**Students’ perceptions of education and employability:**

**Facilitating career transition from higher education into the labor market**

**Reference:**

Donald, Ashleigh & Baruch, Y. (2018). Students’ perceptions of education and employability: Facilitating the transition from higher education into the labour market. *Career Development International*, doi: 10.1108/CDI-09-2017-0171

**Structured Abstract**

**Purpose**: To understand: (i) How students perceive their future careers and how university has prepared them to enter the global labor market; (ii) Student perceptions regarding benefits versus associated costs of pursuing Higher Education on employability and earnings; and (iii) The anticipated barriers and how to overcome these in pursuit of career sustainability within a career ecosystem.

**Method**: We adopted a qualitative method using semi-structured interviews on a small sample of 38 final year students from a UK university who were also participants in an earlier two wave quantitative survey, which was conducted with 387 penultimate and final year undergraduates from the same UK-based University.

**Findings**: Findings revealed that undergraduates perceive their investment in Higher Education to offer a net financial gain; however, this is narrowing due to increased tuition fees, associated student debt, and interest payments eroding earning premiums. As undergraduates progress, they feel more employable from a personal perspective, but less employable from a market perspective due to competition for graduate jobs and the cost/benefit conflict of resources.

**Practical implications**: We provide nine opportunities for enhancing the employability of graduates collaborating with graduate employers, providing a timely contribution to the social, political, and economic debate on the funding of Higher Education.

**Originality/value**: We advance career theory via the new perspective of Career Ecosystem Theory by: (i) Explaining student career perceptions in terms of how university has prepared them for the global labor market; (ii) Exploring the perceived costs versus benefits of pursuing Higher Education in relation to employability; (iii) Suggesting a two-dimensional model of personal and market factors of employability; (iv) Providing a model of careers advice from employers and universities for supporting students' careers; and (v) Offering policy implications in relation to the future funding of Higher Education and employability of future graduates.

**Keywords**

Careers, Ecosystem, Employability, Graduates, Higher Education, Policy, Sustainability.

**Introduction**

Contemporary society faces challenges that are more testing than ever due to the fast pace of development and the inter-connectedness of different facets of life. The landscape of vocations and professions is also changing due to the increasing and significant role that technology plays. Furthermore, the key role for economic stability and progress is the utilization of the human resource, and whereas in the past job security was the desired state, in today's turbulent employment system, the key for sustainability is employability. Employability is the ability to acquire employment when needed, or as Rothwell and Arnold (2007) suggested, it is the ability to keep the job one has or to get the job one wants. For individuals, perceived employability is one’s perceptions of *‘possibilities of obtaining and maintaining employment’* (Vanhercke, Cuyper, Peeters and Witte, 2014, p. 593). The increased relevance of employability for a sustained society is the result of the changes in both career systems and the psychological contract between individuals and organizations (Baruch and Rousseau, 2018). Employability is shaped by many factors, but education is a major determinant of employability, in particular for graduates.

As new graduates need to continuously manage their employability and secure careers in an ever challenging and global labor market, understanding and exploring the student perspective of how Higher Education (HE) can enhance or limit their opportunities of employment is crucial, as their views are neither well known, nor well researched (Donald, Baruch and Ashleigh, 2017a; Jackson, 2015; Tymon, 2013). The relationship between education and employability has become a more dichotomous and tenuous concept as many graduates leaving university today are often underemployed (Okay-Somerville and Scholarios, 2014). Moving from education into the labor market is a major career transition, which requires scholarly attention (Onyishi, Enwereuzor, Ituma and Omenma, 2015; Pinto and Ramalheira, 2017), and to date has received limited empirical evidence relating to students’ perceptions and the impact it has on their future careers. The terms ‘employability’ and ‘perceived employability’ are used interchangeably throughout the paper to maintain flow for the reader. A key contribution of our paper is the representation of students from a variety of degree disciplines. This is in contrast to existing literature which tends to focus on students from a singular degree discipline (e.g. Hsieh and Hsu, 2013; Sheepway, Lincoln and McAllister, 2014; Wilton, 2012). In particular, possible differences in perceived employability between specialist and generalist degree disciplines are as yet unknown (Baruch, Bell and Gray, 2005).

We believe our research offers a timely contribution as it addresses the costs and benefits of HE, how the student view of employability changes during their university studies, and the strategies available to improve employability. This directly relates to the ongoing political, economic, and social debate of university fees and employability (e.g. Department for Education, 2018). The views of students should be voiced, and this paper offers valuable guidance to countries facing HE funding and employability challenges.

With a continued growth in participation in HE, we believe it is important to establish the students’ voice and to associate it as a major actor in the labor market. This is an important aspect in the debate of career transition. For example, boundaries still exist (Inkson, Gunz, Ganesh and Roper, 2012), but should be discussed alongside proactive career behaviours (Okay-Somerville and Scholarios, 2014), to secure sections of the labor market for which graduates are qualified, together with their future career self-management. This therefore, challenges the ‘boundaryless’ career concept, adding credence to the necessity to heed the student ‘voice’ empirically, as they experience the transition from HE to the workplace in the 21st century.

Furthermore, we believe that new insights of gender at the student level can offer an important dimension to the employability discussion. At the individual level, gender has a significant role in shaping employability (Morley, 2001), in particular for graduates (O’Leary, 2017). For example, Donald et al. (2017a) found that male undergraduates perceived themselves to have greater confidence, self-belief, and to be more employable than their female counterparts. Furthermore, female students were less likely to take ownership of their own careers, via a Protean Career Orientation. Our paper addresses a gap in career theory literature through building on the work of Donald et al. (2017a), by evidencing students’ perceptions of how to promote gender equality and representation in the labor market. Again, this offers a timely and valuable contribution given the current media and policy focus on removing the gender pay gap, and promoting gender diversity.

The motivation for this study emanated from seeking to evaluate the employability of undergraduates, from their perspective, offering implications for theory and practice to HE institutions, industry, and national governments. Research highlighting the multitude of pathways to graduate employability has argued that despite such opportunities, our understanding of students’ perception of the effectiveness of education in terms of improving employability and facilitating the transition from HE into the global labor market is yet to be articulated (Donald, Baruch and Ashleigh 2017b). Research has also called for greater collaboration and inter-connectedness between all stakeholders of graduate employability (Modise, 2016). Furthermore, contribution to the understanding of perceived employability of students remains at the individual level (Álvarez-González, López-Miguens and Caballero, 2017). We consider perceived employability, careers, and the labor market as a dynamic system with interrelated participants, as in a career ecosystem (Baruch, 2015; Baruch, Altman and Tung 2016), and argue that a multi-level approach may offer a more comprehensive understanding of future graduate employability. Thus, this paper responds to calls for holistic views of employability (Holmes 2016; Jackson and Wilton 2017), as perceived employability is a concept that can offer benefit to a wide range of stakeholders (e.g. students, organizations, universities, governments and policy makers).

The research utilises Career Ecosystem Theory (CET) (Baruch, 2013, 2015), as its underlying framework and explores HE as a mechanism for life-long learning and career sustainability within a knowledge-based economy (Van der Heijden and De Vos, 2015). Our aims are attempting to understand: (i) How undergraduates perceive their future careers and how university has prepared them to enter the global labor market; (ii) Student perceptions of the benefits of pursuing HE on employability and earnings versus associated costs; and (iii) The anticipated barriers and students’ plans to overcome these in their pursuit of career sustainability within a career ecosystem, drawing on CET.

The paper is structured as follows. Firstly, we review the relevant literature and offer four research questions. Secondly, we present the qualitative approach to our methodology including development of our interview questions, coverage of sample selection, and the process of thematic analysis. Thirdly, we provide findings and analysis, before offering a discussion of the four research questions in relations to our results. Finally, we present theoretical implications, limitations of the study, recommendations for future research, and conclude with practical and policy implications.

**Literature Review**

Higher education (HE) has traditionally been associated with increased employability, earnings, and life aspirations (Brooks and Youngson, 2016). However, these relative advantages continue to be eroded by increased participation in HE and the associated debt. Students are now seeking to differentiate themselves; to stand apart when applying for graduate employment, recognising that a degree alone is no longer sufficient (Stevenson and Clegg, 2011). Given the importance of understanding the factors that can enhance the student career transition from HE into to the global labor market, there is now a greater impetus on students gaining other skills whilst at university, relating to both their perceived employability and what skills can realistically be transferred to the workplace from an employers’ perspective. Demographic characteristics influence the perception of employability, and gender is such a critical factor (Morley, 2001). In an experimental design assessing resumes of business graduates, European research examined the link between academic performance, gender, and extracurricular activities on perceived employability (Pinto and Ramalheira, 2017). Interestingly, gender effects were insignificant, however results confirmed that high academic achievement and high active engagement in extracurricular activities were positively related to job suitability and employability skills including time management, personal organization and learning skills, which concurs with other research (Hassanbeigi et al., 2011; Nemanick and Clark, 2002; Roulin and Bangerter, 2013). However, when the two independent variables were combined, no effects were reported. Pinto and Ramalheira concluded that engaging in extracurricular activities enhanced graduate’s chances in the selection process in terms of future sustainable employment. Such findings suggest that it is as important for graduates to gain transferable skills from engaging in activities promoting for example commercial awareness, teamwork, leadership and communication as it is to achieve academic success.

Another important reason to gain student perceptions of employability is that to date, research has focused predominantly on students from specialist degree subjects, e.g. Business, Engineering, Healthcare, and Modern Languages (Hsieh and Hsu, 2013; Sheepway et al., 2014; Wilton, 2012). This is partly due to the more natural progression of these degree courses to specific job outcomes, and partly the use of convenience samples. Whilst employability outcomes for specialist degree disciplines are strong, it is yet unknown whether more generalist degree disciplines perform as well (Baruch et al., 2005). This paper thus advances existing literature by comparing the perceptions of students from specialist and generalist degree subjects to explore whether existing, predominantly quantitative papers, may be failing to capture the complexities and differing needs of students studying less employable and lower earning degree subjects.

