

Education and Employers Taskforce

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The impact of work experience on student outcomes: implications for policy and practice

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Abstract:

This paper sets out to demonstrate how experiences of work can impact upon student outcomes; including progression to a graduate level job, attainment of a good degree and avoidance of unemployment in the period immediately following graduation. Data included is based on a longitudinal research study of student/graduate career development undertaken between 2006 and 2012, known as 'Futuretrack'. The authors then explore the nature of university-business collaboration in respect of the provision of work experiences (work-based learning and work placements) to identify the components of 'quality' work experiences and the ways in which employers engage with both undergraduate and postgraduate courses in the UK. The paper concludes with a commentary on the implications for institutional policy-making and practice at course level and identifies key messages for HE stakeholders about how to position undergraduate and postgraduate work experiences to best equip students and graduates to make successful transitions to the labour market.

Keywords:

Student, graduate, work-based learning, work experience, transition to the labour market, employer engagement in higher education.

Introduction and methodology

Futuretrack was a longitudinal cohort tracking study, commissioned by the Higher Education Careers Service Unit¹ (HECSU) and undertaken by the Institute for Employment Research at the University of Warwick, under the leadership of Professor Kate Purcell, between 2005 and 2012. The study tracked the career development and progression of the 2005/06 cohort of applicants to higher education (HE) until around 2 years following graduation, when most had entered employment or further education and training. Data was collected at four stages: during application to HE; approximately eighteen months later; prior to final examinations (in the case of 3 year programmes) and between 18 and 30 months following graduation. Futuretrack findings were reported and published at each stage of the study².

Futuretrack data is important for a number of reasons: the data captured not only graduate outcomes but also the whole 'student journey' from application to job and is genuinely longitudinal in nature; the 2005/05 cohort of applicants was the first to experience the (then) new student finance arrangements entailing the repayment of a student loan upon reaching an earnings threshold; the cohort also entered HE at a time of economic stability but graduated into the worst economic downturn for 20 years; and its career development experiences were documented in much more detail than had hitherto, or since, been undertaken.

Subsequent analyses of the particular impact of work experiences, drawing upon Futuretrack longitudinal data was undertaken by HECSU during 2013 and forms the basis of this paper. The methodology for the subsequent analyses comprised making explicit a range of variables (age, gender, parental occupation, subject of study, institution attended, etc.) and their relationship to four broad categories of participation in: paid work, structured work experiences, voluntary (unpaid) work and non-participation in any form of work experience. This formed 'the descriptive phase' following which it was decided to omit voluntary and unpaid work, as this had been undertaken by a minority of respondents, and then a series of regression analyses were undertaken to examine the effect of different forms of structured work-based learning (e.g. work placements) and paid work, or neither, on respondents' subsequent outcomes. The following selective descriptions of students' participation in paid work and structured work experiences is aimed to illustrate the heterogeneity of student experiences – further information may be obtained by accessing the report³.

Descriptors of paid work

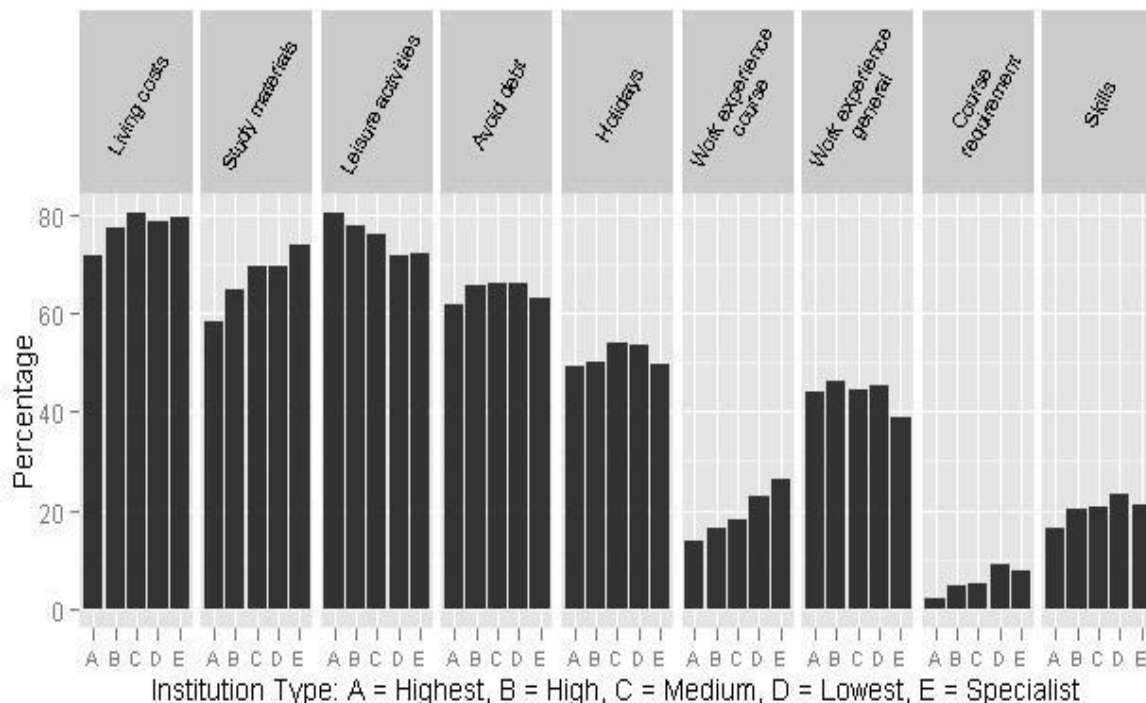
Futuretrack had not been designed solely to capture information on the experience of work, but it very quickly became apparent that participation in work had increased between stages 2 and 3, raising questions about whether this might be in response to students' growing awareness of the difficult economic conditions that lay ahead, or drivers within institutions emphasising the value of direct experience of the world of work in successful transitioning into employment or some other trigger. Students' reasons for undertaking paid work during term-time included, to help with living costs (77.2 per cent), to pay for leisure activities (76.1 per cent) or to buy study materials (66.0 per cent). A much lower proportion of respondents indicated that they had worked in order to gain skills (20.4 per cent) or because it was a course requirement (5.5 per cent). Whilst overall students'

