected from the University of Greenwich Business School students' Year 1, 2 and 3.

1. *Pre-intervention stage:* Prior to the experiment both groups will complete:
    a. A career-self efficacy questionnaire (CDSE: Taylor & Betz, 1983) to measure their career self-efficacy
    b. A Job Search Behaviour Scale (JSBS: Saks & Ashforth, 1999) to measure their job-search behaviours.
2. *Intervention stage*: the experimental group will receive career-coaching lasting for 6 months
3. *Post-intervention stage*: both groups will be given the CDSE and JSBS questionnaires to measure any changes.
4. A purposive sample of key students from both groups will be interviewed to explore any transitions in their career self-efficacy beliefs and their perception of the career coaching effectiveness.
5. Finally, two focus groups of 10 students and 10 career coaches, will be held in order to present and validate preliminary findings.

This study will have policy implication with regard to a future selection of career coaches. It might also help to identify training needs of career coaches with regard to specific traits that are most effective in raising students' self-efficacy.

2.2 Are any of the following involved? (Please indicate YES or NO)

- Intrusive procedure e.g. questionnaire, interview, focus group, diary (attach a copy of your questionnaire or indicative questions) **YES**
- Invasive procedure e.g. venepuncture, tissue sampling **NO**
- Physical contact **NO**
- Covert observation or covert filming / recording **NO**
- Children / young people (under 18) **NO**
- Vulnerable people (elderly, physically or mentally ill, people with learning difficulties, in care, bereaved, prisoners, other) **NO**
- Drugs, medicinal products or medical devices (if YES, complete Annex I) **NO**
- Storing human tissue (if YES, complete Annex II) **NO**
- Working with sources of ionising radiation (if YES, complete Annex III) **NO**

2.3 Has there been a pilot study for this research? (If YES, please give details)
NO

2.4 What is the proposed start date (i) of the project and (ii) of the fieldwork (if different)?

September 2014

What is the proposed end date (i) of the project and (ii) of the fieldwork (if different)?

September 2016

SECTION 3: PARTICIPATION AND CONSENT

3.1 What are the selection criteria for the proposed participants in the study?

The 'University of Greenwich' Business School Year 1, 2 and 3 population.

3.2 How many participants are to take part?
400+ Business School students

3.3 How will prospective participants be recruited / contacted and informed about their role in the project? (Give details and attach your participant information sheet, advertisement, email etc.)

Students from an experimental group will be given an information sheet when they are selected to participate in the career coaching scheme.
Student from a control group will be emailed an information sheet.

3.4 Where will the interaction with participants take place? E.g. online, classroom, public facility, laboratory, office, home etc.

The questionnaires will be distributed online whereas interviews will be conducted in a classroom or a public facility.

3.5 Are any external bodies' premises or resources to be used? Please indicate YES or NO and give details of permission sought.

NO

3.6 What is the expected total duration of participation in the study for each participant? E.g. 20 minutes to complete a questionnaire, an hour for an interview, etc.
20 minutes for a questionnaire and 30 minutes for an interview.

3.7 Is consent to be obtained using the UREC consent template? (Please indicate YES or NO and attach your consent form). If NO please indicate how consent is to be obtained, and attach a copy.

YES

3.8 If children or young people (under 18) are involved, please say how consent will be sought, from both the children / young people and their parents, guardians or those acting *in loco parentis* (e.g. school).

n.a.

3.9 Will any payment, incentive or reimbursement of expenses be made? (Please indicate YES or NO and give details, including amount)
NO

SECTION 4: ETHICAL CONSIDERATIONS

4.1 What do you consider are the main ethical issues and risks that may arise in this research? (Refer to the Guidance on Ethical Approval for Research, point 3.1). What steps will be taken to address each issue?

The main ethical issues and risk that may arise in the research are seen as follows:

- Students, who will be invited for an interview or a focus group, might find the subject-matter sensitive and might be reluctant to self-disclose and to discuss the self-efficacy, expectation and confidence to undertake certain activities, tasks and behaviours. In order to address this issue, students will be informed - prior to being selected for an interview or a focus group – that their participation is voluntary and there will be no penalties if they do not want to attend an interview or a focus group.

- Students might feel obliged to participate in the study if they know the investigator as a lecturer. In order to address this issue the information sheet states very clearly that students can choose not to take part in the study without any penalty.

- Students are allowed to withdraw at any time.

4.2 Will personal data, as defined by the Data Protection Act 1998, be collected during the research (Refer to the Guidance on Ethical Approval for Research, point 3.2)? Indicate YES or NO. If YES, give details of how you will deal with that data.

YES.

This data will be dealt with in the following manner:

1. Consent for collecting and processing the data will be gained using a UoG Participant consent form.
2. Enough information will be provided about the project for the participants to be able to give informed consent
3. Data will be held in a secure location on a work computer with password-protected files. It will not be carried on a USB stick and will not be stored on a laptop. It will not be shared with anyone except the supervisors.
4. Retention of the data: data and administrative records will be kept for the whole duration of the project and will be destroyed after the PhD is completed.
5. After completing the PhD data will be disposed securely and will be erased from the work computer.
6. Confidentiality of the data: data will be anonymised, i.e. students will be coded as letters and numbers in a separate documents that only the researcher will have access to. Participants will be allowed to choose codes / passwords to enable them to access to their data if necessary or withdraw from the project within certain timescales.
7. Data is published only in anonymised form and will never be used to influence any decisions relating to researched individuals.
8. Collected data and the contact details of participants will be only used for the purpose of this research. Contact details will not be used for any marketing reasons.

