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Graduate career development: Two empirically-derived models of the career decision-making processes of students and graduates in the UK

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Abstract

In this article I report on a strand of research, based on interviews with 22 university career practitioners and 30 graduates, that explores the career development of UK students. The research addresses a gap in the literature which has overlooked the decision-making processes of this group and supplements the evidence-base for career practitioners. Findings indicate that students exhibit emotional, cognitive and behavioural career development difficulties, and that graduates consider career options one at a time, engage in self-exploration in the context of a specific option, and use the application process to help them decide on a career direction.

Keywords: Career decision-making; Higher Education; career decision-making difficulties

Introduction

Over the last few years, I have been involved in a strand of research exploring university students' career decision-making – examining how students make their decisions and where they get stuck. The studies have been conducted and published individually (Ayliffe et al., 2024; Yates & Hirsh, 2022; Yates & Hirsh 2024; Yates, 2025) but in this article I

draw them together, to provide a more holistic account of the process of career decision-making in UK students, and to offer some workable ideas for practice.

Study 1: The career decision-making difficulties of students in Higher Education (HE) in the UK

Previous research has examined the career decision-making difficulties of young people who are making their first occupational choices. Much of the research highlights cognitive difficulties and one of the most widely cited taxonomies of career decision-making difficulties identifies ten aspects of cognitive difficulties, grouped within three clusters (Gati et al., 1996). The clusters are *lack of readiness* (lack of motivation, indecisiveness, dysfunctional myths and lack of information about the process), *lack of information* (lack of information about the self, about occupations and about how to research the job market) and *inconsistent information* (unreliable information, external conflicts and internal conflicts). Less explored are the emotional career decision-making difficulties, but Saka et al. (2008) identify three clusters of emotional and personality-related difficulties: *pessimism* (about the world, about the labour market, about their ability to control things), *anxiety* (about making a choice and about the uncertainty of the process) and *self-concept and identity* (generalised anxiety, low self-esteem and an uncrystallised identity).

These career difficulties will no doubt resonate with career professionals, but the research conducted with UK HE students is limited. The first of our studies aimed to start to address this gap in the literature, to identify the career issues, dilemmas and difficulties that UK HE students raise in their one-to-one career appointments.
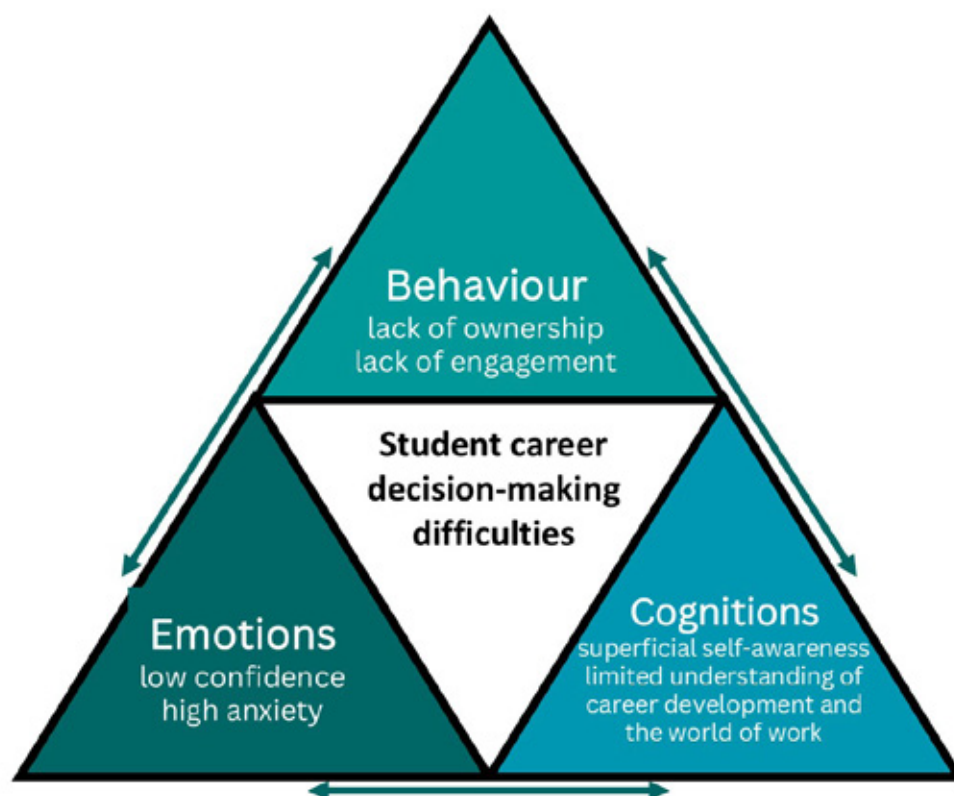
Participants in this qualitative study were 22 career practitioners working in different contexts within Higher Education across the UK. Participants were asked, in semi-structured interviews, to describe the issues that students bring to their one-to-one appointments and we used a template analysis, a form of thematic analysis particularly suitable for large qualitative data sets (King, 2004, 2014) to analyse the transcribed interview scripts. Further details can be found in Yates & Hirsh (2022, 2024).

