

SRHE GRADUATE EMPLOYABILITY & EMPLOYMENT NETWORK

*Graduate Employment, Graduate Employability: Mapping the Research Field,
Setting the Research Agenda, London 21st May 2010*

Trends and patterns in graduate
employment and access to career
opportunities: what does recent and
current research tell us?

Professor Kate Purcell

University of Warwick

The big issues relating to HE expansion

- Has the expansion of higher education led to greater equality of opportunity..

1. ...to access HE?

2. ...to benefit from it?

i.e. How far does HE participation challenge or reinforce social and cultural advantage and disadvantage?

- Are students and graduates obtaining skills and knowledge that

1. ...enhances their career opportunities?

2. ...leads to employment that uses their HE skills and knowledge?

- Is current policy to expand higher education justified in the light of current and recent students' and graduates' experiences and the impact of this public and private investment in HE?

What I'm going to talk about

- 'Employability', employment, careers and what is a 'graduate job'
- Recent labour market and occupational trends and the relationship between these and HE expansion.
- Labour market change, in terms of the balance of occupations, skill level, and the changing 'graduate premium' among early career graduates.
- The implications for graduate employment opportunities in the future.

What *are* employability skills?

‘... a set of attributes, skills and knowledge that all labour market participants should possess to ensure they have the capability of being effective in the workplace – to the benefit of themselves, their employer and the wider economy. Employability skills include...

Self-management ...Teamworking .. Business and customer awareness ...Problem solving ...Communication and literacy .. Application of numeracy ...Application of information technology

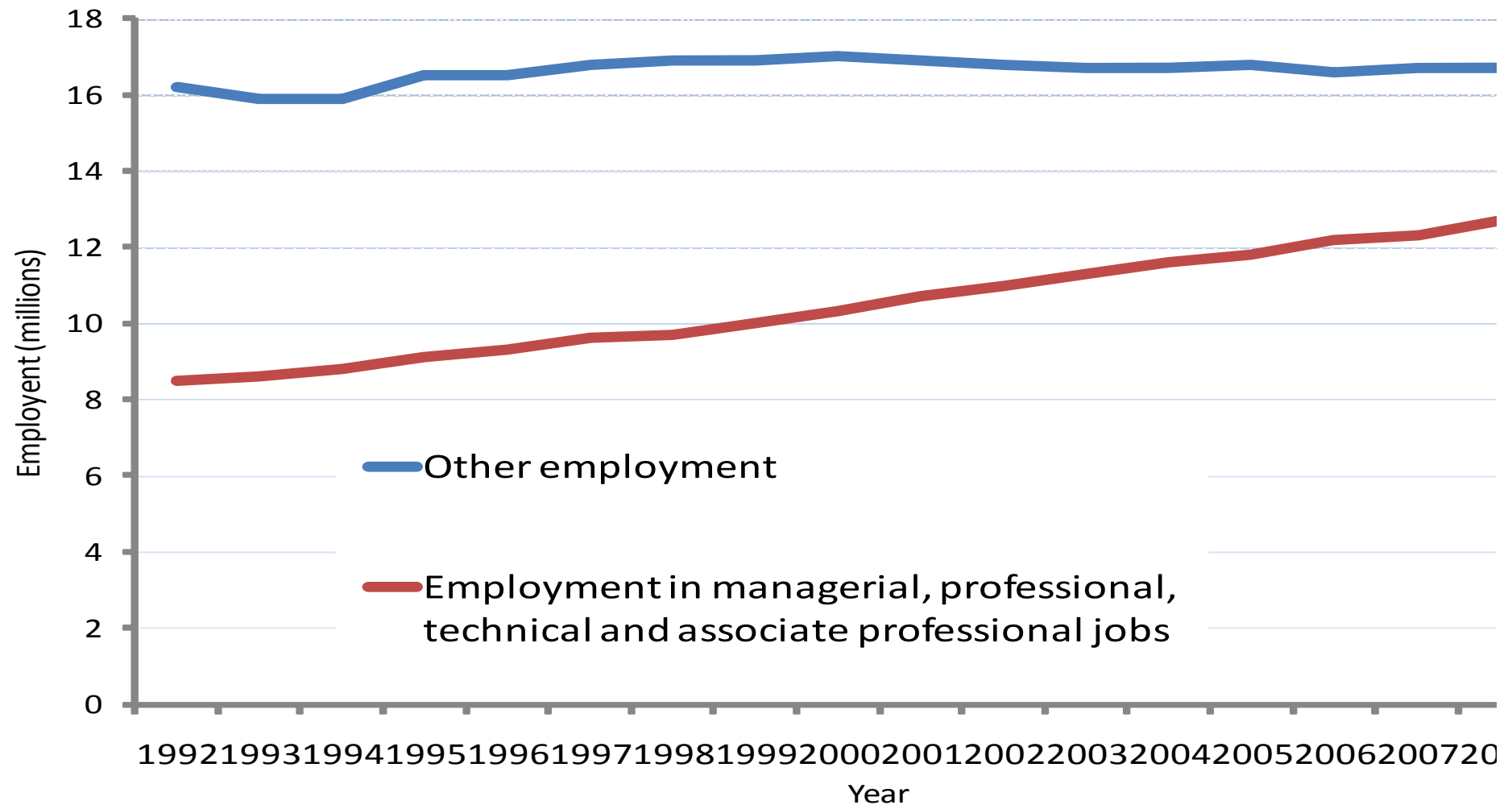
Underpinning all these attributes, **the key foundation [my emphasis]**, must be a **positive attitude**: a 'can-do' approach, a readiness to take part and contribute, openness to new ideas and a drive to make these happen. Employers also value **entrepreneurial graduates** who demonstrate an innovative approach, creative thinking, bring fresh knowledge and challenge assumptions.’

Source <http://highereducation.cbi.org.uk/policy/employability/what-are-employability-skills/>

What is a graduate occupation?