SECTION 5: INSURANCE AND FINANCIAL INTERESTS

5.1 Will this research be covered by an insurance policy (such as your own professional indemnity insurance) other than the University of Greenwich public liability policy? If so, give details.

NO

5.2 Indicate by "YES" or by ticking one of the statements below:

- I declare there is no financial or other direct interest to me or my School or Faculty arising from this study YES
- I declare there is a financial or other direct interest to me or my School or Faculty arising from this study (supply details)

Signatures

I undertake to carry out research in accordance with the University's Research Ethics Policy. In the case of a higher degree, I confirm that approval has been given by the Research Degrees Committee.

Signature of applicant **Date 17 April 2014**

I have discussed the project with the applicant, I confirm that all participants are suitably qualified to undertake this research and I approve it.

Signature of supervisor (to be signed if applicant is a student) **Date 17 April 2014**

I have reviewed the project with the applicant, or applicant's supervisor, and I confirm that all participants are

suitably qualified to undertake this research and I approve it. **Signature of UREC representative or Director of Research** **Date**

Appendix 4.1: Time 1 The Study Reliability of Scales

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
26	18.37	43.082	.434	.254	.838
27	18.97	42.150	.555	.360	.827
28	18.34	42.113	.583	.420	.824
29	18.44	39.587	.586	.665	.824
30	18.37	39.872	.602	.635	.822
31	18.78	42.427	.537	.343	.828
38	19.03	43.216	.563	.405	.827
39	18.26	42.737	.521	.357	.830
40	19.24	44.262	.522	.472	.831
41	18.82	41.824	.514	.453	.831

Case Processing Summary AJSB

		N	%
Cases	Valid	**939**	**98.3**
	Excluded[a]	**16**	**1.7**
	Total	**955**	**100.0**

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.828	**.832**	**6**

JBS Case Processing Summary

		N	%
Cases	Valid	**943**	**98.7**
	Excluded[a]	**12**	**1.3**

	Total	**955**	**100.0**

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.938	**.939**	**4**

Scale: Cronbach Alpha for Self-Appraisal

Reliability Statistics Self-Appraisal

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.721	**.724**	**5**

Reliability Statistics Self-Appraisal

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.721	**.724**	**5**

Scale: Cronbach Alpha for Occupational Information

Case Processing Summary – Occupational Information

		N	%
Cases	Valid	**943**	**98.7**
	Excluded[a]	**12**	**1.3**
	Total	**955**	**100.0**

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics Occupational Information

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.707	**.707**	**5**

Scale: Cronbach Alpha for Goal Selection

Case Processing Summary

		N	%
Cases	Valid	921	96.4
	Excluded[a]	34	3.6
	Total	955	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.726	.729	5

Scale: Cronbach Alpha for Planning

Case Processing Summary

		N	%
Cases	Valid	940	98.4
	Excluded[a]	15	1.6
	Total	955	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.760	.761	5

Scale: Cronbach Alpha for Problem Solving

Case Processing Summary

		N	%
Cases	Valid	939	98.3
	Excluded[a]	16	1.7
	Total	955	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.720	.725	5

Scale: Cronbach Alpha for Total CDSE-SF

Case Processing Summary

		N	%
Cases	Valid	879	92.0
	Excluded[a]	76	8.0
	Total	955	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.926	.927	25

Appendix 4.2: Time 1 Updated PJSB scale

PJBS Reliability Statistics Original Scale

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.822	**.823**	**8**

Appendix 4.3: Time 2 Study Cronbach's α for the Outcome Expectancy Scale

Case Processing Summary

		N	%
Cases	Valid	237	96.7
	Excluded[a]	8	3.3
	Total	245	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.900	.900	12

Appendix 4.4. Time 2 MANOVA Comparison between the Experimental and Control Group at Time 2

Between-Subjects Factors

		Value Label	N
Group Type	1	Experimental Group	79
	2	Control Group	134

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
T2 SelfAppraisal	.363	1	211	.547
T2 Occupational Information	.015	1	211	.902
T2 GoalSelection	.003	1	211	.953
T2 Planning	.158	1	211	.692
T2 ProblemSolving	1.057	1	211	.305
T2 CDSE	.167	1	211	.683
tr T2 PJSB	.575	1	211	.449
tr T2 AJSB	.549	1	211	.460
T2 JSI	.000	1	211	.983

