

## Overall survey response for UK-domiciled doctoral graduates

| UK doctoral graduates              | 2003       | 2004       | 2005       | 2006       | 2007       | Total       |
|------------------------------------|------------|------------|------------|------------|------------|-------------|
| Total respondents                  | 4695       | 4675       | 4880       | 5035       | 5495       | 24780       |
| Total UK doctoral graduates        | 7270       | 7035       | 7080       | 7430       | 7875       | 36695       |
| % response                         | 65%        | 67%        | 69%        | 68%        | 70%        | 68%         |
| Female respondents (response rate) | 2150 (66%) | 2195 (68%) | 2330 (70%) | 2440 (67%) | 2635 (70%) | 11750 (69%) |
| Male respondents (response rate)   | 2545 (64%) | 2485 (65%) | 2550 (68%) | 2595 (68%) | 2860 (70%) | 13030 (66%) |

Table 3: Survey response for UK-domiciled doctoral graduates from UK universities 2003–2007

### Employment rates

Overall, employment circumstances of UK-domiciled doctoral graduates showed much stability. It was noticeable that an increasing proportion of respondents in UK employment combined work with further study; 13% in 2007 compared with 8% in 2003. Annual unemployment rates varied less than a percentage point. Those working or studying overseas declined from 8% in 2003 to 6% in 2007.

| Employment Circumstances            | 2003  | 2004  | 2005  | 2006  | 2007  | Total |
|-------------------------------------|-------|-------|-------|-------|-------|-------|
| Entered work in the UK              | 72.7% | 68.3% | 69.1% | 67.3% | 67.9% | 69.0% |
| Working & studying in the UK        | 8.0%  | 11.4% | 11.4% | 12.8% | 13.3% | 11.5% |
| Entered study or training in the UK | 2.7%  | 2.7%  | 2.9%  | 2.8%  | 2.9%  | 2.8%  |
| Working or studying overseas        | 8.1%  | 7.5%  | 7.0%  | 6.3%  | 5.9%  | 6.9%  |
| Not available for work or study     | 3.2%  | 3.7%  | 3.4%  | 3.3%  | 3.2%  | 3.4%  |
| Believed unemployed                 | 3.2%  | 3.9%  | 3.6%  | 3.2%  | 3.1%  | 3.4%  |

Table 4: Employment circumstances of UK-domiciled doctoral graduates 2003–2007: respondents in all disciplines

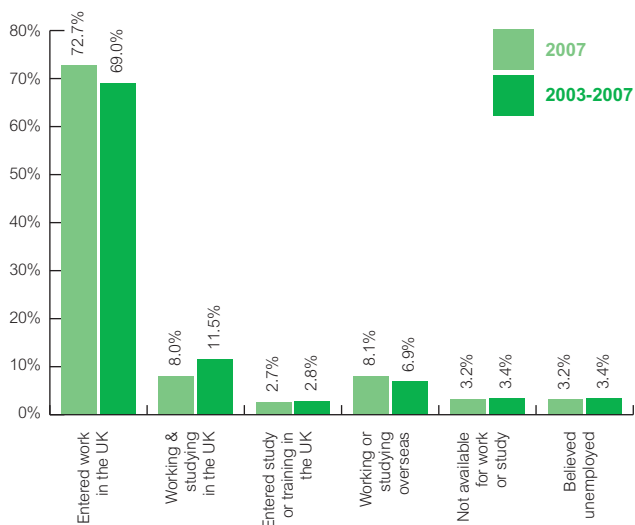


Figure 1: Employment circumstances of UK-domiciled doctoral graduates 2003–2007 and 2007: respondents in all disciplines

The doctoral graduate unemployment rate compared favourably with those of other graduates (Figure 2). 3.1% of UK-domiciled 2007 doctoral graduates were unemployed compared with 5.5% of first-degree graduates. This represents a small narrowing of the unemployment rates since 2003 (3.2% with doctorates and 6.6% with first degrees). Masters graduate unemployment was consistently between the doctorate and first degree rates.

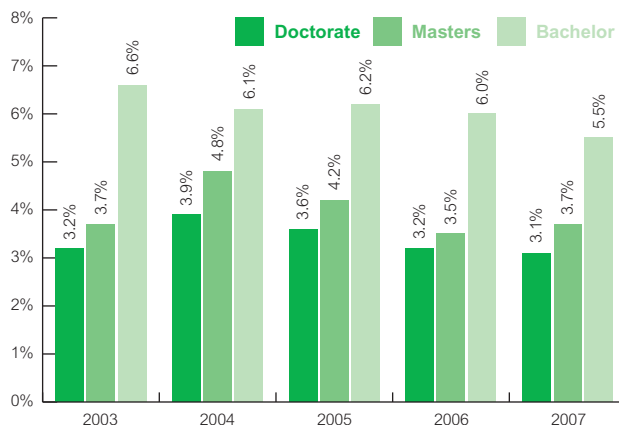


Figure 2: Comparisons of UK-domiciled graduates 'believed unemployed' from 2003–2005 at bachelor, master and doctorate levels

| 'Believed unemployed' | 2003 | 2004 | 2005 | 2006 | 2007 |
|-----------------------|------|------|------|------|------|
| Doctorate             | 3.2% | 3.9% | 3.6% | 3.2% | 3.1% |
| Masters               | 3.7% | 4.8% | 4.2% | 3.5% | 3.7% |
| Bachelor              | 6.6% | 6.1% | 6.2% | 6.0% | 5.5% |

Table 5: UK-domiciled graduate respondents 'believed unemployed' from 2003–2005 at bachelor, master and doctorate levels

### Employment sectors

As shown in Figure 3, UK-domiciled doctoral graduates divided almost equally into those who remain in the education sector (mainly in HE) and those who work in other sectors. The distribution across the different employment sectors was highly consistent year-on-year. The 2007 figures shown in Figure 3 correspond within one percentage point to five-year totals 2003–2007. The largest percentage decline in UK-domiciled doctoral graduates was in those employed in the manufacturing sector, a fall from 16.5% to 14% between 2003 and 2005. Overall, this represented only 65 fewer doctoral graduates, spread across the science subjects, but especially physical sciences and engineering.

