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How and why do students' career interests change during higher education?

Kathleen M. Quinlan[1], James Corbin[2], Natalie W. Gentry[3], Lindsey Cameron[4]

[1]Centre for the Study of Higher Education, [2]Careers and Employability Service, [3]Division of Computing, Engineering and Mathematical Sciences, [4]School of Psychology

University of Kent, Canterbury, United Kingdom

Abstract

Given the increased emphasis on employability in higher education, there is an urgent need to better understand how higher education influences students' career interests. Much of the vocational psychological interest literature has assumed that career interest is stable from adolescence through adulthood. Newer conceptions of interest, drawn from developmental-educational perspectives, instead emphasise the mutability of interest and the ways in which the environment can support its development. This study makes a novel contribution by extending a developmental-educational theory of interest to illuminate how students' career interests develop during university and what students perceive influences those career interests.

Upon completing their bachelor's degrees, we surveyed the 2019 graduating class (n=663) at a mid-ranked UK university offering a blend of applied and pure programmes. Graduates indicated whether their career interests had changed during university, described their career interests 'when they started university' and what they were 'now', and explained what had affected their career interest during university.

Most (61%) reported that their career interests had changed. Consistent with interest theory, the most common types of change were clarification within a single Standard Industrial Classification (30%), shifts to a different SIC (19%), becoming more decided (12%), or rejecting a plan, leaving them unsure (5%). The most common influences on career interests were the curriculum (46%), placements (14%), work experiences (7%), and co-curricular activities (6%). In a follow up study, we interviewed fifteen students about their interest development during higher education. We used the interview results to illustrate and illuminate nuances in the way students experienced those influences. We suggest that the results of this study raise concerns about relying solely on career decidedness measures such as Careers Registration. We also conclude that career practitioners and academics need to consider the central role of disciplinary curricula in career learning, as well as continue to emphasise opportunities for work experiences in and outside the curriculum.

Introduction

As universities around the world are increasingly being held accountable for students' graduate outcomes (Jackson and Bridgstock 2018), there is an urgent need to better understand how to support students' careers education during university. Yet, understanding

of career development in higher education sits between two different research traditions, making it difficult to build a coherent theory of practice or body of evidence to underpin and guide practice. Students' career interest is central in both traditions, but they make very different assumptions about what interest is and how malleable it is (Su 2018).

On the one hand, there is a long and venerable tradition of using vocational interest scales to match individuals' skills to careers (e.g., Holland 1959; Donnay 1996; Su, 2018). Vocational psychological research of this type has treated vocational interest like a personality trait, something that is stable from adolescence through adulthood (Low, Yoon, Roberts and Rounds 2005; Xu and Tracey 2016).

In this tradition, the task of career advisors is to help students identify their interest using various interest inventories and then find jobs that are aligned with that interest (Su, 2018). This assumption of stability has meant that little research attention has been paid to how students' career interests change or the factors that influence those changes. Only recently, with the introduction of within-person research methods, has this stability been questioned (Schultz et al 2017).

A competing view of career development in higher education is rooted in a developmental psychological framework (e.g. Erikson 1968). Developmental psychology underpins a host of student development theories that guide student services professionals in higher education, including career services (Pascarella and Terenzini 2005). These theories emphasise that young people are in the process of developing their identity. Such theories underpin university student services that focus on providing opportunities for students to explore new subject matter, relationships, and activities (e.g. Patton et al 2016). In this paradigm, particularly prevalent in the US, higher education is seen as a place for holistic development that broadens students' horizons, challenges their received identities and world-views, and enables students to grow as people (Quinlan 2011). From the developmental perspective, changes in career interest are seen as a desirable outcome of education. A developmental perspective prompts one to investigate the extent to which students' career interests change and the nature of those changes.

A developmental paradigm, as it is embraced within higher education, also promotes a distinctly *educational* perspective. An educational perspective attends to the interactions between learners, teachers, and subject matter within particular environments (Ball and Forzani 2007). An educational perspective also prompts one to ask what kinds of learning activities and environmental influences (e.g. peers, teachers, subject matters) contribute to those changes in career interest.

Conceptual Framework: Interest Development

In this manuscript, we take a developmental-educational perspective on career interest, drawing specifically on the theoretical framing of the Four-Phase Model of Interest Development (Hidi and Renninger 2006; Renninger and Hidi 2016) to examine changes in students' career interests during UK higher education. This developmental theory conceptualises interest as a tendency or desire to engage with some content or object, involving interaction between a person and the environment, consisting of both cognitive and affective dimensions, and having a physiological/neurological basis connected to reward circuitry. While most educational research using this framework focuses on students' engagement with an academic subject (e.g. biology, math, music) (Renninger and Hidi 2016), we examine students' career interest. That is, the object is a career interest, defined as the job or career to which they aspire.

A person's level of and focus of interest is not seen as a stable personality trait, but as mutable in response to a person's environment. That is, a person's interest can change –

either growing or fading – depending on how well the environment supports it. Interest has been shown to develop over four phases from triggered situational interest, to maintained situational interest, to emerging individual interest, through to well-developed individual interest (Hidi and Renninger 2006). Learners with less well-developed interest need more support than those with more well-developed interest. Learners with well-developed individual interest will re-engage with their interest frequently, voluntarily, independently, and with knowledge and understanding (Renninger and Hidi 2016). Furthermore, educational literature has shown that when choosing higher education programmes, students appear to consider multiple interests and choose those that allow them to blend those interests (Vulperhorst et al 2018; Vulperhorst, Rijst, and Akkerman 2020)

Feldman, Smart and Ethington (2004) found that students in American postsecondary education made gains in particular abilities and interests that were supported by the programme in which they were enrolled, confirming the hypothesis that students are socialised into particular interests through higher education environments. Although Feldman, Smart and Ethington (2004) measured students' interests using Holland's pre-determined interest categories which are normally shown to be stable in adolescence and adulthood (Low, Yoon, Roberts and Rounds 2005; Xu and Tracey 2016), their study still showed that those interests could grow and change during higher education. Using standardised, quantitative measures, though, neglects the way students themselves understand and experience their own career interest and its development. Understanding students' perspectives and experiences is vital to engaging them in career development activities and ensuring their satisfaction. This study addresses that gap.

Influences on career development or interest development

Interest theory prompts us to consider the situational factors that influence interest development. Research on the impact of career development interventions in higher education suggests that mentoring, vocationally oriented curricula, work experience and one-to-one career counselling support career learning in general (Bimrose, Barnes, and Brown 2005). Thus we would expect those experiences to be cited as influential by students. Previous research also has found that family and friends are influential on the career plans and choices of higher education students (Greenbank, 2011) and younger students (Brooks 2003), thus we anticipate students will mention those influences.