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Groups

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.985	1727.539[b]	8.000	204.000	.000	.985
	Wilks' Lambda	.015	1727.539[b]	8.000	204.000	.000	.985
	Hotelling's Trace	67.747	1727.539[b]	8.000	204.000	.000	.985
	Roy's Largest Root	67.747	1727.539[b]	8.000	204.000	.000	.985
Groups	Pillai's Trace	.017	.430[b]	8.000	204.000	.902	.017
	Wilks' Lambda	.983	.430[b]	8.000	204.000	.902	.017
	Hotelling's Trace	.017	.430[b]	8.000	204.000	.902	.017
	Roy's Largest Root	.017	.430[b]	8.000	204.000	.902	.017

a. Design: Intercept + Groups

b. Exact statistic

Descriptive Statistics

	Group Type	Mean	Std. Deviation	N
T2 SelfAppraisal	1 Experimental Group	3.6962	.65934	79
	2 Control Group	3.6537	.61027	134
	Total	3.6695	.62771	213
T2 Occupational Information	1 Experimental Group	3.7038	.64915	79
	2 Control Group	3.6552	.64255	134
	Total	3.6732	.64390	213
T2 GoalSelection	1 Experimental Group	3.6101	.63480	79
	2 Control Group	3.5582	.60825	134
	Total	3.5775	.61725	213
T2 Planning	1 Experimental Group	3.5747	.65818	79
	2 Control Group	3.4791	.59825	134
	Total	3.5146	.62134	213
T2 ProblemSolving	1 Experimental Group	3.5139	.70579	79
	2 Control Group	3.4000	.61265	134
	Total	3.4423	.64945	213
T2 CDSE	1 Experimental Group	3.6197	.57364	79
	2 Control Group	3.5493	.54110	134
	Total	3.5754	.55310	213
tr T2 PJSB	1 Experimental Group	1.4857	.23016	79
	2 Control Group	1.4700	.24288	134
	Total	1.4758	.23782	213
tr T2 AJSB	1 Experimental Group	1.3913	.23320	79
	2 Control Group	1.3968	.24869	134
	Total	1.3948	.24252	213
T2 JSI	1 Experimental Group	3.2785	1.12160	79
	2 Control Group	3.1213	1.11371	134
	Total	3.1796	1.11660	213

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	T2 SelfAppraisal	.090[a]	1	.090	.227	.634	.001
	T2 Occupational Information	.117[b]	1	.117	.282	.596	.001
	T2 GoalSelection	.134[c]	1	.134	.351	.554	.002
	T2 Planning	.454[d]	1	.454	1.177	.279	.006
	T2 ProblemSolving	.645[e]	1	.645	1.533	.217	.007
	T2 CDSE	.247[f]	1	.247	.807	.370	.004
	tr T2 PJSB	.012[g]	1	.012	.215	.643	.001
	tr T2 AJSB	.001[h]	1	.001	.025	.874	.000
	T2 JSI	1.228[i]	1	1.228	.985	.322	.005
Intercept	T2 SelfAppraisal	2684.845	1	2684.845	6789.174	.000	.970
	T2 Occupational Information	2691.488	1	2691.488	6469.613	.000	.968
	T2 GoalSelection	2553.812	1	2553.812	6682.398	.000	.969
	T2 Planning	2472.846	1	2472.846	6410.677	.000	.968
	T2 ProblemSolving	2375.754	1	2375.754	5646.701	.000	.964
	T2 CDSE	2554.286	1	2554.286	8341.898	.000	.975
	tr T2 PJSB	434.167	1	434.167	7648.177	.000	.973
	tr T2 AJSB	386.344	1	386.344	6538.383	.000	.969
	T2 JSI	2035.534	1	2035.534	1632.510	.000	.886
Groups	T2 SelfAppraisal	.090	1	.090	.227	.634	.001
	T2 Occupational Information	.117	1	.117	.282	.596	.001
	T2 GoalSelection	.134	1	.134	.351	.554	.002
	T2 Planning	.454	1	.454	1.177	.279	.006
	T2 ProblemSolving	.645	1	.645	1.533	.217	.007
	T2 CDSE	.247	1	.247	.807	.370	.004
	tr T2 PJSB	.012	1	.012	.215	.643	.001
	tr T2 AJSB	.001	1	.001	.025	.874	.000
	T2 JSI	1.228	1	1.228	.985	.322	.005
Error	T2 SelfAppraisal	83.442	211	.395			
	T2 Occupational Information	87.780	211	.416			
	T2 GoalSelection	80.638	211	.382			
	T2 Planning	81.391	211	.386			
	T2 ProblemSolving	88.775	211	.421			
	T2 CDSE	64.608	211	.306			
	tr T2 PJSB	11.978	211	.057			
	tr T2 AJSB	12.468	211	.059			
	T2 JSI	263.090	211	1.247			
Total	T2 SelfAppraisal	2951.600	213				
	T2 Occupational Information	2961.840	213				
	T2 GoalSelection	2806.800	213				
	T2 Planning	2712.840	213				
	T2 ProblemSolving	2613.280	213				
	T2 CDSE	2787.736	213				
	tr T2 PJSB	475.900	213				
	tr T2 AJSB	426.833	213				
	T2 JSI	2417.688	213				
Corrected Total	T2 SelfAppraisal	83.532	212				
	T2 Occupational Information	87.897	212				
	T2 GoalSelection	80.772	212				
	T2 Planning	81.845	212				
	T2 ProblemSolving	89.420	212				
	T2 CDSE	64.855	212				
	tr T2 PJSB	11.990	212				
	tr T2 AJSB	12.469	212				
	T2 JSI	264.319	212				

a. R Squared = .001 (Adjusted R Squared = -.004)
b. R Squared = .001 (Adjusted R Squared = -.003)
c. R Squared = .002 (Adjusted R Squared = -.003)
d. R Squared = .006 (Adjusted R Squared = .001)
e. R Squared = .007 (Adjusted R Squared = .003)
f. R Squared = .004 (Adjusted R Squared = -.001)
g. R Squared = .001 (Adjusted R Squared = -.004)
h. R Squared = .000 (Adjusted R Squared = -.005)
i. R Squared = .005 (Adjusted R Squared = .000)

