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1                   **How well are students engaging with the careers services at university?**

2

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6                   AB is the guarantor. AB and KB acquired the data. AB analysed the data and drafted  
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16

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20

## Abstract

Employability is a key concern for students and it is of increasing importance to universities with the inclusion of employability outcomes affecting performance in league tables and in the Teaching Excellence Framework. Universities typically teach employability either by embedding it within a course curriculum (embedded approach) or via the career services (parallel approach). This article explores the ratio of United Kingdom (UK) psychology departments adopting an embedded approach vs a parallel approach to employability and investigates how psychology students within a parallel department engage with their careers service. A survey of 258 undergraduate psychology students finds low levels of engagement with career service events, typically less than 50% attendance, despite increases in attendance over the course of student's degree. These findings highlight how many students, in a parallel department are simply not attending events designed to help them explore their career options or assist them navigating the application process.

Keywords: Employability, Embedded, Parallel, Career Self Management, Careers Service.

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1       Employability is a key concern and motivation for many students studying at university (Kandiko  
2       and Mawer 2013). Although there are many definitions of employability in the literature this paper  
3       adopts Pool and Sewell's (2007) definition which states that employability is the skills, knowledge,  
4       understanding and personal attributes that make a person more likely to choose and secure a career  
5       they find satisfaction and success in doing. Employability is also a key concern for institutions with  
6       many league tables including graduate outcomes measures as a key metric. For example, in the UK  
7       the Complete University Guide, and The Guardian league tables both have measures of graduate  
8       prospects (The Complete University Guide 2018a; The Guardian 2017). Analysis by Gibbons,  
9       Neumayer, and Perkins (2015) showed that a 10% increase in a university league table position led to,  
10       on average, a 2% increase in applications. Therefore, universities and departments that have better  
11       graduate prospects will enjoy higher league table positions and a higher number of applicants to  
12       courses. Employability is also an increasingly important priority for governments across the world as  
13       they desire high skilled workers to help contribute to economic growth in knowledge economies  
14       (Bowers-Brown and Harvey 2004; Little 2003). In the United Kingdom, for instance, the government  
15       has created the Teaching Excellence Framework (TEF), which aims to raise teaching quality, provide  
16       a greater focus on employability and increase widening participation at universities (Department for  
17       Business Innovation & Skills 2015). At the core of TEF are six metrics which institutions are  
18       compared against (Bagshaw 2017). Two of these metrics relate to employment outcomes:  
19       employment/further study after six months and high skilled employment/further study after six  
20       months (Bagshaw and Morris 2016; Department for Education 2017). Another government initiative  
21       is the creation of Longitudinal Educational Outcomes (LEO) data which links together higher  
22       education data to tax records to highlight the employment outcomes of different institutions and  
23       courses (Department for Business Innovation & Skills 2016). The government hopes this publically  
24       available data will be used by prospective students to inform their institution and course choice  
25       (Department for Business Innovation & Skills 2016). Clearly, the Teaching Excellence Framework  
26       and the creation of the LEO dataset are two attempts by the English government to try to focus the  
27       concentration of universities on the issue of graduate employability.

## 1       **How are universities currently attempting to address student employability?**

2       Broadly, universities' strategy to employability can be categorised into three approaches: an  
3       embedded approach, a bolt-on approach or a parallel approach to employability (Cranmer 2006). The  
4       Higher Education Academy (2015) define embedded employability as the teaching of employability  
5       that is included within the learning and teaching policies, processes and practices, particularly within  
6       the curriculum of a course. This should occur right across a student's degree program from the  
7       beginning to the completion of their studies and will ideally involve a range of stakeholders including  
8       students, academics, careers services, support staff, the student's union and employers. A bolt-on  
9       approach to employability is where students are offered modules, typically within the curriculum,  
10      aimed at enhancing specific and generic employability skills (Cranmer 2006; Pegg et al. 2012). For  
11      the rest of this paper, we refer to the embedded and bolt-on approaches together because they are  
12      united by the fact that employability is taught as part of the core curriculum on a student degree  
13      program. In contrast, parallel development of employability is where the specific and generic  
14      employability skills teaching is delivered outside of the curriculum, either via a university's careers  
15      service or an award that is in addition to a student's degree programme (Cranmer 2006). It is likely  
16      that a course that adopts a parallel/bolt-on approach to employability will still be situated within a  
17      university that has a career service to offer additional support to students which enables those students  
18      to explore their career options and gain skills both on and off the course. The real concern is for those  
19      students who are on a parallel program with no formal employability training in the course curriculum  
20      helping them to explore their career options and prepare for the world of work who must instead  
21      search, find and attend appropriate career guidance themselves. This raises two important questions  
22      that this research addresses: How many students are on a course with no embedded or bolt-on career  
23      support who are in the position of having to find and attend appropriate career guidance? And second,  
24      of the students in this position-how many actually find and attend such career guidance?