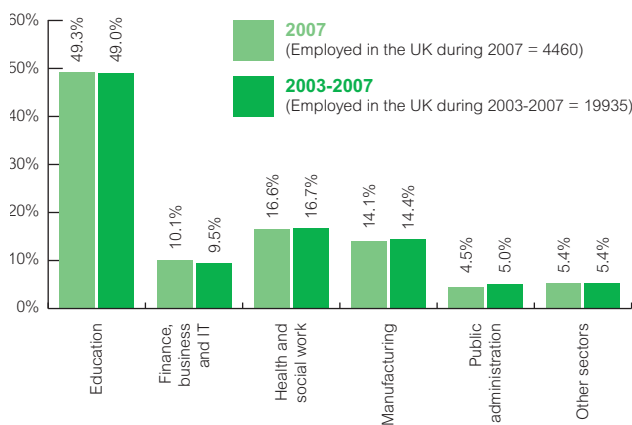


Figure 3: Employment sectors entered by UK-domiciled doctoral graduates 2003–2007 and 2007, based on Standard Industrial Classifications: respondents in all disciplines

### Career occupations

The occupations of doctoral graduates at the 'all disciplines' level showed little variation over the five-year period (see Table 4). Occupations of doctoral graduates at first destination, as aggregated into these broad categories, varied by less than 2%, except in the category 'scientific research, analysis and development professionals', which saw a fall from 18% (2003) to 15% (2007). However, the numbers of respondents entering these occupations remained stable at 675 in 2007 compared with 680 in 2003.

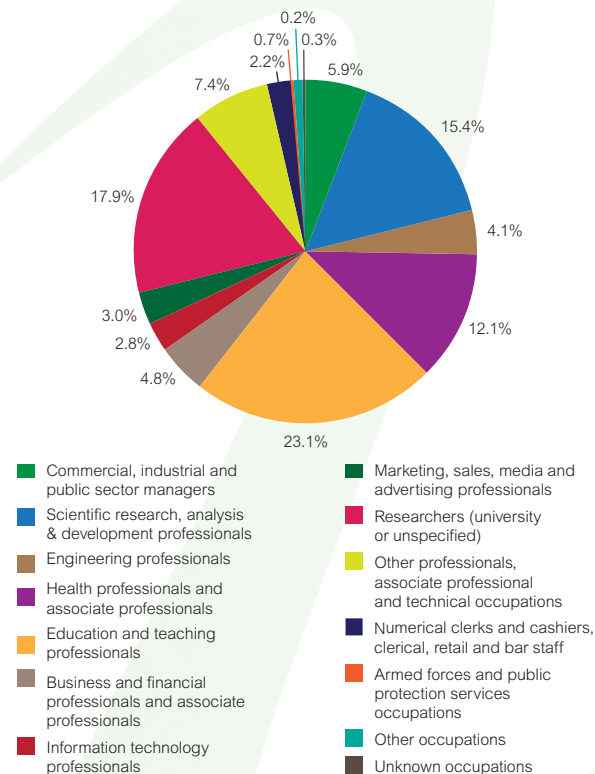


Figure 4: Types of work comparison: UK-domiciled doctoral graduates 2007<sup>6</sup>

### Research roles

Research roles across all sectors accounted for the highest proportion of UK-domiciled doctoral graduates working in the UK. Analysis of SOCs shows that research occupations, which occur across the occupation classifications in Table 6, accounted for 35% of respondents 2003–2007 employed in the UK. Further analysis shows 23% of respondents entered research roles in higher education 2003–2007<sup>8</sup>. UK-domiciled doctoral graduates employed in research roles outside higher education were principally employed in manufacturing (many in the pharmaceutical and chemical industries), the NHS, and other parts of the public sector, such as government departments.

### Education and teaching professionals

Teaching roles accounted for the second highest proportion of UK-domiciled doctoral graduates working in the UK (2003–2007), absorbing a stable 22% (23% in 2007). Higher education lecturer roles dominated this category at an average of 14% of UK-employed respondents over 2003–2007.

### Other occupations

Overall, health professional roles saw a small increase from 11% in 2003 to 12% in 2007, chiefly among doctoral graduates in the biomedical sciences, where the proportion employed in these careers grew from 38% in 2003 to 42% in 2007. This reflects the growing number of clinical psychologists and health professionals (such as medical doctors and nurses) undertaking professional doctorates.

This section only presents a gross overview of trends in doctoral graduate first destinations: employment sectors, occupations and employment status vary considerably by discipline and by subject. The following chapters look in more detail at what we can conclude from the survey returns for UK-domiciled doctoral graduates in five broadly discipline-based groups: arts and humanities, biological sciences, biomedical sciences, physical sciences and engineering, and social sciences. Each discipline chapter also contains destination information for larger subjects (and groups of related subjects) within those discipline groups.

|   | 2003  | 2004  | 2005  | 2006  | 2007  | Total |
|---|-------|-------|-------|-------|-------|-------|
| Commercial, industrial and public sector managers                     | 6.6%  | 7.0%  | 7.1%  | 6.8%  | 5.9%  | 6.7%  |
| Scientific research, analysis & development professionals             | 18.1% | 17.4% | 17.0% | 16.2% | 15.4% | 16.8% |
| Engineering professionals   | 5.3%  | 4.3%  | 4.5%  | 3.6%  | 4.1%  | 4.3%  |
| Health professionals and associate professionals                      | 11.3% | 11.5% | 13.2% | 13.2% | 12.1% | 12.3% |
| Education and teaching professionals                                  | 22.2% | 22.5% | 22.0% | 21.8% | 23.1% | 22.4% |
| Business and financial professionals and associate professionals      | 3.3%  | 3.8%  | 3.6%  | 4.4%  | 4.8%  | 4.0%  |
| Information technology professionals                                  | 2.9%  | 2.4%  | 2.2%  | 2.7%  | 2.8%  | 2.6%  |
| Marketing, sales, media and advertising professionals                 | 3.2%  | 2.6%  | 2.8%  | 3.1%  | 3.0%  | 2.9%  |
| Researchers (university or unspecified)                               | 15.9% | 16.0% | 17.6% | 17.3% | 17.9% | 17.0% |
| Other professionals, associate professional and technical occupations | 7.8%  | 8.6%  | 6.8%  | 7.5%  | 7.4%  | 7.6%  |
| Numerical clerks and cashiers, clerical, retail and bar staff         | 1.9%  | 2.1%  | 1.8%  | 2.1%  | 2.2%  | 2.1%  |
| Armed forces and public protection services occupations               | 0.4%  | 0.2%  | 0.2%  | 0.2%  | 0.3%  | 0.3%  |
| Other occupations   | 1.0%  | 1.2%  | 1.0%  | 1.0%  | 0.7%  | 1.0%  |
| Unknown occupations   | 0.1%  | 0.4%  | 0.2%  | 0.1%  | 0.2%  | 0.2%  |

Table 6: Types of work entered by UK-domiciled doctoral graduates (2003–2007) based on Standard Occupational Classifications (SOC) returned in the DLHE surveys<sup>7</sup>

<sup>6</sup> Types of work being undertaken on January 15 2008 by UK-domiciled doctoral graduates from UK universities 2007.

<sup>7</sup> Types of work being undertaken in the UK on January 15 2004, 2005, 2006, 2007 and 2008 by UK-domiciled doctoral graduates from UK universities in 2003, 2004, 2005, 2006 and 2007.