Appendix 4.5. Independent-Samples T-test for Vocational Outcome Expectations of the Experimental and Control Group at Time 2

Group Statistics

	Group Type	N	Mean	Std. Deviation	Std. Error Mean
transformed T2 Outcome Exp	1 Experimental Group	84	1.3499	.15255	.01664
	2 Control Group	153	1.3207	.15461	.01250

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
transformed T2 Outcome Exp	Equal variances assumed	1.524	.218	1.398	235	.163	.02921	.02090	-.01196	.07038
	Equal variances not assumed			1.403	172.975	.162	.02921	.02082	-.01187	.07030

Group Statistics

	Group Type	N	Mean	Std. Deviation	Std. Error Mean
T2 SelfAppraisal	1 Experimental Group	86	3.6767	.64071	.06909
	2 Control Group	153	3.6497	.61699	.04988
T2 Occupational Information	1 Experimental Group	86	3.6977	.63227	.06818
	2 Control Group	149	3.6631	.64435	.05279
T2 GoalSelection	1 Experimental Group	87	3.6023	.61644	.06609
	2 Control Group	152	3.5711	.60785	.04930
T2 Planning	1 Experimental Group	86	3.5698	.64609	.06967
	2 Control Group	154	3.4792	.61204	.04932
T2 ProblemSolving	1 Experimental Group	87	3.4759	.69432	.07444
	2 Control Group	153	3.4078	.60519	.04893
T2 CDSE	1 Experimental Group	84	3.6081	.56373	.06151
	2 Control Group	140	3.5583	.54449	.04602
tr T2 PJSB	1 Experimental Group	85	1.4864	.22893	.02483
	2 Control Group	151	1.4570	.24165	.01967
tr T2 AJSB	1 Experimental Group	84	1.3890	.23150	.02526
	2 Control Group	157	1.3861	.24729	.01974
T2 JSI	1 Experimental Group	85	3.3324	1.10692	.12006
	2 Control Group	158	3.0997	1.13462	.09027
transformed T2 Outcome Exp	1 Experimental Group	84	1.3499	.15255	.01664
	2 Control Group	153	1.3207	.15461	.01250

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
T2 SelfAppraisal	Equal variances assumed	.104	.748	.321	237	.748	.02707	.08431	-.13903	.19317
	Equal variances not assumed			.318	170.760	.751	.02707	.08521	-.14114	.19528
T2 Occupational Information	Equal variances assumed	.118	.732	.399	233	.690	.03459	.08667	-.13616	.20534
	Equal variances not assumed			.401	180.251	.689	.03459	.08623	-.13555	.20473
T2 GoalSelection	Equal variances assumed	.155	.694	.380	237	.704	.03125	.08214	-.13057	.19306
	Equal variances not assumed			.379	177.118	.705	.03125	.08245	-.13147	.19396
T2 Planning	Equal variances assumed	.010	.919	1.077	238	.282	.09055	.08406	-.07504	.25614
	Equal variances not assumed			1.061	168.089	.290	.09055	.08536	-.07797	.25906
T2 ProblemSolving	Equal variances assumed	1.180	.278	.793	238	.429	.06802	.08578	-.10097	.23700
	Equal variances not assumed			.764	159.511	.446	.06802	.08908	-.10791	.24394
T2 CDSE	Equal variances assumed	.087	.768	.654	222	.514	.04981	.07615	-.10026	.19988
	Equal variances not assumed			.648	170.099	.518	.04981	.07682	-.10183	.20145
tr T2 PJSB	Equal variances assumed	.456	.500	.915	234	.361	.02942	.03216	-.03394	.09278
	Equal variances not assumed			.929	182.264	.354	.02942	.03167	-.03308	.09192
tr T2 AJSB	Equal variances assumed	.677	.411	.088	239	.930	.00288	.03270	-.06154	.06731
	Equal variances not assumed			.090	179.655	.928	.00288	.03205	-.06037	.06613
T2 JSI	Equal variances assumed	.058	.810	1.537	241	.125	.23267	.15133	-.06544	.53078
	Equal variances not assumed			1.549	175.754	.123	.23267	.15021	-.06378	.52912
transformed T2 Outcome Exp	Equal variances assumed	1.524	.218	1.398	235	.163	.02921	.02090	-.01196	.07038
	Equal variances not assumed			1.403	172.975	.162	.02921	.02082	-.01187	.07030

Appendix 4.6: Time 1 Correlations between Career Decision Self-Efficacy and Job- Seeking Behaviours