### 25       **Employability incorporated within the curriculum**

26       The literature on employability embedded within the curriculum in the form of employability  
27       skills training or career-related modules (excluding work experience) seems to show some positive

1 evidence linking employer involvement in course design to positive employability outcomes. For  
2 example, Mason, Williams, and Cranmer (2009) found that employer-led involvement in designing a  
3 course increased the ability of students to secure graduate level employment, however, they did not  
4 find any effect of employability modules. Examples of employer-led involvement from Mason,  
5 Williams, and Cranmer (2009) were employers giving guest lectures, providing ideas and material for  
6 student projects and commenting on the suitability of course content for future employability. Thune  
7 and Støren (2015) also found that employer-led involvement within students' curriculum had a  
8 positive effect on the master student's course completion and their transition to work. For Thune and  
9 Støren (2015) examples of employer-led involvement included: guest lectures, field visits, coursework  
10 in collaboration with an employer, research projects with employers and participation in practice  
11 periods with employers. The literature seems more mixed on the effectiveness of employability  
12 within the curriculum without employer involvement in employment outcomes. For example, Mason,  
13 Williams, and Cranmer (2009) found that the teaching, learning, and assessment of generic graduate  
14 attributes in a course curriculum did not predict employment status six months after graduation.  
15 Similarly, Hazenberg, Seddon, and Denny's (2015) intervention on unemployed graduates, which  
16 included four weeks of work experience and learning aimed at enhancing graduate attributes relevant  
17 to employability, showed no effect on increasing employment. In contrast, Taylor and Hooley (2014)  
18 found that a module focussing on practical employment-related activities (cover letter writing,  
19 application forms, psychometric tests (numeracy and literacy), mock interviews and assessment centre  
20 exercises) led to a 31% increase in students securing graduate employment within 6 months compared  
21 with those who did not participate in the module. Bates et al. (2019) show how students enrolled on a  
22 thirteen week professional development course in their final year were more likely to be in  
23 employment or further study four months after graduation even after controlling for age, gender and  
24 their grade point average. The professional development course involves career development  
25 activities like learning different job search strategies, writing resumes and preparing for interviews  
26 and a reflective component designed to develop students' professional identity and introduce self-care  
27 strategies (Bates and Hayes 2017). One factor that could be crucial to the effectiveness of an  
28 employability skills modules is whether the module focusses on particular skills students may need to

1 navigate the graduate jobs market (such as writing applications and passing psychometric tests) or  
2 whether it focusses on developing generic and specific graduate attributes. The former is teaching  
3 students how to navigate the recruitment process they will face when applying for a job whilst the  
4 latter does not. The evidence reviewed indicates that employability within the curriculum, either in the  
5 form of employer-led involvement or modules targetted at career development activities, increases  
6 students' graduate prospects. Despite the potential benefits of embedding employability within the  
7 curriculum it is unknown, at least within a UK context, the extent to which different higher education  
8 institutions have adopted an embedded/bolt-on vs parallel approach to employability is unknown but  
9 seems very variable (Lowden et al. 2011). This article addresses this gap in our knowledge by taking  
10 an audit of psychology courses across the UK to identify the extent to which employability is  
11 embedded within courses.

## 12 **Work experience in the curriculum**

13 From the employers' perspective, a third of the top 100 graduate recruiters reported that an  
14 application without any work experience would be very unlikely to be successful in their recruitment  
15 process (High Fliers 2018), thus relevant work experience is essential for prospective graduate  
16 employment. Experience of the work environment can be delivered through industrial placement  
17 years (sometimes known as 'sandwich years'), or shorter forms of workplace experience like work  
18 experience modules (core or optional) and internships.

19 The Department for Business Innovation & Skills (2012) report that graduates that had taken  
20 placement years were more likely to be in employment and had on average 8% higher pay than those  
21 graduates that did not take a placement year. Similarly, a number of other studies show the positive  
22 effect of placement years on a) the likelihood of being in employment within six months of  
23 graduation, b) the appropriateness of employment and higher salaries (Reddy and Moores 2006;  
24 Moores and Reddy 2012; Blackwell et al. 2001). Beyond increasing employability, a number of  
25 studies show industrial placement years have positive effects on returning students' academic  
26 performance (Jones, Green, and Higson 2017; Mansfield 2011; Surrige 2009; Reddy and Moores  
27 2012, 2006). An important caveat to the academic and employment advantages of completing a

1 placement year is that it seems to be modified by the academic course of study (Blackwell et al. 2001;  
2 Moores and Reddy 2012). For example, business, engineering and social science students who  
3 completed placement years had higher post-graduate employment rates than science or English degree  
4 students who took placements (Blackwell et al. 2001). Similarly, the strength of the effect of  
5 placement years on academic attainment seemed to be stronger for those who study psychology as a  
6 single discipline than those on a combined honours course with psychology (Reddy and Moores  
7 2012).

8           In addition, a number of studies have also found beneficial effects for shorter-term internships  
9 and work experience modules (Mason, Williams, and Cranmer 2009; Callanan and Benzing 2004;  
10 Zhao and Liden 2011). For example, Mason, Williams, and Cranmer (2009) found that structured  
11 work experience increased the ability of students to secure graduate level employment. Callanan and  
12 Benzing's (2004) study of 163 business management and economics students in the United States of  
13 America (USA) found that work experience increased their likelihood of securing career orientated  
14 employment within six months of their degree by an odds ratio of 4.43 compared to students that did  
15 not undertake work experience. Similarly, Zhao and Liden (2011) in the USA found that of 122  
16 students on internships around 60% of them reported having received a job offer or explicit promises  
17 of job offers by the end of their internships. A number of studies have explored factors that moderate  
18 the positive effects of work experience/internships on employability outcomes like the degree of  
19 student learning from the experience, length of work experience, and commitment of the hosting  
20 organisation. For example, Blackwell et al. (2001) suggest that there is no one ideal form of work  
21 experience rather it is the learning that results from the work experience, in whatever form it comes,  
22 that really matters. Thune and Støren (2015) from research conducted in Norway suggest that only  
23 work experiences that last for a longer period of time and require a degree of commitment from the  
24 organisation hosting the work experience show positive effects on student learning and student's  
25 transition into work. Jackson (2015) highlights a concern in Australia that there are so-called 'black  
26 market internships' which are extra-curricular internship that typically does not pay well (if at all), nor  
27 provide structured meaningful work or have the core ingredients of effective internships like formal