As individuals strive to increase their resources whilst simultaneously protecting against loss of existing resources, students pursuing HE weigh up perceived gains (e.g. access to good careers, higher income, status etc.) against perceived costs, (e.g. time taken, accrued debt etc.). Although such perceptions reflect the Conservation of Resources theory (Höbfoll, 1989), they only capture the objectivity of gains against losses. Vanhercke, Cuyper, Peeters and Witte (2014) emphasize the inherent subjectivity of the concept. Individuals who perceive themselves as employable are more likely to maintain a career-orientated focus by pursuing development of skills and networking, and being proactive in identifying opportunities for career enhancement (Clarke, 2009). However, perceived employability can be reduced through lack of, or diminished resources, and lead to ‘ill-being’ (Vanhercke et al., 2015). Examining the gain and loss cycles of perceived employability and psychological functioning, Vanhercke et al. (2015) reported a positive association with well-being in the employed; whilst amongst job seekers who were unemployed, perceived employability was negatively affected by ‘ill-being’.

As the future of sustainable career development (Iles, 1997) relies on employee well-being, Vanhercke et al. (2015) call for organizational investment into employee’s own perceptions of employability through training, and networking opportunities. More importantly, they suggest career and psychological counselling for the unemployed. Although their sample consisted of older cohorts, their study highlights the importance of gaining insights into how HE can enhance perceived employability before students engage with the labor market post-graduation. Linked to this is the concept of psychological capital; having confidence, motivation, and a positive attribution towards achieving goals, which has found to be linked to positive outcomes in terms of student engagement (Donald et al., 2017a; Luthans, Luthans and Palmer, 2016).

Improving perceived employability is therefore particularly relevant to recent graduates as they move from HE into the workplace (Fugate, Kinicki and Ashforth, 2004). Discussing employability, Fugate et al. (2004) see it as a psycho-social construct, involving individuals being proactive in fostering their own characteristics e.g. knowledge, skills, abilities and other personal factors. As such, pressure exists for HE graduates to take responsibility for their careers, as the onus has shifted from the employer to employee in terms of taking ownership of career management and personal development (Donald et al., 2017a). Graduates are now required to become adaptive and malleable into the ever-changing working environment (Chan, 2000).

Within the context of HE, there is also potential for students to modify attitudes, subjective norms, and motivations at an individual level, with the purpose of enhancing employability, which generally reflect the tenets of Theory of Reasoned Action (TRA) (Fishbein and Ajzen, 1975). Attitude refers to the student evaluating a suggested behaviour and determining it to be positive to them, in the same way they used the reasoned action in choosing their school (e.g. Ingram, Cope, Harju and Wuensch, 2000), or their specific degree (e.g. Law and Yuen, 2012). These attitudes in-turn improve graduates’ employability in the context of HE (O'Leary, 2017), in line with the precepts of positive psychology, whereby a positive view of life and employment leads to positive life and work-related outcomes (Luthans and Youssef, 2007).

In the context of HE, it is important to foster positive attitudes, provide students with subjective norms through family, friends, academics, and outside support agencies such as career services. Utilization of such agencies can have positive impact on graduates' perceptions of their employability (Bridgstock, 2009), and perception of employability can be associated with actual employability (Thijssen, Van der Heijden and Rocco, 2008). Indeed, students may be unaware of how such meso-level support networks can contribute to their employability. Research has reported that students who seek out or are exposed to such levels of support, so motivated toward engagement, can enhance their employability and are more inclined to develop human capital and take ownership of their own career (Baruch and Lavi-Steiner 2015; Donald et al., 2017a; Wilton, 2014). This might also be related to proactivity and networking (Seibert, Kraimer and Crant, 2001).

Studying career transitions should be positioned within the wider global labor market, and transitions from HE into employment are part of the wider career system. We offer a comprehensive theoretical framework that would enable better understanding of factors related to these transitions at more than one level of analysis.

*Career Ecosystem Theory (CET)*

The ecosystem concept is concerned with systems and the flow of people, knowledge, and talent as fit for overall improvement and reaching socio- and economic- balance. We acknowledge the new work arrangements in response to an evolving career ecosystem (Baruch and Rousseau, 2018; Baruch et al., 2016), whereby individuals and organizations are interconnected and depend on each other for sustainability and effectiveness of the system. Emanating from within ecology studies (Golley, 1993), the concept of an ecosystem is a system whereby a large number of loosely coupled actors work interdependently towards the overall effectiveness of that system (Iansiti and Levien 2004). The characteristics of such a career ecosystem are: ***Interconnectedness***, the key characteristic of any ecosystem, is manifested by interactions between the actors, and enacted through interdependencies. ***Interactions*** occur, at various levels of significance, starting from basic transactional exchange work-relationships, and up to the higher level of organizational strategy, reflected in policies developed to satisfy the needs of the actors and enable proper and viable exchange between them. ***Interdependencies*** are inbuilt into organizations and with the 'New Careers' phenomenon, these interdependencies have reached a high state of entanglement (Arthur, 2014). At the societal or national level, each country relies on the capacity of its human talent to generate and sustain global competitiveness. Reaching overall effectiveness is critical for the survival of individuals (Hall, 2004), and organizations or nations (Sölvell, 2015). The results of these characteristics of a career ecosystem are:

* a constant flow of human capital, prompted and influenced by push/pull factors at individual, organizational and societal levels;
* a spiral learning processes, required for continuous adjustments and adaptation to new and dynamic scenarios and situations;
* a continuous change processes that influences the directions and magnitude of human capital flow;

The key to the success and sustainability of an ecosystem is the interconnectedness between the varieties of entities at different levels (Baruch, 2015). This means that a career ecosystem should consist of multi-level stakeholders, including various organizations, institutions, and individuals all working as one dynamic, interconnected, and single entity. An essential component of an ecosystem is career mobility, realised through the balance of needs and requirements against the constant flux of supply and demand (Baruch and Altman, 2016). To maintain sustainability of the career ecosystem, individuals and organizations need to work collaboratively and recognize their interrelated dependencies (Modise, 2016). The CET was applied for understanding talent flow in the higher education context to develop models of employability for graduates (Bridgstock, 2017), and to understand career transitions and career blocks (Stengård, 2018). Graduates are positioned in a critical point of time of their career when they move from university and ‘student life’ to the labor market. They need to understand the new landscape where careers take place, and comprehend the ‘rules of game’ in order to maximize their future career trajectory; working, negotiating, and collaborating with different actors in the system. In particular, they need to develop a psychological contract with other stakeholders, in particular their employer, to develop a realistic career preview and identify means to achieve their career aims (Arthur, 2014; Bridgstock, 2009).

The psychological contract is different, though complementary, to formal and legal contracts. The context is different from that of employment because the actors vary, but the principle that relationships influence human actions remains the same (Rousseau, 1996; Schein, 1980). The new psychological contract adds dynamism to the overall labor market as it opens more options for departure from studentship to the labor market. In the same way that employees and employers have a psychological contract (Rousseau, 1996), students have psychological contracts with their HE institutions. Part of this is the expectation to gain employability at the end of their studies.

Additional complexity emanates from the conflicting empirical findings examining how the student self-perception of employability changes as they progress through each year of their university studies. For example, Saunders and Zuzel (2010) found perceived employability to increase with each subsequent year of study, whereas Qenani, MacDougall and Sexton (2014), and Jackson and Wilton (2017) found a decrease in perceived employability.

Graduates from HE offer benefit at the national level through improving economic competitiveness and at the organizational level through corporate economic performance and sustainability. Governments across the OECD countries need to promote diversity in HE participation, for example, by addressing barriers to social mobility (Green, Henseke and Vignoles, 2017). It is therefore important to study the issue of gender distribution amongst student cohorts. From one perspective, female representation in HE has improved significantly, accounting for 53% of students, with female students currently 35% more likely to go to university than men (Higher Education Funding Council, 2015).

However, male graduates continue to earn more than their female counterparts, both in the initial years after graduation, and across their career, despite being outperformed by women during their degree studies (Sumanasiri, Ab Yajid and Khatibi, 2015). With a strong focus on gender pay equality in the media, this paper explores additional strategies for promoting gender equality. Gender diversity in the workforce can offer a sustainable competitive advantage to nations and organizations through a pipeline of talent and richer representation of the wider society. Managerial implications have been called for by Cohen (2015) and Gill (2017) relating to how to make graduates more employable, and how organizations may gain competitive advantage through sustainable Human Resource Management (HRM), of which career management is a significant factor (Markoulli, Lee, Byington and Felps, 2017).

Other benefits to universities derive through aligning course pedagogy and employability incongruence, providing effective careers advice, and through improved league table rankings, helping to attract prospective students (Ashleigh, Ojiako, Chipulu and Wang, 2012; Ojiako, Chipulu, Ashleigh and Williams, 2014; Sin and Amaral, 2017). We therefore consider strategies for universities across the OECD to improve their future sustainability.

*Research Questions*

The four research questions identified from the above literature review and following the results of a previous quantitative survey published elsewhere (Authors, 2017):

1. How do students perceive the benefits of HE to compare with the associated costs?
2. How do students perceive their employability to change as they progress through each subsequent year of undergraduate study?
3. What strategies do students perceive would improve their employability?
4. What strategies do students perceive to be useful for promoting gender equality and representation within the global labor market?

**Methodology**

The adopted methodology for this paper was a qualitative approach where the authors wanted to explore in more detail results gained from an earlier quantitative two-wave study of 387 undergraduates in their penultimate (2015/2016) and final (2016/2017) years of undergraduate study within a UK University. This study, therefore, employed semi-structured interviews on a cohort of 38 undergraduates in their final year of study (2016/2017), who had previously engaged in the quantitative survey (Authors, 2017). This approach allowed a sample of the original participants in the quantitative study, to share their experiences, perceptions, opinions, feelings, and knowledge, in order to provide more depth and meaning to the findings (Patton, 2015).

All participants came from a leading UK University, as a case of a knowledge-based economy. Employability and earnings data from The Complete University Guide (2018) was used to group degree subjects into two categories: Specialist degree subjects with higher employability outcomes and earnings potential (Business, Engineering, Law, Mathematics, and Modern Languages), and generalist degree subjects with lower employability outcomes and earning potential (Archaeology, Art, Biological Sciences, Criminology, Education, English, Geography, History, Music, Ocean & Earth Sciences, Philosophy, Politics, Psychology, and Social Sciences). The terminology of specialist and generalist follows previous convention within career literature (Baruch et al., 2005).

*Developing the Interview Questions*

Our aim was to explore earlier findings from a two-wave study quantitative study (Authors 2017), where students studying specialist degree subjects perceived themselves as more employable than students studying generalist degree subjects. To explore the reasons for these perceived differences between degree subjects, a series of semi-structured interview questions were developed which were linked to the specific research questions and are presented below, alongside a brief justification for their inclusion.

