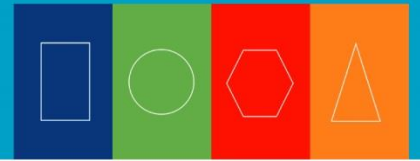


Monitoring Ireland's Skills Supply

Trends in Education and Training Outputs

August 2014



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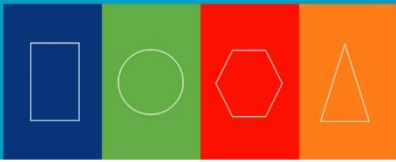
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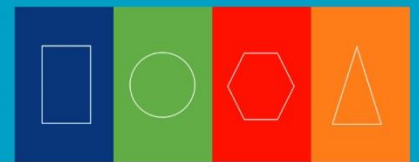
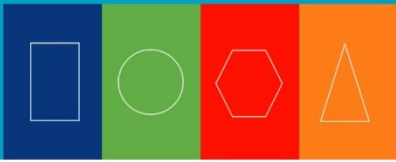
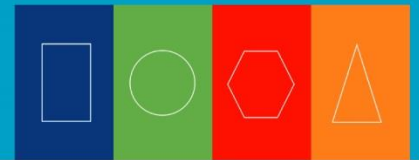


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Foreword

Monitoring Ireland's Skills Supply: Trends in Education and Training Outputs 2014 is the ninth in a series of annual publications produced by the Skills and Labour Market Research Unit in SOLAS on behalf of the Expert Group on Future Skills Needs. The aim of this series of reports is to provide a comprehensive overview of the inflows and outflows from Ireland's education and training system according to qualification level and field of learning.



Ireland's population has one of the youngest age profiles in the European Union; its young population is also one of the most highly educated, second only to Cyprus in terms of its share of third level graduates amongst 25-34 year-olds. Therefore monitoring trends in education and training for those entering and leaving the formal education system in Ireland provides an important insight into the potential future supply of skills to the labour market.

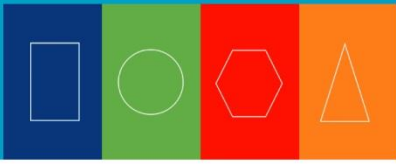
This year's report shows that there were approximately 213,000 awards spanning the ten levels of the National Framework of Qualifications (NFQ), of which a fifth were in technology-related areas (i.e. science, computing, engineering, manufacturing and construction). The report also shows that for young people (aged 25-29 years), the higher the educational attainment, the more likely they were to be in employment and less likely they were to be unemployed.

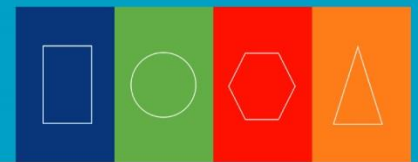
As demographic data shows, the size of the age cohorts relevant to the school going population is set to increase across all sectors of the formal education and training system; in addition, approximately 8% of adults (aged 25-64) had participated in lifelong learning in quarter 4 2013; Ireland is thus likely to continue to have a young, well-educated work force into the future.

Together with its companion publication, the *National Skills Bulletin 2014*, this overview of trends in education and training statistics contributes to the EGFSN's role in advising Government on the current and future skills needs of the economy. It also serves as a tool to decision makers, policy makers and other stakeholders in aligning skills supply with labour market demand and with the needs of society.

I would like to take this opportunity to thank all the education providers and stakeholders for their continued co-operation in providing the data gathered in this report.

Una Halligan,
Chairperson, Expert Group on Future Skills Needs





Executive Summary

Monitoring Ireland's Skills Supply: Trends in Education and Training Outputs is the ninth in a series of annual reports produced by the Skills and Labour Market Research Unit (in SOLAS) on behalf of the Expert Group on Future Skills Needs. This series provides an overview of the potential supply to the labour market from Ireland's education and training system and reports on the inflows and outflows from the education system across all levels of the National Framework of Qualifications (NFQ).

Key Points

- There were approximately 213,000 awards in 2013; of these there were
 - almost 60,000 Junior Certificates
 - almost 56,000 Leaving Certificates
 - over 36,000 QQI-FETAC major awards for further education and training (FET)
 - almost 61,000 higher education awards (refers to 2012 data)
- The Leaving Certificate retention rate (DES 2014) was approximately 90%
- There were approximately 36,000 (QQI-FETAC) major awards holders in 2013, a 15% decline on 2012; the overall number of QQI-FETAC award (all types) holders also declined (by 9%) amounting to 15,600 fewer learners; most of the decline was for minor award holders
- **CAO Acceptances:** there were 46,162 CAO acceptances (NFQ 6-8) in 2013, a 1% increase on 2009; between 2012 and 2013, acceptances for level 6 courses declined by 8%, the number of acceptances at level 7 declined by 8% while level 8 acceptances increased by approximately 2%
- **Undergraduate Enrolments:** total enrolments increased by 13% in the five-year period to 2012 to reach 157,000; this increase relates primarily to level 8
- **Undergraduate Output:** there were 43,600 graduates at levels 6-8 in 2012, an overall increase of 6% on the previous year and 9% since 2008; output increased across all levels since 2011, with a 7% increase at both levels 6 and 8 and an increase of 2% at level 7
- **Postgraduate Enrolments:** there were almost 35,000 postgraduate students enrolled in Ireland's universities and IoTs in 2012, a 4% increase on 2011; there were year-on-year increases in postgraduate cert/diploma and masters enrolments, whereas PhD enrolments fell for the first time in recent years (by 8%)
- **Postgraduate Output:** 17,058 students graduated with a postgraduate qualification in 2012, a 3% decline annually since 2010 although output levels in 2012 remained 12% higher than in 2008
- **Destination of Graduates:** for 25-29 year-olds, the higher the education level the more likely an individual was to be in employment and the less likely they were to be unemployed; between quarter 4 2009 and quarter 4 2013 the number of graduates in employment with at least a level 8 qualification remained relatively unchanged whereas declines occurred for all other education categories
- **Lifelong Learning:** approximately 203,000 persons aged 25-64 years participated in lifelong learning activities in quarter 4 2013, representing 8.2% of the adult population, an increase on 7.9% observed in quarter 4 2008.

Summary of Outputs from the Irish Education and Training System

Table 1 Summary of Education and Training Awards by NFQ Level, 2013¹

	NFQ 1-2	NFQ 3	NFQ 4	NFQ 5	NFQ 6	NFQ 7	NFQ 8	NFQ 9/10	Total
SEC (Junior Cert)	-	60,000	-	-	-	-	-	-	60,000
SEC (Leaving Cert)	-	-	55,600		-	-	-	-	55,600
QQI-FETAC (Major awards)	1,260	2,020	1,070	24,560	7,410	-	-	-	36,320
Institutes of Technology	-	-	-	-	2,630	7,910	10,240	2,260	23,040
Universities	-	-	-	-	2,300	1,690	18,820	14,800	37,610
Total	1,260	62,020	81,230	12,340	9,600	29,060	17,060	212,570	

Source: State Examinations Commission (SEC); Quality & Qualifications Ireland (QQI); Higher Education Authority (HEA)

Table 2 Summary of Further and Higher Education and Training Awards by Field of Education, 2013¹

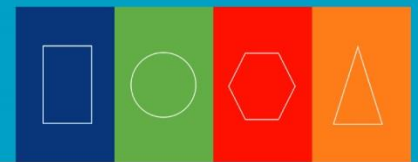
Field	NFQ 1-2	NFQ 3	NFQ 4	NFQ 5	NFQ 6	NFQ 7	NFQ 8	NFQ 9/10	Total
General	1,260	1,620	620	130	310	-	-	30	3,970
Education	-	-	-	-	80	40	1,800	2,990	4,910
Humanities & Arts	-	-	10	2,760	1,000	1,020	5,860	1,990	12,640
Social Science, Bus & Law	-	400	290	3,230	2,440	2,320	8,560	5,710	22,950
Science & Computing	-	-	-	990	770	1,240	3,450	2,080	8,530
Engineer & Construction	-	-	10	450	3,010	2,340	3,480	940	10,230
Agri & Veterinary	-	-	100	1,820	1,470	310	360	130	4,190
Health & Welfare	-	-	40	12,160	1,660	1,240	4,880	2,900	22,880
Services	-	-	10	3,020	1,590	1,100	670	310	6,700
Total	1,260	2,020	1,080	24,560	12,330	9,610	29,060	17,080	97,000

Source: QQI (QQI-FETAC Major Awards); HEA

Levels 1 and 2: The number of FETAC level 1 and 2 awards grew by more than a quarter when compared to 2012, reaching almost 1,260 in 2013; all awards were made in general learning.

Level 3: There were 62,000 awards in 2013, with Junior Certificates accounting for 56,000 (97%) of the total; of the remaining 2,202 QQI-FETAC awards, the majority were made for courses in general learning; when compared to 2012, there was a 3% increase in the number of level 3 awards; the

¹ Graduation data for universities and institutes of technology is for 2012 - the most recent available data. All data presented in Tables 1 and 2 has been rounded and therefore the figures do not add to the totals in each respective table. The data in the above tables does not include education provision from private, independent third level colleges and professional institutes (but is outlined in Chapters 6 and 7 (Sections 6.5 and 7.3)).



increase was due to increases of a similar magnitude (c1,000 additional awards each) for both Junior Certificates and QQI FETAC awards.

Levels 4 and 5: There were over 81,600 awards made in 2013, of which more than two thirds were Leaving Certificates. The remaining 26,000 awards were QQI-FETAC awards, which were mostly at level 5. Of the 24,560 level 5 QQI-FETAC awards, almost half (over 12,000) were in health and welfare (e.g. healthcare support). When compared to 2012, there was little change in the number of Leaving Cert Sits but an 11% decline in the number of QQI-FETAC awards at these levels: the decline in FETAC-QQI awards occurred at both levels 4 (mostly in general learning programmes) and level 5 (mostly in social science business and law).

Level 6: There were over 14,300 awards in 2013 with QQI FETAC awards making up over half of all level 6 awards; the IoTs and universities accounted for an almost equal share each (a further 18% and 16% respectively). Engineering & construction, followed by social science, business & law, had the highest number of level 6 awards at over 3,000 and 2,440 respectively. When compared to the preceding year, the number of level 6 awards declined by 12%, driven mostly by a 15% decline (6,280 fewer awards) in the further education and training sector (especially in the health and welfare field).

Level 7: Of the 9,600 awards made at this level, over 80% were made in the IoTs with the remainder in universities; there was a 3% increase on the preceding year relating to an increase in output from IoTs; social sciences, business and law and engineering/construction each accounted for approximately a quarter of all awards while science/computing experienced the largest increase in output since 2011.

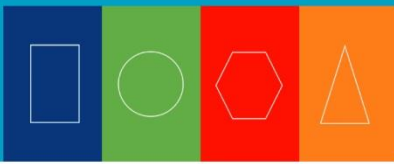
Level 8: Output at this level increased by 7% on the previous year with awards totalling over 29,000 with almost two thirds of awards from the university sector; at 29%, social sciences, business and law accounted for the largest share of awards, followed by humanities and arts at 20% with gains occurring across most disciplines since 2011.

Levels 9 and 10: There were 17,060 awards made across levels 9 and 10 in 2012, a 3% decline on 2011 primarily related to the university sector and masters programmes; of the total output in 2012, 34% were postgraduate certs/diplomas, 58% were masters and 9% for PhD programmes; the social sciences, business and law discipline accounted for a third of all awards at these levels (primarily for masters programmes) with declines occurring across almost all disciplines since 2011.

Future Outlook

Primary and Second Level

- Data from the CSO's population estimates and the DES projections of enrolment at first and second level schools indicate that the size of the school-age population in Ireland is expected to grow considerably in the coming years:



- the total number of pupils enrolled in primary level is expected to grow to 596,440 by 2019, an increase of 13% (70,000 additional pupils) when compared to the 526,400 enrolled in 2013 (DES 2013)
- the total number of pupils enrolled in second level education in September 2012 has increased every year since 2006, reaching at 327,323 enrolments in September 2012; this total is expected to continue to increase, reaching over 416,000 by 2026 (DES 2013)
- Recent growth in the number of junior cycle enrolments (i.e. 1st year at second level) is likely to continue in the medium term, given the anticipated increase in the size of the primary school cohort; this is expected to impact on the number of Junior Certificate sits and, later, Leaving Certificate sits.

