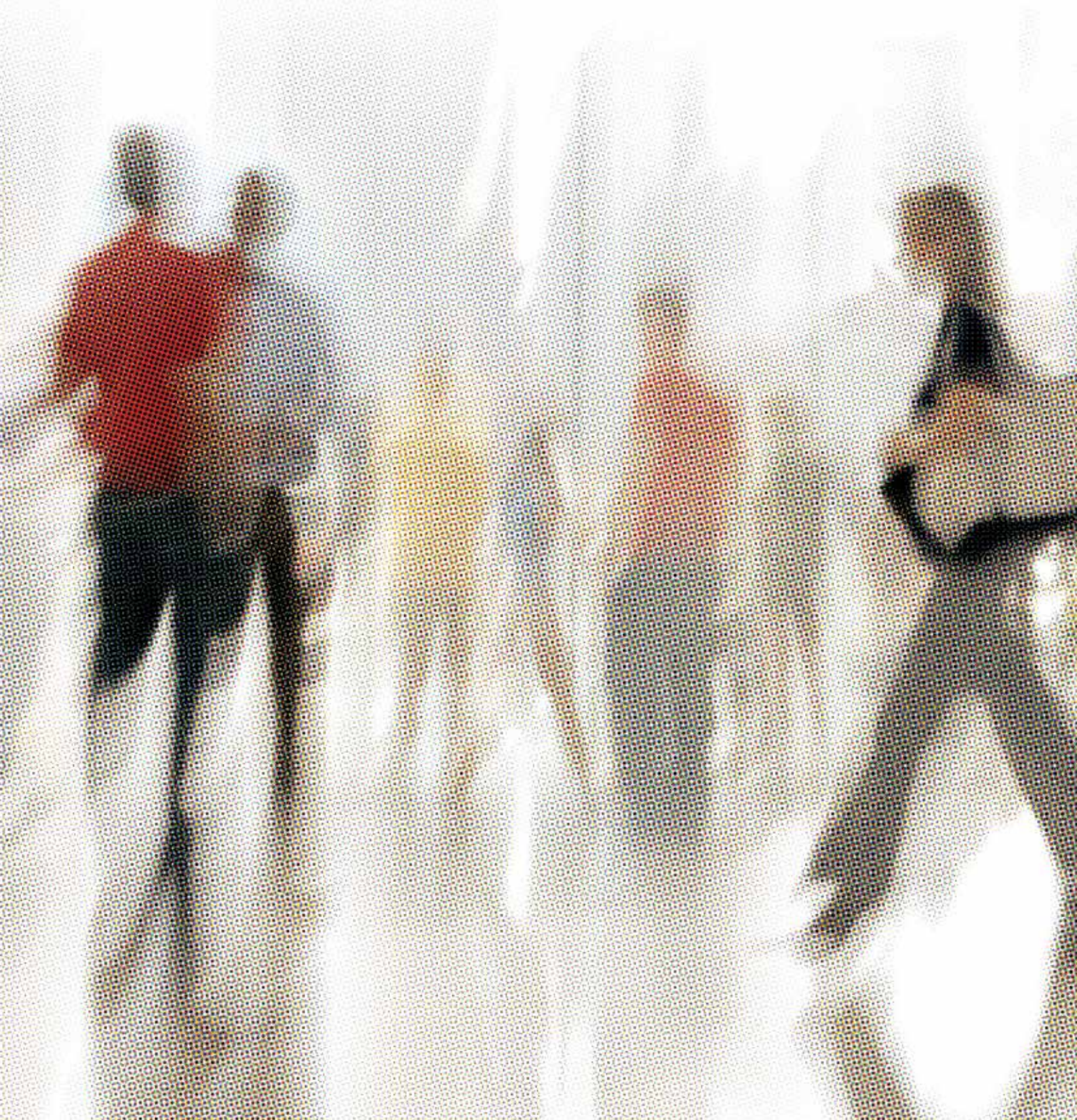


# The Career Paths of Physics Graduates

A longitudinal study  
2006–2010





## **ACKNOWLEDGMENTS**

The Institute would like to thank the research team at the Centre for Education and Industry (CEI) at the University of Warwick who ran the surveys and produced the interim reports.

All of the students and graduates who participated in this study are thanked for their time and effort. Thanks also go to the staff within physics departments for their help in distributing the questionnaires.

Designed and produced by Cavendish Design & Advertising.

<b>PREFACE</b> .....	2
<b>KEY FINDINGS</b> .....	3

<b>DESTINATIONS AND CAREER PATHS OF GRADUATES</b> .....	4-9
2.1 Longitudinal data on destinations of graduates.....	4
2.2 Destinations by gender.....	6
2.3 Destinations by gender and degree class.....	7
2.4 Destination by degree type and gender.....	8

<b>GRADUATES ENTERING EMPLOYMENT</b> .....	10-15
3.1 Salary levels for graduates one year after graduation.....	10
3.2 Salary levels for graduates by number of years after graduation and gender.....	11
3.3 Relevance of physics for graduates in employment.....	12
3.4 Employment sectors for graduates in employment.....	12
3.5 Unemployment rates for graduates.....	14

<b>DESTINATIONS OF GRADUATES WITH DISABILITIES</b> .....	16
--	----

<b>DESTINATIONS OF GRADUATES FROM BLACK AND ETHNIC MINORITY BACKGROUNDS</b> .....	17
---	----

<b>DESTINATIONS OF GRADUATES BY SOCIO-ECONOMIC STATUS</b> .....	18-19
---	-------

<b>DESTINATIONS OF GRADUATES BY INSTITUTION</b> .....	20-23
7.1 Destinations of graduates from different institutions.....	20
7.2 Destinations of graduates from different institutions by degree class....	22

<b>APPENDIX - DEMOGRAPHICS OF THE SAMPLE</b> .....	24
--	----



# 1

## PREFACE

- » **What do physics graduates do when they finish their degree?**
- » **How much do they earn?**
- » **What sectors do they work in?**
- » **Are they more employable than other graduates?**
- » **Are there differences between men and women?**

At the Institute of Physics, we are frequently asked to help answer these questions. While there are various sources of information that give us a partial understanding of where physics graduates find themselves, we have lacked the robust data to see the whole picture of the paths graduates take as they start their careers.

In 2005, the Institute of Physics commissioned a five-year longitudinal study of physics graduates to identify and track the career development of physicists over the first four years following graduation.

Between 2006 and 2010, final-year physics students were asked to complete a survey on their intentions after graduation. Graduates were then re-contacted on an annual basis by e-mail and invited to edit and augment the information to allow us to chart the paths they had taken.

We have gathered information from 5737 final year undergraduates from 55 institutions, 46 in the UK and nine in Ireland. We estimate this represents a response rate of 35–40% of all physics graduates in this period. Through the study we have had the opportunity of examining the career development of graduates from non-traditional groups, including women, ethnic minorities, students from lower socio-economic backgrounds and those with a disability – information vital to form the basis of projects aimed at encouraging participation in physics from a wider, more diverse community.

In this report we present a summary of the data on the destinations of respondents. Alongside this report, we have produced a more in-depth analysis, available to download from [www.iop.org/diversity](http://www.iop.org/diversity).

It is gratifying to see that the data back-up our experiences – many physics graduates go on to further study, while those that enter employment work in a wide range of professions and earn more than average. They are also less likely to be unemployed than the overall graduate population.

Work of this nature is crucial to ensure that potential students are given reliable information as the basis for the choices they make about their future. It also reassures current physics undergraduates of the value of their physics degree and highlights the many and varied places it can take them.

**Prof. Peter Main**  
Director, Education and Science

May 2012

## KEY FINDINGS

- » Overall, 52.4% of respondents were continuing education one year after graduation, with PhD study as the most popular option, followed by a Masters qualification. 39.2% of respondents were in employment one year after graduation, 6.5% were unemployed and 3.7% were undertaking teacher-training courses.
- » There are small differences by gender for destinations of respondents one year after graduation, with women slightly more likely to be taking Masters or teacher-training courses and men more likely to be studying for a PhD.
- » Respondents with first- or upper-second class degrees were most likely to proceed to further study, and PhDs in particular, but only a very small proportion entered teacher training.
- » Gender differences in destination are more apparent for graduates with BSc than MPhys/MSci degrees. Women with BSc degrees were the most likely group to go into teacher training with 9.3% choosing this route, compared to 4.4% of men with a BSc degree, 1.4% of women with a MPhys/MSci degree and 1.9% men with a MPhys/MSci degree.
- » Respondents in employment earned an average salary of £22,500, 14% higher than the average graduate salary of £19,700 for all subjects (2008 figure). There was a 4.3% gender pay gap.
- » Respondents with MPhys/MSci degrees had an average salary of £23,300, 8.7% higher than the average with BSc degrees. The gender pay gap was lower, at 3.3%, for respondents with MPhys/MSci degrees.
- » Respondents with first-class degrees earned higher salaries. However, women with first-class degrees had the same distribution of salaries as men with upper-seconds.
- » Respondents with first-class degrees were more likely to be working in the finance sector and less likely to be in the education sector.
- » Women with BSc degrees were the least likely to report that their occupation was related to physics and the least likely to report that their physics background was useful for their occupation.
- » The increase in the proportion of unemployed respondents between 2006 and 2009 was much lower than the increase for graduates from all subjects in this period.
- » Respondents from higher socio-economic groups were more likely to be employed and less likely to be continuing education than respondents from lower groups.
- » Degree class was a more significant factor than attending a Russell Group institution in determining destination, salary and employment sector. The exception to this was for respondents entering finance, who were more likely to have first-class degrees from Russell Group institutions.

# 2

## DESTINATIONS AND CAREER PATHS OF PHYSICS GRADUATES

### 2.1 Longitudinal data on destinations of graduates

**Figure 2.1 charts the career paths of individuals who have taken part in the longitudinal study. The central disc represents the destinations of all respondents one year after graduation and each subsequent ring represents the destinations of the respondents the study has tracked a further year on. To understand the development of the career paths of individuals, it is helpful to split the diagram into segments along the lines defined by the central disc representing the destinations one year after graduation. For example, from the red segment of the central disc 15% of respondents in all cohorts were taking a Masters course one year after graduation. In the second ring which shows those tracked for at least two years, 21% were studying for a PhD, 50% were continuing with a Masters course, 27% were employed and 1% (one person) was unemployed.**

Gaps in the rings appear where we do not have information for any of the individuals from the segment of the previous ring. This occurs when people have not completed a follow-up survey or are in a cohort not tracked for the full number of years. In the analysis the 'Other' category encompasses routes such as career breaks, voluntary work or other further study options.

- » 52.4% of respondents were continuing education one year after graduation, with PhD study as the most popular option, followed by undertaking a Masters qualification. 39.2% of respondents were in employment, 6.5% were unemployed and 3.7% were undertaking teacher-training courses.
- » The majority of respondents going into employment or on to PhD study have continued on these paths over the first few years after graduation. Respondents who studied for a Masters qualifications either continued Masters study, progressed to PhDs or went into employment, with only one respondent becoming unemployed or no respondents taking other routes after Masters courses.

» There is a group of respondents who entered employment in the year after graduation but at later stages decided to return to further study, at either PhD and Masters level, or chose other paths. For the individuals tracked for four years after graduation this group is approximately one quarter of those who entered employment initially.

» The proportion of respondents who were unemployed after one year is small (6.4%) and of these the majority have secured employment or entered a PhD course two years after graduation. There are a small number that have remained unemployed for two (9 out of 594 respondents), and in some cases three years after graduation (2 out of 319 respondents).

» When analysed by year of graduation, there were no significant differences in the distribution of destinations. The exception to this was the proportion of unemployed respondents which slightly increased between 2006 and 2009 (see section 3.5) and a decrease in the proportion choosing Other routes.