- Is it a job for which a degree is a prerequisite?
- Is it a job for which undergraduate education is a necessary preparation?
- Is it a job which *uses* substantive graduate skills and/or knowledge directly?
- Is it a job with career potential?
- Is it a *better* job (e.g. higher earnings, better status, more job satisfaction) than could be obtained without a degree *by that person*?

The changing structure of UK occupations



Source: Elias and Purcell (2010) using UK Labour Force Surveys, 1992 – 2009 (Quarter 2 each year)

Defining graduate occupations - sources of information

- Databases from development work underlying national occupational classifications (SOC90 and SOC2000)
- LFS text descriptions of qualification requirements for 65,000 jobs (1996/97)
- Labour Force Survey (1.0 million graduates, 1991-2001 on SOC90, 2002-2006 on SOC2000)
- Detailed interviews with graduates about their jobs

Analysing occupational change in more detail: a classification of graduate jobs

- Traditional graduate jobs

The established professions, for which, historically, the normal route has been via an undergraduate degree programme

- Modern graduate jobs

The newer professions, particularly in management, IT and creative vocational areas, engineering, which graduates have been entering increasingly since educational expansion in the 1960s

- New graduate jobs

Areas of employment to which graduates have increasingly been recruited in large numbers; mainly administrative, design, technical and 'caring' occupations

- Niche graduate jobs

Occupations where the majority of incumbents are not graduates, but within which there are stable or growing specialist *niches* which require higher education skills and knowledge

For further details, see

<http://www2.warwick.ac.uk/fac/soc/ier/research/completed/7yrs2/rp6.pdf>

A finer-grained way of clarifying employment trends...

Overall growth in employment, but substantially greater in occupations requiring highest skills and qualifications - **Traditional** and **Modern** graduate jobs grew by **56%** and **61%**, **New** graduate jobs by **45%**, **Niche** by **31%**, compared to just over **8%** of **Non-graduate** jobs.

- Growth concentrated in FT jobs
- Greater growth of women's jobs at all levels except non-graduate jobs
- Growth of PT employment mainly in non-graduate jobs
- Growth in self-employment mainly among male **Non-graduate** employees and decline in women's self-employment in **Niche** graduate jobs.

Impact of changes, by SOC(HE)

OCCUPATIONAL CATEGORY	Change in 26-35 women's share of this category 1993-4/2007/8	IMPACT ON THE full-time GRADUATE PREMIUM	IMPACT ON THE Full-time PAY GAP
Traditional graduate jobs	44% - 53%	No change (13%)	Down from 88% - 83%
Modern graduate jobs	37% – 43%	2% - zero	Up from 81% - 83%
New graduate jobs	38% - 47%	19% - 16%	Down from 97% - 87%
Niche graduate jobs	43% - 46%	26% - 40%	Little change (96% - 95%)
Non-graduate jobs	46% - 44%	20% - 18%	Up from 75% - 81%

Occupational category (SOC[HE])	Employment change(00s\) 1993-04 to 2007-08 (%)	% with degree		% female		Graduate premium ¹ (%)	
		1993-94	2007-08	1993-94	2007-08	1993-94	2007-08
Traditional graduate occupations	+205 (69)	82	86	44	53	13	13
Biological scientists & biochemists	+13 (58)	79	88	44	48	9	8
Modern graduate occupations	+204 (51)	51	70	37	43	2	0
Software engineers, programmers	+33 (37)	45	63	18	13	2	-2
Social workers, probation officers	-7 (-23)	30	58	67	82	19	11
New graduate occupations	+122 (22)	37	57	38	47	19	16
Personnel, training etc managers	+3 (9)	40	62	62	61	41	25
Laboratory technicians	-9 (-36)	33	50	45	59	17	5
Niche graduate occupations	+36 (3)	15	37	43	46	26	40
Nurses	-47 (-28)	5	34	89	85	0	7
Non graduate occupations	-664 (-17)	3	11	46	44	20	18
Accounts clerks, book-keepers etc	-46 (-27)	9	25	75	71	40	22
Sales assistants	-35 (-16)	2	12	79	64	18	1
Total	-97 (-2)	15	32	44	45	42	48

Source: UK Labour Force Surveys, 1993-94 and 2004-06. Information above is for the 26-35 age range in each period. (c.f. Elias and Purcell 2009).

