

GMT research

Do graduates use the skills and knowledge gained from their degrees?

In policy discussion skills are portrayed as being important for dealing with changes in the labour market. There is significant uncertainty concerning the extent to which graduates actually use the skills gained in higher education (HE) as part of their jobs. In popular wisdom some degrees do not give knowledge that can be applied in the labour market while others give useful, practical skills. In this article, PhD student Daria Luchinskaya¹ shows how some graduates from the Futuretrack survey² are using their skills and knowledge in their jobs after having graduated in the midst of a recession.

The findings used in this article form a part of my PhD research, which looks at whether graduates use their skills and knowledge differently in small businesses compared to large businesses, using data from the Futuretrack survey. Futuretrack is a longitudinal survey which followed UK full-time HE applicants from 2006 through to 2012 in four stages: the first at the time of application to HE, the second at the end of the first year of HE, the third in the last year of a HE degree (3 or 4 year) and the fourth stage when most of the respondents had graduated and had started work, in the autumn/winter of 2011/12. I looked at first degree graduates who were living in the UK and were employed at the time of the stage 4 survey, a sub-sample of just over 4,500 people.

The survey says...

Of the 4,500 Futuretrack graduates, just under two thirds worked in businesses which employed 250 people or more. The remaining third were relatively evenly distributed between micro, small and medium-sized businesses. While just over half of the Futuretrack graduates worked in professional and associate professional occupations at the time of the survey as may be expected, 15% worked in administrative and secretarial occupations and 14%

were employed in sales and customer service occupations. A very small number of graduates were employed as process, plant and machine operatives and in the skilled trades occupations, so any results connected with these jobs should be treated with caution.

The Futuretrack survey asked several questions related to the use of skills and knowledge. In particular, graduates were asked whether they used the skills (in general) and knowledge or subject discipline developed during their undergraduate degree in their current job³.

Three quarters of graduates reported that they used their degree skills, and just over half (54%) said that they used their degree knowledge in their current job at the time of the survey. There did not seem to be much variation between the use of skills and knowledge across different-sized businesses, but there was some variation by degree subject. For example, it is apparent in Figure 1 (over page) that non-STEM⁴ subject graduates were less likely to say that they used their skills and knowledge in their current job compared to STEM graduates.

As can be seen in Figure 2, (over page) there were also prominent variations by occupation: typically graduates who indicated that they used both skills and knowledge developed during their degree in their jobs were most likely to be in the professional and associate professional occupations. There was less variation across industries, however, the distribution, hotels and catering sector notably stood out as one in which few respondents reported using skills and knowledge (see Figure 3 over the page). This sector employed about 23% of all graduates.

Using logistic regressions showed that working in medium-sized businesses increased the likelihood of

¹ Daria Luchinskaya is in the final year of her PhD at the Warwick Institute for Employment Research.

² Futuretrack is a HECSU-funded study which collected information about the career progression of the 2005/2006 cohort of applicants to HE from application until 18-30 months after graduation. Read articles from the special edition of GMT at: http://www.hecsu.ac.uk/assets/assets/documents/GMT_Winter_2013.pdf

³ To see the questions asked in the study download the questionnaire at: http://www2.warwick.ac.uk/fac/soc/ier/futuretrack/what/final_futuretrack_2006_wave_4_generic_questionnaire.pdf

⁴ STEM subjects include those in the fields of science, technology, engineering and mathematics