Research on interest development in higher education has shown that inspiring, supportive teachers play an important role in students' interest development (Marjoribanks, Mboya 2004; Quinlan, 2019; Rotgans & Schmidt, 2011). The curriculum also has an important influence on students' desire to continue in a field, which can either lead to attraction to new fields or disenchantment with fields in which they were initially interested (Rosenzweig et al, 2020). Students also actively explore curricular opportunities that allow them to combine their interests (Vulperhorst, Rijst and Akkerman 2020). That is, students both compare their interests against programme affordances and compare programmes to interests. Insofar as higher education students are young adults operating with a greater level of independence in crafting their educational experience, they may actively draw upon a range of resources available to them to build their own individual interest or 'lines of practice' (Azevedo 2011; 2013; 2015).

Research Questions

In this study we asked:

1) To what extent and how do students' career interests change during UK higher education?

2) What demographic and programme factors were associated with changes in career interest? Are there different patterns for students studying pure subjects versus those in vocationally-oriented, applied programmes?

3) What did students think influenced, shaped or prompted their changes in career interest?

Methods

Participants and Study Context

We surveyed all of the graduating class of 2019 bachelor's level students at a mid-ranked UK university. A total of 663 graduates (400 Female; 457 White) completed the survey, constituting a response rate of just over 10% of the entire cohort. Reflecting the university population as a whole, 84% of students were eighteen or nineteen at entry to university, 5% were aged 20 and 10% were 21 or older. Students represented fields in arts/humanities (28%), social sciences (42%), and sciences (30%). Sixty percent (60%) of participants were enrolled in pure subjects (e.g. history, politics, biosciences) while 40% were studying applied subjects (e.g. architecture, accounting, law) (Biglan, 1973).

Specialisation occurs earlier in the UK and European contexts than in, say, the American higher education context. In the UK, students must make decisions between different courses at age 16, before entering upper secondary school. They must then apply to a programme (major area of study) within a university, not just a university as a whole. Degree programmes will have their own, particular requirements and may require specific courses in upper secondary school. For example, to gain entry to a Biosciences programme at university, science subjects in upper secondary will be looked upon more favourably than courses in arts or humanities subjects.

This educational structure is markedly different from the US higher education system where students apply for general admission to higher education and may not declare a major area of study until their second year of postsecondary education. Thus students in the American system are able to spend longer than UK students exploring different areas of interest before making a choice. In the American context of exploration and breadth of studies, one might expect students to be more likely to change their career interest during higher education.

In contrast, in UK universities, if students want to shift to another programme in a very different discipline (e.g. from sport science to business management; English literature to sociology), they will typically need to start the new degree from the beginning. There are some options to do combined degrees (e.g. English and history) which could be exploited without restarting. Likewise, smaller changes within the same department (e.g. clinical psychology to general psychology) typically do not require re-starting the degree. Given this relative inflexibility in the educational structure and the fact that students have few opportunities to study beyond their chosen subject, one might expect students' career interests to be stable. That is, just as they had to make early decisions about their educational interests, they might also have clarified their career interests relatively early and experience little change during HE.

Procedure

Graduates were surveyed in July-August 2019, two months after completing their final exams and shortly after marks had been awarded. This exit survey is routinely administered and managed by the university and includes questions about students' experiences and their plans post-university. The study questions were qualitatively piloted tested with 10 students using cognitive interviewing before being incorporated into this larger online exit survey. Survey responses were matched to administrative data about students' demographic characteristics, final marks, and their use of career services.

Career decidedness at the start of university and now

Participants responded on a 5 point Likert scale (strongly disagree=1 to strongly agree=5) to two questions, a) 'When I started at [this university] I knew what I wanted to do for a career' and b) 'I now know what I want to do for a career'. Note that decidedness at the start of university was a retrospective judgment. Both questions were answered at the same time point. Starting career decidedness was subtracted from current career decidedness to create a change score from –4 to +4. For example, a student with a change score of –4 started in strong agreement they knew what they wanted to do when they started university (a score of 5), but reported strong disagreement at the point of completing their students (a score of 1). Positive scores mean the students became more decided. While the focus of this study is on changes in career interests, not simply changes in career decidedness, we report briefly on decidedness here in order to contextualise and triangulate the data presented on changes in career interest. A brief presentation of the career decidedness data also illuminates the limitations of looking only at career decidedness as compared to changes in career interest more broadly described. That is, a student may have been decided on one career at the beginning (e.g. rating their decidedness 5 at the beginning), changed career plans and be committed to their new plan at the end of university (again rating themselves a 5). In these cases, simply examining decidedness obscures important changes students have experienced during their time in university.

Career interests at the start of university and now

Graduates were asked to indicate 'yes or no' to the question, 'Did your career interests change during higher education?' They were then asked to describe their interests, 'What were your career interests when you started and what are they now?' Using open-ended questions was important because it allowed us to get 'inside' students' experiences of career interest. They could describe and define their career interest in their own terms, whether that was in terms of topics addressed in their curriculum, industries, or job titles. An open-ended question also allowed us to identify other kinds of changes in interest beyond decidedness. This question generated a corpus of 10,805 words. Responses ranged from 0 words (98 participants) to 81 words. Among the 565 who answered, the average length of response was 19 words. Answers to the second question were thematically coded (Braun and Clarke 2006) according to the type of change reported, as shown in Table 1. The categories developed were 'No change', 'Rejected plans/now unsure', 'More decided', 'Change within Standard Industrial Classification (SIC)', 'Change of SIC' and 'Other'. The broadest category of the UK's Office for National Statistics' Standard Industrial Classification hierarchy was used in coding types of career interest change (https://onsdigital.github.io/dp-classification-tools/standard-industrial-classification/ONS_SIC_hierarchy_view.html).

Insert Table 1 here

Influences on career interests

Graduates were asked, 'What has affected your career interest during university? In particular, if your interest or plans have changed, what aspects of your university experience influenced those changes?' Responses totalled 10,429 words and ranged from 0 words (139 participants) to 83 words. Among the 524 who responded, the average length of response was 20 words. Answers were again thematically coded (Braun and Clarke, 2006) starting with codes that were closely related to students' words (e.g. volunteering, paid work experience). Related codes were then merged into broader themes (e.g. the theme of work experience merged both paid work experiences and volunteer experiences).