From the results of that, the median time for repayment of university debt was 16-25 years, with a skewness of 0.766 for penultimate year students, rising to 25-30 years, with a skewness of 0.488 for final year students. This indicates that students were less confident of repaying their debt in full as they progressed through their university studies. These results lead us to develop a further question relating to university debt.

* How feasible do you think it is that you will repay your university debt? (Linked to Research Question 1).

Relating to the cost/benefit analysis of student perceptions, 75.70% (293 of 387) respondents in their final year of study felt that the benefits of HE outweighed the associated costs. 12.15% (47 of 387) gave a neutral response, and 12.15% (47 of 387) felt the costs outweighed the benefits. Whilst the overwhelming majority of students still consider there to be a net benefit from investment in HE, the number of students feeling the costs outweigh the benefits appears to be rising. These results lead to a final question regarding cost/benefit evaluation:

* How do you think the benefits of HE outweigh the associated costs? (Linked to Research Question 1).

Furthermore, 36.40% (141 of 387) of respondents in their final year of study did not expect to repay their debt in full, indicating that recent concerns for the sustainability of the current system are well founded (Department for Education, 2018; Fleming, 2017).

* How do you expect your year of study to influence employability? (Linked to Research Question 2).

Students felt that human capital and career ownership were important aspects of employability, but somewhat surprisingly, careers advice was found to have a neutral impact. This requires further explanation given that the University under study have won awards for their careers service provision, and employability outcomes from the University are strong.

* How have you made use of the careers service, graduate recruiters, alumni, or lecturers during your university studies? (Linked to Research Questions 3).
* What positive and negative experiences have you had? (Linked to Research Question 3).
* What could the careers service, graduate recruiters, alumni, or lecturers do to improve your employability? (Linked to Research Question 3).

Results from the survey showed that expected earnings six months after graduation for penultimate and final year students was £20,000 to £24,000, with a skewness of 2.667 and 2.269 respectively. However, at the University under study, specialist degree subjects have a higher proportion of men than women (e.g. 95% of Engineering students are male). This trend is reversed for generalist degree subjects (e.g. 90% of Art students are female). The Complete University Guide (2018) showed Engineering graduates to be earning £26,522 compared to Art students earning £15,811. This adds further justification for this qualitative study to address two of the aforementioned questions concerning gender and strategies to promote gender equality:

* How would you expect gender to influence employability? (Linked to Research Question 4).
* What strategies could be taken to promote gender equality? (Linked to Research Question 4).

*Sample*

The study sample comprised of 38 (50% female, 50% male) students from the University; 26 (50% female, 50% male) came from generalist degree subjects, and 12 (50% female, 50% male) from specialist degree subjects. Career theory literature of generalist degree subjects is particularly sparse (Baruch et al., 2005), hence the decision to provide greater focus on this group. All 38 students took part in semi-structured interviews in their final year of undergraduate study (2016/2017), as evidenced in Table I.

**Insert Table I Here**

The sample size of 38 offered overall saturation (Corbin and Strauss, 2015), exceeded 35, which is considered a benchmark for qualitative studies in strong journals (Saunders and Townsend, 2016), and met category saturation, which is one of the primary means of verification (Suddaby, 2006). This data provided a clear understanding and explanation of the students’ perceptions of graduate employability, which was appropriate for explaining phenomena undergoing constant change (Gioia, Corley and Hamilton, 2013). It also directly responded to calls for scholars to *engage with those living the phenomenon and attempt to understand it from their perspective* (Corley, 2015, p. 2).

*Thematic Analysis*

Next, the six phases of thematic analysis were conducted as offered by Braun and Clarke (2006, p. 35): *familiarising yourself with your data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report*. We followed the layout example of thematic analysis offered by Baruch and Forstenlechner (2017) in their career theory paper. While the six phases are reported in a linear approach, an iterative approach was favoured to enhance the richness and depth of the findings (Clarke and Braun, 2013). NVivo was used to facilitate thematic analysis of the interview transcripts because it offers transparency, flexibility, the ability to code data, and the ability to retrieve data quickly (Corbin and Strauss, 2015). To reduce the bias of thematic analysis being conducted by a single researcher, a second researcher conducted thematic analysis on a sample of 10% of the interview transcripts as suggested by Saldaña (2015). A third researcher carried out a comparison of the themes, sub-themes, and codes induced from the sample transcripts with those induced from all transcripts. This added validity of the findings and helped to clarify understanding.

**Findings and Analysis**

The documentation provided in Figure I provides a clear audit trail, enabling replication of the study, and promotes reliability of the treatment of qualitative data. It evidences the final data structure (phase six) representing the documentation output from phases one to five, based on guidance and notation by Gioia et al. (2013, p. 21).

**Insert Figure I Here**

We now address findings and analysis systematically across four areas: (A) Benefits and costs of HE; (B) Perceived employability with each subsequent year of study; (C) Careers advice (composed of three sub-sections: careers service, graduate recruiters and alumni, and lecturers); and (D) Promoting gender equality.

*(A) Benefits and Costs of HE*

Students felt that the degree certificate and the reputation of the university helped to enhance their CV and their attractiveness to potential employers, increasing their opportunity of securing a graduate job.

Participant 6: *I can write on my CV that I have been in academic education for the last three years, which for some employers is a massive thing for them. And also I think it comes from what university you go to as well, the fact that I've attended the university I think employers look at that and think, well you know, he must be doing alright.*

Further benefits of HE included self-development and skill development, and the building of lifelong friends and networks, which helped provide access to work-integrated learning opportunities.

Participant 9: *Benefits… I think like hard skills and soft skills. Also, if you have a very big network of like friends and family it can help you with tips on your applications or help you get like internships or like work experience or like visits to the offices outside of what other people get normally.*

Increased earnings potential was another an important perceived benefit of HE, especially in the context of increasing university tuition fees and the need for a return on this investment.

Participant 8: *Obviously, your expected earnings increase by a lot if you have a graduate diploma versus you don’t so you can access more jobs.*

In terms of the costs of HE, the majority of students perceived that their debt would likely be written-off before it could be repaid in full. This was in part due to the high interest payments and in part due to a perception of insufficient earnings within the repayment time-period. Students who felt they would repay their student loan tended to have lower levels of debt, or be studying degree subjects with higher expected earnings (Table II).

Participant 15: *I expect I’ll end up keeping on top of the interest but not repaying it all back by the end of the 30 year period. Basically, it’s too much money and the interest payments are too high. I don’t expect I’ll be earning enough to be able to make a dent in the sum of debt.*

Students also perceived student debt to be putting off prospective students from disadvantaged backgrounds, compounded by the removal of student bursaries. This perception is significant given the contrast of views by current students that perceive their debt would likely be wiped before repayments were made in full.

Participant 3: *I think that’s something that is really putting people off going into university at this moment and with the current uncertainty of it going up again, that can really impact on people. Especially with the people who don’t have that opportunity or are not very well off, coming from disadvantaged backgrounds, who might really need those bursaries in order to take education, that can really bias that split of people that are going into university.*

Of further concern, particularly to the national economy, is a small number of participants who stated they would limit their career ambitions due to the volume of debt they have incurred, to minimise their debt repayments.

Participant 10: *It makes me want to not be able to pay it back. I wouldn’t be pushing ahead in a career just on that basis. I think a lot of Artists feel the same and that’s a shame, that’s basically going to curb a lot of peoples’ ambitions.*

*(B) Perceived Employability with Each Subsequent Year of Study*

Whilst a small number of students categorically perceived themselves to be either more or less employable in their final year of study compared to their penultimate year of study, the majority of students cited both more employable and less employable factors.

The findings evidenced a two-dimensional model of market factors and personal factors (Figure II). As presented in the Figure, personal-based factors lead to an increased perceived employability as students progress with their studies towards graduation. Conversely, the market-based factors caused the perception of employability to decrease in relation to the year of study.

**Insert Figure II Here**

Students felt less employable due to market factors (the volume of graduates, the lack of jobs available, and receiving rejections for job applications), but more employable due to personal factors (the university degree, the university reputation, clubs and societies, work experience, increased confidence, increased aspirations, and career ownership).

Participant 7: *Ironically, it’s gone down. When I came to university, I think a lot of people my age hit that trend of getting good A levels, go to university, get a good degree, get a good job… But then, as kind of reality hits and you realise everyone is graduating and everyone is like oh I can’t get a job it’s been like six months, a year, eighteen months… having applied for jobs realising that you don’t get a job straight away and there are like thousands of people competing for places and you’re not as employable as you are lead to believe initially.*

Participant 33: *Obviously you are more employable as you go along because you’re more qualified, you’ve grown in confidence, you have experience, and you’ve become more comfortable with yourself, so you’re a more attractive person to work with.*

*(C)Careers Advice (Careers Service)*

Although students felt the careers service were helpful in relation to job application, links with employers, and communicating with employers, nine opportunities emerged from the data, where career services could enhance the provisions on offer and engage a greater number of students. Such opportunities are considered a significant original contribution of this research. For each of the nine opportunities, we now provide one piece of evidence below, with additional supporting evidence provided in Appendix I.

(i) Tailored support

Students were perceived to want a tailored approach from the careers service; requiring them to provide equal support for both specialist and generalist degrees subjects alike.

Participant 19: *I just think that if there was more of a specific Humanities sort of day like they have for the Science and like Business fairs and stuff, that that would really benefit us.*

(ii) Narrowed down options

Students wanted the careers service to help to narrow down the large number of opportunities available after university.

Participant 36: *I'd like to see them help you narrow it down by showing you what opportunities there are and all the logistics of the opportunities and things like that. For me personally, if I went to one, an adviser now, I don't know, I'm stuck between two different routes, I'd like them to see how many opportunities for each route, if it's suitable for where I want to work, if it's suitable for like starting salaries, anything like that, what experience I need for it and if there's any like international opportunities because I'd like to travel for business as well so all these factors for each route, I'd like them to have all the information really so that I can narrow it down for which way I go and pick one path and then get experience for that certain path.*

(iii) Partnerships with lecturers

Students perceived academics often had the specialised expertise and industry contacts that were sometimes lacking within the careers service and wanted this gap addressed.

Participant 3: *I think that for the Ocean Sciences in particular maybe speaking to some of the lecturers. Cos I think a lot of the students there look to their lecturers more than they look to the careers advice service. Unless they are not sure where they are going and it’s more transferable type things, they don’t really have the expertise that some of the lecturers do within contacts.*

(iv) Increase awareness

Students felt that the careers service needed to increase awareness of the services offered in order to engage and support a greater number of students.