		SelfAppraisal	Occupationall nformation	GoalSelection	Planning	ProblemSolvi ng	TotalCDSE	trPJSB	AJSB	JSI
SelfAppraisal	Pearson Correlation	1	.661**	.723**	.714**	.656**	.861**	.234**	.161**	.163**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.000
	N	937	925	905	924	923	879	907	922	927
OccupationalInfor mation	Pearson Correlation	.661**	1	.695**	.704**	.650**	.858**	.268**	.233**	.160**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000	.000
	N	925	942	912	929	930	878	914	928	932
GoalSelection	Pearson Correlation	.723**	.695**	1	.707**	.645**	.870**	.248**	.181**	.155**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000	.000
	N	905	912	921	909	908	879	894	906	912
Planning	Pearson Correlation	.714**	.704**	.707**	1	.693**	.888**	.343**	.306**	.225**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000	.000
	N	924	929	909	940	929	879	911	927	930
ProblemSolving	Pearson Correlation	.656**	.650**	.645**	.693**	1	.843**	.266**	.199**	.187**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000	.000
	N	923	930	908	929	939	879	910	924	928
TotalCDSE	Pearson Correlation	.861**	.858**	.870**	.888**	.843**	1	.329**	.265**	.213**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000	.000
	N	879	878	879	879	879	879	856	868	873
trPJSB	Pearson Correlation	.234**	.268**	.248**	.343**	.266**	.329**	1	.774**	.599**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		.000	.000
	N	907	914	894	911	910	856	923	913	918
AJSB	Pearson Correlation	.161**	.233**	.181**	.306**	.199**	.265**	.774**	1	.460**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000		.000
	N	922	928	906	927	924	868	913	939	932
JSI	Pearson Correlation	.163**	.160**	.155**	.225**	.187**	.213**	.599**	.460**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	
	N	927	932	912	930	928	873	918	932	943

**. Correlation is significant at the 0.01 level (2-tailed).

Appendix 4.7: Regression Analysis: Predictors of Job Search Behaviours: Planning

CDSE as as a Predictor of Job Seeking Behaviours (PJSB example)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.329[a]	.108	.107	.22373

a. Predictors: (Constant), TotalCDSE

b. Dependent Variable: trPJSB

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.192	1	5.192	103.717	.000[b]
	Residual	42.749	854	.050		
	Total	47.941	855			

a. Dependent Variable: trPJSB

b. Predictors: (Constant), TotalCDSE

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.924	.049		18.767	.000	.827	1.020					
	TotalCDSE	.141	.014	.329	10.184	.000	.114	.168	.329	.329	.329	1.000	1.000

a. Dependent Variable: trPJSB

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	TotalCDSE
1	1	1.988	1.000	.01	.01
	2	.012	12.796	.99	.99

a. Dependent Variable: trPJSB

Planning as as a Predictor of Job Seeking Behaviours (PJSB example)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.355[a]	.126	.121	.22201

a. Predictors: (Constant), ProblemSolving, GoalSelection, OccupationalInformation, SelfAppraisal, Planning

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.045	5	1.209	24.527	.000[b]
	Residual	41.896	850	.049		
	Total	47.941	855			

a. Dependent Variable: trPJSB

b. Predictors: (Constant), ProblemSolving, GoalSelection, OccupationalInformation, SelfAppraisal, Planning

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.964	.050		19.327	.000
	SelfAppraisal	-.016	.020	-.042	-.804	.422
	OccupationalInformation	.021	.019	.058	1.149	.251
	GoalSelection	-.001	.020	-.003	-.060	.952
	Planning	.102	.020	.288	5.213	.000
	ProblemSolving	.027	.017	.074	1.550	.121

a. Dependent Variable: trPJSB

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Vocational Outcome Expectancy as a Predictor of Job Seeking Behaviours (PJSB example)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.303[a]	.092	.088	.38921

a. Predictors: (Constant), tr T2 PJSB

b. Dependent Variable: T2 Outcome Expectancy

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.481	1	3.481	22.981	.000[b]
	Residual	34.387	227	.151		
	Total	37.868	228			

a. Dependent Variable: T2 Outcome Expectancy

b. Predictors: (Constant), tr T2 PJSB

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	2.443	.160		15.254	.000	2.127	2.758					
	tr T2 PJSB	.516	.108	.303	4.794	.000	.304	.728	.303	.303	.303	1.000	1.000

a. Dependent Variable: T2 Outcome Expectancy

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	tr T2 PJSB
1	1	1.987	1.000	.01	.01
	2	.013	12.371	.99	.99

a. Dependent Variable: T2 Outcome Expectancy

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Appendix 4.8: Time 2 Pearson's Correlations between Vocational Outcome Expectations and Job Seeking Behaviours

Correlations

		T2 PJSB	T2 AJSB	T2 JSI	T2 Outcome Expectancy	T2 CDSE
T2 PJSB	Pearson Correlation	1	.733**	.643**	.294**	.337**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	236	234	235	229	216
T2 AJSB	Pearson Correlation	.733**	1	.469**	.232**	.159*
	Sig. (2-tailed)	.000		.000	.000	.018
	N	234	241	240	234	220
T2 JSI	Pearson Correlation	.643**	.469**	1	.321**	.294**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	235	240	243	236	222
T2 Outcome Expectancy	Pearson Correlation	.294**	.232**	.321**	1	.497**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	229	234	236	237	219
T2 CDSE	Pearson Correlation	.337**	.159*	.294**	.497**	1
	Sig. (2-tailed)	.000	.018	.000	.000	
	N	216	220	222	219	224