¹ Established in 1972, the HECSU is an independent research charity specialising in higher education and graduate employment. We seek to support careers advisory services as they guide students and graduates through university and into postgraduate education and the labour market. We aim to: improve the dissemination of information about higher education and graduate employment, contribute to knowledge of student and graduate career development and employment by conducting and commissioning research, work with careers advisers, academic staff, and employers to support graduate employability.

² Futuretrack reports can be accessed at www.hecsu.ac.uk and <http://www2.warwick.ac.uk/fac/soc/ier/futuretrack/what-is/>

³ DBIS (2013) *Learning from Futuretrack: the impact of work experiences on higher education outcomes*, BIS Research paper 143, London, Department for Business, Innovation and Skills.

reasons for working were relatively stable during their HE courses, there were some notable differences in reasons when the type of institution⁴ was taken into account. Figure 1 indicates that those in the highest entry tariff category were much less likely to have had work experience as a requirement of their course, and less likely to report that money earned was to pay for study materials than those attending low entry tariff institutions.



Reproduced from BIS, 2013

Figure 1: Reasons given for doing paid work during term at stage 2

Students who undertook paid work during term-time were more likely to come from disadvantaged family backgrounds⁵ and to be studying at lower entry tariff institutions and were also likely to work longer hours than those who worked during vacations. Women were more likely to have undertaken paid work than men in term-time. Those aged 21-25 years on entry to HE were the most likely to have worked both during term-time and in vacations. Interestingly, those aged 26 and over, were the most likely to report undertaking no paid work at all.

One of the advantages of longitudinal data collection is that it enables an assessment of change over time. It was noted that,

The main purpose of collecting longitudinal data is to provide information on change at the level of the individual. The cross-sectional (descriptive) information on participation in paid work at stage 2 and stage 3 is useful for describing the overall change in paid work but does not tell us whether it is the same respondents who are doing paid work at stage 2 and stage 3 or whether there is significant mobility by students into and out of paid work over time. Table 1 shows the pattern of transitions into and out of paid work made by respondents between stage 2 and stage 3. The table shows significant persistence in participation in paid work over time with 71.0 per cent of respondents who worked during both vacation and

⁴ The Futuretrack research team classified institutions by UCAS entry tariff bands, rather than membership of mission groups or other categories. See also, http://www2.warwick.ac.uk/fac/soc/ier/futuretrack/findings/ft3.1_wp1_access_tariff_classification.pdf

⁵ As measured by parental occupation at aged 14 and parental experience of higher education.

term-time at stage 2 also working during both vacation and term-time at stage 3. There was also a significant degree of mobility in respondent's involvement in paid work, however, and more than 50 per cent of respondents who had not undertaken paid work at stage 2 had undertaken paid work at stage 3. The overall pattern of movement into and out of paid work by students suggests that we can distinguish 3 groups of respondents with different relationships to paid work: a group who undertook paid work throughout the period of study (25 per cent), a group who did not undertake paid work while studying (15 per cent) and a group who move into and out of paid work in response to changing pattern of constraints and opportunities (60 per cent). (BIS, 2013, page 41).

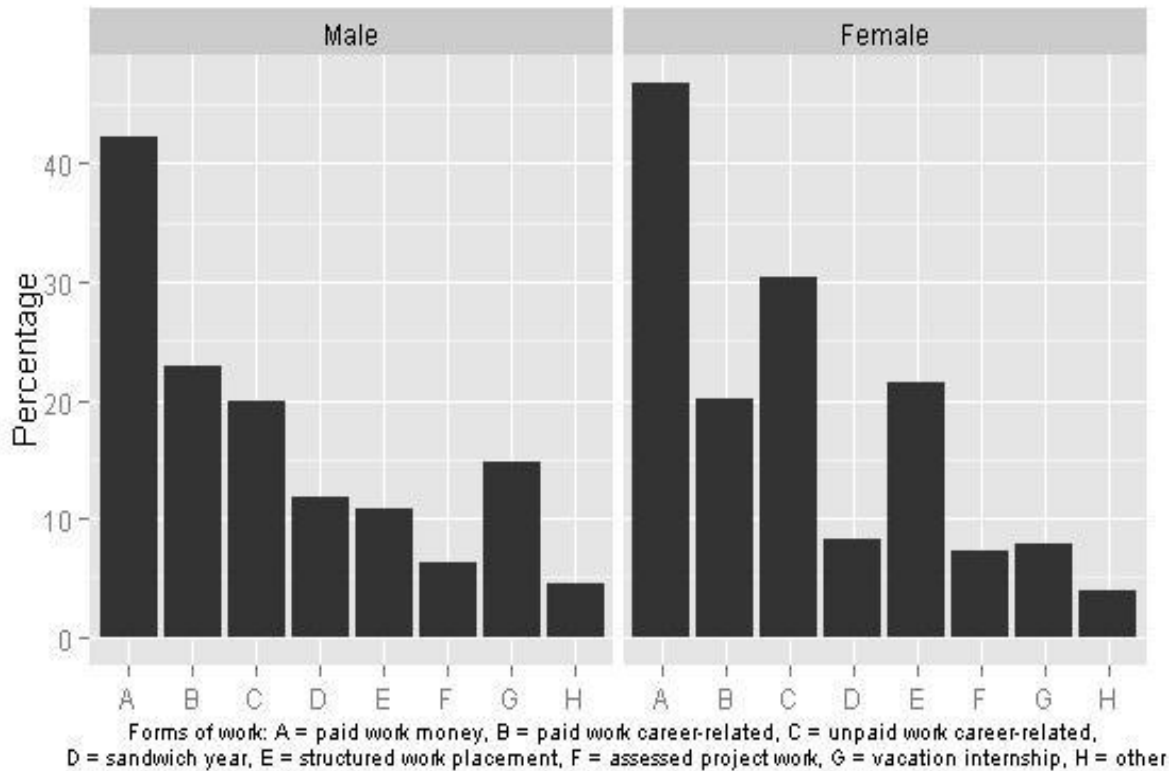
Table 1 Transitions into and out of paid work between stage 2 and stage 3