1 supervision, reflection and feedback to ensure a high-quality learning experience. A number of  
2 authors and governing bodies have given recommendations for high-quality work learning  
3 experiences which include but are not limited to: preparation and induction into the organisation,  
4 meaningful work, explicit links between academic course and knowledge gained via working,  
5 supervision and feedback (Billett 2011; Smith 2012; Gateways to the Professions Collaborative  
6 Forum 2010; Jackson 2015). Assuming that good practices are followed for work experience there is  
7 good empirical evidence linking industrial placement, work experience and internships to enhanced  
8 employment and educational outcomes it is perhaps not surprising that several governments and  
9 governing bodies recommend deeper links between employers and universities (Pegg et al. 2012;  
10 Sheldon 2009; Department for Business Innovation & Skills 2012). In other countries like Australia,  
11 the integration of work experience into the curriculum is common via work integrated learning (WIL)  
12 or capstone initiatives. For instance, Griffith University and Queensland University Technology offer  
13 a range of work integrated learning programs to students across a variety of degree programs  
14 (Gamble, Patrick, and Peach 2010; Bates and Hayes 2017; Bates et al. 2019).

### 15 **Employability outside the curriculum**

16         Employability outside the curriculum typically involves short courses or workshops delivered  
17 primarily by the careers and employability services or by academics as an optional award which is an  
18 extracurricular credited program that students can complete in addition to their degree to gain  
19 additional experiences to help them stand out to future employers (Artess, Hooley, and Mellors-  
20 Bourne 2016). The use of career services is widespread with a recent review of 35 UK institutions all  
21 having some form of careers unit or service assisting students with employability (Minocha, Hristov,  
22 and Reynolds 2017). It has been noted, however, that relying solely upon employability services to  
23 deliver teaching and learning on employability could be a sub-optimal strategy as careers services are  
24 unlikely to be resourced adequately to help and assist all students registered at an institution (Harvey  
25 and Hallam 2005). Second, due to the centralised nature of employability services and optional  
26 awards, it is unclear whether they will effectively be able to raise awareness and interest to attract  
27 widespread participation. For example, Andrews and Russell (2012) find in a sample of 18 UK based

1 courses that student knowledge of the range of events run by the career service is poor despite the  
2 efforts of the career services. Furthermore, due to the optional nature of the career service and  
3 optional awards, it is unclear how many students will engage with the resources given all their other  
4 competing demands for their time (academic course, sports/societies/volunteering commitments, part-  
5 time work and social lives). Note that for students within a department that adopts a parallel approach  
6 to employability it is crucial that they engage with the careers service as they will have little if any  
7 assistance in career exploration or guidance on navigating the recruitment process in their degree  
8 program.

### 9 **Current Study**

10 This study has two key aims: first, to take an audit of all psychology departments in the UK to see  
11 how many have embedded/bolt-on employability modules within their curriculum either as core or  
12 optional modules or offering a work experience module. Second, to identify how students in a  
13 psychology department with a parallel approach to employability engage with the careers service,  
14 career advisors and academic staff regarding their future career. The first aim was achieved by  
15 conducting an audit on 116 UK based psychology departments listed in the 2018 version of the  
16 complete university guide. Each department's online prospective module guide was searched for  
17 evidence of core or optional employability modules or for work experience modules within their  
18 degree program. Those programs that had no employability modules or work experience were  
19 classified as adopting a 'parallel approach' whilst those that did were considered to have an  
20 embedded/bolt-on approach. The second aim was investigated by conducted a survey on 258  
21 undergraduate students regarding their engagement with careers events, career advisors and academic  
22 staff. We predict that students' engagement with the careers service will increase as they progress  
23 through their degree however, this rate will remain less than the majority, i.e. below 50%.  
24 Furthermore, we predict that students are more likely to engage with academic staff and arrange  
25 meetings with career advisors as they progress through their studies, but these rates will remain less  
26 than the majority, i.e. below 50%.

27

### **Method**

## 1 **Participants**

2 Two hundred and fifty-eight undergraduate psychology students from the University of  
3 Nottingham completed the survey. The sample comprised of 98 first years (38%), 99 second years  
4 (38%) and 61 third-year students (24%). The majority of the sample were white (n = 202, 78%),  
5 females (n = 241, 93.41%) with an average age of 19.84 years (SD = 1.51). Forty-eight (18%)  
6 participants were widening participation students in receipt of a university bursary and 71 (39%)  
7 participants held a part-time job in addition to their studies. All participants took part voluntarily with  
8 no incentives for participation.

## 9 **Design**

10 A cross-sectional correlation design was used. Three dependent variables were used to capture  
11 students' engagement with their career planning. First, we measured student engagement at seven core  
12 types of career-related events (i.e. sum score of careers fairs, spotlight sessions, CV writing  
13 workshops, application writing workshops, psychometric test workshops, interview workshops and  
14 assessment centre workshops). Although we acknowledge that this might not capture ad hoc events  
15 like employer presentations or workshops but it does represent a fairly comprehensive list of regular  
16 events that the careers service deliver. Second, we captured the extent which students discussed  
17 careers with academic members of staff (Yes/No) and third, whether students had met a career advisor  
18 (Yes/No). Predictors of career-related events were the year of study, demographic factors (gender,  
19 age, part-time work or being from a widening participation background) and barriers to participation  
20 in career-related events (i.e. Event Information, Academic Concerns, Motivation and Career  
21 Uncertainty). The predictors to discussing with an academic and meeting a careers advisor were the  
22 year of study and demographic factors (i.e. gender, age, part-time work or being from a widening  
23 participation background).