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Appendix 4.9. Time 2 Correlations between Vocational Outcome Expectations and Career Decision Self-Efficacy

Correlations

		T2 CDSE	T2 Outcome Expectancy
T2 CDSE	Pearson Correlation	1	.497**
	Sig. (2-tailed)		.000
	N	224	219
T2 Outcome Expectancy	Pearson Correlation	.497**	1
	Sig. (2-tailed)	.000	
	N	219	237

**. Correlation is significant at the 0.01 level (2-tailed).

Appendix 4.10: Time 1 Independent-Samples t-testing for Gender Differences

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
SelfAppraisal	1 Male	401	3.6394	.60757	.03034
	2 Female	440	3.6214	.61699	.02941
OccupationalInformation	1 Male	401	3.5796	.63740	.03183
	2 Female	440	3.5786	.65732	.03134
GoalSelection	1 Male	401	3.5421	.63423	.03167
	2 Female	440	3.5250	.60755	.02896
Planning	1 Male	401	3.4913	.67775	.03385
	2 Female	440	3.4118	.66040	.03148
ProblemSolving	1 Male	401	3.3766	.65050	.03248
	2 Female	440	3.3368	.65906	.03142
TotalCDSE	1 Male	401	3.5258	.55372	.02765
	2 Female	440	3.4947	.55205	.02632
PJSBtransformed	1 Male	401	1.4271	.24282	.01213
	2 Female	440	1.4100	.23131	.01103
AJSB	1 Male	401	1.9086	.72645	.03628
	2 Female	440	1.8189	.66423	.03167
JSI	1 Male	401	3.0468	1.02095	.05098
	2 Female	440	3.1136	1.09897	.05239

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								L	Upper
Equal variances assumed	.011	.915	.650	872	.516	.025	.038	-.050	.099
Equal variances not assumed			.649	854.827	.516	.025	.038	-.050	.099

Eta squared = $t^2/(t^2+ N12+N2-2) = t^2/(t^2+ N12+N2-2) = .65^2/(.65^2+ 412+462 -2) = 0.000484284$

Appendix 4.11: Time 1 MANOVA to Compare the Career Decision Self-Efficacy Scores for Males and Females at Time 1

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.983	24449.763[b]	2.000	848.000	.000	.983
	Wilks' Lambda	.017	24449.763[b]	2.000	848.000	.000	.983
	Hotelling's Trace	57.665	24449.763[b]	2.000	848.000	.000	.983
	Roy's Largest Root	57.665	24449.763[b]	2.000	848.000	.000	.983
Gender	Pillai's Trace	.002	.829[b]	2.000	848.000	.437	.002
	Wilks' Lambda	.998	.829[b]	2.000	848.000	.437	.002
	Hotelling's Trace	.002	.829[b]	2.000	848.000	.437	.002
	Roy's Largest Root	.002	.829[b]	2.000	848.000	.437	.002

a. Design: Intercept + Gender
b. Exact statistic

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	PJSBtransformed	.085[a]	1	.085	1.526	.217	.002
	TotalCDSE	.171[b]	1	.171	.558	.455	.001
Intercept	PJSBtransformed	1709.575	1	1709.575	30602.724	.000	.973
	TotalCDSE	10464.630	1	10464.630	34212.708	.000	.976
Gender	PJSBtransformed	.085	1	.085	1.526	.217	.002
	TotalCDSE	.171	1	.171	.558	.455	.001
Error	PJSBtransformed	47.428	849	.056			
	TotalCDSE	259.683	849	.306			
Total	PJSBtransformed	1759.900	851				
	TotalCDSE	10744.750	851				
Corrected Total	PJSBtransformed	47.513	850				
	TotalCDSE	259.854	850				

a. R Squared = .002 (Adjusted R Squared = .001)
b. R Squared = .001 (Adjusted R Squared = -.001)

Time 1 ANOVA For Combined Gender and Ethnicity Effect and Career Decision Self-Efficacy

Levene's Test of Equality of Error Variances[a]

Dependent Variable: TotalCDSE

F	df1	df2	Sig.
1.118	11	862	.343

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + ETHNICITY + Gender * ETHNICITY

Tests of Between-Subjects Effects

Dependent Variable: TotalCDSE

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	14.946[a]	11	1.359	4.590	.000	.055
Intercept	3210.344	1	3210.344	10845.956	.000	.926
Gender	.119	1	.119	.403	.526	.000
ETHNICITY	10.370	5	2.074	7.007	.000	.039
Gender * ETHNICITY	3.468	5	.694	2.344	.040	.013
Error	255.147	862	.296			
Total	11038.843	874				
Corrected Total	270.093	873				

a. R Squared = .055 (Adjusted R Squared = .043)

Appendix 4.12: Time 1 Combined Gender and Ethnicity Effect and Students Career Decision Self-Efficacy