Further Education and Training (FET)

- It is estimated that over a quarter of second level pupils progress to further education and training (FET) (DES April 2013); further education and training encompasses a range of provision types, including Post Leaving Certificate Courses and Apprenticeships among others; in 2013, the DES published the 'Review of Apprenticeship Training in Ireland' which envisages expanding the range of occupations which are designated as apprenticeships, especially in non-manual service occupations, including those which have typically attracted female participants²
- Demand for places on FET courses depends largely on the number of places available as well as the impact of economic and labour market conditions
 - The DES (2010) expect demand for Post Leaving Certificate (PLC) courses to remain at its current level (35,500 students)
 - The latest report on apprentice recruitment forecasts (McGrath & Shally: 2014) indicates that apprentice recruitment will increase annually to reach between 2,195 and 3,085 by 2017 (up from 662 in 2012) for construction trades³ and will reach between 535 and 555 by 2017 (up from approximately 500 in 2012) for non-construction trades.

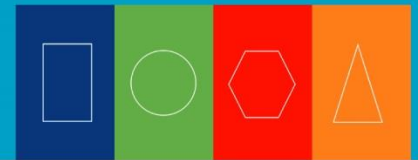
Higher Education

- Children born in the mid-1990s are likely to still be in full-time education/training and the majority (63.7%)⁴ will be expected to enter higher education sometime before they turn 23 years
- In 1999 there were approximately 116,000 enrolments in full-time courses (undergraduate and graduate) in Irish higher education; by 2012, this had risen to almost 165,000; demand for places in full-time higher education is expected to grow further and reach almost 213,000 enrolments by 2025 (DES 2013).

² Beyond construction, the apprenticeship model could be expanded into a range of business sectors including ICT, retail, hospitality, business administration, medical devices, sport and leisure programmes, childcare and social care, financial services, accounting, hairdressing, and beauty care. It is the intention that many of these new apprenticeships would include occupations that have traditionally attracted young female jobseekers (such as hairdressing, retail sales)

³ Construction trades: electrician, carpenter/joiner, plumber, bricklayer, plasterer, painter/decorator, wood manufacturer/finisher & construction plant fitter; non-construction trades include mechanic, vehicle body repairer, fitter (mechanical automation and maintenance), aircraft mechanic, tool maker, and refrigeration craftsperson.

⁴ The DES estimates that 62.2% of any final year second level cohort will transfer to HEA funded third level institutions before reaching mature student age. A further 1.7% will transfer to non-HEA funded institutions (*Projections of Demand for Full-Time Third Level Education, 2013-2027* (July 2013)).



Focus of Science, Engineering and Maths Skills

Second Level

- Entry to science and related programmes in higher education (e.g. human health and disease at Trinity College Dublin, some dentistry programmes) often requires a minimum achievement in Leaving Certificate mathematics or a core science subject (e.g. biology, chemistry, physics etc)
 - the vast majority (96%) of Leaving Certificate students sit the examination in mathematics in any given year, partly due to the fact that it is a compulsory subject for most second level pupils
 - in 2013, almost 51,000 students sat Leaving Certificate mathematics⁵; of these, 13,000 (26%) sat higher level mathematics; almost 32,200 (63%) sat ordinary level and almost 5,700 (11%) sat foundation level; the share sitting higher level mathematics has increased considerably in recent years where the higher level participation rate for mathematics had typically been 16%-17%
- Approximately 31,500 candidates sat the 2013 Leaving Certificate examination in biology (74% at higher level); almost 8,200 candidates in chemistry (83% at higher level) and 6,400 in physics (75% at higher level).

Higher Education

Undergraduate (NFQ 6-8)

Figures 1 and 2 show the inflows (CAO acceptances) and outflows (graduate output) for science and technology related programmes in the Irish higher education system at undergraduate level.

- **Engineering:** the continued increase in output at level 7/6 is not expected to be sustained due to a further decline in the number of CAO acceptances in this discipline; graduate output at level 8 has been increasing steadily in recent years; increases in CAO acceptances has not as yet equated to significant gains in enrolments which would suggest further significant growth in output is not expected
- **Construction:** there was a fall-off in CAO acceptance numbers for both level 7/6 and 8 between 2012 and 2013 although the most recent CAO applicant data indicates a future reversal of this trend; output at level 7/6 declined by 19% between 2011 and 2012 whereas level 8 output increased by 10% over the same period
- **Computing:** the data shows a 6.2% decline in output between 2011 and 2012; the significant increases in CAO acceptances in recent years would suggest this decline will be reversed in the short to medium term; the continued increase in the number of CAO acceptances at level 7/6 indicates that the 14% increase in output is likely to be sustained⁶
- **Science:** graduate output grew by 21% at level 7/6 and 6% at level 8 since 2011; the slow but steady growth in level 8 CAO acceptances suggest this growth in output should be maintained in future years whereas CAO acceptances at level 7/6 have been relatively static in recent years so future growth in output is not expected.

⁵ Pertains to students sitting the Leaving Certificate Established and Leaving Certificate Vocational programmes only; it excludes students sitting the Leaving Certificate Applied.

⁶ Continued growth in the number of computing graduates is also expected in the medium-to-long term as outlined in the Government's ICT Action Plan which aims to significantly increase the number of ICT graduates.

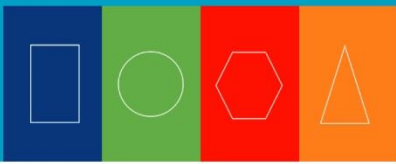
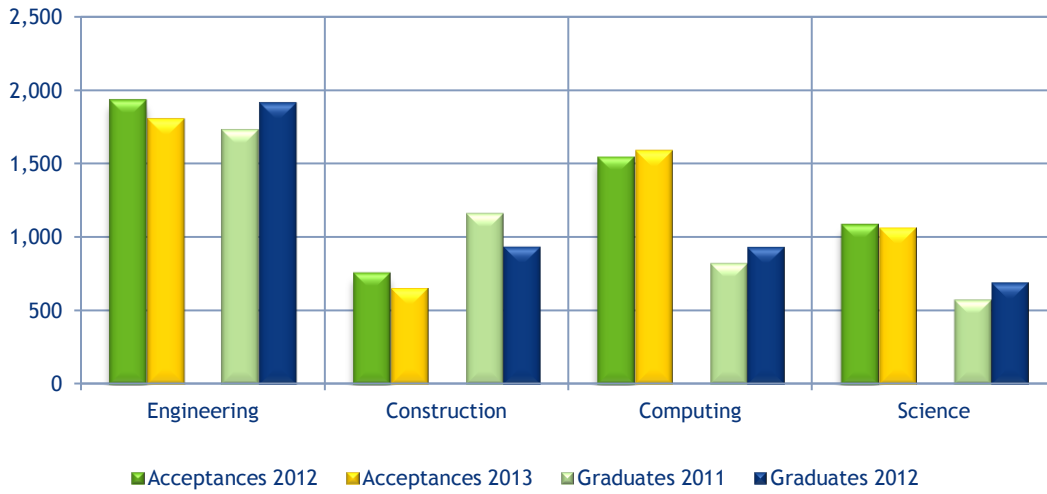
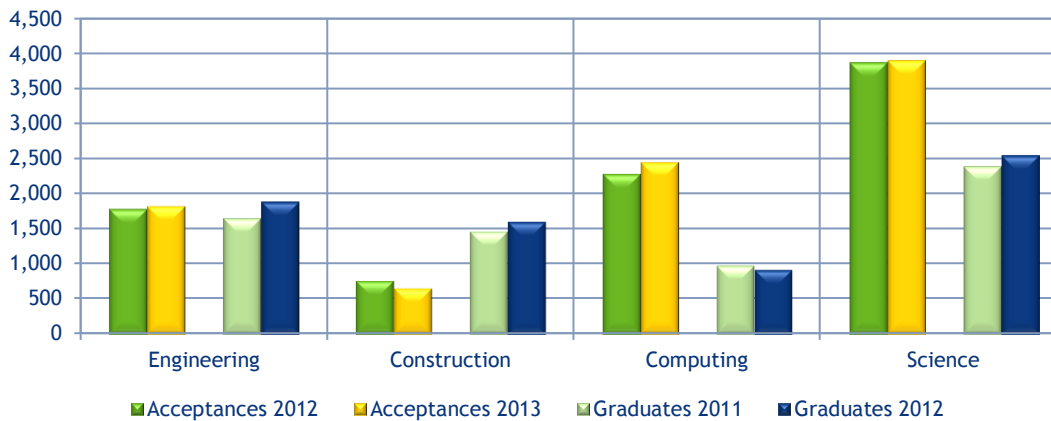


Figure 1 Level 7/6 Science & Technology CAO Acceptances and Graduate Output



Source: CAO; HEA

Figure 2 Level 8 Science & Technology CAO Acceptances and Graduate Output



Source: CAO; HEA

Postgraduate (NFQ 9-10)

Figure 3 shows the numbers of technology enrolments and graduations from postgraduate certs/diplomas, master degree and PhD programmes in 2011 and 2012.

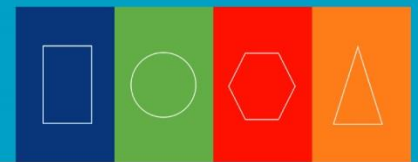
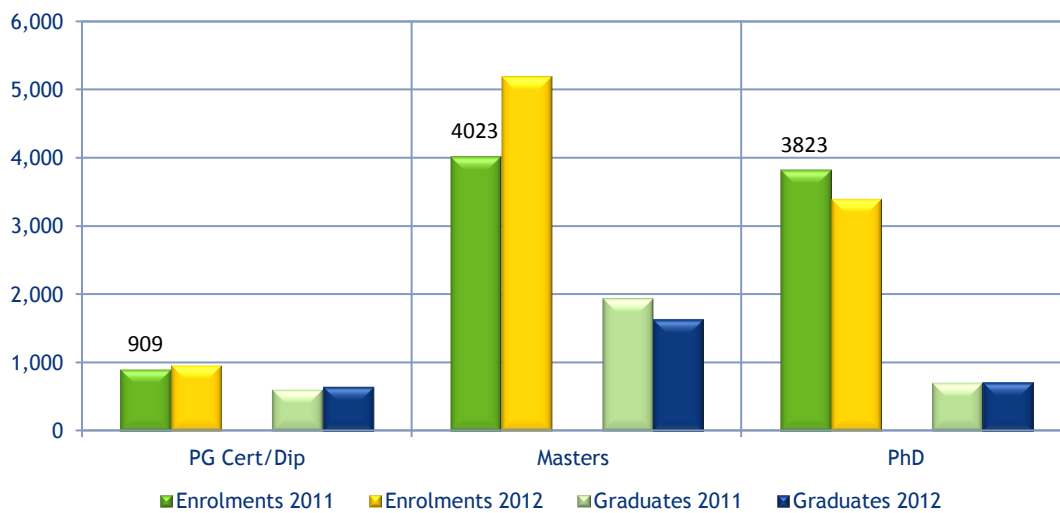
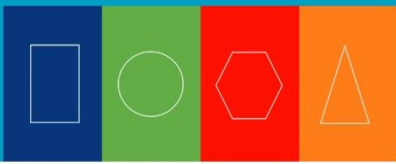


Figure 3 Level 9/10 Science & Technology Enrolments and Graduate Output



Source: HEA

- **Postgraduate Certs/Diplomas:** the increase in enrolments and output relates primarily in an increase in uptake for computing courses at this level
- **Masters:** the decline in technology output that occurred between 2011 and 2012 is likely to be reversed in the short term due to a 29% increase in enrolments in the same period in the areas of engineering and manufacturing and computing
- **PhDs:** output levels remained static between 2011 and 2012 although a decline is expected in the short to medium term due to a fall in enrolment levels; the decline was across all technology subjects but was particularly apparent in science.



Chapter 1 Introduction

1.1 Description

This chapter outlines the main education and training pathways in Irish education and training, and shows the levels where programmes, and the awards with which they are associated, have been placed according to both national and international classifications. Award types, awarding bodies, classifications are discussed in turn.

Figure 1.1 shows the four interlinked sectors of the education and training system in Ireland. The levels at which awards and programmes in the system have been placed is also indicated in the diagram. Detailed explanations of these level classifications are provided in Section 1.2.