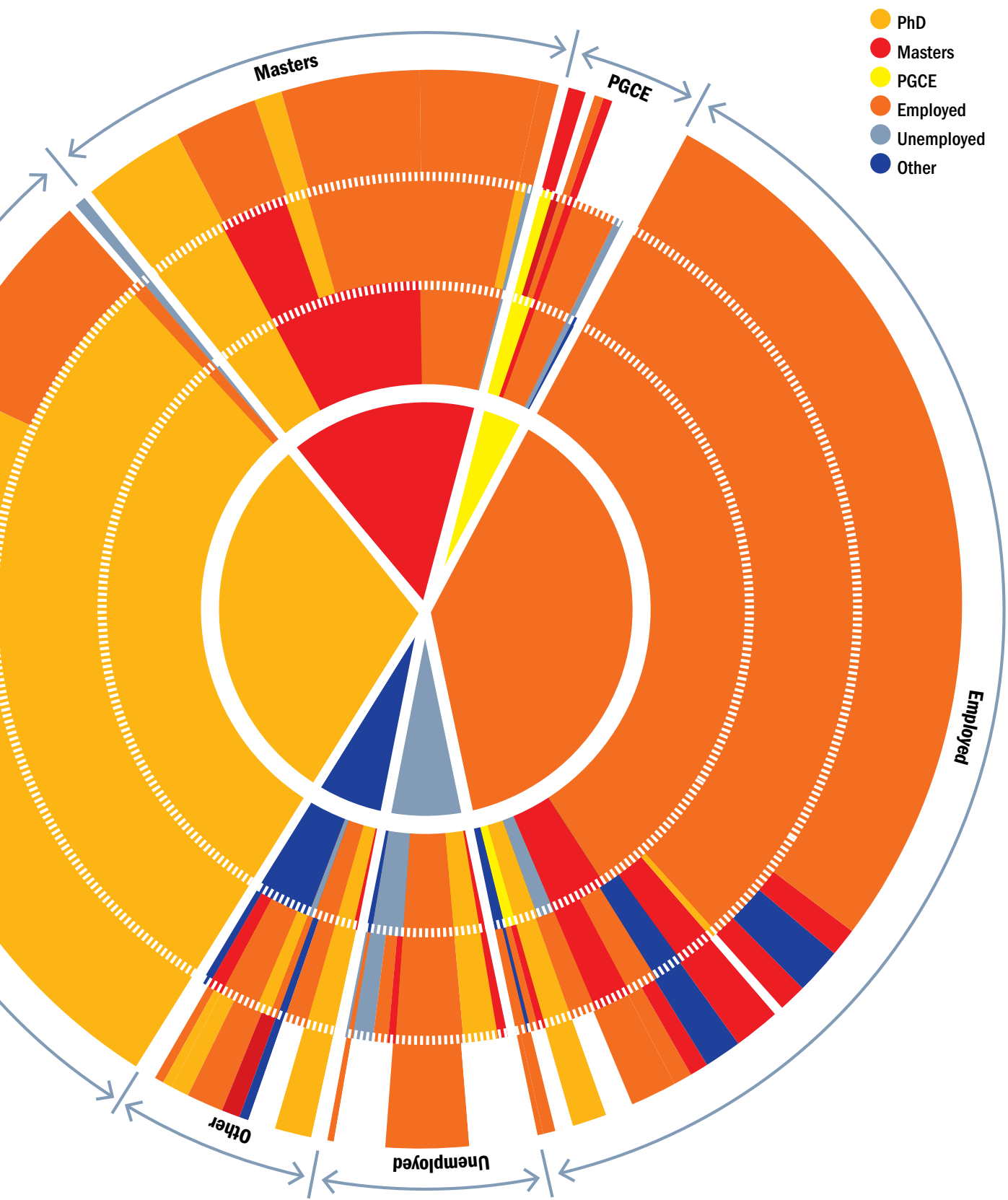
PhD

#### // Figure 2.1

#### Temporal representation of the development of physicists' career paths

Data are presented as totals over all cohorts in the following manner:

- » Central disc: one year after graduation for cohorts graduating in 2006, 2007, 2008 and 2009 (n=1448)
- » Second ring: two years after graduation for cohorts graduating in 2006, 2007 and 2008 (n=594)
- » Third ring: three years after graduation for cohorts graduating in 2006 and 2007 (n=319)
- » Fourth ring: four years after graduation for cohort graduating in 2006 (n=114)



- PhD
- Masters
- PGCE
- Employed
- Unemployed
- Other

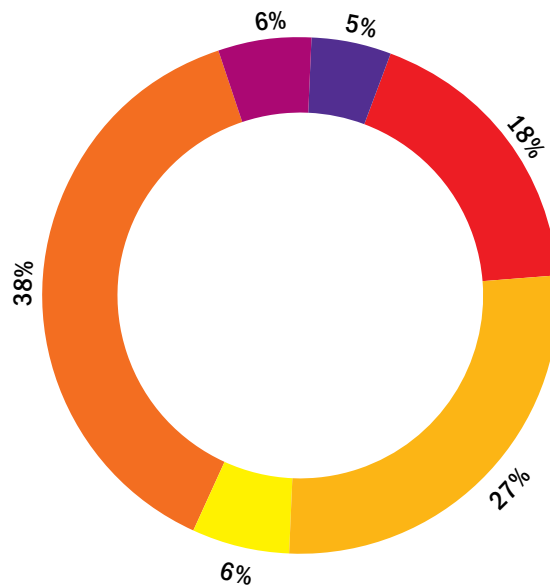
# 2

## DESTINATIONS AND CAREER PATHS OF PHYSICS GRADUATES

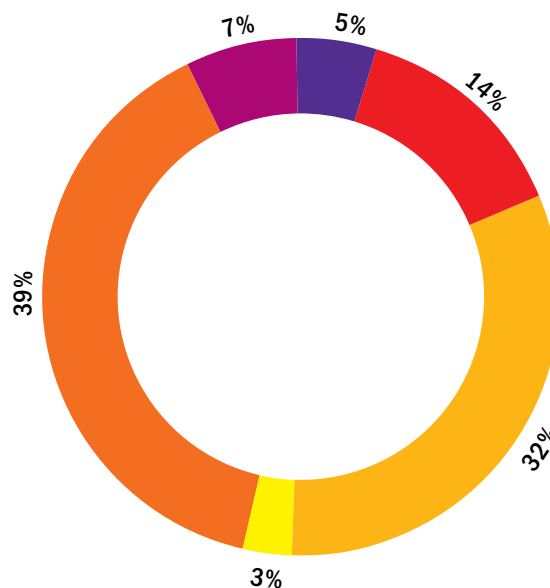
### 2.2 Destinations by gender

- » The same proportions of male and female respondents were continuing education one year after graduation. However, female respondents were more likely to be studying for Masters or on teacher-training courses, whereas their male peers were more likely to go on to PhD study.
- » Similar proportions of male and female respondents entered employment, were unemployed or chose other routes one year after graduation.

// **Figure 2.2a**  
Destinations of female respondents one year after graduation for all cohorts (n=481)



// **Figure 2.2b**  
Destinations of male respondents one year after graduation for all cohorts (n=956)



- Masters
- PhD
- Employed
- PGCE/Teacher Training
- Unemployed
- Other

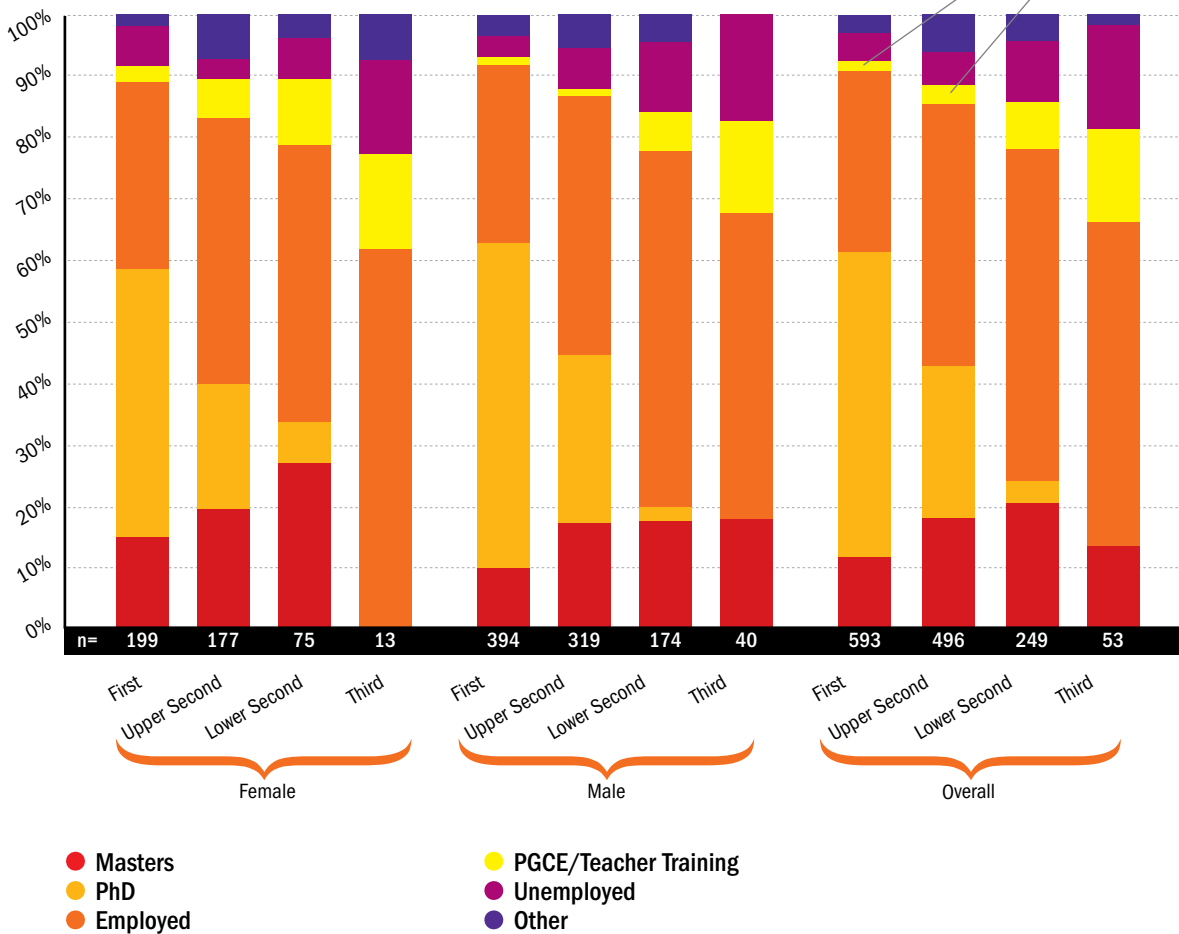


### 2.3 Destinations by gender and degree class

- » The distributions of destinations for males and females with first- and upper-second class degrees are similar. Respondents with first-class degrees were the most likely to be continuing education and studying for a PhD in particular.
- » Gender differences can be seen, in particular, for respondents with lower-second class degrees, where females were more likely than males to be studying for Masters qualifications and less likely to be in employment.
- » Respondents with third-class degrees were more likely to go in to teacher training or be in employment one year after graduation. However, this group also had the highest proportion of respondents who are unemployed one year after graduation (15% of female and 18% for male graduates respectively).

There was only a very small proportion of respondents with first- or upper-second class degrees choosing to enter teacher-training courses.

**// Figure 2.3a**  
Destinations of respondents one year after graduation by degree class and gender



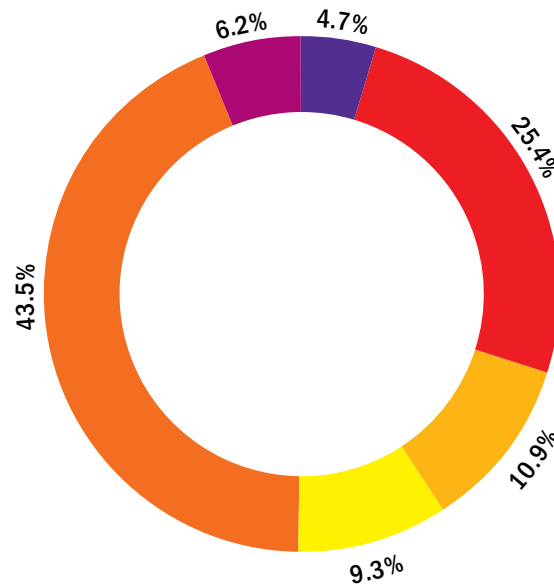
# 2

## DESTINATIONS AND CAREER PATHS OF PHYSICS GRADUATES

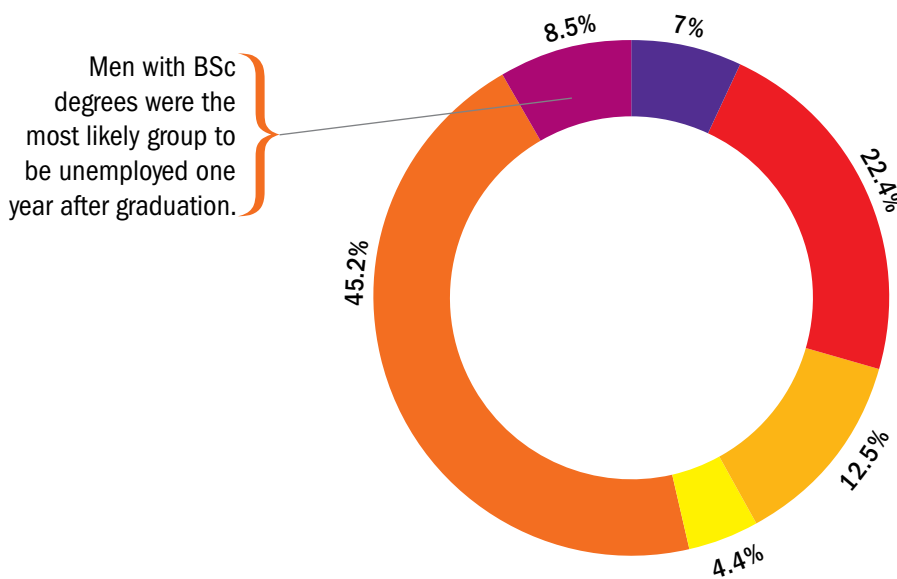
### 2.4 Destinations by degree type and gender

- » Women with BSc degrees were more likely than men with BSc degrees to continue education (49.2% compared to 44.3%), with a larger proportion of men entering employment (figures 2.4a and 2.4b).
- » Unlike the BSc, the distribution of destinations for male and female respondents with MPhys/MSci degrees is very similar with 58.3% of men and 58.2% of women choosing to continue education and 33.8% of women and 35.4% of men in employment (figures 2.4c and 2.4d).
- » The most notable difference between men and women with MPhys/MSci degrees was seen in the proportion of respondents who were studying for a further Masters qualification, with almost twice the percentage of women as men choosing this option: 11.3% compared to 6.3% (figures 2.4c and 2.4d).