Stage 2	Stage 3											
	Vacation and term-time			Only vacation			Only term-time			Not at all		
	N	Row %	Col %	N	Row %	Col %	N	Row %	Col %	N	Row %	Col %
Vacation and term-time	2338	71.0	58.8	519	15.8	15.0	95	2.9	25.0	339	10.3	14.0
Only vacation	959	25.9	24.1	2039	55.1	58.9	114	3.1	30.0	588	15.9	24.2
Only term-time	130	48.1	3.3	49	18.1	1.4	39	14.4	10.3	52	19.3	2.1
Not at all	548	18.4	13.8	852	28.6	24.6	132	4.4	34.7	1447	48.6	59.6

Reproduced from BIS 2013

Descriptors of structured work experiences

Structured experiences of work reported by Futuretrack respondents comprised a wide range of activities. At stage 3 respondents were asked if they had participated in, one-year work placements or shorter than one year work placements, in the UK; at stage 4 they were asked if they had undertaken, a sandwich year undergraduate placement, a shorter structured work placement integral to the course, assessed project work in an external organisation as part of the course, vacation internship with an employer, paid work to gain useful career related experience, paid work undertaken only for money, unpaid work undertaken in order to gain useful career related experience, other work-related activity or none of these. As respondents could provide multiple answers, it has been possible to describe the combinations of work-related activities experienced. Paid work for money and paid work (career related) were the most common activities. There were some interesting differences by gender; as can be seen at Figure 2 more women undertook paid work, unpaid career-related work and structured placements than men; and more men undertook summer internship and sandwich placements than women.

