

The best university degrees to get a job

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Nearly 500 members of the public rated 20 university degree subjects in terms of their usefulness for employability. The top three were Law, Maths and English whereas the bottom three were Fine Art, Anthropology and Theology. A factor analysis was conducted to group the 20 subjects into broad academic fields. Five factors were identified, corresponding to the four fields of Art, Science, Language, Social science and a factor concerning the basic skills of English and Maths. A number of significant individual difference correlates involving demographic and personality variables were identified and discussed.

Keywords: university degrees, employment, vocational psychology

Parents, teachers and school pupils are all interested in not only the best discipline to study, given personal abilities and preferences, but also in the vocational 'usefulness' of various degrees for later getting a job. There remains considerable debate as to whether it is important to select a degree course because of its perceived usefulness in attaining a job or because it fits the interests, values and abilities of potential students.

Hitherto, there has been little research on this topic. Some previous studies have found that, in general, professional faculties (eg engineering, law, and business) have enjoyed a greater degree of prestige in comparison with the humanities and social sciences (Davis and Guppy, 1997). Moreover, graduates from such professional faculties report both real and perceived improvements in life opportunities, compared with graduates from other fields of study (Ascher, 1984, Baruch and Peiperl, 2000; Carnall, 1992; MacElean, 1993; Schofield, 1996).

There is also evidence that 'potential life success' is an important basis for student choice of field of study (Berger, 1988; Cebula and Lopes, 1982). Students appear to choose courses that, in their view, maximize their potential for life success in terms of acquiring highly salaried and satisfactory jobs. More generally, it seems likely that

perceptions of life success will affect beliefs about which fields of study are deserving of closure or further research funding (Furnham, 2002).

Two earlier studies have examined the British public's perceptions of university departments (Furnham and Sisteron, 2000) or faculties (Furnham, 2002) with reference to whether they deserved to be saved or closed in a fictional cost-cutting exercise. These studies found that the departments and faculties that the British public most wanted saved were those that they were familiar with (e.g. medicine, engineering, and education), whereas those they thought least worthy of saving were fields of study that were not established within the British higher-education system (e.g., divinity, fine art, and sports science). More recently, a study in Austria asked a general sample ($N = 315$) to rate the 'life chances' of graduates in 34 different courses. Overall, professional (Medicine, Law, Engineering, Architecture) and science (Chemistry, Physics, Maths) courses were rated most highly followed by social science (Psychology, Sociology, Politics) followed by languages (Spanish, French, German) with the bottom three disciplines being Theology, Philosophy and Architecture.

The current study looks at the beliefs of members of the general British public as to the best subject to choose in order to ensure employability. It also investigates whether these beliefs are systematically linked to demographic or personality differences in respondents.

Participants

There were 492 adults of whom 56.5 per cent were male. Their mean age was 32.8 years ($SD = 11.6$). Half (50.6 per cent) were single while 31.2 per cent were married. In all, 19 per cent had a school leaving certificate as maximum educational achievement, while 60.5 per cent had some university education. Most were employed from a very wide range of occupations. The majority (72.2 per cent) were white Europeans though many other groups were represented (8.3 per cent Black African/Caribbean; 4.6 per cent Indian). Two thirds were Christian (65.4 per cent). Their median income was £15,000-£20,000 (\$21,000-\$28,000) with 10 per cent earning under £10,000 (\$14,000) and 11 per cent earning over £50,000 (\$70,000). They were asked how religious they were on a 7-point scale (1- Not at all 7- Very) and 44.9 per cent scored between 1 and 3, 25.6 per cent the average, and 30 per cent over 4. Similarly they were asked to indicate their political beliefs on a 7-point scale from 1= Strongly leftwing to 7= Strongly rightwing: 31.5 per cent scored 1 to 3, 50 per cent scored 4, and the remainder over 4.

Questionnaire

Participants completed a simple three-page questionnaire. The first page contained the ratings of the various subjects. The following directions were given:

'I want you to imagine that a group of young people have asked for your advice. They have listed a number of degrees all of which they are interested in. But they are worried about getting a job afterwards. They want to know which subject will give them the *best knowledge and skills to get a job*. That is keeping their options for employment they want to know what you believe is the *best subject* to study at university to *ensure employability*. Clearly employers seem to believe that some subjects are better than others. Below is a list of subjects. We want you to rate them on a 10 point scale: 0 stands for not useful, 10 stands for extremely useful in getting a job.'

The second page contained the Gosling, Rentfrow, and Swann (2000) brief measure of the Big Five personality traits which has been validated many times (Furnham, 2008). These traits: extraversion, neuroticism, openness, agreeableness and conscientiousness are accepted widely by personality psychologists as the most parsimonious description of the fundamental, higher-order, biologically based, personality traits. The third page contained demographic information.