<sup>8</sup> The methods for calculating doctoral graduates employed in research related roles and as research staff in higher education are given in the methodology chapter.

# Arts and humanities

## Arts and humanities doctoral graduates at a glance

**Doctoral graduates from the arts and humanities (A&H) made up between 13-14% of all UK-domiciled doctoral graduates over the period 2003–2007, 14% in 2007.**

- The number of A&H UK-domiciled doctoral graduates varied between 885 in 2004 and 1135 in 2007<sup>1</sup>
- The most popular subjects were history and English
- The average A&H response rate to the DLHE survey over the five year period was 67% and highest for those graduating in 2007 (70%)
- Of UK-domiciled doctoral graduates from 2003–2007, 50% of A&H graduates were female; 36% achieved their doctorate through part-time study<sup>2</sup>

### Of UK-domiciled A&H doctoral graduates who responded to the DLHE survey

- The percentage working, or working and studying, in the UK averaged 76% over the period 2003–2007
- The proportion who chose to further their careers abroad was 4.0% (2003–2007), and was consistently below the rate across all disciplines (7% over 2003–2007)
- The unemployment rate (3.4% in 2007 and 4% 2003–2007 average) was consistently lower than for A&H first-degree respondents (6.8% in 2007) and masters graduate respondents (4.4% in 2007)

### Looking in more detail at those A&H respondents working or working and studying in the UK<sup>3</sup>

- The education sector (both higher and other education, across occupations) was consistently the largest employment area for A&H respondents. It absorbed 69% in 2007 and averaged 67% over 2003–2007
- A&H respondents 2003–2007 were more than twice as likely to enter 'education and teaching' occupations (48%) than respondents across all disciplines (22%)
- A subset of these, 27% of all respondents in UK employment, entered HE lecturing roles, almost double the rate across all disciplines (14%)
- The percentage working in all research roles was 18%, well below the all disciplines average (35%)
- The proportion working as research staff in higher education was 14% (2003–2007), well below the all disciplines average (23%)

## Overall survey response for arts and humanities subjects

| A&H UK doctoral graduates       | 2003 | 2004 | 2005 | 2006 | 2007 | Total |
|---------------------------------|------|------|------|------|------|-------|
| Total doctoral graduates in A&H | 1000 | 885  | 905  | 1055 | 1135 | 4985  |
| Total respondents               | 640  | 590  | 625  | 700  | 795  | 3350  |
| % response                      | 64%  | 67%  | 69%  | 66%  | 70%  | 67%   |
| Female respondents              | 285  | 305  | 300  | 355  | 425  | 1670  |
| Male respondents                | 360  | 285  | 325  | 345  | 370  | 1680  |

Table 1: Survey response for UK-domiciled doctoral graduates 2003–2007 in arts and humanities

The UK-domiciled A&H doctoral graduate population rose to 1135 in 2007, a five-year high (2004 saw the lowest number at 885). It constituted over 14% of all UK-domiciled doctoral graduates in 2006 and 2007, and between 13% and 14% over 2003–2005.

### This chapter ...

contains analysis of the arts and humanities doctoral graduate cohort, their response rate to the DHLE survey, first destination employment rates, employment sectors and occupations. The subjects discussed are: history; English; modern languages; theology; and linguistics and classical and ancient languages. Other subjects in arts and humanities are grouped together.

<sup>1</sup> For data protection, all figures have been rounded to the nearest five. Numbers and percentages may not total due to rounding.

<sup>2</sup> Compared to the total UK-domiciled doctoral graduate population where 46% were female; 27% gained their doctorate through part-time study.

<sup>3</sup> All data on destinations, whether in terms of occupations or employment sectors, is from those respondents who entered work or work and study in the UK.

## Employment rates for arts and humanities

The employment circumstances of A&H respondents were stable over 2003–2007. The total A&H respondents entering employment in the UK or combining work and study was 76% compared with 81% of all respondents. The proportion of those working or studying overseas (4%) was also below that for all respondents (7%). Unemployment was 4.0% (3.4% in 2007) compared with 3.4% across all disciplines (3.1% in 2007). A&H respondents included a higher proportion than average of those not available for work or study<sup>4</sup> (6% compared with 3% across the entire 2003–2007 doctoral population) and more entered further study or training (5% compared with 3% of all respondents). However, the employment picture at broad discipline level masks variations between different subjects.

History was the most popular subject and accounted for 25% of all UK-domiciled A&H doctoral graduates, followed by English at 18%: all other subjects had fewer than 10% of the A&H doctoral graduates. Amalgamating data from 2003–2007 creates sufficient numbers to identify employment rates, employment sectors and occupations doctoral graduates entered in the following subjects: history; English; modern languages; theology; and linguistics and classical and ancient languages. All other A&H subjects are discussed as ‘other arts and humanities’<sup>5</sup>.

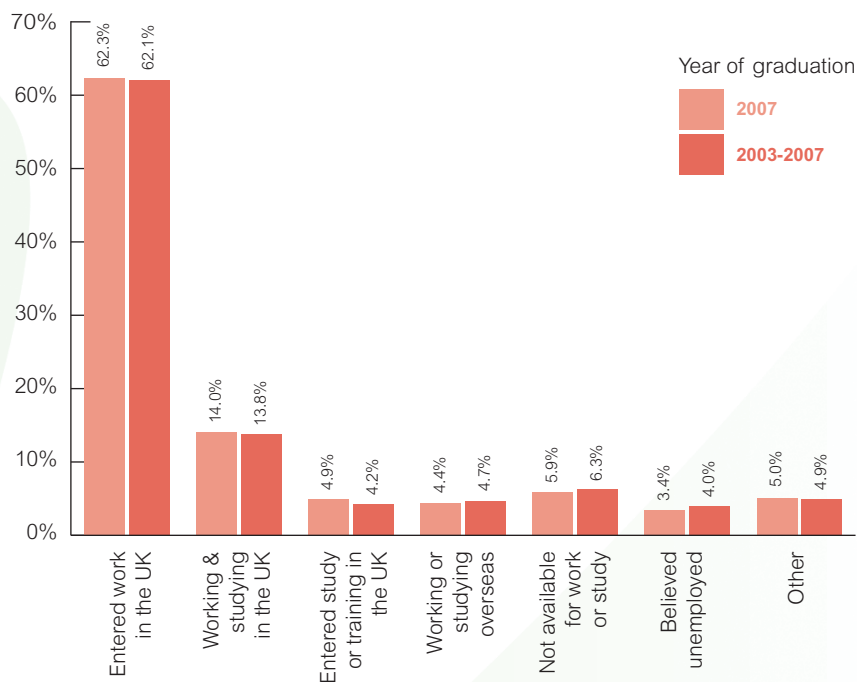


Figure 1: Employment circumstances of UK-domiciled A&H doctoral graduate respondents: 2007 and 2003–2007 comparison