- **Primary level** (shown in orange in the diagram): primary school in Ireland is compulsory from the age of six years but many children begin at the age of 4-5 years. Pupils normally spend eight years in primary school after which they proceed to second level, typically at 13 years.
- **Second level** (shown in yellow and green in the diagram): second level education usually lasts five to six years and is divided into the junior cycle (three years duration) and the senior cycle (two years). Some pupils also do a Transition Year Programme - a one year programme which aims to act as a bridge between the junior and senior cycles. Although compulsory education ends at 16 years, the majority of second level students remain in education and training until the end of the senior cycle, usually until the age of 18.
- **Further education and training (FET)** (shown in red): on completing second level education⁷, school leavers have the option of entering the further education and training system where learners follow technical or vocational training leading to a specific career (this includes apprenticeships and post leaving certificate courses). Courses in basic literacy, numeracy and adult education (including schemes such as the Vocational Training Opportunities Scheme (VTOS) and the Back to Education Initiative (BTEI), catering for re-entrants to education) are also provided within the further education and training sector. Further education and training awards may also lead to progression to higher education.
- **Higher education** (navy and blue in Figure 1.1): another option for school leavers and holders of further education and training awards (e.g. a QQI-FETAC award) is higher education where learners may pursue an undergraduate level course at an institute of technology (IoT), university (including colleges of education), or private, independent college.
 - Higher education at undergraduate level can last from two years (leading to a higher certificate award) to three-four years in order to obtain an ordinary degree/honours bachelor degree (although some degrees such as medical degrees may require five years).
 - Postgraduate education then follows and may range from one year for postgraduate certificates and diplomas, higher diplomas and taught masters degrees to three or more years for a doctoral qualification.

⁷ Formally, the minimum entry requirement to apprenticeship training is a Junior Certificate, achieved on completion of the junior cycle at second level; however, in practice, most school leavers entering apprenticeship training have completed the senior cycle.

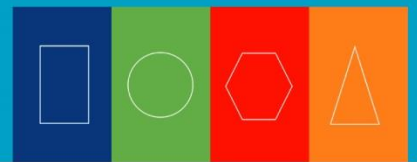
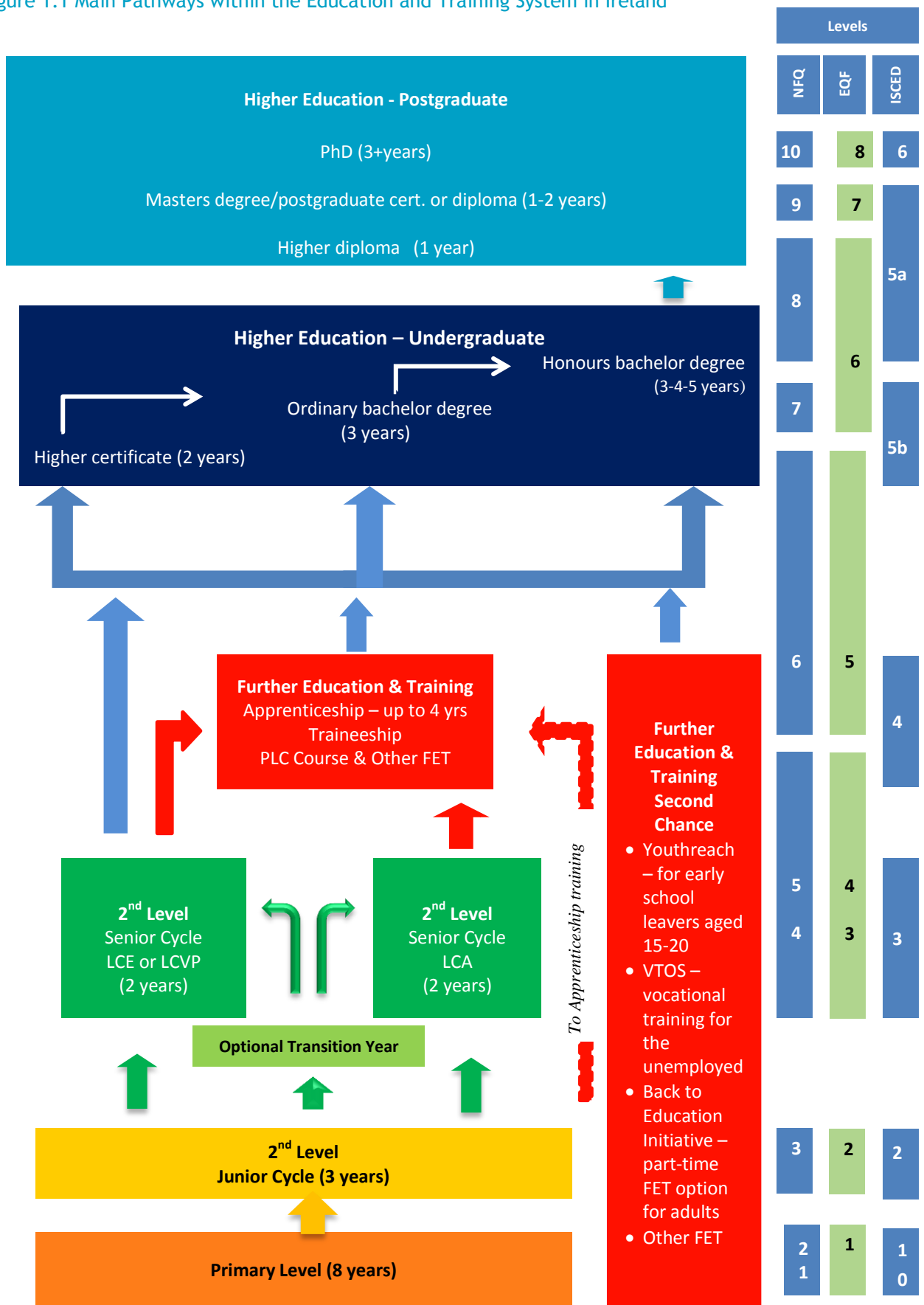


Figure 1.1 Main Pathways within the Education and Training System in Ireland



1.2 Awards and Classifications

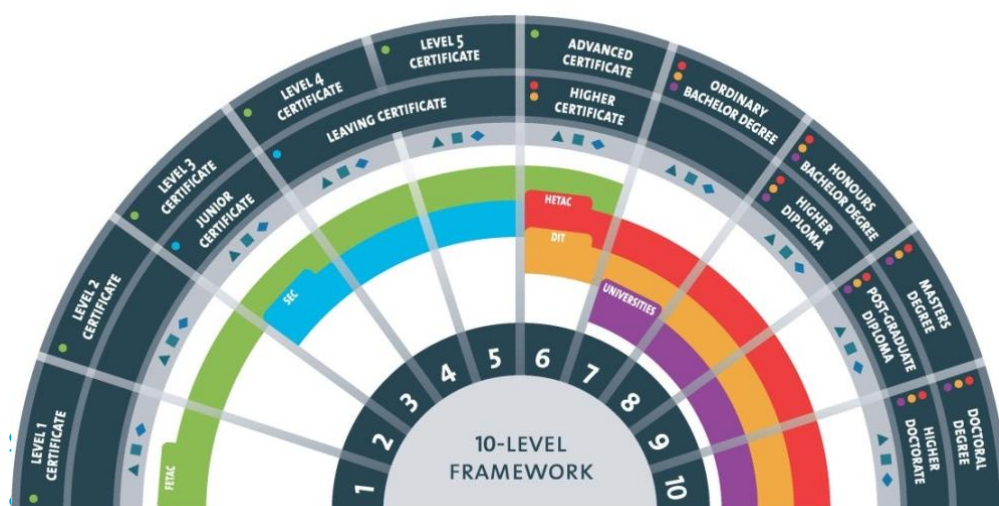
1.2.1 The National Framework of Qualifications

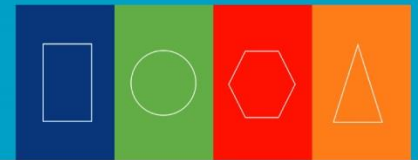
The National Framework of Qualifications (NFQ), launched in 2003, is a system of ten levels used to describe the Irish qualifications system. Each level is based on nationally agreed standards of knowledge, skill and competence and reflects what an individual is expected to know, understand and be able to do following successful completion of a process of learning. Almost all awards made through the state funded sector, and many in the private sector, have been placed on the NFQ.

The structure of the Framework is based on award levels and types, outlined in Figure 1.2. There are ten award levels, which indicate the standard of learning (ranging from the most basic to doctoral awards). There are also four award-type categories, which serve as an indicator of the purpose, volume and progression opportunities associated with a particular award.

- A major award is the main class of award made at a level; examples of major awards include the Leaving Certificate, a QQI-FETAC major certificate or an honours bachelor degree.
- A minor award provides recognition for learners who achieve a range of learning outcomes but not the specific combination of learning outcomes required for a major award. A minor award is linked to a major award.
- A special purpose award is made for very specific purposes, e.g. heavy goods driving.
- A supplemental award is for learning which is additional to a previous award; it could, for example, relate to updating and refreshing knowledge or skills, or to continuing professional development e.g. safety and gas installation award.

Figure 1.2 National Framework of Qualifications





1.2.2 The European Qualifications Framework

The European Qualifications Framework (EQF) is an overarching qualifications framework and serves to make qualifications from different countries and systems in Europe easier for employers and learners to understand. Its aim is to promote citizens' mobility between countries and facilitate lifelong learning. The EQF consists of eight qualifications levels which, like the NFQ, are described through learning outcomes (knowledge, skill and competence).

The NFQ was referenced to the EQF in June 2009, which means that an award placed on the NFQ has a corresponding place on the EQF. Since some countries across Europe have also referenced their national qualifications systems to the EQF (and other countries are in the process of doing so), it is possible to compare an award on Ireland's NFQ with awards from other systems in Europe. For example, in the UK, a higher national diploma (HND) has been placed at level 5 on England and Northern Ireland's Qualification and Credit Framework (QCF); this corresponds to level 5 on the EQF and therefore level 6 on the NFQ. The 'licence professionnelle' in France has been referenced to EQF level 6 and therefore spans levels 7 and 8 on the NFQ⁸.

1.2.3 Awarding bodies in Irish education and training

Almost all awards made through the state funded sector, and many in the private sector, have been placed on the NFQ. These awards are made by a variety of bodies across the ten levels of the NFQ.

- School awards: There are two main awards made by the State Examinations Commission (SEC). The Junior Certificate is placed at level 3 on the NFQ and the Leaving Certificate across levels 4-5.
- Further education and training awards: Awards in FET span levels 1-6 on the NFQ. Quality and Qualifications Ireland (QQI) makes awards for the FET sector. In addition, other awarding bodies, (e.g. City and Guilds) also make awards to learners in Ireland that have been aligned with the NFQ at award level. Prior to the establishment of QQI⁹, the Further Education and Training Awards Council (FETAC) was the body responsible for making awards in the FET sector.
- Higher education awards: universities, Dublin Institute of Technology (DIT), QQI and institutes of technology (IoTs) with delegated authority from QQI make awards to learners in the higher education sector, including some awards at private independent third level colleges. Prior to the establishment of QQI, the Higher Education and Training Awards Council (HETAC) had been responsible for making awards in the higher education sector.
- Professional Bodies: some awards made by the ACAI (Institute of Chartered Accountants of Ireland) and ACCA (Association of Chartered Certified Accountants) are aligned with the NFQ.

⁸ http://ec.europa.eu/eqf/compare/ie/fr_en.htm#comparison

⁹ In November 2012, Quality and Qualifications Ireland was established under the Qualifications and Quality Assurance (Education and Training) Act 2012. The new Authority was created by an amalgamation of four bodies: the Further Education and Training Awards Council (FETAC), the Higher Education and Training Awards Council (HETAC), the National Qualifications Authority of Ireland (NQAI) and the Irish Universities Quality Board (IUQB). The new Authority assumed all the functions of the four legacy bodies.



1.3 Education and Training Programmes Classifications (ISCED)

Neither the NFQ nor the EQF are designed to classify education and training programmes. Rather, they describe the awards (and associated learning outcomes) achieved on completion of certain programmes. The International Standard Classification of Education (ISCED), on the other hand, is specifically designed to classify education and training *programmes*, taking into consideration various features including programme content, duration, and objectives (e.g. preparation for access to third level or for work in an occupation or a range of occupations etc.).