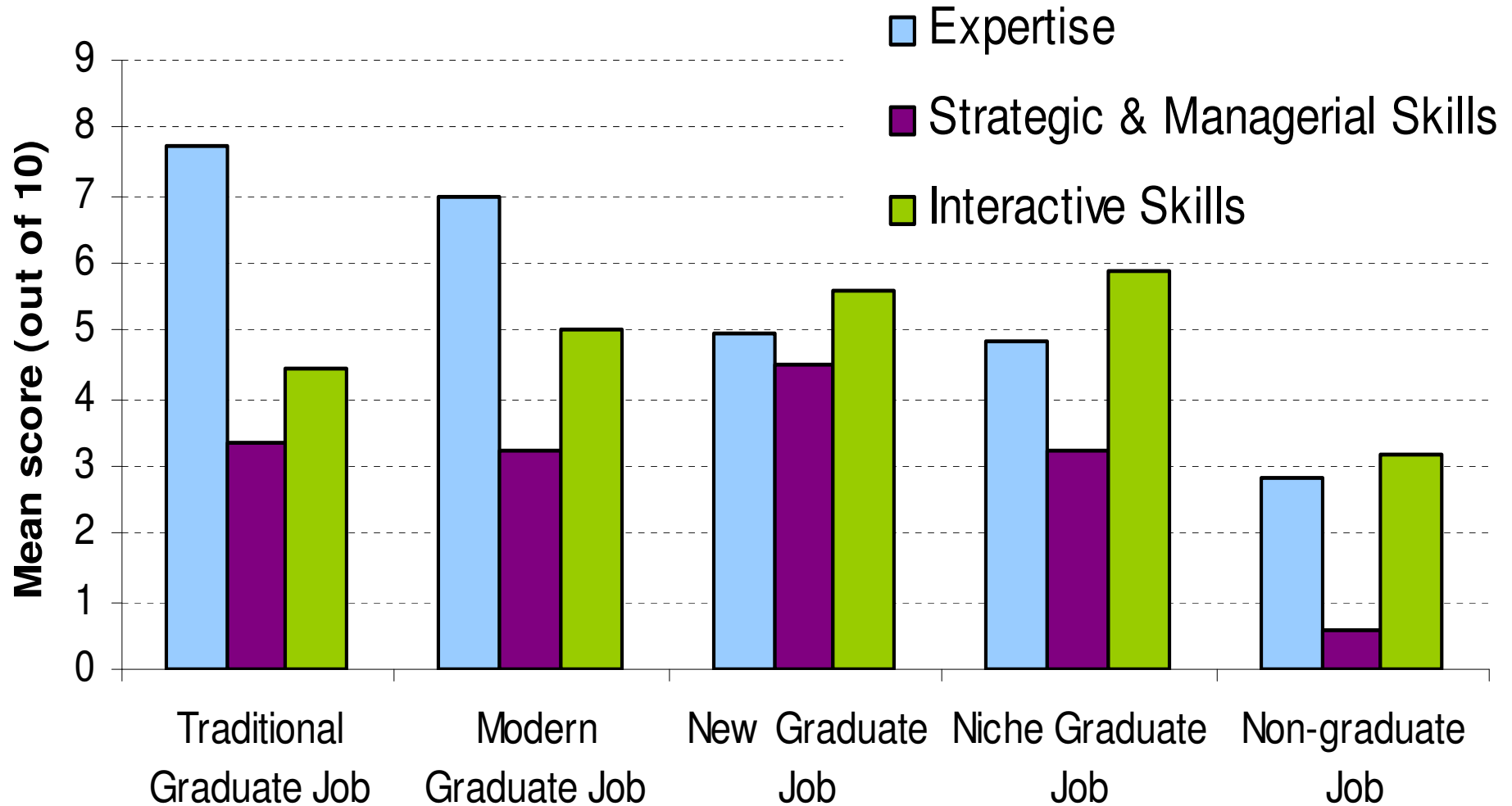
Note: 1. The 'graduate premium' is simply the ratio of the gross weekly earnings of degree and non-degree holders for employees in full-time employment.

Analysing graduate jobs we identified three clusters of skills



Source: Graduate Careers Seven Years On survey (Purcell, Wilton and Elias paper, forthcoming).

Use of skill clusters in current jobs by SOC(HE)



Source: *Graduate Careers 7 Years On* transcribed follow-up interview data (201 respondents)

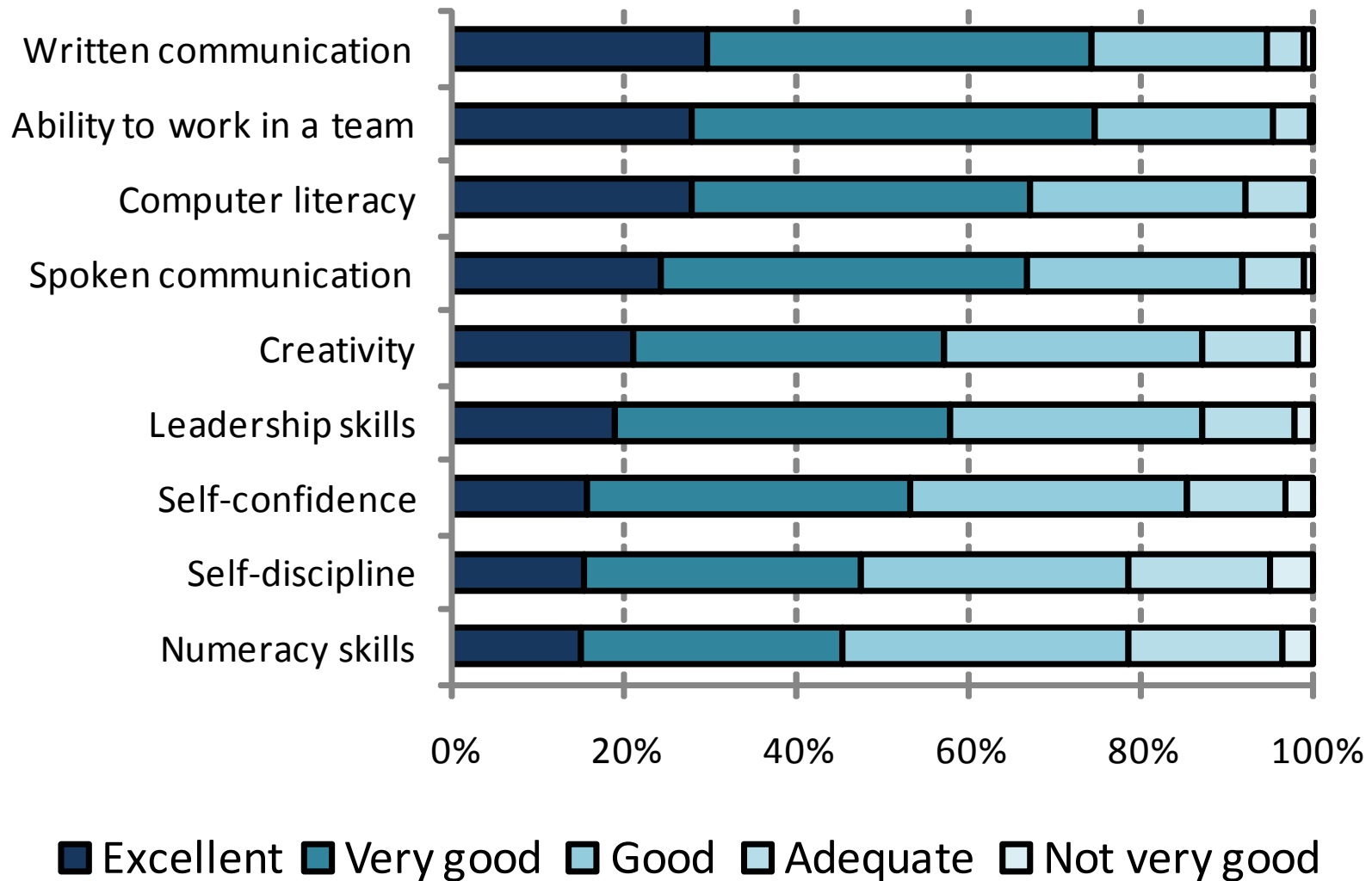
OK – this is the pattern of occupations in which graduates have been employed until very recently: but what **ARE** graduates, and what expertise - skills and knowledge – do they offer to employers?