## Summary of employment outcomes by subject 2003–2007

| A&H UK-domiciled respondents        | History | English | Modern languages | Theology | Linguistics and classical and ancient languages | Other subjects in arts and humanities |
|-------------------------------------|---------|---------|------------------|----------|---|---------------------------------------|
| Entered work in the UK              | 60.5%   | 62.6%   | 57.4%            | 61.3%    | 62.3%   | 64.7%                                 |
| Working and studying in the UK      | 13.6%   | 15.2%   | 12.2%            | 15.3%    | 11.8%   | 13.6%                                 |
| Entered study or training in the UK | 4.6%    | 3.6%    | 7.8%             | 5.0%     | 4.6%  | 2.9%                                  |
| Working or studying overseas        | 3.1%    | 4.2%    | 7.8%             | 5.0%     | 6.0%  | 5.0%                                  |
| Not available for work or study     | 8.9%    | 5.0%    | 4.6%             | 6.6%     | 6.0%  | 5.5%                                  |
| Believed unemployed                 | 3.1%    | 5.5%    | 4.7%             | 2.2%     | 4.2%  | 4.2%                                  |
| Other                               | 6.3%    | 3.9%    | 5.6%             | 4.7%     | 5.0%  | 4.2%                                  |

Table 2: Employment circumstances of UK-domiciled A&H doctoral graduates 2003–2007: respondents in different subjects in arts and humanities

<sup>4</sup> An unknown proportion of these are mature students undertaking doctorates for personal interest.

<sup>5</sup> Other A&H subjects include American studies, archaeology, art and design, cinematics, communication studies, comparative literature, design studies, drama, fine art, journalism, media studies, music, philosophy.

## Employment sectors for arts and humanities doctoral graduates

Employment in the education sector (both higher and other education) accounted for over two thirds of UK-employed A&H respondents in 2007 (69%), slightly above the 2003–2007 average of 67%. A&H respondents were the most likely of all the discipline groups to enter the education sector, just ahead of social sciences at 66% and well above the doctoral graduate population 2003–2007 as a whole (49%).

'Other sectors' was the second most popular destination for A&H UK-employed respondents at between 13% and 16% for the period 2003–2007. These include the cultural and recreation sectors. A&H respondents are considerably more likely than other disciplines to enter these sectors: the all-disciplines rate was 5% over 2003–2007.

7% entered the public administration sector in 2007 (6% over 2003–2007). The remaining sectors shown in Figure 2 employed fewer than 5% both in 2007 and over the five-year period.

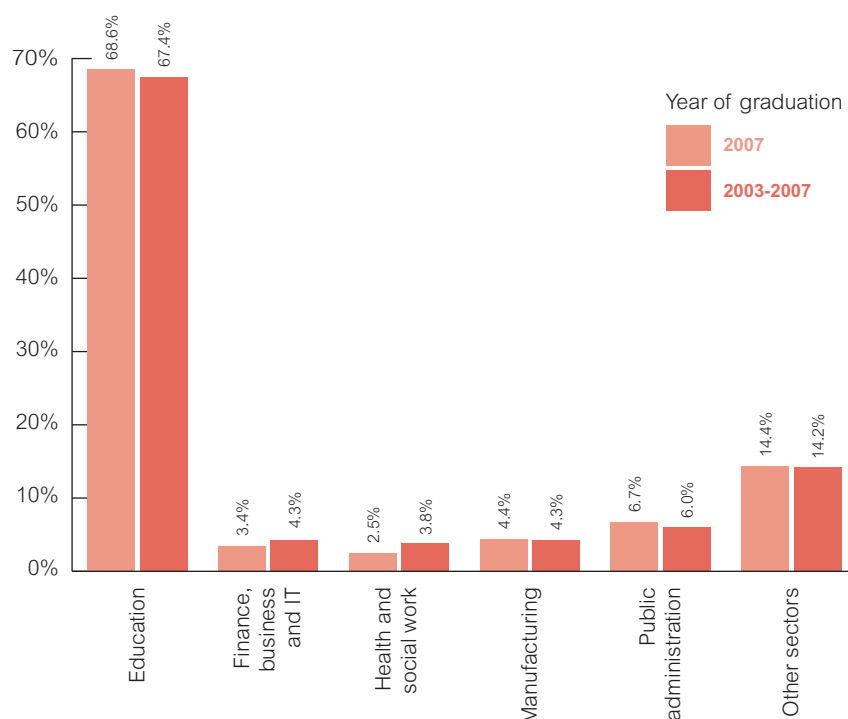


Figure 2: Employment sectors entered by UK-domiciled A&H respondents working in the UK, based on Standard Industrial Classifications (SIC): 2007 and 2003–2007 comparison

## Summary of employment sectors by subject 2003–2007

| A&H UK-domiciled respondents | History | English | Modern languages | Theology | Linguistics and classical and ancient languages | Other subjects in arts and humanities |
|------------------------------|---------|---------|------------------|----------|---|---------------------------------------|
| Education                    | 64.3%   | 77.0%   | 79.3%            | 43.7%    | 73.3%   | 67.2%                                 |
| Finance, business and IT     | 5.0%    | 4.2%    | 4.0%             | 7.0%     | 1.0%  | 3.8%                                  |
| Health and social work       | 3.0%    | 2.8%    | 1.5%             | 12.6%    | 2.9%  | 3.1%                                  |
| Manufacturing                | 5.8%    | 3.2%    | 3.8%             | 2.1%     | 4.5%  | 4.5%                                  |
| Public Administration        | 7.2%    | 4.4%    | 8.5%             | 5.0%     | 7.3%  | 5.3%                                  |
| Other sectors                | 14.7%   | 8.3%    | 3.0%             | 29.6%    | 11.0%   | 16.0%                                 |

Table 3: Employment sectors entered by UK-domiciled A&H respondents working in the UK and graduating in 2003–2007 from different arts and humanities subjects, based on Standard Industrial Classifications (SIC) returned in the DLHE surveys



## Occupations of arts and humanities doctoral graduates

48% of UK-domiciled A&H respondents working in the UK (1200) were employed as 'education and teaching professionals' across all sectors of education 2003–2007. This proportion is higher than any other discipline group and more than double that for all disciplines (22%). 680 of these (27%) gained HE lectureship positions (compared with 14% across all disciplines). Other popular education and teaching roles were FE teaching professionals, university tutorial and teaching assistants and secondary level teachers.

Research roles occur across the different types of occupation classes shown in Table 4. Analysis of SOCs shows research occupations account for a total of 18% of A&H respondents employed in the UK<sup>7</sup>. Further analysis showed 14% of A&H respondents entered research staff roles in higher education<sup>7</sup>. The proportions of respondents employed in research roles across all employment sectors and as HE research staff are the lowest of any discipline group: the averages for the doctoral population as a whole were 35% and 23% respectively.