Findings

We developed three themes, conceptualising the students' career difficulties within a model of interrelated behavioural, emotional and cognitive difficulties (Figure 1). This model echoes Ellis and Beck's well-establish cognitive triangle (Beck, 1976) which explicitly links cognitions, emotions and behaviours, and forms the basis for a range of well-evidenced cognitive behavioural techniques (Hofmann et al., 2012).

The *emotional career issues* described by the career practitioners were most commonly either low confidence or high career anxiety. Low confidence was described as the students' fear that they would not be good enough – good enough to make the right decision, good enough to get a job, and good enough to perform well in post. Career anxiety covered anxiety about making a choice, about the job application process and about actually doing the job. It also referred to anxiety about whether the students would be able to meet expectations – expectations placed on them by their families, by their schools, and by the students themselves, and the fear of falling behind their peers.

Figure 1: Students' Career Decision-making Difficulties

Behaviour
lack of ownership
lack of engagement

Student career
decision-making
difficulties

Emotions
low confidence
high anxiety

Cognitions
superficial self-awareness
limited understanding of
career development and
the world of work

Behavioural career issues were predominately about lack of engagement – either *with* the process or *within* the process. Students who were not engaged *with* the process simply didn't speak to a career practitioner until very late – often not giving their career any thought until after their final university exams were over. Those not engaged *within* the process were those who might attend careers events or appointments, but who would not take ownership of their own career development, expecting either the career practitioner or 'fate' to step in and identify the right career choice for them.

Cognitive career issues were exhibited by students whose self-awareness was deemed superficial, and those who did not know enough about the options available. This cluster also included students who did not understand the process of career choice (what exactly they would need to do to reach a conclusion) and students who were struggling to know what an employer would want or how an employer would see them.

Some of the specific career decision-making difficulties we identified within each of the three factors are well-rehearsed in the literature. Gati et al.'s cluster of *lack of information* (1996) aligns with the cognitive cluster in our model, and Saka et al., (2008) identify low confidence and anxiety in their model focused on emotional career decision-making difficulties. Verbruggen and de Vos's theory of Career Inaction (2020) identifies *inertia-enhancing mechanisms* that constitute psychological barriers to career decision-making, highlighting that fear and anxiety (aligned with our emotional issues) and cognitive overload (linked to our cognitive cluster) both typically contribute to career inaction – which aligns with the lack of engagement in our behavioural cluster. Our new model however seems to be the first such model to bring together the three groups of emotional, behavioural and cognitive difficulties and identify the specific challenges and the relationships between them in this way.

Practical implications

One aim of the study was to offer some guidance that could inform the training of career professionals. Whilst career trainees are generally well equipped to support students with some of the aspects of career difficulties highlighted in this model, there are other issues that are perhaps less widely addressed in initial professional training. The Career Development Institute's qualification in career development, for example (CDI, 2024), ensures that career practice trainees are well qualified to support students with many of their cognitive difficulties, equipping them with techniques for boosting self-awareness, supporting clients researching the labour market, and identifying job ideas, but is less explicit in its focus on the difficulties within the emotional and behavioural clusters.