Participant 21: *Maybe make themselves a little more aware to others. I’d heard there is a careers service, but I didn’t really know what they do or where they are.*

(v) Compulsory participation

Students felt that having to attend career services sessions would help them to reach, and thus provide benefit to, a greater number of students.

Participant 17: *I must admit the sessions have been very, for chemistry at least, have been very sparsely attended. You know out of the entire chemistry year there might have only been two or three people that went to these workshops and so... I think they're really useful, so maybe making them mandatory might be a good thing. You know if they're giving the talk anyway, people might as well be there I think.*

(vi) Engage students more

Students wanted the careers service to be more proactive in engaging students.

Participant 26: *Personally, I’d like them to be a bit more proactive, come to us, but that’s me talking as a typical lazy student.*

(vii) Support beyond main campus

As the majority of the general degree subjects with lower employability are based away from the main university campus (Campus A), students called for a greater presence and provision of the careers service at these additional campus locations.

Participant 32: *I’ve definitely never seen them on ‘Campus C’, so I guess it might be worth them going down there if they’re trying to engage with students because we’re not always at ‘Campus A’. If their only physical output is on there, we’re less likely to see them.*

(viii) Expand company coverage

Students perceived the current companies being promoted on campus often targeted students from specialist degree subjects and felt they needed to offer wider opportunities to students from more generalist (and less employable) degree subjects.

Participant 34: *All the careers employability is about Bankers, Accountants, and Auditors, and yeah I just don’t need that.*

(ix) Support for rejected applications

Students often felt less employable following a rejected job application, and called on the careers service to provide support for students in this situation.

Participant 3: *I’ve had a few rejections for summer applications… so maybe having some support there.*

*(C)Careers Advice (Graduate Recruiters and Alumni)*

Students acknowledge the role of graduate recruiters through careers fairs, careers talks, building networks, and job application support. Students called for alumni to come and talk about their careers and share their experience.

Participant 8: *Once a year they get in four people who work in social sciences, who are graduates of some of the social science programmes, and then they, usually about twenty people show up and they listen to what they’ve done and ask questions. That is really useful.*

Participant 24: *Maybe keeping in touch more with past students and what they’re getting up to and ask would they be willing to, you know, share where they are now and how they got there.*

There was a call for graduate recruiters to help in raising awareness of jobs available, and to offer further job application support and encouragement for building work experience.

Participant 32: *Some don’t always make it obvious that you can always apply. So if you’re like going to get a Banking internship, it’s perfectly ok for a Humanities student to apply. Sometimes you can feel like you are not the right person even if you might be.*

*(C)Careers Advice (Lecturers)*

Finally, students highlighted the importance of lecturers in the provision of careers advice, including the need to develop realistic expectations. Students felt that lecturers possessed specific knowledge of industry within their research area, and often possessed key contacts in the workplace. Students also felt lecturers had awareness of work placement opportunities and graduate job opportunities. Evidence relating to this aspect has been provided under the ‘*partnerships with lecturers’* heading (point iii) of the nine opportunities for the careers service to enhance the provisions on offer and engage a greater number of students.

*(D) Promoting Gender Equality*

Students identified three gender pipeline challenges:

(i) Gender stereotypes

Gender stereotypes need to be challenged at an early age by targeting primary and secondary school children. If primary school children lack role models for them to look up to and aspire to, then this affects their interests and subject choices through secondary school, at university, and into the graduate labor market. The pipeline of talent is then not available for employers to hire from, or for society to benefit from.

Participant 26: *Definitely in terms of the STEM (Science, Technology, Engineering, and Mathematics) subjects, promoting female involvement, it’s just about eradicating any assumptions or misconceptions about the career market. I think this needs to be installed as early as possible – at primary school - that there is no normal, you can go into any career you wish to, and there should be no barriers to you getting that career. It’s a case of having people that are in those situations, for example, a female Engineer coming into schools and saying ‘look, I’ve done it, there’s no reason why you can’t, that gives students that role model to look up to, that example to aspire to.*

(ii) Self-worth and confidence

Students perceived females to have a lower sense of self-worth and confidence than their male counterparts. This impeded female applications for particular universities, courses, or graduate jobs for which they were capable. Alternatively, when they did apply, they were unable to sell themselves to the admissions or interview panels in a manner that reflected their ability and potential. This links to challenge (i) in terms of providing role models and support from primary through to HE in order to establish a strong pipeline of female talent in the labor market.

Participant 10: *There’s a fundamental issue – that’s self-worth – and I don’t know how the university could deal with it, other than to give us more women to teach us and support us – not in the background, in the front ground. You can’t really say have self-esteem classes, but in a way, that’s what we need. Give us more powerful women. It starts at home, carried on in school, and by the time they get to university it’s ingrained that they are second best really.*

(iii) Maternity leave

Taking time out of the labor market to have, or to care for children was seen as a barrier to females. Although employment law prohibits discrimination, the perception remains that some employers often avoid hiring women of childbearing age. This not only limits initial employment opportunities for this cohort, but also has a subsequent knock-on effect of fewer women in senior roles due to less experience or opportunities.

Participant 20: *I think for women you are massively disadvantaged because obviously you’re the only gender who can have children. I heard that employers don’t like hiring women you are in the sort of twenties, where you, you have children and they don’t want to hire you if you’re only going to be part-time or take maternity leave. So I think it’s a big barrier in terms of gender.*

Students further identified three gender employer issues.

(i) Hiring committees

Students felt that hiring committees often lacked gender equality. This lead to concerns around people hiring people like themselves, and therefore inherent bias towards female applicants.

Participant 19: *Just some gender equality on interview boards so there is no way of being discriminative because the interview board fully represents the people that are coming in.*

(ii) Gender pay gap

Students called for action to address the gender pay gap and maternity pay.

Participant 26: *Obviously with the glass ceiling, the gender pay gap, so experiences are likely to perhaps be less satisfying, just because I could do the same work as a girl in my cohort now, but she could be paid less. Especially if she then takes maternity leave, which might impact future earnings.*

(iii) Gender targets

Students also had somewhat split views around the suitability of gender targets. For example, some students perceived them as an important part of gender equality:

Participant 4: *I think employers are either willingly doing it or they’re forced to take on more women now, so I think that’s definitely a good thing and it’s definitely narrowed the gap.*

In contrast, other students perceived gender targets as having an unfair impact:

Participant 19: *If there’s a quota in place and they’ve got too many male workers already then they would have to hire me and I think that’s quite unfair. I’m not really sure if quotas are exactly the right solution for this problem.*

**Discussion and Conclusions**

We started with three identified aims: (i) How undergraduates perceive their future careers and how university has prepared them to enter the global labor market; (ii) Student perceptions of the benefits of pursuing HE on employability and earnings versus associated costs; and (iii) The anticipated barriers and students’ plans to overcome these in their pursuit of career sustainability within a career ecosystem, drawing on CET. These aims were reflected in our research questions. Our paper now provides a discussion for each of the four research questions, which in-turn respond to the three aims.

*Research Question 1: How do students perceive the benefits of HE to compare with the associated costs?*

Students perceived the degree certificate as the most recent evidence of academic ability and achievement. However, in line with Stevenson and Clegg (2011), students no longer see the degree itself as sufficient. The findings are encouraging and indicate that students have a strong awareness of the competitive nature of the global labor market.

Students perceived HE to improve their employability and life aspirations. This may be due to the role of perceived of employability and actual job search (Onyishi et al., 2015), and can include work-integrated learning opportunities during HE and future career prospects following graduation. The students’ perceptions appear to align with findings of increased earnings for graduates compared to non-graduates (High Fliers, 2017; The Complete University Guide, 2018), and the impact is not limited to top universities (Baruch and Lavi-Steiner, 2015). However, employability and earnings potential significantly varied by degree subject, with graduates from more specialist focused degree subjects (Business, Engineering, Law, Mathematics, and Modern Languages) expecting greater employability and earnings than students studying more generalist degree subjects (Archaeology, Art, Biological Sciences, Chemistry, Civil & Environmental Sciences, Criminology, Education, English, Geography, History, Music, Ocean & Earth Sciences, Philosophy, Politics, Psychology, and Social Sciences). These findings closely align with data from The Complete University Guide (2018), presented in Table II, which shows reported earnings for domestic full-time students six months after graduation in January 2016 by degree subject for the University at which this research took place.

**Insert Table II Here**

Overall, students highlighted an array of benefits from HE, recognizing the value of HE to their personal development, future career, and life aspirations. However, students perceived the gap between the benefits and the costs of HE to have narrowed significantly since the introduction in the UK of £9,000 per annum tuition fees and associated interest payments. Students were less confident of repaying their debt in full as they progressed through their university studies. Countries that plan to adopt a similar strategy may consider our findings before making decisions.

Furthermore, the perceived adversity to debt stated in the interviews aligns with previous empirical research by the Chartered Institute of Personnel and Development (CIPD) (2016) and the Sutton Trust (2015), which found people from disadvantaged backgrounds felt held back because they cannot afford to invest in life-long learning opportunities.

Policy makers need to closely monitor the views of current and prospective students and account for these when setting future agendas. Students felt that an individual needed a clear reason for pursuing HE and that perhaps, university was not suitable for everyone. This makes sense and is in line with the Conservation of Resources theory whereby people wish to increase their resources whilst simultaneously protecting against loss of existing resources (Höbfoll, 1989, 2001). The volume of graduates has not yet eroded the earnings premium of a degree, but could in the future if the costs of HE continue to rise (The Institute for Fiscal Studies, 2016). This research suggests that governments must decide if an agenda to pursue increasing participation in HE is still the correct direction of travel and, if so, what is the appropriate funding model. Furthermore, the UK government decision to remove bursaries from the 2016/2017 academic year appears from students’ perception to limit social mobility, reducing talent, representation, and diversity at university and into the global labor market.

*Research Question 2: How do students perceive their employability to change as they progress through each subsequent year of undergraduate study?*

From a market factor perspective, students perceived themselves to be less employable in their final year of study (see Jackson and Wilton 2017; Qenani, et al., 2014), with the final year of study attributed to providing a greater awareness of the challenges posed by the global labor market. This included the volume of graduates, the lack of jobs available, and receiving rejections for job applications. Furthermore, the findings support the claim by Clarke (2008) that the availability of jobs in the global labor market determines employment opportunities.

