# Monitoring Ireland's Skills Supply

## Trends in Education/Training Outputs

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Future Skills Needs

# Monitoring Ireland's Skills Supply

## Trends in Education/Training Outputs

A report by the Skills and Labour Market Research Unit (SLMRU) in FÁS for the Expert Group on Future Skills Needs

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# Executive Summary

*'Monitoring Ireland's Skills Supply: Trends in Education/Training Output 2006'* is the second in a series of annual reports produced by the Skills and Labour Market Research Unit of FÁS, on behalf of the Expert Group on Future Skills Needs.

The objective of this series of reports is to provide an indication of the supply of skills to the Irish labour market from the formal education and training system. Although the data includes both part-time and full-time participants in education, the main focus is on those who have yet to enter the labour force. As such, it does not specifically examine training for those already in employment.

The report examines outflows from the formal education system across levels 3-10 of the National Framework of Qualifications (NFQ). At each level, the supply of skills is examined in terms of:

- Graduate output: refers to the number of individuals who receive an award on completion of a course of study. Graduate output trends are used as an indicator of the potential current supply
- Student inflows: this is used as an indicator of the potential future supply
- Gender: this is used as an indicator of gender balance
- Discipline: this is used as an indicator of the supply of skills by broad type
- First destination: this is used as an indication of students' destination following graduation from higher education
- International comparison: this is an indicator of how Ireland performs internationally in terms of education outflows

The report follows a similar pattern to the Monitoring Ireland's Skills Supply report published in January 2006. Additional information is provided in relation to international comparison at Junior Certificate level, further education and training provision, private education outflows and Irish student enrolments abroad.

In this summary, we outline the salient features of the skills supply emerging from the education and training system in Ireland. For each output level, we compare the latest available data with that in the previous Monitoring Ireland's Skills Supply report. The focus is on key education and training data that may have a bearing on the potential supply of skills to the Irish labour market.

## Outputs from the Irish Education System

### Post-Primary

At a total of 57,944 candidates, 2006 saw the first increase in Junior Certificate numbers since 2002. Compared to 2005, there were an extra 1,194 Junior Certificate sits.

Leaving Certificate candidate numbers, on the other hand, continued to decline. In 2006, there were a total of 54,110 Leaving Certificate candidates, which is over 3,000 fewer than in 2005 and almost 4,500 fewer than in 2002. Approximately 28,300 females (52%) sat the Leaving Certificate in 2006.

| | 2005 | 2006 | % Change |
|---|---|---|---|
| **Junior Certificate** | 56,750 | 57,944 | +2.1% |
| **Leaving Certificate** | 57,422 | 54,110 | -5.8% |

## Further Education and Training

A total of 111,099 candidates received 130,226 awards from FETAC in 2006 across levels 3 to 6 on the National Framework of Qualifications. The award types are detailed in Section 5. It is possible for an individual to receive two or more awards.

Over 24,500 candidates received certificates (major) in 2006, with, on average, each candidate receiving only one major award. Candidates receiving component (minor) awards totalled 65,521. Almost 25,000 candidates received specific purpose awards in 2006 and a further 191 candidates received supplemental awards.

*FETAC Awards by Award Type and Candidates, 2006*

| Award Type | No. of Awards | No. of Candidates |
|---|---|---|
| Certificates (Major) | 26,299 | 24,515 |
| Component (Minor) | 75,703 | 65,521 |
| Specific Purpose (Special Purpose) | 28,028 | 24,777 |
| Supplemental | 196 | 191 |
| **Total** | **130,226** | **111,099*** |

**The total number of candidates does not sum up as some candidates can hold awards in more than one award type.*

Of the 26,299 major awards, 13% were at level 3, 7% at level 4, 54% at level 5, and 27% at level 6. On average, holders of component certificates achieve two minors in one year so the 75,703 component awards are comprised of 135,170 minor awards. Of the minor awards, the highest proportion was at level 5. Similarly, most special purpose awards were made at level 5. All supplemental awards were made at level 6.

*FETAC Awards by Award Type and Award Level, 2006*

| Award Type | NFQ Level 3 | NFQ Level 4 | NFQ Level 5 | NFQ Level 6 | Total |
|---|---|---|---|---|---|
| Major | 3,488 | 1,739 | 14,071 | 7,001 | **26,299** |
| Minor | 34,064 | 24,062 | 72,003 | 5,041 | **135,170** |
| Special Purpose | 39 | 1,342 | 23,887 | 2,760 | **28,028** |
| Supplemental | - | - | - | 196 | **196** |
| **Total** | **37,591** | **27,143** | **109,961** | **14,998** | **189,693** |

# Higher Education

## CAO Acceptances

Despite a sharp decline in Leaving Certificate numbers in 2006, a slight increase in total CAO acceptances occurred. Acceptances for level 7/6 courses in 2006 dropped by 5.5% when compared to 2005. On the other hand, acceptances for level 8 courses were up by 6.3%.

| | 2005 | 2006 | % change |
|---|---|---|---|
| Level 7/6 CAO Acceptances | 13,193 | 12,467 | -5.5% |
| Level 8 CAO Acceptances | 24,925 | 26,488 | +6.3% |
| **Total** | **38,118** | **38,955** | **+2.2%** |

## Graduate Output – Universities and Institutes of Technology

Overall graduate output at university and institutes of technology declined by 2.9% between 2004 and 2005 (latest available data). This was primarily due to a decline at level 7/6 of 8.8% in this period. There was very little change in the graduate output at levels 8 and 9/10.

| | 2004 | 2005 | % change |
|---|---|---|---|
| Level 7/6 | 18,876 | 17,207 | -8.8% |
| Level 8 | 24,720 | 24,659 | -0.2% |
| Level 9/10 | 12,781 | 12,883 | +0.8% |
| **Total** | **56,377** | **54,749** | **-2.9%** |

## First Destination of Graduates

According to the HEA's First Destination Survey, 2005, the majority of those who graduate with level 7/6 awards continue on to further education and training. In contrast, the majority of those with level 8 qualifications are in employment within 9 months of graduation. This is also the case for those receiving post-graduate qualifications.

# International Comparisons

In international assessments carried out in 29 OECD countries (PISA 2003), Ireland's 15-year-olds ranked:

- 6th out of 29 for reading literacy
- 13th for scientific literacy
- 17th for mathematical literacy

According to international data (Education at a Glance 2006), in 2004

- Ireland's graduate output at certificate/diploma and ordinary degree level was 20.1%, which is well above the OECD average (9.2%)
- Ireland's combined graduate output at honours degree and masters degree level stood at 37.4% which was above the average for OECD countries (34.8%)
- Graduate output for advanced research programmes in Ireland was 1.1% which is below the OECD average of 1.3%.

# Technology Outlook

This section focuses on the current and future trends affecting the supply of skills from the education system to the technology sector. Education outflows from science, computing and engineering disciplines are examined.

Entry into science or technology related courses in Irish higher education require minimum competencies in mathematics. A minimum of a C3 at higher level in mathematics or equivalent is required for Engineers Ireland recognised level 8 engineering courses. As the table below shows, only 15% of all students are eligible for these courses. For science and computing courses, both at university and IoT level, the most common minimum requirement is a grade D in ordinary level mathematics. An additional 66% of students meet the mathematics requirements for these courses. Foundation level mathematics is not accepted for entry to most engineering courses in higher education, thereby eliminating 10% of leaving certificate students from direct entry to many of these courses.

*Leaving Certificate Achievements in Mathematics, 2006*

| Level and Achievement | No of students | % of all students |
|---|---|---|
| Higher ≥ C | 7,416 | 15% |
| Ordinary ≥ D; Higher D | 32,354 | 66% |
| Ordinary or Higher ≤ E | 4360 | 9% |
| Foundation (all grades) | 5104 | 10% |
| **Total** | **49,234** | **100%** |

Source: SEC

On the positive side, the pass rate for ordinary level mathematics is on the increase, from 86% in 2002 to 88% in 2006. In addition, at Junior Certificate level, the proportion of students sitting and achieving grade D or above in higher level mathematics is also increasing. This results in an increasing pool of potential candidates with the competencies to prepare for Leaving Certificate mathematics at higher level in the future.

## Science

An increasing number of students are sitting Junior Certificate science at higher level and Leaving Certificate biology and chemistry, also at higher level. Pass rates for most science related subjects are increasing at higher level in both the Junior and Leaving Certificate examinations.

CAO acceptances for science courses at level 7/6 have declined in recent years although a recovery of 7.5% occurred between 2005 and 2006. In the same period, level 8 course acceptances declined by 6.4%.

*Science CAO Acceptances, 2005-2006*

| NFQ Level | 2005 | 2006 | % Change |
|---|---|---|---|
| 7/6 | 808 | 869 | +7.5% |
| 8 | 2,665 | 2,495 | -6.4% |
| **Total** | **3,473** | **3,364** | **-3.1%** |

Overall graduate output for science-related courses increased by 1.5% between 2004 and 2005. The most significant percentage increase occurred for level 10 awards, whereas there was a slight drop in the number of level 9 awards.

*Science Graduate Output, 2004-2005*

| NFQ Level | 2004 | 2005 | % Change |
|---|---|---|---|
| 7/6 | 772 | 780 | +1.0% |
| 8 | 2,246 | 2,291 | +2.0% |
| 9 | 528 | 508 | -3.8% |
| 10 | 280 | 306 | +9.3% |
| **Total** | **3,826** | **3,885** | **+1.5%** |

*Outlook:* In the short-term, a recovery in graduate output at level 7/6 is not expected, although the increase in CAO acceptances at this level suggests a possible recovery in the medium term. At level 8, increases in output are expected to continue in the short term, but this will reverse in the medium term. With PhD enrolments increasing in the science discipline, increases in graduate output are expected to continue.

The growing take-up of science subjects at higher level in both Junior Certificate and Leaving Certificate examinations has the potential to lead to an increase in science related CAO acceptances in the future.

## Engineering and Construction

Acceptances on both level 7/6 and level 8 engineering courses experienced a significant decline in recent years, although the numbers appear to have stabilised for both levels in the last year.

*Engineering & Construction CAO Acceptances, 2005-2006*

| NFQ Level | 2005 | 2006 | % Change |
|---|---|---|---|
| 7/6 | 3,735 | 3,653 | -2.2% |
| 8 | 2,322 | 2,245 | -3.3% |
| **Total** | **6,057** | **5,898** | **-2.6%** |

There was an overall decline of 1.8% in the number of engineering and construction awards made between 2004 and 2005. This decline is due to a reduction in numbers at level 7/6 whereas increases, albeit minor, occurred for all other levels in this time period.

*Engineering & Construction Graduate Output, 2004-2005*

| NFQ Level | 2004 | 2005 | % Change |
|---|---|---|---|
| 7/6 | 4,360 | 4,055 | -7.0% |
| 8 | 2,667 | 2,823 | 5.8% |
| 9 | 717 | 720 | 0.4% |
| 10 | 96 | 103 | 7.3% |
| **Total** | **7,840** | **7,701** | **-1.8%** |

*Outlook:* The numbers choosing engineering courses in higher education have declined which will impact on graduate output in the short to medium term. However, an increase in acceptances for construction courses in the same time period may mask the decline in graduate output in the overall engineering category

### Computing

Significant declines in CAO acceptances for computing courses at levels 7/6 and 8 have been observed in recent years. The latest figures suggest some recovery at level 7/6 with an increase of 14.5% in the period 2005-2006. Level 8 acceptances, however, have continued to decline, with a reduction of 6.9% since the previous year.

*Computing CAO Acceptances, 2005-2006*

| NFQ Level | 2005 | 2006 | % Change |
|---|---|---|---|
| 7/6 | 833 | 954 | +14.5% |
| 8 | 995 | 926 | -6.9% |
| **Total** | **1,828** | **1,880** | **+2.8%** |

Graduate output from computing courses at all levels declined by 16.1% between 2004 and 2005. This was most pronounced at level 7/6 where the number of awards dropped by 27.5%. Output increased at levels 9 and 10 but the numbers involved are relatively small.

*Computing Graduate Output, 2004-2005*

| NFQ Level | 2004 | 2005 | % Change |
|---|---|---|---|
| 7/6 | 1,619 | 1,174 | -27.5% |
| 8 | 2,178 | 1,869 | -14.2% |
| 9 | 683 | 700 | +2.5% |
| 10 | 39 | 49 | +25.6% |
| **Total** | **4,519** | **3,792** | **-16.1%** |

*Outlook:* With declines in acceptances at level 7/6 and 8, a reduction in graduate output in computing is likely to continue for at least the next 3-5 years due to recent declines in acceptances. However, CAO acceptances are showing some signs of recovery and this should have a positive effect on future output.

## Future Output

The expected increase in the school age population along with the increases in higher education participation rates will ensure that the overall supply of skilled labour will continue to increase.

Declines in level 7/6 inflows experienced in recent years will lead to graduate output continuing to fall; on the other hand, student inflows at level 8 and level 9/10 have been increasing continuously, resulting in future increased output at these levels.

With the decrease in numbers choosing to study technology related courses in higher education in recent years, declines in graduate output have been expected. However, there are signs of recovery in CAO acceptance in some areas and this will impact on graduate output and future supply. In addition, there are increases in both the take-up of and grades achievements in science and mathematics at Junior and Leaving Certificate level thereby increasing the potential supply of students who may opt to pursue science, technology and engineering courses in further and higher education. Furthermore, science PhD graduates are on the increase.

# 1. Introduction

This latest edition of *'Monitoring Ireland's Skills Supply: Trends in Education/Training Output'* is the second in a series of annual reports produced by the Skills and Labour Market Research Unit of FÁS, on behalf of the Expert Group on Future Skills Needs.

Educational attainment is regarded as essential to the economic and social development of society in general. Findings indicate that in most OECD countries, employment rates rise with educational attainment. Studies also show that increasing the average time spent in education by one year leads to a positive long-term effect on economic output of between 3% and 6% (Source: Education at a Glance 2006). The supply of skills from the formal education system plays a significant role in furthering Ireland's goal of becoming a leading knowledge-based society.

The objective of this series of reports is to provide an indication of the supply of skills to the Irish labour market from the formal education and training system. Although the data includes both part-time and full-time participants in education, the main focus is on those who have yet to enter the labour force. As such, it does not specifically examine training for those already in employment.

The report examines outflows from the formal education system across levels 3-10 of the National Framework of Qualifications (NFQ). To date, no awards have been made at level 1 and 2. At each level, the supply of skills is examined in terms of:

- Graduate output: refers to the number of individuals who receive an award on completion of a course of study. Graduate output trends are used as an indicator of the potential current supply
- Student inflows: this is used as an indicator of the potential future supply
- Gender: this is used as an indicator of gender balance
- Discipline: this is used as an indicator of the supply of skills by broad type
- First destination: this is used as an indication of students' destination following graduation from higher education
- International comparison: this is an indicator of Ireland's performance internationally

The report follows a similar pattern to the Monitoring Ireland's Skills Supply report published in January 2006. Additional information is provided in relation to international comparison at Junior Certificate level, further education and training provision, private education outflows and Irish student enrolments abroad.

## 1.1 The Irish Education System

### 1.1.1 Description

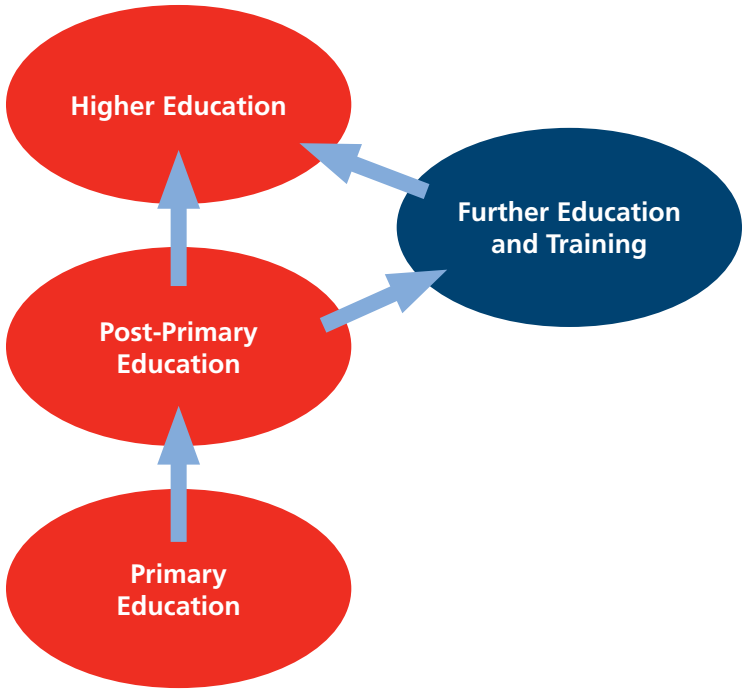
Full-time education in Ireland is compulsory for children between the ages of 6 and 16 or until they have completed the first three years of the junior cycle at post-primary level. The Irish education system is subdivided into four main sections: primary education, post-primary education, further education, and higher education. Figure 1 outlines the progression routes for each of these sectors.

Primary education is typically eight years in duration. This is followed by five-to-six years of post-primary education. Post-primary education consists of a three-year junior cycle leading to the Junior Certificate examination, followed by a two or three-year senior cycle programme leading to the Leaving Certificate examination.

Education and training which occurs alongside and after second-level schooling but which is not part of the higher education and training system is known as further education and training (FET). Further education and training includes post-leaving certificate courses (PLCs), craft courses, foundation courses and part-time courses meriting credit on the above courses. Further education and training courses are run at both public and privately funded institutions.

The higher education sector in Ireland is comprised of the university sector, the institute of technology sector and the colleges of education. In addition, there exist private institutions, often substantially funded by the state, which provide education in specialist areas such as medicine and law. There are also a small but growing number of independent private colleges which offer a range of courses, mostly in disciplines such as business.

***Figure 1*** *Four interlinked sectors of the Irish education system*




### 1.1.2 Awarding Bodies

Since 2003, the State Examinations Commission has been the body responsible for the development, assessment, accreditation and certification of the Irish state examinations at post-primary level, namely the Junior Certificate and the Leaving Certificate.

Since 2001, The Further Education and Training Awards Council (FETAC) has been the body responsible for making awards in FET. Prior to 2001, a range of other bodies performed this function, e.g. FÁS, the National Council for Vocational Awards (NCVA), Fáilte Ireland, Bord Iascaigh Mhara (BIM) and Teagasc.

The Higher Education and Training Awards Council (HETAC) has responsibility for making awards for higher education courses completed in the institutes of technology and private colleges. Several of the Institutes of Technology (IoTs) have delegated authority from HETAC to make their own awards. Universities and Dublin Institute of Technology act as their own awarding authorities.

### 1.1.3 National Framework of Qualifications

The National Framework of Qualifications (NFQ) was introduced in 2003 and implemented thereafter following an extensive consultation process with all of the national key stakeholders. The framework is defined as *"a single, nationally and internationally accepted entity, through which all learning achievements may be measured and related to each other in a coherent way and which defines the relationship between all education and training awards"*. The NFQ is based on standards of knowledge, skill and competence. The structure of the framework is based on levels which are outlined in Table 1 and further detailed in Appendix A. Each level has a specified level indicator which is a broad description of the learning outcomes at a given level in terms of eight sub-strands of knowledge, skill and competence (these level indicators are outlined in Appendix B). At each level of the framework there are one or more award types. An award type is described as a class of named awards which share common features and level. Each award type has its own award type descriptor. The National Qualifications Authority of Ireland (NQAI) has the responsibility of setting and developing these level indicators and award type descriptors. At each level in the framework there will be at least one award type. Each award type will have a range of named awards. It is the responsibility of the awarding bodies (HETAC, FETAC, the universities, and the State Examinations Commission) to develop the named awards. The former and existing awards now placed on the ten-level framework are outlined in Appendix A.

***Table 1*** *National Framework of Qualifications*

| Level | Awards |
|---|---|
| Level 10 | Doctoral Degree |
| Level 9 | Master's Degree, Post-Graduate Diploma |
| Level 8 | Honours Bachelor Degree, Higher Diploma |
| Level 7 | Ordinary Bachelor Degree |
| Level 6 | Advanced Certificate, Higher Certificate |
| Level 5 | Level 5 Certificate, Leaving Certificate |
| Level 4 | Level 4 Certificate, Leaving Certificate |
| Level 3 | Level 3 Certificate, Junior Certificate |
| Level 2 | Level 2 Certificate |
| Level 1 | Level 1 Certificate |

Source: National Qualifications Authority of Ireland

## 1.2 Education Data Collection

The education data in this report was gathered from a variety of sources:

- Demographic data was sourced from the Central Statistics Office, Eurydice and Eurostat.
- Junior Certificate and Leaving Certificate data: from the State Examinations Commission, the Central Applications Office (CAO) and the Department of Education and Science (DES).

- International comparison data: from the *OECD Education online database* and other OECD publications (see References section).
- Further education and training data: from FETAC.
- University and institute of technology (IoT) data: from the Higher Education Authority (HEA), DES, HETAC, institutes of technology and the CAO.
- Private education data: from HETAC, NUI, individual private colleges and professional bodies.
- For Irish students studying abroad: from Universities and Colleges Admission Service (UCAS) and from the *OECD Education online database*.

The report focuses on the most recent trends, usually covering the period 2002-2006, unless the availability of the data dictates otherwise or longer term trends are of particular interest.

## 1.3 Report Structure

The report is structured as follows. Key demographic data is examined in Chapter 2. This is followed by a description of Irish students' educational attainments at Junior Certificate level in Chapter 3 and Leaving Certificate level in Chapter 4. Chapter 5 examines the supply of skills from the further education and training sector. Chapters 6 and 7 examine CAO acceptances and graduations in universities and IoTs for NFQ levels 7/6 and level 8 courses respectively. Chapter 8 looks at enrolment data and skills output from level 9/10 courses from universities and IoTs. Outflows from the private education sector are provided in Chapter 9. Finally, we look at the Irish students enrolled in courses abroad in Chapter 10.

# 2. Demographic Outlook

**Key Points**

- Increasing birth rates have lead to an rise in the school age population since 2000
- Population projections estimate that although the number of school leavers will continue to decline in the short-term, an increase is expected from 2013
- The admission rate to higher education has been increasing continuously over the last two decades; in 2004, the admission rate was 55%, almost three times that of the 1980 rate
- The size of Ireland's school age population is expected to grow by approximately 19% in the ten years between 2005 and 2015. This far exceeds the expected growth rate in all other EU countries
- When compared to other EU countries, Ireland has both the highest proportion of persons under 30 and persons under 5 years

## 2.1 Introduction

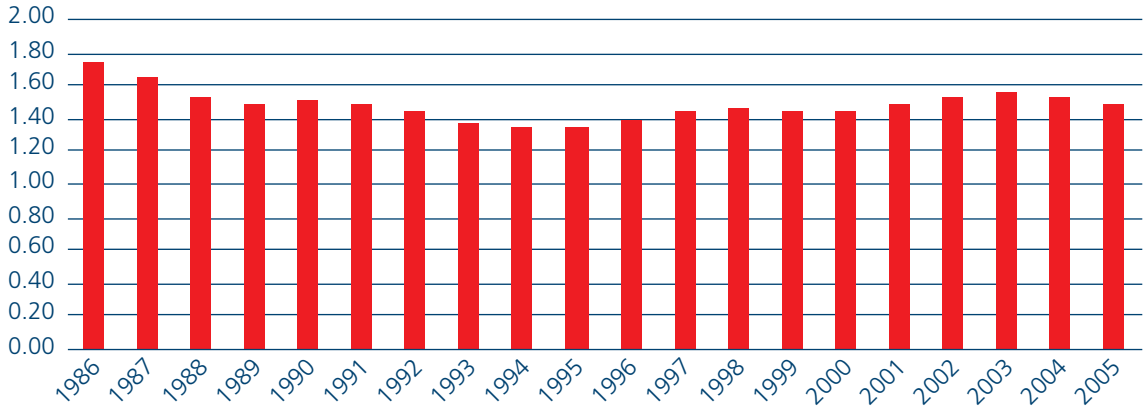
This section provides an overview of demographic information relevant to the Irish school-age population. Demographic trends are important as the number of entrants into the national education system is largely dependent on the number of persons in the relevant age cohort.

The analysis breaks down into four sections. First, we look at the birth rate in Ireland between 1986 and 2005. This forms the basis for the following section, which examines the number of children who are and will become available to enter the primary and secondary education systems. We then turn our attention to third level education where we examine, (a) the proportion of college applicants who are of school-leaving age, (b) the population forecasts for this age cohort, and (c) the third level participation rate for the relevant age cohort. The fourth and final section of this chapter compares demographic trends for Ireland with those of other European countries in terms of overall fertility rates, school age populations and third level participation rates.

## 2.2 Birth Rate

Birth rate is defined here as the number of live births per 100 of the population. An examination of birth rates gives an indication of the future pool of children available to enter the education system. In addition, the school-age population is affected by the net migration of young people to Ireland: children of returning Irish citizens and those of other EU-25 nationals and non-EU nationals also contribute to the numbers in the school attending age cohorts. The information on birth rates provided here relates to children born in Ireland only.

***Figure 2.1*** *Birth Rates in Ireland per 100 of the Population, 1986-2005*




Source: Population Estimates, CSO

Figure 2.1 shows the annual birth rates in Ireland for the period 1986-2005. The birth rate in Ireland peaked at 1.7 per 100 in 1986 and declined to reach its lowest point (1.3 per 100) in 1994. The birth rate recovered to reach 1.55 in 2002 but declined again to almost 1.5 in 2005. In absolute terms, the numbers of live births in 1986 and 2005 are almost comparable at 61,620 and 61,042 respectively.

## 2.3 Primary & Post-Primary Inflows

As a result of the decline in birth rates from 1986 to 1994, a lower number of Irish born children were subsequently available to enter primary level education. Given that the average age of children starting primary school is 5 years, the decline in numbers entering the primary education system continued until 1999. The number of children starting school has been increasing since then. In September 1999, there were 51,946 children enrolled in junior infants at primary school level. By September 2004, this number had increased to 56,591.[1]

In the academic year 2004-05, the number of students enrolled in year one of the Junior Certificate cycle totalled 55,357, which was a decline of 611 on the preceding year. An increase in new post-primary enrolments is expected in the short-term.

## 2.4 Third Level Participation

The typical age of school-leavers in Ireland is 16-19 years. Table 2.1 shows the percentages of 16-19 year olds who were Central Applications Office (CAO) acceptors for 2002 and 2005. Although there has been a slight decline since 2002, the vast majority of those accepting places for courses at third level institutions are aged between 16-19 years.

***Table 2.1*** *% of CAO Acceptors who are aged 16-19 in 2002 and 2005*

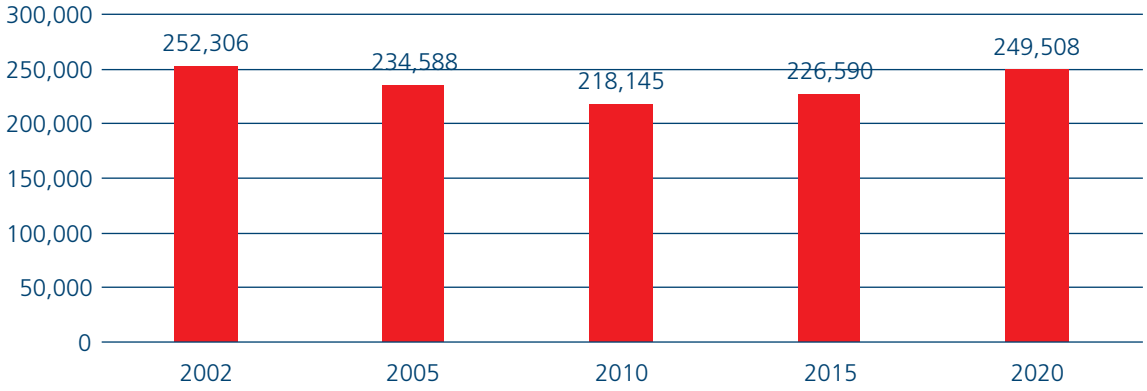
| | 16-19 (2002) | 16-19 (2005) |
|---|---|---|
| Level 8 | 90% | 88% |
| Level 7/6 | 87% | 85% |

Source: CAO

1 *Primary Level Education Statistics 2004-2005,* Department of Education and Science.