There are many approaches which could offer career practitioners useful techniques for working with the issues of students who have emotional or behavioural difficulties. Motivational interviewing (Rochat & Rossier, 2016) is an approach that aligns with a person-centred approach to guidance or coaching, and helps to encourage clients to take ownership of their own situation through boosting their intrinsic motivation towards change (Ryan & Deci, 2000). Savickas's work on Career Construction Theory (2020) and Career AdaptAbilities (Savickas & Porfeli, 2012) offers techniques to encourage clients to take ownership of their own career planning and Solution Focused Coaching has shown some promise within career contexts as an approach to enabling clients to identify their own solutions to their own problems (Miller, 2016). Emotional difficulties with clients must of course be approached sensitively – most practitioners are not qualified counsellors, and we must be mindful of the limits of our expertise, but there are some techniques from cognitive behavioural coaching that have been show to work within career coaching, and acceptance and commitment therapy helps clients manage the impact of their anxiety and is showing great promise in our field (Luken & De Folter, 2019). These approaches could be incorporated into career practice training programmes to offer career practitioners a wider range of techniques for addressing the student career decision making difficulties we identified.

Study 2: How do students make their career choices?

The students' lack of understanding about how to go about making a career choice was one of the difficulties identified in Study 1 that commanded our attention, notable because our participants, the career practitioners themselves were uncertain about how to best address it. The Higher Education Statistics Authority (HESA) provides data about graduate outcomes 15 months after graduation. But whilst this data is useful, and often well used within career programmes, the existing destination data is concerned with the nature of outcomes and the graduates' perceptions of them; it does not provide data on how the graduates came to choose those options. The career practitioners in our study evidently had a deep understanding of career development and career choice, yet reported that they felt that they did not have a clear model to explain to the students the steps they needed to take to make a good career choice. Many of them described using both the DOTS model (Law & Watts, 1977) and the theory of Planned Happenstance (Mitchell et al., 1999) but found that even this combination failed to offer a simple step-by-step framework to describe student career choice. This became the goal for Study 2 where I sought to identify and understand the steps that students and graduates took to reach a decision on their first graduate job.

Most existing models of career decision-making are normative, offering guidance for how people 'should' make career choices (for example Gati & Asher, 2005; Hirschi & Läge, 2007). Career practitioners of course want to help students make good decisions, but expecting them to conform to a normative approach may not be the most valuable way to support them; evidence has shown that it can be more effective to meet clients where they are – acknowledging the real-world approach that they are taking and helping them to build on and improve their existing approach (Baron, 2004; Bell et al., 1988). A descriptive model, outlining the steps that graduates typically take to reach a career choice could be a useful starting point for this kind of support.

I conducted semi-structured interviews with 30 recent UK graduates (those who graduated within the previous three years), 15 women and 15 men, who were currently employed, and asked them to describe the career development steps they took as they went from '*I have no idea what I want to do*' to '*I am now working*'. Through a reflective thematic analysis (Clarke & Braun, 2022), an approach to thematic analysis particularly suitable for single-coder research, I developed a model of real-world career decision-making. Further details can be found in Yates (2025).

Findings

The graduates interviewed came from diverse disciplines and were working in a range of different jobs and industries, yet there was considerable consistency in the steps they described (Figure 2). The graduates explained that they first identified a plausible job idea, and then started to find out more about it. As they researched, they considered whether the job would suit them – whether they would like it, whether they would be successful in that field, and whether the job would meet their needs. If the job failed to meet their standards, then they returned to stage 1 and picked another job. If the job sounded as though it might suit them, then they looked for a vacancy and applied. The process of applying, for many, constituted a deeper stage of exploration, and many made their final decision during or after applying. The whole process was iterative and the graduates went back and forth between the stages until they had reached a decision.