In contrast, the second dimension of personal factors sees students acknowledge their personal development over their years of university study. This included the university degree, the university reputation, clubs and societies, work experience, increased confidence, increased aspirations, and career ownership. Students perceived themselves to be more employable in their final year of study, supporting findings by Remedios (2012). This followed their perception of improved confidence, experience, and self-esteem as they gain improved human capital.

Therefore from a personal perspective, students’ perceive themselves to be more employable but, from a market perspective, less employable. These findings provide an empirical backing for the claim by Holmes (2013) that a graduate can be employable without necessarily being employed. The new two-dimensional model (Figure II) captures this complexity, perhaps accounting for conflicting findings to date by empirical, predominantly quantitative studies in career theory literature.

*Research Question 3: What strategies do students perceive would improve their employability?*

Students focused heavily on the help-seeking and information-seeking factors identified by Froehlich, Beausaert and Segers (2017). However, only half of the participants had made use of the careers service during their university studies, citing laziness, lack of time, lack of awareness, or lack of tailored support. This represents an issue for students and universities, where both actors need to take responsibility and work collaboratively to improve employability outcomes. Those who had used the careers service had split views; some found it useful, while others found the advice too generic.

Nine opportunities emerged from student perceptions for the careers service to enhance the provisions on offer and engage a greater number of students: (i) Tailored support, (ii) Narrowed down options, (iii) Partnership with lecturers, (iv) Increase awareness (v) Compulsory participation, (vi) Engage students more, (vii) Support beyond main campus, (viii) Expand company coverage, and (ix) Support for rejected applications.

Students acknowledge the partnership role of graduate recruiters with the careers service through careers fairs, careers talks, building networks, and job application support. The empirical findings across our previous quantitative research (Authors, 2017) and this qualitative research indicate the need for additional and tailored support to be provided to females and to students studying generalist degree subjects.

Students identified lecturers as key players in the provision of careers advice, particularly in aligning course pedagogy and employability incongruence (Ashleigh et al., 2012; Ojiako et al., 2014; Sin and Amaral, 2017). An opportunity also exists to embed work-integrated learning within the university curriculum (Martini and Cavenago, 2017). Students felt the current provision of careers advice risked being too generic and too focused on career opportunities related to specialist degree subjects (e.g. Engineering and Finance) at multinational corporations (Minocha, Hristov and Reynolds, 2017). Furthermore, students highlighted the need for greater collaboration between universities and employers, supporting earlier calls (Modise, 2016). Additionally, students acknowledged the potential for careers advice to modify attitudes, subjective norms, and motivations, highlighting the importance of TRA (Fishbein and Ajzen, 1975). Figure III offers a new careers advice model based on students’ perceptions of possible collaborative opportunities between employers and universities. The figure highlights the complexity and interlinked dependencies across a variety of stakeholders within a career ecosystem in providing careers advice to students (Baruch, 2013, 2015; Baruch et al., 2016). Employers typically work and communicate with graduates’ recruitment agencies and with the alumni, to reach students. The university works with career advisers and with lecturers to reach the same audience. These different agencies are nevertheless interconnected with both formal and informal relationships and multiple psychological contract working across the levels (Baruch and Rousseau, 2018).

**Insert Figure III Here**

*Research Question 4: What strategies do students perceive to be useful for promoting gender equality and representation within the Global Labor Market?*

As already reported, men represent a higher proportion of students studying specialist degree subjects than women do at the University under study. This is of concern given that students in our study perceived Engineering to be the most employable degree subject and Art as the least employable. This highlights gender pipeline challenges for specific sectors, although other degree subjects tended to have a better gender balance. One approach is to increase the number of role models, particularly at primary school to challenge assumptions that particular careers are ‘off-limits’ based on gender. For example, pupils could be presented with a list of professions and asked to state if they felt the professions were predominantly ‘for’ girls or boys. Subsequently, these preconceptions could be challenged by working in partnership with industry to bring in role models for students, to share their life experiences, and open up new opportunities by expanding the students’ horizons.

Furthermore, through primary, secondary, and tertiary education, and into the global labor market, all stakeholders of graduate employability need to help females in developing self-worth and confidence, and in being able to convey this during the job application process. For example, as illustrated above (findings section), students acquired the competence to 'sell themselves' to prospective future employers.

In addition to education, students highlighted further steps that organizations should take to address inequality and promote diversity. Students felt that employers should ensure their hiring committees have strong diversity representation, both to evidence to prospective candidates the commitment to diversity, and to ensure diversity representation in hiring decision outcomes. Employers need to play an active role in retaining and promoting graduates to provide role models to future generations. This includes removing the gender pay gap, actively addressing discrimination across all countries of operation, and supporting females in taking time out to have children without negative impacts to their future career potential.

**Theoretical Implications**

The CET theory is awaiting empirical testing, and this is one of the first studies to explore its relevance and applicability. This research advances the understanding and relevance of the CET (Baruch, 2013, 2015) in exploring and explaining students’ perception of how HE prepares them for the global labor market. We achieve this by highlighting the interconnected nature of stakeholders of graduate employability and the dependency of these loosely coupled actors on each other (Baruch, 2013, 2015; Baruch et al., 2016). We build on the premise stated in the literature review that an essential component of an ecosystem is career mobility, realised through the balance of needs and requirements against the constant flux of supply and demand (Baruch and Altman, 2016). Our findings validate the CET as they manifest the multiplicity of stakeholders in the careers of graduates and the interdependencies they share. In support of our claim for validation of CET, we offer a new employer and university careers advice model (Figure III).

Furthermore, we believe that the CET offers a holistic and comprehensive framework to understand careers, as the field of career theory suffers from fragmentation and multiple concepts that often cause confusion rather than clarity (Baruch, Szücs and Gunz, 2015). Contemporary careers are characterized by a high level of individualization whereby individuals take responsibility to lead and develop their own careers (Hall, 2004), crossing boundaries and being open to mobility (Arthur, 2014). While not every person can move due to strong pull factors (Stengård, 2018) and difficulties in boundary crossing (Inkson et al., 2012), gaining university degree accreditation is a strong enabling factor for future career mobility. For example, in relating the university degree process to employability, our study offers development of a new two-dimensional model of personal factors and market factors (Figure II). Students felt more employable due to personal factors and less employable due to market factors, perhaps explaining the conflicting findings in earlier studies (Clarke, 2008; Jackson and Wilton, 2017; Qenani et al., 2014; Remedios, 2012). This suggests that at the individual level, perceived employability directs the flow of human capital into the graduate labor market. The evidence we offer, then, extends the 'new careers' theory to understand the conditions required for application of the ideas of a dynamic labor market and relevance of career transitions.

A final contribution comes through offering new insights to career theory literature of the role of gender across the lifespan. At the individual level, gender has a significant role in shaping employability (Morley, 2001), in particular for graduates (Donald et al., 2017a; O’Leary, 2017). We believe that new insights of gender at the student level can offer an important dimension to the employability discussion by evidencing students’ perceptions of how to promote gender equality and representation in the labor market. In particular, we highlight the role of CET in the interconnectedness of stakeholders across primary, secondary, and university education, and the graduate and wider labor market. From a student perspective, gender continues to have a direct impact at the individual level on perceived employability, the type of job, career progression opportunities, and on lifetime earnings. The role of gender should therefore be considered a key element of CET.

**Limitations**

First, participants came from a single university, and while this is the case for similar publications (e.g. Direito, Pereira and Duarte, 2012), it would be preferable to have a representation of more universities. Our paper, however, does offer coverage of wide specialist and generalist degree subjects. Due to the sample size, we can only comment on specialist and generalist degree subjects rather than on individual degree subjects within these categories.

Second, there is a risk when accessing students that the more engaged students self-select themselves to participate (e.g. Crawford and Wang, 2016). To address this, all relevant students were sent an email invitation to participate. Half of the participants had made use of the careers service and half had not, which helped to give a more rounded reflection of the students’ perceptions.

Third, a social desirability might influence responses. Furthermore, as undergraduates in this study were still studying at the university, the actual or realised benefits and costs may not yet be evident. However, existing student perceptions are still a valuable barometer of the current snapshot of perceived employability, particularly in terms of informing policy decisions.

**Recommendations for Future Research**

In response to calls by Creswell (2015), future work could replicate this research across other universities to compare students’ perceptions across different geo-locations. Replication should continue the multidisciplinary approach applied here between education and HRM, and may further benefit from drawing on other disciplines. Research should continue the pursuit of collaboration across all actors of employability, and offer clear and pragmatic links between academic findings and practical or policy contributions.

Career theory research could benefit further from mixed methods studies, which could help to explain with greater clarity the students’ perceptions of graduate employability. Career research should cover students from a wider range of degree subjects, moving beyond the existing narrow focus on specific degrees. Future research focusing on generalist degree subjects at a more granular level would make a valuable contribution to this sparse area in existing career theory literature.

**Practical Contribution and Policy Implications**

The robust theoretical underpinning and pragmatic nature of this research lead to a number of valuable practical contributions and policy implication. Our paper offers valuable guidance to governments facing similar funding challenges.

*Value for Money*

Students agreed that the volume of graduates has not yet eroded the earnings premium of a degree, but could in the future, if the costs of HE continue to rise, in line with The Institute for Fiscal Studies (2016). Governments across the OECD must decide if an agenda to pursue increasing participation in HE is still the correct direction for national competitiveness and sustainability and, if so, what is the appropriate funding model. Governments must jointly work with organizations to address market factors of perceived employability, driven by perceived underemployment and competition for graduate jobs. Creation of new jobs and growth of the economy through economic and social policy decisions is essential to sustain the volume of students participating in HE and subsequently entering the global labor market. These jobs must be of sufficient challenge to qualify as graduate-level, and must be sustainable, where feasible, to maximise operability of the career ecosystem.

When setting tuition fees, students pointed out the difference in return on investment between degree programmes as echoed by The Complete University Guide (2018), in addition to voicing concerns over high interest rates and student debt repayments (Fleming, 2017).

*Access to HE*

The decision to remove student bursaries appears to be perceived by current undergraduate students as limiting social mobility, and reducing talent, representation, and diversity at universities and subsequently into the global labor market. The Chartered Institute of Personnel and Development (CIPD) (2016) and the Sutton Trust (2015) share this view.