ISCED is used by the OECD and European Union to gather and compare statistical data on education and training internationally. As the NFQ (and consequently EQF) award levels and ISCED programme categories aim to describe what are essentially different features of education and training, the two classifications are not directly comparable and any comparison between NFQ level and international data (which is classified by ISCED) will only be approximate. However, the ISCED definitions of education levels that correspond to education and training within the Irish system are as follows:

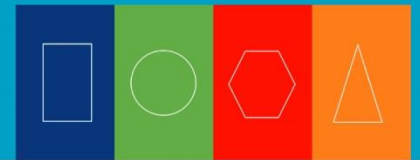
ISCED ¹⁰ Level	Corresponds to :
Level 0: Pre-primary education	Early start and other pre-primary
Level 1: Primary education	Primary education
Level 2: Lower secondary	2 nd level education - junior cycle
Level 3: Upper secondary	2 nd level education - senior cycle
Level 4: Post secondary non-tertiary	Apprenticeship, PLC courses, other FET
Level 5: Tertiary Type B	Higher Certificate/Ordinary Bachelor Degree
Level 5: Tertiary Type A (First Degree)	Honours Bachelor Degree
Level 5: Tertiary Type A (Second or Further Degree)	Postgraduate Qualifications, e.g. Masters (except PhD)
Level 6: Advanced Research Qualifications	PhD

1.4 Education and Training Data Sources

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

- **The Central Statistics Office (CSO):** demographic data, data relating to early school leavers, the education attainment of those in the workforce and the population, and data on the lifelong learning participation rates in the adult population
- **The State Examinations Commission (SEC):** Junior Certificate and Leaving Certificate examination candidate numbers and results
- **The Department of Education and Skills (DES):** school and PLC course enrolment data
- **The Central Applications Office (CAO):** higher education applicant numbers and their course choice acceptances

¹⁰ Refers to ISCED 1997 classifications. ISCED was revised in 2011 (ISCED 2011); however, as ISCED 2011 was implemented only from November 2011 onwards, international data used in this report was available according to ISCED 1997 only.



- **Quality and Qualifications Ireland (QQI):** further education and training (QQI-FETAC) award data; QQI-HETAC award data for those qualifying from selected private and independent higher education and training providers
- **The Higher Education Authority (HEA):** higher education enrolments and graduations; first destination survey data
- **The UK based Universities and College Admission service (UCAS) and the Higher Education Statistics Association (HESA):** data pertaining to Irish higher education applicants and graduates in the UK
- **Eurostat:** outgoing Erasmus student numbers from Irish higher education institutions; EU demographic data (e.g. fertility rates, education attainment of the population etc.)
- **OECD education online database:** international higher education data relevant to Irish students studying abroad
- **SOLAS:** certification and apprenticeships data.

This report focuses on the most recent education data available; 2013 data was available for Junior and Leaving Certificate numbers, CAO acceptance data, and QQI-FETAC awards data; the latest available year for higher education data was 2012 (2011 for OECD data). Data from private/independent providers of professional and higher education was available for 2012 or 2013, depending on the provider. Where possible, data comparisons are for a five-year period, although in instances where a longer term was necessary in order to identify the relevant trends, data prior to 2008 or 2009 was also examined.

1.5 Report Structure

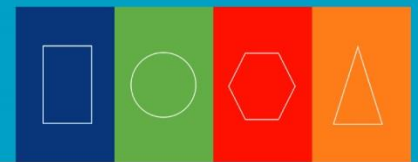
The report is structured as follows. Chapter 2 presents key demographic data relevant to the anticipated inflows to the Irish education system at each level. The educational attainments of students at Junior Certificate and Leaving Certificate levels are presented in Chapters 3 and 4 respectively. Chapter 5 examines awards data from the Further Education and Training sector. Three chapters, 6, 7 and 8, are devoted to higher education: Chapter 6 focuses on the number of CAO acceptances, enrolments and graduates for undergraduate higher education (i.e. NFQ levels 6, 7 and 8); Chapter 7 is devoted to postgraduate (NFQ 9 and 10) higher education; Chapter 8 examines what third level graduates do on completion of their studies. Chapter 9 presents the number of Irish-resident students pursuing education in other countries. Finally, Chapter 10 examines the extent to which the adult population in Ireland engages in formal learning activities.



Chapter 2 Demographic Profile

Key Points

- **Population:**
 - While the number of births has fallen since the peak in 2009, at almost 69,000 in 2013, they continue to be well above those observed in the early and mid-2000s
 - The CSO estimates that in 2013, there were 520,459 children aged 5-12 years in Ireland, a rise of 10% when compared to 1996; in contrast the number of 19-23 year-olds in the population declined by 5% over the same period - a reflection of comparatively low number of births in the 1990s as well as increased outward migration for this cohort
- **Education System Inflows:**
 - There were approximately 71,400 junior infant enrolments in September 2012, the largest number observed over the period 1996-2012
 - The number of children entering the junior cycle at second level reached its lowest level in 2006; since then 1st year enrolments have been, in the main, increasing, reaching almost 60,200 in September 2013
- **Projected Inflows:**
 - Given the expanding pool of children in the younger cohorts and the anticipated increase in enrolments in the education and training system, Ireland is likely to have significantly greater numbers ultimately entering the labour market in the long-term
- **Adults' (25-64) Education Attainment:** younger age cohorts tend to have higher education profiles than older age cohorts; in quarter 4 2013,
 - 21% of adults aged 25-64 years had attained at most lower secondary (e.g. Junior Certificate) qualifications; however, the rate for those aged 25-29 was less than half that (10%) while it reached 47% for 60-64 year-olds
 - approximately half of 25-29 year-olds were third level graduates compared to 10% for those aged 60-64 and 27% for the population overall
 - nonetheless the share of the adult population with further education & training qualifications has remained broadly stable across age groups (14% on average)
- **EU Comparison:** Ireland compares favourably with other EU countries in terms of its young population and educational attainment of adults: in 2013, Ireland had
 - jointly with France, the highest fertility rate in the EU
 - the youngest population age profile: 27% of Ireland's population is aged less than 20; this compares to an EU 28 average of 21%
 - an above average share of third level graduates in the adult population (aged 25-64 years) (41.5%, compared to an EU average of 28%)
 - the second highest share of 25-34 year-olds with 3rd level qualifications, after Cyprus (51.1%, compared to an EU average of 36.1%).



2.1 Introduction

This aim of this chapter is to outline demographic trends relevant to the size of the school going age-cohorts and to show how anticipated changes in the size of the typical age cohorts for primary level, second level and beyond will impact on the demand for places within the education and training sector in Ireland.

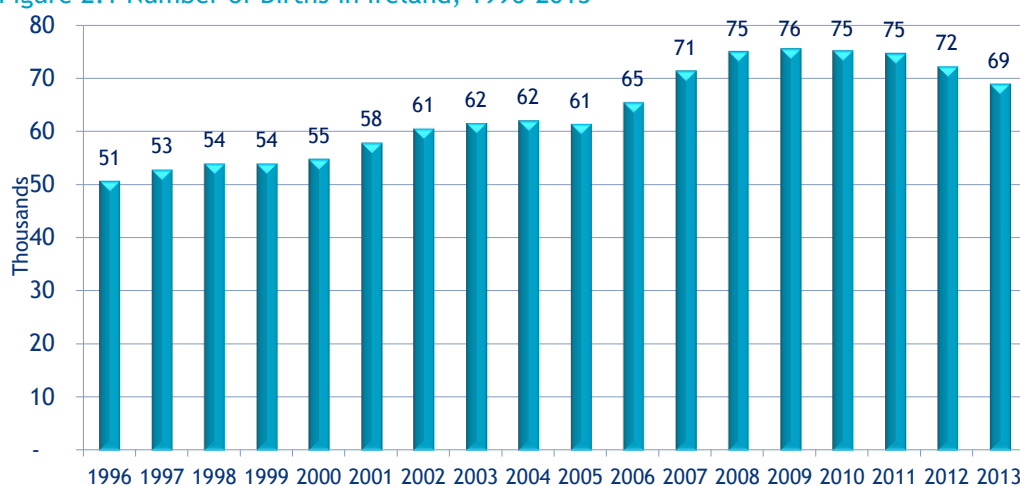
As the size of the school-going age population at any level depends primarily on the number of children born in the preceding years, Section 2.2 outlines the number of births in Ireland in recent years, followed by an examination of trends in the number of persons aged 5-12 years (primary school age), 13-18 years (second level school age), and 19-23 years (post-secondary tertiary and non-tertiary education age). The CSO's migration estimates for the relevant age cohorts are also outlined. Section 2.3 focuses on trends in inflows and total enrolments in the education and training system, including projected enrolments at various levels for the coming years. This is followed by a profile of the educational attainment of the adult population (25-64 years) based on CSO Quarterly National Household Survey (QNHS) in Section 2.4. Finally, Section 2.5 looks at Ireland's position on an EU level in terms of birth rates, education attainment of young adults.

2.2 Demographic trends

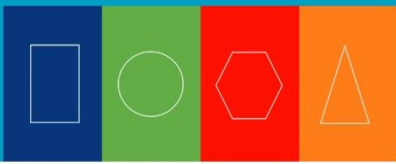
2.2.1 Births (Figure 2.1)

- While lower than the peak in 2009, at almost 69,000 births in 2013, the number of children born in Ireland remains considerably higher than at the turn of the century (55,000)

Figure 2.1 Number of Births in Ireland, 1996-2013



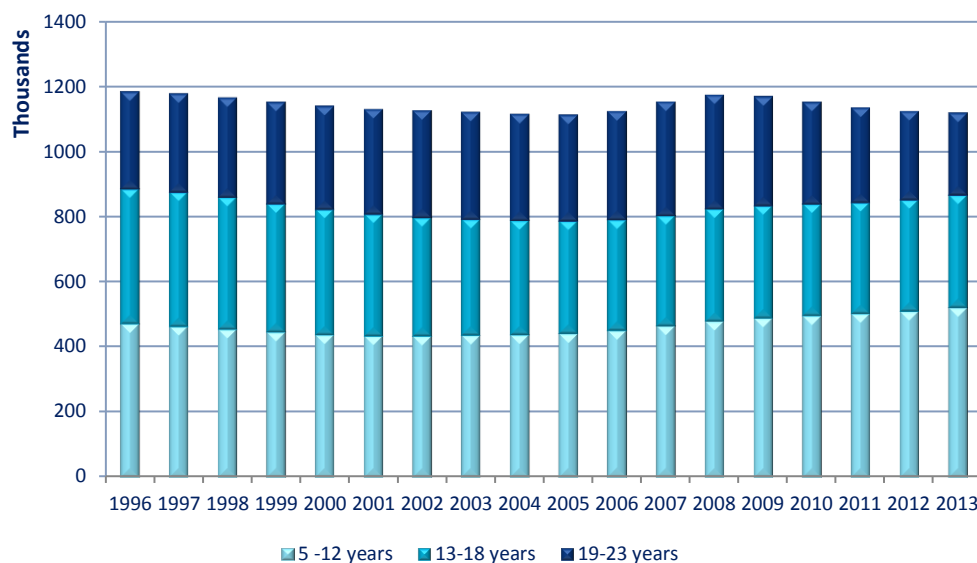
Source: CSO



2.2.2 School & Pre-School Going Age Population Aged 5-23 Years (Figure 2.2)

- Between 1996 and 2013, the estimated size of the school going age cohorts (5-23 years) declined by 5% (approximately 64,000 fewer persons), reaching 1.1 million in 2013; while initially the declines were attributable to a decrease in the younger age cohorts (5-18 years), in later years (i.e. since 2009), the decline was driven primarily by decreases in the number of 19-23 year-olds, a reflection of a lower number of births in the early 1990s, as well as the effect of increased outward migration, in particular since 2010 (detailed in Figure 2.3)
- The number of children aged 5-12 years rose by 10% (49,000 additional children) between 1996 and 2013; by 2013, there were an estimated 520,500 children aged 5-12 years in Ireland.