Both in 2007 and over 2003–2007, 7% of UK-employed respondents were 'commercial, industrial and public sector managers', similar to the average rate across the entire doctoral population. The 7% employed in 'marketing, sales, media or advertising professional' roles was above the 2003–2007 all disciplines average of 3%.

Overall, 2003–2007 was a relatively stable period for A&H doctoral graduate employment. UK employment rates were below that for all disciplines, but higher proportions entered further study or were unavailable for work or study. Education sector employment dominated, characterised by a high proportion in teaching roles. Conversely, research destinations were below the average for the doctoral population as a whole. We now look in more detail at the employment rates, sectors and occupations of A&H doctoral graduates by subject.

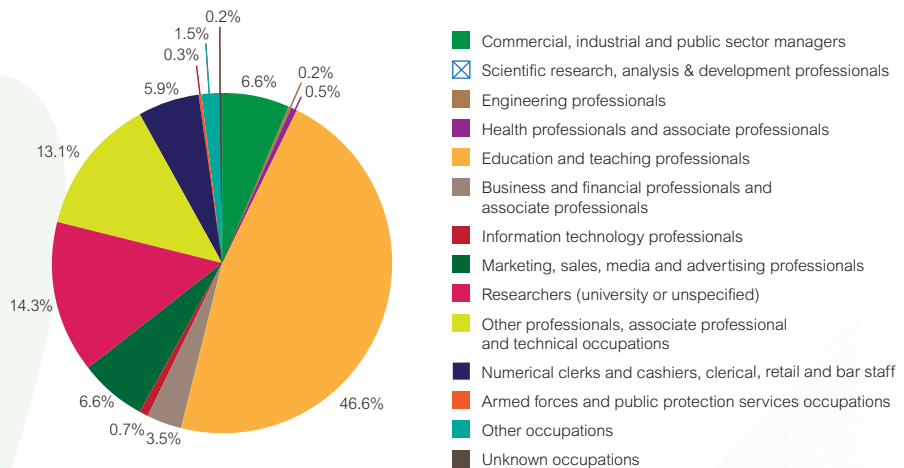


Figure 3: Types of work entered by UK-domiciled A&H doctoral graduates (2007), based on Standard Occupational Classifications (SOC) returned in the DLHE surveys<sup>6</sup>

| A&H UK-domiciled respondents  | 2003  | 2004  | 2005  | 2006  | 2007  | 2003-2007 |
|---|-------|-------|-------|-------|-------|-----------|
| Commercial, industrial and public sector managers                     | 5.7%  | 6.8%  | 9.4%  | 7.1%  | 6.6%  | 7.1%      |
| Scientific research, analysis & development professionals             | 3.0%  | 0.6%  | 1.1%  | 0.0%  | 0.0%  | 0.9%      |
| Engineering professionals   | 0.6%  | 0.0%  | 0.2%  | 0.5%  | 0.2%  | 0.3%      |
| Health professionals and associate professionals                      | 0.6%  | 0.9%  | 0.4%  | 0.8%  | 0.5%  | 0.6%      |
| Education and teaching professionals                                  | 45.2% | 50.7% | 48.2% | 47.9% | 46.6% | 47.7%     |
| Business and financial professionals and associate professionals      | 1.0%  | 1.9%  | 1.1%  | 2.7%  | 3.5%  | 2.1%      |
| Information technology professionals                                  | 0.8%  | 0.6%  | 0.9%  | 0.8%  | 0.7%  | 0.8%      |
| Marketing, sales, media and advertising professionals                 | 8.2%  | 6.0%  | 6.2%  | 6.9%  | 6.6%  | 6.8%      |
| Researchers (university or unspecified)                               | 13.2% | 7.3%  | 10.6% | 10.5% | 14.3% | 11.3%     |
| Other professionals, associate professional and technical occupations | 15.4% | 19.3% | 14.2% | 14.5% | 13.1% | 15.2%     |
| Numerical clerks and cashiers, clerical, retail and bar staff         | 3.7%  | 3.9%  | 5.1%  | 5.7%  | 5.9%  | 4.9%      |
| Armed forces and public protection services occupations               | 0.4%  | 0.2%  | 0.4%  | 0.0%  | 0.3%  | 0.3%      |
| Other occupations   | 2.1%  | 1.5%  | 1.9%  | 2.8%  | 1.5%  | 1.9%      |
| Unknown occupations   | 0.0%  | 0.2%  | 0.2%  | 0.0%  | 0.2%  | 0.1%      |

Table 4: Types of work entered by UK-domiciled A&H doctoral graduates (2003–2007), based on Standard Occupational Classifications (SOC) returned in the DLHE surveys<sup>8</sup>

<sup>6</sup> Types of work being undertaken by UK-domiciled respondents working in the UK on January 15 2008 after graduating from UK universities in 2007.

<sup>7</sup> The methods for calculating doctoral graduates employed in research related roles and as research staff in HE are given in the methodology chapter.

<sup>8</sup> Types of work being undertaken by UK-domiciled respondents working in the UK on January 15 2004, 2005, 2006, 2007 and 2008 after graduating from UK universities in 2003, 2004, 2005, 2006 and 2007.

## History

1250 UK-domiciled doctoral graduates (25% of A&H cohort), 850 respondents (68%) of which 620 entered employment in the UK (2003–2007)

History is the largest A&H subject, making up a quarter of UK-domiciled A&H doctoral graduates. 46% of UK-domiciled history doctoral graduates were female and 32% had studied part-time. 64% of history respondents working in the UK remained in HE or entered other education sectors over 2003–2007, a little below the A&H average of 67% (Table 3). The unemployment rate (3.1%) was below the A&H average (4.0%). Respondents with doctorates in history were most likely of all A&H subjects to be 'unavailable for work or study' at 9% (Table 2), perhaps reflecting the proportion of mature students undertaking doctorates in history for personal interest.

Over 2003–2007 the most popular occupations for history doctoral respondents were 'education and teaching' roles. At 38% (240 respondents) this proportion was below the average across A&H subjects (48%) but above that for respondents across all disciplines (22%). HE lectureships accounted for 20% (125 respondents), below the A&H average of 27%. Other significant education and teaching roles were university tutorial and teaching assistants, secondary level teachers and FE teaching professionals.