Figure 2.2 presents the CSO population projections (M1F1) for the cohort of young persons aged 16-19 years (i.e. those approaching the age for entry to third level education). In the medium term, the CSO predicts that the number of school leavers will decline. However, the decline is expected to be modest and may even be reversed due to inward migration. A recovery in this age cohort is expected to commence in 2013, with predictions for 2020 estimating the number in this age group to be almost on a par with those of 2002. Consequently, the number of school-leavers available for entry to third level education in 2020 is expected to be comparable with that in 2002.

***Figure 2.2*** *Population Projections to 2020: Age Group 16-19*

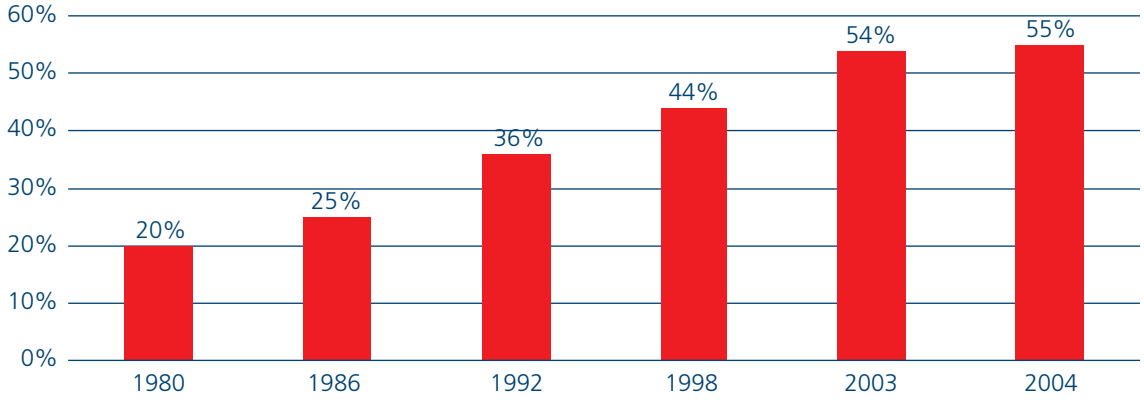



Source: Population and Labour Force Projections, 2006-2036, CSO

Increases in higher education participation and inward migration are expected to counteract to some extent the predicted negative demographic effect on the number of new entrants to third level education. A 2006 report on behalf of the Higher Education Authority defines the admission rate as the inflow of new entrants to higher education, expressed as a ratio to the number of persons in the population of the single years of age from which more than seventy-five per cent of the new entrants come. The report estimates that 34,047 students with a permanent address in the Republic of Ireland, entered higher education in Ireland in 2004.[2]

Figure 2.3 shows the admission rate of new entrants to higher education for the period 1980-2004. The admission rate has been increasing continuously over the last two decades. In 2004, the admission rate was 55%, almost three times that of the 1980 rate. When Irish students enrolled in UK universities are taken into consideration, this proportion increases to almost 60%.

***Figure 2.3*** *Third Level Admission Rates, 1980-2004*




Source: Who Went to College in 2004? HEA, 2006

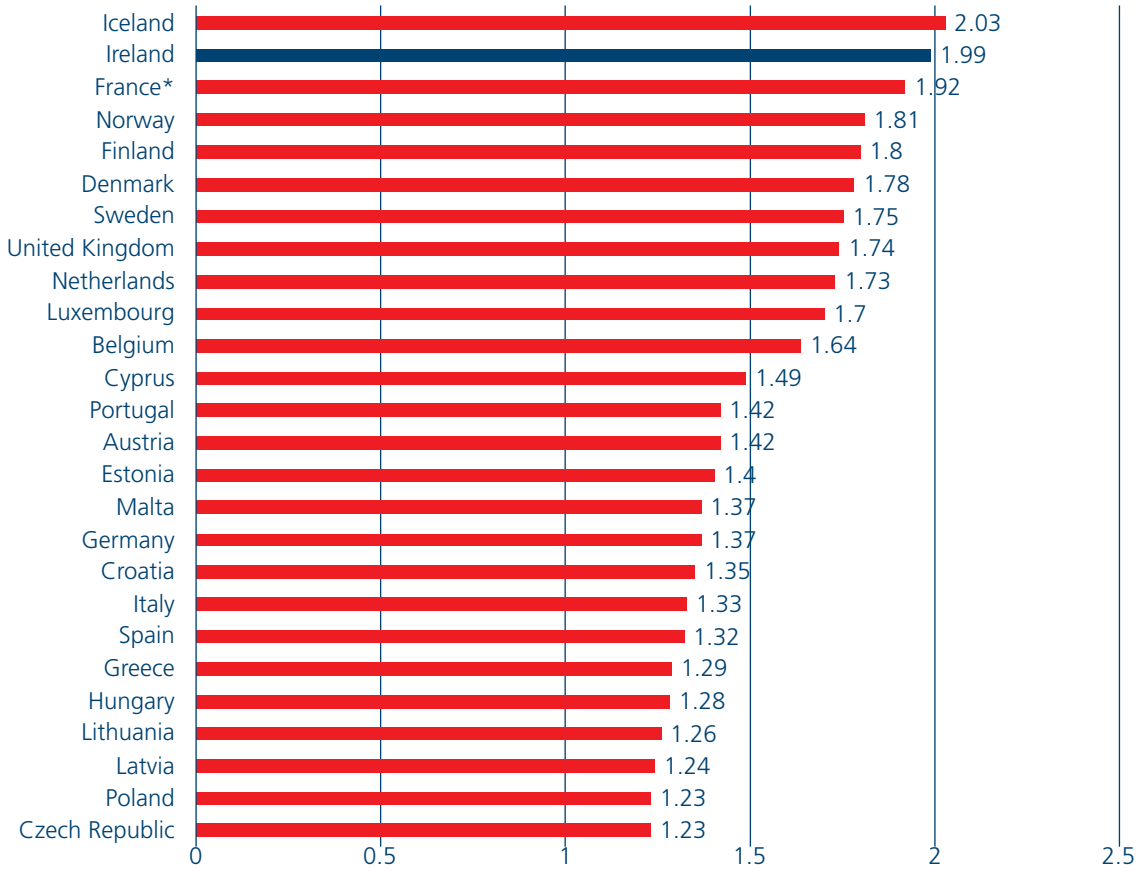
2 This figure does not include the 1,886 new entrants with a permanent address outside the Republic of Ireland. Neither does it include the numbers of Irish nationals who entered higher education outside the Republic of Ireland. Source: Who Went to College in 2004? A National Survey of New Entrants to Higher Education, HEA, 2006.

# 2.5 International Comparisons

## 2.5.1 Fertility Rates

At 1.99%, Ireland had the second highest fertility rate in 2004 amongst EU countries (Figure 2.4), second only to Iceland. Fertility rate is defined as the number of live child births per woman of child bearing age.

***Figure 2.4*** *Fertility Rates for Selected European Countries, 2004*



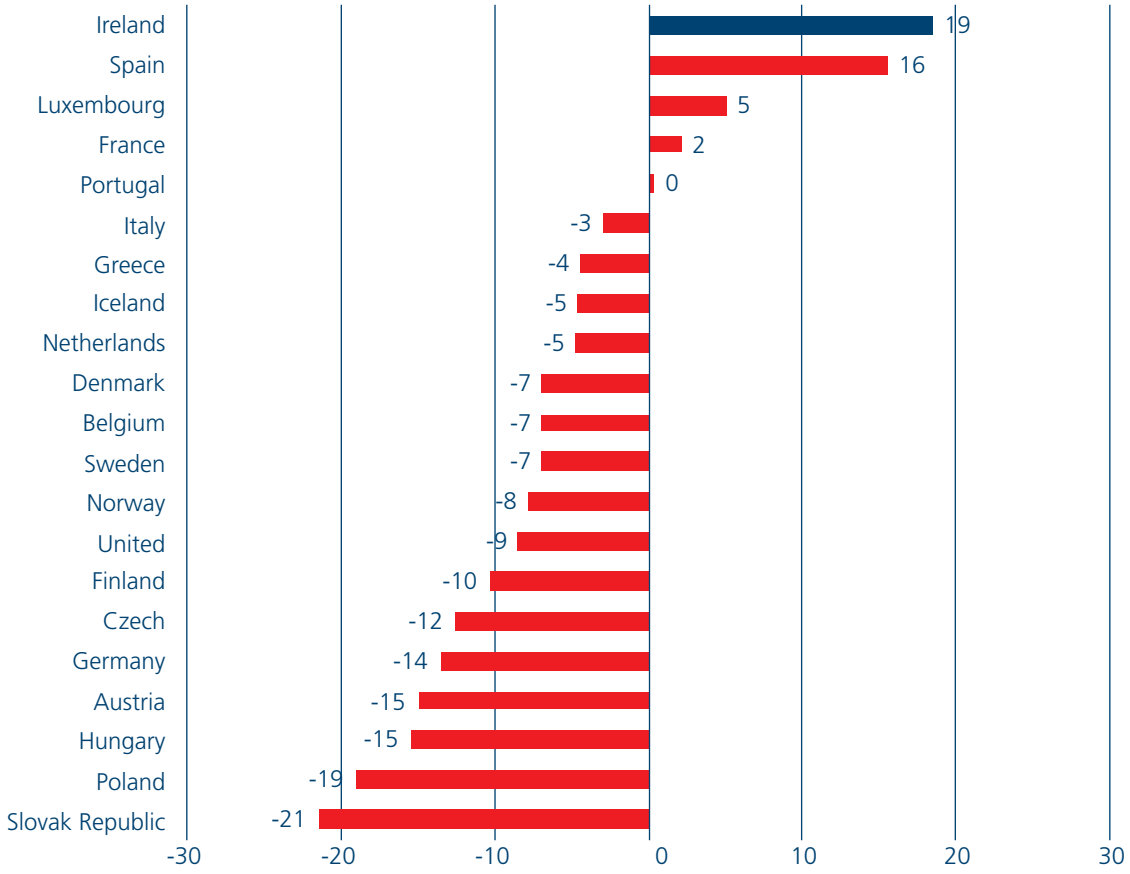

Source: Eurostat

* Figures refer to 2003

## 2.5.2 School-age population forecasts

Demographic data across European countries indicates that the size of the student population in compulsory schooling (5-14 age cohort) will decline over the coming years in the majority of EU countries. The projected change between 2005 and 2015 in the 5-14 year-old cohort is presented in Figure 2.5 below. Ireland is one of only five EU countries which expect to see positive future growth for this population group. The majority of countries are set to experience a decline, and some, a sharp decline in the size of the student population in compulsory schooling by 2015.

***Figure 2.5*** *Expected Percentage Change in Primary and Lower Secondary Education Enrolments in Selected EU Countries, 2005-2015*




Source: Education at a Glance, 2006

When compared with other European countries, Eurostat population statistics (2004) show that Ireland has

- the highest proportion (44.7%) of persons under 30
- the highest proportion (7.2%) of persons under 5 years
- the second highest proportion of persons aged 0-9 (13.9%)
- the second highest proportions (16.6%) of those aged 20-29

# 3. Junior Certificate

**Key Points**

- In 2006, there were almost 58,000 Junior Certificate candidates; a 2% increase since 2005. This marks the first rise in Junior Certificate numbers since 2002
- Approximately 4.5% of those who enter post-primary education will not take the Junior Certificate exam
- Junior Certificate students are increasingly taking examination subjects at higher level
- Overall, there has been an increase in the proportion of students taking science
- Between 2002 and 2006, the numbers sitting and achieving grade D or more in higher level mathematics and science increased. The proportion of those achieving grade D in ordinary level mathematics and science has also increased
- As in 2005, females outnumbered males in participation in Junior Certificate 2006 subjects at higher level; they also achieved higher grades than males in most subjects at higher and ordinary level
- In international assessments across 29 OECD countries, Irish 15-year-old students ranked 17th for mathematical literacy, 13th for scientific literacy and 6th for reading literacy.

## 3.1 Introduction

This chapter provides a profile of the Junior Certificate programme in terms of candidate numbers, their subject choices and achievements at this level. First, a brief description of the Junior Certificate programme is presented. We then look at the Junior Certificate candidates in terms of numbers and results trends. We pay particular attention to candidates' performance in the key subjects of English, mathematics and science. The final section reports on the findings of the international assessment project, PISA 2003, which is an indicator of the achievements of Ireland's 15-year olds at international level in key subject areas.

## 3.2 The Junior Certificate

The Junior Certificate examination is held at the end of the Junior Cycle in post-primary schools. Students normally sit for the examinations after three years of post-primary education at the age of 14 or 15 years. It is situated at level 3 on the National Framework for Qualifications for Ireland. The learning outcomes associated with completion of the Junior Certificate (i.e. NFQ level 3) are outlined in Appendix B.

The Junior Certificate examination is offered in approximately 30 subjects. Most are offered at higher and ordinary level. English, mathematics and Irish are offered at higher, ordinary and foundation levels. Civic, Social and Political Education (CSPE) is offered at common level only. On average, candidates sit nine subjects.

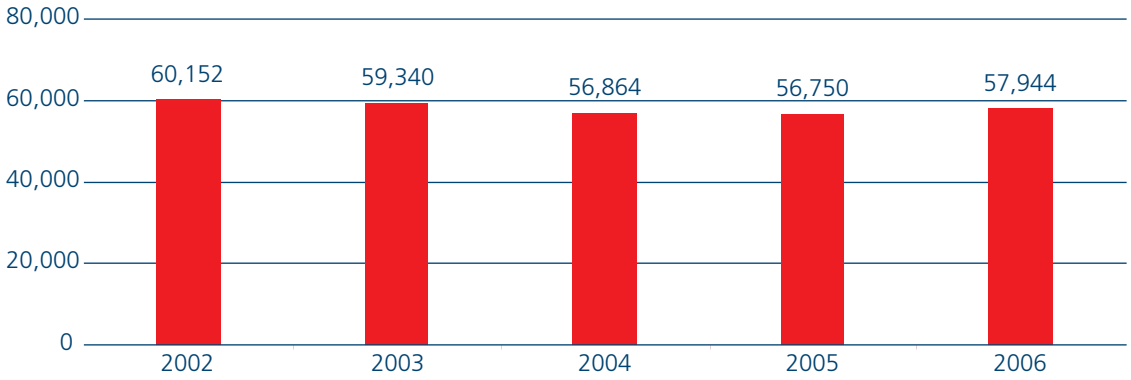
## 3.3 Junior Certificate Candidates

Candidature for the Junior Certificate examination is not restricted to post-primary school students. Candidates who are re-entrants to education may be entered for the examination through approved education schemes such as the Vocational Training Opportunities Scheme and the Back to Education Initiative. In 2006, 2.3% (1,310) of all Junior Certificate candidates were re-entrants to education. This figure is comparable to preceding years.

Not all students who enter post-primary education will sit the Junior Certificate examination. A Department of Education and Science report found that of all those who entered post-primary schools in 1996, only 94.6% sat the Junior Certificate.[3] This participation rate represents an increase of 0.7 percentage points from the 1991 cohort. The retention rate for females is slightly higher than that for males at 95.8% and 93.4% respectively.

Figure 3.1 shows the number of Junior Certificate candidates between 2002 and 2006. The number of students sitting the Junior Certificate declined steadily between 2002 and 2005, going from almost 60,200 in 2002 to under 57,000 in 2005. However, 2006 saw an increase in those sitting the Junior Certificate, although at 57,944, the number remains below that of 2002. In 2006, approximately 28,500 (49%) females and 29,400 (51%) males sat the Junior Certificate examination.

***Figure 3.1*** *Number of Junior Certificate Candidates, 2002-2006*




Source: State Examinations Commission

## 3.4 Junior Certificate Results Trends

This section examines the top-ten subject choice for Junior Certificate candidates in 2002 and 2006. We first compare the total numbers and percentages of students who sit various Junior Certificate examination subjects. Next, we look at higher level sits in terms of percentages. The third stage in this analysis examines the achievements of Junior Certificate students in mathematics, science and English. Finally, we provide a gender breakdown in terms of higher and ordinary level sits and achievements.

### 3.4.1 Total Sits

Table 3.1 outlines the top-ten subject choice for Junior Certificate candidates in 2002 and 2006. It sets out the number of students for each examination subject and indicates the proportion of the total number of Junior Certificate candidates who opted to take each subject.

3 Department of Education and Science report published in September 2005: *Retention Rates of Pupils in Second-Level Schools.*

There are few stark differences between 2002 and 2006 in the proportions of students who opted to sit the various examination subjects. In 2002 and 2006, the vast majority of students sat examinations in English, mathematics and CPSE (between 99% and 97%).

Science was the only subject in the top-ten to experience a noticeable increase in the proportions of examination candidates, going from 84% in 2002 to 86% in 2006. On the other hand, the proportions of students sitting Irish, French and business studies recorded decreases of 4, 5 and 5 percentage points respectively.

In absolute terms, all subjects, with the exception of art, craft and design, experienced a decline in candidate numbers between 2002 and 2006. This is largely a reflection of the declining numbers in the relevant age cohort and the consequent drop in the overall number taking the Junior Certificate examination.

***Table 3.1*** *Junior Certificate Results, 2002 and 2006*

| | 2002 | | 2006 | |
|---|---|---|---|---|
| | No. of candidates | % of Total | No. of candidates | % of Total |
| English | 59,590 | 99 | 57,125 | 99 |
| Mathematics | 59,295 | 99 | 56,965 | 98 |
| C.P.S.E. | 58,278 | 97 | 56,148 | 97 |
| Geography | 54,446 | 91 | 52,255 | 90 |
| History | 53,796 | 89 | 51,310 | 89 |
| Irish | 55,433 | 92 | 50,871 | 88 |
| Science | 50,764 | 84 | 49,909 | 86 |
| French | 40,523 | 67 | 35,701 | 62 |
| Business Studies | 38,041 | 63 | 33,821 | 58 |
| Art, Craft, Design | 21,536 | 36 | 21,723 | 37 |

Source: State Examinations Commission

### 3.4.2 Higher Level Sits

Table 3.2 presents the proportions of students who opted to take higher level papers for each subject. In six out of the top-ten subjects, an increase was observed in the proportions of those who took subject examinations at higher level. (C.P.S.E. is offered at common level only). The largest increases were in art, craft and design, mathematics and science, where the percentages taking higher level rose by 6, 5 and 4 percentage points respectively.

In addition, despite a drop in the overall number sitting the majority of the top-ten Junior Certificate subjects (see Table 3.1), there was an increase in absolute terms in the number taking higher level papers in three subjects: in mathematics, approximately 2,400 more students took the higher level paper in 2006 than in 2002; higher level science recorded a rise of approximately 1,500; and English, a rise of approximately 170.

***Table 3.2*** *Higher level candidates (%) for the top-ten subject choice, 2002 and 2006*

| | 2002 | 2006 |
|---|---|---|
| | % at Higher Level | % at Higher Level |
| English | 62 | 65 |
| Mathematics | 37 | 42 |
| C.P.S.E. | - | - |
| Geography | 77 | 77 |
| History | 67 | 67 |
| Irish | 40 | 43 |
| Science | 63 | 67 |
| French | 67 | 67 |
| Business Studies | 66 | 69 |
| Art, Craft, Design | 59 | 65 |

Source: State Examinations Commission

### 3.4.3 English, Mathematics and Scientific Literacy

Basic skills in English, mathematic and scientific literacy form the foundation for basic education and lifelong learning and are essential in order for individuals to work and participate in the economy. For this reason, we turn our attention to the performance of Junior Certificate candidates in these specific subjects.

Table 3.3 presents the number and percentages of Junior Certificate candidates who obtained grade D or higher (i.e. a pass grade) in English, mathematics and science at ordinary and higher level in 2006.

At both ordinary and higher level, an increase in the pass rates for mathematics and science was observed in the five year period between 2002 and 2006. In absolute terms, the number who passed higher level mathematics and science rose by more than 2,500 between 2002 and 2006. The proportion of students who passed higher level English remained unchanged at 98%, while there was a slight drop in the proportion and number of students obtaining a pass grade in ordinary level English.

***Table 3.3*** *Higher and Ordinary Level Junior Certificate English, Mathematics, and Science, 2002 and 2006*

| | Higher Level | | | | Ordinary Level | | | |
|---|---|---|---|---|---|---|---|---|
| | 2002 | | 2006 | | 2002 | | 2006 | |
| | No. of Sits Grades ≥D | % of Exam Sits Grades ≥D | No. of Sits Grades ≥D | % of Exam Sits Grades ≥D | No. of Sits Grades ≥D | % of Exam Sits Grades ≥D | No. of Sits Grades ≥D | % of Exam Sits Grades ≥D |
| English | 36,400 | (98%) | 36,559 | (98%) | 19,562 | (99%) | 17,427 | (98%) |
| Mathematics | 20,472 | (94%) | 23,228 | (96%) | 26,841 | (91%) | 25,219 | (94%) |
| Science | 29,893 | (94%) | 32,769 | (97%) | 17,733 | (94%) | 15,479 | (95%) |

Source: State Examinations Commission

### 3.4.4 Gender distribution at higher and ordinary levels, 2006

Table 3.4 provides a gender breakdown of higher and ordinary level Junior Certificate sits in 2006. For each of the nine subjects outlined in Table 3.4, females consistently outnumbered males in higher level papers. In particular, females dominated the higher level papers in art, craft and design (66%), in Irish (59%) and French (57%).

For ordinary level papers, the trend is reversed: males outnumbered females in seven out of nine subjects including English (60% of all ordinary level candidates were male), science (60% were male) and Irish (55%).

***Table 3.4*** *Gender Breakdown of Higher and Ordinary Level Junior Certificate Sits, 2006*

| | Higher Level | | | | Ordinary Level | | | |
|---|---|---|---|---|---|---|---|---|
| | Male Sits (%) | | Female Sits (%) | | Male Sits (%) | | Female Sits (%) | |
| English | 16,929 | (46) | 20,216 | (54) | 10,624 | (60) | 7,092 | (40) |
| Mathematics | 11,761 | (49) | 12,443 | (51) | 13,763 | (51) | 13,057 | (49) |
| Geography | 19,697 | (49) | 20,381 | (51) | 6,536 | (54) | 5,641 | (46) |
| History | 16,822 | (49) | 17,743 | (51) | 8,804 | (53) | 7,941 | (47) |
| Irish | 9,078 | (41) | 12,875 | (59) | 13,910 | (55) | 11,530 | (45) |
| Science | 16,393 | (49) | 17,219 | (51) | 9,806 | (60) | 6,491 | (40) |
| French | 10,249 | (43) | 13,690 | (57) | 6,466 | (55) | 5,296 | (45) |
| Business Studies | 10,907 | (47) | 12,336 | (53) | 5,241 | (50) | 5,337 | (50) |
| Art, Craft, Design | 4,763 | (34) | 9,386 | (66) | 3,732 | (49) | 3,842 | (51) |

Source: State Examinations Commission

Table 3.5 presents the achievements of males and females in terms of A, B and C grades obtained in higher and ordinary level Junior Certificate subjects in 2006. At higher level, the percentage of females who obtained grades A, B or C is higher than that for males in all of the subjects examined. This difference is most pronounced in English, where a gap of 11 percentage points between female and male achievement was observed. This was followed by French and art, craft and design, each with an almost 10 percentage point difference between male and female achievement.

A similar trend is observed for ordinary level subjects: females outperform males in most subjects, particularly in English, French and art, craft and design. However, males outperform females in three subjects: geography, history and, to a lesser extent, science. The gender gap in achievement in both ordinary level geography and history is almost 4 percentage points.

***Table 3.5*** *Gender Differences in Achievements at Higher and Ordinary Level in the Junior Certificate, 2006*

| | Higher Level | | | Ordinary Level | | |
|---|---|---|---|---|---|---|
| | Male (%) A,B,C | Female (%) A,B,C | Difference % points | Male (%) A,B,C | Female (%) A,B,C | Difference % points |
| English | 72 | 83 | 11.0 | 73 | 86 | 13.0 |
| Mathematics | 78 | 80 | 1.9 | 76 | 80 | 4.8 |
| Geography | 75 | 76 | 1.7 | 76 | 72 | -3.9 |
| History | 70 | 73 | 2.5 | 78 | 75 | -3.7 |
| Irish | 75 | 76 | 1.2 | 74 | 84 | 10.4 |
| Science | 77 | 81 | 3.7 | 70 | 69 | -1.6 |
| French | 64 | 74 | 9.9 | 52 | 64 | 12.3 |
| Business Studies | 80 | 83 | 2.5 | 74 | 82 | 8.2 |
| Art, Craft, Design | 81 | 91 | 9.9 | 72 | 84 | 11.6 |

Source: State Examinations Commission

## 3.5 Irish 15-year-olds: International Comparison

The data for this section was gathered from the OECD publication entitled *'Education at a Glance 2006'* and from a summary report by Cosgrove *et al.* (2004) of the Educational Research Centre at St. Patrick's College of Education entitled *'Education for Life: The Achievements of 15-Year-Olds in Ireland in the Second Cycle of PISA'*.

The Programme for International Student Assessment (PISA) is an international assessment project implemented across member states of the Organisation for Economic Co-operation and Development (OECD) and partner countries. It aims to provide internationally comparable indicators of the educational attainment of 15-year old students in the key areas of reading, mathematical and scientific literacy.

The majority of students who participated in the PISA 2003 assessments sat the Junior Certificate in either 2002 (34.3%) or 2003 (59.6%). Analyses carried out by Cosgrove *et al* (2004) indicate that there is a moderate relationship between the PISA 2003 assessments and the Junior Certificate examination, with some content unique to each assessment, and some common to both. Therefore, although the PISA results are not directly comparable with the Junior Certificate results, the PISA 2003 assessments provide an insight into how the performance of those of Junior Certificate age compares internationally.

Table 3.6 outlines Ireland's performance compared to other countries in terms of mathematical, scientific and reading literacy. Overall, the results from PISA 2003 show that Ireland's 15-year-olds perform at higher than the OECD average for reading and scientific literacy and at the OECD average in terms of mathematical literacy.