One thing is sure – they are not a homogeneous population, as some insights from Futuretrack reveal..

Using data from FUTURETRACK - An unprecedented investigation of the relationship between HE participation and labour market outcomes

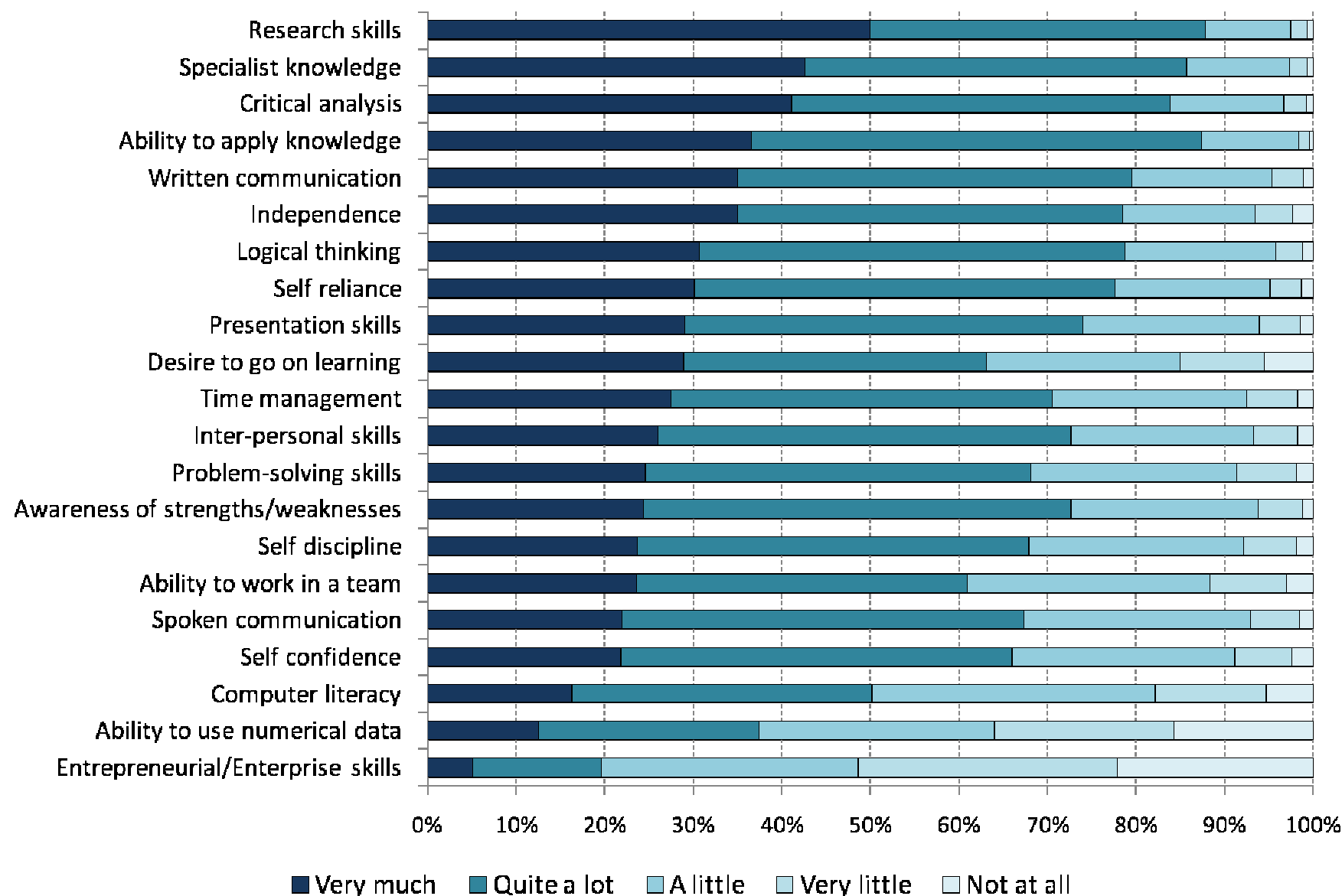
- Longitudinal study – tracking respondents from HE application in 2005-6 until 2011-12;
- Large sample with comprehensive and representative coverage of full spectrum of undergraduate full-time student population, including EU and other overseas students;
- Includes applicants who did not proceed to HE;
- Independent, policy-relevant research
 - Interdisciplinary team
 - Mixed-methods research with potential for quantitative and qualitative extension.