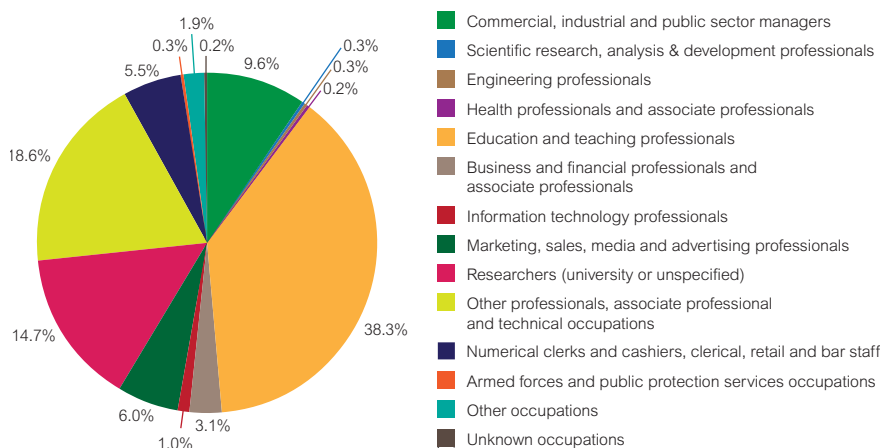


Figure 4: Types of work entered into by UK-domiciled respondents employed in the UK, graduating in 2003–2007 in history, based on Standard Occupational Classifications (SOC) returned in the DLHE surveys

The second largest category of respondents in history was 'other professionals, associate professional and technical occupations' (19%), including researchers, above the A&H average of 15%.

Research roles occur across the different types of occupations shown in Figure 4. Analysis of SOCs shows research occupations account for a total of 24% of history respondents employed in the UK. Further analysis showed 19% of UK-

employed respondents entered research staff roles in higher education<sup>9</sup>. Both are well above the discipline average of 18% and 14% respectively, but below those for the doctoral population as a whole (35% and 23%).

Other significant destinations were 'commercial, industrial and public sector managers', which at 10% absorbed above the average for A&H and all disciplines (both 7%).

## English

875 UK-domiciled doctoral graduates (18% of A&H cohort), 585 respondents (67%) of which 445 entered employment in the UK (2003–2007)

UK-domiciled doctoral graduates in English were 55% female and 28% had studied part-time. Respondents in English were slightly more likely to enter employment in the UK or work and study (78%) than the average across A&H subjects (76%) (Table 2). At 5.5%, the unemployment rate was the highest of any subject outside physical sciences (A&H average 4.0%). Employment in the education sector dominated at 77%, above the A&H average of 67% (Table 3).

Over 2003–2007, by far the most popular occupations for English doctoral respondents were 'education and teaching' roles. At 60% (270 respondents) this proportion was the highest of all A&H subjects (48%). HE lectureships accounted for 30% (135 respondents), above the A&H average of 27%. Other significant education and teaching roles were university tutorial and teaching assistants, secondary level teachers and FE teaching professionals.

The second largest category of UK-employed English respondents were 'researchers (university or unspecified)'

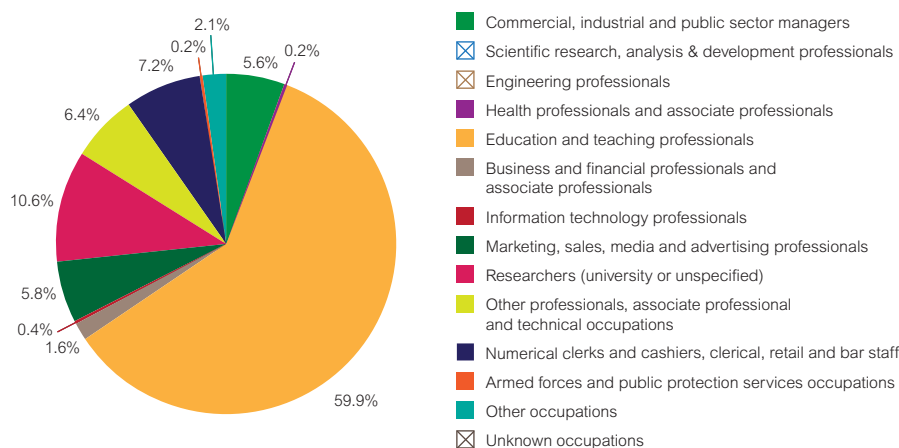


Figure 5: Types of work entered into by UK-domiciled respondents employed in the UK, graduating in 2003–2007 in English, based on Standard Occupational Classifications (SOC) returned in the DLHE surveys

(11%). However, research roles occur across the different types of occupation classes shown in Figure 5. Analysis of SOCs shows research occupations account for a total of 13% of English respondents employed in the UK. Further analysis showed 12% of UK-employed respondents entered research staff roles in

higher education<sup>9</sup>. Both are below the discipline average of 18% and 14% respectively, and those for the doctoral population as a whole (35% and 23%).

All other occupational areas employed small numbers – less than 30 respondents over the five-year period.

<sup>9</sup> The methods for calculating doctoral graduates employed in research related roles and as research staff in HE are given in the methodology chapter.

## Modern languages

465 UK-domiciled doctoral graduates (9% of A&H cohort), 295 respondents (64%) of which 200 entered employment in the UK (2003–2007)

Over 2003–2007, modern languages had the highest proportion of female doctoral graduates (61%) and the lowest proportion of part-time study (24%) of all A&H subjects (34%). The subject area saw higher than average proportions go on to further study and training in the UK (8% compared with 4% across A&H) and to work or study overseas (8% compared with 5%). Conversely, employment in the UK and combining work and study were lower than the A&H average (Table 2). The education sector absorbed 79% of modern languages respondents, the highest proportion of all A&H subjects (Table 3), indeed of all subjects analysed.

57% (115 respondents) entered education and teaching roles, considerably above the 48% across all A&H subjects and the 22% across the doctoral graduate population as a whole. HE lectureships accounted for 40% (125 respondents); this was the highest proportion of any A&H subject group.

The second largest category was 'researchers (university or unspecified)'

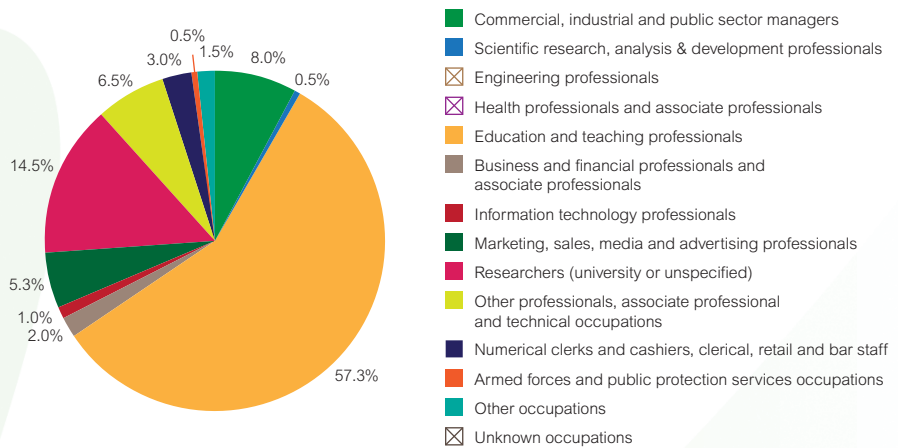


Figure 6: Types of work entered into by UK-domiciled respondents employed in the UK, graduating in 2003–2007 in modern languages, based on Standard Occupational Classifications (SOC) returned in the DLHE surveys

(15%). However, research roles occur across the different types of employment shown in Figure 6. Analysis of SOCs shows research occupations account for a total of 17% of modern languages respondents employed in the UK. Further

analysis showed 17% of UK-employed respondents entered research staff roles in higher education<sup>10</sup>. This compares with the discipline average of 18% and 14% respectively and those for the doctoral population as a whole (35% and 23%).