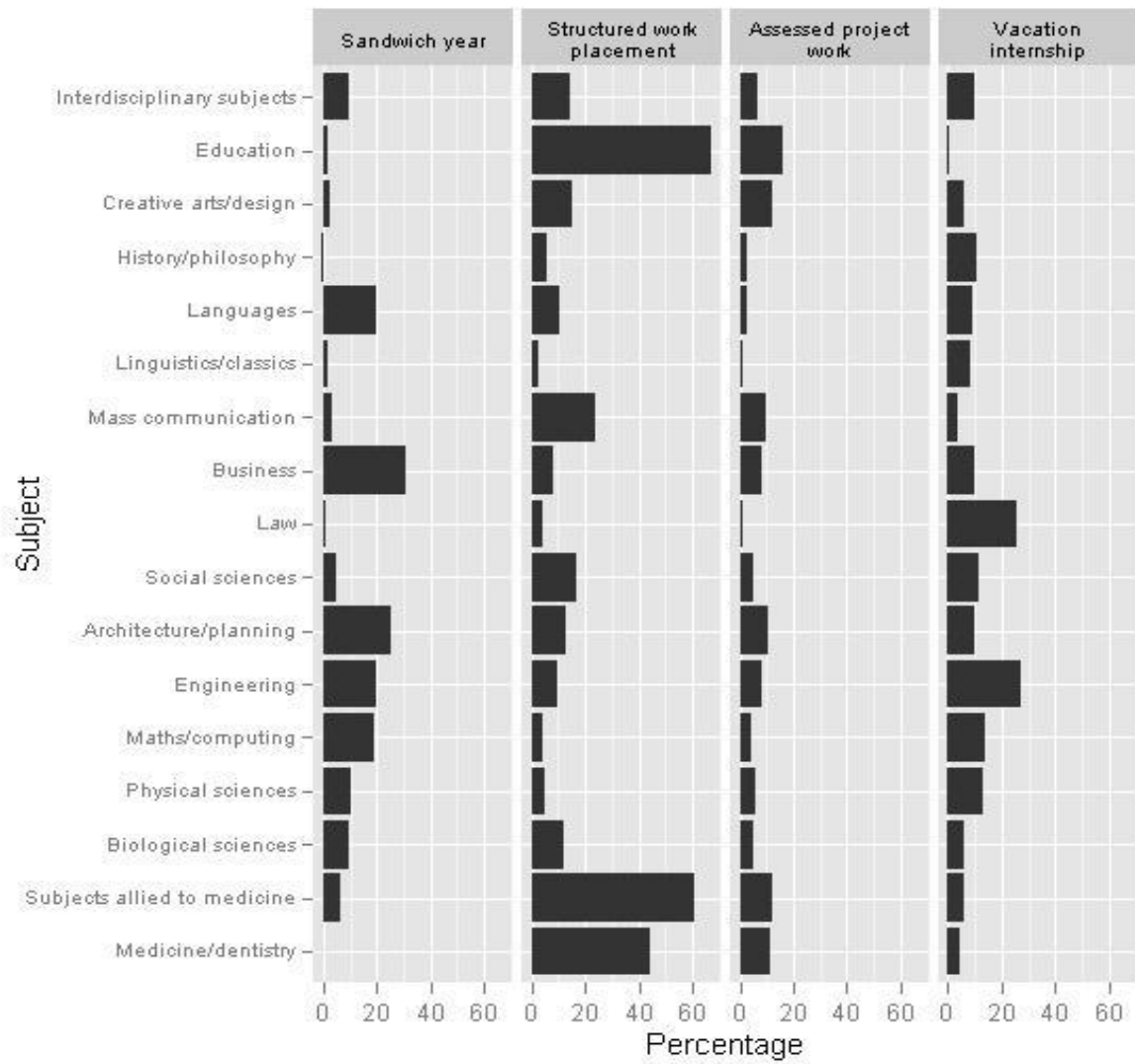


Reproduced from BIS, 2013

Figure 2: Work-related activities at stage 4 by gender

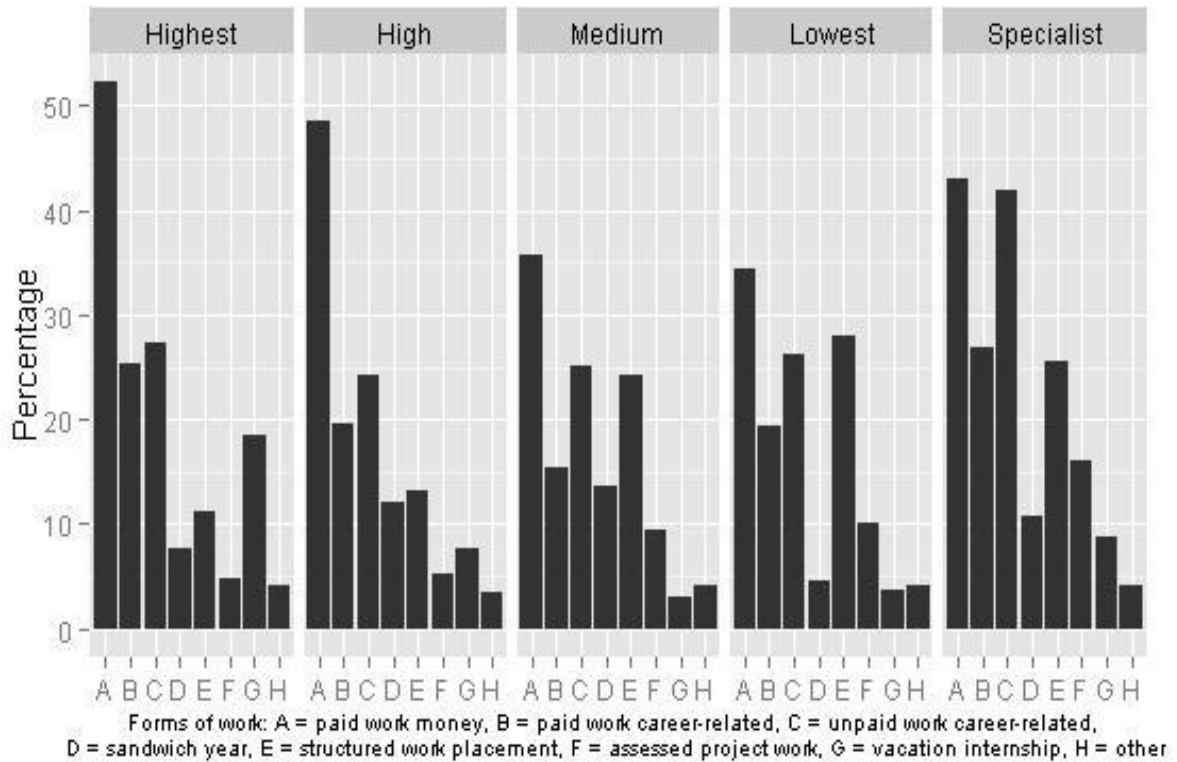
Family background also appears to play a role, albeit a relatively minor one, with those whose parents are described as professional-managerial being more likely to have undertaken a vacation internship but less likely to have undertaken work placements in comparison to respondents with parents who worked in intermediate or routine and semi-routine occupations.

Participation in work placements and sandwich years was also found to be influenced by both type of subject and institution attended. Respondents studying Education or Subjects Allied to Medicine were most likely to have participated in a work placement and those studying Business or Engineering were most likely to report having experienced a sandwich year (Figure 3 refers). Those attending the highest tariff institutions were most likely to report having undertaken a summer internship and those in medium and low tariff institutions were more likely to have undertaken work placements (Figure 4 refers). Such differences might indicate 'custom and practice' within those subject areas or institutions, or reflect established subject career trajectories or the preferences of employers and professional bodies. What appears to be clear is that access to forms of work-related higher learning is not uniform.