Procedure

Postgraduate students in educational psychology were asked to collect data from 4-6 people from widely different backgrounds as part of a psychometric course. Participants were informed that all questionnaires were to be completed anonymously and that they could withdraw at any time without giving a reason.

Results

Table 1 rank-orders the perceived occupational usefulness of the 20 disciplines. The rank order is not dissimilar from that of Furnham and Sistrone (2000), even though a somewhat different list was used in their study. The rank order correlation between the two was $r = .82$ ($p < .001$). This is particularly interesting because not only was the list of departments different, but the criterion was different too, since it concerned recommending departments for closure. In our data, law, maths and English were rated as the most useful, while fine art, anthropology and theology least useful.

A factor analysis with VARIMAX rotation revealed five factors,

together accounting for nearly two thirds of the total variance (see Table 1). The first factor comprised six arts subjects that would probably be in the arts faculty of a university. The second factor comprised three physical sciences. The third factor comprised three languages and law subjects. The fourth factor comprised mainly social sciences. The fifth factor was mainly defined by the basic subjects of maths and English, along with a negative loading from zoology, probably indicating a perception of low employability value for this subject.

TABLE 1
Descriptive statistics and factor structure loadings for the 20 disciplines in the study

Disciplines	Rank*	Mean	SD	Factor				
				1	2	3	4	5
Law	5	8.29	1.81			0.46		
Maths	2	7.84	2.10					0.76
English	1	7.26	2.54					0.57
Psychology	11	6.69	2.36				0.62	
Physics	8	6.61	2.39		0.80			
Chemistry	6	6.51	2.38		0.88			
Biology		6.37	2.37		0.82			
French	7	5.98	2.62			0.80		
Media Studies	19	5.95	2.77				0.74	
German	10	5.52	2.70			0.86		
Sociology	13	5.12	2.55				0.58	
Japanese		4.99	3.04			0.77		
Sports Science		4.95	2.62				0.66	
History	9	4.85	2.51		0.69			
Geography	12	4.69	2.37		0.54			
Philosophy	15	4.35	2.70		0.63			
Zoology	20	3.85	2.72					-0.44
Fine art	16	3.58	2.47		0.53			
Anthropology	18	3.53	2.49		0.65			
Theology		3.38	2.63		0.68			
Eigenvalue				5.81	2.11	1.80	1.50	1.27
Variance				29.1	10.6	8.9	7.4	6.3

0=Not Useful 10=Extremely useful

Note: * The rank column gives the order for saving departments from Furnham and Sistrone (2000)

A number of analyses were performed at the item (20) and factor (5) levels of the dataset. First, a series of ANOVA explored sex differences. Four were significant at the $p < .01$ level suggesting that females rated English, French, media studies and psychology higher than did males.

Subsequently, correlations were computed between the 20 ratings and participant age, education, income, religious and political beliefs. Considering only correlations $> .10$, older people rated English, German and maths more useful than younger people. There were no significant correlations involving education levels and only one involving income, with wealthier participants rating media studies as less useful. More religious people rated psychology, philosophy, sociology and theology higher than less religious people. There were four significant correlates of political beliefs: right-wing participants rated maths higher and biology, chemistry, and zoology lower than their left-wing peers.

Last, a series of hierarchical regressions were performed, with the five factor scores as the criteria. Demographics (sex, age, income) were entered in step 1, followed by ideology, politics and religion in step 2, and personality (Big Five) in Step 3. The regressions for arts (factor 1) and science (factor 2) did not reach significance. The regression for languages and law (factor 3) was significant ($F(10, 392) = 3.28, p < .001$; adj $r^2 = .06$), suggesting less stable (ie 'neurotic'), agreeable, females rated this subject group more highly. The regression for social sciences (factor 4) was also significant ($F(10, 392) = 2.43, p < .01$; adj $R^2 = .04$), suggesting that religious, lower income people rated it more highly. The last regression on the basic literacy subjects (maths and English; factor five) reached significance too ($F(10, 372) = 5.75, p < .001$; Adj $R^2 = .11$), indicating that older, more religious, 'Conscientious' and 'agreeable' participants rated it more highly.

Discussion

The results of this study were clear; of the 20 disciplines rated for employment usefulness, three were deemed very useful (over 7/10) while four were rated relatively useless (3/10). Some degree courses are very clearly vocational, such as accountancy and architecture, medicine and dentistry, engineering and law. The only such course included in our list was law, which received the highest rating. However, it should be noted that a surprisingly high number of students who read law do not go on to practice it, while many of those who read a wide range of other courses eventually convert to law.