## Theology

440 UK-domiciled doctoral graduates (9% of A&H cohort) 320 respondents (73%) of which 240 entered employment in the UK (2003–2007)

Over 2003–2007, theology had the lowest proportion of female graduates (33%) and the highest proportion of part-time study (52%) of all A&H subjects. It had the highest proportion of respondents combining work and study (15%) and the lowest unemployment rate (2.2%) of the A&H subjects (Table 2). The education sector absorbed 44% of theology respondents, followed by the 'other sectors' category (30%), which includes religious organisations. A significant proportion of theology doctoral graduates also worked in the health and social work sector as clergy (13%) (Table 3).

40% of UK-employed theology respondents entered 'other professionals, associate professional and technical occupations', largely as clergy.

'Education and teaching professional' roles accounted for 33%, below the average across A&H subjects (48%), though above the average across all disciplines (22%). The proportion in HE lecturer roles was 14%, equalling the all disciplines average, though the lowest of all A&H subjects.

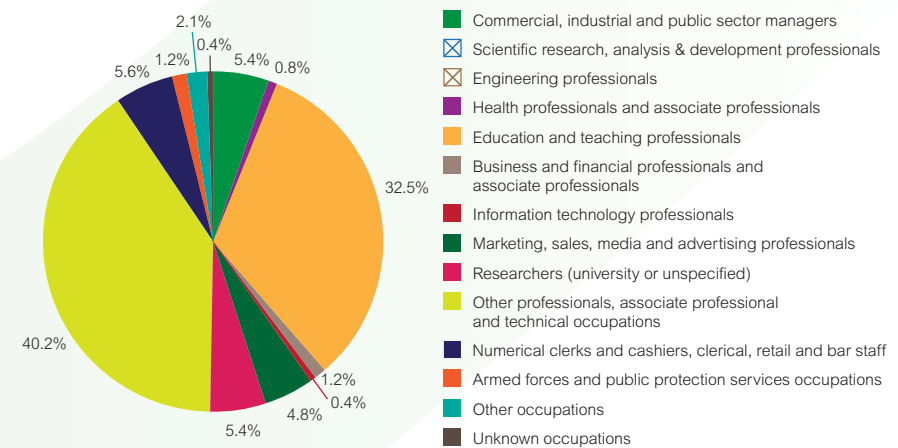


Figure 7: Types of work entered into by UK-domiciled respondents employed in the UK, graduating in 2003–2007 in theology, based on Standard Occupational Classifications (SOC) returned in the DLHE surveys

7% of UK-employed respondents from theology entered research roles, which occur across the different types of employment shown in Figure 7. Further analysis showed 6% of UK-employed respondents entered research staff roles in higher education<sup>10</sup>, well below the A&H

discipline average of 20% and 14% respectively and those for the doctoral population as a whole (35% and 23%).

All other occupational areas employed very small numbers – less than 15 respondents over the five-year period.

<sup>10</sup> The methods for calculating doctoral graduates employed in research related roles and as research staff in HE are given in the methodology chapter.



## Linguistics and classical and ancient languages

385 UK-domiciled doctoral graduates (8% of A&H cohort), 260 respondents (67%) of which 190 entered employment in the UK (2003–2007)

Over 2003–2007, UK-domiciled graduates in linguistics and classical and ancient languages were 53% female and 33% had studied part-time. Respondents from these subjects were slightly less likely than other A&H subjects to combine work and study (12%) (Table 2). The education sector absorbed 73% of respondents employed in the UK, above the average for A&H (67%) (Table 3).

'Education and teaching professional' roles were most popular accounting for 49%, in line with the A&H average and well above that for across all disciplines (22%). The proportion in HE lecturer roles was 26%, close to the A&H average of 27%.

One in five UK-employed respondents in linguistics and classical and ancient languages entered 'other professional, associate professional and technical occupations' (18%). The third largest category was 'researchers (university or unspecified)' (11%). However, research roles occur across the different types of employment shown in Figure 8. Analysis of

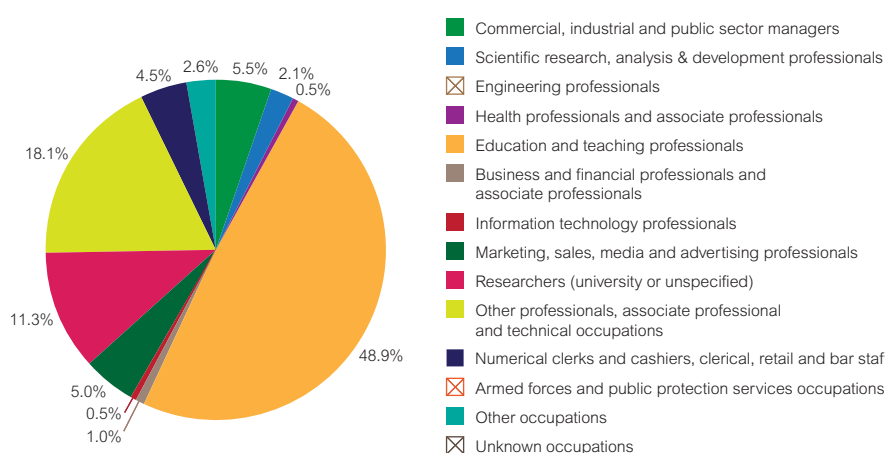


Figure 8: Types of work entered into by UK-domiciled respondents employed in the UK, graduating in 2003–2007 in linguistics, classical and ancient languages, based on Standard Occupational Classifications (SOC) returned in the DLHE surveys

SOCs shows research occupations account for a total of 23% of respondents in these subjects employed in the UK. Further analysis showed 18% of UK-employed respondents entered research

staff roles in higher education<sup>11</sup>. Both are above the discipline average of 18% and 14% respectively, but below those for the doctoral population as a whole (35% and 23%).

## Other subjects in arts and humanities<sup>12</sup>

1565 UK-domiciled doctoral graduates (31% of A&H cohort), 1045 respondents (67%) of which 815 entered employment in the UK (2003–2007)

Over 2003–2007, UK-domiciled doctoral graduates in other subjects in arts and humanities were 46% female and 39% had studied part-time. Respondents in this subject grouping were slightly more likely to enter work in the UK (65%) than across all A&H subjects (62%) (Table 2). Of these, the education sector absorbed two thirds, in line with the average for A&H subjects (67%) (Table 3).