From a gender perspective, students called for the creation of a pipeline of talent from primary school to secondary school, to university, and into the global labor market. This would help to remove the controversial need for gender targets. Students support encouragement of females to study male-dominated subjects and vice versa. Either students who do not study these subjects at school are locked out of specific related degree courses, or they have to undertake further pre-university study or foundation years in order to access the degree courses and subsequent graduate jobs in these areas. Providing greater support to females to take time out from the workplace to have children will help to ensure talent retention, career progression, and greater representation at the top echelons. HRM should ensure gender and diversity representation on their interview and hiring committees, to evidence commitment to candidates and to ensure equal representation of views and to counter inherent bias.

*Skills Provision and Careers Advice*

Students from generalist degree subjects identified nine opportunities for careers services to enhance the provision on offer and to engage a greater number of students. These include: (i) Tailored support, (ii) Narrowed down options, (iii) Partnership with lecturers, (iv) Increase awareness (v) Compulsory participation, (vi) Engage students more, (vii) Support beyond main campus, (viii) Expand company coverage, and (ix) Support for rejected applications. Students also felt that female students required additional support to improve their self-confidence and self-worth, and to be able to convey this during the application and hiring process. In addition to the collaborative efforts of the aforementioned stakeholders, students felt that university alumni could provide further links between universities and organizations, further evidencing the interconnected nature of a career ecosystem through CET in preparing graduates for the global labor market.

Career self-management and a focus on lifelong learning are important aspects of employability, (Hall, 2004; Van der Heijden and De Vos, 2015) in terms of sustainable careers. Not all students currently engage in taking ownership of their careers citing laziness, lack of time, being unaware of the support on offer, or because the support on offer is not currently tailored to their needs.

**Conclusions**

Students continue to perceive the benefits of HE to outweigh the associated costs, highlighting the array of benefits from HE to their personal development, future career, and life aspirations. However, the perceived gap between benefits and costs has narrowed significantly with increased tuition fees, interest rates, and other university-related debts. With the exception of students studying degree subjects with the highest earnings potential (e.g. Engineering, Mathematics, and Business), the majority of students did not expect to repay their university debt in full. Student perceptions aligned with debt expectations (Future Finance, 2016), and expected earnings (The Complete University Guide, 2018). Students felt that an individual needed a clear reason for pursuing HE and university may not be suitable for everyone. There was a strong perception from current university students that increased tuition fees were putting off students from disadvantaged backgrounds.

From this study a new two-dimensional model of personal factors and market factors was developed (Figure II). Students felt more employable due to personal factors and less employable due to market factors, perhaps explaining the conflicting findings in earlier studies (Clarke, 2008; Jackson and Wilton, 2017; Qenani et al., 2014; Remedios, 2012).

Students who used the careers service, who study degrees with clearer employment outcomes (e.g. Engineering and Finance), and who are looking to apply to multinational corporations, were happy with existing careers provision. However, only half of the sample had used the careers service (n=19). Students identified nine opportunities to improve their employability through careers advice, education, and development. In particular, students echoed calls from Modise (2016) for greater collaboration between employers, alumni, careers services, and lecturers. Students from generalist degree subjects identified lecturers as key players in the provision of careers advice, particularly in aligning course pedagogy and employability incongruence (Ashleigh et al., 2012; Ojiako et al., 2014; Sin and Amaral, 2017), and embedding work-integrated learning within the university curriculum (Martini and Cavenago, 2017). Individuals need to take ownership of their careers and focus on lifelong learning as part of a sustainable career (Van der Heijden and De Vos, 2015).

From a gender perspective, students highlighted gender pipeline challenges and employer challenges. Whilst overall gender representation across HE has improved, specific degree subjects have significant gender issues (e.g. Engineering). Students called on organizations and universities to work together to target primary and secondary schools and to break down gendered and wider diversity employment perceptions through the provision of role models. Universities will benefit through better employment outcomes for their graduates, and a more diverse talent pipeline will enhance organizational competitiveness and national competitiveness.

We believe that our original contributions to theory and practice will aid the advancement of graduate employability as an outcome of HE, through giving a voice to the students’ perceptions, and stimulating future research agendas.

**References**

Álvarez-González, P., López-Miguens, M. J. and Caballero, G. (2017), Perceived employability in university students: developing an integrated model. *Career Development International*, Vol. 22(3), pp. 280-299.

Arthur, M. (2014), The Boundaryless Career at 20: Where Do We Stand, and Where Can We Go?. *Career Development International*, Vol. 19(6), pp. 627-640.

Ashleigh, M., Ojiako, U., Chipulu, M. and Wang, J. K. (2012), Critical learning themes in project management education: implication for blended learning. *International Journal of Project Management*, Vol. 30(2), pp. 153-161.

Baruch, Y. (2013), Careers in Academe: The Academic Labour Market as an Eco-System. *Career Development International*, Vol. 18(2), pp. 196-210.

Baruch, Y. (2015), Organizational and labor markets as career ecosystem, in: A., De Vos and B. I. J. M. Van der Heijden (Eds), *Handbook of Research on Sustainable Careers*, pp. 365-380 (Cheltenham: Edward Elgar).

Baruch, Y. and Altman, Y. (2016), The Ecosystem of Labor Markets and Careers. *HR People and Strategy*, Vol. 39(3), pp. 16-18

Baruch, Y., Altman, Y. and Tung, R. L. (2016), Career Mobility in a Global Era – Advances in Managing Expatriation and Reputation. *Academy of Management Annals*,   
Vol. 10(1), pp. 841-849.

Baruch, Y., Bell. M. P. and Gray, D. (2005), Generalist and specialist graduate business degrees; tangible and intangible value. *Journal of Vocational Behaviour*, Vol. 67(1), pp. 51-68.

Baruch, Y. and Forstenlechner, I. (2017), Global careers in the Arabian Gulf: Understanding motives for self-initiated expatriation of the highly skilled, globally mobile professionals. *Career Development International*, Vol. 22(1), pp. 3-22.

Baruch, Y. and Lavi-Steiner, O. (2015), The career impact of management education from an average-ranked university: Human capital perspective. *Career Development International*, Vol. 20(3), pp. 218-237.

Baruch, Y. and Rousseau, D. M. (2018), Integrating Psychological Contracts and Ecosystems in Career Studies and Management. *The Academy of Management Annals*, DOI: 10.5465/annals.2016.0103

Baruch, Y., Szücs, N., and Gunz, H. (2015), Career studies in search of theory: The rise and rise of concepts. *Career Development International*, Vol. 20(1), pp. 3-20.

Braun, V. and Clarke, V. (2006), Using thematic analysis in psychology. *Qualitative Research in Psychology*, Vol. 3(2), pp. 77-101.

Bridgstock, R. (2009), The graduate attributes we’ve overlooked: Enhancing graduate employability through career management skills. *Higher Education Research & Development*, Vol. 28(1), pp. 31-44.

Bridgstock, R. (2017). The University and the Knowledge Network: A New Educational Model for Twenty-first Century Learning and Employability. In *Graduate employability in context* (pp. 339-358). Palgrave Macmillan, London.

Brooks, R. and Youngson, P. L. (2016), Undergraduate work placements: an analysis of the effects on career progression. *Studies in Higher Education*, Vol. 41(9), pp. 1563-1578.

Chan, D. (2000), Understanding adaptation to changes in the work environment: Integrating individual difference and learning perspectives, in: G. R. Ferris (Ed), *Research in personnel and human resources management*, pp. 1-42 (Stamford, CT: JAI Press).

CIPD (2016), *Third of UK employees disappointed with their career progression*. Online: https://www.cipd.co.uk/pressoffice/press-releases/eo-skills-careers-150316.aspx (accessed 23 September 2018).

Clarke, M. (2009), Plodders, pragmatists, visionaries and opportunists: career patterns and

Employability. *Career Development International*, Vol. 14(1), pp. 8-28.

Clarke, M. (2008), Understanding and managing employability in changing career contexts. *Journal of European Industrial Training*, Vol. 32(4), pp. 258-284.

Clarke, V. and Braun, V. (2013), Teaching thematic analysis: Overcoming challenges and developing strategies for effective learning. *The Psychologist*, Vol. 26(2), pp. 120-123.

Cohen, D. J. (2015), HR past, present and future: A call for consistent practices and a focus on competencies. *Human Resource Management Review*, Vol. 25(2), pp. 205-215.

Corbin, J. M. and Strauss, A. (2015), *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. 4th Edition. (Thousand Oaks, CA: Sage).

Corley, K. G. (2015), “A commentary on ‘what grounded theory is…’ engaging a phenomenon from the perspective of those living it”. *Organizational Research Methods*, Vol. 18(4),   
pp. 600-605.

Crawford, I. and Wang, Z. (2016), The impact of placements on the academic performance of UK and international students in higher education. *Studies in Higher Education*,   
Vol. 41(4), pp. 712-733.

Creswell, J. W. (2015), *A Concise Introduction to Mixed Methods Research*. (Thousand Oaks: Sage Publications).

Department for Education (2018), Prime Minister launches major review of post-18 Education. Available online at: https://www.gov.uk/government/news/prime-minister-launches-major-review-of-post-18-education (accessed 23 September 2018).

Direito, I., Pereira, A. and Duarte, A. M. (2012), Engineering Undergraduates’ Perceptions of Soft Skills: Relations with Self-Efficacy and Learning Styles. *Procedia – Social and Behavioral Sciences*, Vol. 55, pp. 843-851.

Donald, W. E., Baruch, Y. and Ashleigh, M. J. (2017a), The undergraduate self-perception of employability: human capital, careers advice, and career ownership. *Studies in Higher Education*, DOI: 10.1080.03075079.2017.1387107.

Donald, W. E., Baruch, Y. and Ashleigh, M. J. (2017b), Boundaryless and protean career orientation: A multitude of pathways to graduate employability, in: M. Tomlinson and L. Holmes (Eds), *Graduate Employability in Context: Theory, Research and Debate*, pp. 129-150 (London: Palgrave Macmillan).

Fishbein, M. and Ajzen, I. (1975), *Belief, attitude, intention and behavior: An introduction to theory and research reading*. (MA: Addison-Wesley).

Fleming, P. (2017), The Human Capital Hoax: Work, Debt and Insecurity in the Era of Uberization. *Organization Studies,* Vol. 38(5), pp. 691-709.

Froehlich, D. E., Beausaert, S. and Segers, M. (2017), Development and validation of a scale measuring approached to work-related informal learning. *International Journal of Training and Development*, Vol. 21(2), pp. 130-144.