## 24 **Materials**

25 The questionnaire consisted of thirty-two items that were a mix of closed and open questions. The  
26 questionnaire came in four sections: demographic items (age, gender, widening participation status,

1 part-time job), items measuring their engagement in extracurricular activities (sports clubs,  
2 volunteering, paid employment), questions assessing their perceptions of employability and items  
3 assessing their engagement with the career service. This project focusses on the sections assessing  
4 demographics and engagement with the careers service. An open-end response question asking  
5 participants ‘what would you say are the main barriers to participating in career events/sessions?’ was  
6 coded into four categories: event information (signified by statements like “not sure what they are” or  
7 “not aware of them”), academic concerns (symbolised by statement like “clashes with lectures”),  
8 motivation (symbolised by “can’t be bothered” or “not aware”), and career uncertainty (signified by  
9 “Don’t know what I want to do”) using deductive content analysis. Inter-rater reliability between the  
10 two coders had moderate agreement ( $\kappa.75, z = 12, p <.001$ )(McHugh 2012).

## 11 **Procedure**

12 Participants were invited to complete the questionnaire at the beginning of seminars, workshops  
13 and lectures. Participants were informed of the nature of the study and had to provide informed  
14 consent before participating. Each participant was then handed a questionnaire or given access to an  
15 online survey using Qualtrics where they proceeded to complete the thirty-two items.

## 16 **Results**

### 17 **Audit of Embedded Employability within UK Psychology Departments**

18 An audit of 116 university psychology departments across the UK was conducted on the 21<sup>st</sup>  
19 January 2019 in order to identify the extent to which employability is embedded within the curriculum  
20 of psychology courses. Courses were coded on three dimensions: whether they had a credit-bearing  
21 module offering work experience, a core module teaching employability or an optional module  
22 developing employability skills. Figure 1 shows that work experience modules were the most popular  
23 choice for embedding careers within psychology departments curriculums with forty (34%)  
24 departments offering a work experience module. Twenty-one departments offered a core module on  
25 employability and only four (3%) departments offered an optional module focussing on developing  
26 employability skills. Sixty-five (56%) universities offered no form of embedded or bolt-on

1 employability options (i.e. work placement, optional or core modules) on their curriculum.

2 [Insert Figure 1]

### 3 **Engagement with the Careers Service**

4 Given the relatively small number of psychology departments that have embedded employability  
5 within their curriculum, it is important to understand the levels of student engagement with the career  
6 services and what factor predict higher levels of student engagement within a department that has  
7 adopted a parallel approach to employability. Figure 2 shows the events which were attended by  
8 students. As can be seen, careers fairs are the most well-attended events with 21% of first years, 39%  
9 of second and 55% of third years attending them. However, many of the events directly related to  
10 assisting students through the application process like CV (6% first years, 10% second years, 18%  
11 third years), application (3% first years, 5% second years, 13% third years), psychometric (2% first  
12 years, 4% second years, 8% third years), interview (3% first years, 6% second years, 8% third years)  
13 and assessment centre (2% first years, 3% second years, 3% third years) workshops received low  
14 levels of attendance by all year groups. A one-sample t-test was conducted to identify if on average  
15 students attended less than half of the seven careers events on offer at the career service. The results  
16 showed that over the entire sample attendance was substantially lower than half of careers events  
17 ( $t(253) = -37.22, p < .001$ ). This effect remains if you test first, second and third years separately  
18 (First years  $t(95) = -32.86, p < .001$ ; second years  $t(97) = -26.40, p < .001$ ; third years  $t(59) = -11.25,$   
19  $p < .001$ ).

20 To identify factors that predict attendance at career-related events a negative binomial regression  
21 model was conducted on the sum score of attendance at career service events. The model with year of  
22 study, gender, age, part-time job, bursary and barriers to participation (Event Information, Academic  
23 Studies, Motivation, Career Uncertainty) was a substantially better fit than the empty model ( $\chi^2(15) =$   
24  $58.01, p < .001$ ). Second years were 2.06 times more likely to attend career-related events than first  
25 years similarly, third-year students were 3.61 times more likely go to career events than second years  
26 (see Figure 2). No other demographic factors like age, gender, part-time work or receiving a bursary

1 predicted engagement with the careers service. The only other significant predictor of attendance at  
2 career-related events was careers information with students who felt like they did not have enough  
3 information about events (i.e. time of event, location, relevance of event) being 0.55 less likely to  
4 attend. No other self-reported barriers to participation predicted attendance rates at careers events.

5 [Insert Table 1]

6 [Insert Figure 2]

### 7 **Engagement with Academic Staff and Career Advisors**

8 Engagement with a member of academic staff for careers advice did increase over the three years  
9 (24% First, 37% Second, 54% Third year) however the overall level of engagement is still  
10 surprisingly low with the majority of first and second years and a substantial number of third years not  
11 discussing their career plans with academics such as their tutor. A one proportion z-test showed that  
12 over the entire sample significantly less than 50% of students had spoken to an academic about their  
13 careers ( $\chi^2(1) = 18.99, p < .001$ ). This effect remains for first and second years (first years  $\chi^2(1) =$   
14  $25.51, p < .001$ ; second years  $\chi^2(1) = 6.31, p < .01$ ) but not for third years ( $\chi^2(1) = 0.41, p = .739$ ).  
15 This shows that the majority of first-year and second-year students have not spoken to a member of  
16 academic staff about their careers.