***Table 3.6*** *Country Rankings in Mathematical, Scientific and Reading Literacy PISA 2003*

| Mathematical Literacy | | Scientific Literacy | | Reading Literacy | |
|---|---|---|---|---|---|
| Country | OECD Difference | Country | OECD Difference | Country | OECD Difference |
| Finland | ↑ | Finland | ↑ | Finland | ↑ |
| Korea | ↑ | Japan | ↑ | Korea | ↑ |
| Netherlands | ↑ | Korea | ↑ | Canada | ↑ |
| Japan | ↑ | Australia | ↑ | Australia | ↑ |
| Canada | ↑ | Netherlands | ↑ | New Zealand | ↑ |
| Belgium | ↑ | Czech Republic | ↑ | Ireland | ↑ |
| Switzerland | ↑ | New Zealand | ↑ | Sweden | ↑ |
| Australia | ↑ | Canada | ↑ | Netherlands | ↑ |
| New Zealand | ↑ | Switzerland | ↑ | Belgium | ↑ |
| Czech Republic | ↑ | France | ↑ | Norway | O |
| Iceland | ↑ | Belgium | ↑ | Switzerland | O |
| Denmark | ↑ | Sweden | ↑ | Japan | O |
| France | ↑ | Ireland | ↑ | Poland | O |
| Sweden | ↑ | Hungary | O | France | O |
| Austria | O | Germany | O | United States | O |
| Germany | O | Poland | O | Denmark | O |
| Ireland | O | Slovak Republic | O | Iceland | O |
| Slovak Republic | O | Iceland | ↓ | Germany | O |
| Norway | ↓ | United States | ↓ | Austria | O |
| Luxembourg | ↓ | Austria | ↓ | Czech Republic | O |
| Poland | ↓ | Spain | ↓ | Hungary | ↓ |
| Hungary | ↓ | Italy | ↓ | Spain | ↓ |
| Spain | ↓ | Norway | ↓ | Luxembourg | ↓ |
| United States | ↓ | Luxembourg | ↓ | Portugal | ↓ |
| Portugal | ↓ | Greece | ↓ | Italy | ↓ |
| Italy | ↓ | Denmark | ↓ | Greece | ↓ |
| Greece | ↓ | Portugal | ↓ | Slovak Republic | ↓ |
| Turkey | ↓ | Turkey | ↓ | Turkey | ↓ |
| Mexico | ↓ | Mexico | ↓ | Mexico | ↓ |

Source: Cosgrove *et al.* (2004)

↑ = mean score is significantly higher than OECD country average

O = mean score is not significantly different from OECD country average

↓ = mean score is significantly lower than the OECD country average

### 3.5.1 Mathematical Literacy

When the performance of Irish students in mathematical literacy is examined across proficiency levels, the findings show that Ireland has fewer lower achievers in mathematical literacy than the OECD average: the percentage of Irish students who are at or below the lowest level, Level 1, is approximately 16.8%. This compares favourably with the OECD average of 21.4%.

On the other hand, at 11.3%, the percentage of Irish students who attain the highest proficiency levels is also lower than the OECD average of 14.6% indicating that Ireland has fewer higher achievers in mathematical literacy. Cosgrove *et al*.(2004) argue that the moderate overall performance of Irish students in mathematics can be attributed more to the underperformance of students at the top levels rather than to the weak performance of students at the lower end of the scale.

### 3.5.2 Reading Literacy

When proficiency levels in reading literacy are examined, the results show that the percentage of Irish 15-year-olds (11%) who scored at or below the lowest level, Level 1, is lower than the OECD average of 19.1%. The proportion of these scoring at the highest levels (Levels 5 and 6 combined) was also significantly higher for Ireland: 35.5% compared to the OECD average of 29.6%. These findings indicate that the relatively strong performance of Irish 15-year-olds in reading literacy can be attributed both to the comparatively strong performance of low achievers and the good performance of high achievers (Cosgrove *et al*. 2004).

Despite Ireland's relatively high ranking in terms of reading literacy, the PISA 2003 mean scores for Ireland were lower than in PISA 2000. Ireland's overall ranking dropped from fifth to sixth place.

### 3.5.3 Scientific Literacy

Overall, Ireland's ranking in scientific literacy was 13th out of 29 OECD countries and 16th out of 40 participating countries. Ireland's mean score in scientific literacy was significantly higher than the OECD average. Information on proficiency levels is not sufficient to permit further analysis. However, PISA 2006 aimed to make science a domain of particular focus which will allow for detailed analysis across proficiency levels in the future.

# 4. Leaving Certificate

**Key Points**

- In 2006, 54,110 candidates sat the Leaving Certificate Examination; a decline of over 4,400 on 2002
- There are increasing numbers and proportions of students opting to sit Leaving Certificate biology and chemistry; those sitting biology increased by almost 3,000 (or from 40% to 49% of all candidates) while those for chemistry rose by over 500 (or from 12% to 14%) between 2002 and 2006
- Of the candidates who sat Leaving Certificate mathematics in 2006, only 18% took the higher level paper; this is by far the lowest percentage of higher level sits for any subject in the science group; approximately 97% of those taking higher level mathematics achieved a grade D or above in 2006
- Increasing pass rates were observed at both higher and ordinary level for most of the science, engineering and technology subjects
- At ordinary level, Leaving Certificate mathematics has one of the lowest pass rates in science related subjects; almost 12% of ordinary level mathematics candidates failed to obtain a grade D or higher
- Females outnumber males in participation in Leaving Certificate subjects at higher level; they also obtain higher grades than males
- In terms of Leaving Certificate points, there has been a shift towards higher points attainments when compared to 2002.

## 4.1 Introduction

This chapter examines the supply of skills from persons completing the Leaving Certificate programme. We begin with a profile of the Leaving Certificate candidates and examination. We then present an analysis of Leaving Certificate trends according to (a) science and related subjects, (b) business and related subjects, (c) languages and (d) gender distribution. The pass rates for key skills areas (English, mathematics and science related subjects) are also provided. This chapter concludes with an outline of the points system (the principal means of application and entry to higher level education in the Republic of Ireland), followed by a short description of recent trends in points achievement of Leaving Certificate candidates.

## 4.2 The Leaving Certificate

The Leaving Certificate examination is held at the end of the Senior Cycle in post-primary schools. It spans levels 4 and 5 on the National Framework of Qualifications for Ireland. The learning outcomes associated with these levels are outlined in Appendix B.

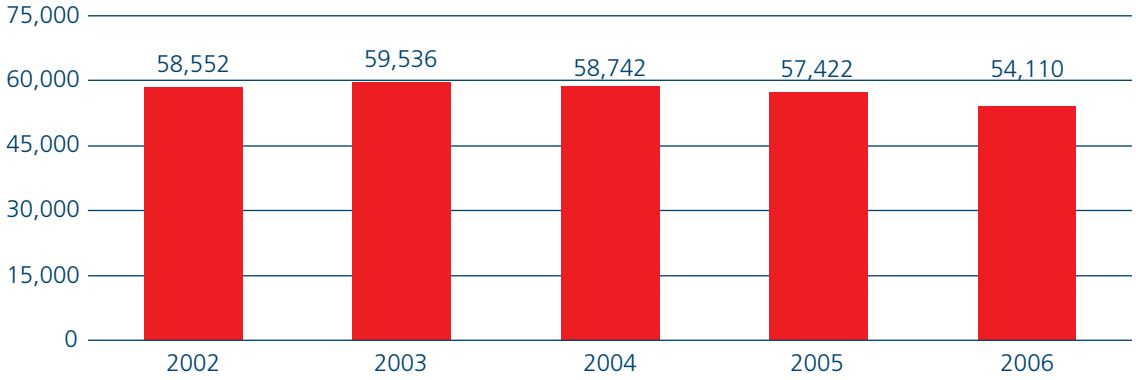
## 4.3 Leaving Certificate Candidates

The majority of candidates who sit for the examinations are students in post-primary schools, are 16-19 years of age, and have completed 5 or 6 years of post-primary education. The Leaving Certificate numbers also include repeat students. In 2006, approximately 4% of all Leaving Certificate candidates were repeat students, which is slightly lower than in 2002 when they accounted for 5% of the total. Other candidates may sit the Leaving Certificate examinations as participants in the Vocational Training Opportunities Scheme or as external candidates (i.e. those outside the school system) who sit individual subjects. In 2005, the latest date for which the data is available, the number of VTOS candidates who sat the Leaving Certificate was 808 amounting to approximately 1.4% of the total number of candidates.

Not all students who enter second level education will complete the Leaving Certificate. A Department of Education and Science report (2005) asserts that of those who entered second level education in 1996 only 81.3% went on to sit their Leaving Certificate.[4]

There are three types of Leaving Certificate programmes provided to students in Irish post-primary schools: Leaving Certificate Established, Leaving Certificate Vocational Programme (LCVP), and Leaving Certificate Applied. The number of candidates who sat the Leaving Certificate (all programmes) from 2002 to 2006 is presented in Figure 4.1. The number of Leaving Certificate candidates declined sharply in 2006: there were 54,110 candidates in 2006 which is a drop of over 5,000 from the 2003 figure of almost 60,000. This is a reflection of the declining birth rate observed in the late 1980s for the relevant age-cohort. In 2006 approximately 28,300 females (52%) sat the Leaving Certificate. Males accounted for approximately 25,800 (or 48%) of Leaving Certificate sits.

***Figure 4.1*** *Number of Leaving Certificate Candidates, 2002-2006*

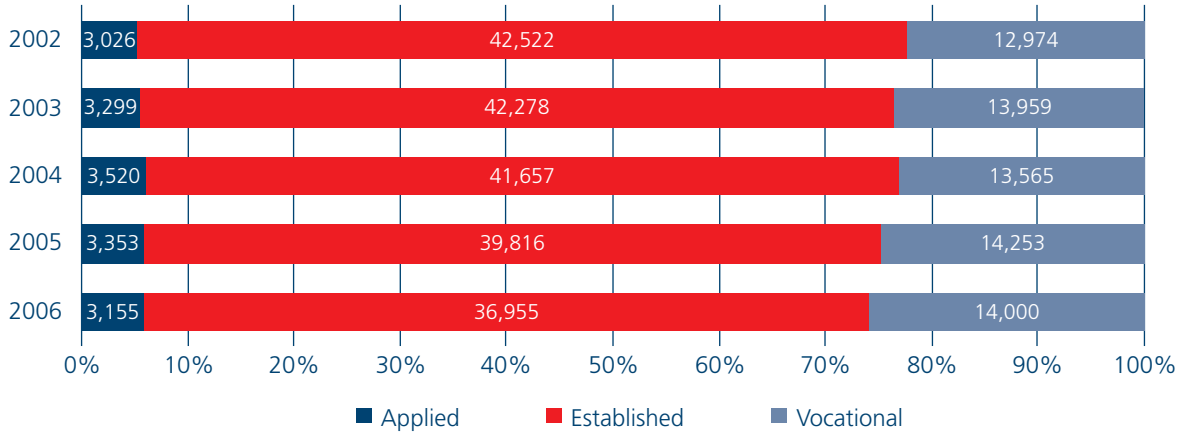



Source: State Examinations Commission

Figure 4.2 gives the breakdown of those who opted for the three Leaving Certificate programmes over the five year period 2002-2006. By far the most popular programme is the Leaving Certificate Established whose numbers, although experiencing a decline since 2002, continue to make up almost 70% of all candidates taking the Leaving Certificate in any given year. This is followed by the Leaving Certificate Vocational programme. It has gained in popularity, going from 22% of all Leaving Certificate 'sits' in 2002 to almost 26% in 2006. Finally, although the Leaving Certificate Applied programme accounted for fewer than 6% of all Leaving Certificate sits in 2006, the proportion of students taking the Leaving Certificate Applied programme has increased from 5.2% to 5.8% since 2002.

4 Department of Education and Science report published in September 2005: *Retention Rates of Pupils in Second-level Schools.*

***Figure 4.2*** *Students Taking the Three Leaving Certificate Programmes (%), 2002-2006*




Source: State Examinations Commission

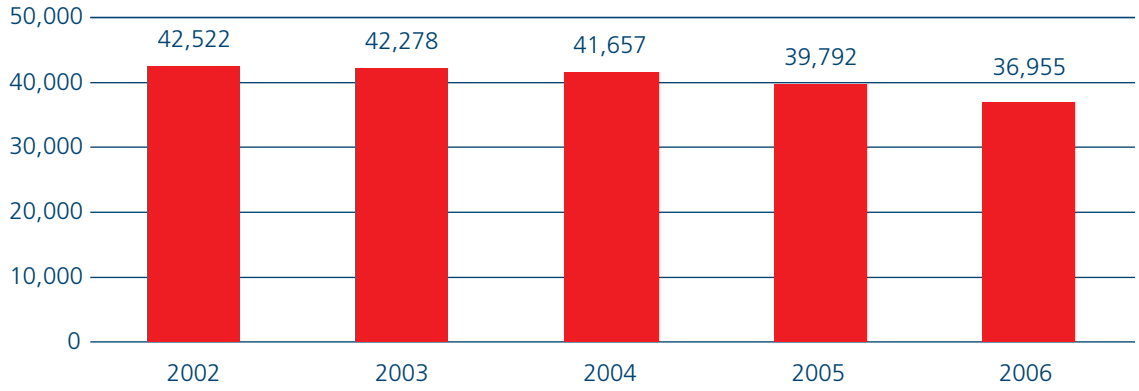
## 4.4 Leaving Certificate Established and Vocational

### 4.4.1 Leaving Certificate Established

The Leaving Certificate Established programme is designed to provide students with a broad and balanced education while allowing for some specialisation. The certificate is used to gain entry into further education, employment, training, and higher education. Figure 4.3 shows the number of candidates who sat the Leaving Certificate Established exam each year from 2002 to 2006. The number of students who sat the Leaving Certificate Established exams decreased significantly in that time, going from 42,522 in 2002 to 36,955 in 2006. This decrease is mainly a reflection of the relevant demographic trends.

School students are typically required to follow a minimum of five subjects from a list of 33. However, six subjects are necessary for entry into most third level degree courses and school students often sit seven subjects for the Leaving Certificate Established examination.

***Figure 4.3*** *Number of Candidates Sitting the Leaving Certificate Established, 2002-2006*



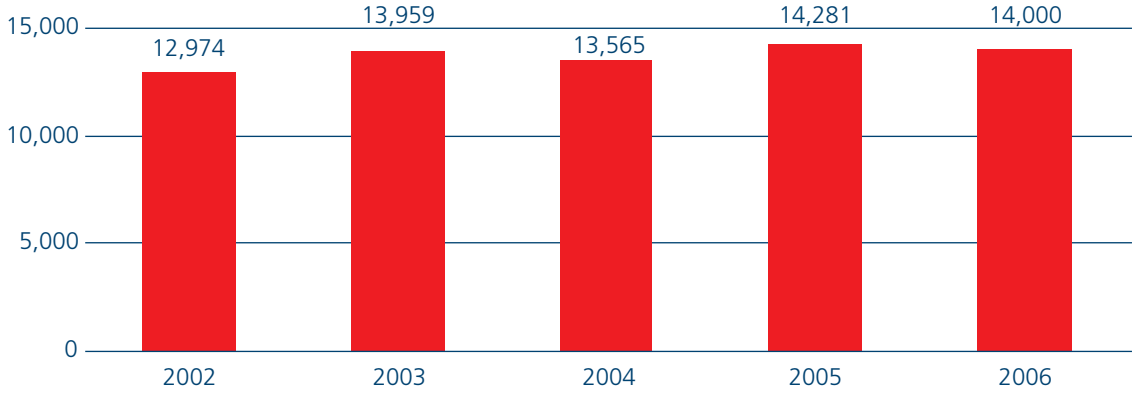

Source: State Examinations Commission

### 4.4.2 Leaving Certificate Vocational

The Leaving Certificate Vocational Programme (LCVP) is a two year academic and experience-based programme. It is designed to give a strong vocational dimension to the Leaving Certificate Established. It is not a separate stand-alone Leaving Certificate programme. The number of students who sat the Leaving Certificate Vocational Programme examination increased from just under 13,000 in 2002 to 14,000 in 2006 (see Figure 4.4).

LCVP students must take a minimum of five Leaving Certificate (Established) subjects, two of which must be selected from one of the designated Vocational Subject Groupings. The subject groupings put regular Leaving Certificate subjects that complement each other into groups (e.g. home economics and business, or accounting and business). Students also take two Link Modules, namely Preparation for the World of Work and Enterprise Education which include compulsory work experience and enterprise activity. The formal assessment of the Link Modules has two components: a written exam taken nationally by all candidates, and a portfolio prepared by each candidate. The Link Modules' results may constitute a candidate's sixth subject in the Leaving Certificate for points calculation purposes for university and institute of technology course applications.[5]

***Figure 4.4*** *Number of Candidates Sitting the Leaving Certificate Vocational Programme, 2002-2006*




Source: State Examinations Commission

### 4.4.3 Results trends for Leaving Cert. Established and Vocational

In this section we look first at students' top-ten subject choice for the Leaving Certificate in 2006. We then turn our attention to candidates' participation in science related subjects, business related subjects and languages. Next, we look at how candidates performed in terms of levels and grades obtained in selected subjects recognised as forming the foundation of basic education, namely, English, mathematics and the sciences. Finally, a breakdown of results according to gender is presented.

In 2006, the total number of Leaving Certificate Established and Vocational candidates was 50,955. Candidates following the Leaving Certificate Established or Vocational programmes may sit subjects at higher level or ordinary level. Mathematics and Irish may also be taken at foundation level.

#### Top-ten subject choice

The top-ten subject choice for Leaving Certificate candidates in 2006 is presented in Table 4.1 below. Mathematics, English and Irish are amongst the most popular due mainly to the fact that they are compulsory subjects for the majority of students in post-primary schools. The only science related subject appearing on this list is biology which was taken by almost 25,000 (49%) of the total number of Leaving Certificate candidates. All other science subjects ranked outside the top-ten: construction studies ranked in 11th place; physics ranked 13th; and chemistry 14th.

5 Results for the Link Modules are expressed in terms of Pass, Merit or Distinction.

***Table 4.1*** *Top-ten subject choice for Leaving Certificate Candidates, 2006*

| Subject | Higher | % | Ordinary | % | Foundation | % | Total |
|---|---|---|---|---|---|---|---|
| Mathematics | 9,018 | 18 | 35,112 | 71 | 5,104 | 10 | **49,234** |
| English | 30,441 | 63 | 17,961 | 37 | | | **48,402** |
| Irish | 12,948 | 29 | 26,437 | 60 | 4,543 | 10 | **43,928** |
| French | 13,421 | 48 | 14,388 | 52 | | | **27,809** |
| Biology | 17,048 | 69 | 7,837 | 31 | | | **24,885** |
| Geography | 17,788 | 72 | 6,865 | 28 | | | **24,653** |
| Business | 12,856 | 66 | 6,567 | 34 | | | **19,423** |
| Home Economics (S & S) | 8,200 | 67 | 4,099 | 33 | | | **12,299** |
| History | 6,975 | 65 | 3,702 | 35 | | | **10,677** |
| Art | 7,440 | 75 | 2,541 | 25 | | | **9,981** |

Source: State Examinations Commission

The top-ten choice remains largely similar to that of preceding years, with the exception of biology which has overtaken geography as the fifth most popular Leaving Certificate subject. The proportion of students taking mathematics at foundation level in any given year is approximately 10%.

### Science, engineering and technology subjects

Table 4.2 gives the number of students who sat science, engineering and technology subjects in the Leaving Certificate examinations in 2002 and 2006. The number in brackets gives the proportion of the total number of Leaving Certificate students who opted to sit a given subject. The proportion of candidates who took the higher level paper for each subject is also provided.

***Table 4.2*** *Number of candidates taking science, engineering and technology subjects, 2002 and 2006*

| Science Group | 2002 No. of Sits | 2002 (% of Total) | 2002 % at Higher Level | 2006 No. of Sits | 2006 (% of Total) | 2006 % at Higher Level |
|---|---|---|---|---|---|---|
| Mathematics | 53,658 | (97%) | 18 | 49,234 | (97%) | 18 |
| Biology | 22,064 | (40%) | 62 | 24,884 | (49%) | 69 |
| Construction Studies | 8,512 | (15%) | 73 | 8,558 | (17%) | 76 |
| Physics | 8,651 | (16%) | 69 | 7,335 | (14%) | 71 |
| Chemistry | 6,497 | (12%) | 86 | 7,071 | (14%) | 81 |
| Technical Drawing | 6,039 | (11%) | 52 | 5,292 | (10%) | 55 |
| Engineering | 4,746 | (9%) | 67 | 4,775 | (9%) | 72 |
| Agricultural Science | 2,890 | (5%) | 71 | 3,913 | (8%) | 77 |
| Applied Maths | 1,293 | (2%) | 93 | 1,323 | (3%) | 94 |
| Physics/Chemistry | 969 | (2%) | 67 | 582 | (1%) | 79 |

Source: State Examinations Commission

Overall, approximately 97% of Leaving Certificate candidates sat mathematics in any given year. In 2006, almost 50% of candidates took biology which is a considerable increase from 2002 when the percentage was 40%. The percentage of those taking chemistry also increased in that time, going from 12% in 2002 to 14% in 2006. In absolute terms, the number taking biology increased by over 2,800 and the number taking chemistry rose by more than 500 over the five year period.

On the other hand, decreases were observed for those taking physics and physics/chemistry between 2002 and 2006[6]. The proportion of all candidates taking physics fell slightly from 16% in 2002 to 14% in 2006, while the proportion taking physics/chemistry fell from 2% to 1% over the same period. In absolute terms, there were more than 1,000 fewer candidates for physics and almost 400 fewer candidates for physics/chemistry in 2006 when compared to 2002.

With the exception of mathematics, the majority of students in 2006 sat higher level papers in science related subjects. Applied mathematics had the highest proportion of higher level 'sits', at 94%. This was followed by chemistry at 81% and physics/chemistry at 79%.

### Business related subjects

The numbers and proportions of candidates taking business related subjects in 2002 and 2006 are set out in Table 4.3. The number in brackets gives the proportion of the total number of Leaving Certificate students who opted to sit a given subject. The proportion of candidates who took the higher level paper in each subject is also provided.

While business remains the most popular subject choice in this grouping, the percentage of candidates who opted to sit business in the Leaving Certificate decreased from almost 43% to 38% between 2002 and 2006. In absolute terms, the number decreased by more than 4,000. The second most popular business subject was accounting at 14%, up slightly from 13% in 2002.

For each of the business related subjects the number of candidates taking the higher level paper exceeded the number of those who took the subject at ordinary level. All students sitting agricultural economics in 2006 took the higher level paper.

***Table 4.3*** *Candidates taking business related subjects, 2002 and 2006*

| | 2002 | | | 2006 | |
|---|---|---|---|---|---|
| Business Group | No. of Sits | (% of Total) | % at Higher Level | No. of Sits | (% of Total) | % at Higher Level |
| Business | 23,605 | (43%) | 69 | 19,423 | (38%) | 66 |
| Accounting | 7,070 | (13%) | 67 | 6,897 | (14%) | 68 |
| Economics | 4,727 | (9%) | 79 | 4,362 | (9%) | 75 |
| Agricultural Economics | 187 | (0.3%) | 95 | 73 | (0.1%) | 100 |

Source: State Examinations Commission

6 Physics/chemistry comprises elements of the Leaving Certificate physics syllabus and elements of the Leaving Certificate chemistry syllabus. Candidates are not normally permitted to sit physics/chemistry in combination with either physics or chemistry.

### Languages

Table 4.4 shows the number and percentage of candidates for the top five language subjects in the Leaving Certificate examination in 2002 and 2006. English is the top language subject: approximately 95% of all Leaving Certificate candidates took English in 2002 and 2006. Those taking Irish decreased from 88% in 2002 to 86% in 2006. Over half of all Leaving Certificate candidates take French. The next most popular modern language is German at just over 15%. Spanish was taken by approximately 5% of all candidates, up from 3% in 2002. Other languages taken by less than 0.5% of candidates include Latin, Italian, and Russian.

The proportion of candidates taking higher level English increased from 60% to 63% between 2002 and 2006. The percentages of those taking higher level French, German and Spanish also increased slightly over the same period while the percentage of those taking Irish at higher level decreased from 30% to 29%. Irish and French were the only languages where the proportion of those taking higher level was less than those taking ordinary level.

***Table 4.4*** *Candidates taking the top five language subjects, 2002 and 2006*

| | 2002 | | | 2006 | |
|---|---|---|---|---|---|
| Language Group | Number of Sits | (% of Total) | % at Higher Level | Number of Sits | (% of Total) | % at Higher Level |
| English | 52,997 | (95%) | 60 | 48,402 | (95%) | 63 |
| Irish | 49,085 | (88%) | 30 | 43,928 | (86%) | 29 |
| French | 32,116 | (58%) | 47 | 27,809 | (55%) | 48 |
| German | 8,722 | (16%) | 59 | 7,731 | (15%) | 62 |
| Spanish | 1,702 | (3%) | 57 | 2,371 | (5%) | 58 |

Source: State Examinations Commission

### English, mathematics and scientific literacy

English, mathematics and scientific literacy skills are essential requirements for the successful functioning of a knowledge-based economy. Basic literacy and numeracy skills form the foundations of education and are the gateway not only to further and higher education but also to employment. The number and percentage of candidates who obtained a grade D or above (i.e. a pass grade) in English, mathematics and selected science subjects are presented in Table 4.5 for ordinary level examinations and in Table 4.6 for higher level.

*Ordinary Level*

When compared to 2002, all ordinary level subjects saw an increase in the proportion of students who obtained a grade D or above in 2006 (Table 4.4). The most significant increase was observed for physics/chemistry where the proportions achieving grade D or more increased from 58% to 81%. However, the number of candidates sitting this subject is very small and has declined substantially (from 315 to 124) in the time period.

Biology recorded the second highest increase in the proportion of students with a grade D or above, going from 81% to 87% between 2002 and 2006.

The subjects with the highest percentages of students gaining a grade D or above at ordinary level in 2006 were English (98%) and physics (91%). Those with the highest percentages of students who failed to gain a grade D or above were physics/chemistry (19%) and chemistry (16%).

***Table 4.5*** *Students with Grades A,B,C or D in Ordinary Level English, Mathematics and Sciences, 2002 and 2006*

| | 2002 | | 2006 | |
|---|---|---|---|---|
| | No. of Candidates, Grades ≥ D | % of Exam Sits, Grades ≥ D | No. of Candidates, Grades ≥ D | % of Exam Sits, Grades ≥ D |
| English | 20,813 | (97%) | 17,516 | (98%) |
| Mathematics | 33,317 | (86%) | 31,047 | (88%) |
| Biology | 6,736 | (81%) | 6,797 | (87%) |
| Physics | 2,316 | (87%) | 1,937 | (91%) |
| Chemistry | 765 | (82%) | 1,148 | (84%) |
| Physics / Chemistry | 182 | (58%) | 101 | (81%) |

Source: State Examinations Commission

*Higher Level*

Between 2002 and 2006, slight increases were observed in the proportion of those obtaining a grade D or above in higher level mathematics, biology, and physics/ chemistry (Table 4.6). A more substantial increase was observed for physics where the proportion gaining grade D or above rose from 89% in 2002 to 93% in 2006. The percentage for English remained the same at 99% in both 2002 and 2006. Similarly the proportion of those with D or more in higher level chemistry remained unchanged at 93%.

The higher level subjects with the highest percentages of students gaining a grade D or above in 2006 were English (99%) and Mathematics (97%). The higher level subject with the highest percentage of students who failed to gain a grade D or above was physics/chemistry at 14%.

***Table 4.6*** *Students with Grades A,B,C or D in Higher Level English, Mathematics and Sciences, 2002 and 2006*

| | 2002 | | 2006 | |
|---|---|---|---|---|
| | No. of Candidates, Grades ≥ D | % of Exam Sits, Grades ≥ D | No. of Candidates, Grades ≥ D | % of Exam Sits, Grades ≥ D |
| English | 31,081 | (99%) | 30,007 | (99%) |
| Mathematics | 9,013 | (96%) | 8,723 | (97%) |
| Biology | 12,707 | (92%) | 15,829 | (93%) |
| Physics | 5,357 | (89%) | 4,829 | (93%) |
| Chemistry | 5,180 | (93%) | 5,292 | (93%) |
| Physics / Chemistry | 554 | (85%) | 396 | (86%) |

Source: State Examinations Commission

## Gender Breakdown

*Total Sits*

Table 4.7 presents a gender breakdown of Leaving Certificate (established and vocational) sits for the top ten subjects in 2006. Females outnumbered males in eight out of the ten subjects. Of the top ten Leaving Certificate subjects, the number of males exceeded that of females in only two subjects: history and geography.