Students' self-rating of their skills in their final year



Source: Futuretrack 2006 combined dataset: UK based third year finalists (weighted)

Extent to which students think courses enabled them to develop different skills



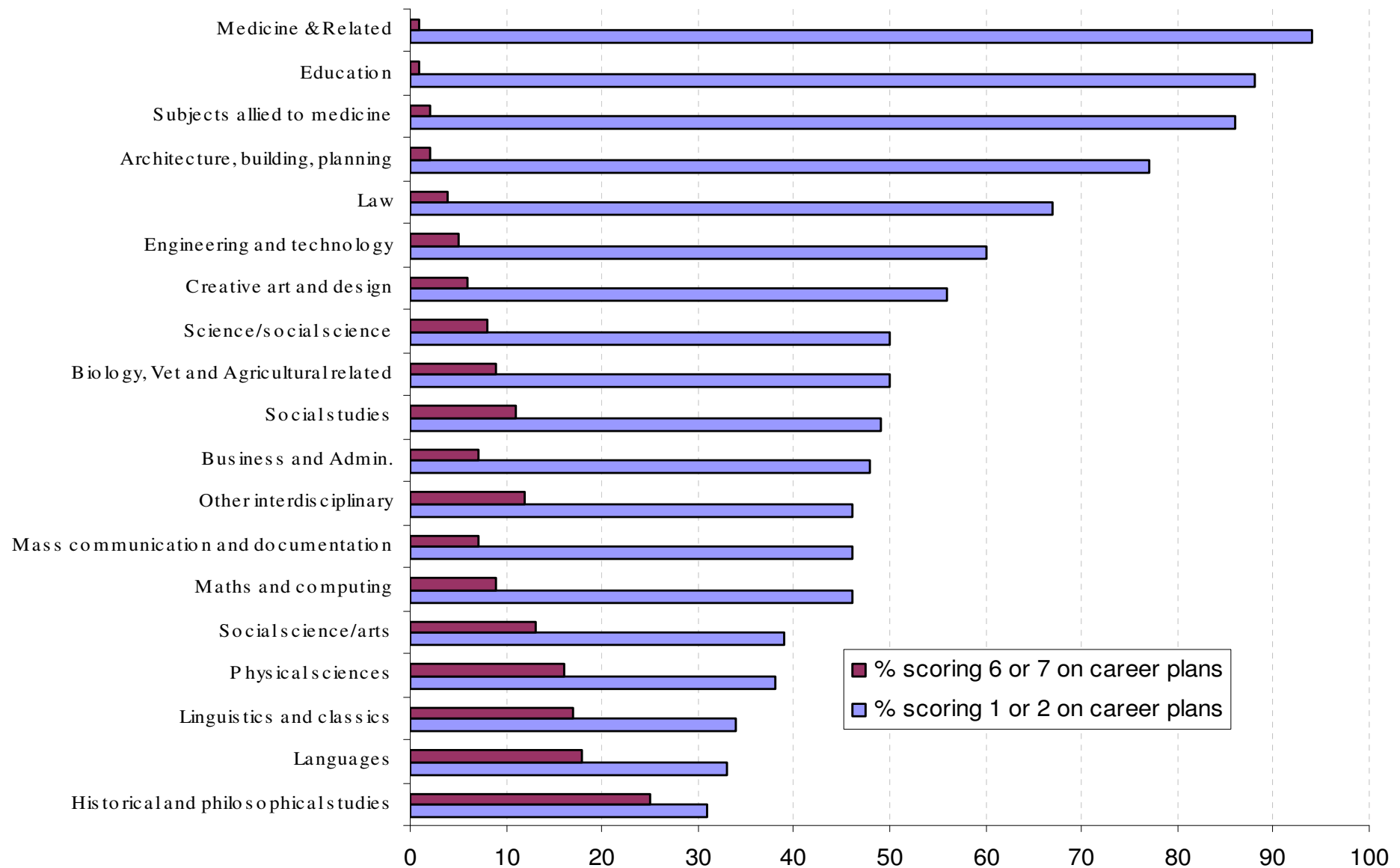
Source: Futuretrack 2006 combined dataset: UK based third year finalists (weighted)

The extent to which these skills were developed on different courses varied considerably. A detailed exploration of differences between subject, discipline areas and the extent to which students regarded their courses and vocational or non-vocational has been undertaken by the research team. A Futuretrack thematic paper discussing these differences and the extent to which there is a core of 'graduate skills' or 'transferable skills' developed on undergraduate programmes is in production and will be published in summer 2010.

Thematic papers based on Stage 3 analyses will be published on the IER and HECSU websites as final drafts become available.

See <http://go.warwick.ac.uk/glmf>

Clarity of career plans by subject



Source: Futuretrack survey Stage 1 (Purcell *et al.* 2008)

Key characteristics of 2006 students in selected subjects

	% Female	% Asian	% Black	% 25+	% 'professional managerial background
ALL 2006 accepted UK applicants	55.4	9.6	5	11.8	41.3
Pre-clinical Medicine	57.5	18.5	2.7	16.3	58.2
Pharmacy etc	57.3	42.7	13.2	13.3	35.6
Nursing	90.5	2.9	6.1	42.2	25.7
Physics	19.4	5.3	1.5	2.9	57.8
Mathematics	43.5	14.8	2.1	2.9	48.9
Computer Science	12.1	15.0	6.1	9.3	34.1
Mechanical Engineering	6.7	10.4	4.6	5.5	44.9
Economics	29.0	22.8	6.5	1.5	51.9
Sociology	74.7	8.2	6.2	13.6	37.1
Media Studies	48.8	5.3	4.4	4.8	37.5
History by period	45.5	2.6	0.6	7.2	52.4
Design Studies	62.1	6.1	3.2	9.4	36.6
Languages	71.3	3	2	6.8	52.2

Source: Futuretrack survey Stage 1 (Purcell *et al.* 2008)

Subject studied	Mode of access to HE					
	% non-standard entry	% at pre-1992 university	% with high entry qualifications.	% through UCAS extra or Clearing	EU	Other overseas ⁴
All Subjects	27.8	46.7	26.9	7.5	6.6	7.0
Mathematics	6.3	87.9	64.3	7.6	4.9	9.4
Mechanical Engineering	24.8	62.5	34.9	5.5	8.5	20.8
Computer Science	31.1	36.8	14.2	7.5	5.8	5.8
Business Studies	20.1	20.2	15.6	9.5	11.4	9.2
Management Studies	25.6	35.6	21.4	7.6	13.8	12.9
Law (by area)	16.7	55.2	42.4	9.5	6.1	14.1
Nursing	58.9	34.6	7.7	7.9	1.6	0.3
Design Studies	41.0	14.5	9.9	3.8	6.0	4.0
Tourism, Transport and Travel	35.2	3.0	5.4	6.6	10.9	5.0
History	14.2	76.3	49.3	4.6	2.9	2.7
Languages	15.9	73.3	46.1	6.4	7.8	3.2
Sociology	23.6	47.6	19.3	12.6	3.9	2.7
Media Studies	26.4	16.9	11.9	6.9	6.7	3.2