ETHNICITY * Gender

Dependent Variable: TotalCDSE

ETHNICITY	Gender	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
	1 Male	3.384	.243	2.906	3.862
	2 Female	3.697	.206	3.294	4.101
1 White	1 Male	3.541	.044	3.453	3.628
	2 Female	3.644	.039	3.568	3.721
2 Black or Black British	1 Male	3.693	.070	3.556	3.830
	2 Female	3.573	.072	3.431	3.714
3 Asian or Asian British	1 Male	3.482	.049	3.385	3.578
	2 Female	3.381	.053	3.277	3.485
4 Mixed	1 Male	3.626	.132	3.367	3.885
	2 Female	3.280	.125	3.035	3.525
5 Chinese or Other Ethnic Group	1 Male	3.373	.071	3.233	3.513
	2 Female	3.268	.062	3.146	3.389

Appendix 4.13: PROCESS analysis for Testing Hypothesis 11

SPSS PROCESS Syntax

```
* Encoding: UTF-8.
insert file
="/volumes/no name/spssmodmedcourse/process files/process.sps".


PROCESS VARS = TotCDSE  White SEX JSI
/Y = JSI
/X = TotCDSE
/M = White
/W = SEX
/MODEL = 2
```

PROCESS Output for Testing Hypothesis 11 PJSB Example

```
Model = 2
    Y = trPJSB
    X = TotCDSE
    M = BlorBlBr
    W = SEX

Sample size
        856

**************************************************************************
Outcome: trPJSB

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .3436      .1181      .0497    22.7573     5.0000   850.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant      .9344      .0705    13.2600      .0000      .7961     1.0728
BlorBlBr     -.2631      .1369    -1.9221      .0549     -.5317      .0056
TotCDSE       .1346      .0199     6.7591      .0000      .0955      .1737
int_1         .0834      .0373     2.2354      .0256      .0102      .1567
SEX           .0876      .0984      .8902      .3736     -.1056      .2808
int_2        -.0211      .0277     -.7622      .4461     -.0754      .0332

Product terms key:

 int_1    TotCDSE     X     BlorBlBr
 int_2    TotCDSE     X     SEX

R-square increase due to interaction(s):
         R2-chng          F        df1        df2          p
int_1      .0052     4.9972     1.0000   850.0000      .0256
int_2      .0006      .5810     1.0000   850.0000      .4461
Both       .0057     2.7441     2.0000   850.0000      .0649

**************************************************************************
Conditional effect of X on Y at values of the moderator(s):
       SEX   BlorBlBr     Effect         se          t          p       LLCI       ULCI
     .0000      .0000      .1346      .0199     6.7591      .0000      .0955      .1737
     .0000     1.0000      .2181      .0368     5.9223      .0000      .1458      .2903
    1.0000      .0000      .1135      .0212     5.3566      .0000      .0719      .1551
    1.0000     1.0000      .1970      .0368     5.3584      .0000      .1248      .2691

Values for quantitative moderators are the mean and plus/minus one SD from mean.
Values for dichotomous moderators are the two values of the moderator.

****************** ANALYSIS NOTES AND WARNINGS ************************

Level of confidence for all confidence intervals in output:
    95.00

NOTE: Some cases were deleted due to missing data.  The number of such cases was:
  99

------ END MATRIX -----
```

PROCESS Output for Testing Hypothesis 11 AJSB Example

```
Model = 2
    Y = AJSB
    X = TotCDSE
    M = BlorBlBr
    W = SEX

Sample size
        868

**************************************************************************
Outcome: AJSB

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .3205      .1027      .4380    19.7382     5.0000   862.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant      .7605      .2093     3.6334      .0003      .3497     1.1713
BlorBlBr    -1.0936      .4012    -2.7259      .0065    -1.8810     -.3062
TotCDSE       .2942      .0591     4.9749      .0000      .1781      .4103
int_1         .3718      .1095     3.3963      .0007      .1569      .5866
SEX           .3658      .2880     1.2702      .2044     -.1995      .9311
int_2        -.0803      .0810     -.9905      .3222     -.2393      .0788

Product terms key:

 int_1    TotCDSE     X     BlorBlBr
 int_2    TotCDSE     X     SEX

R-square increase due to interaction(s):
         R2-chng          F        df1        df2          p
int_1      .0120    11.5347     1.0000   862.0000      .0007
int_2      .0010      .9810     1.0000   862.0000      .3222
Both       .0130     6.2291     2.0000   862.0000      .0021

**************************************************************************

Conditional effect of X on Y at values of the moderator(s):
       SEX   BlorBlBr     Effect         se          t          p       LLCI       ULCI
     .0000      .0000      .2942      .0591     4.9749      .0000      .1781      .4103
     .0000     1.0000      .6660      .1077     6.1843      .0000      .4546      .8773
    1.0000      .0000      .2139      .0612     3.4938      .0005      .0937      .3341
    1.0000     1.0000      .5857      .1081     5.4161      .0000      .3735      .7980

Values for quantitative moderators are the mean and plus/minus one SD from mean.
Values for dichotomous moderators are the two values of the moderator.

********************* ANALYSIS NOTES AND WARNINGS *************************

Level of confidence for all confidence intervals in output:
    95.00

NOTE: Some cases were deleted due to missing data.  The number of such cases was:
  87

------ END MATRIX -----
```