Fugate, M., Kinicki, A. J. and Ashforth, B. E. (2004), Employability: A psycho-social construct, its dimensions, and applications. *Journal of Vocational Behaviour*, Vol. 65(1), pp. 14-38.

Future Finance. (2016), *Less than half of students confident their degree will pay for itself.* Available online at: https://www.futurefinance.com/uk/press (accessed 23 September 2018).

Gill, C. (2017), Don't know, don't care: An exploration of evidence based knowledge and practice in human resource management. *Human Resource Management Review*. DOI.org/10.1016/j.hrmr.1017.06.001

Gioia, D. A., Corley, K. G. and Hamilton, A. L. (2013), Seeking Qualitative Rigor in Inductive Research: Notes on the Gioia Methodology. *Organizational Research Methods*, Vol. 16(1), pp.15-31.

Golley, F. B. (1993), *A history of the ecosystem concept in ecology: more than the sum of the parts.* (Yale: University Press).

Green, F., Henseke, G. and Vignoles, A. (2017), Private school and labour market outcomes. *British Educational Research Journal*, Vol. 43(1), pp. 7-28.

Hall, D. T. (2004), The protean career: A quarter-century journey. *Journal of Vocational Behavior*, Vol. 65(1), pp. 1-13.

Hassanbeigi, A., Askari, J., Nakhjavani, M., Shirkhoda, S., Barzegar, K., Mozayyan, M. R. and Fallahzadeh, H. (2011), The relationship between study skills and academic performance of university students. Procedia - *Social and Behavioral Sciences*, Vol. 30(1), pp. 1416–1424.

High Fliers. (2017), *The Graduate Market in 2017.* London: High Fliers Research Limited.

Higher Education Funding Council. (2015), *Data and Statistics*. Available online at: http://www.hefce.ac.uk/data (accessed 23 September 2018).

Höbfoll, S. E. (1989), Conservation of Resources: A New Attempt at Conceptualizing Stress. *American Psychologist*, Vol. 44(3), pp. 513-524.

Höbfoll, S. E. (2001), The Influence of Culture, Community, and the Nested-Self in the Stress Process: Advancing Conservation of Resources Theory. *Applied Psychology*, Vol. 50(3),   
pp. 337-421.

Holmes, L. M. (2013), Competing perspectives on graduate employability: possession, position or process? *Studies in Higher Education*, Vol. 38(4), pp. 538-554.

Holmes, L. M. (2016), Graduate Employability: Future Directions and Debate. In *Graduate Employability in Context: Theory, Research and Debate*, in: M. Tomlinson and L. Holmes (Eds), *Graduate Employability in Context: Theory, Research and Debate*, pp. 359-370 (London: Palgrave Macmillan).

Hsieh, S-I. and Hsu, L-L. (2013), An outcome-based evaluation of nursing competency of baccalaureate senior nursing students in Taiwan. *Nurse Education Today*, Vol. 33(12),   
pp. 1536-1545.

Iansiti, M. and Levien, R. (2004), Strategy as ecology. *Harvard Business Review*, Vol. 82(3), pp. 68–81.

Iles, P. (1997), Sustainable high-potential career development: a resource-based view. *Career*

*Development International*, Vol. 2(7), pp. 347-353.

Ingram, K. L., Cope, J. G., Harju, B. L. and Wuensch, K. L. (2000). Applying to graduate school: A test of the theory of planned behavior. *Journal of Social Behavior and Personality*, Vol. 15(2), pp. 215-226.

Inkson, K., Gunz, H., Ganesh, S. and Roper, J. (2012). Boundaryless careers: Bringing back boundaries. *Organization Studies*, Vol. 33(3), pp. 323.340.

Jackson, D. (2015), Employability skill development in work-integrated learning: Barriers and best practice. *Studies in Higher Education*, Vol. 40(2), pp. 350-367.

Jackson, D. and Wilton, N. (2017), Perceived employability among undergraduates and the importance of career self-management, work experience and individual characteristics. *Higher Education Research & Development*, Vol. 36(4), pp. 747-762.

Law, P. and Yuen, D. (2012), A multilevel study of students’ motivations of studying accounting: Implications for employers. *Education & Training*, Vol. 54(1), pp. 50-64.

Luthans, K. W., Luthans, B. C. and Palmer, N. F. (2016), A positive approach to management education: The relationship between academic PsyCap and student engagement, *Journal of Management Development*, Vol. 35(9), pp. 1098-1118.

Luthans, F. and Youssef, C. M. (2007), Emerging positive organizational behavior. *Journal of Management,* Vol. 33, pp. 321-349.

Markoulli, M., Lee, C. I., Byington, E. and Felps, W. A. (2017), Mapping Human Resource Management: Reviewing the field and charting future directions. *Human Resource Management Review*, Vol. 27(3), pp. 367-396.

Martini, M. and Cavenago, D. (2017), The role of perceived workplace development opportunities in enhancing individual employability. *International Journal of Training and Development*, Vol. 21(1), pp. 18-34.

Minocha, S., Hristov, D. and Reynolds, M. (2017), From graduate employability to employment: policy and practice in UK higher education. *International Journal of Training and Development*, Vol. 21(3), pp. 235-248.

Modise, O. M. (2016), Career workshops as a non-traditional research model for enhanced relationships between higher education and the labour market. *International Journal of Training and Development*, Vol. 20(2), pp. 152-163.

Morley, L. (2001), Producing new workers: Quality, equality and employability in higher education. *Quality in higher education*, Vol. *7*(2), pp. 131-138.

Nemanick, R. C. and Clark, E. M. (2002), The differential effects of extracurricular activities in attributions in resume evaluation. *International Journal of Selection and Assessment*, Vol. 10(1), pp. 206–217.

Ojiako, U., Chipulu, M., Ashleigh, M. and Williams, T. (2014), Project management learning: Key dimensions and saliency from student experiences. *International Journal of Project Management*, Vol. 32(8), pp. 1445-1458.

Okay-Somerville, B. and Scholarios, D. (2014), Coping with career boundaries and boundary-crossing in the graduate labour market. *Career Development International*, Vol. 19(6),   
pp. 1-27.

O’Leary, S. (2017), Graduates’ experiences of, and attitudes towards, the inclusion of employability-related support in undergraduate degree programmes; trends and variations by subject discipline and gender. *Journal of Education and Work*, Vol. 30(1), pp. 84-105.

Onyishi, I. E., Enwereuzor, I. K., Ituma, A. N. and Omenma, J. T. (2015), The mediating role of perceived employability in the relationship between core self-evaluations and job search behaviour. *Career Development International*, Vol. 20(6), pp. 604-626.

Patton, M. Q. (2015), *Qualitative Research and Evaluation of Methods: Integrating Theory and Practice*, 4th Edition. (Thousand Oaks, California: SAGE Publications).

Pinto, L. H. and Ramalheira, D. C., (2017), Perceived employability of business graduates: The effect of academic performance and extracurricular activities. *Journal of Vocational Behavior*, Vol. 99(1), pp. 165-178.

Qenani, E., MacDougall, N. and Sexton C. (2014), An empirical study of self-perceived employability: Improving the prospects for student employment success in an uncertain environment. *Active Learning in Higher Education*, Vol. 15(3), pp. 199-213.

Remedios, R. (2012), The role of soft skills in employability. *International Journal of Management Reviews*, Vol. 2(7), pp. 1285-1292.

Roulin, N. and Bangerter, A. (2013), Students’ use of extra-curricular activities for positional advantage in competitive job markets. *Journal of Education and Work*, Vol. 26(1),   
pp. 21–47.

Rothwell, A., and Arnold, J. (2007), Self-perceived employability: Development and validation of a scale. *Personnel Review*, Vol. 36(1), pp. 23-41.

Rousseau, D. M. (1996), Changing the deal while keeping the people. *Academy of Management Executive*, Vol. 10(1), pp. 50-59.

Saldaña, J. (2015), *The coding manual for qualitative researchers.* (London: Sage).

Saunders, M. and Townsend, K. (2016), Reporting and Justifying the Number of Interview Participants in Organization and Workplace Research. *British Journal of Management*, Vol. 27(4), pp. 836-852.

Saunders, V. and Zuzel, K. (2010), Evaluating employability skills: employer and student perceptions. *Bioscience Education*, Vol. 15(2), pp. 1-15.

Schein E. H. (1980), ‘*Organizational Psychology*, 3rd Ed. Englewood Cliffs, NJ: Prentice-Hall.

Seibert, S. E., Kraimer, M. L. and Crant, J. M. (2001), What do proactive people do? A longitudinal model linking proactive personality and career success. *Personnel Psychology*, Vol. 54, (4), pp. 845-874.

Sheepway, L., Lincoln, M. and McAllister, S. (2014), Impact of placement type on the development of clinical competency in speech-language pathology students. *International Journal of Language and Communication Disorders*, Vol. 49(2), pp. 189-203.

Sin, C. and Amaral, A. (2017), Academics’ and employers’ perceptions about responsibilities for employability and their initiative towards its development. *Higher Education*, Vol. 73(1), pp. 97-111.

Sölvell, Ö. (2015), [The Competitive Advantage of Nations 25 years – opening up new perspectives on competitiveness.](http://www.emeraldinsight.com/doi/abs/10.1108/cr-07-2015-0068) *Competitiveness Review*, Vol. 25, pp. 471-481.

Stengård, J. (2018), *Being stuck in the workplace: Who is locked-in and what are the implications for well-being and health?* (Doctoral dissertation, Department of Psychology, Stockholm University).

Stevenson, J. and Clegg, S. (2011), Possible selves: Students orientating themselves towards the future through extracurricular activity. *British Educational Research Journal*, Vol. 37(2), pp. 231-246.

Suddaby, R. (2006), From the editors: What grounded theory is not. *Academy of Management Journa*l, Vol. 49(4), pp. 633-642.

Sumanasiri, E., Ab Yajid, M. S. and Khatibi, A. (2015), Review of Literature of Graduate Employability. *Journal of Studies in Education*, Vol. 5(3), pp. 75-88.

Sutton Trust. (2015), *Sutton Trust response to maintenance grant cuts set out in today’s Budget.* Available online at: http://www.suttontrust.com/newsarchive/Sutton-trust-response-to-maintenance-grants-cuts-set-out-in-todays-budget (accessed 23 September 2018).

The Complete University Guide. (2018), University League Tables 2018. Available online at: https://www.thecompleteuniversityguide.co.uk/league-tables/ (accessed 23 September 2018).