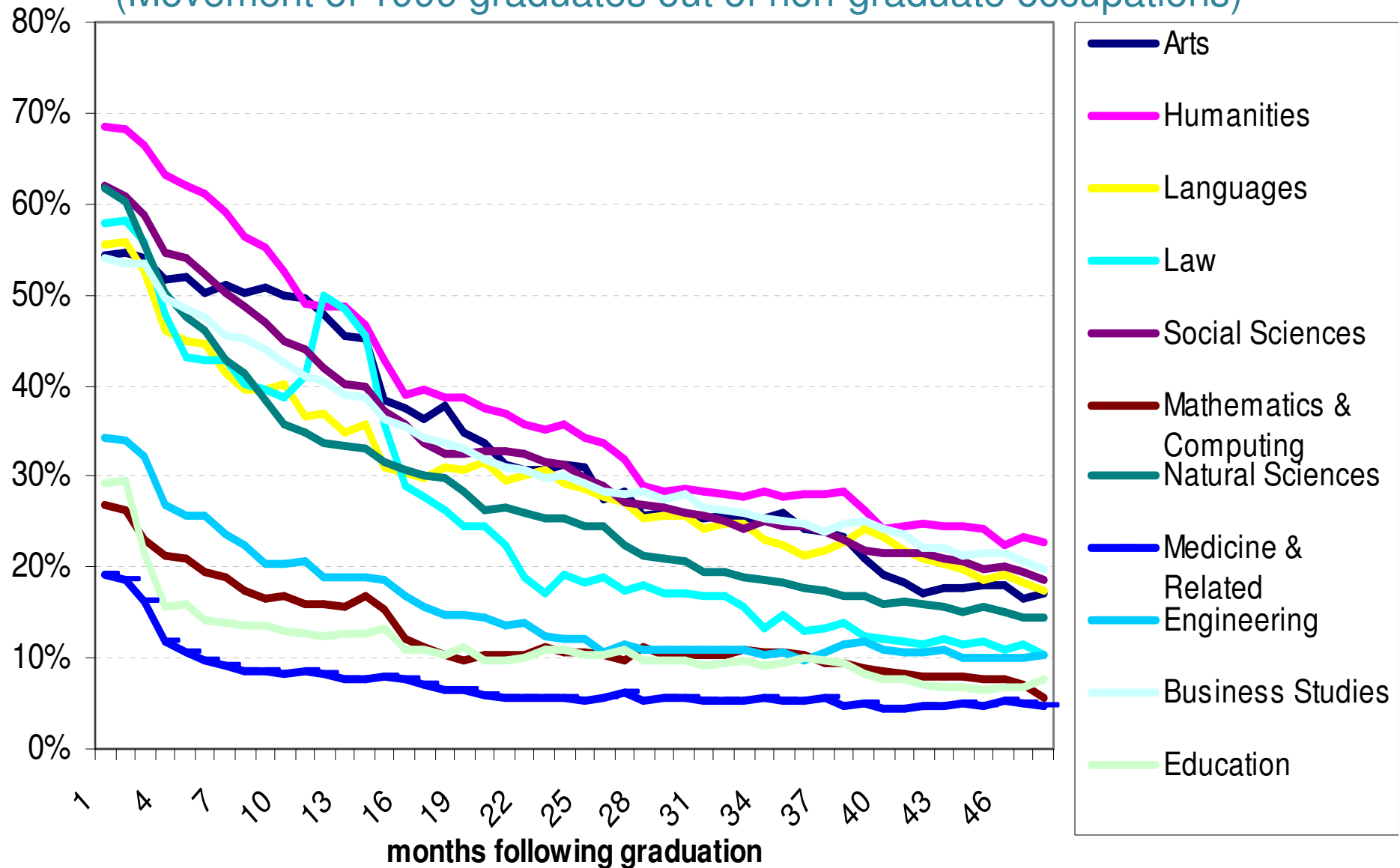
What graduating students hoped to do in the year after completing their degrees



Source: Futuretrack 2006 combined dataset: UK based third year finalists (weighted)