**// Figure 2.4a**  
Destinations of female respondents with BSc degrees one year after graduation (n=193)



**// Figure 2.4b**  
Destinations of male respondents with BSc degrees one year after graduation (n=343)



Men with BSc degrees were the most likely group to be unemployed one year after graduation.

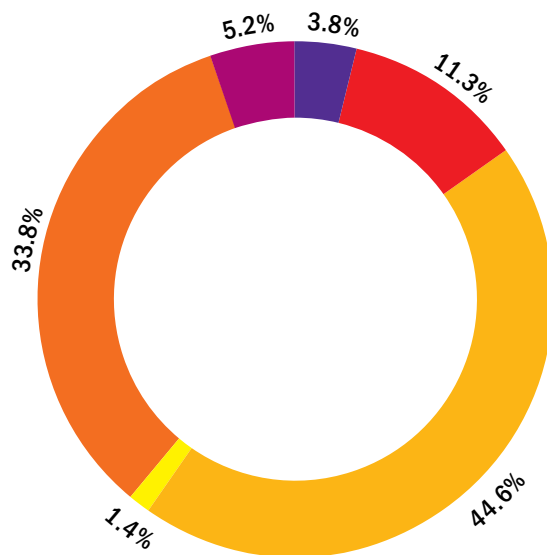
- Masters
- PhD
- Employed
- PGCE/Teacher Training
- Unemployed
- Other

» When considering the proportions of respondents studying for a PhD, 44.6% of women and 48.1% of men with MPhys/MSci degrees chose this option compared to only 10.9% of women and 12.5% of men with BSc degrees. This indicates that the MPhys/MSci is being maintained as the primary route into PhD study.

» Females with BSc degrees were the most likely of the four groups to go on to teacher-training courses, with 9.3% of respondents choosing this route compared to 4.4% of men with BSc degrees, 1.4% of women with MPhys/MSci degrees and 1.9% of men with MPhys/MSci degrees.

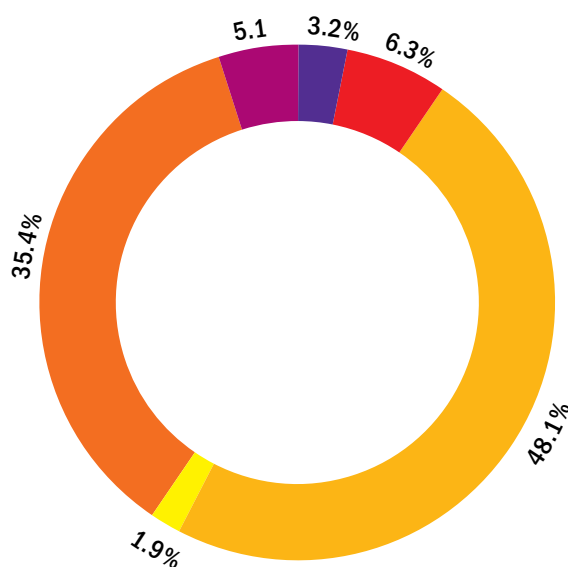
**// Figure 2.4c**

**Destinations of female respondents with MPhys/MSci degrees one year after graduation (n=213)**



**// Figure 2.4d**

**Destinations of male respondents with MPhys/MSci degrees one year after graduation (n=432)**



- Masters
- PhD
- Employed
- PGCE/Teacher Training
- Unemployed
- Other

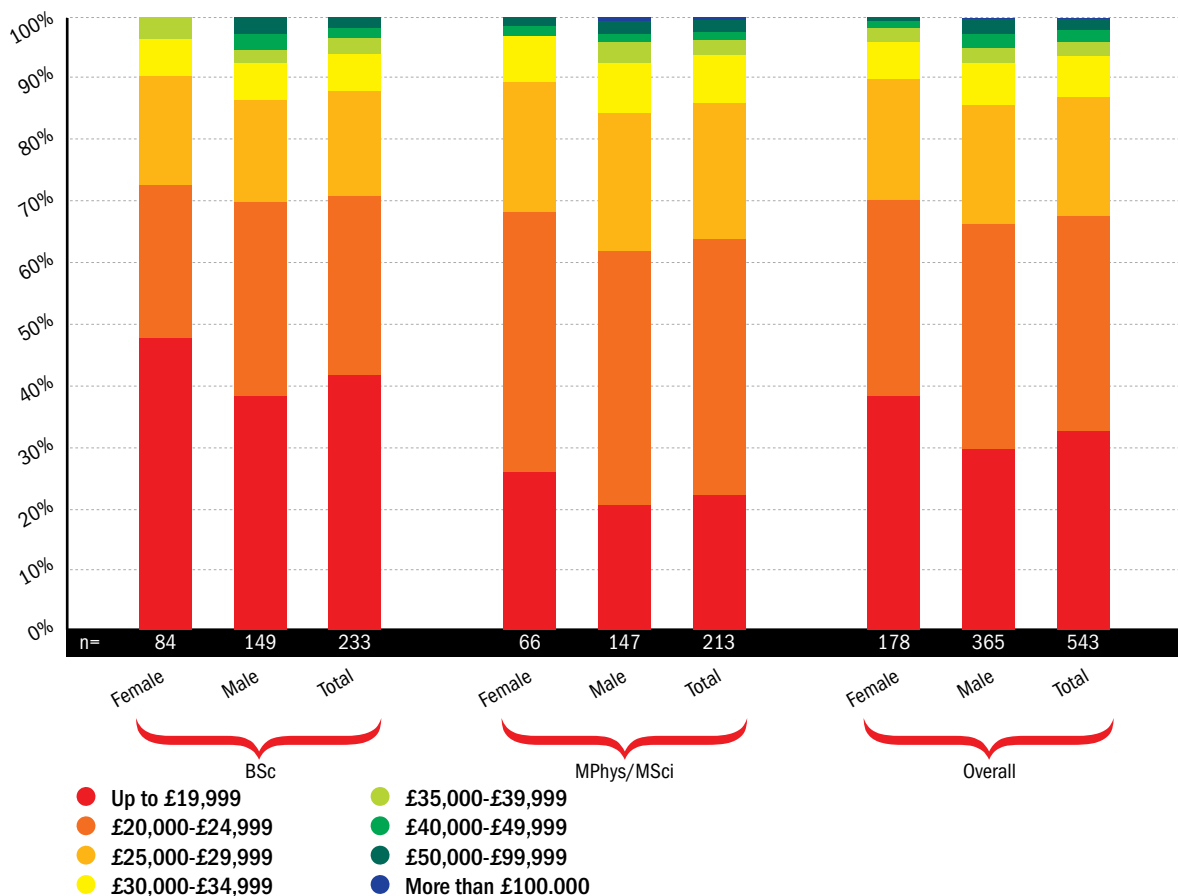
# 3

## GRADUATES ENTERING EMPLOYMENT

### 3.1 Salary levels for graduates one year after graduation

- » The median salary for respondents in employment one year after completing their degree was £22,500. This is higher than the estimated salaries for graduates in 2008 across all degrees of £19,667\* (figure 3.1a).
- » The median salary for female respondents was £21,800, 4.3% lower than their male peers. A higher proportion of women were earning less than £20,000 and a small number of men were earning more than £50,000 (10 men and one woman were in this group) (figure 3.1a).
- » Significantly more respondents with MPhys/MSci degrees were earning over £20,000 compared with respondents with BSc degrees. The median salary for respondents with MPhys/MSci degrees was £23,300, 8.7% higher than the median salary for respondents with BSc degrees of £21,500 (figure 3.1a).
- » The gender pay gap for respondents with MPhys/MSci degrees was lower than for respondents with BSc degrees: at 3.3% for those with an MPhys/MSci compared to 6.4% for those with a BSc (figure 3.1a).
- » There is a clear connection between the salary of respondents and the degree class, with a higher proportion of male and female respondents with first-class degrees earning over £25,000 (figure 3.1b).

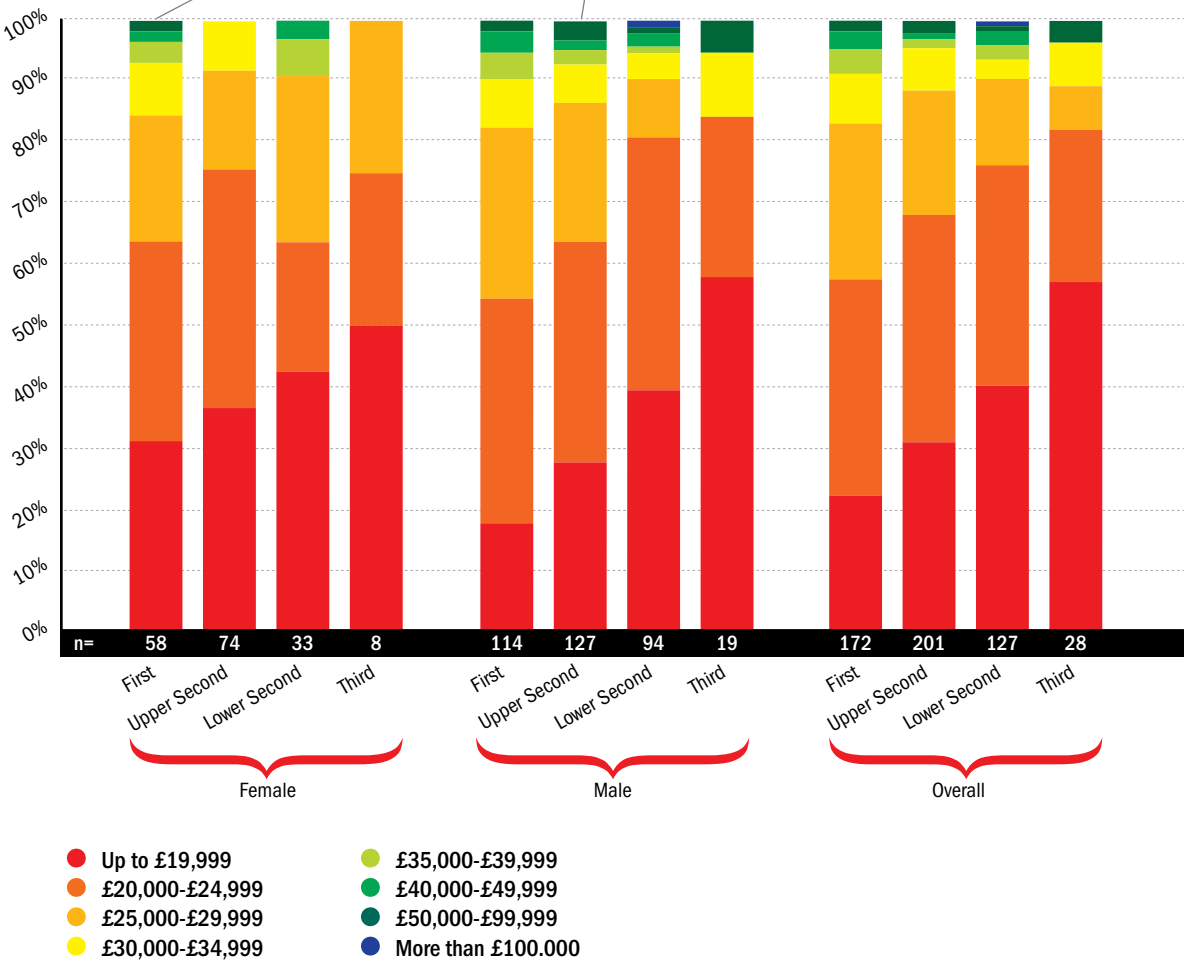
**// Figure 3.1a**  
Salaries of respondents in employment one year after graduation by degree type and gender



\*HESA Destination of leavers survey for graduates of known destination in full-time employment six months after graduation. The 2008 figure is used as the most appropriate comparison to the data presented here that represents the average across respondents graduating between 2006-2009.