Demographics

Administrative data provided students' gender, age, race, the programme on which they studied and their final marks. The programme of study was coded as either pure or applied (Biglan, 1973).

Interview participants and procedures

In addition to the university wide survey, we interviewed 15 psychology students in their second year in an approximately 45 minute interview that explored their interests and interest trajectory. Interviewees started by taking about five minutes to reflect on the development of their interest in their subject by drawing a picture, using the metaphor of interest as a river. They were instructed to start their river with the first time they became interested in the subject and end it with where they imagine they will be 3 years from the present. They were invited to illustrate key events and experiences in their lives, such as bends in the river to represent turning points in life; changes in the width of the river to illustrate changes in the breadth or concentration at different times; tributaries to illustrate new influences flowing in; rapids or obstructions to depict difficulties. Students then explained their drawing, with the interviewer following up with specific questions to probe how the student initially became interested in the subject, how that influenced their choice of degree course, the influences on their interest during HE, and how those interests were related to their career plans.

Procedures were approved by the ethics board of the first author's department. Pseudonyms are used for all students. A narrative approach was used to analyse the interviews (McAlpine 2016). Each interview was transcribed verbatim and summaries were made of key points. Narratives were then compared to patterns in the quantitative analysis, focusing on changes in career interest and the influences on those changes. Illustrative case examples that best represented the significant patterns found across the whole dataset were selected.

Results

Career decidedness change

As can be seen in Table 2, only 40% agreed or strongly agreed that they 'knew what they wanted to do for a career' when they started university. Almost half of the graduates (45%) either disagreed or strongly disagreed. On mean scores, were no significant differences between male (M=2.98; SD=1.279) and female students (M=2.89; SD=1.33) in terms of decidedness at the start of university. Students enrolled on applied programmes (M=3.26; SD=1.242,) reported significantly higher decidedness at the start of their studies than students on pure programmes (M=2.70; SD=1.31) (t=-5.512 [587] p<.001). Black, Asian or Minority Ethnic (BME) students were also significantly more likely to be enrolled on applied courses

than White students ($X_2 = 15.805$, p<.001). Therefore, it was unsurprising that BME students were more likely to report significantly higher career decidedness at the start of university (*M*=3.18, *SD*=1.244) than White students (*M*=2.81, *SD*=1.325) (*t*= -3.303 [646] p<.01).

By the time of graduation, the majority of graduates (64%) agreed or strongly agreed that they 'knew what they wanted to do for a career', while only 18% disagreed or strongly disagreed. Again, there were no significant differences between males (*M*=3.81; *SD*=1.12) and females (*M*=3.64; *SD*=1.18) on career decidedness at the end of university. Students in applied programmes (*M*=3.95; *SD*=1.04) were again more decided than those on pure programmes (*M*=3.55; *SD*=1.21) (*t*=-4.505 [658] *p*<.001). However, there were no longer any significant differences on decidedness between White (*M*=3.72; *SD*=1.15) and BME students (*M*=3.66; *SD*=1.20). The mean scores for all students' decidedness at the end of university (*M*=3.71; SD=1.16;) were significantly higher (*t*=57.354 [660] *p*<.001). than at the start of university (*M*=2.93; *SD*=1.31).

Insert Table 2 here

As suggested by these analyses, the trend was toward students becoming more decided during their studies. But the overall percentages at the start and end of students' studies can mask what is happening at the individual level. Thus, we analysed change scores *for each student* by computing the difference between their current decidedness and the degree of decidedness when they started. Just over half of graduates (53%) were *more* decided about what they wanted to do in their careers one month after completing their bachelor's degree than when they started university. About one third (35%) reported the same level of decidedness 'now' compared to when they started, and 12% were less decided 'now' than when they started. This individual-level analysis shows that the experience of HE was associated with changes in decidedness (whether toward greater or less decidedness) in 65% of students.

Career interest change

The analyses of decidedness ('knowing what they want to do for a career') reflects only a single dimension of change in career interest, obscuring other potential changes in students' interests that may have occurred during university. That is, students may have been decided on one career path at the beginning of university, but changed direction and been equally decided on a different career path at the end of university. Thus their decidedness may not have changed, but a considerable amount of career learning may have occurred. Here we focus on changes in career interest.

On a simple 'yes' or 'no' question, 61% percent reported that their career interests had changed. This figure is very close to the 65% who had changes in their career decidedness scores. There were no significant differences by gender on whether their career interests changed; 61% of men and 61% of women responded 'yes'. However, there were significant differences by ethnicity on whether they changed their career interest $X_2 = 10.345$, p<.01. Sixty-five percent of White students reported that their career interests changed compared to 53% of BME students. Although graduates who had studied pure subjects were slightly more likely to report a change in career interests than graduates of applied programmes, this difference was not statistically significant.

As shown in Table 3, 41% of graduates either said there was no change (31%) or gave no response (10%). These figures were consistent with those who reported no change in career interest on the previous question (39%). The discrepancy can be explained by lower response rates on open-ended responses on the survey.

Insert Table 3 here

Of those responding, 5% described having a plan but then rejecting it, which left them still unsure about their career interest. Some students (12%) simply indicated that they had become more decided or confident about their plans. More commonly (30%) graduates described having clarified their interests within a Standard Industrial Classification (SIC). A further 19% of students made a more radical change, shifting their interests to a different broad SIC category. Each category of change is described and illustrated in Table 1.

Influences on career change

The codes for influences on career change are described and illustrated in Table 4. As can be seen in Table 5, about one third (33%) of students either did not respond to this open-ended question or gave answers too vague to be coded. Given that 39% of students said their interests had not changed, it is to be expected that a similar percentage of students would not answer this question, as it was not applicable. Thus we focus on those who gave a substantive response, as those graduates are the ones whose interests changed.

Insert Table 4 here

Nearly half of those providing a clear response to the question (46%) indicated that the curriculum influenced their change in career interest. Research projects, although also part of the curriculum, were treated as a separate category and were cited by a further 3%, usually in connection with a growing interest in research careers. The second most common influence (14%) was a placement or internship. Work experiences, whether paid or voluntary, were also cited by 7%. Co-curricular activities followed closely at 6%. Lecturers (5%) and various people with whom they networked (4%) were also influential. Activities organised by careers services staff were cited by 4%. Four percent (4%) of students also referred to some aspect of their competency, such as whether they thought they were good at a particular role or not. Personal factors such as work preferences or special needs were mentioned by 3% of graduates as shaping their career interests.