PROCESS Output for Testing Hypothesis 11 JSI Example

```
Model = 2
    Y = JSI
    X = TotCDSE
    M = White
    W = SEX

Sample size
        873

**************************************************************************
Outcome: JSI

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .2260      .0511     1.0636     9.3301     5.0000   867.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     1.2697      .3515     3.6120      .0003      .5797     1.9596
White         .0089      .4805      .0185      .9853     -.9342      .9520
TotCDSE       .5333      .1011     5.2738      .0000      .3348      .7318
int_1        -.0107      .1340     -.0802      .9361     -.2738      .2523
SEX           .7890      .4489     1.7578      .0791     -.0920     1.6700
int_2        -.2488      .1264    -1.9676      .0494     -.4969     -.0006

Product terms key:

 int_1    TotCDSE     X     White
 int_2    TotCDSE     X     SEX

R-square increase due to interaction(s):
         R2-chng          F        df1        df2          p
int_1      .0000      .0064     1.0000   867.0000      .9361
int_2      .0042     3.8715     1.0000   867.0000      .0494
Both       .0042     1.9358     2.0000   867.0000      .1449

**************************************************************************

Conditional effect of X on Y at values of the moderator(s):
        SEX      White     Effect         se          t          p       LLCI       ULCI
      .0000      .0000      .5333      .1011     5.2738      .0000      .3348      .7318
      .0000     1.0000      .5226      .1233     4.2400      .0000      .2807      .7645
     1.0000      .0000      .2846      .1003     2.8364      .0047      .0877      .4815
     1.0000     1.0000      .2738      .1275     2.1470      .0321      .0235      .5241

Values for quantitative moderators are the mean and plus/minus one SD from mean.
Values for dichotomous moderators are the two values of the moderator.

********************* ANALYSIS NOTES AND WARNINGS *************************

Level of confidence for all confidence intervals in output:
    95.00

NOTE: Some cases were deleted due to missing data.  The number of such cases was:
  82

------ END MATRIX -----
```

Appendix 4.14. PROCESS analysis for Testing Hypothesis 12

AC1: SPSS PROCESS Syntax

```
* Encoding: UTF-8.
insert file
="/volumes/no name/spssmodmedcourse/process files/process.sps".


PROCESS VARS = White TotCDSE trPJSB
/Y = trPJSB
/M = TotCDSE
/X = White
/MODEL = 4
```

PROCESS Output for Testing Hypothesis 11 PJSB Example

```
Model = 4
    Y = trPJSB
    X = BlorBlBr
    M = TotCDSE

Sample size
       856

**************************************************************************
Outcome: TotCDSE

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .0951      .0090      .3029     7.7884     1.0000   854.0000      .0054

Model
             coeff         se          t          p       LLCI       ULCI
constant    3.4908      .0202   172.5356      .0000     3.4510     3.5305
BlorBlBr     .1534      .0550     2.7908      .0054      .0455      .2613

**************************************************************************
Outcome: trPJSB

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .3338      .1114      .0499    53.4952     2.0000   853.0000      .0000

Model
             coeff         se          t          p       LLCI       ULCI
constant     .9266      .0492    18.8361      .0000      .8300     1.0231
TotCDSE      .1387      .0139     9.9846      .0000      .1115      .1660
BlorBlBr     .0390      .0224     1.7400      .0822     -.0050      .0830



****************** DIRECT AND INDIRECT EFFECTS *************************

Direct effect of X on Y
     Effect         SE          t          p       LLCI       ULCI
      .0390      .0224     1.7400      .0822     -.0050      .0830

Indirect effect of X on Y
           Effect    Boot SE   BootLLCI   BootULCI
TotCDSE      .0213      .0086      .0054      .0387

****************** ANALYSIS NOTES AND WARNINGS *************************

Number of bootstrap samples for bias corrected bootstrap confidence intervals:
     5000

Level of confidence for all confidence intervals in output:
    95.00

NOTE: Some cases were deleted due to missing data.  The number of such cases was:
  99

------ END MATRIX -----
```

Appendix 4.15: PROCESS analysis example for gender and ethnicity as moderators of students' vocational outcome expectations and their job seeking behaviours: A Mixed ethnicity and an Active Job Search Behaviours Example

SPSS PROCESS Syntax

```
PROCESS VARS = T2OutExp Mixed SEX trT2AJSB
/Y = trT2AJSB
/X = T2OutExp
/M = Mixed
/W = SEX
/MODEL = 2
```

SPSS Output

Matrix

```
Run MATRIX procedure:

************** PROCESS Procedure for SPSS Release 2.16.3 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2013). www.guilford.com/p/hayes3

**************************************************************************
Model = 2
    Y = trT2AJSB
    X = T2OutExp
    M = Mixed
    W = SEX

Sample size
        234

**************************************************************************
Outcome: trT2AJSB

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .2976      .0886      .0551     4.4307     5.0000   228.0000      .0007

Model
              coeff         se          t          p       LLCI       ULCI
constant     1.1169      .1588     7.0353      .0000      .8041     1.4297
Mixed         .1713      .6086      .2816      .7785    -1.0278     1.3705
T2OutExp      .0840      .0486     1.7303      .0849     -.0117      .1797
int_1        -.1078      .1948     -.5535      .5804     -.4916      .2760
SEX          -.4929      .2516    -1.9588      .0514     -.9887      .0029
int_2         .1590      .0781     2.0364      .0429      .0052      .3128

Product terms key:

 int_1    T2OutExp    X     Mixed
 int_2    T2OutExp    X     SEX
```