The wide spread of occupations entered by respondents in other subjects in arts and humanities over 2003–2007 reflects the range of smaller subjects that have been combined to form this category.

Respondents in other subjects in arts and humanities were slightly more likely to enter 'education and teaching' roles (50%) than the A&H average (48%), and well above the all disciplines average of 22%. 32% were employed as HE lecturers compared with an A&H average of 27%.

One in ten UK-employed respondents from other A&H subjects entered 'other professional, associate professional and technical occupations' (11%); these included social science researchers. 'Researchers (university or unspecified)' accounted for 10%. However, research

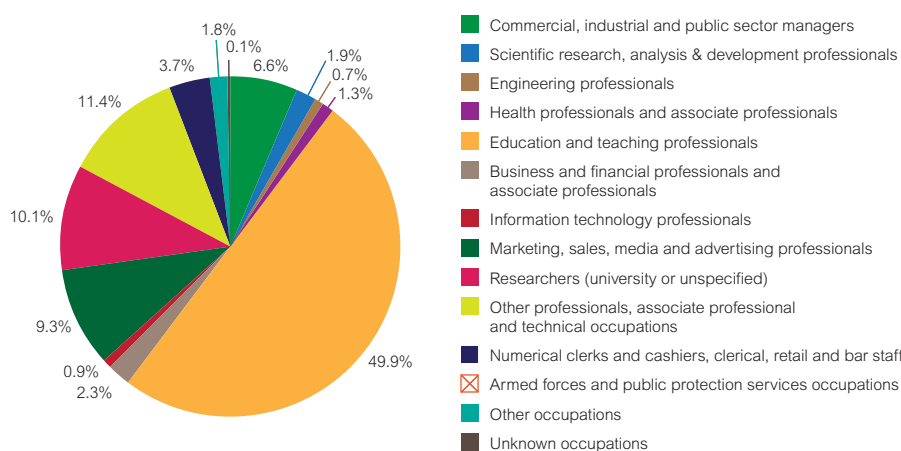


Figure 9: Types of work entered into by UK-domiciled respondents employed in the UK, graduating in 2003–2007 in other subjects in arts and humanities, based on Standard Occupational Classifications (SOC) returned in the DLHE surveys

roles occur across the different types of employment shown in Figure 9. Analysis of SOC's shows research occupations account for a total of 17% of respondents in these subjects employed in the UK. Further analysis showed 12% of UK-employed respondents entered research staff roles in higher education<sup>11</sup>. Both are just below the discipline average of 18% and 14%, respectively, and well below

those for the doctoral population as a whole (35% and 23%).

9% of UK-employed respondents entered careers in 'marketing, sales, media and advertising', compared with 7% across all A&H subjects, reflecting the predominance of media-related subjects of this subject grouping.

<sup>11</sup> The methods for calculating doctoral graduates employed in research related roles and as research staff in HE are given in the methodology chapter.

<sup>12</sup> Other A&H subjects include American studies, archaeology, art and design, cinematics, communication studies, comparative literature, design studies, drama, fine art, journalism, media studies, music, philosophy.

# Biological sciences

## Biological sciences doctoral graduates at a glance

**Doctoral graduates from the biological sciences (BS) made up 13% of all UK-domiciled doctoral graduates in 2007 and 14% over the period 2003–2007.**

- The number of BS doctoral graduates remained almost unchanged, ranging between 1015 (2005 and 2007) and 1045 (2004 and 2006)<sup>1</sup>
- The most popular subjects were biology, and biochemistry, molecular biology and biophysics
- The BS response rate to the DLHE survey rose from 65% (2003) to 68% in 2007
- Of UK-domiciled doctoral graduates 2003–2007, 53% of BS graduates were female; 14% achieved their doctorate through part-time study<sup>2</sup>

### Of UK-domiciled BS doctoral graduates who responded to the DLHE survey

- The percentage working, or working and studying, in the UK was 79% in 2007 (and 77% over the period 2003–2007)
- The proportion who chose to further their careers abroad ranged from 8% (2007) to 12% (2003 and 2005) and was consistently above the average rate (7%) across all disciplines 2003–2007
- The unemployment rate (3.9% in 2007 and 2003–2007 average) was consistently lower than for BS first-degree respondents (5.1% in 2007) and masters graduates respondents (4.6% in 2007)

### Looking in more detail at those BS respondents working or working and studying in the UK<sup>3</sup>

- The education sector (both higher and other education, across occupations) was consistently the largest employment area for BS respondents at 50% in 2007 and averaging 49% over 2003–2007
- Manufacturing was the second most popular sector, employing 21% in 2007 and averaging 22% over 2003–2007
- The percentage working in all research roles was 64%, well above the all disciplines average (35%)
- The proportion of respondents working as research staff in higher education was 36% (2003–2007), well above the all disciplines average (23%)
- BS respondents 2003–2007 were considerably less likely to enter education and teaching occupations (9%) than the doctoral graduate population as a whole (22%)

## Overall survey response for biological sciences subjects

| BS UK doctoral graduates       | 2003 | 2004 | 2005 | 2006 | 2007 | Total |
|--------------------------------|------|------|------|------|------|-------|
| Total doctoral graduates in BS | 1015 | 1045 | 1015 | 1045 | 1015 | 5135  |
| Total respondents              | 660  | 680  | 685  | 675  | 695  | 3390  |
| % response                     | 65%  | 65%  | 67%  | 65%  | 68%  | 66%   |
| Female respondents             | 355  | 365  | 365  | 390  | 370  | 1845  |
| Male respondents               | 305  | 315  | 320  | 285  | 320  | 1545  |

Table 1: Survey response for UK-domiciled doctoral graduates 2003–2007 in biological sciences

The UK-domiciled BS doctoral graduate population varied by less than 3% over the period 2003–2007, ranging between 1015 and 1045 graduates; a stable 13%–14% of the total UK-domiciled population.

### This chapter ...

contains analysis of the biological sciences doctoral graduate cohort, their response rate to the DLHE survey, first destination employment rates, employment sectors and occupations. The subjects discussed are: biology; biochemistry, molecular biology and biophysics; microbiology; and agriculture. Other subjects in biological sciences are grouped together.

<sup>1</sup> For data protection, all figures have been rounded to the nearest five. Numbers and percentages may not total due to rounding.

<sup>2</sup> Compared with the total UK-domiciled doctoral graduate population where 46% were female; 27% gained their doctorate through part-time study.

<sup>3</sup> All data on destinations, whether in terms of occupations or sectors, is from those respondents who entered work or work and study in the UK.