In relation to the curriculum, placements and work experiences, graduates reported examples of both attraction and disenchantment. An example of attraction was "Taking the specific modules make me realise that I want to work in these areas." An example of disenchantment was, "Mostly I learned what I didn't want to do. For example, I learned that while conflict studies is interesting, I'm not interested in working in that field." Lecturers were generally described as attracting students to a particular interest. Competency was generally cited as discouraging or detracting them from particular paths. As many of the comments, including most of those related to co-curricular, were not readily classifiable as either attraction or disenchantment, we did not systematically code for attraction or disenchantment. Examples of both attraction and disenchantment are included in Table 4.

Insert Table 5 here

Case examples from interviews

Given the brevity of the survey responses, most respondent referred to just one key factor that influenced their career development. However, the interviews revealed how students encountered multiple influences during their educational journeys. Some may not even be fully aware of those various influences until they tell their stories in the interviews and reflect in response to probing questions. We also see how our codes such as "curriculum" can play out in different ways. Thus the interview data capture more of the complexity of

students real lived experience. Below we will discuss seven interviewees that particularly illuminate the survey findings. Rosie, Topaz, Chantelle and Athena are all second year general psychology students. Phoebe is a second year clinical psychology student. Joanna is a third year general psychology student while Lucie and Anna are third year clinical psychology students doing a placement year.   We'll introduce them as they come up and return to them under other themes where their narratives illustrate multiple influences.

Relationships between curriculum and career interest

On the survey, the most commonly cited influence on students' career interest was the curriculum. As we examined the narratives, students did talk a lot about the curriculum, though sometimes the relationship between the curriculum and students' career interests were bi-directional. It is also worth remembering that approximately 40% of the survey respondents reported that they knew what they wanted to do when they started university. Thus, for those students, the curriculum may not fit a one-directional pattern from curriculum to refined career interest. Here we present examples of two students – Phoebe and Joanna - who had fairly clear career interests at the start university and sought out opportunities within their curriculum to enhance their understanding, exposure, and employability. These students did not know initially which curricula – i.e. which specialties within a broad field or particular modules – would be best aligned with their career aspirations. They "tested" the curriculum against their visions of their future, combining or refining their interests as they discovered sub-specialities more closely related to their aspirations.

Phoebe (2nd year clinical psychology, international student) loved dance and it had always been a part of her life. Although she had been encouraged to study dance in a conservatoire, she wanted to continue academic studies, too. In particular, after studying social psychology through her sociology A-Level, she wanted to study clinical psychology at degree level so she could help people as a therapist. On starting university, she joined the Dance Society and also joined a local dance club that met weekly to learn new routines. She realised quickly that that she wanted to make dance an everyday – not just weekly - activity. She learned about dance therapy through one of her modules, began reading up on it and became very excited at the prospect. She completed a career profile on Prospects.ac.uk, with great scepticism, expecting it would be 'like a Buzzfeed quiz'. The results though, also suggested that Dance Therapist was a good career match. She researched dance-related degree programmes in the UK and found some that combined psychology and dance. One even focussed on dance therapy. Unfortunately, visa restrictions made the move onto a new course impossible, despite having offers from two universities.

In some ways, Phoebe's interests have not changed – she still loves dance and still wants to help people. Likewise, she is still planning to be a therapist. Nonetheless, the curriculum and careers advice helped Phoebe identify a sub-speciality that would allow her to link her two interests. When pressed about pursuing a master's in dance therapy, Phoebe said that she will dance and ideally therapy will be a part of that – her passion and career aspiration centred around using dance, rather than talk therapies.

Joanna (3rd year psychology student) began studying psychology after a series of volunteering and paid work opportunities working with children with autistic spectrum disorders, disadvantaged children, homeless youth, and young offenders. Although psychology was her weakest subject at A-Level, her career focus motivated her to continue studying the subject because she was determined to make a difference in the lives of disadvantaged youth. At university, the modular nature of the degree enabled Joanna to try out different areas of psychology and make decisions about where she would like to go in her career. As she took different modules, she ruled out her initial intended focus on either social

psychology or clinical psychology, and instead honed in on developmental psychology. Joanna already had a well-developed individual interest based on her work experience and was feeling her way through the curriculum to identify the specialities that would best contribute to the knowledge base she wanted to build to support her vocational purpose.

While Phoebe and Joanna both largely knew what they wanted to do and were seeking curricula that contributed most closely to preparing for that path, other students took a more exploratory approach. For example, Alice (3rd year psychology student) started university with plans of ultimately pursuing a career in clinical psychology. But throughout her interview, she talked instead about exploring beyond and around this core interest, hoping to confirm her chosen path, while also being open-minded about related options. So, instead of enrolling in the clinical psychology undergraduate degree course, she decided to do a general psychology degree to try out a variety of sub-specialties. She assumed she could specialise during postgraduate study.

By March of her final year, Alice had applied to work as a Psychologist Assistant and a Researcher, the typical routes toward qualifying as a clinical psychologist. Faced with rejections from these applications, she decided to apply for the role of Mental Health Social Worker: 'I thought there would be no harm in giving it a go and also I would get a master's out of it whilst also being paid. It's not such a bad thing'. Alice said this role would give her the opportunity to gain experience of working with people with mental health challenges, which would help her subsequent application for a PhD in clinical psychology. She also talked about the potential for changing her mind about her career, noting that this route provided greater flexibility in the future, especially as her experience might reveal an interest in social work: 'I also feel like I could do more, like I could become the Head of the Department or Head of County and then go on to research things.'

Alice thought her curriculum helped her confirm decisions about her future career plans because she was able to rule out some options: 'When I did the forensics module, it made me, like, "No I don't want to do forensics". It made me more certain'. As she looks ahead, she seems to be setting herself up to "rule out" or "rule in" social work.

Influence of lecturers

In some cases, the lecturers themselves were seen as the key influence, though the way that lecturers teach can make it difficult to separate "curricular" influences from the lecturers themselves. Anna described how her lecturers who are active researchers helped to shape her career aspirations. She talked about how hearing the practical applications of their current research brought the subject to life. Their work was inspirational and was having an impact in the wider world. When talking to a particular academic about his research, Anna felt particularly inspired, as he was so welcoming, willing to talk about their research in cognitive psychology, and answer her questions. During the conversation, the academic offered to work with her in her final year on a project that interested her. Anna followed this subject through her second year when she secured a placement (3rd year) year in this field.

Influence of work experiences and placements

The examples in this section demonstrate how work experience and placements can shape students' career interest. Joanna, introduced above in relation to the way she used the curriculum to support interests that developed out of her volunteering and work experience, is an exemplar.