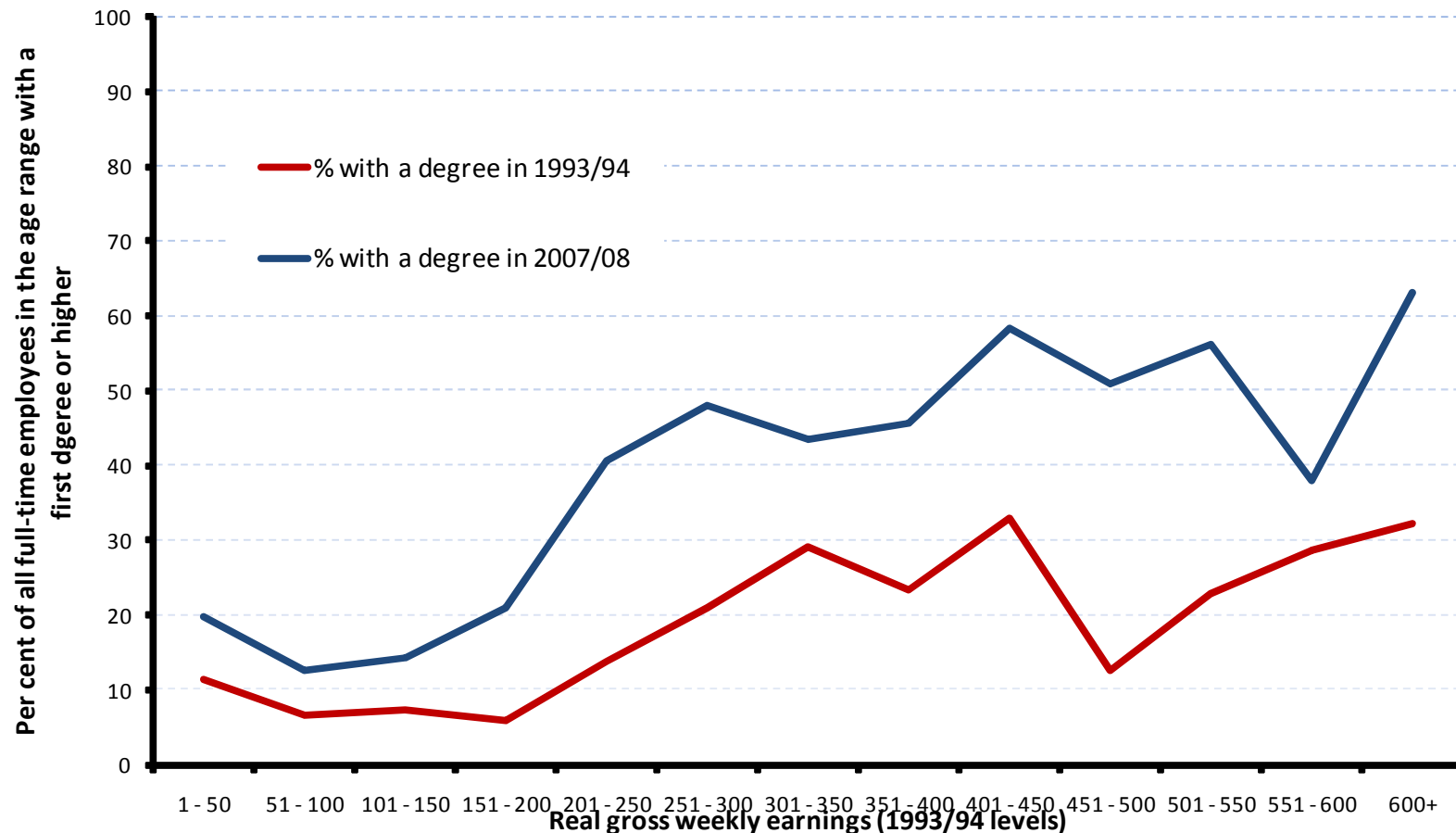
Does subject of degree matter for graduate career opportunities?

(Movement of 1999 graduates out of non-graduate occupations)



Source: *Class of '99 survey* (Purcell *et.al* 2005)

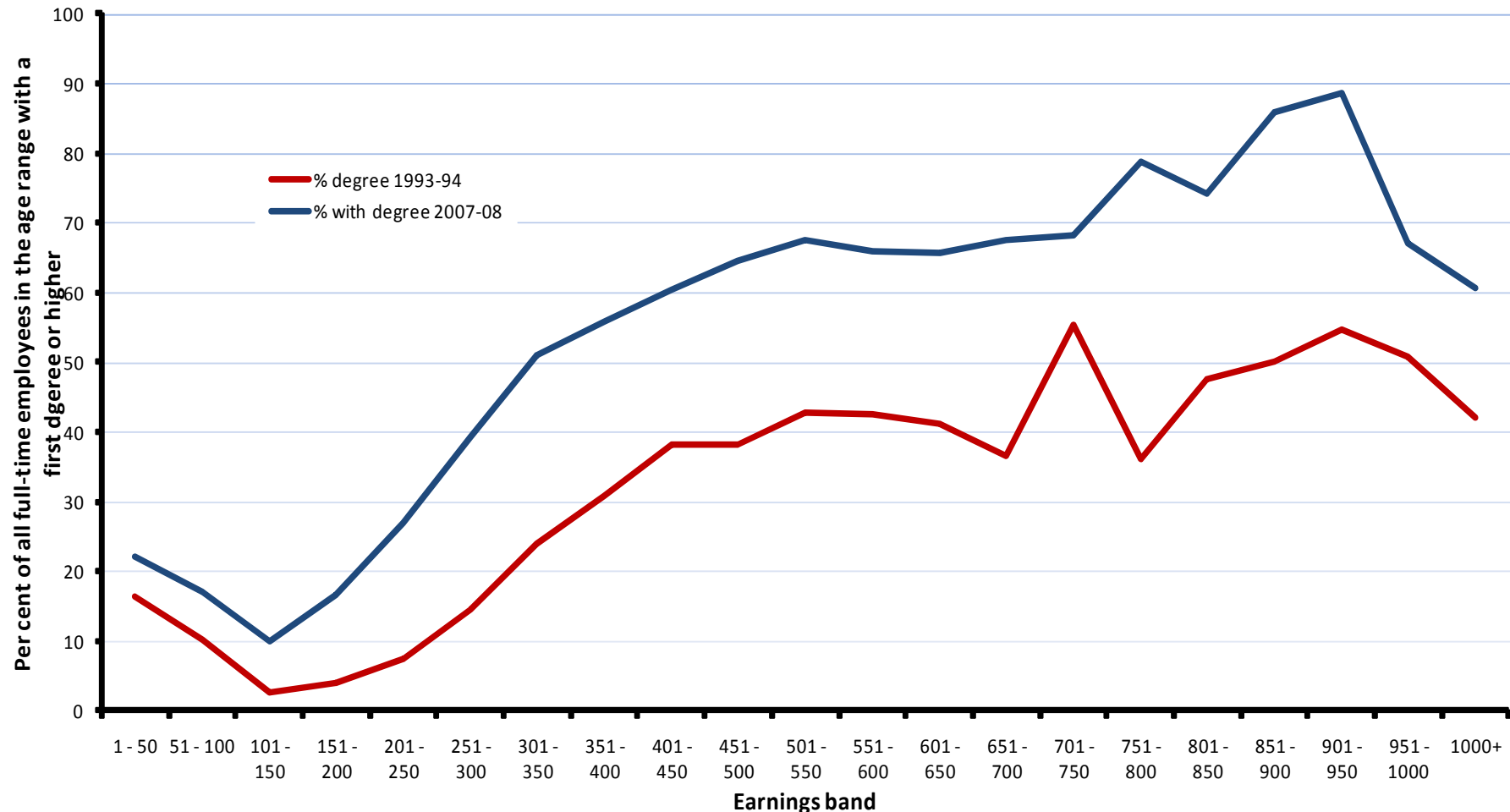
Change in the distribution of 21-25 year old graduates by earnings, 1993-94 compared with 2007-08