Figure 2.2 CSO Population Estimates for School-Going Age Cohorts 1996-2013



Source: CSO Population Estimates

2.2.3 Migration Estimates (Figure 2.3)

- Over the period 1996-2013, the number of children under 15 years coming into Ireland was higher than those leaving, except for 2010: the CSO estimated that 6,800 children under the age of 15 emigrated, while 9,300 immigrated in 2013
- In contrast, since 2010, the number of 15-24 year-olds leaving is higher than those entering, although the most recent data (2013) indicates that the growth in outward migration has halted; 34,800 young people aged 15-24 years were estimated to have emigrated in 2013, while there were approximately 12,900 immigrants in the same age cohort.

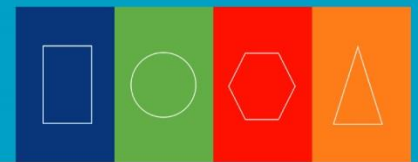
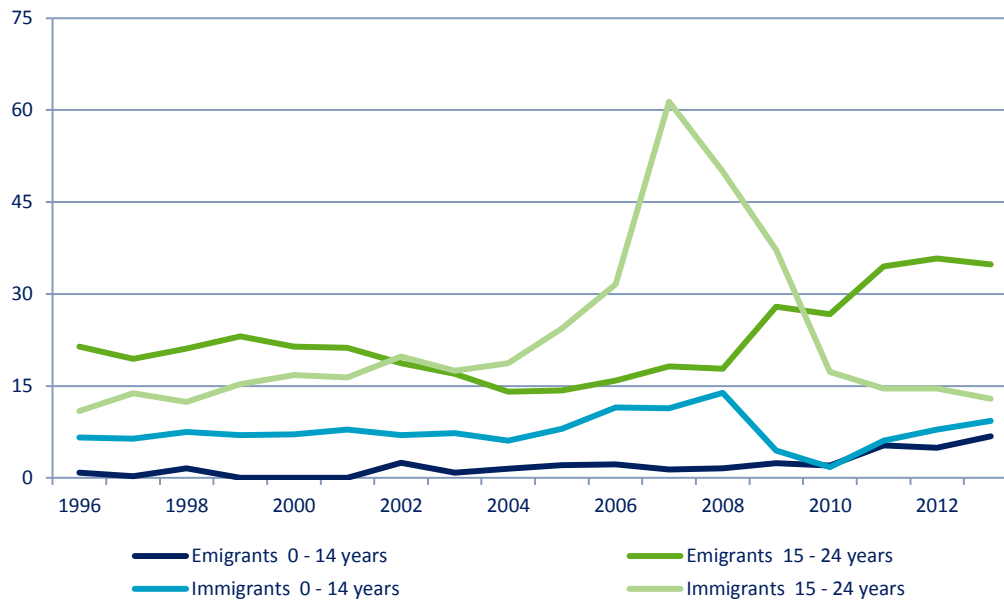


Figure 2.3 CSO Migration Estimates for 0-14 & 15-24 Year Age Cohorts (000s) 1996-2013



Source: CSO Population and Migration Estimates

2.3 Trends in Education and Training Inflows and Enrolments

2.3.1 Inflows: Primary & Second Level (Figure 2.4)

- Primary Level:** driven largely by increases in the number of births in the preceding years, the number of junior infant enrolments has, in the main, been growing steadily since 1999; at over 71,400 in September 2012, there were 38% more junior infants than in 1999, amounting to an additional 19,500 junior infants; this is the highest number of junior infant enrolments observed over the period 1996-2012
- Second Level:** following several years of annual declines, the number of children entering the junior cycle at second level reached its lowest level in 2006; since then 1st year enrolments have been, in the main, increasing (despite a slight decline in 2012); at almost 60,200 in September 2013, the number of first year pupils at second level was 9% higher than in 2006 (almost 5,000 additional pupils).

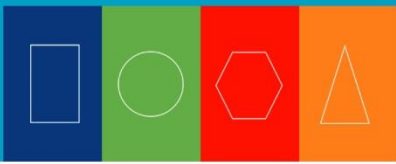
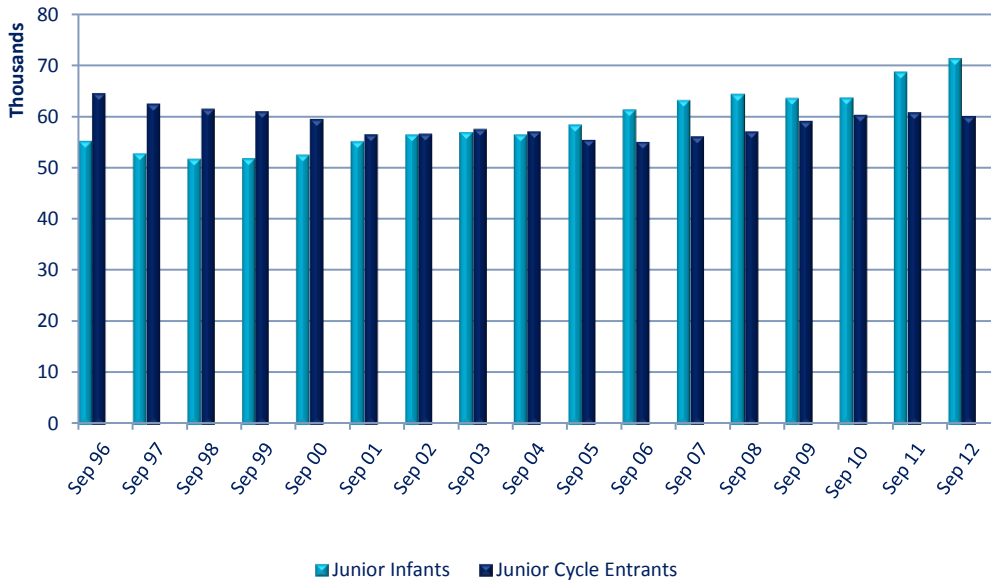


Figure 2.4 Inflows to Junior Infants (Primary Level) & Junior Cycle Year 1 (Second Level), 1996-2012



Source: DES

2.3.2 Enrolments & Projected Enrolments (Primary & Second Level) (Figure 2.5)

- Figure 2.5 shows total enrolments in primary and second level schools from 1995- 2012, and the DES projected enrolments for 2013-2031
- Primary Level:** having declined to their lowest level in 2000 (439,560 pupils), the total number of pupils enrolled in primary school has been increasing annually since then, reaching over 526,400 in 2012, a rise of 20% when compared to 2000; these numbers are expected to continue to grow, according to DES projections, reaching a peak of 596,440 by 2019; this translates into approximately 57,300 more pupils enrolled in primary level than in 2013; beyond 2020, it is anticipated that enrolments will begin to decline
- Second Level:** having declined annually between 1996 and 2005, the total number of pupils enrolled at second level has increased every year since 2006, although, at 327,323 enrolments in Sept 2012, the total is still below that observed in 1996 (352,463); nonetheless, due mainly to demographic changes in the primary school age cohort, future enrolments at second level are projected to continue to grow in the coming years, peaking at over 416,000 in 2026; this represents an increase of 24% (81,000 additional pupils) when compared to 2013 (the start of the projections period).

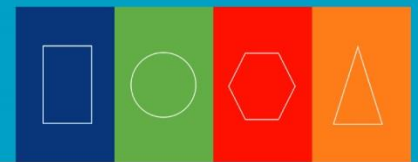
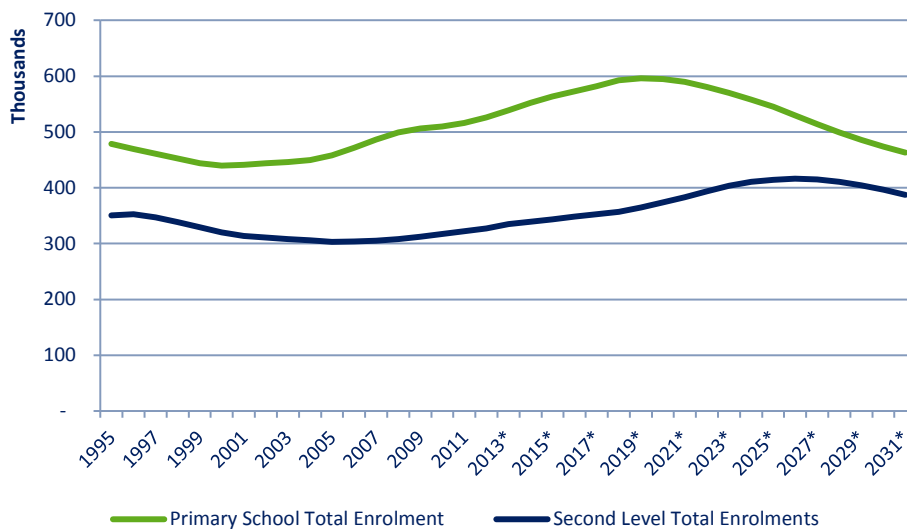


Figure 2.5 Total School Enrolments (All Years) 1995-2012 and Projections 2013-2031



Source: DES Statistics Database & DES Projections of Enrolment (July 2013)¹¹

* Projected enrolment

Note 1: year refers to school year start (e.g. 2007 refers to the 2007/2008 school year).

Note 2: includes junior cycle, senior cycle and transition year programmes.

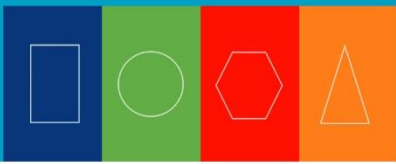
2.3.3 Inflows & Enrolments in Selected Further Education & Training

Ireland In 2014, SOLAS¹² in collaboration with the Department of Education and Skills published Ireland's first ever Further Education and Training Strategy, which is a five-year strategy aimed at ensuring a more integrated approach to the provision of FET in Ireland; the Strategy aims to improve the quality and relevance of FET, to ensure that the education and training provided is aligned with labour market needs as well as the needs of learners, and to promote FET as an attractive education and training option amongst school leavers.

The further education and training (FET) sector encompasses a broad range of provision, including apprenticeships, traineeships, specific skills training, Post Leaving Certificate (PLC) courses, Youthreach, Vocational Training Opportunities Scheme (VTOS), adult literacy, community education schemes, among others. This diversity in provision reflects the range of the objectives of the FET sector, which, as highlighted in a recent report (ESRI 2014: viii), aims to provide (i) initial vocational education and training (e.g. apprenticeships), (ii) a re-entry route to education and training (including literacy), (iii) professional or vocational development for those in the labour market, (iv) community education and training, and (v) other training for adults. In addition, the duration and certification associated with the different FET programmes also varies: courses can last from 15 weeks (in the case of some traineeships), to one-to-two years (e.g. PLC courses) or up to four years

¹¹ Projections presented here refer to the M2F2 scenario, which projects that net migration will return to positive by 2018 (rising thereafter to plus 10,000 annually by 2021) and that fertility will decline very gradually in the coming years, reaching 1.8 by 2026 and remaining constant thereafter. DES deems this to be the most likely scenario.

¹² SOLAS was established in 2013 and is responsible for funding, planning and co-ordinating training and further education programmes. The Education and Training Boards, made up of the former Vocational Education Committees (VECs) and FÁS, have assumed the management of training and delivery of FET programmes.



(e.g. most apprenticeships); certification ranges from levels 1-6 on the NFQ, depending on the programme.

As a result of the heterogeneous nature of FET composition and objectives, there is much more variation in learner age than is the case in the primary and post-primary sectors¹³. Future trends in the FET sector are therefore more difficult to project as, unlike primary and second level, the impact of the demographic profile of the population on enrolments is less relevant. Furthermore, enrolments for some types of FET (e.g. apprenticeships, traineeships) are frequently a response to economic conditions and patterns are more likely to fluctuate as economic activity changes.

In this subsection, we focus on two types of FET provision - PLC courses and apprenticeships - for the following reasons: they are intended mainly as initial FET options (rather than second chance options) and aimed primarily, although not exclusively, at school leavers; they are of at least one academic year in duration; and they progress the learner up the skills scale on the NFQ (i.e. all PLC courses lead to at least a level 5 award on the NFQ, while all apprenticeship qualifications have been placed at level 6). Nonetheless, it should be borne in mind that PLC courses and apprenticeships represent a subset of the total FET provision; for example, the ESRI (2014: ix) estimates that in 2011, there were over 194,000 enrolments (full- and part-time) across all programme types in the former VEC sector¹⁴, while in 2012 there were over 65,000 enrolments (full- and part-time) on former FÁS programmes¹⁵.