The gap in pay levels for male and female respondents is evident in this figure considering that the distribution of salaries for women with first-class degrees is very similar to men with upper-second class degrees.

**// Figure 3.1b**  
**Salaries of respondents in employment one year after graduation by gender and degree class**



**3.2 Salary levels for graduates by number of years after graduation and gender**

» Of respondents in employment two years after graduation, over 40% were earning more than £25,000, with a higher proportion of men than women earning more than £30,000.

» From tracking the salaries of the respondents who entered and remained in employment, the distribution of salaries have consistently moved towards higher salary bands for additional years in employment.

# 3

## GRADUATES ENTERING EMPLOYMENT

### 3.3 Relevance of physics for graduates in employment

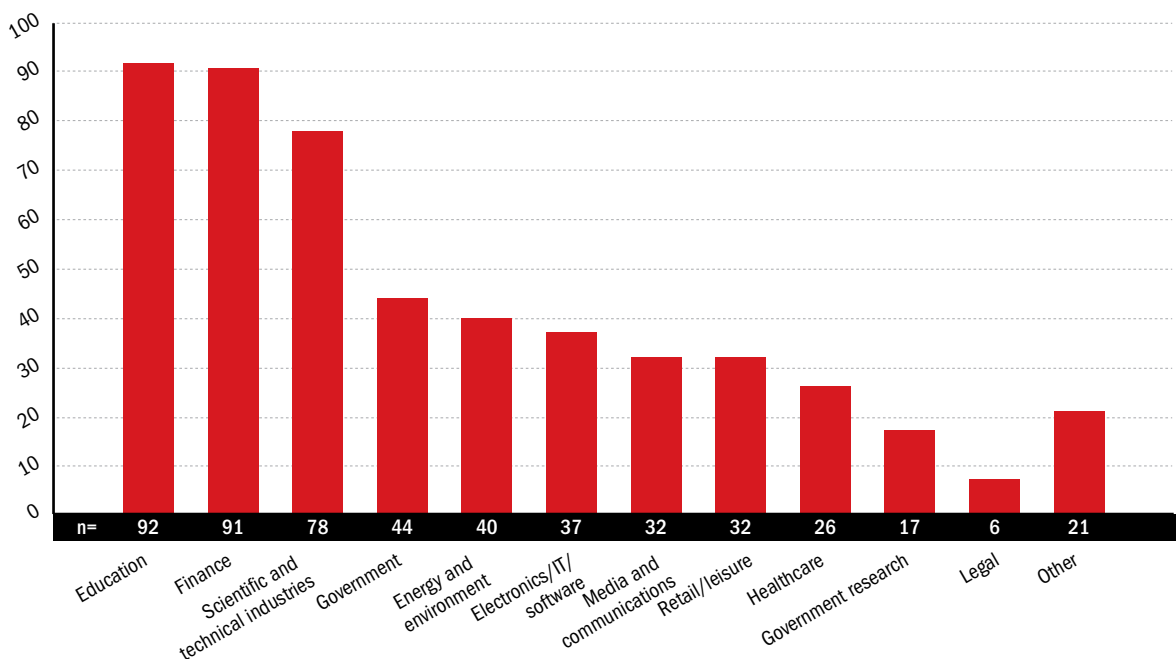
Respondents in employment were asked to rate how closely related their occupation was to physics and how useful they thought their physics degree was for their occupation.

- » Respondents with MPhys/MSci degrees were more likely to report that their occupation was related to physics than respondents with BSc degrees. There were similar patterns for male and female respondents with both types of degrees, although a higher proportion of women with BSc degrees reported that their occupation is not at all related to physics.
- » Overall, two thirds reported that their physics background was useful or very useful for their occupation, with similar patterns for men and women and respondents with MPhys/MSci and BSc degrees. The exception to this was again women with BSc degrees who were the least likely to report that their physics background is useful for their occupation.

### 3.4 Employment sectors for graduates in employment

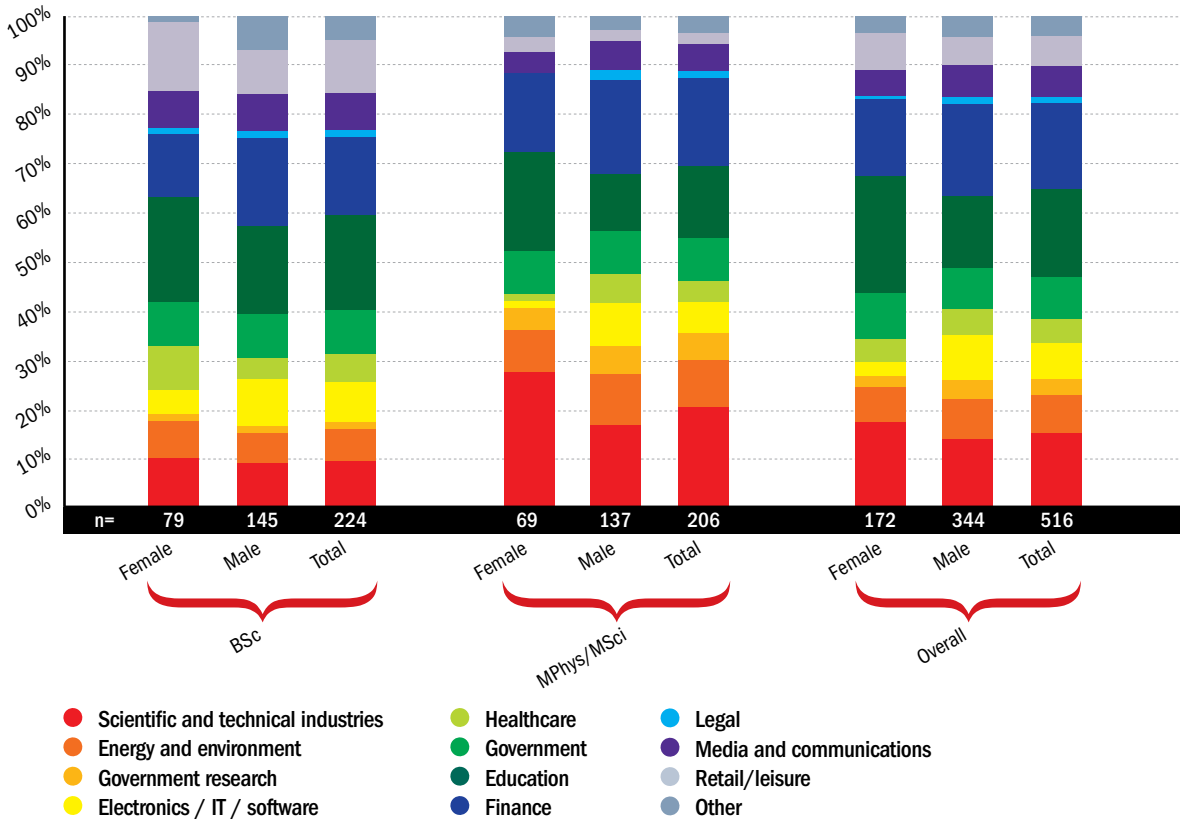
- » Respondents in employment one year after graduation were working in a wide range of employment sectors with the largest numbers choosing jobs in education, finance or scientific and technical industries\* (figure 3.4a).
- » Respondents with MPhys/MSci degrees are more likely than those with BSc degrees to go into scientific and technical industries, energy and environment or government research. This was particularly true for female respondents with MPhys/MSci degrees (figure 3.4b).
- » Women were more likely than men to work in education and less likely to work in electronics/IT/software. There were similar proportions of men and women with both BSc and MPhys/MSci degrees working in finance (figure 3.4b).
- » Respondents with first-class degrees were the most likely group to be working in finance and those with lower-second or third-class degrees were the most likely to be working in education.
- » There are comparable salary distributions for female and male respondents working in education and finance, with the exception of a group of men in finance earning very high salaries (figure 3.4c).
- » The most notable salary difference for men and women are in media and communications and electronics/IT/software, where men are more likely to be earning the highest salaries (figure 3.4c).
- » Respondents with BSc degrees were more likely than those with MPhys/MSci degrees to be working in media and communications and retail sectors.
- » Scientific and technical industries and energy and environment show similar salary distributions for men and women.

**// Figure 3.4a**  
Numbers of respondents in employment one year after graduation by employment sector



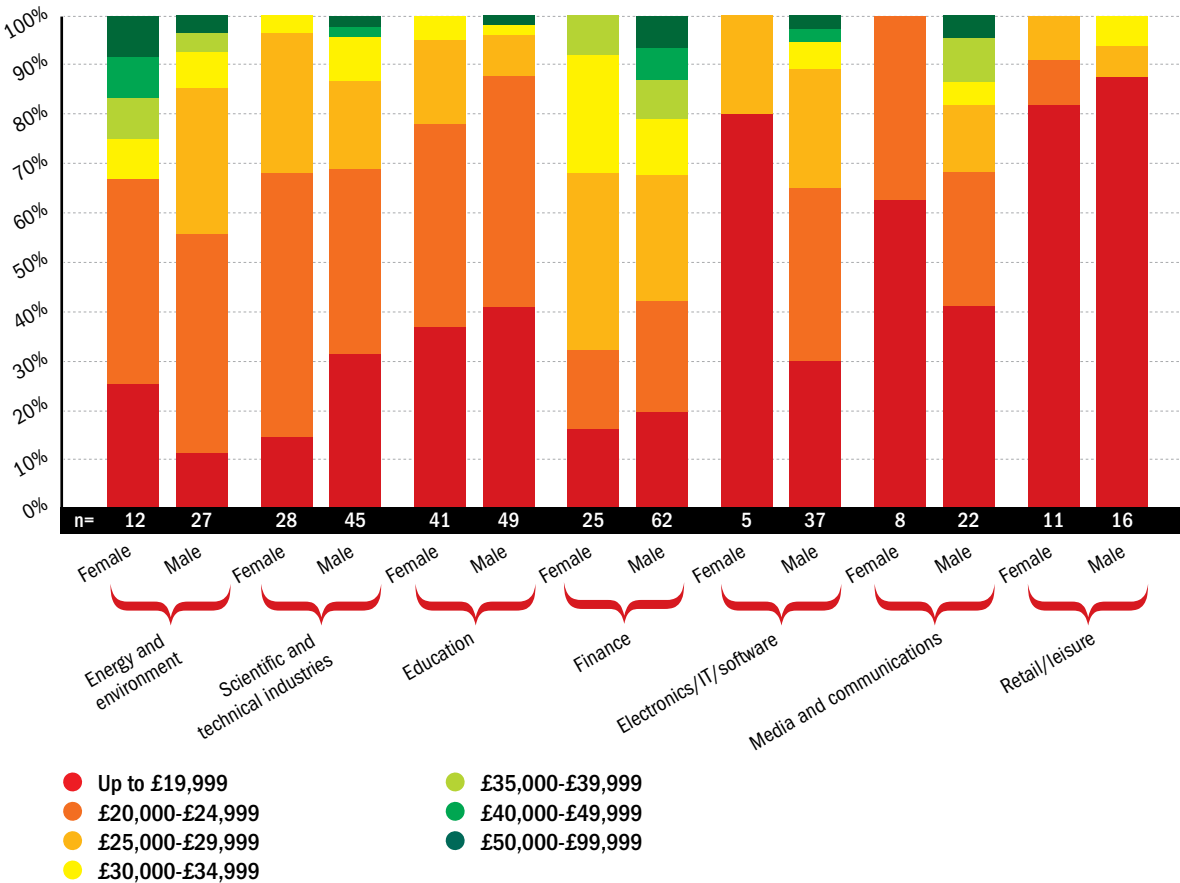
**// Figure 3.4b**

**Employment sectors for respondents in employment one year after graduation by degree type and gender**



**// Figure 3.4c**

**Salaries of respondents in employment one year after graduation by selected employment sector**



\*Science and technical industries encompasses individuals working in aerospace/space, defence, instrumentation, manufacturing/construction, transport, or other science/technical sectors.