Reproduced from BIS, 2013

Figure 3: Work-related activities at stage 4 by broad subject group

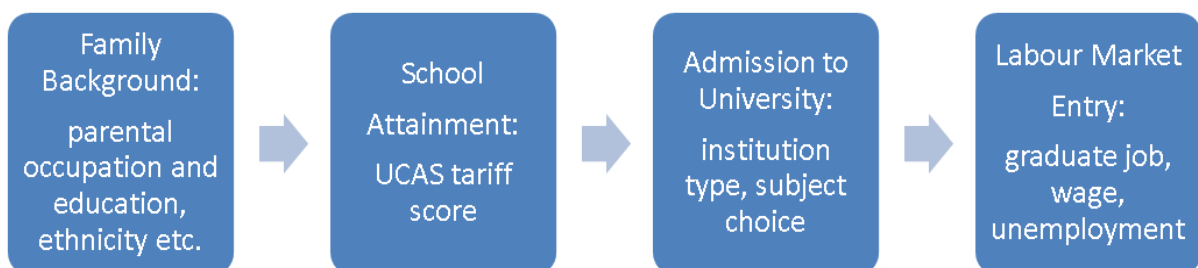


Reproduced from BIS, 2013

Figure 4: Work-related activities at stage 4 by type of institution

Graduate outcomes

A model of pathways into and through higher education, at Figure 5, informed the analyses of graduate outcomes. The model describes how there is no direct link between family background and labour market outcomes but that differences in school attainment and type of university that such attainment permits, *'provides pathways through which initial disadvantages, such as family background, influence labour market outcomes following HE'* (BIS, 2013, p 13).



Reproduced from BIS, 2013

Figure 5: Model of pathways into and through higher education

The descriptive analyses show that there are differences in characteristics amongst those who did and those who did not, have experiences of work whilst studying. However, a key question was whether the experience of work had an effect that is independent of these characteristics.

Analysis⁶ was undertaken in two steps – the first step (or model) included respondents’ age, gender, ethnicity, family background, prior level of educational achievement, subject and institution type – the second step (or model) added in information about the type of work undertaken while at university. By comparing the two models, it was possible to see how far the outcomes were associated with background characteristics prior to HE and also whether the experience(s) of work had any independent effect. The graduate outcomes that were included in the modelling were: class of degree (first or upper second vs lower second, third or ordinary degree); current unemployment; gross annual pay, whether the respondent reported having obtained a ‘graduate’ job, and respondents’ report of self-confidence. Table 2 provides the outcomes for respondents who had undertaken different forms of work experiences. It shows that those who had undertaken no form of work experience reported much higher levels of unemployment (14.9 per cent) and those who had undertaken either only work-based learning or only paid work had less unemployment (7.1 and 9.2 per cent respectively) but those experiencing the least unemployment, were those who had undertaken both paid work and work-based learning (6.1 per cent). Experience of work-based learning is positively associated with obtaining a graduate level job and with self-confidence. Strikingly, the experience of both paid work and work-based learning are associated with attainment of a good degree and achievement of a higher wage.

Table 2: Proportion of respondents with each outcome separately by type of work undertaken

	Type of Work Experience				Number of respondents
	Paid work only	Work-based learning	Both paid work and work-based learning	None	
<u>Outcomes</u>					
Good degree	77.0	73.1	81.9	67.3	8386
Self-confidence	82.5	84.6	85.7	78.1	8389
Unemployment	9.2	7.7	6.1	14.9	8384
Graduate job	36.2	59.4	55.2	33.6	6057
Wage ¹	19442.3	22054.7	23581.6	18343.6	6278

¹the figures for the wage give the mean wage

Reproduced from BIS, 2013

These results suggest that transitions made by Futuretrack respondents into the labour market were influenced by experiences of work whilst studying and that work experience mediates the relationship between respondents’ prior characteristics and labour market outcome at 18 – 30 months beyond graduation. The importance of prior qualifications, type of institution attended and subject cannot be under-estimated – graduates of higher tariff institutions were more likely to have obtained a graduate level job and achieved higher wages in comparison with lower tariff institutions and those who studied specialist-vocational courses had the most positive outcomes. One interpretation of this is that both work experiences and socio-economic characteristics impact upon

⁶ Logistic regression was used in all analyses, except where the dependent variable was the wage, in which a linear regression model was used.

graduate outcomes. It was noted that whilst work experience appears to confer benefits, access to experiences may be affected by 'unseen' student characteristics.

...The data used does not, however, have information on factors such as labour market experience prior to HE or the social contacts of respondents. To the extent that such factors have been important in influencing either the work experience undertaken by respondents or their subsequent outcomes, the findings may still be subject to a degree of selection bias. It is difficult to predict the direction in which selection effects might bias estimates of the effect of work experience. However, respondents who might benefit the most from undertaking activities, such as vacation internships, are probably most likely to have been successful in obtaining them because they have (partly unmeasured) characteristics, such as family contacts, which other respondents lack. In this case, the correspondence of participation in particular types of work and positive subsequent labour market outcomes results from a shared association with pre-existing family factors, thus leading to an overestimation of the effects of work experience. Removing selection bias might be expected to be more difficult for some outcomes than others. For example, low self-confidence might itself be a reason for why some respondents did not have a job at university rather than a consequence of the respondent's work experience. (BIS, 2013, p 88).