***Table 4.7*** *Gender Breakdown of Top-Ten Leaving Certificate Subjects, 2006*

| | Total sits (2006) | % Male | % Female |
|---|---|---|---|
| Mathematics | 49,234 | 48 | 52 |
| English | 48,402 | 48 | 52 |
| Irish | 43,928 | 47 | 53 |
| French | 27,809 | 41 | 59 |
| Biology | 24,885 | 33 | 67 |
| Geography | 24,653 | 53 | 47 |
| Business | 19,423 | 44 | 56 |
| Home Economics | 12,299 | 33 | 67 |
| History | 10,677 | 55 | 45 |
| Art | 9,981 | 36 | 64 |

Source: State Examinations Commission

Of the four subjects from the science group that figured in the top-ten in 2006, females dominated in mathematics, biology and home economics where they accounted for 52%, 67% and 67% of all candidates opting to sit exams in these subjects.

For science subjects outside the top-ten, the pattern is reversed. More than 90% of all candidates were male in the traditionally male-dominated subjects such as construction studies (93%), technical drawing (92%) and engineering (95%). Males also dominated in physics (74%) and in physics/chemistry (65%). Chemistry was the only science subject not in the top-ten where the number of females was higher than that of males (55% were female).

Females outnumbered males in the three languages that figured in the top ten subjects: females accounted for 52% of all English sits, 52% of those who took Irish and 53% of those who took French.

Finally, in business and in art females again outnumbered males making up 56% and 64% respectively of all those sitting these subjects in 2006.

*Gender Distribution of Higher Level and Ordinary Level Sits*

A gender distribution for males and females who sat higher and ordinary level papers in the top ten subjects for 2006 is outlined in Table 4.8. Females outnumbered males in higher level papers for seven out of ten subjects. The vast majority (93%) of those taking higher level home economics were female. Females also dominated in biology, Irish and French making up 69%, 66% and 63% of all those sitting higher level papers in these subjects. Finally, although by a slightly smaller margin, the number of females also exceeded the number of males who sat higher level English and higher level business: in each of these subjects the proportion of females taking the higher level paper in 2006 was 57%.

At ordinary level females also outnumbered males in five of the top ten subjects. Males, however, outnumbered females in history, home economics, geography and English. Approximately equal number of males and females sat higher level Irish.

Foundation level is offered for mathematics and Irish only. Although almost equal numbers of males and females took foundation level mathematics in 2006, only 35% of females took foundation level Irish.

***Table 4.8*** *Gender Breakdown of Sits at Higher and Ordinary Level, 2006*

| | Higher Level | % Male | % Female | Ordinary Level | % Male | % Female |
|---|---|---|---|---|---|---|
| Mathematics | 9,018 | 52 | 48 | 35,112 | 47 | 53 |
| English | 30,441 | 43 | 57 | 17,961 | 55 | 45 |
| Irish | 12,948 | 34 | 66 | 26,437 | 50 | 50 |
| French | 13,421 | 37 | 63 | 14,388 | 44 | 56 |
| Biology | 17,048 | 31 | 69 | 7,837 | 36 | 64 |
| Geography | 17,788 | 51 | 49 | 6,865 | 56 | 44 |
| Business | 12,856 | 43 | 57 | 6,567 | 47 | 53 |
| Home Economics | 8,200 | 7 | 93 | 4,099 | 83 | 17 |
| History | 6,975 | 54 | 46 | 3,702 | 58 | 42 |
| Art | 7,440 | 33 | 67 | 2,541 | 46 | 54 |

Source: State Examinations Commission

*Gender Distribution of Achievement*

Table 4.9 presents the achievements by males and females in the key subjects of English, mathematics and science related subjects. At higher level, females consistently outperform males in each of the selected subjects. Female achievements at ordinary level also surpass those of males for all but one of the subjects in this grouping: physics is the only exception where 91% of males obtained a pass grade (i.e. grade D or above) compared to only 88% for females.

***Table 4.9*** *Gender Breakdown of those with Grade D or above in English, Mathematics and Science, 2006*

| | Higher Level | | | | | Ordinary Level | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Males ≥ D | % | Females ≥ D | % | Difference (%) | Males ≥ D | % | Females ≥ D | % | Difference (%) |
| English | 12,832 | 98 | 17,175 | 99 | -1 | 9,652 | 97 | 7,864 | 98 | -1 |
| Mathematics | 4,482 | 96 | 4,241 | 98 | -2 | 14,177 | 86 | 16,870 | 90 | -4 |
| Biology | 4,879 | 92 | 10,950 | 93 | -1 | 2,388 | 84 | 4,409 | 88 | -4 |
| Chemistry | 2,244 | 92 | 3,048 | 93 | -1 | 599 | 82 | 549 | 87 | -5 |
| Physics | 3,349 | 92 | 1,480 | 94 | -2 | 1,610 | 91 | 327 | 88 | 3 |
| Physics / Chemistry | 240 | 84 | 156 | 91 | -8 | 72 | 80 | 29 | 85 | -5 |

Source: State Examinations Commission

## 4.5 Leaving Certificate Applied Programme

The Leaving Certificate Applied Programme (LCAP), introduced in 1995, is a self-contained Leaving Certificate programme. The programme is designed for those students who do not wish to proceed directly to higher education or for those whose needs and aptitudes are not fully catered for by the other two Leaving Certificate programmes. The LCAP is a distinct, self-contained two-year programme and it aims to prepare students for the transition from school to adult and working life.

The LCAP is a modular program divided into four half-year sessions. Over the two-year duration of the programme, participants complete 44 modules, i.e. eleven per session. The outcome of student assessment in the LCAP is stated in the form of credits: A maximum of 200 credits can be gained by each student over the two years of the LCAP and also from the final examination. Candidates are required to sit exams in the following subjects

- English and Communication
- Two vocational specialisms (e.g. Agriculture/Horticulture, Engineering, Childcare/Community Care, Technology, Hair and Beauty, etc.)
- Mathematical Applications
- Languages (Irish and a modern European language)
- Social Education.

Students who successfully complete the programme receive a single award made on the basis of credits accrued over the two year cycle. The certificate is awarded at three levels:

| | | |
|---|---|---|
| Pass | 60-69% | (120-139 credits) |
| Merit | 70-84% | (140-169 credits) |
| Distinction | 85-100% | (170-200 credits) |

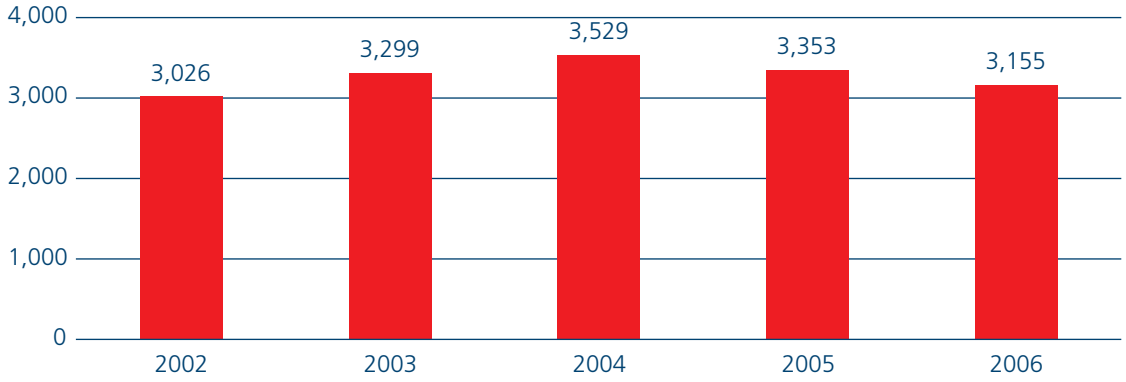
Candidates who obtained less than 60% (120 credits) receive a Record of Credits. This also applies to those who leave before the end of the programme.

A student who has been awarded the Leaving Certificate Applied can go on to a range of Post-Leaving Certificate courses (PLCs), apprenticeships and courses offered by Fáilte Ireland. The PLC courses can lead on to a Further Education and Training Awards (FETAC) level 5 award, and in some cases a FETAC level 6 award. Students with the Leaving Certificate Applied cannot gain direct entry through the Central Applications Office (CAO) system to the universities or institutes of technology. However, those in receipt of a FETAC level 5 or 6 award can be eligible for some third-level courses in the institutes of technology or other higher education institutions and through these to some degree programmes.[7]

Figure 4.5 presents the number of candidates sitting the Leaving Certificate Applied from 2002-2006. In 2006, 3,155 persons sat the Leaving Certificate Applied. In absolute terms, the number has declined since its peak of 3,529 in 2004, but this is a reflection of the decrease in numbers in the relevant age cohort. Overall the LCAP has gained in popularity since 2002 going from 5.2% of all Leaving Certificate exam sits in 2002 to 5.8% in 2006 (see Figure 4.2).

7 In 2006, as a result of the introduction of a pilot scheme, the number of higher education institutions offering progression to a variety of level 6, 7 and 8 programmes increased: there were 35 higher education institutions offering holders of FETAC qualifications progression to certain level 6, level 7 and level 8 degree programmes.

***Figure 4.5*** *Number of Candidates Sitting the Leaving Certificate Applied, 2002-2006*

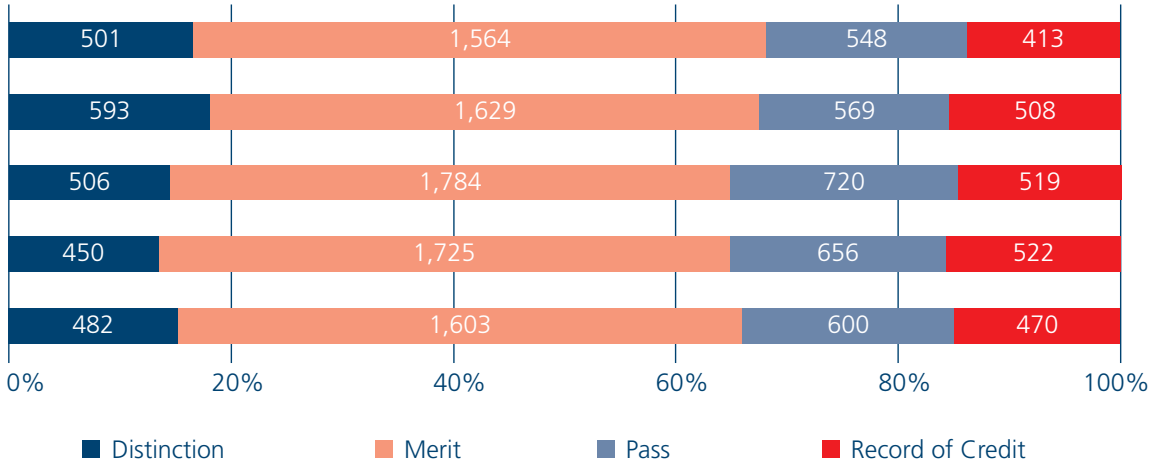



Source: State Examinations Commission

### 4.5.1 Results trends for Leaving Certificate Applied

The numbers of students who received a pass, merit, distinction or Record of Credit in the LCA 2002-2006 are presented in Figure 4.6. The percentage of those receiving distinctions and merits has decreased from 16.6% and 51.7% respectively in 2002 to 15.3% and 50.8% respectively in 2006.

***Figure 4.6*** *Leaving Certificate Applied Results, 2002-2006*




Source: State Examinations Commission

## 4.6 The Points System

The Central Applications Office (CAO) undertakes the task of processing centrally the applications to undergraduate (levels 6, 7, and 8) courses at many of the higher education institutes in Ireland. Students wishing to follow a course at any of the participating institutions indicate to the CAO their course choices in order of preference. Places are subsequently offered on the basis of points calculated from a candidate's Leaving Certificate results.

The points system gives priority to students with the better performance. The six best results in recognised subjects are added up for points computation. In general, most subjects carry equal points and points are awarded for each grade as per Table 4.10 below. However, bonus points for higher level mathematics are awarded by University of Limerick. Dublin Institute of Technology also awards bonus points for mathematics and a number of science subjects in the case of certain level 8 courses. The

Leaving Certificate Vocational programme Link Modules carry points as follows: Distinction = 70, Merit = 50, Pass = 30. The Link Module score can be substituted as one of a student's best six subjects but may not be counted in addition to the best six subjects.

***Table 4.10*** *Leaving Certificate Grade Points*

| Grade | A1 | A2 | B1 | B2 | B3 | C1 | C2 | C3 | D1 | D2 | D3 | <E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| % | 90-100 | 85-89 | 80-84 | 75-79 | 70-74 | 65-69 | 60-64 | 55-59 | 50-54 | 45-49 | 40-44 | 0-39 |
| Higher Level | 100 | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 0 |
| Ordinary Level | 60 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 | 10 | 5 | 0 |

Source: CAO

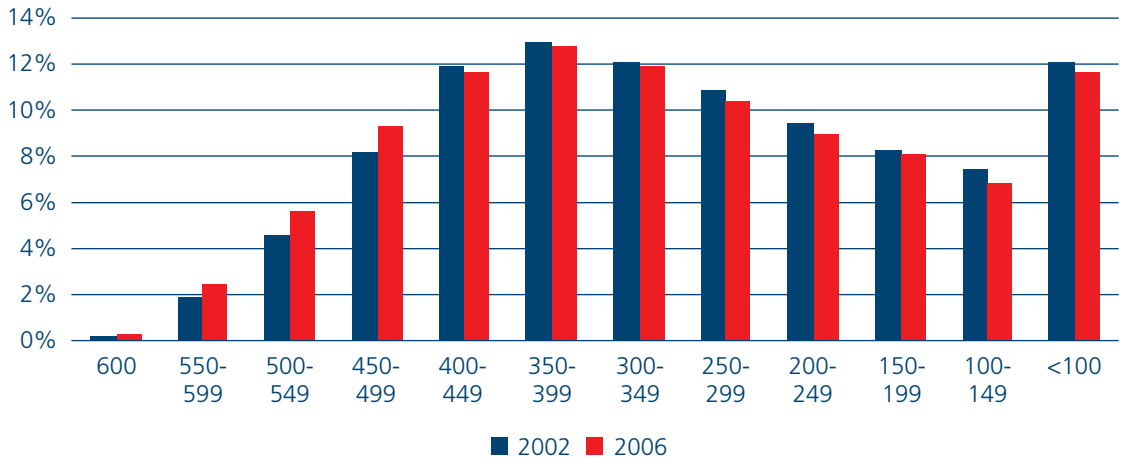
No points are allocated for subjects taken at foundation level (i.e. mathematics or Irish) or for Leaving Certificate Applied results.

## 4.7 Points Achievements 2002 and 2006

The percentages of students whose points achievements fell within the various points bands are presented in Figure 4.7 for 2002 and 2006. Overall, the results for Leaving Certificate students in 2006 show a slight shift towards higher points attainments when compared to the 2002 figures. Increases were observed in 2006 for each of the bands from 450 points upwards. At the same time, the overall proportion of students who obtained 100 points or less (exaggerated on the scale by the results of external candidates who may only sit one subject) decreased.

In 2006, 149 Leaving Certificate students (0.3%) obtained the maximum 600 points. This is an increase of 49 on the 2002 figure which stood at 100 (0.2%). The 350-399 points band (e.g. six C2 grades at higher level) had the highest proportion of students with 13% of all candidates (6,500 students). Approximately 12% of candidates obtained 400-449 points and another 12% obtained 300-349 points. In total, approximately 42% of all candidates in 2006 gained 350 points or more which is slightly greater than that of 2002, where 39% of candidates had 350+ points.

***Figure 4.7*** *Points Achieved by Leaving Certificate Candidates who Applied Through the CAO, 2002 and 2006*




Source: CAO

# 5. Further Education and Training

**Key Points**

- Over 111,000 candidates received 130,000 FETAC awards in 2006; of these, 26,299 were major awards
- The highest proportion of awards made in 2006 were at level 5 (54%), with a further 27% at level 6, 13% at level 3, and 7% at level 4
- Approximately 51% of all award recipients were aged 30 or younger
- Craft and childcare courses accounted for a high proportion of major awards
- For minor awards, a significant number of awards were made in courses relating to computer literacy and applications
- Special purpose and supplemental awards were primarily in areas relating to construction and built environment.

## 5.1 Introduction

The focus of this chapter is on the supply of skills emerging from further education and training in Ireland. The Further Education and Training Awards Council (FETAC) is the national awarding body for further education and training (FET) in Ireland. In general, FET awards are placed across levels 1-6 on the NFQ, although to date, FET awards have only been made at levels 3 to 6. Learning outcomes associated with these levels are presented in Appendix B.

Programmes leading to FETAC awards are offered nationwide by a wide range of providers including Fáilte Ireland, FÁS, Teagasc, Bord Iascaigh Mhara (BIM), Vocational Education Committees (VECs), adult and community education and training centres, a range of private providers, and in the workplace. The training they provide ranges from short courses to longer programmes including apprenticeships. Some of the bodies also have a role in third level courses in cooperation with third level institutions; these courses are examined in chapters 6-8.

## 5.2 Further Education and Training Providers

FÁS is Ireland's National Training and Employment Authority. It has responsibility for the Public Employment Service as well as the apprenticeship system and provides a large range of other courses. It also has roles in training the employed and disadvantaged groups.

Teagasc provides training courses for the agriculture, horticulture and food sectors. These courses range from higher education, further education and short courses in both the agriculture and food sectors. Higher education courses supported by Teagasc are included in Chapters 6-8.

BIM provides training in catching, fish farming and seafood processing. They also provide training in safety and aquaculture.

Fáilte Ireland provides training for those working in and for those wishing to enter the tourism industry. Courses are provided through institutes of technology and in Fáilte Ireland centres. Courses are designed to develop skills in areas such as accommodation, bar, cookery, front office/reception, restaurant and tourism/travel. These courses include: full-time courses delivered by institutes of technology and short-term courses for those already working in the industry who wish to update their skills and for those wishing to return to work.

The majority of courses provided by the VECs take place in schools, colleges and community education centres. These courses are full-time and are of 1-2 years in length. PLC courses combine technical knowledge, core skills and work experience.

## 5.3 Further Education and Training Awards

The majority of the courses provided by these public bodies are accredited by the Further Education and Training Awards Council (FETAC), the national awarding body for further education and training. Awards data has been assigned a level on the NFQ by FETAC. A description of the levels and learning outcomes are detailed in Appendices A and B. The types of awards are described below.

**Types of awards:**

A **certificate** is a major award and is the principal class of award made at each level. It represents a significant volume of learning outcomes. A major award will prepare learners for employment, participation in society and community and access to higher levels of education and training e.g. Level 5 Certificate in Childcare

A **component certificate** is a minor award derived from, and must link to, at least one major award. Minor awards are smaller than their parent major award(s). Achievement of a minor award provides for recognition of learning that has relevance and value in its own right e.g. word processing, safety and health at work

A **specific purpose (special purpose) award** is made for specific relatively narrow purposes. It does not have to link to a major award e.g. environmental inspection skills

A **supplemental award** is an award to recognise learning which involves updating/up-skilling and/or continuing education and training with specific regard to occupations e.g. gas installation

### 5.3.1 Awards by candidates

In total, 111,099 candidates received 130,226 FETAC awards in 2006 across the various award types. The number of awards does not always equal the number of candidates, as shown in Table 5.1, as one candidate can receive more than one award. It is also the case that a candidate can receive awards in more than one award type i.e. one candidate receiving both a major and a minor award.

Over 24,500 candidates received certificates (major) in 2006, with, on average, each candidate receiving only one major award. Candidates receiving component (minor) awards totalled 65,521. As detailed above, minor awards are linked to major awards and candidates with minor awards often go on to achieve major awards.

Almost 25,000 candidates received specific purpose awards in 2006 and 191 candidates received supplemental awards.

***Table 5.1*** *FETAC awards by award type and candidates, 2006*

| Award Type | No. of Awards | No. of Candidates |
|---|---|---|
| Certificate (Major) | 26,299 | 24,515 |
| Component (Minor) | 75,703 | 65,521 |
| Specific Purpose (Special Purpose) | 28,028 | 24,777 |
| Supplemental | 196 | 191 |
| **Total** | **130,226** | **111,099*** |

Source: FETAC

*The total number of candidates does not sum up as some candidates can gain awards in more than one award type.

### 5.3.2 Awards by NFQ Level

Table 5.2 details the number of awards made in 2006 by award type and NFQ level. On average, holders of component certificates achieve two minors in one year; therefore, the 75,703 component awards are comprised of 135,170 minor awards.

The highest proportion of awards (58%) in 2006 was made at level 5. Of the 26,299 major awards, 13% were at level 3, 7% at level 4, 54% at level 5, and 27% at level 6. The majority of both minor and special purpose awards were awarded at level 5. All supplemental awards were made at level 6.

***Table 5.2*** *FETAC awards by award type and NFQ level, 2006*

| Award Type | Level 3 | Level 4 | Level 5 | Level 6 | Total |
|---|---|---|---|---|---|
| Major | 3,488 | 1,739 | 14,071 | 7,001 | **26,299** |
| Minor | 34,064 | 24,062 | 72,003 | 5,041 | **135,170** |
| Special Purpose | 39 | 1,342 | 23,887 | 2,760 | **28,028** |
| Supplemental | - | - | - | 196 | **196** |
| **Total** | **37,591** | **27,143** | **109,961** | **14,998** | **189,693** |

Source: FETAC

### 5.3.3 Awards by Gender

Overall, 51% of all awards made in 2006 were for male candidates. Table 5.3 details the proportions of males and females who received awards in 2006 by level and award type.

Proportionally, more females received major awards at levels 3 to 5 in 2006; the reverse is true at level 6 where 87% were male. This is due to the number of craft awards at this level. For minor awards, a higher percentage of females received awards across all levels. In contrast, the majority of special purpose and supplemental award recipients were male (excluding special purpose awards at level 4).

***Table 5.3*** *FETAC awards by award type, NFQ level and gender, 2006*

| | Level 3 | | Level 4 | | Level 5 | | Level 6 | |
|---|---|---|---|---|---|---|---|---|
| **Award Type** | **Male** | **Female** | **Male** | **Female** | **Male** | **Female** | **Male** | **Female** |
| Major | 41% | 59% | 39% | 61% | 23% | 77% | 87% | 13% |
| Minor | 37% | 63% | 44% | 56% | 31% | 69% | 26% | 74% |
| Special Purpose | 82% | 18% | 46% | 54% | 93% | 7% | 70% | 30% |
| Supplemental | - | - | - | - | - | - | 94% | 6% |

Source: FETAC

### 5.3.4 Awards by Age

Approximately 51% of all FETAC awards recipients in 2006 were aged 30 or younger. For major awards, 40% of candidates were aged between 19 and 23.

On the other hand, those who received minor, special purpose and supplemental awards had a higher age profile. This is most likely due to these awards being focused on people already in the workforce.

***Table 5.4*** *FETAC awards by award type and age, 2006*

| **Award Type** | **<18** | **19-23** | **23-30** | **31-50** | **51+** | **n/a** | **Total** |
|---|---|---|---|---|---|---|---|
| Major | 6% | 40% | 22% | 25% | 5% | 1% | **100%** |
| Minor | 8% | 25% | 16% | 36% | 11% | 3% | **100%** |
| Special Purpose | 1% | 14% | 28% | 46% | 10% | 1% | **100%** |
| Supplemental | 1% | 5% | 29% | 57% | 9% | 0% | **100%** |
| **Total** | **7%** | **25%** | **19%** | **36%** | **10%** | **3%** | **100%** |

Source: FETAC

### 5.3.5 Awards by Field of Learning

The fields of learning used here were assigned by the SLMRU based on a FETAC coding system. As such, the SLMRU takes responsibility for the accuracy of the coding.

**Major Awards**

Education, health and welfare-related courses had the highest numbers of major awards in 2006, as per Table 5.5. These relate primarily to childcare and healthcare support courses at level 5. At level 6, the highest numbers of awards were in both the construction and built environment and engineering/ manufacturing categories; these relate in the most part to craft awards. Business and administration accounted for 14% of the total awards; these are principally for business studies and office skills courses. The core skills, language and general studies awards, primarily at level 3, relate to general learning and vocational education skills courses.

***Table 5.5*** *Major awards by field of learning and NFQ level, 2006*

| Field of Learning | Level 3 | Level 4 | Level 5 | Level 6 | Total |
|---|---|---|---|---|---|
| Agriculture, Science & Computing | 97 | 100 | 685 | 1,041 | **1,923** |
| Arts, Craft & Media | - | - | 1,565 | 70 | **1,635** |
| Business and Administration | - | 349 | 3,380 | 52 | **3,781** |
| Construction & Built Environment | 100 | - | 179 | 1,970 | **2,249** |
| Core Skills, Language & General Studies | 1,091 | 144 | 63 | - | **1,298** |
| Education, Health & Welfare | - | 6 | 6,327 | 180 | **6,513** |
| Engineering/Manufacturing | - | - | 127 | 2,635 | **2,762** |
| Services | - | - | 957 | 396 | **1,353** |
| Tourism, Hospitality & Sports | - | 1,140 | 600 | 657 | **2,397** |
| Not Classified | 2,200 | - | 188 | - | **2,388** |
| **Total** | **3,488** | **1,739** | **14,071** | **7,001** | **26,299** |

Source: FETAC

### Minor Awards

The largest number of minor awards made in 2006 was in the core skills, language and general studies field comprising subjects such as computer literacy, communications and occupational first aid. Table 5.6 shows that a further 20% of awards were made in business and administration in areas such as computer applications, word processing and book-keeping. There were also a significant number of awards made in education, health and welfare at level 5; these relate primarily to childcare courses.

***Table 5.6*** *Minor awards by field of learning and NFQ level, 2006*

| Field of Learning | Level 3 | Level 4 | Level 5 | Level 6 | Total |
|---|---|---|---|---|---|
| Agriculture, Science & Computing | 1,821 | 1,403 | 4,956 | 591 | **8,771** |
| Arts, Craft & Media | 4,572 | 1,115 | 5,797 | 423 | **11,907** |
| Business and Administration | 1,719 | 8,616 | 16,641 | 191 | **27,167** |
| Construction & Built Environment | 175 | 15 | 635 | 27 | **852** |
| Core Skills, Language & General Studies | 21,995 | 6,437 | 13,052 | 570 | **42,054** |
| Education, Health & Welfare | 964 | 1,214 | 16,661 | 1,016 | **19,855** |
| Engineering/Manufacturing | 460 | 340 | 1,167 | 104 | **2,071** |
| Services | 56 | 3,148 | 1,304 | 30 | **4,538** |
| Tourism, Hospitality & Sports | 2,289 | 1,712 | 3,831 | 39 | **7,871** |
| Not Classified | 13 | 62 | 7,959 | 2,050 | **10,084** |
| **Total** | **34,064** | **24,062** | **72,003** | **5,041** | **135,170** |

Source: FETAC

### Special Purpose

The majority of special purpose awards were for construction/built environment-related courses and these were primarily at level 5. These relate, for the most part, to construction plant operations courses. There were also a significant number of awards (3,982) within engineering and manufacturing and in business and administration (2,961).