Figure 1: Use of skills and knowledge in current job by degree subject

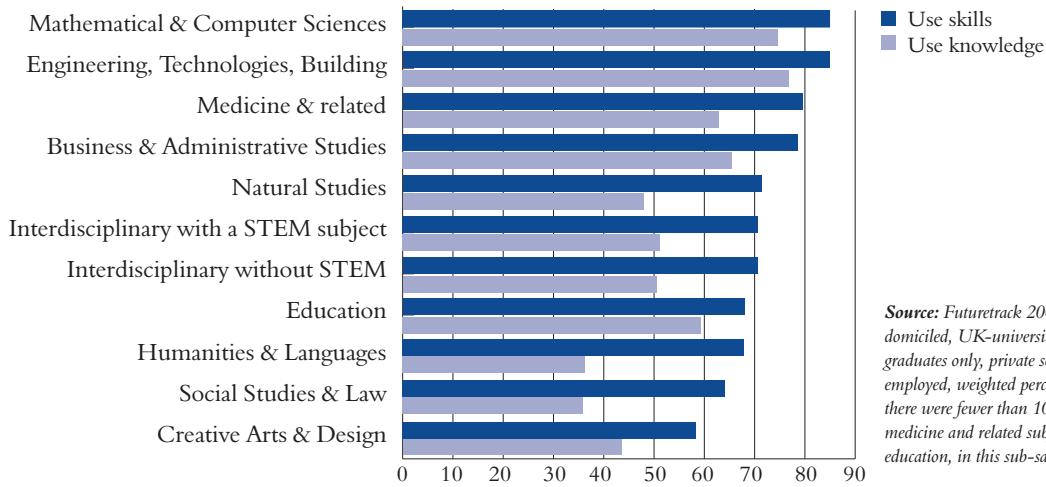


Figure 2: Use of skills and knowledge by major occupational group

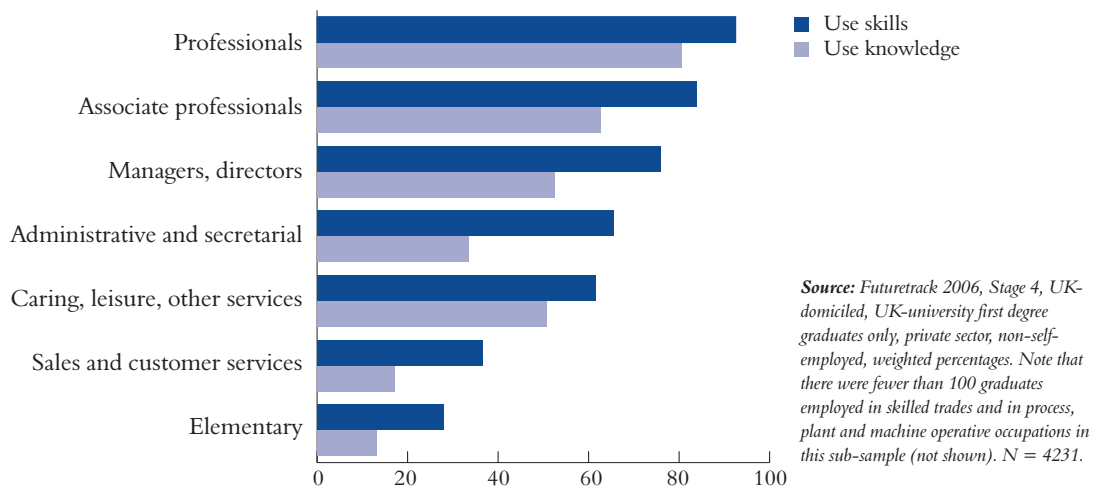
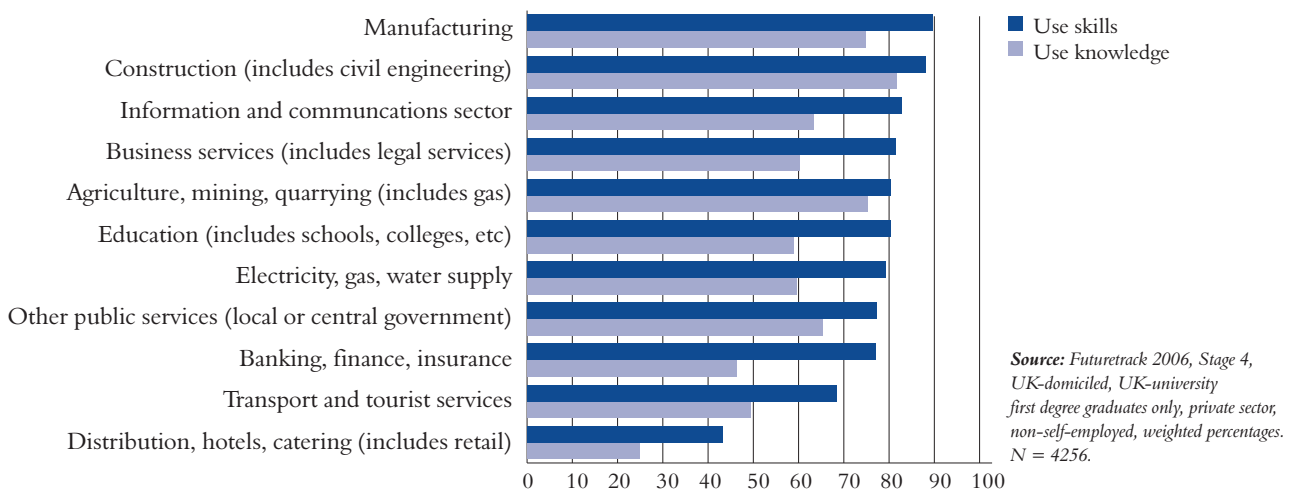