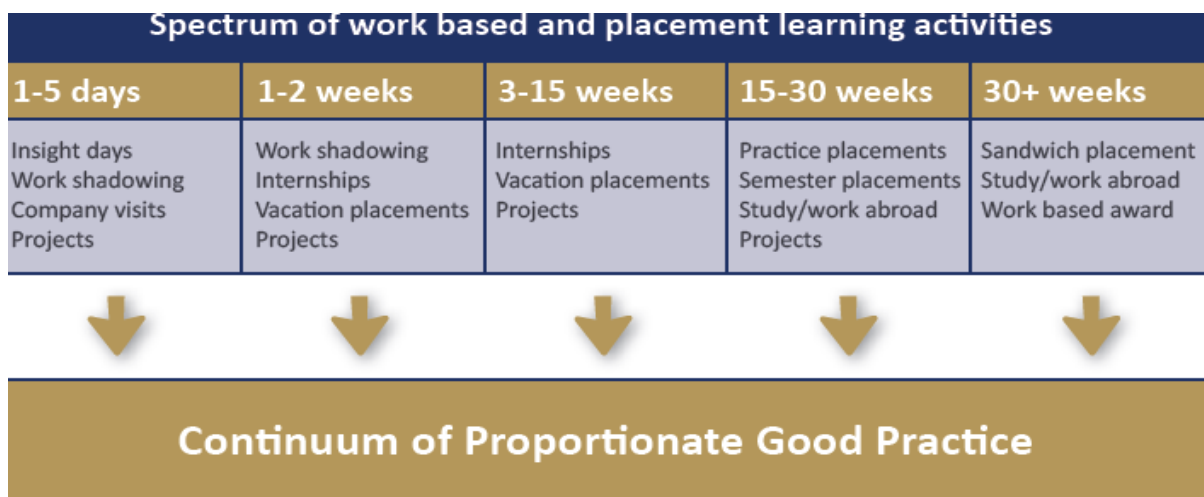
Quality work experiences

Alongside interest in whether work experience confers positive graduate outcomes is a concern that the experience of work should be a high quality one. In September 2013, ASET produced new guidance for work-based learning and placements to help institutions manage work placements by mapping 7 principles of good practice against the relevant sections of the QAA Quality Code⁷. The principles foster good practice when all parties work to:

- Accept and recognise the value to employability
- Are partners in planning and management
- Clearly understand the responsibilities and expectations of everyone involved
- Collaborate to ensure opportunities are inclusive, safe and supported
- Engage in structured opportunities for learning and development
- Establish sustainable relationships and networks
- Record outcomes and evaluate feedback for continuous enhancement

ASET distinguished a spectrum of placement (and work-based learning) activities whose quality hinges upon establishment of effective formal and informal relationships.

⁷ <http://www.qaa.ac.uk/assuringstandardsandquality/quality-code/Pages/default.aspx> referred to as 'the Quality Code'



Reproduced from ASET⁸

The relationships are likely to include those between:

- *Student and employer*: for longer periods, this would be a formal legal contract of employment, with all the implied entitlements and responsibilities. If the student is joining the employer for a placement this is likely to be a new contract, for a student embarking on work based learning with their existing employer this may require a variation in contract or working terms. For periods as short as a few hours, the student would probably be regarded as a visitor rather than employee.
- *Student and Higher Education provider*: the formal contract implicit in acceptance of a student on a course, and evidenced by the student's contributions towards tuition fee.
- *Higher Education provider and employer*: usually a formal contract, particular to practice placements where the employer is often involved in competency assessments such as in the Health sector.

The way these relationships are manifested in practice shows how universities collaborate with business partners in the provision of work-based and work-related learning. The following examples illustrate the diversity of approaches taken by institutions in the delivery of quality work experiences.

Accredited employability modules at Ulster

Work-based learning, student placements and other forms of work experience at the University of Ulster is central to the university's corporate plan. More than 2,000 Ulster students go on placement every year. Around 200 courses offer exemptions from professional examinations and/or carry professional accreditation. The Career Development Centre offers a suite of accredited employability modules which if not delivered directly into academic programmes of study, are delivered as open modules for any student to attend. They comprise:

- *'Developing Skills for Work', Second Year Module* A module to support students in identifying and developing strategies for securing relevant employability skills through work experience, study abroad and course related project work.
- *'Work Experience Skills Builder', Second Year Module* A module to support students in understanding the world of work and volunteering and which helps students to identify learning opportunities within a work experience or volunteering context.

⁸ ASET (2013) *ASET Good Practice Guide for Work based and Placement Learning in Higher Education*. Available from www.asetonline.org

- *'Graduation - What Next?'* Final Year Module A module to support students in exploring options and opportunities available to them after graduation and to develop the skills required to succeed in graduate recruitment.

Professional training at Surrey

The University of Surrey model embeds work placements as a fundamental part of the student experience; it is an embedded part of the curriculum. Called the Professional Training Year (PTY) it offers students the opportunity to undertake a work, study or research placement as part of their degree programme. Links with 1,000 employer partners provides many placement opportunities for students across all subject disciplines. The PTY programme offers a unique experience to students for gaining access to the world of work while studying; to meet employers, to develop job search skills and to acquire the employability skills that employers look for. A 120 credit framework also ensures that employability skills are developed prior to the actual placement, with opportunities for critical reflection built into the post-placement process in the "transfer of learning" module. Alongside the PTY programme a wide range of activities and services support the development of employability skills. Employability skills are incorporated into the academic experience. The Surrey student gets access to the benefits of:

- the Professional Training Year which offers students a work placement as an embedded component of their degree programme;
- specifically designed academic degree programmes with content relevant to the acquisition of employability skills;
- exposure to academic staff with active links with employers around the world;
- research and knowledge transfer partnerships which offer postgraduate training in the workplace;
- a supportive environment for enterprise activities by students;
- the Careers Service with links to over 500 employers across the world.