***Table 5.7*** *Special Purpose awards by field of learning and NFQ level, 2006*

| Field of Learning | Level 3 | Level 4 | Level 5 | Level 6 | Total |
|---|---|---|---|---|---|
| Agriculture, Science & Computing | - | 22 | 1,552 | - | 1,574 |
| Business and Administration | - | 22 | 1,379 | 1,560 | 2,961 |
| Construction & Built Environment | - | 17 | 15,683 | - | 15,700 |
| Core Skills, Language & General Studies | - | 18 | 1 | - | 19 |
| Education, Health & Welfare | - | - | 462 | 389 | 851 |
| Engineering/Manufacturing | - | - | 3,798 | 184 | 3,982 |
| Services | - | 14 | - | - | 14 |
| Tourism, Hospitality & Sports | - | 21 | - | 22 | 43 |
| Not Classified | 39 | 1,228 | 1,012 | 605 | 2,884 |
| **Total** | **39** | **1,342** | **23,887** | **2,760** | **28,028** |

Source: FETAC

### Supplemental

All supplemental awards in 2006 related to gas installation and were placed at level 6 on the NFQ.

# 6. Universities & Institutes of Technology – Level 7/6

**Key Points**

- CAO Acceptances – Just fewer than 12,500 persons accepted places on level 7/6 courses in 2006, a decline of 25.5% since 2000
- Graduate Output – In 2005, approximately 17,200 students graduated with level 7/6 awards, declining for the first time in recent years
- Outlook – Acceptances at level 7/6 are declining, with graduate output set to continue to decline
- Science – Acceptances on science courses at level 7/6 are down on the 2000 figure; graduate output in 2005 remained relatively unchanged
- Engineering – Acceptances on engineering courses are down on the 2000 figure; graduate output in 2005 is also less than that in 2004
- Computing – A significant decline in CAO acceptances is evident since 2000 for computing courses, although a 14.5% increase occurred between 2005 and 2006; there was a decline in graduate output for 2005
- First Destination – Fewer students with level 7/6 awards are continuing on to further study or training in 2005 than in the previous year
- International Comparison – Ireland ranks well (3rd) when compared to other OECD countries in the percentage of Tertiary Type B graduates.

## 6.1 Introduction

This chapter examines the learning outcomes from universities and institutes of technology which are placed at level 6 and 7 on the NFQ. Awards at this level include higher certificates and ordinary degrees. Learning outcomes associated with awards at levels 6 and 7 are detailed in Appendix B. As level 6 and 7 data from universities and institutes of technology does not allow a distinction between the two levels, they are combined for the purposes of this report.

In this chapter we first examine CAO acceptance data, followed by output data for both universities and institutes of technology. Third, we examine the first destination of graduates and finally how Ireland compares internationally at this level.

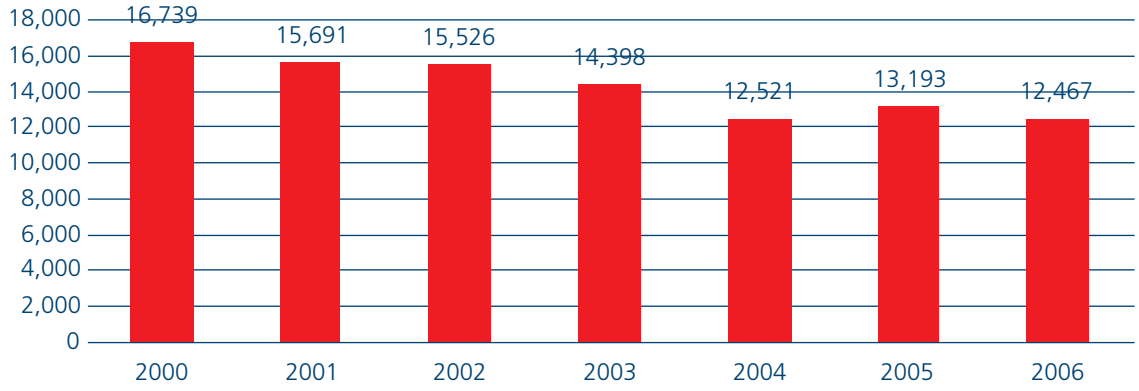
## 6.2 CAO Acceptances

The majority of those entering higher education at levels 7/6 apply for their desired courses through the Central Applications Office (CAO). Foreign and some mature students must apply directly to the education provider. Those who apply through the CAO can apply to two lists: the level 7/6 list and the level 8 list. An applicant may receive an offer of a level 7/6 and a level 8 course; however, only one course can be accepted.

CAO course acceptances are not the same as student enrolments. Some acceptors do not enrol and some seek deferment. Nonetheless, they are a good indication of first year enrolment trends and inflows into programmes at these levels.

Figure 6.1 shows the total number of CAO level 7/6 acceptances from 2000 to 2006. In 2006, a total of 12,467 people accepted places on level 7/6 courses. This represents 32% of all CAO acceptances to higher level education in 2006. The number of acceptances declined from 16,739 in 2000 to 12,467 in 2006, with a decline of 724 since 2005. This decline in numbers is due to two major factors – the increase in those applying for level 8 courses and demographic trends.

***Figure 6.1*** *CAO Level 7/6 Total Acceptances, 2000-2006*




Source: CAO Directors Report

Table 6.1 details the breakdown of acceptances by discipline. In 2006, acceptances on technology-related courses accounted for 43.9% of all acceptances. Although a significant decline (32.1%) occurred for those accepting places on technology courses in the period 2000-2006, the percentage of acceptances in this category has experienced a slight recovery since 2005. The most significant decline in technology acceptances during the period 2000-2006 occurred for computing courses with a decline of 1,334, or 58.3%. However, an increase of 14.5% occurred since 2005. Similarly, while the numbers accepting places within engineering/manufacturing and science declined between 2000 and 2006, the numbers were relatively unchanged between 2005 and 2006.

Acceptances on health, veterinary and agriculture courses experienced some of the most significant percentage increases in the period 2000-2006, with 28.3%, although the numbers involved are relatively small. A decline in acceptances on these courses has occurred since 2005.

The 'other' category has experienced a decline in the number of acceptances both in the periods 2000-2006 and 2005-2006. Business and law disciplines declined within these periods by 37.2% and 12.5% respectively. Although social services experienced a decline since 2005, this discipline increased by 62.7% between 2000 and 2006. Services (e.g. personal, transport and security services) was the only discipline within this category to increase in the numbers of acceptors in both time periods.

***Table 6.1*** *CAO Level 7/6 Total Acceptances by Discipline, 2000-2006*

| Discipline | 2000 (%) | 2005 (%) | 2006 (%) | %Change 2006-2000 | %Change 2006-2005 |
|---|---|---|---|---|---|
| Engineering & Manufacturing | 2,420 (14.5%) | 1,599 (12.1%) | 1,602 (12.8%) | -33.8% | +0.2% |
| Construction | 2,128 (12.7%) | 2,136 (16.2%) | 2,051 (16.4%) | -3.6% | -4.0% |
| Computing | 2,288 (13.7%) | 833 (6.3%) | 954 (7.7%) | -58.3% | +14.5% |
| Science (Non Healthcare) | 1,226 (7.3%) | 808 (6.1%) | 869 (6.9%) | -29.1% | +7.5% |
| **Total Technology** | **8,062 (48.2%)** | **5,376 (40.8%)** | **5,476 (43.9%)** | **-32.1%** | **+1.9%** |
| Agriculture & Veterinary | 277 (1.7%) | 363 (2.7%) | 353 (2.8%) | +27.4% | -2.8% |
| Health and Welfare | 253 (1.5%) | 407 (3.1%) | 327 (2.7%) | +29.2% | -19.7% |
| **Total Health, Vet and Agriculture** | **530 (3.2%)** | **770 (5.8%)** | **680 (5.5%)** | **+28.3%** | **-11.7%** |
| Arts & Humanities | 1,439 (8.6%) | 1,229 (9.3%) | 1,210 (9.7%) | -15.9% | -1.5% |
| Education | 0 (0%) | 41 (0.3%) | 27 (0.2%) | - | -34.1% |
| Business & Law | 5,226 (31.2%) | 3,755 (28.5%) | 3,284 (26.3%) | -37.2% | -12.5% |
| Social Services | 359 (2.1%) | 855 (6.5%) | 584 (4.7%) | +62.7% | -31.7% |
| Services | 1,123 (6.7%) | 1,165 (8.8%) | 1,206 (9.7%) | +7.4% | +3.5% |
| **Total Other** | **8,147 (48.7%)** | **7,045 (53.4%)** | **6,311 (50.6%)** | **-22.5%** | **-10.4%** |
| **Total** | **16,739 (100%)** | **13,191 (100%)** | **12,467 (100%)** | **-25.5%** | **-5.5%** |

Source: Central Applications Office

Table 6.2 provides a gender breakdown of level 7/6 acceptances for each year between 2000 and 2006. Overall, the proportion of males who accept places on level 7/6 courses is higher than the proportion of females. Between 2001 and 2006, at least 55% of level 7/6 course acceptances were by males. Based on the CSO population data, the gender breakdown of those aged 16-19 in 2006 is 51% male and 49% female; therefore, this data shows that a slightly higher proportion of males than would be expected, based on the population, are accepting places on level 7/6 courses.

***Table 6.2*** *Gender Distribution of CAO Acceptances, Level 7/6 (%), 2000-2006*

| Year | Male % | Female % |
|---|---|---|
| 2000 | 54.6 | 45.4 |
| 2001 | 55.4 | 44.6 |
| 2002 | 56.0 | 44.0 |
| 2003 | 57.0 | 43.0 |
| 2004 | 56.3 | 43.7 |
| 2005 | 55.4 | 44.6 |
| 2006 | 56.5 | 43.5 |

Source: Central Applications Office

In terms of age, the majority of CAO level 7/6 acceptors are aged 17 and 18 years. However, in recent years, the number of CAO mature acceptors (i.e. 23 years and over) has been increasing. In 2006, 10% of all acceptors at level 7/6 were aged 23+. This is an increase from 4% in 2000.

## 6.3 Graduate Output

Following the successful completion of a level 7/6 course, students are awarded one of the following: higher certificate, university certificate, ordinary degree or university diploma. In terms of labour supply, graduate output indicates the potential annual pool of technicians and higher technicians (also known as associate professionals).

In 2005, approximately 17,200 students graduated from higher education programmes with a level 7/6 award. The overall number of graduates at this level increased in the period 2000-2004, although a decline occurred in 2005. It is worth noting that due to the inclusion of part-time graduates and those emerging through the 2+1+1 route (progression from a 2-year level 6 to 3-year level 7 to 4-year level 8) in the graduate output there is no direct comparability between the output and CAO acceptances.

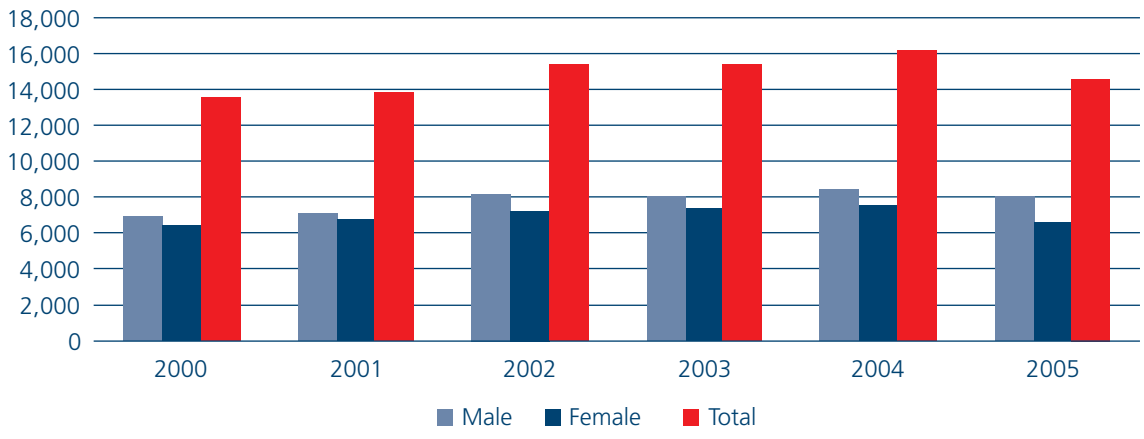
### 6.3.1 Institutes of Technology Sector

Institutes of technology are the main education providers of level 7/6 programmes. In 2005, 85% of all higher education level 7/6 awards were made by institutes of technology. Graduate data for institutes of technology is supplied by HETAC and those institutes with delegated authority.

Figure 6.2 outlines recent trends in graduate output from institutes of technology level 7/6 courses. In 2005, approximately 14,600 students graduated at this level. The number of graduates continuously increased over the period 2000-2004. The decline in level 7/6 CAO acceptances in recent years is reflected in the 2005 graduation data, with a decline of 1,460 since 2004. This pattern is expected to continue as the number of CAO acceptances continue to decline at this level.

Male graduates outnumbered female graduates every year over the period 2000-2005. In 2000, a total of 52% of graduates from institutes of technology were male; this increased to 54% in 2005.

***Figure 6.2*** *Level 7/6 Output by Gender from Institutes of Technology, 2000-2005*



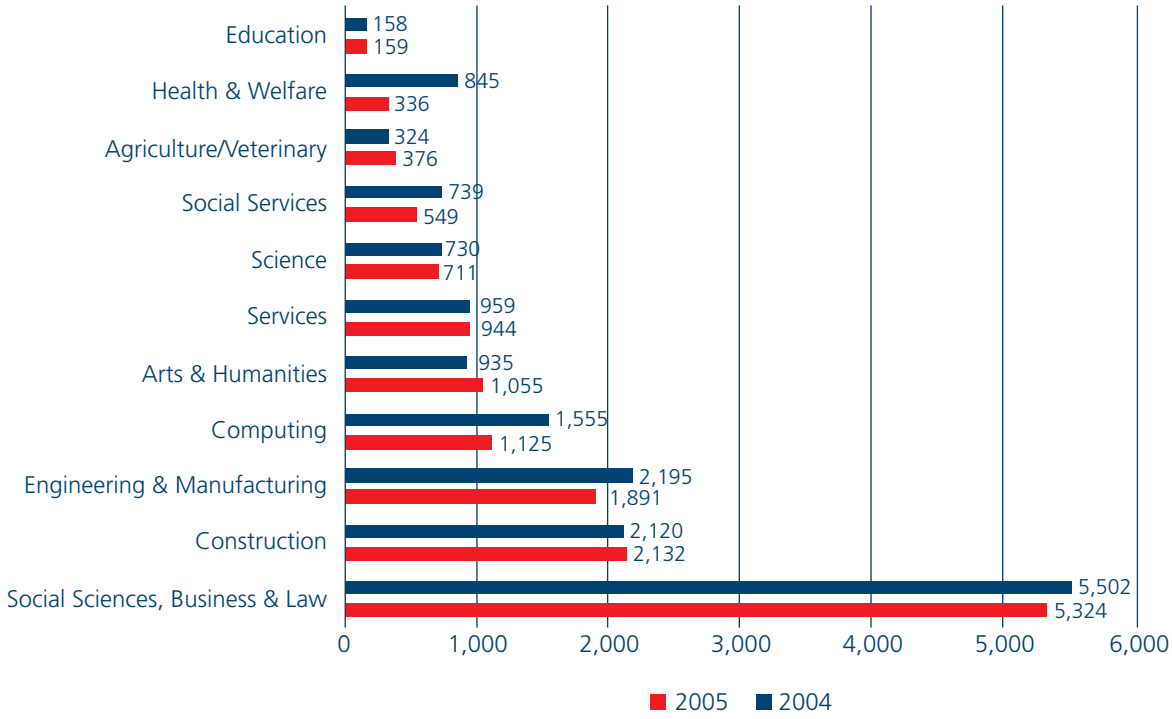

Source: HETAC, Institutes of Technology

Figure 6.3 shows the graduate output from institutes of technology by discipline in 2004 and 2005. The number of graduates declined over this period by 1,460. Both computing and engineering/ manufacturing disciplines experienced a drop, of 27.7% and 13.8% respectively, reflecting the fall off in

numbers accepting places on these courses in recent years. Healthcare graduates fell from 845 in 2004 to 336 in 2005. This was due primarily to the change in nursing qualifications from a three year diploma to a four year honours bachelor degree.

Overall, the most significant number of awards in 2005 was made for those in the social sciences, business and law discipline with 5,324 awards. This is followed by construction and engineering/ manufacturing with 2,132 and 1,891 respectively.

***Figure 6.3*** *Discipline Breakdown of Level 7/6 Output from Institutes of Technology, 2004 and 2005*

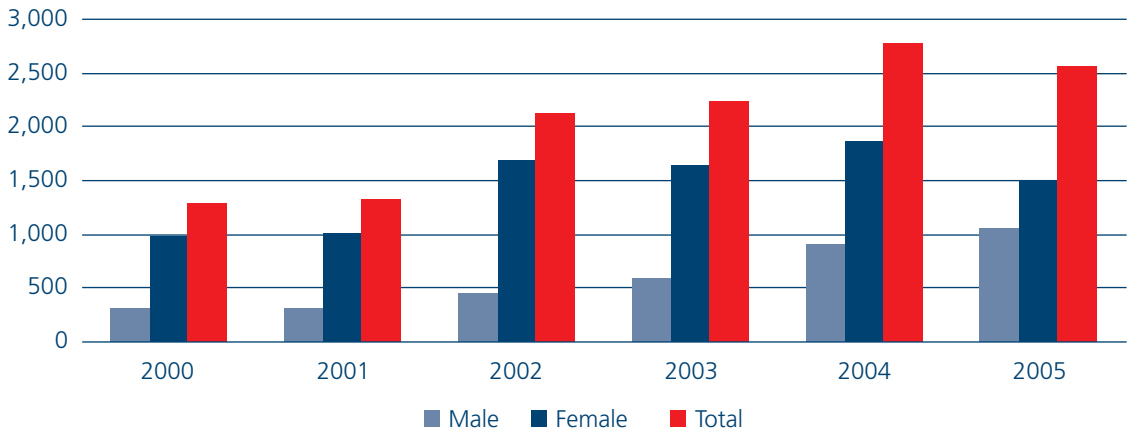



Source: HETAC, Institutes of Technology

### 6.3.2 University Sector

Universities are not a major provider of level 7/6 awards in Ireland. In 2005, only 15% of all level 7/6 awards were made by universities. However, the number of courses offered has increased in recent years resulting in a 100% increase in graduate output since 2000. Of the 2,567 awards made in 2005 at this level, over 67% of graduates were female, as per Figure 6.4. Females have been the predominant level 7/6 award recipients within the university sector throughout the period 2000-2005, although a decline in the output of female graduates occurred in 2005. The percentage of males receiving awards at this level has increased over the period 2000-2005; from 24% in 2000 to 42% in 2005.

***Figure 6.4*** *Level 7/6 Output by Gender from Universities, 2000-2005*

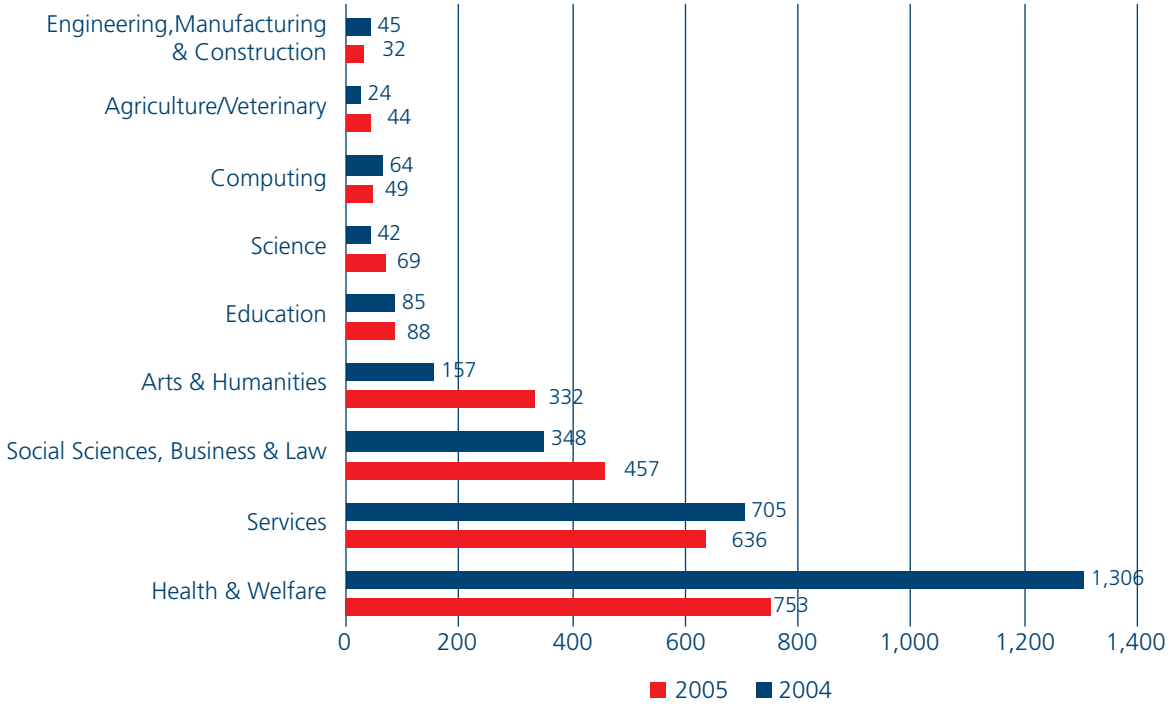



Source: HEA

The discipline breakdown of level 7/6 graduate awards for universities in 2004 and 2005 is detailed in Figure 6.5. Over this period the number of graduates declined by 209. Health/welfare and services disciplines produced the most graduates in 2005 with 753 and 636 respectively. The significant decline in the health and welfare graduates between 2004 and 2005 occurred primarily due to the change in nursing qualifications from a three year diploma to a four year honours bachelor degree. Output in the services discipline also declined from 705 in 2004.

While an overall decline in graduate output occurred in 2005, both arts/humanities and social sciences, business and law experienced increases, of 111% and 31% respectively.

***Figure 6.5*** *Discipline Breakdown of Level 7/6 Output from Universities, 2004 and 2005*




Source: HEA

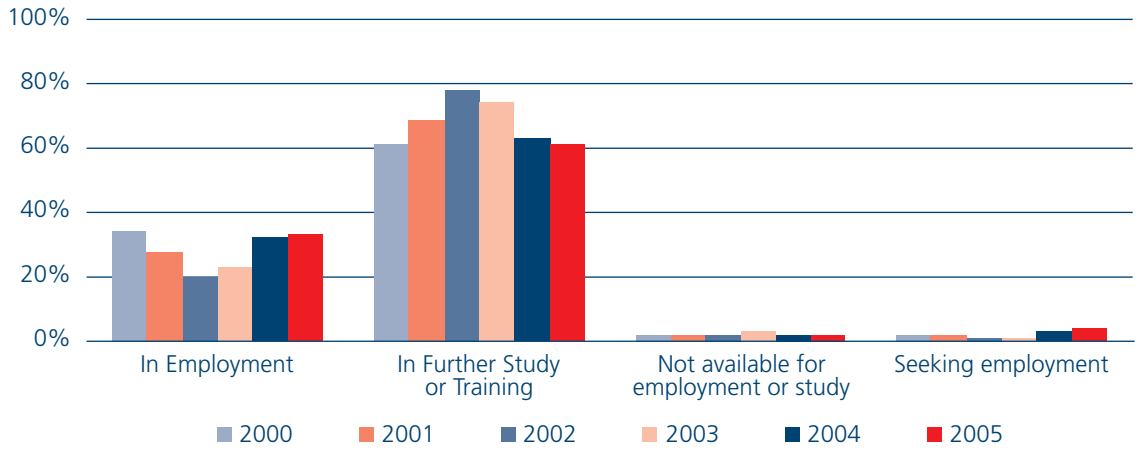
## 6.4 First Destination

Following the completion of level 7/6 courses, graduates have a number of options available including entering the workforce, continuing to further study or seeking employment abroad. In order to assess the extent to which graduates avail of these options, the HEA conducts an annual survey on the first destination of graduates from higher education. The results of this survey allow for the estimation of the following:

- the difference between the potential and actual supply of labour from level 7/6 education
- the progression of graduates through the education system
- the success of securing employment following graduation.

Figure 6.6 examines the first destination of level 7/6 graduates for the period 2000-2005. In 2005, 33% gained employment upon completion of a level 7/6 programme, an increase of 14% since 2002. In contrast, the proportion of students in further study or training dropped considerably between 2002 and 2005, going from 78% to 61% over the period. This represents a decline in the incidence of education progression through the 2+1+1 route where students who complete a two year certificate course (level 6), move on to a one year ordinary bachelor degree (level 7), and then spend a further year to obtain an add-on honours bachelor's degree (level 8). The proportion of graduates not available for employment or study remained at 2% in 2005 while the proportion of those seeking employment rose slightly to 4%.

***Figure 6.6*** *First Destination of Level 7/6 Award Recipients, 2000-2005, (% of graduates)*

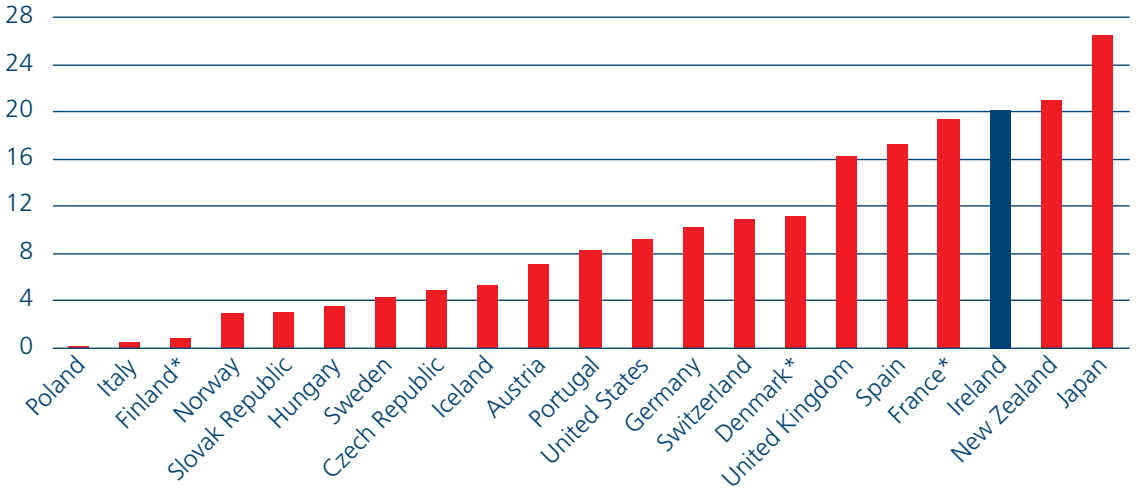



Source: HEA

## 6.5 International Comparison

This section compares Ireland's performance with that of other selected countries in terms of graduate output at level 7/6 in higher education. For this purpose, we use the results of the OECD survey of education entitled Education at a Glance 2006, which provides the results of an annual survey of education in over 40 participating countries. To date, no cross-classification of NFQ award levels and OECD data (which is classified according to ISCED levels) is available and a direct comparison between graduate output at level 7/6 and international data will only be approximate. However, ISCED Tertiary Type B education is defined as shorter (2-3 years) vocationally orientated third level courses and thus corresponds, in very general terms, to diploma/certificate and ordinary degree-level education in Ireland. Figure 6.7 shows the percentage of Tertiary Type B graduates to the population at typical age of graduation for selected OECD countries in 2004. The overall OECD average for 2004 is 9.2%. With 20.1% of Tertiary Type B graduates to the population, Ireland's graduate output at diploma/certificate and ordinary degree level is well above the OECD average.