17 A binary logistic regression was conducted to see what predictors influenced whether students  
18 engaged with a member of academic staff regarding their careers. The overall model was significantly  
19 better than the null model with a year of study and part-time job significantly predicting engagement  
20 with academics about their careers ( $\chi^2(6) = 24.18, p < .001$ ). Moving from the first to the second year  
21 increased the odds of talking with an academic about your career by 2.36 (see *Table 2*). Similarly,  
22 going from the second year into the third year increased the odds by 7.04. Those who held down a  
23 part-time job in addition to their study were 0.50 times less likely to have talked to an academic about  
24 their careers. No other predictors like age, gender, part-time work or receiving a bursary predicted  
25 engagement with a member of academic staff.

26 [Insert *Table 2*]

1 Engaging with a career's advisor increased throughout the three years of studying psychology at  
2 an undergraduate level however even in the third year only around 51% of students had spoken to a  
3 career advisor (4% First, 25% Second, 51% Third year). One proportion z-test showed that over the  
4 entire sample significantly less than 50% of students had seen a careers advisor ( $\chi^2 (1) = 73.81, p <$   
5  $.001$ ). This effect remains for first and second years (first years  $\chi^2 (1) = 82.65, p < .001$ ; second years  
6  $\chi^2 (1) = 24.25, p < .001$ ) but not for third years ( $\chi^2 (1) = 0.02, p = .551$ ). This implies that there are a  
7 lot of students in first and second year who towards the very end of the academic year had not been to  
8 speak to a career advisor about their career.

9 A binary logistic regression was conducted to see what predictors influenced whether students  
10 engaged with a career advisor. The overall model was substantially better than the null model ( $\chi^2 (6) =$   
11  $52.99, p < .001$ ) with the year of study predicting seeing a careers advisor. More precisely moving  
12 from first to the second year increased the odds of seeing a careers advisor by 7.69 and moving from  
13 second to the third year increased the odds by 22.30 (see *Table 3*). No other predictors like age,  
14 gender, part-time work or receiving a bursary predicted engagement with a career advisor.

15 [Insert *Table 3*]

## 16 **Discussion**

17 This study has three key findings: first, the audit of UK psychology departments highlighted that  
18 most departments (56%) have no formal employability or work experience module within their  
19 curriculum indicating they have adopted a parallel approach to employability. Second, survey results  
20 from a department with a parallel approach to employability showed attendance does increase at  
21 career-related events, engaging with academics about careers and seeing a careers advisor over the  
22 years of study, however, the overall rate of attendance is generally low and not necessarily directed  
23 toward those events which could add most value to students entering the job market (i.e. workshops  
24 designed to help them navigate the recruitment processes). Third, a key barrier to participation in  
25 career-related events was a lack of information about the event and difficulty understanding their  
26 relevance to the students. In the rest of the discussion, we review and contextualise the importance of

1 each of these three findings.

2 The fact that the majority of UK psychology departments do not have formal employability or  
3 work experience modules is an important contribution to the literature. It is particularly surprising  
4 given the current importance of employability for students and for universities in the form of league  
5 table positions that more is not done within psychology departments to promote and enhance their  
6 student's employability. One implication of low levels of employability teaching within the  
7 curriculum is that many psychology students may not be adequately prepared to engage with the  
8 process of exploring their careers and navigating a typical graduate-level recruitment process (i.e.  
9 writing applications, psychometric tests, interviews and assessments). Indeed this finding could be  
10 part of the explanation as to why psychology students are more likely to be in postgraduate study or  
11 non-graduate jobs (The Complete University Guide 2018b). There are two important caveats that are  
12 worth considering. First, it does not necessarily follow that just because there was a low level of  
13 engagement at one particular department that has adopted a parallel approach that all other institutions  
14 that have a parallel approach will have similarly low levels of engagement. However, we suspect with  
15 all the academic, extra-curricular, part-time work and social pressures on students that there will also  
16 be a similarly low level of engagement at other institutions in the UK or in other countries that adopt a  
17 similar parallel approach. A fruitful area of future research could be to investigate whether student  
18 engagement with careers events and advice seeking is comparably low at other departments or  
19 institutions that utilise a parallel approach to employability. It would also be interesting for future  
20 research to get an international perspective by comparing whether different higher education sectors  
21 are more or less likely to incorporate employability training within the core curriculum of a university  
22 degree program or leave this to student's extracurricular activities. Second, just because students are  
23 not getting employability information on their course or from the career services does not directly  
24 imply that they are not accessing other resources, perhaps online, to explore their career options or  
25 develop skills that will help them navigate the recruitment process. Another avenue of future research  
26 could assess whether students at departments with a parallel approach to employability are  
27 progressing in their career planning, are able to write good application forms, perform well in



1 psychometric tests, and respond positively in interviews.

2       Currently, psychology graduates are more likely than other courses to be underemployed in non-  
3 professional roles (psychology 33%, Average for other courses 18%) or more likely to engage in  
4 further postgraduate education (psychology 30%, Average for other courses 20%)(The Complete  
5 University Guide 2018b). This trend is not just seen in the UK but also in Australia where psychology  
6 graduates are more likely to be unemployed, or in further study compared to other degree programs  
7 (Hamilton et al. 2018). Underemployment is also an issue, for instance, the third most common  
8 occupation for an Australian psychology graduate under 25 is a sales assistant (Hamilton et al. 2018).  
9 One explanation of why psychology students might be under-employed and more likely to attend  
10 postgraduate study is that if psychology students wish to gain chartered psychologist roles (i.e.  
11 clinical, health, occupational psychologists etc.) they often need to gain work experience in a ‘non-  
12 graduate role’ before applying to further postgraduate study. An alternative explanation for this  
13 underemployment and further uptake of postgraduate study is that many students, due to the lack of  
14 careers service engagement and engagement with employability on their course, are not adequately  
15 prepared to explore their career options or navigate the recruitment process. Research from both  
16 Australia and the USA also report low levels of engagement with the career service for instance out of  
17 163 graduating business and economic students in the USA 63% had not visited a career centre  
18 (Callanan and Benzing 2004; Bates et al. 2019). In the current study, although careers engagement  
19 increased notably for final year students in this study, the lack of engagement during the first and  
20 second years would seem to suggest that students are postponing career planning until a later stage in  
21 their undergraduate degree programs which employ a parallel approach. It is at these initial stages,  
22 however, where students can identify graduate career options which they are most passionate about  
23 and identify opportunities to gain relevant work experience which is crucial to graduate employment  
24 (High Fliers, 2018). The danger of students delaying engaging with the careers service until their final  
25 year is that they may well be missing out on relevant job vacancies and experiences that would help  
26 with their career development. It is, therefore, possible that this results in students either accepting a  
27 job that does not require a degree or accepting a postgraduate course offer. One of the few