The Institute for Fiscal Studies. (2016), *Degrees have ‘retained earnings value*. Available online at: ifs.org/publications/2017 (accessed 23 September 2018).

Thijssen, J. G., Van der Heijden, B. I. J. M. and Rocco, T. S. (2008), Toward the employability—link model: current employment transition to future employment perspectives. *Human Resource Development Review*, Vol. 7(2), pp. 165-183.

Tymon, A. (2013), The student perspective on employability. *Studies in Higher Education*, Vol. 38(6), pp. 841-856.

Vanhercke, D., Cuyper, N. D., Peeters, E. and Witte, H. D. (2014), Defining perceived employability, A psychological approach. *Personnel Review*, Vol. 43(4), pp. 592–605.

Vanhercke, D., Kirves, K., De Cuyper, N., Verbruggen, M., Forrier, A. and De Witte, H. (2015), Perceived employability and psychological functioning framed by gain and loss Cycles. *Career Development International*, Vol. 20(2), pp. 179-198.

Van der Heijden, B. I. J. M. and De Vos, A. (2015), Sustainable careers: Introductory chapter, in: A. De Vos and B. I. J. M. Van der Heijden (Eds), *Handbook of Research on Sustainable Careers*, pp. 1-19 (Cheltenham: Edward Elgar),

Wilton, N. (2012), The impact of work placements on skills development and labour market outcomes for business and management graduates. *Studies in Higher Education*,   
Vol. 37(5), pp. 603-620.

Wilton, N. (2014), Employability is in the eye of the holder. *Higher Education, Skills and Work-Based Learning*, Vol. 4(3), pp. 242-255.

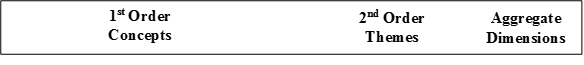
**Table I Participant Information**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Participant ID** | **Gender** | **Degree Subject** | **Degree Category** | **Degree Type** |
| 1 | Female | Oceanography | Ocean & Earth Sciences | Generalist |
| 2 | Female | Music | Archaeology & Music | Generalist |
| 3 | Female | Oceanography | Ocean & Earth Sciences | Generalist |
| 4 | Female | Biology | Biological Sciences | Generalist |
| 5 | Female | Psychology | Education & Psychology | Generalist |
| 6 | Male | Education | Education & Psychology | Generalist |
| 7 | Male | Music | Archaeology & Music | Generalist |
| 8 | Male | Politics | English, History & Politics | Generalist |
| 9 | Female | Law | Law | Specialist |
| 10 | Female | Art | Art | Generalist |
| 11 | Female | Geography | Geography & Environmental Science | Generalist |
| 12 | Male | Biology | Biological Sciences | Generalist |
| 13 | Female | Geography | Geography & Environmental Science | Generalist |
| 14 | Female | Art | Art | Generalist |
| 15 | Male | Engineering | Engineering | Specialist |
| 16 | Male | Law | Law | Specialist |
| 17 | Male | Chemistry | Chemistry | Generalist |
| 18 | Male | Engineering | Engineering | Specialist |
| 19 | Female | Archaeology | Archaeology & Music | Generalist |
| 20 | Female | Law | Law | Specialist |
| 21 | Female | Social Sciences | Social Sciences & Philosophy | Generalist |
| 22 | Male | Art | Art | Generalist |
| 23 | Male | Business | Business | Specialist |
| 24 | Female | Modern Languages | Modern Languages | Specialist |
| 25 | Female | Chemistry | Chemistry | Generalist |
| 26 | Male | Geography | Geography & Environmental Sciences | Generalist |
| 27 | Male | Chemistry | Chemistry | Generalist |
| 28 | Male | Business | Business | Specialist |
| 29 | Female | Modern Languages | Modern Languages | Specialist |
| 30 | Male | Biology | Biological Sciences | Generalist |
| 31 | Male | Mathematics | Mathematics | Specialist |
| 32 | Male | Philosophy | Social Science & Philosophy | Generalist |
| 33 | Female | English | English, History & Politics | Generalist |
| 34 | Female | Business | Business | Specialist |
| 35 | Male | Music | Music | Generalist |
| 36 | Male | Oceanography | Ocean & Earth Sciences | Generalist |
| 37 | Male | History | English, History & Politics | Generalist |
| 38 | Female | Mathematics | Mathematics | Specialist |
| Total Generalist Participants: 26 (13 Male/13 Female) | | | | |
| Total Specialist Participants: 12 (6 Male/6 Female) | | | | |

**Table II: The Complete University Guide 2018**

|  |  |
| --- | --- |
| **Degree Subject** | **Earnings** |
| Engineering | £26,522 |
| Mathematics | £24,471 |
| Business | £23,781 |
| Politics | £22,197 |
| Social Sciences | £22,197 |
| Philosophy | £22,025 |
| Law | £20,769 |
| Chemistry | £20,512 |
| Geography | £20,484 |
| Modern Languages | £20,461 |
| Archaeology | £19,671 |
| Biology | £19,538 |
| Education | £19,400 |
| English | £19,472 |
| Psychology | £19,117 |
| Ocean & Earth Sciences | £19,000 |
| History | £18,537 |
| Art | £15,811 |
| Music | £14,705 |

**Figure I: Thematic Analysis Report (Notation from Gioia et al., 2013, p .21)**

****

Repayment Expectations

University   
Debt

Benefits

Costs and Benefits of HE

* Degree certificate, skills, and self-development
* Increased earnings potential and access to jobs
* Friends, networks, and university reputation

Costs

* Tuition fees: Need clear reason for HE
* Debt putting people off HE
* Volume of graduates (increased participation)
* Will not repay: volume of debt and interest
* Will repay: bursary, lower fees, or higher salary
* Unknown factors e.g. earnings and health

* More employable or less employable
* Degree, extracurricular, and work experience
* Volume of graduates, lack of jobs, and rejection

Year of Study Influence

Final Year Employability

* Gender representation on hiring committees
* Gender pay gap and maternity pay
* Gender targets or no gender targets

Gender Pipeline Challenges

Gender Employer Issues

* Target primary and secondary schools
* Self-worth and confidence in females
* Taking time out to have children

Gender   
Influence

Careers   
Advice

* Knowledge of industry and key contacts
* Awareness of work placement opportunities
* Awareness of graduate job opportunities
* Current contributions
* Job application support and employer links
* Opportunities for future improvement
* Current communication methods
* Job application support and employer links
* Opportunities for future improvement

Graduate Recruiters

Lecturers

Careers Service

Figure I shows the progression from 1st Order Concepts, to 2nd Order Themes, to final Aggregate Dimensions. The arrows indicate the relevant transitions across the stages. The combined stages represent the Thematic Analysis Report.

**Figure II: Two-Dimensional Model of Perceived Employability**

**Years of Study**

|  |  |  |
| --- | --- | --- |
| **Personal Factors** | *Less Employable* | *More Employable* |
| **Market Factors** | *Less Employable* | *More Employable* |

Figure II offers a new Two-Dimensional Model of Perceived Employability. The arrows indicate that students perceived themselves to be more employable in terms of Personal Factors, but less employable in terms of Market Factors as they progress through their years of university study.

**Figure III: Employer and University Careers Advice Model**

Alumni &  
Graduates

**Employer**

Graduate Recruiter

Careers Advisors

**University**

Lecturers

S

T

U

D

E

N

T

S

Figure III shows a new Employer and University Careers Advice Model. This model captures the importance of Career Ecosystems Theory, in terms of the inter-related and inter-dependent nature of the actors of graduate employability.

**Appendix I: Additional Evidence - Opportunities for Careers Service**

|  |  |
| --- | --- |
| **Opportunity** | **Evidence** |
| (i)  Tailored support | Participant 9: *And then in the Law school there's like a careers and employability week I think, I'm not sure what they call it but they have like different talks where they get employers to come in and then you get to go for like visits to the courts and tribunals in Southampton and Winchester. I think those are quite useful if you are like exploring your options because they get quite a lot of firms to come in so you can talk to their employees and because they also get people who graduated from the university just like a year earlier.* |
| (ii)  Narrowed down options | Participant 7: *I started applying for the jobs and then I got caught in that circle of just casting my net everywhere and applying for random jobs. So, I reckon, maybe something that could maybe help people refine their, like, getting away from casting your net, something that helps you narrow down that search.* |
| (iii) Partnership with lecturers | Participant 4: *I also think if you're looking at the lecturers and the people in the lab that are around you and seeing what kind of attributes they have that have led them to get to where they are, I think that helps.*  Participant 32: *I guess I didn't really [use the careers service]… I've been to my lecturers and discussed with them instead.*  Participant 35: *Cos although the careers advisers may be able to give me the entry requirements and things like that, they won’t be able to give me that experience that the academics will be able to provide. So anytime I want to talk about going to music college I can talk to my lecturers.* |
| (iv)  Increase awareness | Participant 10: *No, I haven’t used the careers service. We’ve been offered it, someone’s come and laid her stall out but she wasn’t confident and it didn’t seem like it was going to be helpful. I think I know a couple of people that went to a talk at ‘Campus A’ but otherwise I don’t know anyone who’s used that service and I certainly haven’t. Maybe they need to raise awareness of the services they offer.* |
| (v)  Compulsory participation | Participant 2: *But the general perception from most music students was just that it was a stupid idea. They called it compulsory and it was in no way made compulsory.* |

**Appendix I: Additional Evidence - Opportunities for Careers Service (Continued)**

|  |  |
| --- | --- |
| **Opportunity** | **Evidence** |
| (vi)  Engage students more | Participant 28: *The difficult thing for the careers department is finding the time where they can timetable lectures, their own lectures, and where people are going to show up to them.* |
| (vii)  Support beyond main campus | Participant 1: *I tried to see them about my CV, but because it's only on ‘Campus A’ and I have lectures at ‘Campus B’ I was unable to come at a time when they still had the ten minute slots available and I couldn't book one so I never ended up doing that because it wasn't feasible.* |
| (viii)  Expand company coverage | Participant 37: *At the employability fairs, it’s almost exclusively multinational companies that are offering positions.* |
| (ix)  Support for rejected applications | *Participant 23: I get rejected for example, that sort of changes my view about maybe I'm not particularly good enough compared to others while it may be purely a case of whether they had fulfilled their requirements or are just looking for what else they can possibly recruit. So some support for that, maybe from the careers service could be useful.* |