Joanna always wanted to work with young people. As a child she was surrounded by children and babies. At the age of 12, Joanna began volunteering at a children's summer

camp and, over time, the camp began inviting students with additional needs. At 16, Joanna began working with the company who supported the students with additional needs, first on a voluntary basis and then in a paid role. It was at this point that her passion for working with vulnerable children grew. This summer job exposed Joanna to a various disorders like autism, ADHD, GDD and other additional needs, but it was the children with autism that sparked her interest. 'They were so smart and precocious, talking about politics at 9 years of age, their approach to play and their ability to focus really grew my interest in psychology and the way that the brain works and how diverse this can be'. It was this engagement with individuals and experiencing the sheer range of differences that interested Joanna.

When Joanna began working with autistic children, she researched the condition, reading research papers, books, and articles to understand causes and the support individuals and their families needed. She has continued to work with the same company throughout university during summers and term breaks. The company recently diversified its contracts with local authorities and other organisations, providing more support for people in the community, including vulnerable young children. Many of the children that Joanna worked with have been exposed to abuse and neglect. The idea of therapies to support these individuals was very interesting to her. This move from just supporting ASD children to addressing a broader range of challenges changed Joanna's ideas around a future career.

While Joanna arranged her own work experience during summers and vacations, Anna completed a formal placement year in a clinical setting supporting adult mental health. It was a unique experience for Anna as she was able to simultaneously work in a clinical and research setting and had the opportunity to compare the two. As a result of the placement, she concluded that 'clinical psychology is not for me', though she did enjoy the research projects. When considering why she was originally interested in a clinical route, Anna said, 'I think because it seems like the best job option when graduating with a psychology degree and I didn't think I would be clever enough to do something with neuroscience'. However, since studying it within modules, and attending a summer school on neuroscience and neurodegenerative diseases, Anna feels more confident.

Still feeling positive from the neuroscience experience, particularly the summer school, Anna applied for a final year project in cognitive neuroscience, hoping to follow this subject through to study at a postgraduate level, then into a career in research. Thus, in both Joanna and Anna's case, their work experience or placement widened their career horizons.

Influence of co-curricular experiences

In the previous section, we saw how work and placement experiences shaped students career interests and plans. In addition to work experience, other experiences shaped students' understandings and perceptions of the world around them and how they might fit in. Anna, whom we saw above had a very influential placement year leading to aspiring to research in cognitive neuroscience, was also inspired to volunteer, supporting individuals with dementia. This co-curricular activity also was directly inspired by her placement, as she particularly enjoyed the human interaction element on her placement. She volunteers with an activist group of nearly 20 individuals with dementia who seek to remove the stigma of dementia and to make public spaces more suitable for people with dementia. In addition, Anna meets regularly with one of the group, helping this patient to write a book for healthcare professionals on supporting individuals with dementia from a service users' perspective. Linking her co-curricular experiences to her newfound career aspiration, Anna described what motivates her to pursue a career in research: 'finding out something that can be applied to help people actively in their lives – that's the whole point of doing research'.

Helen's activities outside of school and university were also highly influential. As a child, Helen had a clear career goal – she wanted to be a Disney Princess. Not an actor, but an actual princess. Realising the barriers to this career aspiration as she grew older, she searched for a 'streamlined' ambition, focusing in on a realistic, potential career. Toward the end of her A Levels, she was left with the decision to either accept the retail promotion she was being offered or go to university. Still making regular visits to Disney theme parks, she wanted to use her study of psychology to understand how Disney created the atmosphere she loved so much. Initially she focused on social psychology, but then realised her interests were better served studying business and organisational psychology. She began to envision a career in marketing and PR for Disney, helping to create the Disney experience. By the end of her third year, she was planning to continue into a master's degree in organisational psychology.

Alice, whom we introduced above as exploring in and beyond clinical psychology to apply for a role in mental health social work, also explored various co-curricular activities that shaped her ambitions. She completed an 8-week mindfulness course and was a buddy and academic peer mentor. 'These activities made me realise that this is where I want to go, and helping people is quite rewarding. My future career plans are something related to mental health and helping people, specifically clinical psychology if I can. I have applied for a placement as a mental health social worker.' Continuing to use these explorations to both 'rule in' careers (e.g. helping professions), she also used them to 'rule out' options. She volunteered in a research lab in her second year, enabling her to get a taste of working in a research team in her department. Whilst she found it interesting and thought she would probably do some research on the side, it was not something that she would want to pursue.

Thus both Anna and Alice had experiences of research and had a desire to 'help people in their lives'. Anna was able to see how research could lead to improvements in people's lives, while Alice focused on the direct, hands-on work with patients or clients.

Increasing realism about careers

In the survey data, we coded a small percentage of students as referring to assessments of their own competency or to personal factors influencing their career interests. In examining student narratives, these factors could be more generally described as students gaining a greater sense of realism about particular careers. As they gained awareness, their career plans shifted based on feasibility. Rosie, another second year student and Alice, for example, both talked about being deterred by challenging application processes or high levels of competition for roles (e.g. clinical psychology), making them very uncertain career pathways. The difficulty of securing roles in their first choice careers had been confirmed through engagement with professionals, academics, and the careers service. Both Rosie and Alice moved towards career options that they perceived to either be easier routes, or at the very least, more certain. Alice, as described above, decided to apply for a mental health social worker role as an alternative possible route into clinical psychology. Rosie, after learning how few opportunities there were in forensic psychology and even clinical psychology, had teaching as a possible "back-up" career plan after having completed some work experience in a school for children with special educational needs.

Influence of family

Family input into career interests featured very lightly in the survey results. However, the interviews suggested that families do exert a strong influence, often before university. Topaz, Chantelle and Athena all needed to 'sell' their degree choice to their families. These

students educated themselves and their parents in order to gain familial support for an independent decision.

Topaz's family were pushing for a medical career, so she talked about career options around psychotherapy to demonstrate psychology's connection to medical options. Similarly, when Chantelle told her parents that she wanted to study psychology, they were unsure because 'it wasn't the doctor, the lawyer, the accountant' they expected, and her father wanted her to 'make the most money to be the most comfortable'. Chantelle's uncle was a radiographer, and there was familial pressure to follow into a known career path. When asked how she had talked her parents around, she said that she had to 'speak to them more about the options available with psychology'.