# 3

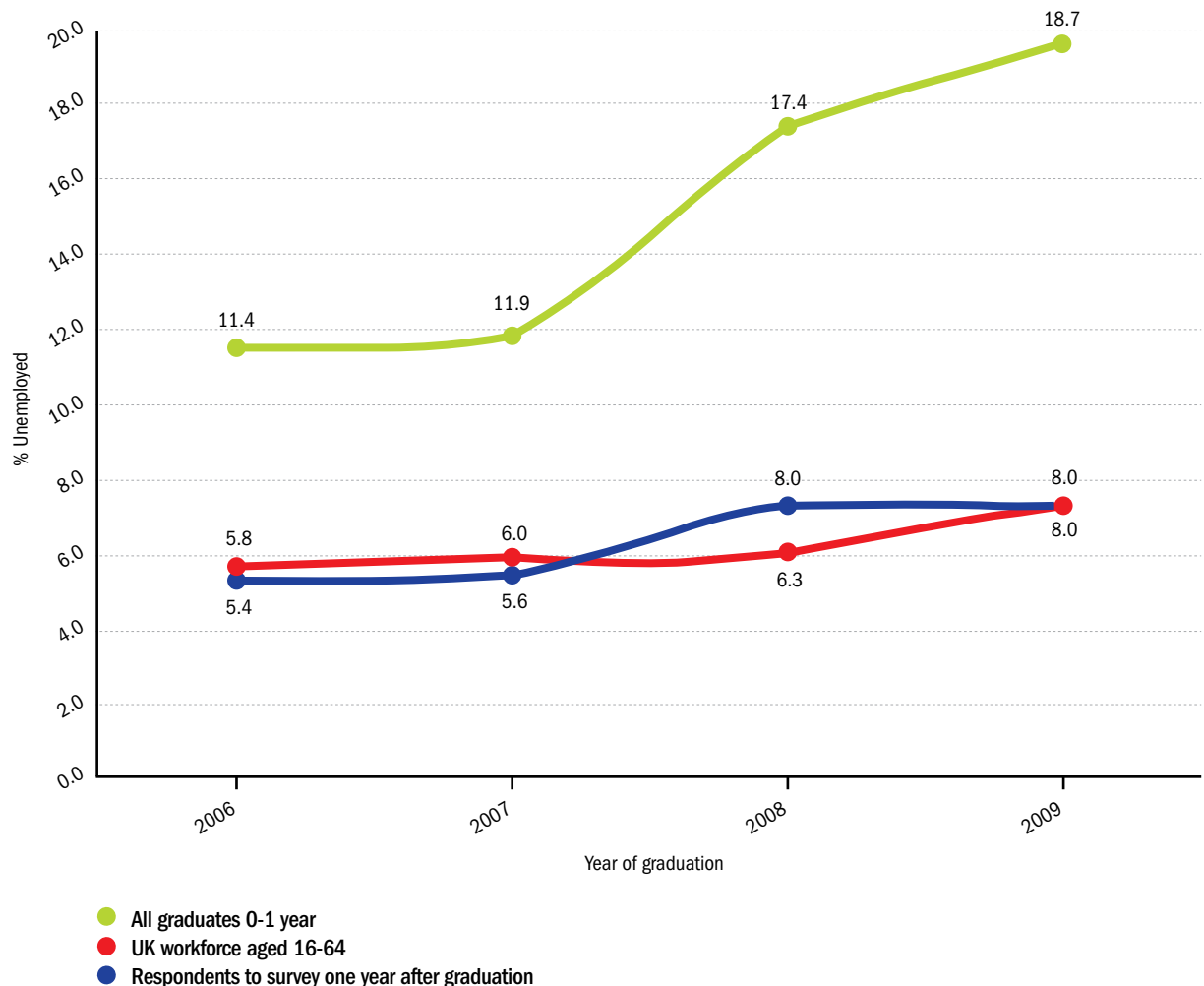
## GRADUATES ENTERING EMPLOYMENT

### 3.5 Unemployment rates for graduates

» The average proportion of respondents who were unemployed one year after graduation was 6.4%. The rate of unemployment increased slightly for graduates in 2008 and 2009,

but this increase was significantly less than the national graduate unemployment figures and more closely in line with the UK average unemployment rate in this period.\*

**// Figure 3.5a**  
**Unemployment rates for respondents one year after graduation compared to estimated national figures**

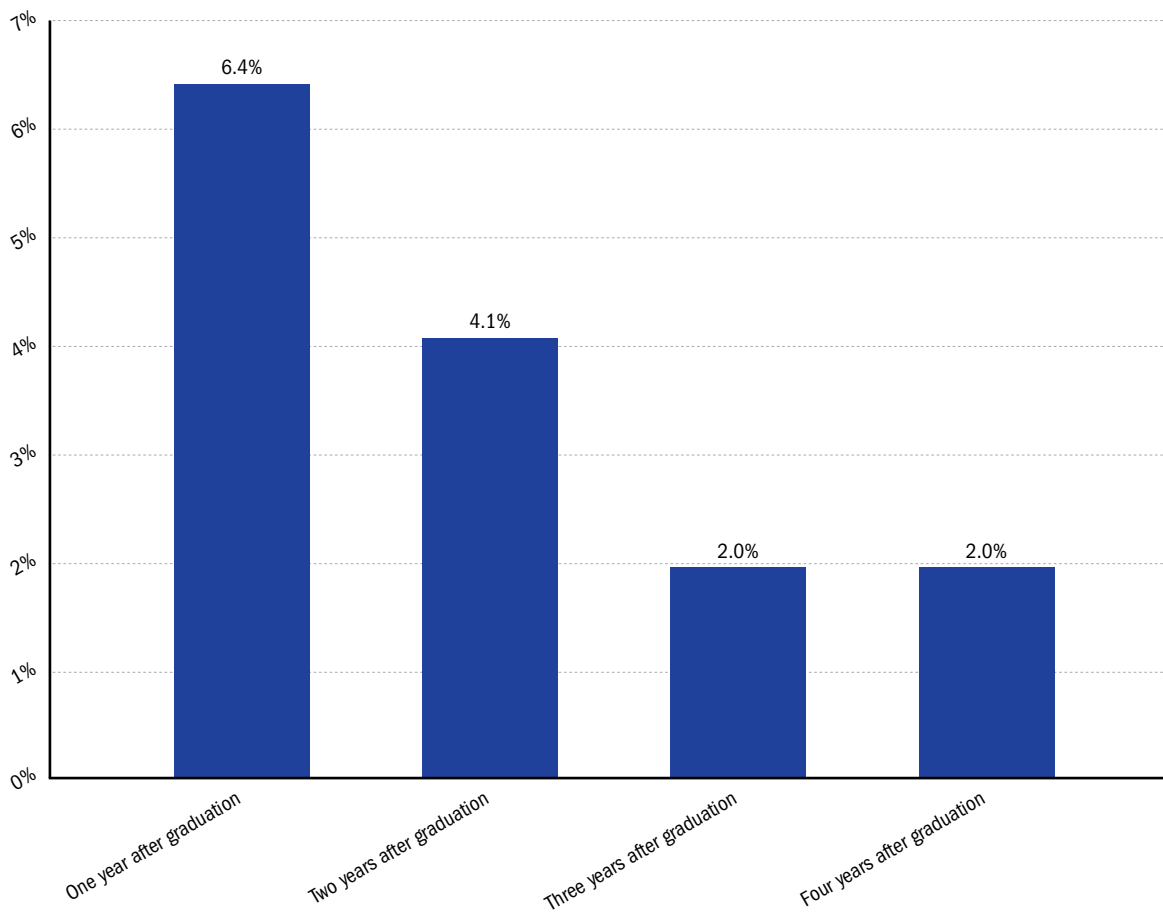


\*National unemployment figures taken from Office for national Statistics release Labour Market Statistics, August 2011



» Not only is there a smaller proportion of unemployed respondents one year after graduation, but also the proportion of unemployed respondents decreases for two, three and four years following graduation.

**// Figure 3.5b**  
**Average unemployment rates for respondents by time after graduation**



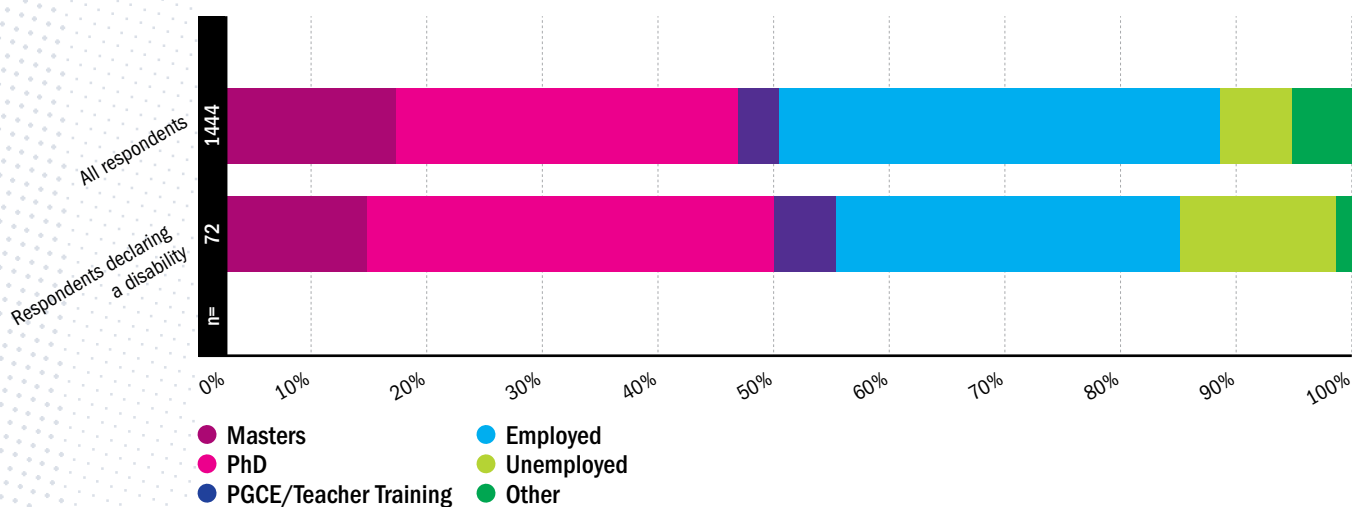
# 4

## DESTINATIONS OF GRADUATES WITH DISABILITIES

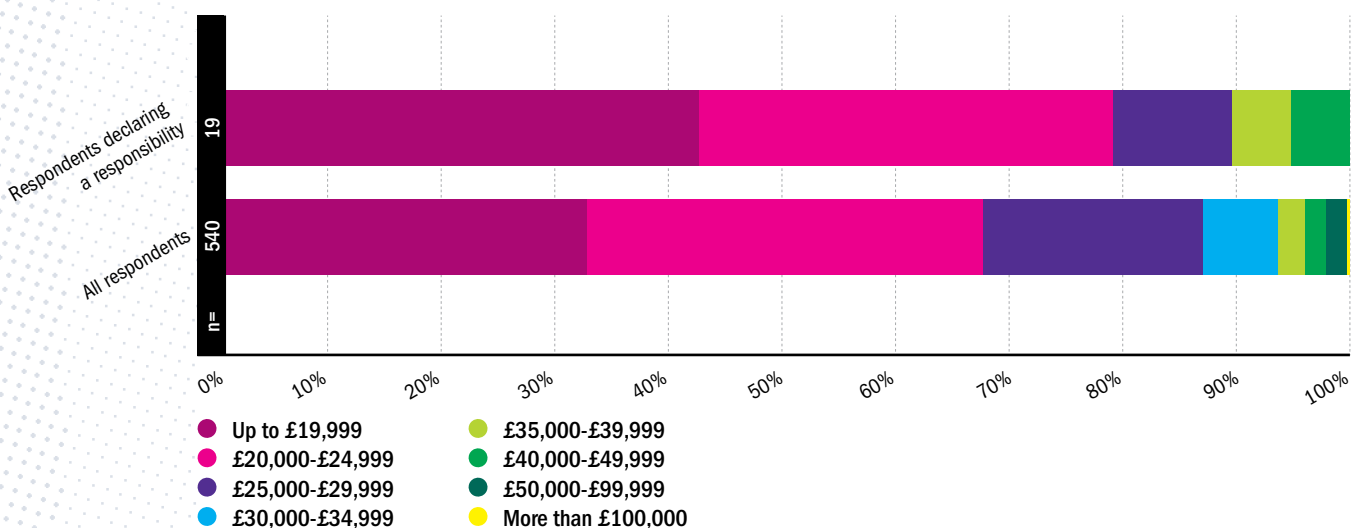
The number of respondents who declared a disability was small (around 7% of all respondents), therefore, the results presented here are sensitive to changes of one or two people. They are useful as indications of circumstances, but not necessarily representative of destinations for all disabled graduates.

- » Respondents declaring a disability were slightly more likely to be continuing education one year after graduation than all respondents and correspondingly less likely to be in employment (figure 4.1a).
- » A higher proportion of respondents declaring a disability were unemployed one year after graduation (14%) compared to all respondents (6%) (figure 4.1a).
- » For those in employment, respondents declaring a disability were more likely to be earning less than £25,000 than all respondents (79% compared to 67%) (figure 4.1b).
- » When respondents declaring a disability who were in employment one year after graduation are analysed by employment sector, a similar distribution is seen as for all respondents, with the exception of a higher proportion of disabled respondents working in education and a smaller proportion working in finance.