Figure 2: A model of real-world graduate decision-making
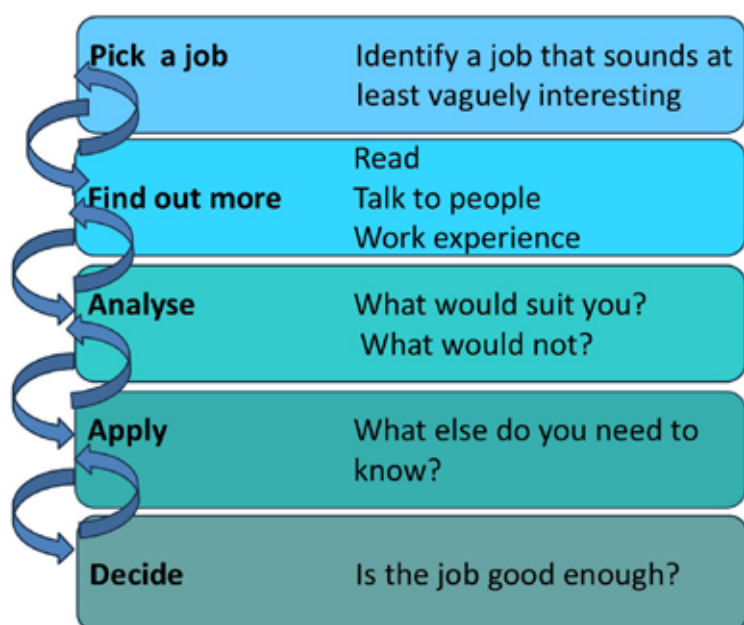
The stages in this model align with some aspects of existing normative models (Gati & Asher, 2005; Hirschi & Läge, 2007). It is no surprise to see that students research the job options, analyse how well an occupation would suit them, and make a decision. But there are three notable differences. In this descriptive model, the students generally consider jobs one at a time; they engage in self-exploration after they have conducted some research on a job, and only in the context of this particular occupation; and they use the application process as a way of finding out more – they apply and then decide, rather than decide and then apply.

The graduate participants in this study all described a very similar career decision-making journey, but many of them were aware that their steps did not conform to the normative ideal – they knew how they 'ought' to make a choice and were aware and sometimes a little embarrassed to admit that they were deviating from traditional advice. So, what did they find so appealing about this approach?

I mentioned earlier that one key challenge that students face in making their career choices is cognitive overload (Sauermann, 2005; Verbruggen & de Vos, 2020) and we know that making a career choice can be enormously demanding in terms of time and effort. The real-world model includes four key resource-saving processes and that may be the key to its appeal.

1. *The graduates, where they could, relied on chance to identify a job idea.* Ideally, they generated their career ideas through chance – inspired by a person they met, a course they took or a film they watched. The graduates only put in the effort needed for active career research when chance let them down – when nothing emerged, or when their chance-inspired idea failed to live up to expectations.

2. *The graduates only dealt with one career idea at a time.* Rather than researching a range of options and keeping three or four possible career options live at once, the graduates picked one and pursued it, trying to work out whether it would meet a minimum acceptable standard. Only if it fell short would the students start thinking about a second option. This one-at-a-time known as satisficing (Simon, 1955) reduces the cognitive load required to make a decision, and has been shown to lead to more satisfying career outcomes (Iyengar et al., 2006).

3. *Self-exploration was conducted in the context of a particular, tangible job idea.* Trying to work out what they want from a career, job or next step can be very difficult for young people who have had little experience in the workplace. Traditional careers advice assumes that clients should first identify their own needs, strengths and requirements and then use that information to identify a suitable job idea. These graduates reversed this: they looked for a suitable job and then worked out whether it was what they wanted. Concrete examples are less cognitively demanding than abstract ideas, and it seemed to be much easier for graduates to consider '*what would I like or not like about nursing?*' than '*what do I want in a job?*'

4. *Graduates applied for jobs as a way to help them decide.* Received wisdom in careers writing is that you should make a choice and then apply for a job (Gati & Asher, 2005; Law & Watts, 1977), but many of the graduates I spoke to reversed this: they applied for a job and then made a choice. The application process can be a very efficient way to

research, as applicants meet future colleagues and see the office where they might be based. Arguably, it makes good sense to approach the application process as a two-way interview, and the graduates felt that this process would save their resources, killing two birds with one stone, as they found out more and applied at the same time.