Athena chose to study psychology in the UK after growing up in a small Asian country, studying at a school in China and then enrolling in an international school. Her mother herself had studied in the UK for university, felt the experience was formative, and encouraged Athena to follow in her footsteps. Athena talked about other familial pressure, coming from an Asian family where there was an expectation to study something like business. This pressure was felt as early as making decisions about International Baccalaureate subject choices. When deciding about which university to study at, Athena was swayed by the business psychology options, along with the wide range of other modules on offer. The business psychology modules, with links to marketing, made this selection more palatable to her family. Currently in her second year, a barrier faced by Athena is the availability of placements in consumer psychology. To counterbalance this, Athena's mother advocated for a second degree in marketing, which Athena was not against. She explained, though, that her marketing studies would likely be at undergraduate level because employers in her home country are reluctant to employ people with postgraduate degrees because of the higher salary that comes with the qualification. The familial and cultural influence is firmly influencing Athena's choices. She went on to talk about potentially doing a HR placement. Although she had no interest in the subject, she hoped that practical exposure to the subject might spark an interest. It is unclear the extent to which the future study plan is limiting the effort in achieving a placement now, but not taking the placement year was referred to as 'saving a year'.

Lucie, an avid Lacrosse player and a third year student doing a research placement year, planned to do a final year research project investigating the impact of exercise on memory. When describing her interest development, Lucie talked a lot about her personality and abilities, as well as what she had been taught at school. When probed about her life experiences, she mentioned her father taking her to the Invictus Games where he was working. She described seeing individuals overcoming adversity and using sport to improve their mental health. It was only during the interview that she seemed to make the connection between her passion for Lacrosse as a stress relief mechanism and her passion for helping people through psychology. Lucie was undoubtedly influenced by her father through the provision of early formative experiences. Only through her own, independent exploration of her two interests (sport and mental health) and further reflection did she begin to construct an integrated interest that she can consciously link back to that early influence. In this case, the influence happened before university.

Discussion

Most students (61%) experienced changes in their career interests during their time in university, which supports a developmental-educational perspective on career development. Consistent with previous literature (e.g. Cobb and Winter 2018, AGCAS 2017, Shury et al. 2017) the majority of participants reported changes in career decidedness. Career

(in)decision scales have been used since at least the 1980's (Brisbin and Savickis 1994) and are making a resurgence in HE following a Higher Education Funding Council of England Learning Gain project focused on tracking HE students' work readiness in what is called careers registration (Cobb and Winter 2018). Yet, career (in)decision scales are not able to distinguish between students who have prematurely foreclosed on a career, perhaps due to parental pressure, and students who are making mature, informed decisions after careful consideration of options (Brisbin and Savickis 1994). Thus, consistent with a developmental-educational approach to career learning, we investigated the nature of the changes in career interest during HE.

The categories that emerged when students described their changes in career interest were not just changes in certainty about a pre-determined career plan. The most common type of change in interest was a clarification within a single Standard Industrial Classification (SIC). These changes were often relatively minor and still within the same general area covered by their degree course, yet students experienced them as meaningful enough to describe in an open-ended comment. In the language of the four phase model, these changes seem to be consistent with shifts from 'emerging individual interest' to 'well-defined individual interest' (Hidi and Renninger 2006). The process of learning in HE enabled them to gain knowledge and define their career interest more precisely.

A notable minority (17% of the sample) changed their interests from one SIC to another SIC, suggesting more substantial changes. More substantial changes in the object of interest (e.g. from one industry or job title to another) would be expected to arise in educational situations as students are exposed to new knowledge and experience and interact with lecturers and professionals (Renninger and Hidi 2016). That is, students may encounter new areas of interest and be attracted toward those new possibilities (Rosenzweig et al 2020). Alternatively, educational environments may fail to support budding interests, leading students to become disenchanted with their original career interests (Rosenzweig et al 2020). In the case of disenchantment, students may have started with more situational career interests or weakly emergent individual interests which were vulnerable to being extinguished in the face of unsupportive environments. There were examples of both disenchantment and attraction evident in the survey dataset and interviews.

When describing their career interests, student generally referred to industries (e.g. marketing), job titles (e.g. solicitor, sports journalists) or specialties within a subject area (e.g. clinical vs forensic psychology). The way recent graduates think about career interests, then, is quite different from the categories used in much vocational psychology literature. Thus they may report changing their career interest even if assessments based on career assessment codes (e.g. Holland 1997) might not capture a change.

The most frequently cited influences on career interests were the curriculum (46%), placements (14%), work experiences (7%) and co-curricular activities (6%). These findings corroborate other studies on effective career interventions, which point to the effectiveness of vocationally-oriented curricula and work experience in promoting career learning (Bimrose, Barnes and Brown, 2005). However, it is notable that 60% of the survey sample was studying on pure programmes, rather than programmes particularly tied to a given profession. Changes in career interest and attributions to the curriculum for those changes were evident among graduates of both pure and applied programmes; neither group was more likely to report a change in career interest during university. This finding suggests that 'pure' as well as vocationally-oriented curricula play an important role in students' career interest development.

Changes in career interest were also attributed to interactions with people, but less frequently than first-hand experiences with curricula, work and co-curricular activities. Lecturers (5%), networking (4%) and career services staff (4%) were mentioned. This

finding corroborates research that has also shown that influential people, such as teachers and advisors, play a key role in supporting career learning (Bimrose, Barnes and Brown, 2005) and students' interest development more generally (Marjoribanks, Mboya 2004; Quinlan, 2019; Rotgans & Schmidt, 2011).

Surprisingly, graduates who completed the survey rarely mentioned friends and never mentioned family as influential in their career interest development during university. Rather, some of the respondents referenced increased freedom they enjoyed in higher education to explore and test out new experiences. The lack of reference to family members was surprising and stands in contrast to other studies in UK higher education (Greenbank, 2011) and research on younger students' higher education choices (Brooks 2003). Given that almost 40% of students did not experience changes in their career interests and, therefore, did not elaborate on influences on career interests during university, it may be that those students were more heavily influenced by family earlier in their educational process. The interview results support this interpretation. It is also possible that families continue to play a role in students' career interest development, but that students would prefer not to admit it or take it as a given. The interview with Athena revealed the way in which families, and cultural expectations more broadly, can continue to exert influence even during university.

Implications for Research and Next Steps

Most students' changes in career interest were broadly consistent with Renninger and Hidi's (2006; 2015) four stage theory of interest. First, a major difference between situational interest and well-developed individual interest concerns an individual's level of knowledge about the object of that interest. The most common type of career interest change observed was a clarification of career interest within the same broad subject of study, suggesting greater knowledge of the subject area and related career options. The experiences to which graduates attributed their career interest changes also suggested a process of learning more about the subject.