***Figure 6.7*** *Tertiary Type B Graduates to the Population at Typical Age of Graduation for Selected OECD Countries (%), 2004*




Source: Education at a Glance 2006, OECD

* Graduation figures are from 2003

# 7. Universities and Institutes of Technology – Level 8

**Key Points**

- CAO Acceptances – Just fewer than 26,500 persons accepted places on level 8 courses in 2006, an increase of 27.8% since 2000
- Graduate Output – There were approximately 24,700 level 8 awards made by universities and institutes of technology in 2005, a similar output to 2004
- Outlook – With increases in acceptors at level 8 in recent years, graduate output at this level is likely to continue to increase in the future
- Science – increases in graduate output are expected to continue in the short-term but will reverse in the medium term due to a decline in CAO acceptances
- Engineering – Graduate output increased in 2005 but a decline is expected to occur in the short-term due to the fall in CAO acceptors since 2000. However, an increase in acceptances for construction courses in the same time period may mask the decline in graduate output in the overall engineering category
- Computing – Graduate output declined significantly in 2005 and will continue to do so in the medium term due to the 49% drop in CAO acceptance since 2000. CAO acceptances are showing signs of recovery and this should have a positive effect on future output
- First Destination – The majority of those who graduate with level 8 awards are in employment within 9 months of graduation
- International Comparison – When the combined graduate output for honours bachelor degree and masters degree courses is considered, Ireland is ranked 10th (out of 25 countries) in the proportion of tertiary Type A graduates to the population.

## 7.1 Introduction

This chapter outlines the supply of skills from programmes placed at level 8 on the NFQ. Awards currently placed at this level are Honours Bachelor Degrees and Graduate Diplomas (Conversion). A description of the learning outcomes associated with awards at this level is outlined in Appendix B.

This section first examines CAO acceptances for level 8 programmes. Second, we examine graduate output at level 8 from institutes of technology and universities. Third, we examine the first destination of level 8 award recipients. Finally, we take an international perspective of level 8 graduates.

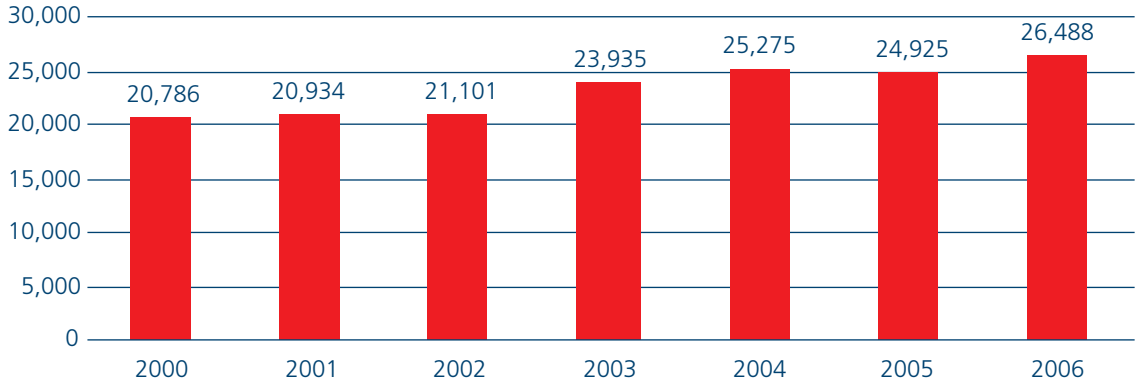
## 7.2 CAO Acceptances

The majority of first year entrants to level 8 courses have applied for their course of choice and accepted this course, if offered, through the Central Applications Office. Applicants may receive an offer of a level 7/6 and a level 8 course; however, only one offer can be accepted.

CAO acceptances are not the same as student enrolments. Some acceptors do not enrol and some may seek deferment. They do, however, give a good indication of annual first year enrolments.

The total number of level 8 acceptances from 2000-2006 is outlined in Figure 7.1. In 2006, 26,488 people accepted an offer of a level 8 course. This represents over two thirds of all CAO acceptances in 2006. The total number of level 8 acceptances increased from 20,786 in 2000 to 26,488 in 2006; an increase of 27% in the time period.

***Figure 7.1*** *CAO Level 8 Total Acceptances, 2000-2006*




Source: CAO Directors Reports

Table 7.1 presents a breakdown of level 8 CAO acceptances by discipline. In 2006, 21.4% of all level 8 acceptances were for technology courses, compared to 31.7% in 2000. Both engineering/manufacturing and computing disciplines experienced significant declines in the period 2000-2006, although the numbers accepting places on these courses remained relatively static between 2005 and 2006. Science courses showed no change in the period 2000-2006 but this masks the fact that a decline of 6.4% occurred between 2005 and 2006. Construction courses were the only technology courses to increase over either time period, with a 71.1% increase between 2000 and 2006.

Health, veterinary and agriculture courses increased their share of level 8 acceptances over the period 2000-2006 from 5.6% to 15.5% of the total. The most significant increases occurred for other healthcare and nursing courses. No level 8 nursing courses existed in 2000 but a change in nursing training from a 3 year diploma course to a 4 year honours degree course has led to over 2,000 persons accepting places on these courses in 2006.

The most significant share of level 8 acceptances in 2006 was for the 'other' category, primarily arts and humanities (30.1% share) and business and law (22.6% share). These disciplines have both increased in the period 2000-2006 by 27.8% and 23.5% respectively. The largest percentage increase occurred for social services courses, albeit from a very small base in 2000.

***Table 7.1*** *CAO Level 8 Acceptances by Discipline, 2000-2006*

| Discipline | 2000 (%) | 2005 (%) | 2006 (%) | %Change 2006-2000 | %Change 2006-2005 |
|---|---|---|---|---|---|
| Engineering & Manufacturing | 1,664 (8.0%) | 1,206 (4.8%) | 1,203 (4.5%) | -27.7% | -0.2% |
| Construction | 609 (2.9%) | 1,116 (4.5%) | 1,042 (3.9%) | +71.1% | -6.6% |
| Computing | 1,809 (8.7%) | 995 (4.0%) | 926 (3.5%) | -48.8% | -6.9% |
| Science (Non Healthcare) | 2,495 (12.0%) | 2,665 (10.7%) | 2,495 (9.4%) | 0% | -6.4% |
| **Total Technology** | **6,577 (31.7%)** | **5,982 (23.9%)** | **5,666 (21.4%)** | **-13.9%** | **-5.3%** |
| Agriculture & Veterinary | 324 (1.6%) | 284 (1.1%) | 309 (1.2%) | -4.6% | +8.8% |
| Nursing | 0 (0.0%) | 1,822 (7.3%) | 2,037 (7.7%) | - | +11.8% |
| Medicine | 330 (1.6%) | 306 (1.2%) | 415 (1.6%) | +25.8% | +35.6% |
| Dentistry | 66 (0.3%) | 63 (0.3%) | 66 (0.3%) | +0% | +4.8% |
| Other Healthcare | 443 (2.1%) | 1,175 (4.7%) | 1,265 (4.8%) | +185.6% | +7.7% |
| **Total Health, Vet and Agriculture** | **1,163 (5.6%)** | **3,650 (14.6%)** | **4,092 (15.5%)** | **+251.8%** | **+12.1%** |
| Arts & Humanities | 6,237 (30.1%) | 7,359 (29.5%) | 7,969 (30.1%) | +27.8% | +8.3% |
| Education | 1,515 (7.3%) | 2,083 (8.3%) | 2,030 (7.7%) | +34.0% | -2.5% |
| Business & Law | 4,847 (23.4%) | 5,269 (21.1%) | 5,987 (22.6%) | +23.5% | +13.6% |
| Social Services | 78 (0.4%) | 236 (0.9%) | 397 (1.5%) | +409.0% | +68.2% |
| Services | 311 (1.5%) | 405 (1.6%) | 347 (1.3%) | +11.6% | -14.3% |
| **Total Other** | **12,988 (62.7%)** | **15,352 (61.4%)** | **16,730 (63.2%)** | **+28.8%** | **+9.0%** |
| **TOTAL** | **20,728 (100.0%)** | **24,984 (100.0%)** | **26,488 (100.0%)** | **+27.8%** | **+6.0%** |

Source: Central Applications Office

Table 7.2 provides a gender breakdown of level 8 acceptances for each year between 2000 and 2006. In contrast to level 7/6, the proportion of females who accept places on level 8 courses is higher than the proportion of males. On average, 58% of all level 8 acceptors are female. As only 49% of all 16-19 year olds in the population in 2006 are female, this would suggest that this result is not based on demographic factors.

***Table 7.2*** *Gender Distribution of CAO Acceptances, Level 8 (%), 2000-2006*

| Year | Male % | Female % |
|---|---|---|
| 2000 | 42.6 | 57.4 |
| 2001 | 42.9 | 57.1 |
| 2002 | 43.5 | 56.5 |
| 2003 | 42.0 | 58.0 |
| 2004 | 42.4 | 57.6 |
| 2005 | 40.6 | 59.4 |
| 2006 | 41.5 | 58.5 |

Source: Central Applications Office

In terms of age, the majority of level 8 acceptors were aged 17 or 18 years in 2006. Mature acceptors (i.e. aged 23 or over) accounted for 10% of all acceptors in 2006. This percentage has more than doubled since 2000 when 4% of all acceptors were aged 23+.

## 7.3 Graduate Output

Students successfully graduating with a level 8 honours bachelor degree are outlined in this section. In terms of labour supply, graduate output indicates the potential annual supply of professionals.

There were approximately 24,700 level 8 awards made by universities and IoTs in 2005; an increase of 39% in the period 2000-2005. The increase in the participation rate at this level and increases in the number of courses offered, particularly in institutes of technology, are the main factors influencing this increase.

It is worth noting that due to the inclusion of part-time graduates and those emerging through the 2+1+1 route in the graduate output, there is no direct comparability between graduate output and CAO acceptances.

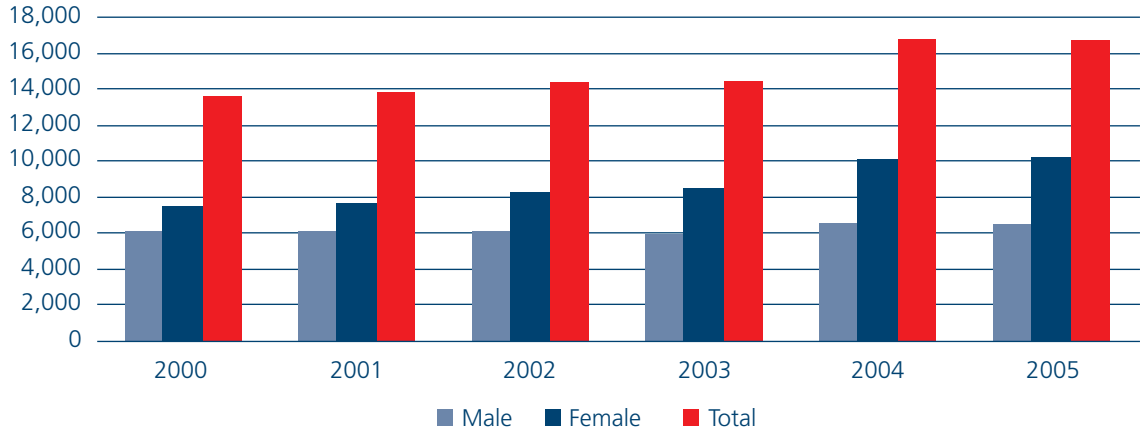
### 7.3.1 University Sector

Universities are the main education provider of level 8 programmes. In 2005, over two thirds of awards made at this level were for university programmes, as compared to one third for institutes of technology. Graduate data for the university sector is provided by the HEA.

Figure 7.2 outlines the level 8 graduate output from universities for the period 2000 to 2005. In 2005, over 16,700 students graduated at this level. The number of people graduating has increased significantly over the period, from 13,666 in 2000, representing an increase of 22%. The numbers graduating at this level remained constant between 2004 and 2005.

The number of males graduating has remained relatively constant over the period; an increase from 6,121 in 2000 to 6,468 in 2005, resulting in an overall increase of 6%. Female graduate numbers, however, have increased by 36% over the period – from 7,545 in 2000 to 10,238 in 2005.

***Figure 7.2*** *Level 8 University Output by Gender, 2000-2005*

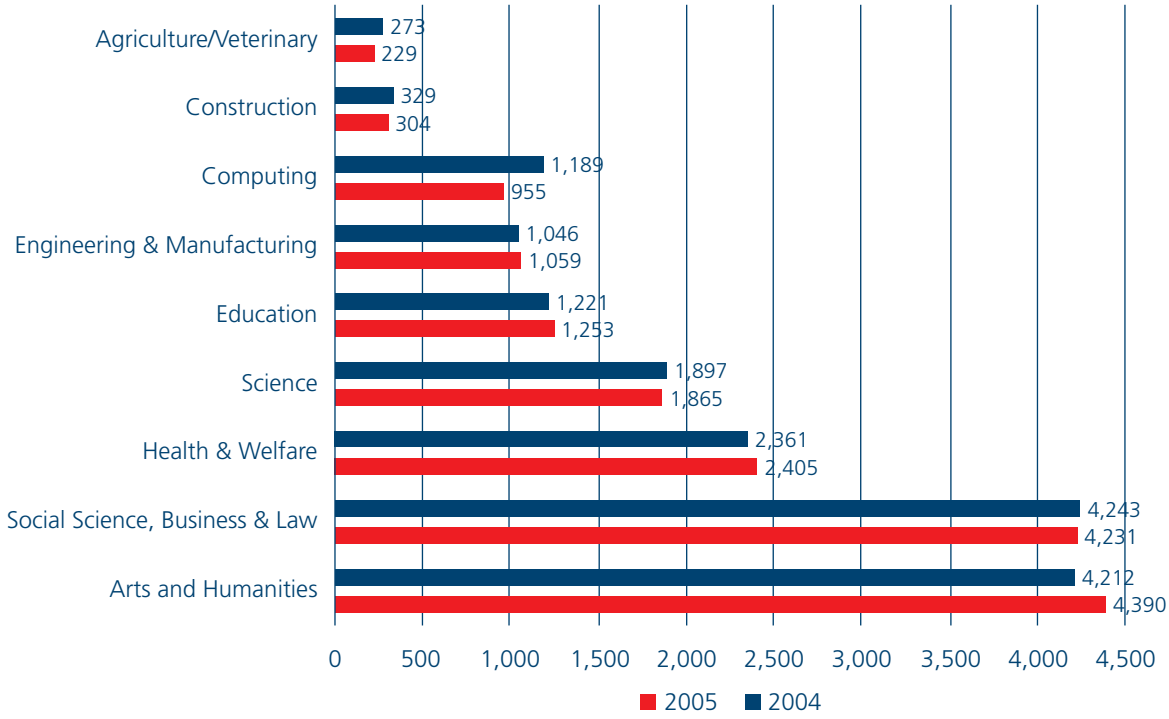



Source: HEA

The discipline breakdown of level 8 graduate output is outlined in Figure 7.3. Arts and humanities, and social sciences, business and law disciplines had the highest levels of output in 2005 with 4,390 and 4,231 students graduating respectively.

In general, the numbers of graduates in each discipline did not differ significantly between 2004 and 2005. Moderate increases occurred in the number of graduates in health and welfare and arts and humanities. The only case where a significant decline occurred was in computing. The number of students accepting courses in computing has been declining in recent years and 2005 is the first year where this is reflected in the graduate output. A further decline in graduate output in this discipline is expected in the medium term.

***Figure 7.3*** *Discipline Breakdown of Level 8 University Output, 2004 and 2005*




Source: HEA

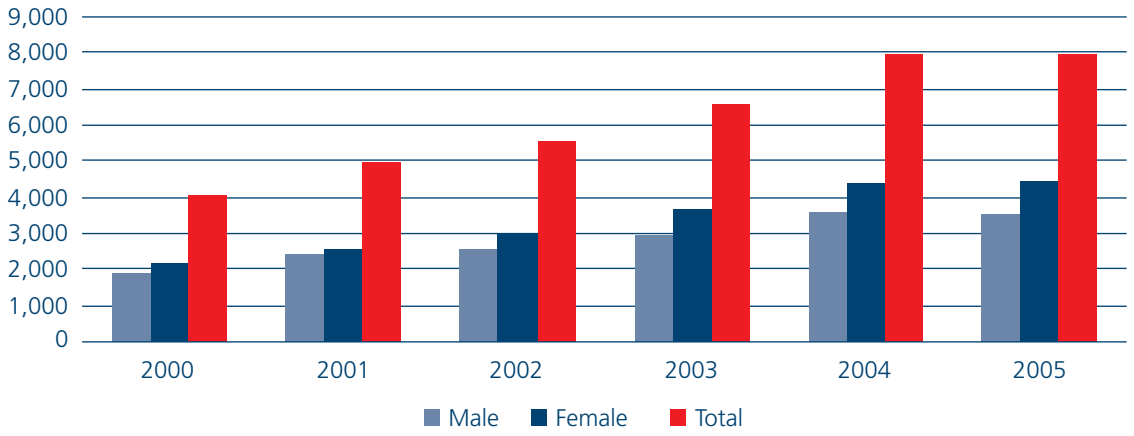
### 7.3.2 Institute of Technology Sector

Institutes of technology are the second major provider of level 8 education in Ireland. Their participation at this level has been increasing dramatically in recent years, as they continue to increase the number of level 8 courses they offer. Graduate data for the institutes of technology is provided by HETAC and those institutes with delegated authority.

The graduate output at level 8 over the period 2000-2005 from institutes of technology is outlined in Figure 7.4. In 2005, approximately 8,000 students graduated with level 8 qualifications. This number increased from approximately 4,000 in 2000, representing a 100% increase in graduate output at level 8.

Female graduates outnumbered male graduates each year in the period 2000-2005. In 2000, 53% of graduates were female; however, this had risen to 55.5% in 2005.

***Figure 7.4*** *Level 8 Institutes of Technology Output by Gender, 2000-2005*



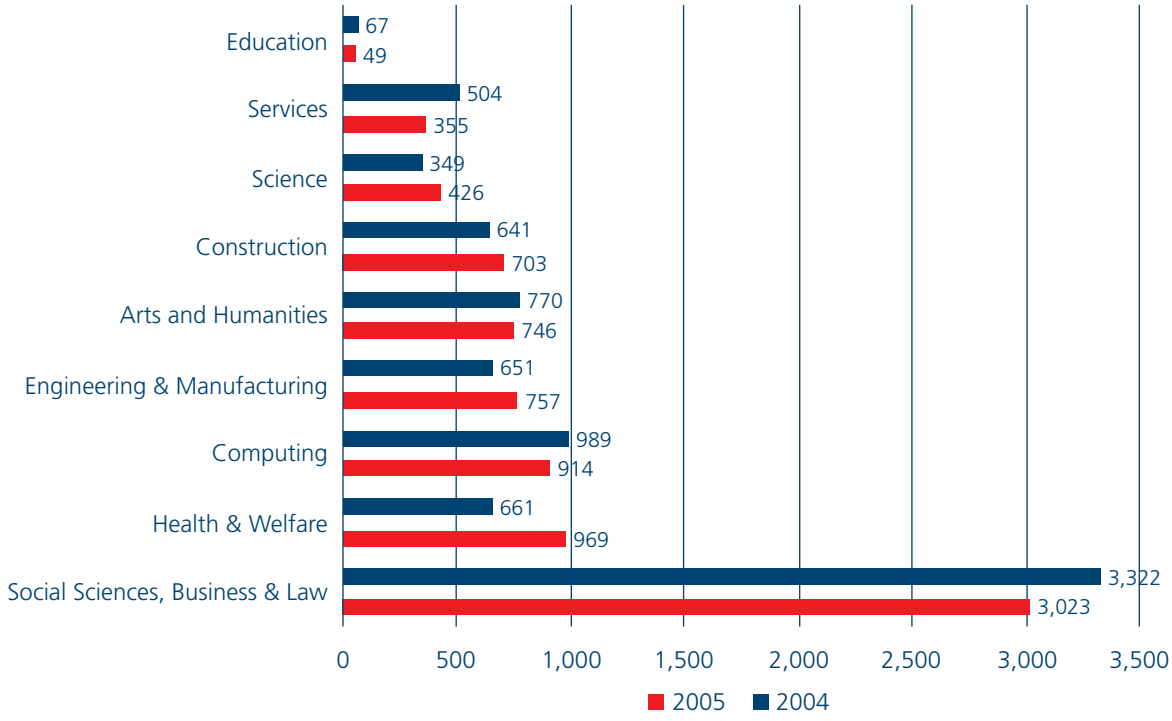

Source: HETAC, Institutes of Technology

Figure 7.5 outlines the discipline breakdown of graduate output at this level in 2004 and 2005. Social sciences, business and law programmes produced the most graduates in 2005, with 3,023, although the number of graduates in this discipline has declined since 2004. More modest declines were witnessed in disciplines including education, services and computing. The decline in the number of computing graduates has not been as pronounced as in the universities.

Health and welfare disciplines experienced an increase of 47% in graduate output between the two year periods. Increases also occurred for science, construction and engineering and manufacturing.

There were also no graduates from agriculture and veterinary related courses in either year at this level.

***Figure 7.5*** *Discipline Breakdown of Level 8 Institutes of Technology Output, 2004 and 2005*




Source: HETAC, Institutes of Technology

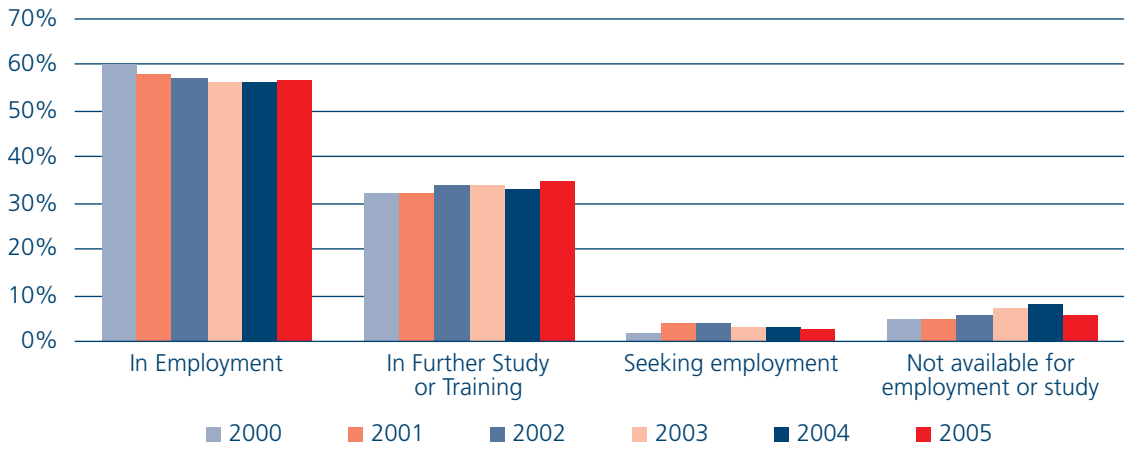
## 7.4 First Destination

Following completion of level 8 programmes, graduates have a number of options available. To assess the extent to which graduates follow different routes, the results of the HEA's First Destination Survey from higher education are outlined in Figure 7.6.

Overall, there were few significant changes in the first destination of level 8 award recipients in the period 2000-2005. Although the percentage of level 8 graduates in employment increased from 56% to 57% between 2004 and 2005, the overall employment rate remains below the 2000 rate of 60%.

The number of graduates continuing to further study increased to 35%, its highest rate since 2000 when the figure stood at 33%. There have also been decreases in the proportions of graduates seeking employment (down from 3% to 2% between 2004 and 2005) and in those not available for employment (down from 8% in 2004 to 6% in 2005).

***Figure 7.6*** *First Destination of Primary Degree Award Recipients, 2000-2005 (% of graduates)*




Source: HEA

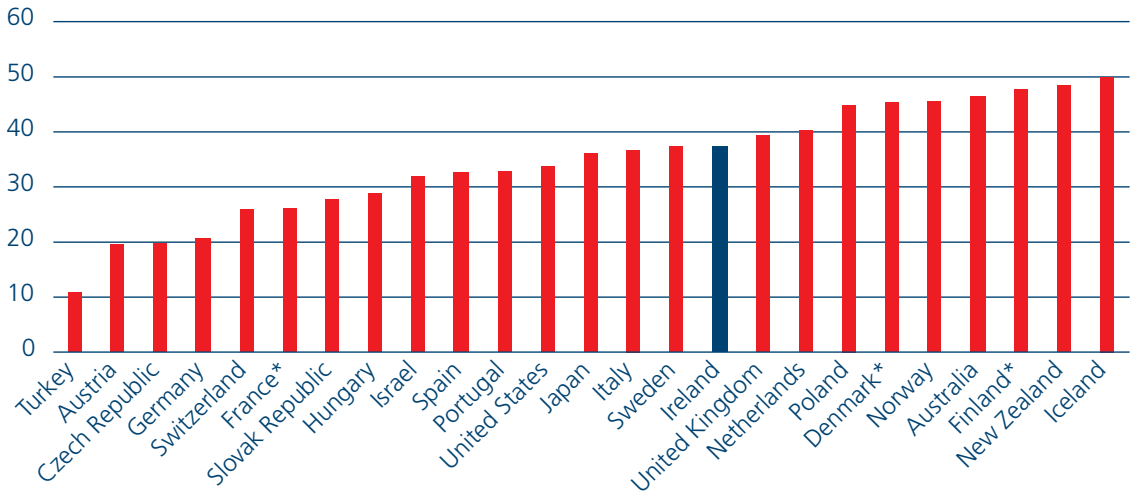
## 7.5 International Comparison

In this section we provide an indication of Ireland's performance in terms of graduate output from level 8 courses as compared to that of other developed countries.

The percentage of Tertiary Type A graduates from selected OECD countries in 2004 is presented in Figure 7.7 below. ISCED Tertiary Type A education is defined as theoretically based programmes designed to provide qualifications for entry into advanced research programmes and professions with high skill requirements. As such, honours bachelor degrees and master degrees (placed at NFQ levels 8 and 9 respectively, as detailed in Appendix A) in Irish higher education correspond to Tertiary Type A. As it is not possible to disaggregate the OECD data for Tertiary Type A, this section represents the combined graduate output at honours bachelor degree and masters degree levels.

Overall, the percentage of Tertiary Type A graduates to the population at typical age of graduation for OECD countries averaged 34.8%. At 37.4%, Ireland stands above the average for OECD graduate output at this level. This is an increase on the rate for 2003, which stood at 36.8%.

***Figure 7.7*** *Tertiary Type A Graduates to the Population (%) at Typical Age of Graduation, 2004*




Source: Education at a Glance 2006, OECD

*Graduation figures are from 2003

# 8. Universities and Institutes of Technology – Level 9/10

**Key Points**

- Enrolments – Over 24,500 people enrolled in level 9/10 courses in 2005; an increase of 23% for postgraduate diplomas/certificates, 60% for masters and 61% for doctorates when compared to 2000
- Graduate Output – Approximately 11,600 persons graduated with a level 9/10 award from universities in 2005; an increase of 9% for postgraduate diplomas/certificates, 59% for masters and 38% for doctorates when compared to 2000. A further 1,200 graduated from IoTs, primarily with masters awards
- Outlook – With enrolments increasing, it is expected that graduate output will continue to increase in the coming years
- Science – The science discipline produced the most doctoral awards in 2005, with 306 awarded
- Engineering – In 2005, over 500 awards in this discipline were made at level 9/10, primarily for master's degrees
- Computing – The majority of level 9/10 computing awards in 2005 were for masters degrees
- First Destination – In 2005, 74% of graduates with postgraduate diplomas and 76% with higher degrees were in employment within 9 months of graduation
- International Comparison – Ireland ranked poorly in terms of graduates to the population at advanced research level as compared to other OECD countries. Out of a total of 31 countries, Ireland ranked 19th for PhD graduate output.