It seems then that this study showed that graduates' approaches to career choice are well suited to dealing with some of the more difficult and demanding aspects of the career decision-making process.

Practical implications

The model as a whole could add value in two specific ways. We identified in the first study that students find it difficult to know how to go about making a career decision and for many this lack of understanding provokes anxiety. Sharing this straightforward step by step model with students could provide them with a clear path towards a decision and allow them to feel confident that they know what they need to do.

Second, the order of the stages offers some insights that could help with curriculum planning. This model suggests that graduates' natural inclination is to engage in self-exploration in the context of a specific job. This reversal of the traditional order of sessions from self-awareness and then opportunity awareness, to opportunity awareness followed by self-awareness in the context of one particular job idea, may well be more valuable for students, who seem to find it easier to reflect deeply on themselves within the context of a tangible job idea. Ayliffe et al., (2024) offer some useful reflections on one such initiative at City St George's, University of London.

Additionally, career practitioners can add value at specific stages. The model is, intentionally, descriptive rather than prescriptive: it shows how graduates actually make decisions, rather than offering advice on how to make good decisions. As such the approach has some limitations and career practitioners are well placed to add value to students by being alert to the flaws in the approach and finding ways to help students to mitigate against some of the risks.

The first limitation is the graduates' approach to identifying their initial job idea, where they typically relied on their life experience, rather than exploring options more systematically. We know that some students and graduates have a wider range of experiences or have access to more aspirational range of occupations than others. This seems to be a point in the process where careers services can add considerable value, offering students opportunities to encounter a wide range of different types of occupations early in their time at university to broaden their horizons for action (Hodkinson & Sparkes, 1997).

A further risk lies in the apply-then-decide approach to making a choice. As I have argued, this is in some ways a sensible approach – the application process can offer a great opportunity to research the opportunity at a deeper level. The problem lies in the passive attitude that many of the graduates seemed to take when making the decision, often seeing the employer's decision as to whether or not to offer them a job, as a 'sign' that the job is right for them. Careers support at this stage, encouraging students to really consider whether the job is right for them, could help students and graduates to take ownership of this decision.

Finally, it is worth noting some limitations with the research itself. The limited sample size of both studies means that we should be cautious in drawing generalisable conclusions and 19 of the 30 graduates in Study 2 had finished their HE courses in 2020 and 2021, meaning that their ~~studies~~ were impacted by the Covid pandemic for one or more years. We did not explicitly explore the impact this may have had on their processes, but it is useful to note that this was not a conventional HE experience for them. The cross sectional design of Study 2 means that the graduates were relying on their memories; a longitudinal study, following students at different time points during their career decision making journey could help to develop the model. Further research into specific UK HE populations, including, for example neurodivergent students, students from different TUNDRA quintiles, and students choosing work placements, could help to offer a clearer and more nuanced picture.

Conclusion

In this article I have offered a descriptive account of student and graduate career decision-making – outlining how these graduates made their first occupational choices and the typical career difficulties practitioners see in their student clients. The findings from this research align with existing literature, but there are also aspects identified in these studies that have not been seen elsewhere, notably the close links between emotional, cognitive and behavioural clusters of decision-making difficulties, and some of the steps involved in making a career choice – including the idea of self-exploration only in the context of a job idea and the apply-and-then-decide approach to making a choice. Most literature published on this subject is normative, offering models of good practice, but I argue that working with a descriptive model may be more effective – meeting students where they are, and building on their natural instincts, rather than expecting them to conform to an alien, albeit technically 'better' approach. I hope that the studies reported here offer something fresh that resonates with practitioners and can be used to support clients.

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