Second, well-developed individual interest is associated with voluntary and frequent engagement with an object. The general movement toward greater certainty and more refined interests observed in these graduates suggests greater commitment to engagement (i.e. voluntary and frequent engagement) characteristic of well-developed individual interests. Finally, graduates referred to activities that suggested greater independence in their engagement. That is, the curriculum, their placements/internships, work experiences and co-curricular activities figured more heavily than interactions with key people. In the earlier stages of interest development, people such as parents and teachers play particularly important roles in structuring and nurturing young people's interests.

Although most standardised measures of interest ask respondents to comment on a broad area (e.g. science or math) (e.g. Quinlan, 2019), these findings suggest that a more nuanced approach may need to be taken. That is, as students in HE gain more knowledge of their field, they refine their interests within it. Thus understanding interest development requires appreciating how students clarify specific interests within a field and how they blend various interests (Vulperhorst, Rijst and Akkerman 2020) to, perhaps, build their own individual lines of practice (Azevedo 2011; 2013; 2015). Simply comparing students' responses to surveys on their interest in the field *in general* may not reveal changes associated with refinements in the focus of their individual interest within that general field.

This study was limited in using a retrospective survey. Longitudinal, within-person research exploring how students' career interests develop over time would be a useful next step. Indeed, as part of this HECSU grant, we have now gathered survey data tracking one

cohort of psychology students from their first to second year of university. Findings from that study will be reported in subsequent manuscripts.

Given the importance students attributed to the curriculum, it would be helpful to probe its effects more deeply with students. What aspects of the curriculum are most influential? Is the curriculum more influential at some times in their study (e.g. in first year) than at others? Are there particular kinds of activities that have been integrated into the curriculum that are most useful to students (e.g. integrated careers discussions)? The year 2 psychology survey conducted in autumn 2020 probes more deeply into particular aspects of the curriculum.

Practical implications

Increasingly, HE career practitioners are tracking students' career decidedness at registration each academic year and tailoring services, support and communication to students according to where they are in terms of decidedness (Cobb and Winter 2018; Daubney 2019). As shown in this study, career (in)decision scales alone do not capture other personally important and meaningful changes that may be happening in students' career thinking, such as changes in the focus of their career interest.

A small subset of students in this survey reported having a career plan at the start of university, but rejected that plan. Those students are, by definition, disenchanted with their original interests and may be particularly at risk of a crisis. They may need special attention from advisors. Thus it may be particularly important to add a response option that identifies students who have rejected an existing plan but not yet replaced it. As students transition between interests and plans, or as decidedness falters, it is important to ensure that they are able to access the support they need in good time. This report offers evidence for reconsidering the linear Career Registration process and refining it to a multi-phase approach.

To build students' reflective career competencies (Akkermans et al 2013), the careers registration process also might be enhanced by taking a more holistic approach. For example, simply adding an open-ended question such as the one used in this survey about career interests may be helpful in prompting student reflection and action on their interests.

Much career education is offered outside regular, disciplinary curricula (Farenga and Quinlan 2016). Yet, this study shows that students are very reliant on their curricula in clarifying their career interests. This finding suggests that careers practitioners and academics might rethink how to support students' career learning through disciplinary curricula itself. In a qualitative study of embedded careers education in HE, for instance, Horn (2009) highlighted how the tools or content of disciplines might be linked to careers thinking, so that academics might rethink how they teach in ways that would also help students identify, grow and reflect on their career interests. Her report sought to prompt 'new insights or ways of conceptualising careers education.' (Horn, 2009, 9) by uncovering courses that were not explicitly about getting a job (e.g. writing a CV), 'but rather focused on developing the students' interests in and analysis of ethical, social or political issues in work and society.' A recent study has shown that graduates who experienced a sense of purpose in their work had participated in a programme or class that helped them think about pursuing meaningful work (Gallup 2019).

Conclusion

We need to understand the factors that influence how students' career interests develop during HE in order to design learning environments that best support students. Until

recently, much of the vocational interest literature has assumed that career interest is stable and trait-like (Schultz, et al. 2017). In contrast, educational interest theories emphasize the mutability of interest and focus on situational factors that stimulate, maintain and deepen interest (Hidi and Harackiewicz 2000, Hidi and Renninger 2006, Renninger and Hidi 2016). This study has filled a significant gap in the literature by focusing on how students' career interests develop during university and the influences on those career interests.

Acknowledgments

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Table 1.

Codes of Types of Career Interest Change with Descriptions and Examples

Description	Example responses to: *What were your career interests when you started and what are they now?*
No change. If they reported no change on the previous "yes/no" question, this open-ended response was often left blank.	*Computing:* I knew I wanted to get into something with tech and business combined, but nothing specific. Now I'm entering a tech grad scheme that is focussed on management. *English:* Something in the city that is creative, i.e. a junior creative role for a social media company or a runner for a media company to get my foot on the ladder. something out of office and with flare. That is all I know, my career interests haven't changed. *Engineering and Digital Arts*: I still want to be an electronic engineer. *European Culture and Languages*: to become a lawyer and they are still the same *Psychology*: clinical psychologist *Physical Sciences*: Not a clue for both
Rejected plans/now unsure. Started with an interest or plan that was then rejected and has not been replaced.	*Law*: I wanted to be a Solicitor but I'm not sure now *Politics/International Relations*: Security or intelligence analysis. Now I'm not sure. *Social Sciences*: At start, criminal justice system. Now unsure.
Change in decidedness. Did not report any particular interest at the beginning (e.g. not sure, didn't know, didn't have any) but now report an interest.	*European Culture and Languages*: Didn't have any. Want to become an archaeological scientist after a masters. *Anthropology and Conservation*: I had no idea. Now I want to be an audiologist. *History*: I had no career interests but now I am slightly interested in social media, events and marketing. *Politics/International Relations*: I had no career interests in particular when I started, now I am going into banking.
Clarification within SIC. Changes occurring within a single Standard Industrial Classification (at broadest level). Typically they reported some general interest that was refined or a shift in focus within a broad area aligned with their degree subject.	*Arts:* I started out wanting to be a cameraman but working on set made me realise I was stronger in the editing suite. *Biosciences*: Medicine to medicine or physician associate or something in healthcare *Computing*: Something in IT. Now Web Development. *Economics*: Investment banking - M&A Now - asset management - investment side *Psychology:* I wanted to become a clinical psychologist but my interests have shifted to forensic psychology instead - I know I want to work in a forensic area, however I am unsure which forensic area would be best for me.
Change of SIC.	*Anthropology and Conservation:* I wanted to be a zookeeper, but now I would like to become a teacher *Biosciences*: Primarily inclined to continue into medical research, however, I now would like to start a career in healthcare. *Computing*: Technology/development in the financial sector. Now, creative video production and advertising. Documentary filmmaking. *English*: Teaching originally, now publishing or civil service. *Business:* Accounting but now marketing *Physical Sciences*: to work in industry and i now want to be a secondary chemistry teacher
Other responses.	*Economics*: Do anything to make money, now they are to enjoy what I do. *European Culture and Languages*: I took the degree course purely because it was of interest. I realised that jobs in this area of study were not easy to come by and did not expect to get a graduate job when I left university as I am an extra mature student. I do need to work now that I have graduated and my confidence in my abilities means I do have higher expectations of jobs I am capable of doing now. *Politics/International Relations*: I aim to be in a career that I enjoy and care about; I do not wish to be another cog in the machine.