## 8.1 Introduction

This chapter outlines the supply of skills from programmes placed at levels 9 and 10. Awards placed at level 9 on the National Framework of Qualifications are master degrees and postgraduate diplomas (first stage of masters). Awards placed at level 10 are doctoral degrees. For simplicity purposes higher diplomas from universities and all postgraduate diplomas, whether conversion or leading to a masters, are discussed in this chapter.

The learning outcomes associated with a level 9 or a level 10 award are outlined in Appendix B.

First, we examine total enrolments on level 9/10 programmes at universities and institutes of technology. Second, the graduate output from these programmes is examined. Third, the first destination of level 9/10 award recipients is examined and finally, an international comparison is made.

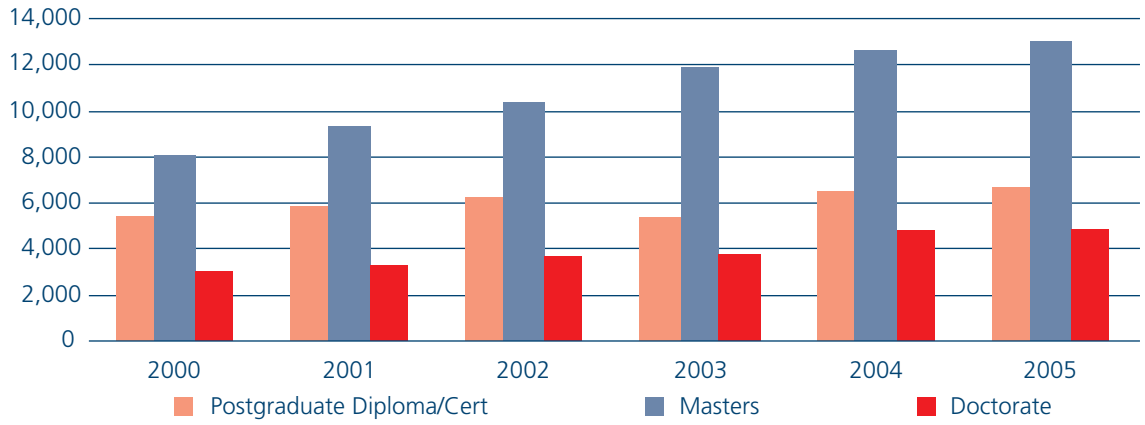
## 8.2 Enrolment Data

Those entering level 9/10 courses are required to hold a higher education qualification. For the majority of higher education institutions in Ireland, there is no central applications process associated with postgraduate programme entry. Those wishing to enter apply directly to the education institution.

Enrolment data at levels 9 and 10 is available from institutes of technology, from the Department of Education and Science, universities and from the Higher Education Authority.

The number of level 9/10 enrolments by award type at institutes of technology and universities from 2000 to 2005 is outlined in Figure 8.1. In 2005, over 24,500 people enrolled in Level 9/10 courses, representing a 48% increase in enrolments since 2000. Of those enrolling in 2005, 27% were for postgraduate diploma/certificate courses, 53% for masters and a further 20% for doctorate programmes. Masters programmes have experienced the most significant increase over the period – from 8,100 in 2000 to 13,000 in 2005.

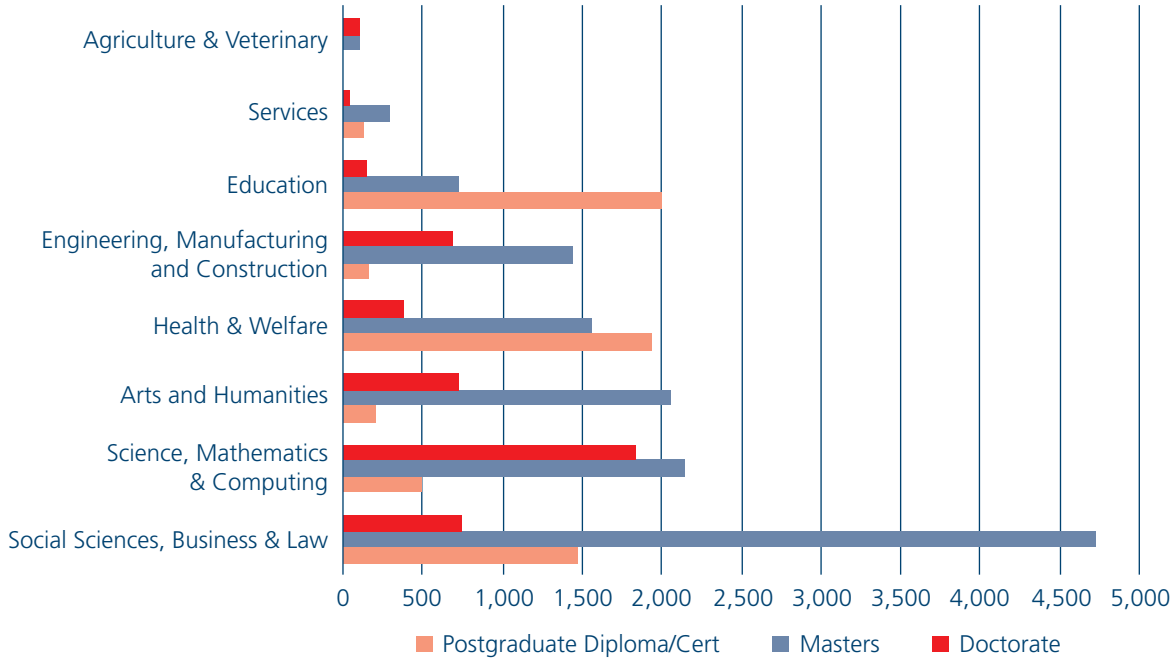
***Figure 8.1*** *Level 9/10 Institutes of Technology and University Enrolments, 2000-2005*




Source: Department of Education and Science, HEA

The majority of enrolments in masters programmes were in social sciences, business and law, science, mathematics and computing, and arts and humanities, as shown in Figure 8.2. Enrolments in postgraduate diploma/certificate programmes were primarily in education, health and welfare, and business and law. Enrolments in doctorate programmes were mostly in science, mathematics, and computing disciplines.

***Figure 8.2*** *Level 9/10 Enrolments in Institutes of Technology and University by Discipline, 2005*




Source: Department of Education and Science, HEA

In terms of gender, 56% of all level 9/10 enrolments in 2005 were female. This gender difference is more pronounced for postgraduate diploma/certificates programmes where 66% of students enrolled were female.

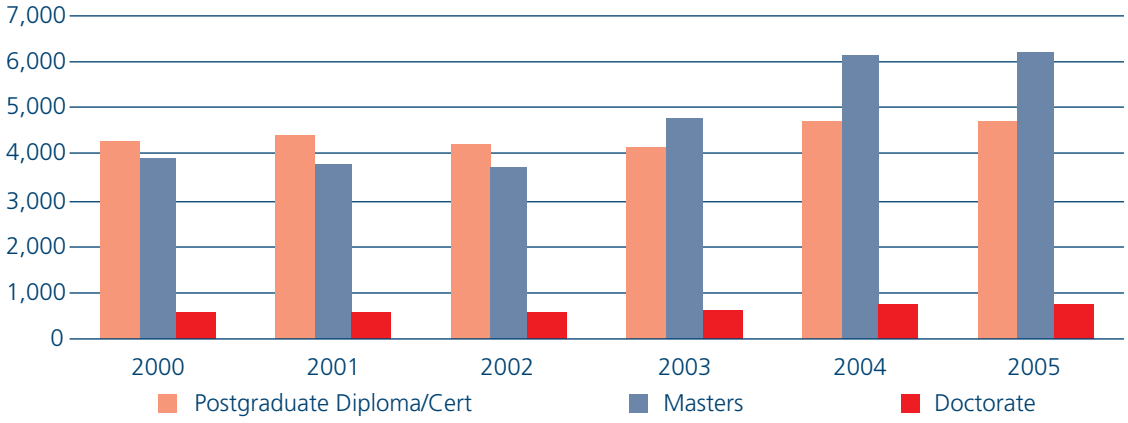
## 8.3 Postgraduate Output

The supply of level 9/10 graduates to the Irish labour force is vitally important in the development of Ireland as a knowledge-based economy. This section examines the most recent graduate data available for level 9/10 awards in the institute of technology sector and the university sector. In 2005, approximately 13,000 students graduated with level 9/10 qualifications. Approximately 5,070 (39%) of these awards at this level were for postgraduate diplomas/certificates; 7,150 (55%) were masters' awards; and a further 780 (6%) were awarded for doctorates.

### 8.3.1 University Sector

Universities are the major providers of level 9/10 programmes in Ireland. The number of level 9/10 awards made by the universities from 2000 to 2005 is outlined in Figure 8.3. In 2005, over 11,600 students graduated with a level 9/10 qualification from universities. This number increased by 33% since 2000 (8,800). Output from masters programmes, in particular, has experienced a significant increase in the period – from 3,900 in 2000 to 6,200 in 2005. Output from doctorate programmes has increased by over 200 (38%) over the six year period.

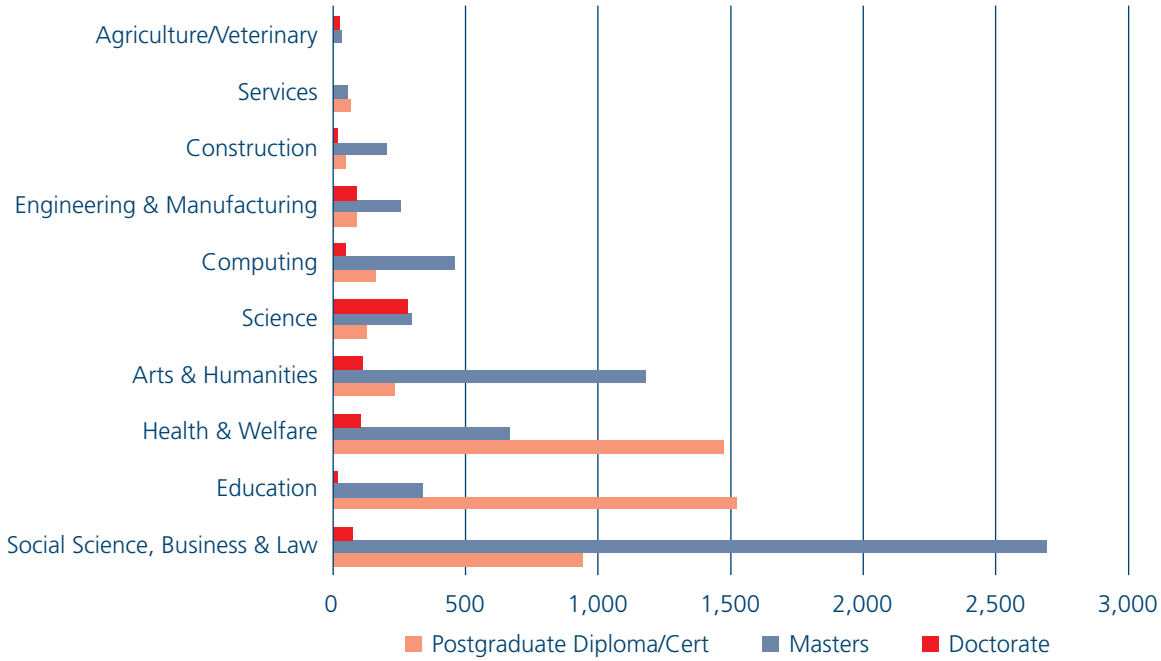
***Figure 8.3*** *Level 9/10 University Output, 2000-2005*




Source: HEA

As outlined in Figure 8.4, university output from level 9/10 in 2005 was primarily in disciplines such as social sciences, business and law, education, and health and welfare. For masters' programmes, the majority of those graduating were from social science, business and law, and arts and humanities. For postgraduate diplomas/certificates, output was highest from education, health and welfare, and social science, business and law. Science and arts and humanities disciplines produced the most graduates with PhDs.

***Figure 8.4*** *Level 9/10 University Output by Discipline, 2005*



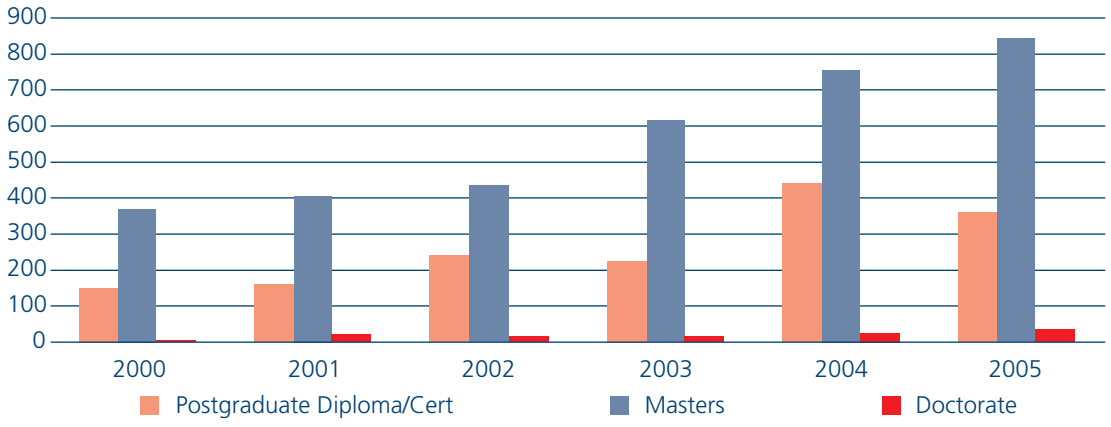

Source: HEA

### 8.3.2 Institutes of Technology Sector

From a very low base, the provision of postgraduate education by institutes of technology has been steadily increasing since 2000.

Figure 8.5 outlines the number of level 9/10 awards granted by the institutes of technology from 2000 to 2005. The data is collected from HETAC and from the institutes of technology with delegated authority. In 2005, approximately 1,200 students graduated with level 9/10 qualifications from institutes of technology. The majority of these qualified with a masters' degree (68%), with a further 29% awarded a postgraduate diploma/certificate. A small number were awarded doctorates (2.7%). The overall number of awards granted at levels 9 and 10 has increased by 137% in the period 2000 to 2005. The number of masters awards has been steadily increasing over this period while the number of postgraduate diplomas/certificates experienced a decline between 2004 and 2005.

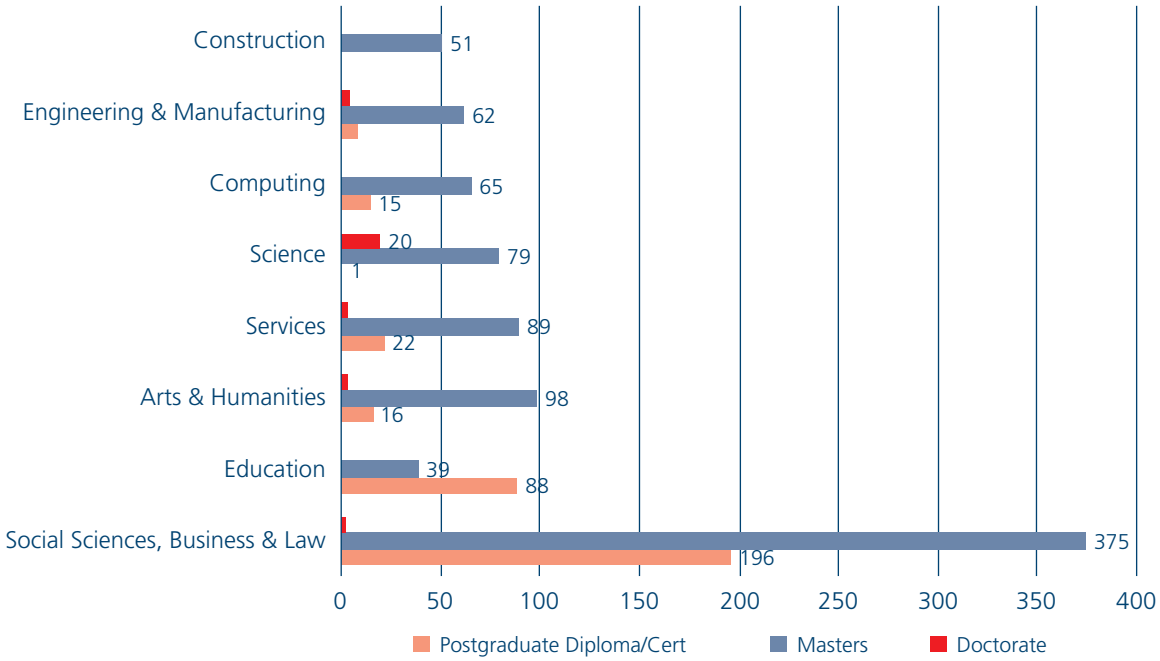
***Figure 8.5*** *Level 9/10 Institute of Technology Output, 2000-2005*




Source: HETAC, institutes of technology

Figure 8.6 shows the 2005 output by discipline of level 9/10 graduates from institutes of technology. In 2005, the majority of all awards were within the social sciences, business and law discipline: 57% of postgraduate diplomas/certificates and 44% of masters awards were in this discipline. Only a small number of doctorates were awarded in 2005 and these were primarily in the science discipline.

***Figure 8.6*** *Level 9/10 Institute of Technology Output by Discipline, 2005*




Source: HETAC, institutes of technology

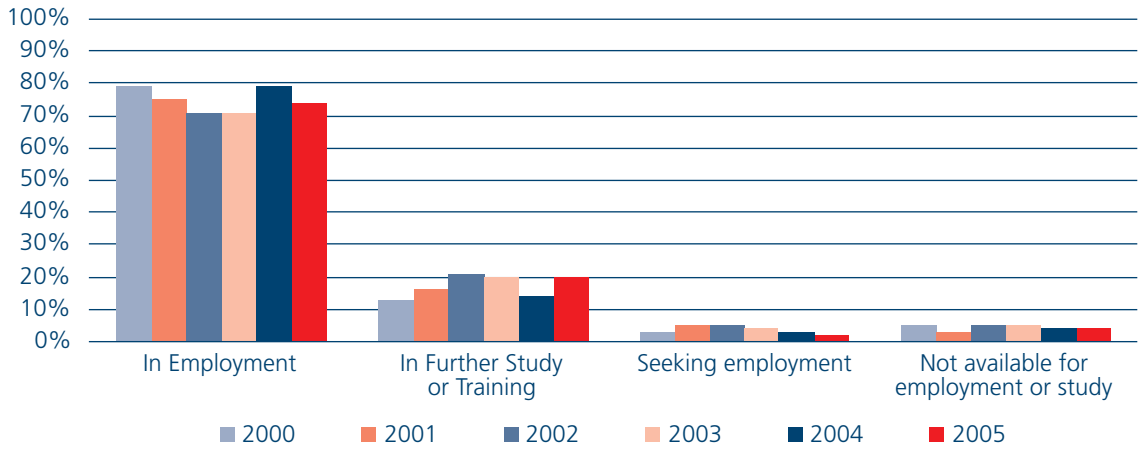
## 8.4 First Destination

Graduates at level 9/10 have a number of options available to them such as entry into the workforce and the pursuit of further study. A high proportion of level 9/10 graduates go directly into employment. The results of the HEA's First Destination of Award Recipients survey in 2005 confirm this point.

The first destination of postgraduate diploma award recipients from 2000 to 2005 is outlined in Figure 8.7. The number of graduates in employment increased from 71% in 2002 to 74% in 2005, although the overall employment rate among postgraduate diploma recipients is below the 79% rate observed in 2000 and in 2004.

The proportion of graduates in further study or training in 2005 stood at 20%, representing an increase of seven percentage points since 2000. The proportions seeking employment decreased to 2% in 2005 and those not available for employment or study remained unchanged since 2004 at 4%.

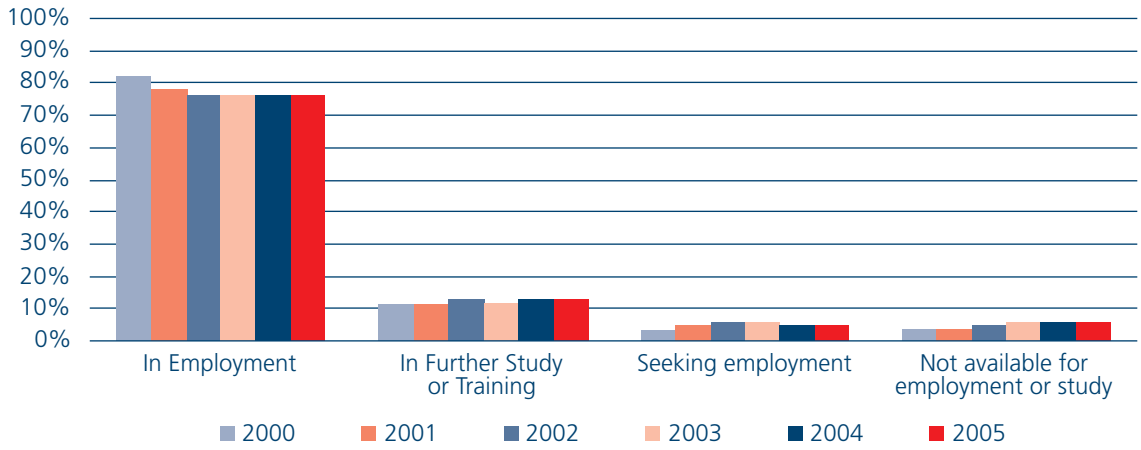
***Figure 8.7*** *First Destination of Postgraduate Diploma Award Recipients, 2000-2005 (% of graduates)*




Source: HEA

The first destination of higher degree award recipients from 2000 to 2005 is outlined in Figure 8.8. Higher degrees are classified as master degrees and doctoral degrees. The percentage of higher degree graduates in employment has decreased from 82% in 2000 to 76% in 2005. The percentage of respondents continuing to further study has increased from 11% in 2000 to 13% in 2005. Those seeking employment following graduation increased from 3% in 2000 to 5% in 2005.

***Figure 8.8*** *First Destination of Higher Degree Award Recipients, 2000-2005 (% of graduates)*




Source: HEA

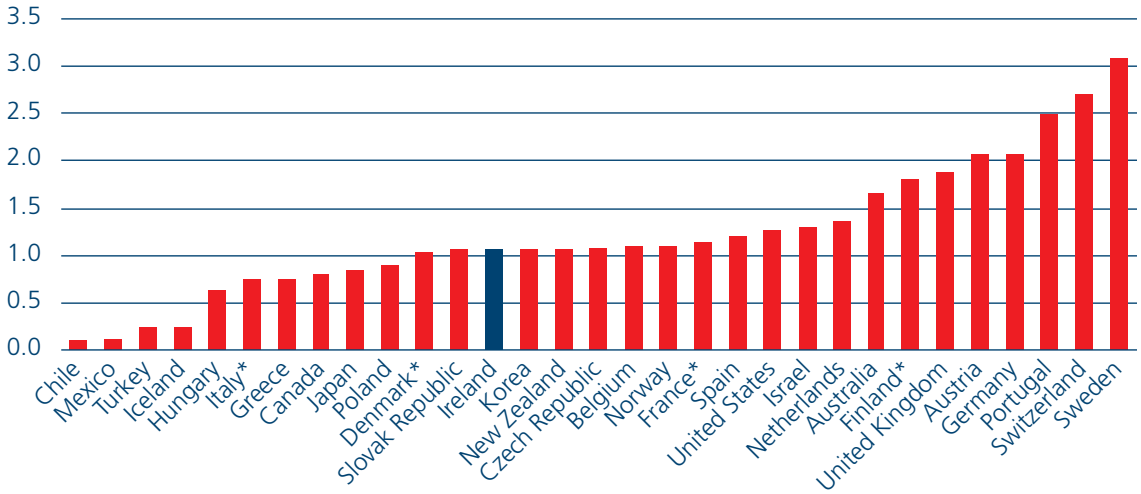
## 8.5 International Comparison

This section presents an indication of Ireland's performance in terms of advanced research graduates with that of other OECD countries.

Figure 8.9 details the percentage of advanced research graduates to the population at the typical age of graduation across OECD countries in 2004. ISCED advanced research programmes correspond to PhD level education in Irish higher education. (Programmes corresponding to masters degree level are classified, along with honours bachelor degree programmes, as Tertiary Type A education and were examined in Section 7.5 of this report.) The average advanced research graduate rate for OECD countries in 2004 was 1.3%. At 1.1%, Ireland ranks below the OECD average. Ireland therefore produced less than the OECD average graduate output at PhD level.

In 2004, the Expert Group on Future Skills Needs recommended an increase in the number of researchers produced through the higher education system in Ireland. Initiatives such as the establishment of Science Foundation Ireland, an organisation involved in funding research programmes, should in the coming years provide for an increase in the number of research graduates. Other initiatives in a similar vein include the launch in June 2006 of the Strategy for Science Technology and Innovation which aims to significantly increase public expenditure on research and development over the next eight years and seeks, among others, to double the number of PhDs.

***Figure 8.9*** *Advanced Research Graduates to the Population (%) at Typical Age of Graduation, 2004*




Source: Education at a Glance 2006, OECD

* Refers to 2003 Figures

# 9. Private Education and Training

**Key Points**

- Approximately 13,000 students in the private education sector obtained a qualification in 2005, almost 6,000 awards from private colleges and over 7,000 from professional institutes
- Over 95% of the awards made in private education provision in 2005 are recognised by universities and/or professional bodies; such awards provide the holder with a qualification that is of a recognised standard for either professional or continued educational purposes
- Approximately 6,000 awards were made for courses taken at private colleges in 2005 mostly for courses in management, business education, social studies and accounting
- Professional institutes, collectively, made a further 7,000 awards, chiefly in the areas of business and finance, law and management.

## 9.1 Introduction

Education and training in Ireland includes a small, but significant, private sector. Private education and training may be gained through private colleges or through the professional institutes that provide training for occupations such as bankers, accountants, insurance brokers, lawyers, managers etc. This chapter focuses on the provision of education and training from both private colleges and professional institutions.

## 9.2 Private Colleges

The majority of private colleges in Ireland provide courses that lead to an award either made or recognised by HETAC, Irish universities and, to a lesser extent, UK universities. Other awarding bodies are also represented in the private education sector but are excluded from this section due to the unavailability of data. The data for this section was obtained through personal contact with the awarding bodies which make awards to students who completed programmes in almost 30 private colleges in Ireland. Table 1 in Appendix C contains a list of these private colleges. The data concerning awards made by HETAC and Irish and UK universities for courses taken at private colleges was not included in the preceding sections.

In 2005, almost 6,000 awards – recognised by the HETAC, Irish universities or UK universities – were granted to individuals enrolled in private colleges in the Republic of Ireland. Figure 9.1 outlines the number of awards granted in various disciplines within the private education sector in 2005.[8] HETAC made most awards (60%) followed by Irish universities (30%) and UK universities (10% of all awards).