Figure 3: Use of skills and knowledge by industry group



using degree knowledge (but not skills) even when controlling for occupation, industry, degree subject, and personal characteristics such as gender, age and socioeconomic background. In fact, personal characteristics were not significant, for example being male or female did not make a difference to using degree skills and knowledge in work. Being employed in any occupational group compared to the professional occupations decreased the likelihood of using skills and knowledge. The industry worked in did not affect the likelihood of using degree skills but did affect the use of knowledge: being employed in manufacturing, construction, transport and tourist services and ICT, among others, increased the likelihood of using degree knowledge compared to being employed in banking, finance and insurance. As for subjects, graduates from medicine and related subjects and business and administrative subjects were more likely to say that they used their skills compared to those who studied the natural sciences. On the other hand, graduates from all STEM-related subjects, along with business and administrative subjects, education and interdisciplinary subjects without a STEM component, were also more likely to say that they used their subject knowledge than those from the natural sciences.

What the graduates had to say...

The Futuretrack survey did not ask how the graduates use their degree skills and knowledge, or indeed what the graduates understood these terms to mean. So, in the qualitative part of my PhD I conducted in-depth interviews with Futuretrack graduates who were working in associate professional jobs (marketing, advertising and PR). To date, I have interviewed 17 people, ten in small and seven in large businesses. Most were from managerial socioeconomic backgrounds and attended highest or high tariff universities. Six were male and 11 female. Seven of these graduates indicated in the questionnaire that they used both their skills and their knowledge in their jobs. One person used knowledge but not skills. The remaining nine people said that they used their skills but not their knowledge. In the interviews the graduates were asked to describe the difference between degree skills and knowledge, and to give me some examples of how they use (or do not use) these skills and knowledge in their work.

For most, knowledge was something to do with the specific course content that they learned during their degree. Respondents frequently talked about how it was theoretical and conceptual, or that it was the content of the seminars and lecture slides. Examples of knowledge included quantum mechanics, the Suez crisis, history of science, and so on. The skills were

often more confidently defined, usually by example, as more practical and transferable such as, how to research, write, argue, solve problems, present, manage time and so on. Respondents often mentioned that the skills were not necessarily tied to their specific degree.

Among those who mentioned that they used their knowledge, they talked about it as something which enabled them to create a professional rapport with colleagues or clients on an incidental basis. For example:

"Understanding the science behind the drug really enabled me to talk more effectively about how the company should market it [...] But I [...] don't need to, on a day to day basis, call on my science knowledge." (Female, natural sciences graduate, highest tariff university, employed in a small market research company as a marketing associate professional)

"[W]hat has been quite useful has been to anchor, or to bring in some kind of academic reference [...] which can sometimes help to unlock ideas, or frame some thinking." (Male, humanities and languages graduate, highest tariff university, employed in a small advertising company as a marketing associate professional)

"I kind of use the knowledge [...] because I recruit geoscientists [...] I did a geology degree, I have a clue about what they mean when they talk about carbonates and modelling [...] so I can talk to them probably a little more easily than someone without a degree in geology. I wouldn't say it's crucial." (Female, natural sciences graduate, highest tariff university, employed in a small recruitment company as a human resources officer)