In-house work placements at Essex

The University of Essex's 'frontrunners' scheme supports in-house work-related learning on the university campus. It allows placements to be between one and three terms long, and up to 10 hours a week during term and 15 hours a week over the summer. Students that start in the autumn or winter work on three month placements while summer placements last two months. Flexible working hours accommodate exam preparation. Funding is allocated centrally and academics must submit placement proposals that clearly identify the work-related skills to be developed. The scheme offers additional flexibility in setting and monitoring the learning outcomes to be achieved.

Business-facing at Hertfordshire

At the University of Hertfordshire partnering with SMEs is part of the DNA of the institution; it is a corporate priority. The Careers Service has been expanded and is now called the Careers and Placement service. All initial customer relationship management with SMEs is channelled through a team comprising some seven dedicated staff in the Careers and Placement Service. This has resulted in active relationships with several thousand SMEs and relatively abundant opportunities for work-related learning and placements for students. Contacts with SMEs at departmental and individual academic level continue beyond this centralised initial contact but the possibility of disjointed, purely tactical relationships with SMEs is minimised.

Fostering student leadership skills at Manchester

An important part of the employability support provided to undergraduate students by the Careers & Employability Division (CED) is the *Manchester Leadership Programme* (MLP) which combines academic units, called Leadership in Action, with opportunities for volunteering. Over 1,200

students from across the institution take part in the programme annually. The MLP aims to develop team working, debating and influencing skills, project management skills and increase confidence in written communication and analytical thinking skills; i.e. capacities that enhance students' future participation in the workforce as well as contribute positively to learning in HE.

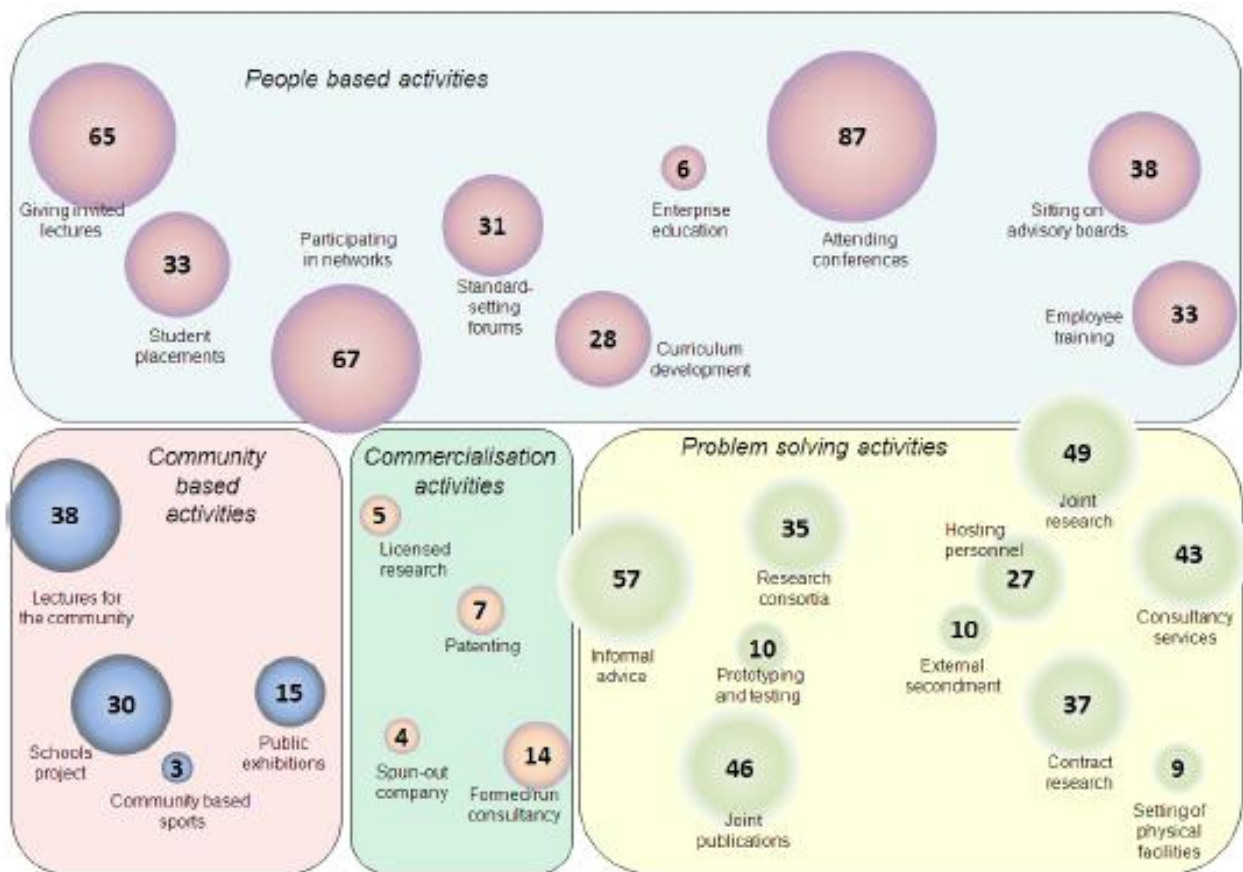
To achieve the Manchester Leadership Award, students must pass a 'Leadership in Action Unit' and also engage in between 20 and 60 hours of voluntary work, which is formally recorded in their Higher Education Achievement Report (HEAR). Voluntary work experiences are unpaid and generally hosted by the third sector; at least 15 hours must be spent in organisations in the North West (thus fulfilling the university's ambitions to contribute local community infrastructures). A feature of the MLP is the opportunity to undertake 'challenges' that have a community benefit; for example, fund-raising, renovation work or working with older people.