1 experimental articles assessing the efficacy of careers modules that a) help students explore their  
2 careers and b) assists them in navigating the recruitment process found students that took the  
3 employability module were 31% more likely to have a job at the end of their studies than students on  
4 the course who did not attend that module (Taylor and Hooley 2014). If there were more departments  
5 that offered modules that supported career exploration in tandem with workshops and assessment  
6 aimed at improving psychology students' abilities at performing on the application, psychometrics,  
7 interviews and assessment centres one wonders whether psychology students would be  
8 underemployed (relative to other courses) or more likely to attend postgraduate courses.

9 The final key finding was that the only predictor of attendance at career-related events was  
10 whether the student felt that had enough information about the events. This finding is puzzling as  
11 students receive bi-weekly emails from the career service promoting their events which would suggest  
12 that the information is available to them. However, it could be the case that students do not read their  
13 emails or if they do read them they may fail to see the connection between how these opportunities  
14 available from the career service can help them explore their career options and gain employment.  
15 Future research could look to explore in greater detail, using a qualitative approach, questions relating  
16 to how effective students perceive the advertisements of the careers events to be, how they would  
17 promote similar events and for those students that have attended what aspects of the careers events did  
18 they find useful.

## 19 **Limitations**

20 The audit of psychology department does rely upon detailed and up to date information being  
21 available on departmental websites, therefore, it could be the case that some departments do have  
22 work-related modules or employability modules that were not captured here. We believe most  
23 departments in the competitive market for students would keep up to date their website and wish to  
24 showcase the good work they are doing on employability so the number of modules missed on the  
25 audit is likely to be low. Of course, this does not preclude the possibility that departments do not  
26 include the odd lecture, tutorial or seminar on employability at some point during the course which  
27 would be missed by the audit. However, an hour or two on employability across the course of a

1 degree program is likely to have little to no effect on student's employability (Lowden et al. 2011;  
2 Mason, Williams, Cranmer, 2003). The survey assessing engagement with the career service was  
3 conducted right at the end of their second term so just before students went away for Easter. It is  
4 possible that students may have engaged with career events, career advisors or academics in the two-  
5 week period after Easter before the exam season began. We feel that this is unlikely to be the case as  
6 students would probably have been more preoccupied with revision for their examinations. The very  
7 nature of the self-report survey is also problematic and could underestimate the actual level of  
8 engagement if students forget a lot of events that they had attended. Ideally, future research would use  
9 attendance register from events held by the career service if these are kept and accessible.

## 10 **Conclusions**

11 This study highlights for the first time that many UK psychology departments do not offer as a  
12 core part of their curriculum employability training which implies that many students are left on their  
13 own to find employability information from sources like the careers service. We suspect that this issue  
14 is not a problem isolated to psychology departments nor to the UK and indeed this would be a fruitful  
15 avenue for future research to pursue. Another key finding from this study is that many students in a  
16 department that has adopted a parallel approach to employability (i.e. employability is not taught on  
17 the course curriculum) have very low levels of engagement with the career service, academics and  
18 career advisors indicating that many students are probably underprepared for the transition from  
19 university to the world of work. We would encourage other researchers and educators responsible for  
20 students on courses that have a parallel approach to employability to assess how engaged their  
21 students are with the career service and explore ways to support non-engaging students to make the  
22 transition from university to the world of work.

## 23 **Acknowledgements**

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## 25 **Declaration of Interests**

26 The authors declare no competing interests.

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## Tables

Table 1

*Negative Binomial Regression showing predictors of attendance at career related events.*

	<b>Incident Ratio's</b>	<b>Standard Error</b>	<b>z values</b>	<b>P</b>
<b>Intercept</b>	2.15	1.59	0.48	.63
<b>Year of Study Level 2 vs 1</b>	2.06	0.24	2.97	.002**
<b>Year of Study Level 3 vs 2</b>	3.61	0.30	4.23	<.001***
<b>Gender</b>	0.44	0.52	-1.59	.11
<b>Age</b>	0.93	0.08	-0.91	.36
<b>Part time job</b>	1.17	0.20	0.78	.44
<b>Bursary</b>	1.06	0.24	0.25	.80
<b>Event Information</b>	0.55	0.24	-2.54	.011*
<b>Academic Studies</b>	0.90	0.21	-.53	.59
<b>Motivation</b>	0.65	0.28	-1.48	.14
<b>Career Uncertainty</b>	0.76	0.27	-1.02	.31

*Note 1. Null vs model with predictors  $\chi^2 (15) = 58.01, p < .001$ . Overall effect of Year of Study  $\chi^2 (2) = 19.21, p < .001$ . \* represents  $p < .05$ , \*\* represents,  $p < .01$ , \*\*\* represents  $p < .001$ .*