Table 2.

Frequency and Percent of Respondents Who 'know what I want to do for a career'

Response	When I started university			Now		
	Frequency	Percent	Cumulative Percent	Frequency	Percent	Cumulative Percent
Strongly disagree	107	16	16	31	5	5
Disagree	187	28	45	89	13	18
Neither	100	15	60	114	17	36
Agree	181	27	87	233	35	71
Strongly agree	86	13	100	193	29	100
Total	661 (2 missing)	100		660 (3 missing)		

Note. Percents may not total to 100 due to rounding.

Table 3.

Frequency and Percent of Respondents Reporting Each Type of Career Interest Change

Code	Frequency	Percent of total (n=663)	Percent of those responding (n=600)	Percent of those experiencing change (n=395)
No response	63	10		
No change	205	31	34	
Rejected plans, now unsure	29	4	5	7
More decided	71	11	12	18
Clarification within SIC	177	27	30	45
Change of SIC	115	17	19	29
Other	3	<1	<1	<1

Note. Percents may not total to 100 due to rounding.

Table 4.

Themes for Influences on Career Change

Theme and Description	Examples
No specific response: Left the question blank (121) or wrote in "nothing", "no", "n/a" (61) or described something general that didn't point to any particular part of their experience (39).	-Not too sure -Not being fully aware of opportunities available -Mostly just the gradual understanding that I needed to make a decision, and so I made an effort to find out what I enjoyed. -University life and freedom allowing me to see alternative careers
Curriculum: Lectures, labs, seminars, modules or subjects, degree content, interest/enjoyment or lack thereof in subject	-The finance subjects made me think that accounting may not be the only option, as I enjoyed the finance module more than I expected. -Studying journalism taught me what the job was and I realised that it wasn't for me. -Certain modules have pushed me towards career paths I didn't know existed -My degree
Placement: placement, year in industry, internship or work-study experience provided by the university. If participants mentioned this along with the curriculum, it was coded as "placement".	-Placement -My year in industry -My placement year was the main factor driving the change. I was a data analyst on my placement year and found it to be something I want to pursue long term -…the year in industry was key in changing my view of what I wanted to do. I spent a year in the Civil Service and although I thoroughly enjoyed my time, I didn't feel challenged and so when I researched graduate jobs, I steered away from those areas…
Work experience: Other work experiences, either voluntary or paid.	-My biggest influence was the work experience I took over the summer between my 2nd and 3rd year… -Applying for jobs and getting work experience made me understand what the roles I was interested in actually looked like in practice. -Setting up my own social media business... -Working part-time jobs whilst at university has had the most profound impact on my career… -Volunteering in the heritage sector
Co-curricular: Co-curricular activities, including student societies, clubs, listening to talks, taking additional non-credit modules.	-Experience leading a society -Computing society talks by external speakers -I was involved with Model United Nations for 2 years at university, which exposed me to some more problems and I got to meet students studying law, politics, and international relations…
Lecturers: Specific reference to lecturers or academic advisors who were inspiring or gave advice.	-The passion from the lecturers -Supervisor support -Speaking to the lecturers about viable career opportunities -Certain teachers have really inspired me. Notably [name] and [name]. This encouraged me to develop and interest in property law and data protection. -Two years of doing archaeology modules under [name of lecturer]
Networking: Connecting with, networking with, talking with, listening to, or meeting people (not lecturers).	-Meeting with people who are highly respected in their fields was a wonderful experience. They were also open to questions and happy to help with career options. -Meeting in-house lawyers -The networks/connections I have made in university with international students -Speaking to different people and reading more
Careers service: Career events or career advisors.	-Going to the job fairs organised where I got more information -The talks provided about how to work in the heritage field were very important, I would not have know how to get started otherwise -The placements team and careers office played such an important part in my employability development…

Competency: Better appreciating their own strengths and weaknesses in relation to particular career options.	-My grades, if I got a bad grade I'd feel less confident in myself career-wise -Realising my strong areas -The lack of experience in filming and using the cameras meant that my plans were unrealistic. However, I learned that I have a skill in graphic design and research when taking on these tasks at university, and I enjoy them, so this changed my plans.
Personal factors: Their own personal preferences, values or needs that shaped their career decision-making.	-Work life balance -Location. Staying near a big city for work -My own mental well-being changes while at university so that has slightly altered my career interest -Too competitive -I want to focus on sustainability
Research project: A research project, typically a final year dissertation, at university.	-Doing my final year project has really helped me enjoy 3D modelling -The third year lab project introduced me to real practical work in research, this is what inspired me to continue in the field -Writing my dissertation helped me realise I want to pursue a career in research
Other: Includes a collection of codes with fewer than 10 responses each, including the nature of the work (8); financial (7) friends (4), and their own research into careers (3).	-Understanding what my original career plans would require and spending time in a laboratory made me unsure if I would want to do it long-term -I realised forensics is tedious and poorly paid for what you do -Realising the pay differences between the two roles… -The friends you meet and talk to has affected my outlook. -…I was told by a friend shortly before graduation that there are prospects in project management… -My own personal research

Table 5.

Frequency and Percent of Responses for each Career Change Influence Theme

Theme	Frequency	Percent of total (n=663)	Percent of those giving response (n=442)
No specific response	221	33	
Curriculum	202	31	46
Placement	60	9	14
Work experience	29	4	7
Co-curricular	29	4	6
Lecturers	24	4	5
Networking	18	3	4
Careers service	16	2	4
Competency	16	2	4
Personal factors	15	2	3
Research project	11	2	3
Other	22	3	5

Note. Percents may not total to 100 due to rounding