PLC Courses (Figure 2.6)

- As PLC courses tend to be relatively short (particularly when compared to primary and second level), often just 1 year in duration, first year enrolments and total enrolments tend to follow one another closely
- **Inflows:** there were approximately 30,700 PLC students enrolled on Year 1 of a PLC course in 2012; numbers grew by more than a half between 1999 and 2012 (up from 20,000 in 1999), with the bulk of the increase occurring between 2007 and 2009; nonetheless, the number has declined from a peak of almost 33,000 in 2010
- **Enrolments:** total enrolments on PLC courses follows a similar pattern, growing by 46% over the period 1999-2012, but declining slightly since 2010
- **Future demand:** future intake to PLC courses will depend largely on the number of places and the extent to which school leavers and those returning to education wish to participate. For this reason, no modelling of the future demand for places has been carried out, although the DES (2010) expect demand to remain at its current level, unless the number of allocated places for PLC courses is altered in line with learner demand, labour market needs, and/or community needs.

¹³ For example, 73% of all FETAC award holders in 2013 were aged 25 years or more; i.e. the vast majority were older than the traditional school-leaving age.

¹⁴ In addition to PLC courses, other types of training in the former VEC sector include VTOS (5,650 enrolments in 2011), Youthreach (3,321 enrolments), Community Education (57,939 enrolments), Adult Literacy (43,099 enrolments), among many others (source: ESRI 2014, 47)

¹⁵ In addition to apprenticeships, other types of former FÁS training in 2013 included approximately 5,600 traineeships, almost 20,000 specific skills training, over 4,000 in community training, among others (Source: ESRI 2014, 53 & FÁS).

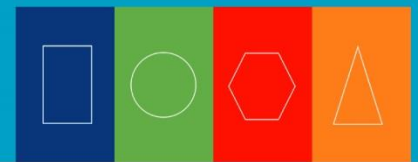
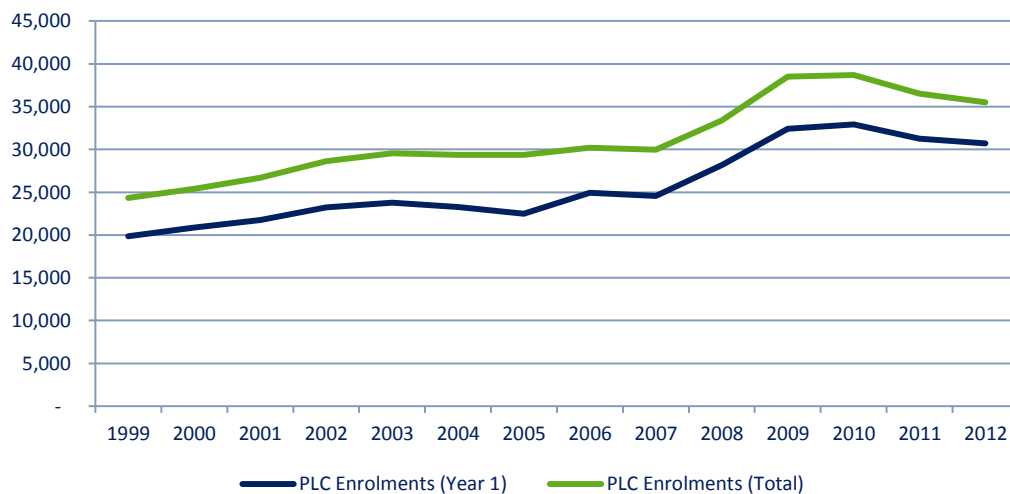


Figure 2.6 PLC Enrolments (1st Years and Total Enrolments), 1999-2012



Source: DES

Apprenticeships and Apprenticeship Forecasts (Figure 2.7)

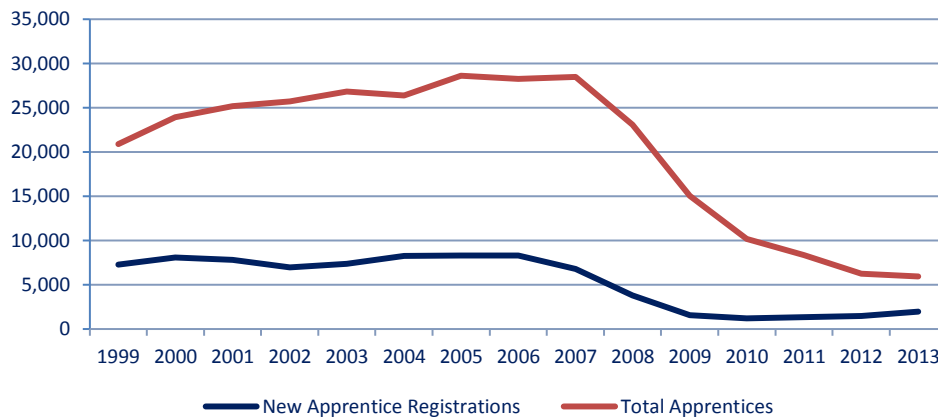
- Apprenticeship registrations are often impacted by changes in the structure of the economy and labour market (apprentices are counted in employment figures); increases and decreases in employment, particularly in certain sectors such as construction are often reflected in the inflows and total number of registered apprentices; in 2013, the DES published the 'Review of Apprenticeship Training in Ireland' which envisages expanding the range of occupations which are designated as apprenticeships, especially in non-manual service occupations, including those which have typically attracted female participants¹⁶
- **New registrations:** the total number of new registrations in apprenticeships peaked in 2006 at over 8,300, having increased from almost 7,300 in 1999; coinciding with the economic crisis, the number of new registrations fell sharply from 2007 onwards reaching their lowest number in 2009 at just over 1,500; new apprentice registrations for 2013 reached almost 2,000
- **Total registrations:** the total number of registered apprentices in Ireland reached their highest number to date in 2005 (28,605) and remained at that level until the economic crisis, before declining steadily to reach 5,902 in 2013
- **Future demand:** the latest report on apprentice recruitment forecasts (McGrath & Shally: 2014) indicates that apprentice recruitment for construction and non-construction trades is expected to grow as overall employment levels recover; it is estimated that for construction trades¹⁷, apprentice recruitment will increase annually to reach between 2,195 and 3,085 by 2017, up

¹⁶ Beyond construction, the apprenticeship model could be expanded into a range of business sectors including ICT, retail, hospitality, business administration, medical devices, sport and leisure programmes, childcare and social care, financial services, accounting, hairdressing, and beauty care. It is the intention that many of these new apprenticeships would include occupations that have traditionally attracted young female jobseekers (such as hairdressing, retail sales).

¹⁷ Construction trades: electrician, carpenter/joiner, plumber, bricklayer, plasterer, painter/decorator, wood manufacturer/finisher & construction plant fitter; non-construction trades include mechanic, vehicle body repairer, fitter (mechanical automation and maintenance), aircraft mechanic, tool maker, and refrigeration craftperson.

from 662 in 2012; for non-construction trades, apprentice recruitment is expected to reach between 535 and 555 by 2017, up from approximately 500 in 2012.

Figure 2.7 Apprenticeships New Registrations



Source: SOLAS

2.3.4 Higher Education (Figure 2.8)

The potential pool of entrants to higher education, like the FET sector, is more difficult to capture than that of primary and second level as factors other than demographics will affect the demand for places (e.g. availability of places, the fact that some learners may not proceed to third level directly on completing second level, labour market opportunities, etc.).

- Children born in the mid-1990s are likely to still be in full-time education/training and the majority (63.7%)¹⁸ will be expected to enter higher education sometime before they turn 23 years; in 2014, children born in 1996 will turn 18, the age at which many will leave second level education and enter further or higher education or training
- The number of full-time new entrants to Irish higher education grew by 16% between 1999 and 2012, when it reached almost 41,700 enrolments; the DES (2013) anticipates that demand for places in higher education will continue to grow in the coming years, and, as a result, the number of new entrants is projected to reach 54,700 by 2026
- In 1999 there were approximately 116,000 enrolments in full-time courses (undergraduate and graduate) in Irish higher education; by 2012, this had risen to almost 165,000; demand for places in full-time higher education is expected to grow further and reach almost 213,000 enrolments by 2025 (DES 2013).

¹⁸ The DES estimates that 62.2% of any final year second level cohort will transfer to HEA funded third level institutions before reaching mature student age. A further 1.7% will transfer to non-HEA funded institutions (*Projections of Demand for Full-Time Third Level Education, 2013-2027* (July 2013)).

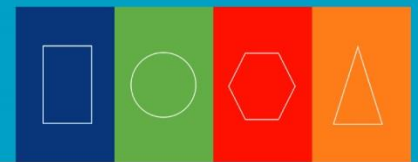
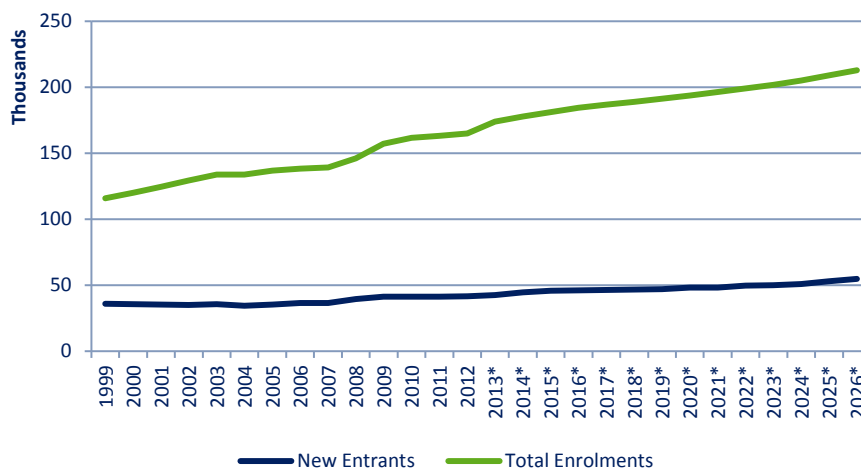


Figure 2.8 Higher Education New Entrants & Total Enrolments (1999-2012) and Projected New Entrants and Total Demand (2013-2026)



Source: DES Statistics Database and Projections of Demand for Full-Time Third Level Education (July 2013)

2.4 Education Attainment of the Adult Population (Figure 2.9)

- Of the total adult population (aged 25-64 years) in Ireland in quarter 4 2013, 42% held third level qualifications; at the other end of the skills spectrum, 21% held at most a Junior Certificate or equivalent
- In general, younger age cohorts tend to be more highly qualified than older age cohorts: approximately half of all 25-29 year-olds are third level graduates; in contrast, less than a third of 50-54-year-olds and less than a quarter of 60-64 year-olds are third level graduates; furthermore, with 54% of those aged 30-34 years holding third level qualifications, Ireland is well ahead of the EU 2020 target which aims to have 40% of this cohort completing third level education¹⁹
- Similarly, while almost half (47%) of all 60-64 year-old have attained at most lower secondary education, the share for 25-29 year-olds was 10%
- In contrast, the share of those with further education and training (FET) shows little variation between age groups: 15% of 25-29 year-olds held at FET qualifications, which is broadly in line with the 11% share for those aged 60-64 years.