Source: LFS (Elias and Purcell 2009)

Note: Earnings in 2007-08 have been deflated by 75 per cent – the growth in earnings of all employees between 1993-4 and 2007-08. The mean pay of full-time employees aged 21-25 year in 1993/94 was £214.

Change in the distribution of 26-35 year old graduates by earnings, 1993-94 compared with 2007-08



Source: LFS (Elias and Purcell 2009)

Note: Earnings in 2005-6 have been deflated by 75 per cent – the growth in earnings of all employees from 1993-94 to 2007-08

Research findings from current and recent projects

The move to mass participation in HE did not lead to widespread graduate under-employment, BUT policy-relevant findings include:

- very different outcomes for graduates with different skills, qualifications and access to labour markets
- persistent and increasing gender pay as careers progress;
- gender segmentation in graduate jobs and lower reported satisfaction with career development among female graduates;
- persistent under-representation of women in 'top jobs';
- significantly lower fertility among female graduates (around one third remaining childless at age 40);
- increasing confusion about 'the value of a degree';
- increasing segregation in the graduate labour market.

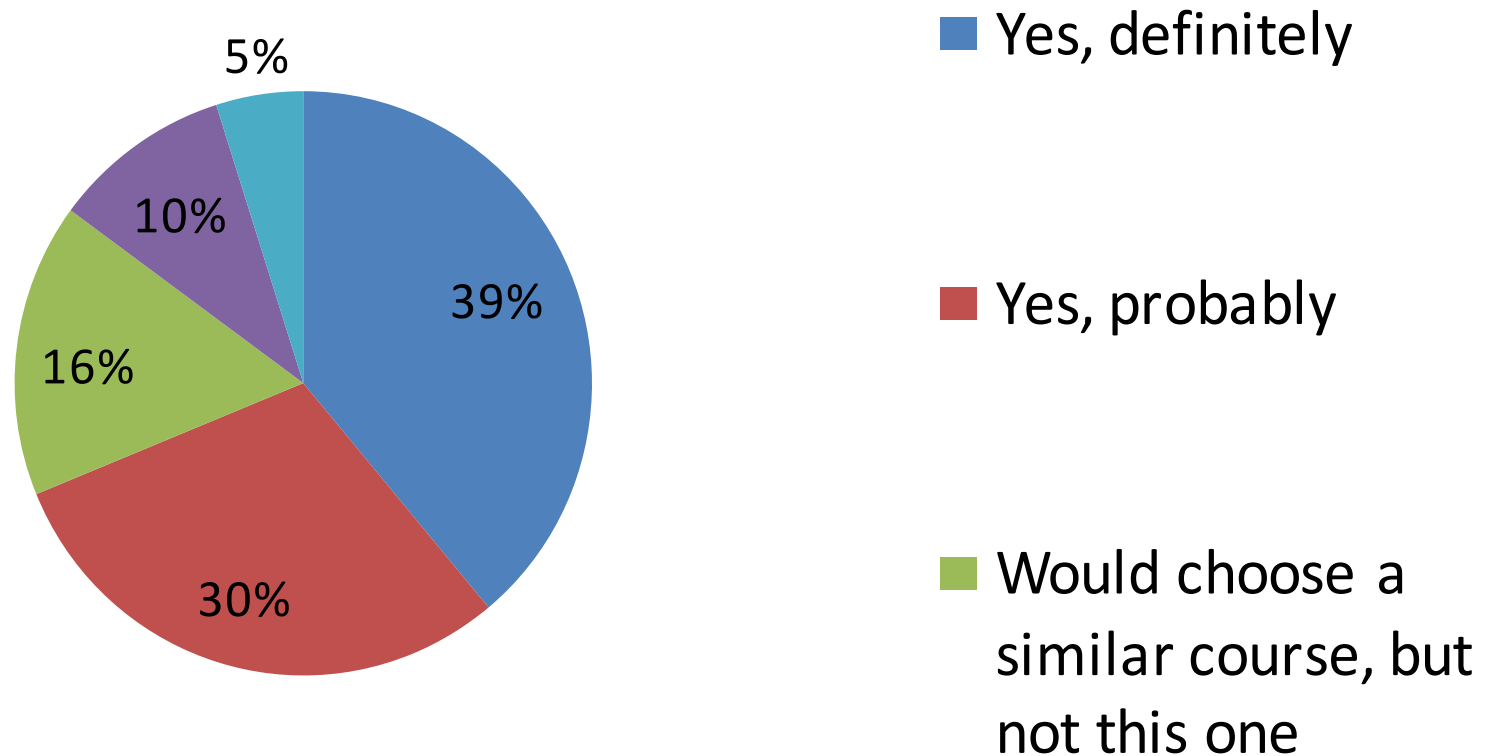
BUT...

- Since 2003-2006, when the classes of '95 and '99 leavers were last surveyed we've had a global recession..and evidence of increasing graduate unemployment and underemployment ...

Is this a blip, or a longer term trend?

AND higher education is not just about 'employability' and earnings expectations, or even employment ...

If you were starting again, would you choose the same course?



Source: Futuretrack 2006 combined dataset: UK based third year finalists (weighted)

For more information about the IER projects
and publications cited see
www.go.warwick.ac.uk/glmf

and contact

Kate.Purcell@warwick.ac.uk