To be eligible for the MLP, students should have a free choice option within their degree programmes. The MLP attracts students from a broad range of degree programmes across the university. A number of schools in the Faculty of Medical and Human Sciences have integrated the MLP as a mandatory part of their programmes.

Modes of university-business interaction

Research by the UK-IRC⁹ shows that there is a rich diversity in the modes of interaction between universities and industry. This research shows that these links are not solely based around intellectual property and commercialising university knowledge. They incorporate links that centre around people, problems and place. On people-based activities, the UK-IRC cites earlier work by Ulrichsen (Figure 6) and shows the extensive links that academics have with external organisations (including employers) that cover curriculum development (28 per cent) and student placements (33 per cent).

⁹ M. Abreu, V. Grinevich, A. Hughes and M. Kitson (2010) Knowledge Exchange between Academics and the Business, Public and Third Sectors, UK-IRC.



Source: Adapted with permission from Ulrichsen (2009)

Figure 6: Academic links with external organisations and activity (percentage of respondents)

Within universities the challenge is unlocking the benefits of these various relationships to support both the research and teaching objectives. There is a likewise a clear opportunity for universities to explore how they can stretch the nature of their interactions with industry to encapsulate benefits for the student experience. If one considers the extensive variety in the types of activity that academics engage in externally, there must be opportunities to leverage work experience opportunities for students from these activities. The conferences academics attend, the advisory boards they sit on, the employee training they are involved with and the extensive external networks that academics have with industry all provide opportunities for linking to teaching activity and to leverage opportunities for any variety of different types of work-related learning.

Commentary

Graduate prospects for 2014 look better; the latest High Fliers¹⁰ report on graduate employment indicates that the UK's top 100 graduate recruiters will be recruiting more graduates this year. However, today's graduates face an uncertain future where the fast changing advances in technology, structural changes in labour markets and high rates of youth unemployment mean that employability has to extend beyond the generic skills required. It has to embrace creativity,

¹⁰ High Fliers (2014) The Graduate Market in 2014: annual review of graduate vacancies and starting salaries at Britain's leading employers. London.

innovative thinking, resilience, risk taking, experimentation and empathy across cultures for graduates to be successful in twenty first century employment.

With rising tuition fees, growing concerns about youth unemployment, graduate underemployment and significant concerns about the education to employment transition, HEIs have made significant investments in the student employability.

Recent factors affecting the growing interest in student employability skills include: The Wilson Review¹¹ which highlights the importance of employability skills to improve graduate employment prospects and the fact that more universities have identified employability as a distinctive marketing proposition for their institutional brand and positioning in the higher education sector.

The recommendations of the Wilson Review in particular place additional pressures on the HE sector to broaden the student offer to more manifestly incorporate aspects of graduate employability into academic programmes. Degree programmes that embed employability skills and offer out of curriculum opportunities for students to develop these skills will become the single most important issue for HEIs to address. The Wilson Review found that sandwich degree programmes, internships and work-based programmes all have roles to play in enhancing graduates' skill levels and ensuring a smooth and effective transition between university and the business environment.

Research by the Higher Education Academy¹² on employability highlights the diverse range of activities that HEIs engage in to support employability skills; these range from employability skills embedded in degree modules, work placements for students, curriculum co-design with employers, non-curricular activities and supporting student involvement in clubs, societies and community projects.

The evidence from Futuretrack on the impact of work highlights the need to:

- better educate potential students about the importance of work experience as part of their student journey;
- ensure that universities through their careers services and subject disciplines advocate the importance of these opportunities for students;
- think strategically at a discipline level about actively embedding careers learning and opportunities for work experience into the curriculum;

The research also raises some big questions about how universities support their graduates in the transition from education into employment. Given the current complexities in the labour market with graduate underemployment, the growing trend of portfolio careers, zero hours contracts (even for professionals), and the global competition for talent, the research challenges universities and employers to work more strategically to 'grow the market' in work placement opportunities.

Given that the 'millennials' are facing significant uncertainty, ambiguity and complexity in how they craft their career trajectories, universities will have to radically re-think how they present the proposition to potential students in terms of providing them with clear pathways into, through and beyond higher education. In partnership with employers, universities should be also thinking about how to better equip their students for a non-conventional future. Students and graduates will need better tools with which to navigate their futures. More strategic, integrated and coherent

¹¹ T. Wilson (2012) A Review of University-Business Collaboration, for the Department for Business, Innovation and Skills.

¹² A. Pegg, J. Waldock, S. Henty-Isaac, and R. Lawton (2012) *Pedagogy for Employability*, York, Higher Education Academy.

institutional links between universities, employers and the professions to ensure clear progression pathways into the world of work would significantly enhance how work placements could be presented as a natural part of the student experience.

There appears to be both evidence of the positive impact of work experience on graduate outcomes and also evidence of university-business collaborations and curricular activities aimed to promote (undergraduate and postgraduate) students' engagement with work-related activities. Our brief review here suggests that further research that identifies how different forms of work-related activities separately impact upon student/graduate outcomes will necessarily involve consideration of the balance between employers' view (and use) of subject disciplines and typical subject career trajectories. Given the complex nature of the graduate labour market in the UK, this could be a challenging next step.