¹⁹ <http://ec.europa.eu/europe2020/targets/eu-targets/>

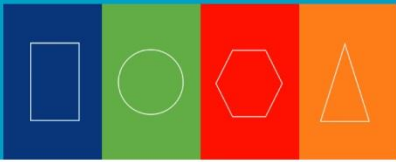
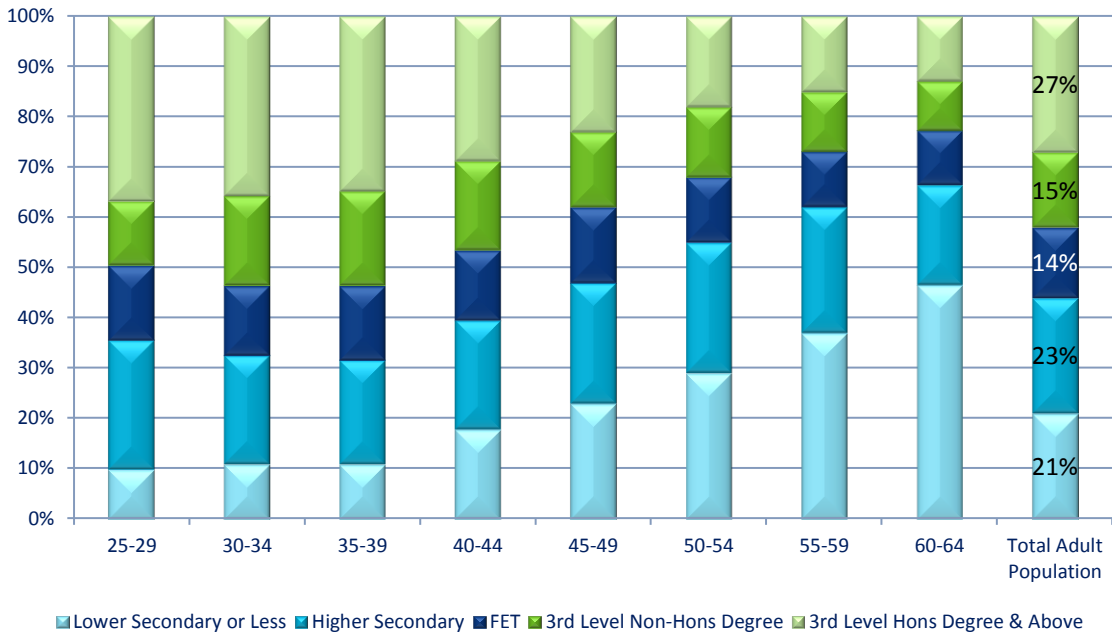


Figure 2.9 Adult Population (25-64 years) by Age and Education Attainment, Quarter 4 2013



Source: SLMRU Analysis of CSO (QNHS) data

2.5 EU Comparison

2.5.1 EU Fertility Rates (Figure 2.10)

- At 2.01% each, Ireland and France had the highest fertility rates in the EU in 2013, well above the EU 28 average (1.58%)
- Ireland's fertility rate has been consistently above the EU average since 2000 (earliest date for comparison with EU 28)
- Nonetheless, Ireland's fertility rate is in decline, down from 2.06% in 2008 and 2.03% in 2012.

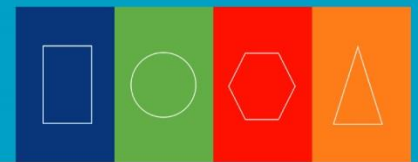
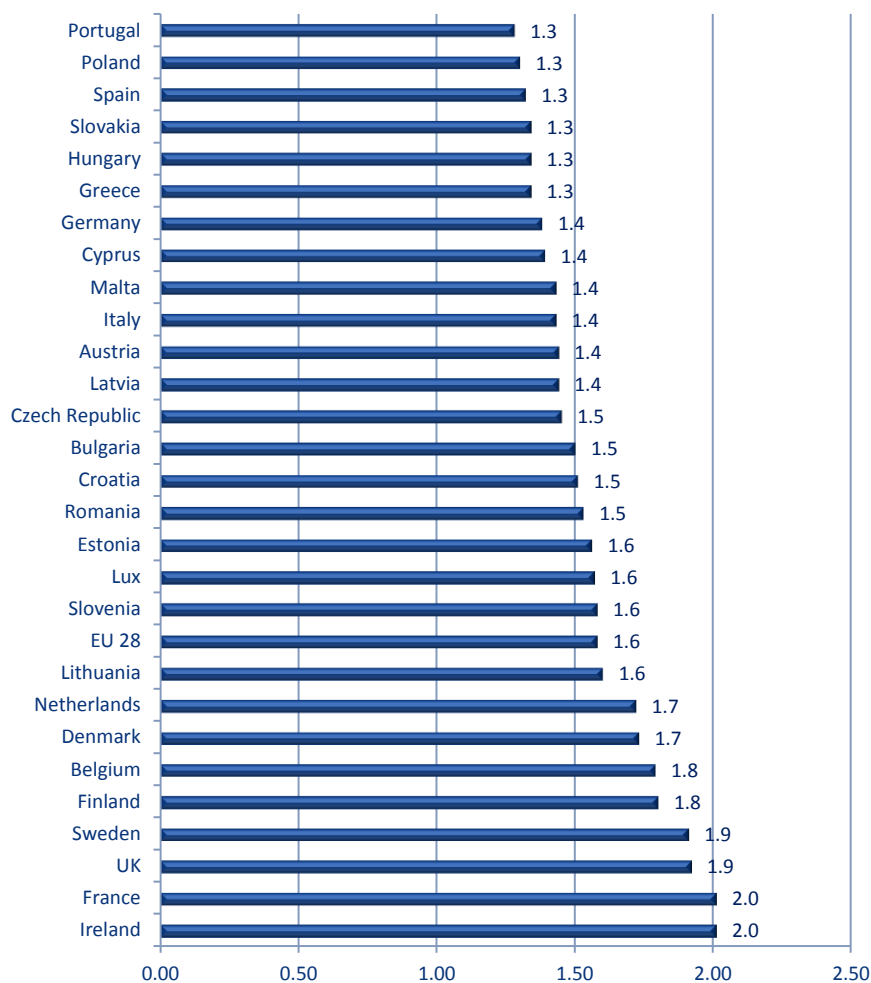


Figure 2.10 Total Fertility Rates (%) in EU Countries, 2013

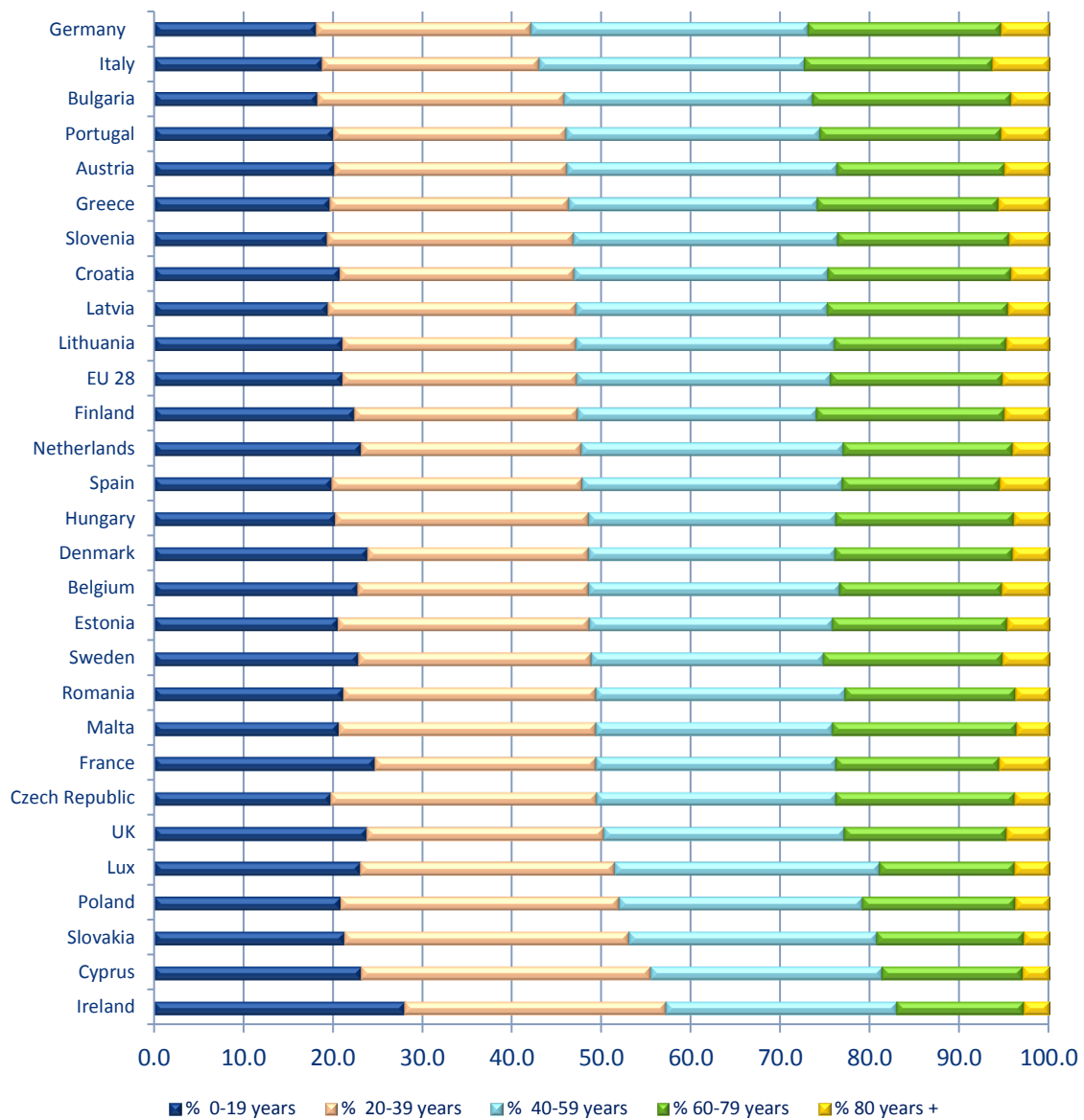


Source: Eurostat (extracted May 2014)

2.5.2 Young Population (Figure 2.11)

- When compared to other EU countries, Ireland had the youngest population profile: 57% of the population is aged 39 or less, compared to the EU average across 28 countries of 47% and shares of 50% or less for the UK, France and Denmark
- Ireland had the smallest proportion of its population aged 60 years and above (17%, compared to 24% across the EU and over 26% in countries such as Germany and Italy)
- In addition, Ireland also had the highest share of the population under 20 years (27% compared to an EU 28 average of 21% and averages of 24.6% or less for France, Denmark and the UK).

Figure 2.11 Population (%) in EU Countries, 2013



Source: Eurostat (Extracted May 2014)

2.5.3 EU Population - Education Attainment

- **Adult Population (25-64 years) (Figure 2.12):** when compared to other EU countries in 2013, Ireland has the highest share of third level graduates, with 41.5% of all adults (aged 25-64 years) holding third level qualifications; this compares to a 28% share on average across the 28 EU countries
- At 23.3%, the share of adults (aged 25-64 years) with at most lower secondary qualifications in Ireland is below, although close to, the EU 28 average (24.8%); it is, however, higher than that of other countries such as Germany (13.7%), Finland (14.1%) and Lithuania (6.6%), among others.

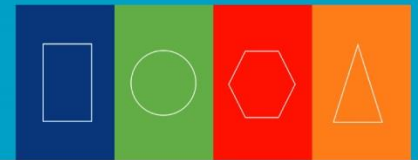
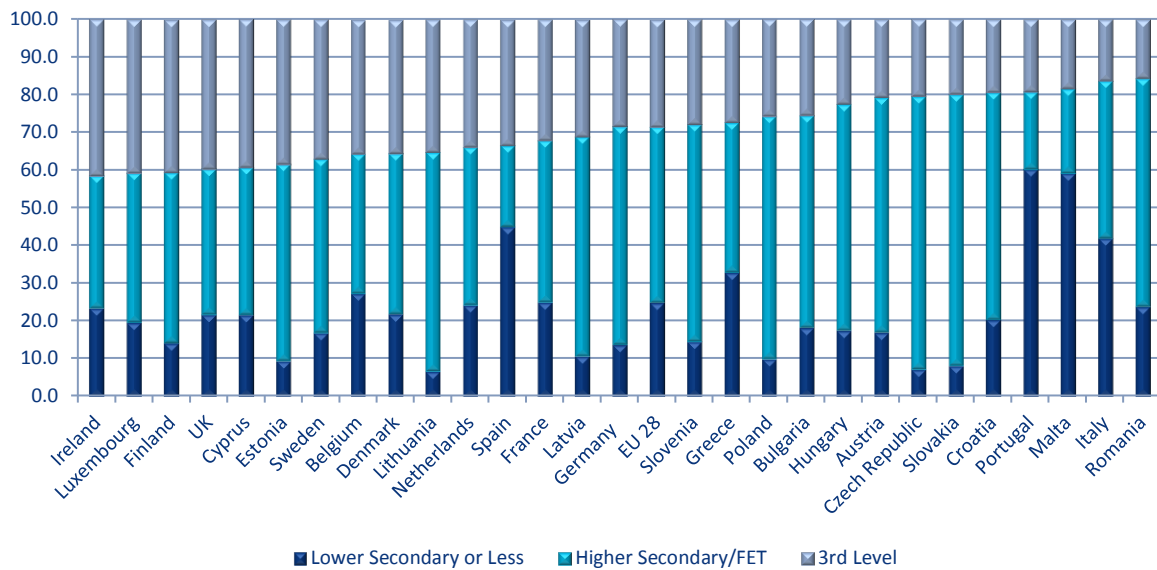