**// Figure 4.1a**  
Destinations of respondents one year after graduation by disability status



**// Figure 4.1b**  
Salaries for respondents in employment one year after graduation by disability status

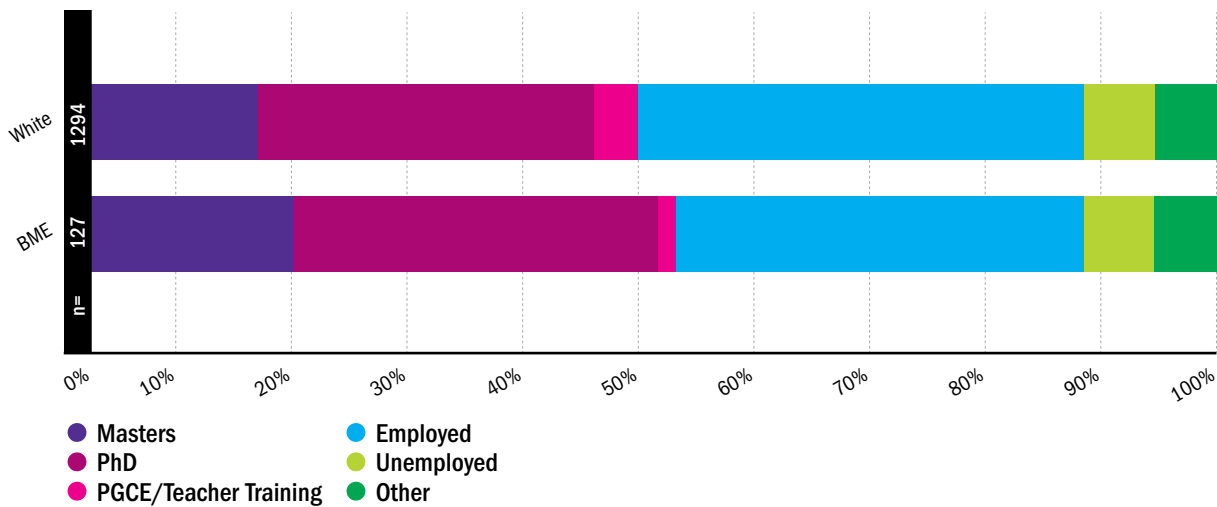


## DESTINATIONS OF GRADUATES FROM BLACK AND ETHNIC-MINORITY BACKGROUNDS

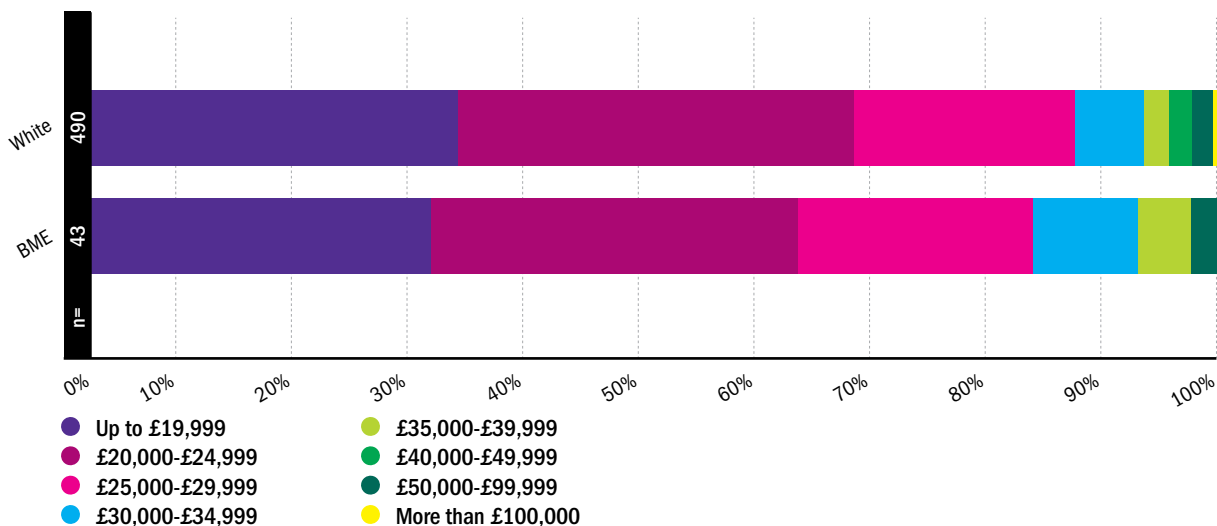
The number of black and ethnic minority (BME) respondents was small (around 12% of the sample). Therefore a shift of one or two people between categories could have a large effect. As for disabled graduates, the results presented here offer indications, but are not necessarily representative of all BME graduates.

- » Respondents from BME backgrounds were slightly more likely than their white peers to be continuing further study one year after graduation, with 52% of BME respondents choosing this path compared to 49% of white respondents (figure 5.1a).
- » Of respondents who were continuing education one year after graduation, there is a very similar distribution of further-study options for white and BME respondents (figure 5.1a).
- » There was a higher proportion of BME respondents working in education (31% of BME compared to 17% of white respondents) and a greater proportion of white respondents working in scientific and technical industries, energy and environment and government research. Conversely, BME respondents were more likely to be in electrical/IT/software industries than white respondents (12% compared to 7%).
- » For those in employment, BME respondents were slightly more likely to be earning over £25,000 than white respondents (37% compared to 32%) (figure 5.1b).

**// Figure 5.1a**  
Destinations of respondents one year after graduation by ethnicity



**// Figure 5.1b**  
Salaries of respondents in employment one year after graduation by ethnicity

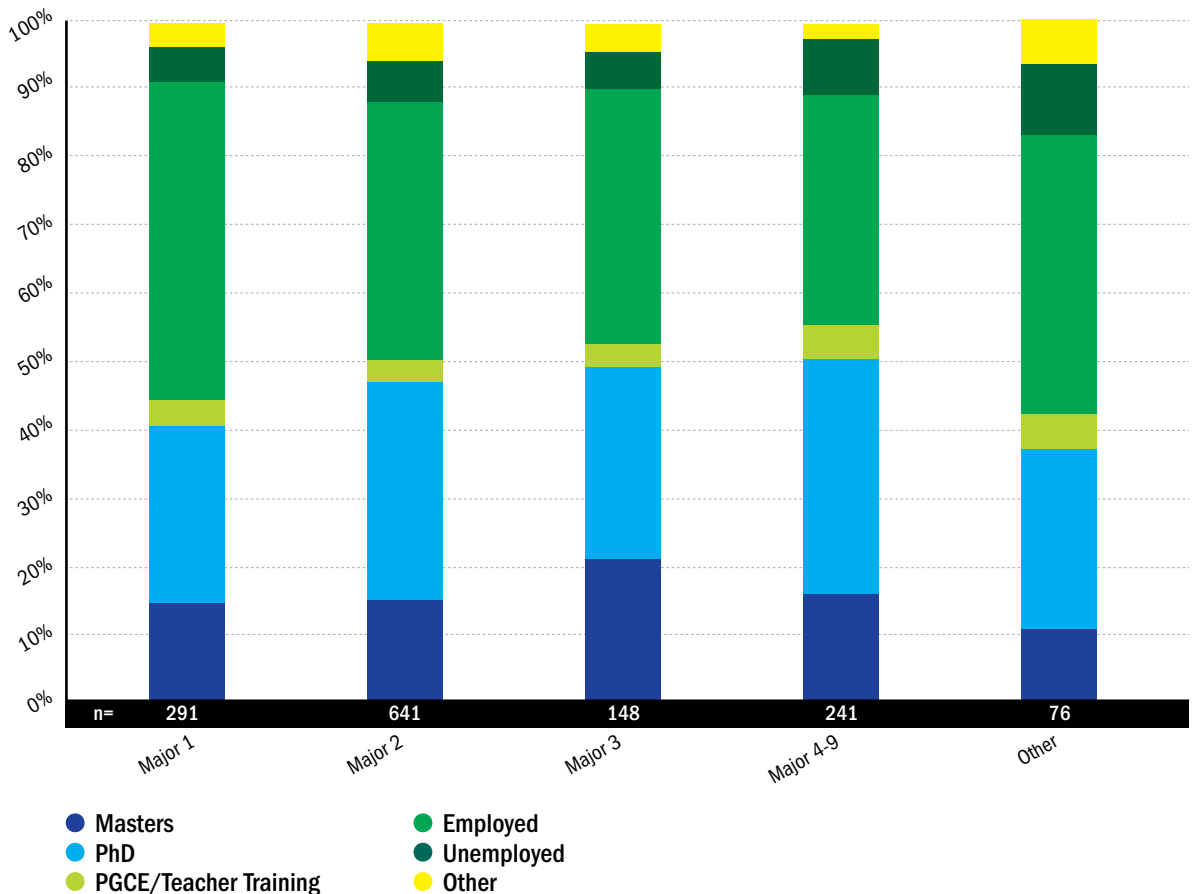


# 6

## DESTINATIONS OF GRADUATES BY SOCIO-ECONOMIC STATUS

Respondents were classified into socio-economic groups Major 1 to 9 based on their parental occupation, or in the case of mature students, their current/most recent or their partner's occupation. Major 1 and Major 2 correspond respectively to higher and lower professional and managerial backgrounds, Major 3 corresponds to associate professional/technical occupations, whereas Major 4-9 encompass occupations in administration, skilled and unskilled trades, caring, customer service and plant/machine operation.

// Figure 6.1a  
Destinations of respondents one year after graduation by socio-economic status



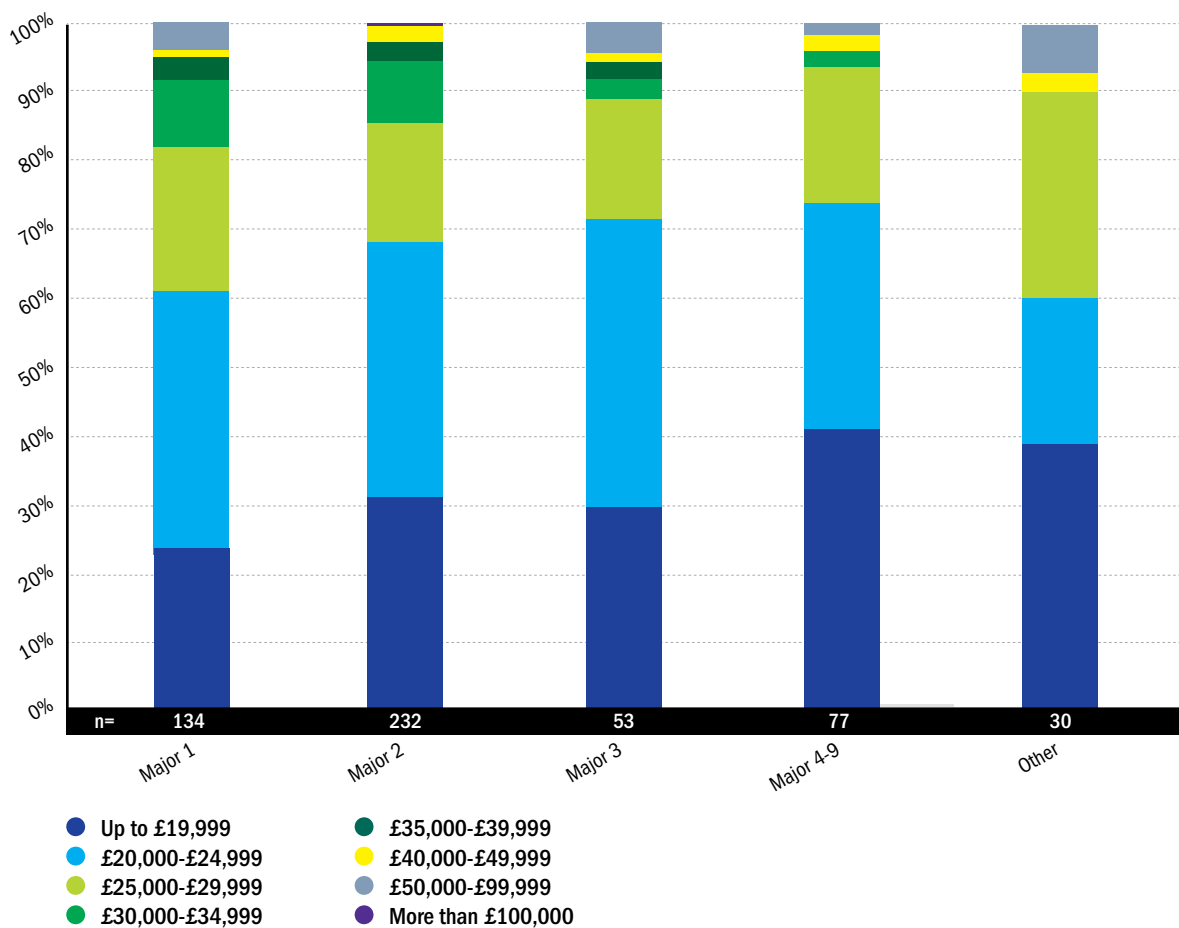
Office for National Statistics, Standard Occupational Classifications 2000 (major groups 1 to 9).