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Table 2

*A binary logistic regression exploring the factors that predict whether students talked with academics about their future careers.*

	<b>Odds Ratio's</b>	<b>Standard Error</b>	<b>z values</b>	<b>P</b>
<b>Intercept</b>	23.45	2.56	1.23	.22
<b>Year of Study Level 2 vs 1</b>	2.36	0.35	2.45	.014*
<b>Year of Study Level 3 vs 2</b>	7.04	0.48	4.08	<.001***
<b>Gender</b>	1.60	0.58	0.81	.42
<b>Age</b>	0.80	0.14	-1.61	.106
<b>Part time job</b>	0.50	0.32	-2.14	.033*
<b>Bursary</b>	0.71	0.38	-0.89	.371

Note 2. Null vs model with predictors  $\chi^2 (6) = 24.18, p < .001$ . Overall effect of Year of Study  $\chi^2 (2) = 16.6, p < .001$ . \* represents  $p < .05$ , \*\* represents,  $p < .01$ , \*\*\* represents  $p < .001$ .

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Table 3

*A binary logistic regression exploring the factors that predict whether students talked with a careers advisor.*

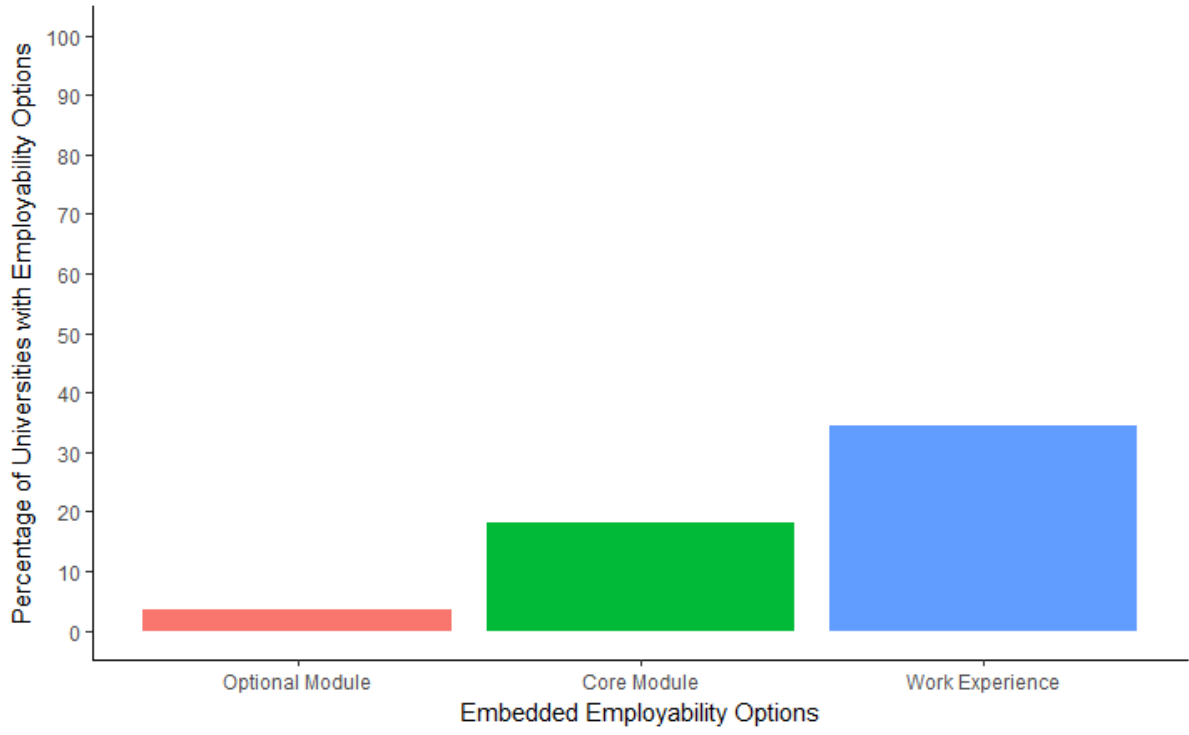
	<b>Odds Ratio's</b>	<b>Standard Error</b>	<b>z values</b>	<b>P</b>
<b>Intercept</b>	0.00	2.42	-2.18	.029*
<b>Year of Study Level 2 vs 1</b>	7.69	0.58	3.55	<.001***
<b>Year of Study Level 3 vs 2</b>	22.30	0.63	4.94	<.001***
<b>Gender</b>	0.95	0.79	-0.07	.946
<b>Age</b>	1.12	0.12	0.92	.357
<b>Part time job</b>	0.97	0.37	-0.92	.927
<b>Bursary</b>	0.64	0.44	-1.02	.307

*Note 3.* Null vs model with predictors  $\chi^2 (6) = 52.99, p < .001$ . Overall effect of Year of Study  $\chi^2 (2) = 24.9, p < .001$ . \* represents  $p < .05$ , \*\* represents,  $p < .01$ , \*\*\* represents  $p < .001$ .