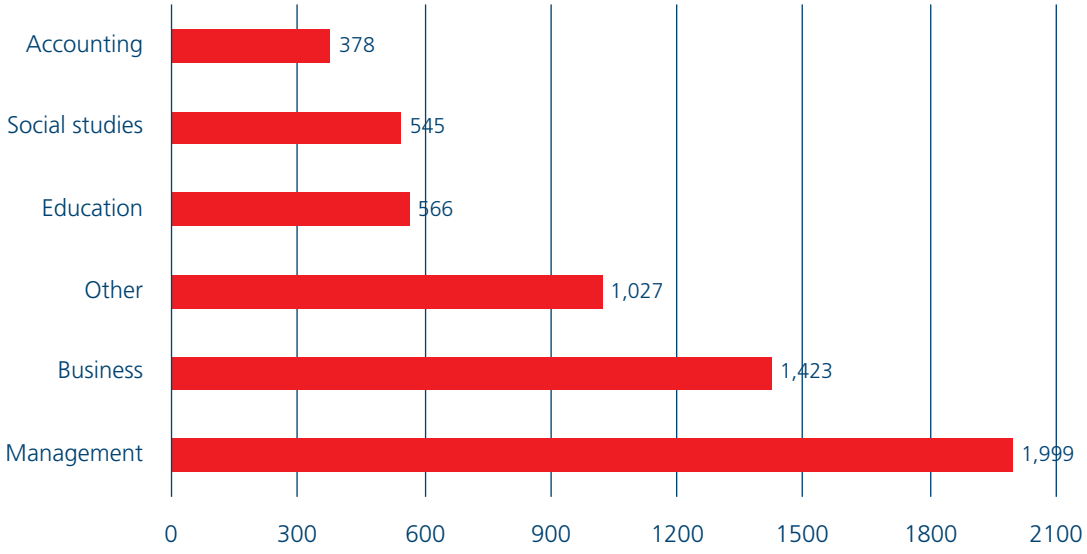
The awards were granted predominantly in the area of management, but also in business, education, social studies and accounting. The 'other' category includes design, information technology, journalism and media, and humanities.

8 All available data was included in this analysis, however, the data may not be exhaustive as not all providers/awarding bodies were in a position to supply the required data.

As HETAC qualifications are placed on the NFQ framework and Irish University (i.e. NUI and DCU) qualifications are compatible with the framework, an indication of award level can be made: approximately 48% of all awards in this category were granted at NFQ level 8; 43% were granted at level 7/6; the remaining 9% of awards were granted at level 9/10. Education had the highest proportion of level 8 awards at 82%; the highest proportion of level 9/10 awards were in the 'other' category; and the highest proportion of level 7/6 awards were in social studies at 55%.

A gender breakdown for most of the data in this section is unavailable. However, out of approximately 3,500 awards made by HETAC, the ratio of female to male award recipients was approximately 60 to 40.

***Figure 9.1*** *Awards by Discipline (Private Colleges), 2005*




Source: HETAC, NUI, Private Colleges

## 9.3 Professional Institutes

Professional institutes are bodies that represent the concerns and interests of those working in a given occupation, e.g. the Law Society, Institute of Chartered Accountants in Ireland, the Institute of Bankers, etc. Many professional institutes promote, and in some cases provide, education and training for their members. Only professional institutes that act as education or training providers are included in this analysis. The data was obtained on personal contact with individual professional institutes. A list of these institutes is provided in Table 2 of Appendix C.

There also exist a number of professional institutes that are examining and/or awarding bodies only. Students seeking qualifications from these professional institutes must source their own tuition, be that from a private college or publicly-funded provider such as an IoT. As they are not course providers, and to minimize double-counting, professional institutes that are not course providers are excluded from this analysis.

Collectively, the professional institutes (tuition providers only) granted over 7,215 awards in 2005. Awards made by professional institutes are predominantly in the areas of business and finance, law and management.

More than 85% of professional qualifications were awarded for studies in business and accounting. The remaining 13% were made up almost equally of awards in law and management.

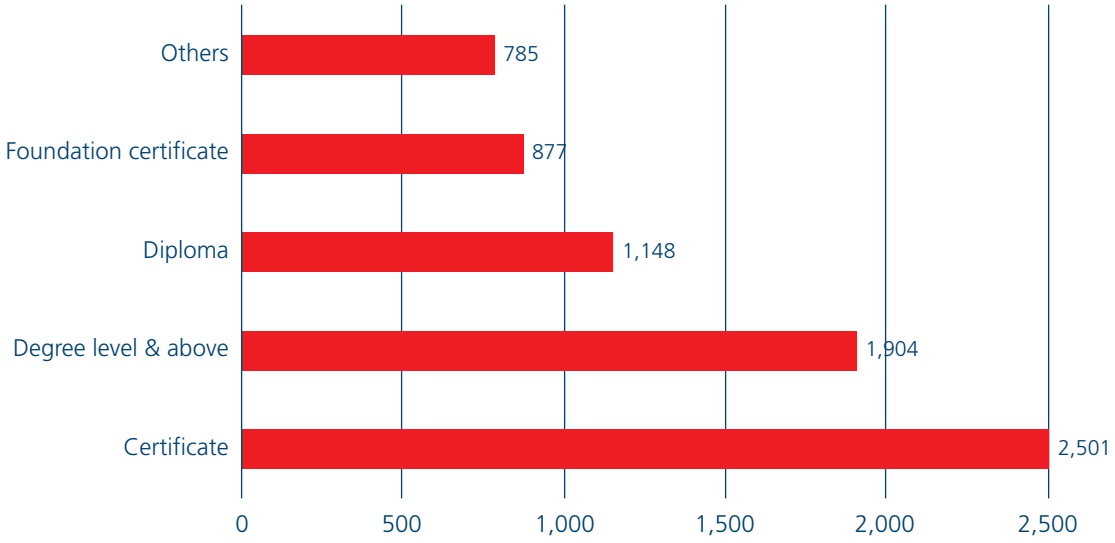
The awards in this category are professional qualifications, and although there are exceptions, many of the awards are not currently classified according to NFQ levels. Furthermore, the award titles, i.e. certificate,

diploma, etc. are set by each individual professional institute and are not necessarily comparable with each other. As such, an accurate comparison of award level is not possible. However, Figure 9.2 outlines the numbers for each type of award made by professional bodies in 2005. It should be borne in mind, however, that award types are only general categories: not all institutes offer all of the types described.

The foundation certificate is often an entry-level qualification. Those holding a foundation certificate may be exempt from certain modules of a certificate level course. Approximately 12% of all awards made by the professional institutes were for foundation certificates.

A total of 35% of all awards made by professional institutes were for certificate-level awards. 16% of awards were diplomas or diploma-level awards. Awards granted at degree level and above made up 26% of all awards granted by professional institutes. Awards that could not be placed in any of the aforementioned categories are grouped here in 'others'. Approximately 11% of the awards fell into this category.

***Figure 9.2*** *Awards by Type (Professional Institutes), 2005*




Source: Personal contact with institutes

# 10. Irish Students Abroad

**Key Points**

- Over 16,000 Irish-resident students were enrolled in higher education institutions outside the Republic of Ireland in 2004
- The United Kingdom had the highest number of Irish students (14,713) followed by the U.S. (1,020)
- Over 12,000 students are enrolled in Tertiary Type A courses abroad
- Over 1,000 are enrolled in advanced research programmes abroad
- Approximately 2,700 students accepted places to study at UK universities and colleges in 2006, a drop on the 2005 figure, due possibly to the introduction of top-up fees in the UK
- Students accepting places on UK higher education courses in 2006 chose to study primarily health related courses (22.8%), arts (17%), engineering and technology (13.3%) or science and computing (12.1%).

## 10.1 Introduction

Every year, thousands of students from the Republic of Ireland accept college places in universities abroad. Although the data is limited in terms of the detail available (i.e. field of study), the aggregate data is sufficient to provide information regarding country and broad level of study. The data for the United Kingdom, the country with the highest number of Irish-resident students, is available in more detail.

The discussion breaks down into two areas. We first examine the available data regarding the numbers of Irish students who are enrolled in third level education outside of the Republic of Ireland. The second section focuses in further detail on students from the Republic of Ireland who accept college places in the United Kingdom.

## 10.2 Irish Students in OECD Countries

The data for this section was obtained from the OECD Education online database. This database holds data on the distribution of foreign students by, inter alia, country of origin and level of education. The term 'foreign students' as it is employed by the OECD Education database refers to students whose permanent residence is not in the country of study.[9] Levels of education are classified according to ISCED levels; however, information for Irish students who follow Tertiary Type B programmes (equivalent to certificate/diploma and ordinary bachelor degree level) abroad is unavailable. The data does not provide a breakdown by field of education.

Table 10.1 outlines the distribution of students whose permanent residence is in the Republic of Ireland and who were enrolled in third level education outside the state in 2004, the latest year for which the data is available. Overall, there were over 16,000 Irish students enrolled in higher education institutes abroad. With just over 12,000 enrolments, the majority of Irish students abroad are enrolled in Tertiary Type A (equivalent to honours degree and masters degree) programmes. Advanced research programmes, which correspond to PhD level education, accounted for 1,074 Irish student enrolments abroad.

9 Students who are of Irish citizenship but who are resident in the country of study due to migration by themselves or their parents prior to enrolment are not included.

The United Kingdom, with over 14,500 total enrolments, had by far the highest number of students whose permanent residence is in Ireland. This is followed by the United States at just over 1,000.

***Table 10.1*** *Irish students' enrolments in foreign universities, 2004*

| | Tertiary Type A | Advanced Research Programmes | Unspecified | Total |
|---|---|---|---|---|
| United Kingdom | 11,630 | 1,036 | 2,047 | **14,713** |
| United States | - | - | 1,020 | **1,020** |
| Australia | 142 | 17 | - | **159** |
| Denmark | 110 | 2 | 12 | **124** |
| Canada | 65 | 19 | - | **84** |
| Sweden | 59 | - | - | **59** |
| Others | 51 | 3 | 3 | **57** |
| **Total** | **12,006** | **1,074** | **3,079** | **16,159** |

Source: OECD Education Online Database

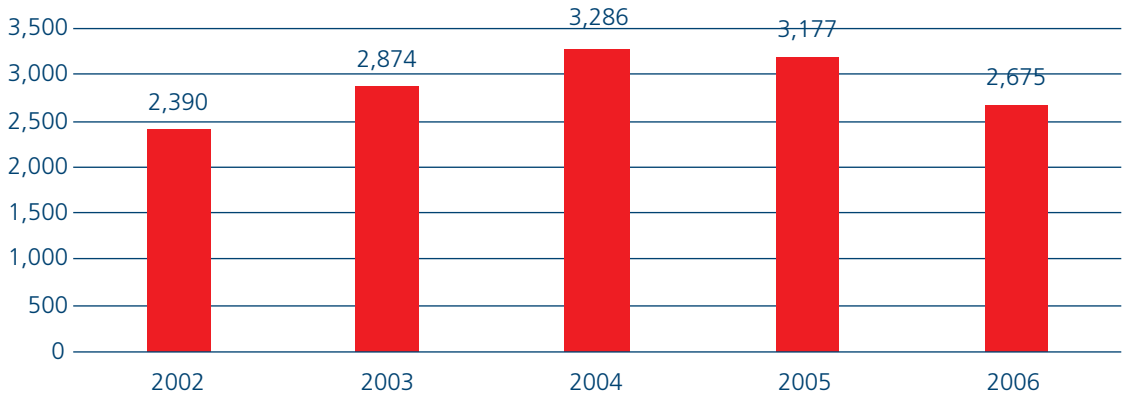
## 10.3 Irish Student Acceptances in the UK

The data for this section was obtained from UCAS (Universities and Colleges Admission Service). UCAS is the equivalent of Ireland's CAO, and handles the application process for various UK third level institutions.

Figure 10.1 outlines the number of acceptors from the Republic of Ireland applying through the UCAS system. Acceptance figures may not be the same as enrolment figures, as some students accept but do not take up a place. Nonetheless, acceptances give a good indication of first year enrolment trends for those choosing to study in the UK.

In 2006, over 2,600 Republic of Ireland domiciled students accepted places in third level institutions in the UK. While the numbers accepting places increased from 2002 to 2004 a decline has since occurred. This is thought to be a result of the introduction of top-up fees.

***Figure 10.1*** *Republic of Ireland Domiciled UCAS Acceptors, 2002-2006*




Source: UCAS

Table 10.2 details the discipline breakdown of Republic of Ireland domiciled UCAS acceptors in 2006. Over 22% of all acceptors were for health related courses. This is followed by arts (17%), engineering and technology (13.3%), and science and computing (12.1%). This breakdown by discipline is similar to that of 2005.

***Table 10.2*** *Republic of Ireland Domiciled UCAS Acceptors by Discipline, 2006*

| Discipline | Acceptors | % |
|---|---|---|
| Engineering and Technology | 357 | 13.3% |
| Architecture, Building and Planning | 217 | 8.1% |
| Science and Computing | 323 | 12.1% |
| **Total Technology** | **897** | **33.5%** |
| Medical and Dentistry | 95 | 3.6% |
| Health | 609 | 22.8% |
| Veterinary and Agriculture | 76 | 2.8% |
| **Total Health, Vet & Agriculture** | **780** | **29.2%** |
| Arts | 454 | 17.0% |
| Social Sciences and Arts | 37 | 1.4% |
| General Other Common and Unknown | 11 | 0.4% |
| Science, Social Science and Arts | 104 | 3.9% |
| Combined Sciences | 41 | 1.5% |
| Social Studies | 56 | 2.1% |
| Business and Law | 204 | 7.6% |
| Education | 78 | 2.9% |
| Combined Social Studies | 13 | 0.5% |
| **Total Other** | **998** | **37.3%** |
| **Total** | **2675** | **100.0%** |

Source: UCAS

# Appendix A: Awards Placed on the National Framework of Qualifications

| Level | Awarding Bodies | Existing and Former Awards (Awarding Bodies) | New Framework Awards (Awarding Bodies) |
|---|---|---|---|
| 1 | FETAC | - | Level 1 Certificate (FETAC) |
| 2 | FETAC | Primary Certificate (DES) | Level 2 Certificate (FETAC) |
| 3 | FETAC | Introductory Skills Certificate (FETAC/CERT/NTCB) | Level 3 Certificate (FETAC) |
| | SEC | Introductory Vocational Skills (IVS) (FETAC/FÁS) | Junior Certificate (SEC) |
| | | National Foundation Certificate (FETAC/NCVA) | |
| | | Day Vocational (Group) Certificate (DES) | |
| | | Intermediate Certificate (DES) | |
| 4 | FETAC | Elementary Skills Certificate (FETAC /CERT/NTCB) | Level 4 Certificate (FETAC) |
| | SEC | Specific Skills (FETAC/FÁS) | Leaving Certificate (SEC) |
| | | National Skills Certificate (FETAC/FÁS) | |
| | | National Vocational Certificate Level 1 (FETAC/NCVA) | |
| | | Basic Horticultural Skills (FETAC/TEAGASC) | |
| 5 | FETAC | Certificate in Hotel Operations (FETAC/CERT/ NTCB) | Level 5 Certificate (FETAC) |
| | SEC | Specific Skills (FETAC/FÁS) | Leaving Certificate (SEC) |
| | | National Skills Certificate (FETAC/FÁS) | |
| | | Vocational Certificate Level 2 (FETAC/TEAGASC) | |
| | | National Vocational Certificate Level 2 (FETAC/NCVA) | |
| | | Foundation Certificate (FETAC/NCEA) | |
| 6 | FETAC | Advanced Skills/Supervisory Certificate (FETAC/CERT/ NTCB) | Advanced Certificate (FETAC) |
| | HETAC | National Certificate in Professional Cookery (FETAC/CERT/ NTCB) | |
| | DIT | Specific Skills (FETAC/FÁS) | Higher Certificate (DIT, HETAC) |
| | | National Skills Certificate (FETAC/ FÁS) | |
| | | National Craft Certificate * (FETAC/FÁS/DES) | |
| | | National Vocational Certificate Level 3 (FETAC/NCVA) | |
| | | Vocational Certificate Level 3 (FETAC/TEAGASC) | |
| | | Advanced Certificate in Agriculture (FETAC/ TEAGASC) | |
| | | Certificate in Farm Management (FETAC/TEAGASC) | |
| | | One-Year Certificate (HETAC/NCEA) | |
| | | Advanced Certificate (HETAC/NCEA) | |
| | | National Certificate (HETAC/NCEA) | |
| | | Certificate (DIT) | |
| 7 | Universities | National Diploma (HETAC/NCEA) | Ordinary Bachelor Degree (Universities, DIT, HETAC) |
| | HETAC | Ordinary Bachelor/Bachelor Degree (DIT) | |
| | DIT | Diploma (Three Year) (DIT) | |

| Level | Awarding Bodies | Existing and Former Awards (Awarding Bodies) | New Framework Awards (Awarding Bodies) |
|---|---|---|---|
| 8 | Universities<br>HETAC<br>DIT | Bachelor Degree (3 & 4 Year Honours) (HETAC/NCEA)<br>Graduate Diploma (Conversion) (HETAC/NCEA)<br>Honours Bachelors Degree (DIT)<br>Diploma ** (DIT) | Honours Bachelor Degree (Universities, DIT, HETAC)<br>Higher Diploma (Universities, DIT, HETAC) |
| 9 | Universities<br>HETAC<br>DIT | Masters Degree (HETAC/NCEA)<br>Graduate Diploma (1st Stage Masters) (HETAC/NCEA)<br>Masters Degree (DIT)<br>Graduate Diploma (DIT) | Master Degree (Universities, DIT, HETAC)<br>Post-Graduate Diploma (Universities, DIT, HETAC) |
| 10 | Universities<br>HETAC<br>DIT | Doctor Of Philosophy (HETAC/NCEA)<br>Doctor Of Philosophy (DIT) | Doctoral Degree (Universities, DIT, HETAC)<br>Higher Doctorate (Universities, DIT, HETAC) |

* While the National Craft Certificate has been placed as a set at level 6, there are level 7 outcomes associated with the awards in the set. This placement does not preclude the possibility of existing National Craft Certificate programmes being validated at level 7.

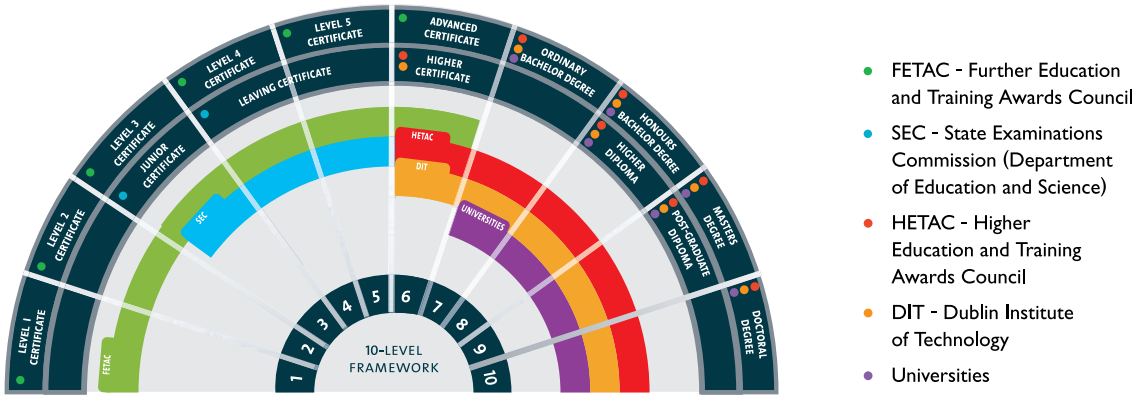
** A range of Diploma awards formerly made by DIT has been placed at level 8: Honours Diploma, Higher Diploma, Advanced Diploma, Graduate Diploma (in music performance), Diploma (four and five year).

### KEY to Awarding Bodies

FETAC Further Education and Training Awards Council
SEC State Examinations Commission (Department of Education & Science)
HETAC Higher Education and Training Awards Council
DIT Dublin Institute of Technology

The 'fan diagram' below illustrates each of the ten levels on the National Framework of Qualifications, the awarding bodies that make the awards and the major award-types.

***Figure A.1*** *National Framework of Qualifications*



# Appendix B: NFQ Learning Outcomes

The National Framework of Qualifications (NFQ) is based on standards of knowledge, skill and competence. The structure of the framework is based on levels which range from level 1 to level 10. Associated with each level is a specified level indicator. Level indicators are broad descriptions of the learning outcomes at a given level in terms of eight sub-strands of knowledge, skill and competence. Outlined below is a synopsis of each level indicator pertaining to NFQ levels 1 – 10, the levels referred to in this report.

**Level 1** – The learning outcomes relate to the performance of basic tasks in a controlled environment under supervision and the display of an ability to learn information and basic repetitive skills, as well as to sequence learning tasks. Literacy and numeracy achievements would correspond to those measured at the initial levels of international assessment systems.

**Level 2** – Key outcomes relate are basic literacy and numeracy and the introduction to systematic learning. Learning outcomes relate to the ability to learn new skills and knowledge in a supervised environment and to carry out routine work under direction. Learning outcomes at this level are typically developmental rather than geared towards a specific occupation.

**Level 3** – Learning outcomes at this level relate to a low volume of practical capability and of knowledge of theory. The outcomes relate to the performance of relatively simple work and may be fairly quickly acquired. Outcomes at this level may also confer a minimum employability for low-skilled occupations and include functional literacy and numeracy.

**Level 4** – Independence is the hallmark of this level. Learning outcomes at this level correspond to a growing sense of responsibility for participating in public life and shaping one's own life. The outcomes at this level would be associated with first-time entry to many occupational sectors.

**Level 5** – Learning outcomes at this level include a broad range of skills that require some theoretical understanding. The outcomes may relate to engaging in a specific activity, with the capacity to use the instruments and techniques relating to an occupation. They are associated with work being undertaken independently subject to general direction.

**Level 6** – The learning outcomes at this level include a comprehensive range of skills which may be vocationally-specific and/or of a general supervisory nature, and require detailed theoretical understanding. The outcomes also provide for a particular focus on learning skills. The outcomes relate to working in a generally autonomous way to assume design and/or management and/or administrative responsibilities. Occupations at this level would include higher craft, junior technician and supervisor.

**Level 7** – Learning outcomes at this level relate to knowledge and critical understanding of the well established principles in a field of study and the application of those principles in different contexts. This level includes knowledge of methods of enquiry and the ability to critically evaluate the appropriateness of different approaches to solving problems. The outcomes include an understanding of the limits of the knowledge acquired and how this influences analyses and interpretations in a work context. Outcomes at this level would be appropriate to the upper end of many technical occupations and would include higher technicians, some restricted professionals and junior management.

**Level 8** – Innovation is a key feature of learning outcomes at this level. Learning outcomes relate to being at the forefront of a field of learning in terms of knowledge and understanding. The outcomes include an awareness of the boundaries of the learning in the field and the preparation required to push

back those boundaries through further learning. The outcomes relate to adaptability, flexibility, ability to cope with change and ability to exercise initiative and solve problems within their field of study. In a number of applied fields the outcomes are those linked with the independent, knowledge-based professional. In other fields the outcomes are linked with those of a generalist and would normally be appropriate to management positions. Those holding a Level 8 qualification are eligible for transfer to a programme leading to a higher diploma or progression to programmes leading to master degree or postgraduate diploma or in some cases to programmes leading to a doctoral degree.

**Level 9** – The learning outcomes at this level relate to the demonstration of knowledge and understanding which is the forefront of a field of learning. The outcomes relate to the application of knowledge, understanding and problem solving abilities in new or unfamiliar contexts related to a field of study. The outcomes are associated with an ability to integrate knowledge, handle complexity and formulate judgements. Outcomes associated with this level would link with employment as a senior professional or manager with responsibility for the work outputs of teams. Progression and transfer routes for those completing postgraduate diplomas would lead to a masters degree some of which they may be exempt from. Those with masters degrees would progress or transfer to a doctoral degree or to another masters degree or to a postgraduate diploma.

**Level 10** – Learning outcomes at this level relate to the discovery and development of new knowledge and skills and delivering findings at the frontiers of knowledge and application. Further outcomes at this level relate to specialist skills and transferable skills required for managing such as the abilities to critique and develop organisational structures and initiate change.

# Appendix C: Private Education Providers

***Table 1*** *Private education providers: accredited by HETAC, NUI, DCU, UK Universities*[10]

| | |
|---|---|
| Academy of Medical Laboratory Science | All Hallows |
| DBS School of Arts | Dorset College |
| Dublin Business School | Dublin Business School |
| FISC Ireland Ltd. | Griffith College Dublin |
| Hibernia College | Holy Ghost College, Kimmage |
| HSI Limerick | HSI Limerick Business School |
| Institute of Public Administration | Irish Academy of Public Relations |
| Irish Management Institute | Mid West Business Institute |
| Milltown Institute | National College of Ireland |
| PCI College, Dublin | Shannon College of Hotel Management |
| Skerry's Cork Business School[11] | St Nicholas Montesori College |
| St. Patrick's College, Thurles | The American College, Dublin |
| The Open Training College | Thomas Crosbie Holdings Ltd. |
| Tipperary Institute | |

***Table 2*** *Professional institutes – awarding bodies & course providers*[12]

| Professional Institute | Sector |
|---|---|
| Association of Compliance Officers in Ireland (ACOI) | Finance |
| Institute of Bankers | Banking |
| Institute of Chartered Accountants in Ireland – | Accountancy |
| Institute of Professional Auctioneers and Valuers (IPAV) | Auctioneers |
| Irish Taxation Institute | Taxation |
| Insurance Institute of Ireland | Insurance |
| IPICS The Supply Chain Management Institute | Supply Chain Management |
| Irish Institute of Purchasing and Materials Management | Management |
| Life Insurance Association (LIA) | Life Insurance |
| King's Inns | Law |
| Law Society of Ireland (Blackhall Place) | Law |
| The Marketing Institute of Ireland | Marketing |
| The Sales Institute of Ireland | Sales |

10 UK universities include: Nottingham Trent University, Middlesex University, Liverpool John Moore's University

11 Now known as Griffith College, Cork.

12 Some institutes out-source the tuition they 'provide'. However, they organise the courses, set the syllabus, and sometimes even correct the exams. This implies that the colleges to where the tuition was outsourced do not usually hold any data regarding numbers of awards etc. For this reason, they are included in this section as double counting is unlikely to occur.

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# Publications by the Expert Group on Future Skills Needs

| Report | Date of Publication |
|---|---|
| Tomorrow's Skills: Towards a National Skills Strategy | March 2007 |
| National Skills Bulletin 2006 | December 2006 |
| Future Skills Requirements of the International Digital Media Industry: Implications for Ireland | July 2006 |
| Careers and Labour Market Information in Ireland | July 2006 |
| Skills at Regional Level in Ireland | May 2006 |
| SME Management Development Report | May 2006 |
| Monitoring Ireland's Skills Supply: Trends in Education / Training Outputs | January 2006 |
| Data Analysis of In-Employment Education Training in Ireland | December 2005 |
| Skills Needs in the Irish Economy: The Role of Migration | October 2005 |
| National Skills Bulletin 2005 | October 2005 |
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| Skills Requirements of the Digital Content Industry in Ireland Phase I | February 2005 |
| Innovate Market Sell | November 2004 |
| The Supply and Demand for Researchers and Research Personnel | September 2004 |
| Literature Review on Aspects of Training of those at Work in Ireland | June 2004 |
| Financial Skills Monitoring Report | November 2003 |
| Responding to Ireland's Growing Skills Needs – The Fourth Report of the Expert Group on Future Skills Needs | October 2003 |
| The Demand and Supply of Skills in the Biotechnology Sector | September 2003 |
| Skills Monitoring Report – Construction Industry 2003/10 | July 2003 |
| Benchmarking Education and Training for Economic Development in Ireland | July 2003 |
| The Demand and Supply of Engineers and Engineering Technicians | June 2003 |
| The Demand and Supply of Skills in the Food Processing Sector | April 2003 |
| National Survey of Vacancies in the Private Non-Agricultural Sector 2001/2002 | March 2003 |
| National Survey of Vacancies in the Public Sector 2001/2002 | March 2003 |
| The Irish Labour Market: Prospects for 2002 and Beyond | January 2002 |
| Labour Participation Rates of the over 55s in Ireland | December 2001 |
| The Third Report of the Expert Group on Future Skills Needs – Responding to Ireland's Growing Skills Needs | August 2001 |
| Benchmarking Mechanisms and Strategies to Attract Researchers to Ireland | July 2001 |
| Report on E-Business Skills | August 2000 |
| Report on In-Company Training | August 2000 |
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