Of the subjects included in this study's list, it was the basic ones (broadly representing the 'three Rs') that were rated most highly. Most jobs require basic levels of literacy and numeracy, which was implicitly recognised in participant ratings. It is also straightforward why the three 'bottom' subjects were rated as less useful for getting jobs. Many artists are unemployed or have very limited opportunities to be commercially successful in their art (potter, painter, sculptor, etc). Equally, it is not

immediately obvious what transferable skills one acquires as an anthropology student though it may be possible to make a case for it being no less useful than sociology, a closely related discipline which was rated much more highly. Theology came bottom of the list for usefulness, even though it could be argued that it has a great deal in common with philosophy, which was rated much more highly.

Overall, the factor analysis helped establish a clear pattern in perceived usefulness, with arts subjects seen as less useful than science subjects and languages and social sciences between the two. The two anomalies that merit discussion are the relatively high ratings of psychology and media studies. This may have been due to the sampling method whereby postgraduate students on a psychology course may have approached others with similar interests to themselves.

The high correlation between the ratings of this study and those in Furnham and Sistrer (2000) is worth noting. In that study, participants were asked to help a hypothetical university make decision about saving versus cutting departments. Participants most wanted English, followed by maths, saved and media studies, followed by zoology, cut. The fact that the two sets of ratings correlated at $r = .81$ suggests that, in making their judgements, participants in Furnham and Sistrer (2000) may have implicitly relied on criteria of vocational usefulness.

We also examined demographic, ideological, and personality correlates of the ratings at both discipline and factor levels. Overall, the results suggested agreement in the ratings, although a number of demographic and individual difference correlates were found. The former mainly concerned religion and income, whereas the latter involved neuroticism, conscientiousness, and agreeableness. Nevertheless, these effects were not remarkably strong, suggesting a consensus of views. Alternatively, it is possible that the individual differences variables incorporated in this study are not those that will differentiate between participants on this issue.

It is important to point out that this study is about public perceptions *not* actualities. That is, what people believe or think is the best degree to get a job is not necessarily accurate. Thus many people go from history or zoology degrees to become very successful in life, while those who read maths or English may fail to find good employment. Many graduates read subjects that they are interested in, and accept the fact that they will need training for, a specific job *after* completing their degree. Some organisations attempt to produce tables that indicate actual rates of employment of graduates in different subjects though these are often problematic as they do not take into consideration the

university, nor the rapidly fluctuating job market in a turbulent economy. This research area could usefully expand to look at a far greater range of subjects from the more traditional (ie classics) to the more modern (ie neuroscience). Further, it would be interesting to compare prospective students, their parents, teachers and employers perceptions. Many recognise that similar useful skills (eg clear report writing, critical thinking, data analysis) are acquired through quite different degrees. Equally many would argue that most degrees are not designed to be vocational in any narrow sense but afford a person an opportunity to study a particular subject in depth.

Career counsellors tend to focus on matching people's interests, abilities, and traits with the requirements of a job, rather than on perceptions about employment prospects. Nevertheless, some people choose to study certain disciplines for their vocational potential and financial rewards more so than because they find them intrinsically interesting. Discovering students' beliefs about the vocational potential of university courses may help career counsellors improve their understanding of their clients' needs and motivations.

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Note

Quality and standards in higher education

Peter Williams

Author's note: This article is based on a presentation given at a discussion on quality and standards in higher education organised by the Higher Education Policy Institute (HEPI) in the House of Commons on 27 January 2010. I have tried to turn what was essentially a talk into a written text. As a result the article has in some places a degree of informality not usually seen in these pages.

Quality and standards in higher education is a tricky topic, but one that won't go away. Everyone has a view, but it's rarely informed by fact. The subject is particularly difficult for several reasons. Perhaps the most important of these is the lack of any generally agreed definition of what quality and standards are. We all use the same words but we mean different things by them. What is 'quality', what are 'standards' in the world of higher education? We need to be clear about this to avoid talking at cross purposes. When I refer here to good quality higher education I mean courses which:

- have a clearly defined purpose;
- are consciously and carefully designed to meet that purpose;
- conform to the requirements of the national Framework for Higher Education Qualifications;
- are delivered using pedagogical approaches and techniques that are fit for their purpose and regularly checked for their effectiveness; and
- in which students are assessed against agreed national expectations, using assessment methods that will measure reliably what is intended to be measured.

When I use the word 'standards', I mean explicit and predetermined levels of knowledge, understanding and skill that are required to be demonstrated before a degree is awarded and which meet the expectations of the UK's Academic Infrastructure (a set of nationally