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## Figures

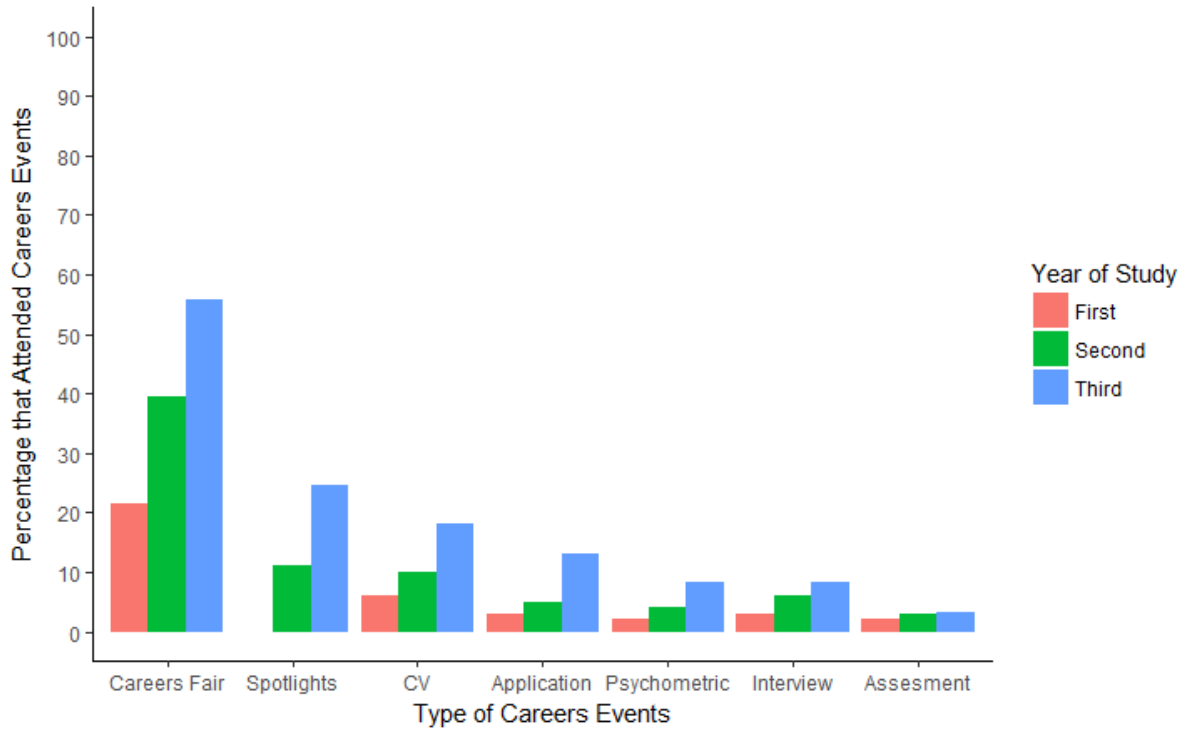


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*Figure 1.* Percentage of psychology departments in the UK offering embedded employability options like employability skills modules, work experience modules or placement years.

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2 *Figure 2.* Percentage of student’s engagement by year across seven types of careers events run by the  
 3 career service.

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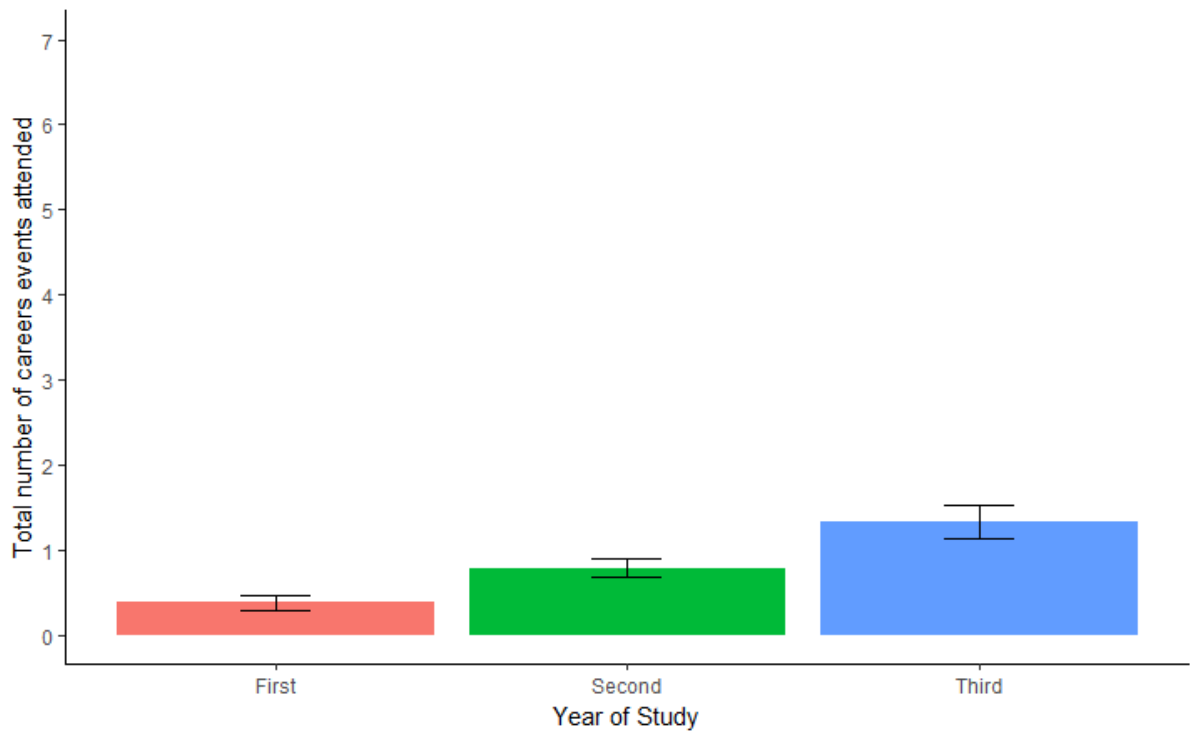
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*Figure 3.* Total number of career events attended by year of study.  $\pm$  Standard error bars.

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