- |  |  |
|--|--|
| 1 » Managers and senior officials                    | 5 » Skilled trades occupations             |
| 2 » Professional occupations                         | 6 » Personal service occupations           |
| 3 » Associate professional and technical occupations | 7 » Sales and customer service occupations |
| 4 » Administrative and secretarial occupations       | 8 » Process, plant and machine operatives  |
|  | 9 » Elementary occupations                 |

- » Respondents from Major 1 were less likely than those from Major 2-9 to go on to further study and more likely to be employed (figure 6.1a).
- » There was a very similar proportion taking teacher-training courses across all groups (figure 6.1a).

- » Respondents from Major 1 were more likely to be earning over £25,000 and average salaries decrease for the lower socio-economic groups (figure 6.1a).
- » Analysis of employment sectors for respondents in employment by socio-economic group show a similar distribution of sectors across all groups.

**// Figure 6.1b**  
**Salaries for respondents in employment one year after graduation by socio-economic status**



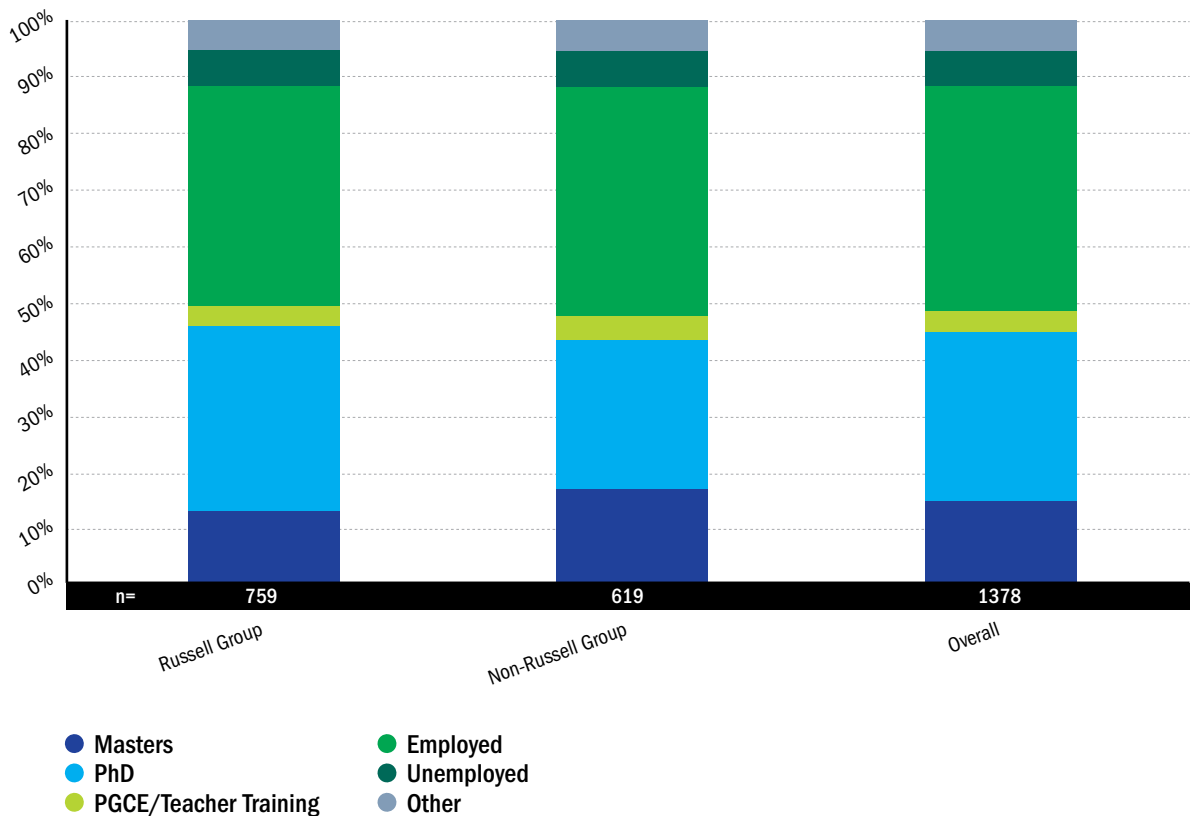
# 7

## DESTINATIONS OF GRADUATES BY INSTITUTION

### 7.1 Destinations of graduates from different institutions

- » Respondents from Russell Group\* institutions show a very similar proportion going on to further study as those from non-Russell Group institutions but Russell Group respondents were more likely to go on to PhD study and less likely to go on to Masters qualifications (figure 7.1a).
- » Respondents from Russell Group institutions earned slightly higher salaries, with a higher proportion of respondents earning over £25,000 than those from non-Russell Group institutions (figure 7.1b).
- » Respondents from Russell Group institutions were more likely to go into finance and education, compared to those from non-Russell Group institutions who were more likely to take up positions in scientific and technical industries, energy and environment or government research (figure 7.1c).

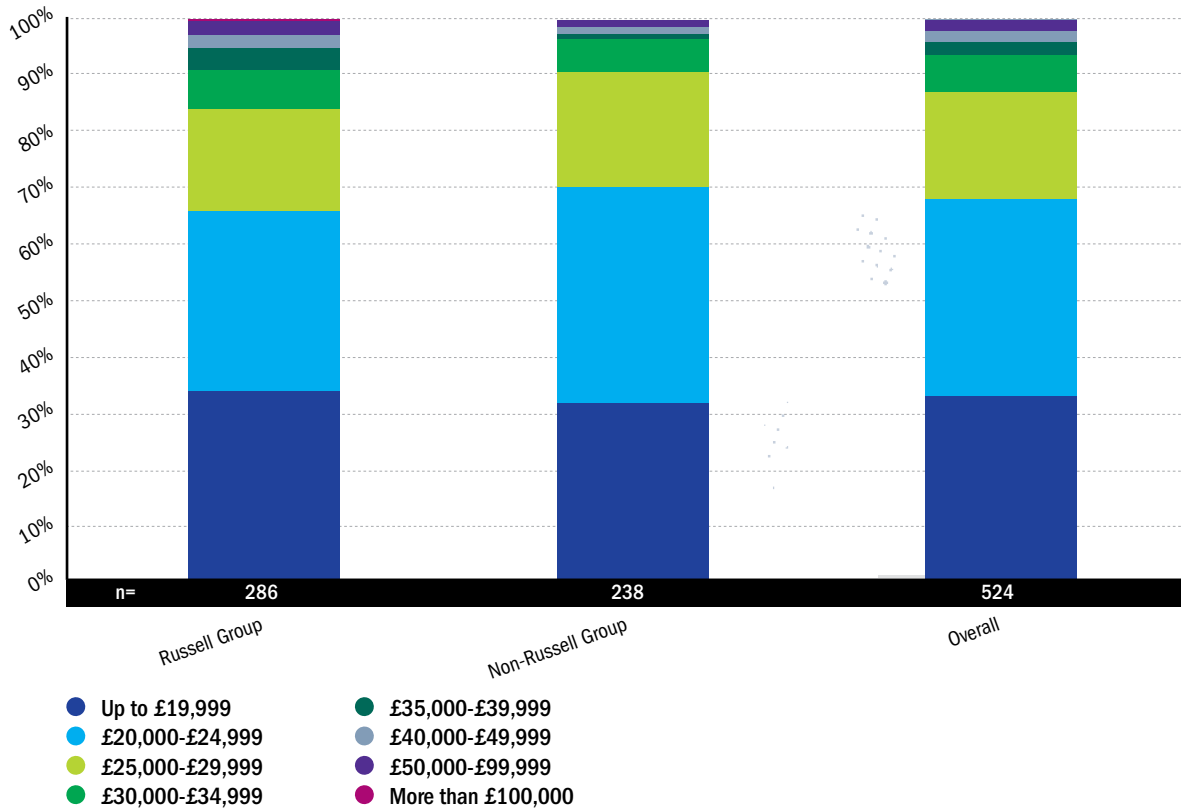
**// Figure 7.1a**  
Destinations of respondents one year after graduation from different institutions



\* The definition of Russell Group institutions does not include the universities of Durham, York, Exeter and Queen Mary who joined the Russell Group in March 2012.

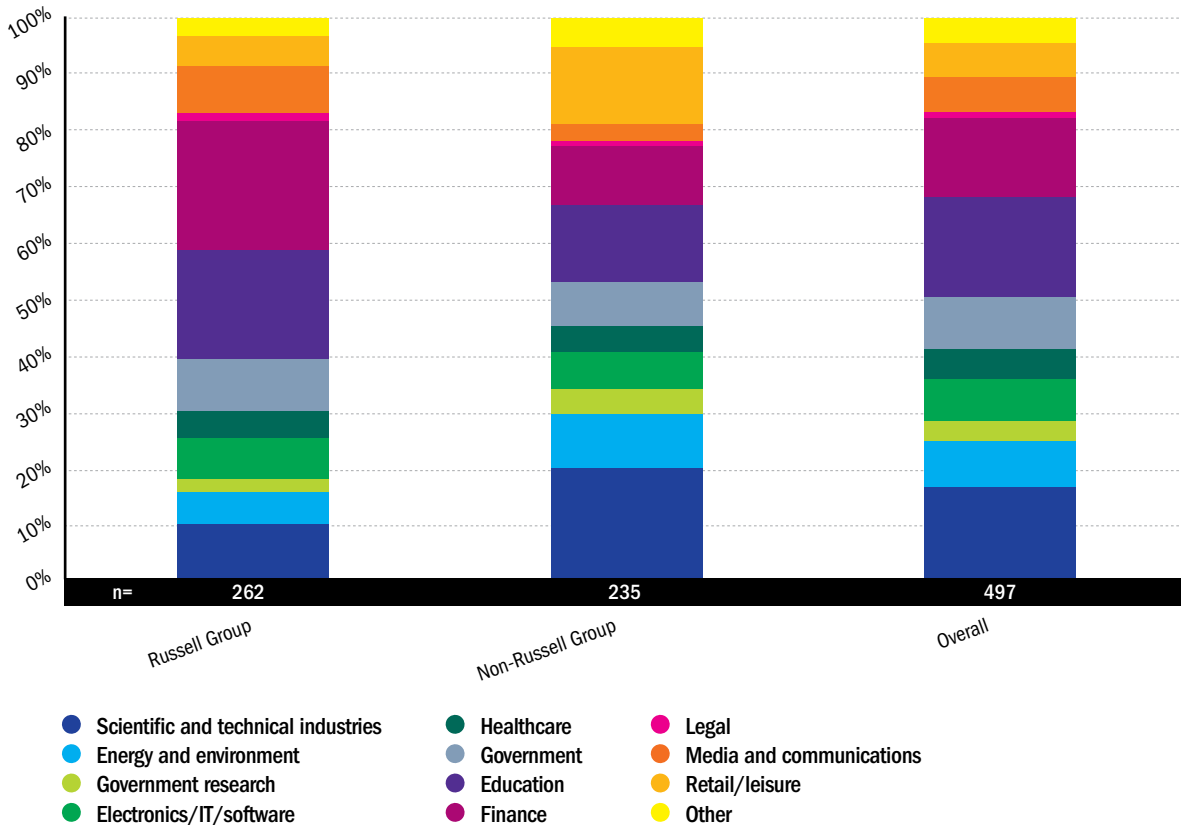
// Figure 7.1b

Salaries for respondents in employment one year after graduation from different institutions



// Figure 7.1c

Employment sectors of respondents in employment one year after graduation from different institutions