One person who graduated from a media practice and theory degree with a specialism in film production also differentiated between knowledge and skills on a theoretical-practical spectrum. In this case, his definition of skills was to do with film-making whereas knowledge was to do with writing, researching and presenting, activities which most other respondents described as skills in less practice-based courses. For those who did not report using their knowledge, it was defined almost exclusively in terms of the course content, for example:

"In terms of knowledge, in terms of the things that I have studied and the history that I learned, none of that would be used in that role." (Female, humanities and languages, highest tariff university, employed in a small market research company as a marketing associate professional)

"I don't really use any of my knowledge gained about psychological studies or criminological theories in my day-to-

day work because it has nothing to do with it." (Female, interdisciplinary subjects including STEM, medium-tariff university, employed in a large insurance company as a marketing associate professional)

However, from some of the interviews with people who said that they did not use their degree knowledge in the Futuretrack survey, it seemed that it did help on some sort of conceptual level, as illustrated by the quote below, which reads in a similar way to the quotes about using knowledge above.

"There isn't really much call for in-depth knowledge of mathematical concepts as an analyst, but it does help to be highly numerate [...] the statistics that I did do didn't directly apply to the work that I do but the foundations of that sort of statistical knowledge could be applied." (Female, mathematical and computer sciences, highest tariff university, employed in a small market research company as a marketing associate professional)

The findings from the qualitative part of the study suggest that the way in which knowledge is interpreted

is much more likely to be affected by the type of degree that the graduate studied, and so would condition responses to whether or not degree knowledge is used in their job. On the other hand, the concept of skill seems to be less affected by the degree subject, which may provide one explanation for why graduates are more likely to say that they use the skills gained during their degree but not their knowledge. However, these interviews also show that where knowledge was used, respondents often mentioned that it was helpful indirectly, and this was also picked up on by a respondent who did not report using knowledge. This suggests that the usefulness of degree knowledge may be underestimated by university graduates, and provides another explanation for why the incidence of using knowledge was less than that of using skills. Ultimately, the graduates I spoke to were able to identify clearly the benefits of their university degrees for their own professional and personal capabilities.

Higher Education Academy Employability Update



HEA workshop and seminar series

www.heacademy.ac.uk/seminars-themes#emp

Improving employability through student and academic partnerships

5 February 2014, Birmingham City University

A model for increasing students' understanding of their employability – 10 years and evolving

21 February 2014, University of Ulster

Integrating 'sustainability' within degree programmes: towards a student handbook

28 February 2014, University of East Anglia

Designing work-integrated assessments: tools and techniques to align employability, assessment and technology

28 March 2014, University of Exeter

Nurturing talent – developing a professional mentoring scheme

2 April 2014, University of Leeds

Meeting employers needs by developing graduates as critical thinkers

24 April 2014, Kingston University

Excavate to innovate: 'unearthing' students' and tutors' perceptions of employability to energise work based pedagogy

30 April 2014, The University of Northampton

HEA annual conference 2014, 2-3 July 2014, Aston University

Preparing for learning futures: the next ten years.

The conference marks the tenth anniversary of the HEA and asks what the past ten years can tell us about what the next ten years might bring. The event will focus on the future of the student learning experience and ask how we are preparing ourselves for it; it will look at how current policy and practice is (or is not) equipping us for the opportunities that lie ahead and what may need to be done to both adapt to and create new learning environments. Bookings are now open, with an early bird rate available until 1 May 2014, www.heacademy.ac.uk/annual-conference/booking-information. #heaconf14

Enterprise Education

25 March 2014 HEA Employability seminar and webinar, York.

David Gibson OBE, Queens University Belfast, will be presenting on *embedding enterprise education into the academic curriculum to enhance employability*. Information and booking details will be available on the HEA website from 1 February 2014. www.heacademy.ac.uk/webinar-seminar-series

29th May 2014 HEA employability conference – *enhancing employability through enterprise education*. Information and booking details will be available on the HEA website from February 2014.