# 7

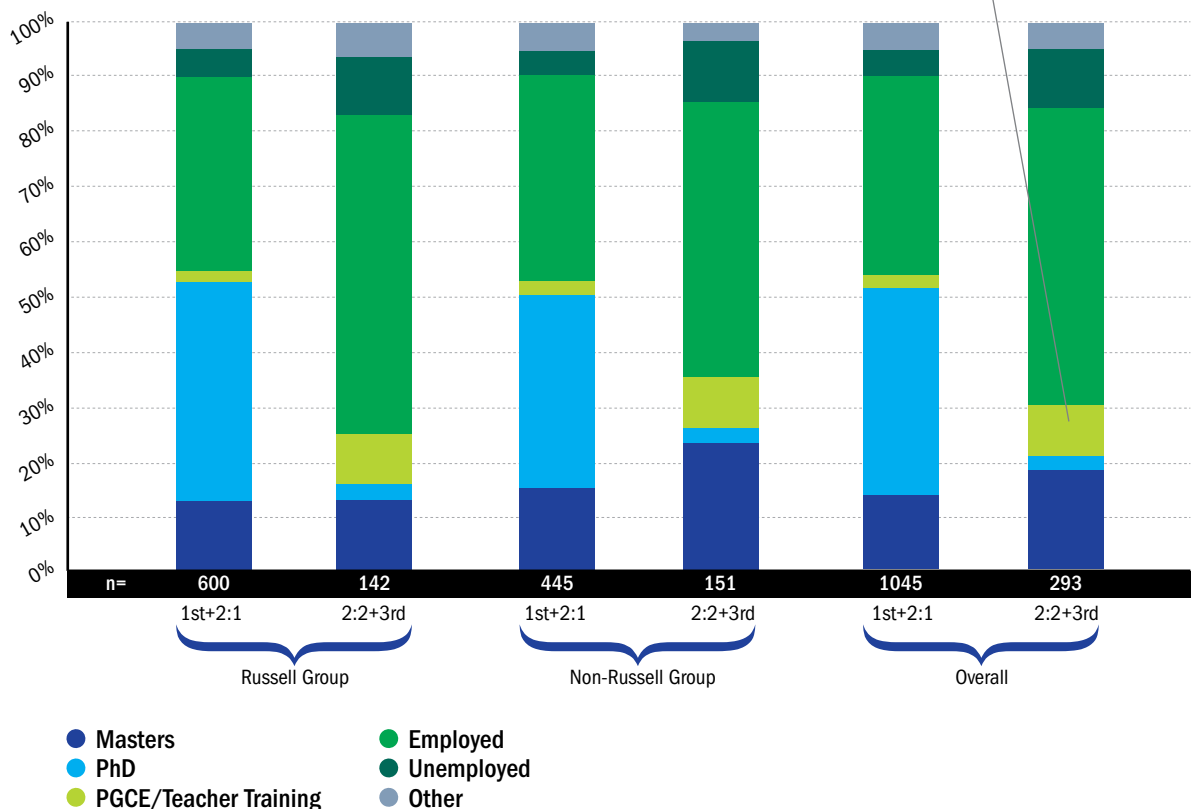
## DESTINATIONS OF GRADUATES BY INSTITUTION

### 7.2 Destinations of graduates from different institutions by degree class

- » Considering the destinations of respondents from Russell Group institutions by degree class, the differences identified in section 7.1 for the destinations from Russell Group and non-Russell Group institutions are not apparent for respondents with first- or upper-second class degrees (figure 7.2a).
- » Respondents with lower-second or third-class degrees from Russell Group institutions were less likely to go on to further study and more likely to be employed than those with lower-second or third-class degrees from non-Russell Group institutions (figure 7.2a).
- » When degree class is taken into account, there are smaller differences between the distribution of salaries for respondents from Russell Group or non-Russell Group institutions. This may indicate that, for physics graduates, degree class is a more significant factor in determining salary for those in employment than the institution attended (figure 7.2b).
- » The main difference between those with first or upper-second class degrees from Russell Group and non-Russell Group institutions is in the choice of employment sector. Those from non-Russell Group institutions were more likely to stay in science sectors, whereas those from the Russell Group have a wider spread across all employment sectors, including a larger proportion working in finance (25.1% compared to 17.4%) (figure 7.2c).

Teacher-training courses are most likely to attract respondents with lower-second or third-class degrees for both Russell Group and non-Russell Group institutions.

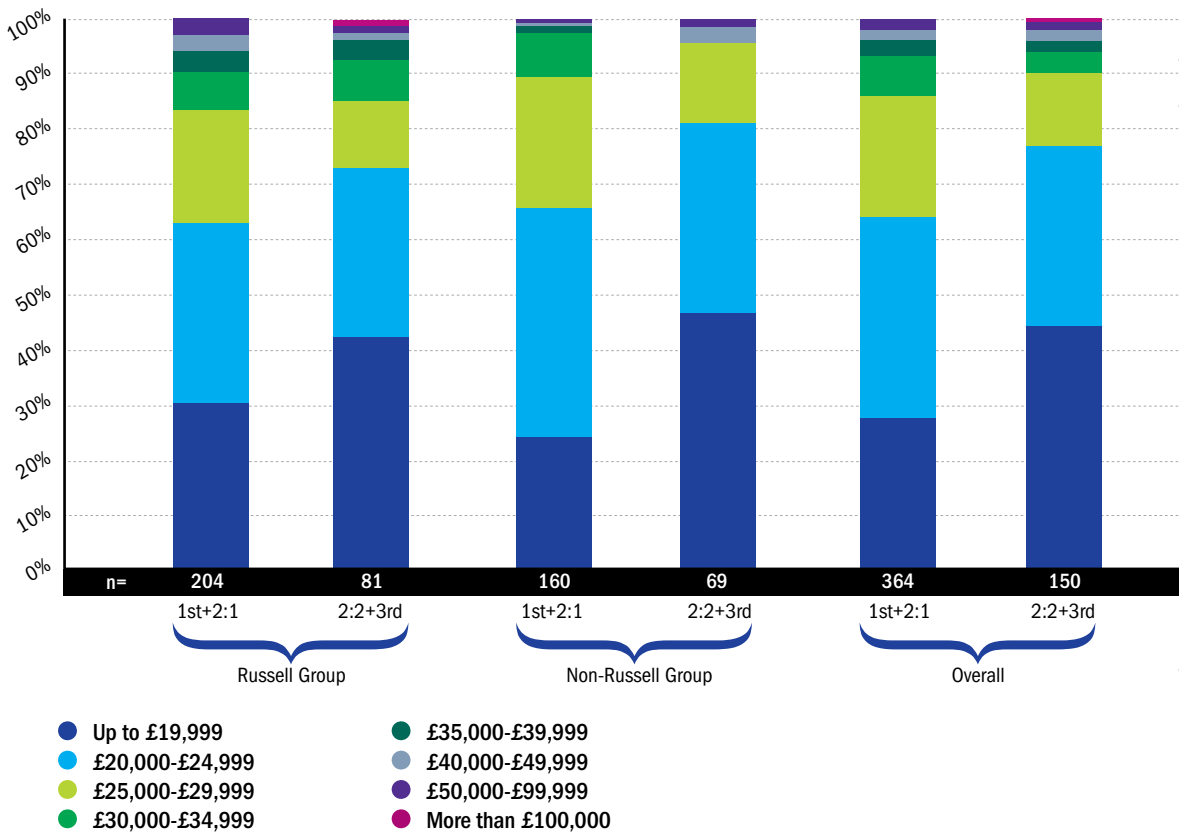
// Figure 7.2a  
Destinations of respondents one year after graduation from different institutions by degree class





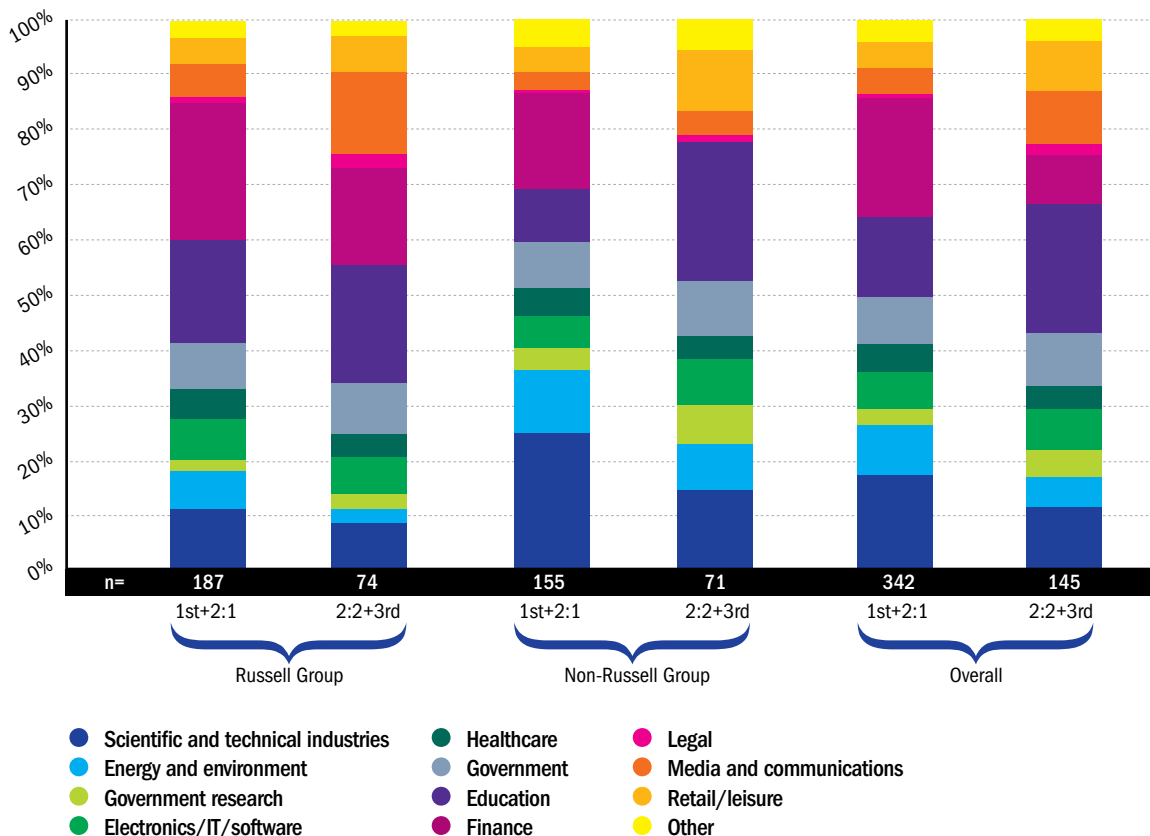
// Figure 7.2b

Salaries of respondents in employment one year after graduation from different institutions by degree class



// Figure 7.2c

Employment sectors for respondents in employment one year after graduation from different institutions by degree class



# 8

## APPENDIX – DEMOGRAPHICS OF THE SAMPLE

### // Sampling

The study has collected information from 5737 final-year undergraduates taking physics degrees in the UK and Ireland between 2006 and 2010. We estimate that this is a response rate of around 40% of the population of all physics graduates in this period.

There was a drop in the number of responses one year after graduation, with 34% of those captured in the initial survey responding to the follow-up questionnaire. However, there was a better retention rate for subsequent follow-up surveys. For example, 83% of the people who responded to the first follow-up survey also responded to the second.

### // Gender

The proportion of female respondents at each stage of the survey (average 28%) was higher than the average proportion of female physics graduates (21%) indicating that women were more likely than men to complete the first survey and respond to the follow-up surveys. This over-sampling of women has been beneficial for the analysis by gender to increase the sample sizes under consideration.

### // Socio-economic status

Respondents were classified into socio-economic groups Major 1 to 9 based on their parental occupation, or in the case of mature students their current/most recent or their partner's occupation. Classification was based on the Office of National Statistics Standard Occupational Classifications 2000\*. Major 1 and Major 2 correspond respectively to higher and lower professional and managerial backgrounds, Major 3 corresponds to associate professional/technical occupations and Major 4-9 encompass occupations in administration, skilled and unskilled trades, caring, customer service and plant/machine operation.

Over 60% of respondents were classified as Major groups 1 and 2, indicating that the majority of respondents came from professional and managerial backgrounds. The proportion of graduates from Major group 1 (20%) is consistent with data for undergraduate students in physics from the Higher Education Statistics Agency (HESA). However, the proportion of respondents in Major group 2 (46%) was significantly higher than the proportion in this group given by HESA (around 11%) of undergraduate physics students.

### // Ethnicity

Around 12% of respondents were from non-white ethnic backgrounds in each cohort, with particularly small numbers of graduates from black backgrounds. This is consistent with HESA data, which puts the proportion of white undergraduate students in physics at around 90%. Therefore, in this sense the survey population is representative of the pool of physics graduates that respondents were drawn from.

### // Disability

There were a small number of respondents declaring a disability in the initial and follow-up surveys (6%). This is lower than the proportion of students declaring a disability within HESA data (10%). This may be indicative of accessibility issues for disabled students and graduates completing the paper or online surveys – an important consideration for future research of this nature. For survey respondents who considered themselves to have a disability, the most prevalent impairment given was dyslexia.

### // Degree class

Of respondents to the survey, 41% achieved a first-class degree, which is 11% higher than the proportion of graduates gaining a first from HESA data for this period. Correspondingly, 4% of survey respondents achieved a third-class degree compared to 10% from HESA data.

\* Full details can be found here <http://www.ons.gov.uk/ons/guide-method/classifications/archived-standard-classifications/standard-occupational-classification-2000/index.html>



# The Career Paths of Physics Graduates

**A longitudinal study  
2006–2010**

**For more information please contact:**

Frances Ling

**IOP** Institute of Physics

76 Portland Place

London W1B 1NT

Tel: +44 (0) 20 7470 4842

Fax: +44 (0)20 7470 4848

E-mail: [diversity@iop.org](mailto:diversity@iop.org)

**[www.iop.org/diversity](http://www.iop.org/diversity)**

Registered charity: 293851

Scottish charity register number: SC040092

This document is also available to download  
as a PDF from our website.

The RNIB clear print guidelines have been  
considered in the production of this document.  
Clear print is a design approach that considers  
the needs of people with sight problems.

For more information, visit **[www.rnib.org.uk](http://www.rnib.org.uk)**.