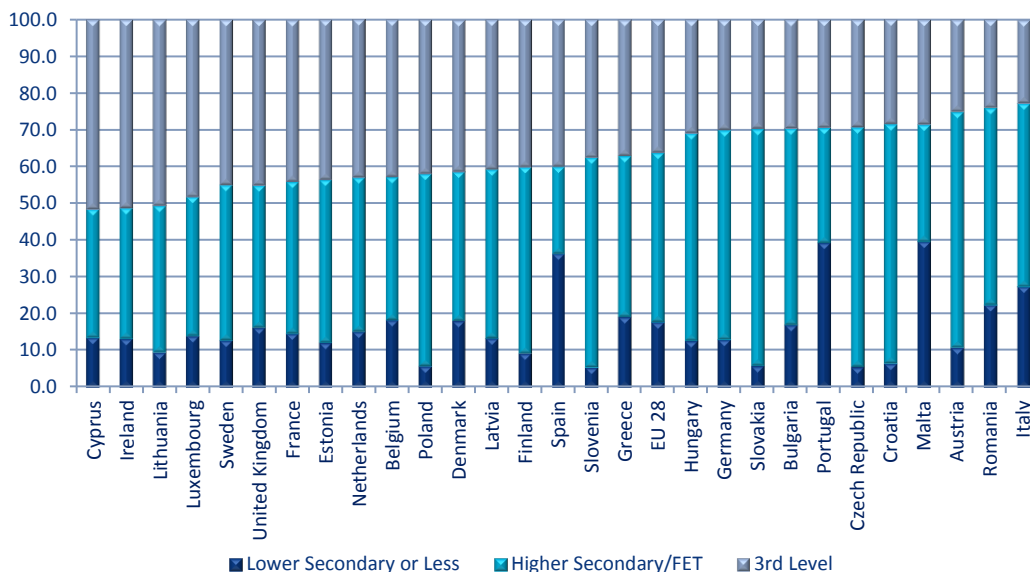
Figure 2.12 EU Adult (25-64 Year-Olds) Population (%) by Education Level, 2013



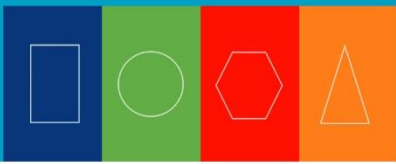
Source: Eurostat (Extracted May 2014)

- **Young Adult Population (25-34 years) (Figure 2.13):** in 2013, the share of graduates amongst Ireland’s young adults aged 25-34 years was the second (after Cyprus) highest in the EU: 51.1% of young adults in Ireland held third level qualifications, well above the EU 28 average of 36.1%
- The share of the young Irish population with lower secondary or less education attainment is well below the EU average (13.2% for Ireland compared to 17.8% across the EU).

Figure 2.13 Young Adult (25-34 Year-Olds) Population by Education Level (%), 2013



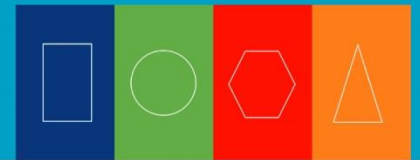
Source: Eurostat (Extracted May 2014)



Chapter 3 Junior Certificate

Key Points

- **Total sits:**
 - at almost 60,000 in 2013, the number of Junior Certificate sits increased by 2% compared to 2012
- **Retention rate:**
 - The retention rate to completion of the Junior Certificate was estimated at 96.9% for those who entered the Junior Cycle in 2007
 - Females (97.3%) had a higher retention rate than males (96.6%)
- **Subjects:**
 - As in previous years, almost all candidates sat English, mathematics and CSPE in 2013
 - The vast majority (90% or more) sat geography, history and science
 - When compared to 2009, the uptake rate either remained the same (for English and mathematics) or increased for all subjects except French and business studies; the largest relative increase was for science and religious education (+ three percentage points each)
- **Higher level participation:**
 - The majority of candidates in each of the top ten subjects opted for the higher level paper
 - At 83% each, higher level participation was greatest for religious education and geography
 - Higher level participation was lowest in mathematics (52%) and Irish (53%)
 - There were increases in the higher level participation rates for all subjects in 2013 when compared to 2009, particularly for business studies, science, mathematics and French (which each rose by between eight and eleven percentage points)
- **Mathematics:**
 - 2013 was the first year in which higher level participation in mathematics exceeded 50%; it grew by nine percentage points when compared to 2009, with much of the growth occurring between 2012 and 2013 alone (+ four percentage points)
- **Early School Leavers:** CSO (QNHS) data shows that in quarter 4 2013,
 - The share of early school leavers was 8.4%
 - At 9.5%, males were more likely than females (7.3%) to be early school leavers
 - When compared to quarter 4 2009, the early school leaving rate declined by more than four percentage points (going from 12.6% to 8.4%)
- **PISA:**
 - Ireland's 15 year-olds performed significantly above the OECD average in mathematics, reading and science; however, in computer-based mathematics and problem solving assessments, Ireland performed less well with scores that were at the OECD average; in contrast, in digital reading, Ireland's performance, was significantly above the OECD.



3.1 Introduction

This chapter presents an overview of the Junior Certificate examination, which has been placed at level 3 on the National Framework of Qualifications (NFQ). The main statistics in relation to Junior Certificate candidates and their subject choices and achievements are outlined. This is followed by a summary of the key findings from the 2012 PISA cycle, providing an indicator of how Ireland compares internationally in terms of the achievements of 15 year-olds in key subject areas. The share of young adults in the population who are estimated to have ended their full-time education at this level (early school leavers) is also provided using CSO data from the Quarterly National Household Survey (QNHS).

3.2 Junior Certificate: Candidates and Examination

The Junior Certificate examination takes place at the end of the junior cycle in post primary schools. Students are typically aged 15 years and have completed three years of second level education. The Department of Education and Skills (DES) estimates²⁰ that the Junior Certificate retention rate for those who entered the junior cycle in 2007 was 96.9%; females were slightly more likely than males to sit the Junior Certificate (97.3% compared to 96.6% for males). There was a slight increase in the retention rate when compared to the preceding year (96.4% in 2007).

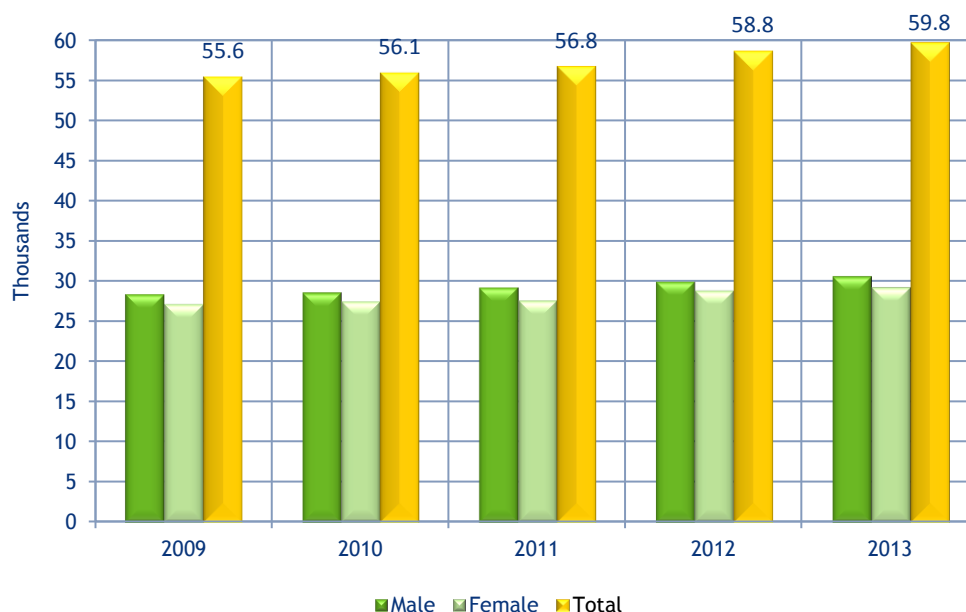
Candidature for the Junior Certificate examination is not restricted to post primary school pupils. Re-entrants to education may be entered for the examination through approved education programmes such as the Vocational Training Opportunities Scheme (VTOS), Adult Literacy and Community Education Schemes, among others. In 2013, 887 Junior Certificate candidates were re-entrants to education, representing an 11% decline when compared to 2012. In fact the number of re-entrants has decreased each year since the recession began (2008), although this is the first time it has fallen below 1,000.

Figure 3.1 shows the number of Junior Certificate sits over the period 2009-2013.

- At almost 60,000 in 2013, the number of Junior Certificate sits was the highest recorded over the period 2009-2013
- There were an additional 4,266 sits (+8%) when compared to 2009 and an additional 1,025 sits (+1.7%) when compared to 2012; these increases, which are in part a reflection of the continued growth in the number of second level entrants observed since September 2007, are expected to impact on the number of Leaving Certificate sits in June 2015 and 2016
- Each year, males slightly outnumber females: in the 2013 examination, males made up a 51% share (30,553 sits); females, a 49% share (29,270 candidates).

²⁰ *Retention Rates of Pupils in Second Level Schools: 2007 Entry Cohort (Golden: 2013)*

Figure 3.1 Junior Certificate Sits 2009-2013



Source: State Examinations Commission

Note: Data for 2013 is provisional.

3.3 Junior Certificate Subject Choice and Levels

The Junior Certificate examination is offered in more than 25 subjects. Most are offered at higher and ordinary level, with English, mathematics and Irish also offered at foundation level. Civic, social and political education (CSPE) is available at common level only. The majority of candidates usually sit at least six subjects, although many take between eight and ten subjects.

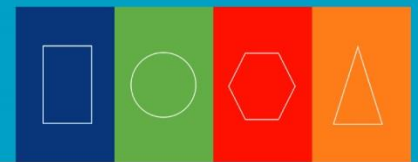
3.3.1 Top Ten Subject Choice: Total Sits

Table 3.1 compares the number of sits and uptake rates for the most popular Junior Certificate subjects for 2009 and 2013.

- Almost all candidates sat the Junior Certificate in English, mathematics and CSPE in any given year; the high uptake rates for these three subjects are largely a reflection of the fact that for most junior cycle pupils they are compulsory subjects
- Geography and history are also taken by the vast majority of candidates with at least a 90% uptake rate in any given year.

The most notable differences observed between 2009 and 2013 are as follows:

- the number of candidates increased for each of the selected subjects in Table 3.1
- while the c4,400 additional sits for English and mathematics are in line with the 8% increase in overall Junior Certificate candidate numbers, there were stronger increases for all other subjects except French and business studies



- in absolute terms the strongest growth over the five-year period was in science with 5,377 additional sits, amounting to an 11% increase; as a result the overall uptake rate for science grew by three percentage points to 90%
- strong growth (of at least 10%) in numbers was also recorded for geography (+4,800 sits), Irish (+4,700 sits) and religious education (+3,800 sits); uptake rates for these subjects also rose
- despite increases of between 1,100 and 1,600 in the numbers sitting French and business studies, these were the only subjects where the uptake rates declined over the five-year period.

Table 3.1 Junior Certificate Sits and Take-up Rates by Subject, 2009 and 2013

Subject	2009 Sits	2009 Uptake	2013 Sits	2013 Uptake
English	54,862	99%	59,254	99%
Mathematics	54,708	99%	59,088	99%
CSPE	54,059	97%	58,681	98%
Geography	50,500	91%	55,341	93%
History	49,891	90%	54,503	91%
Science	48,535	87%	53,912	90%
Irish	47,313	85%	51,993	87%
French	33,135	60%	34,273	57%
Business Studies	32,219	58%	33,819	57%
Religious Education	25,016	45%	28,845	48%

Source: State Examinations Commission

3.3.2 Top Ten Subject Choice: Higher Level Sits

Figure 3.2 shows the higher level participation rates for the most popular subjects in the Junior Certificate examination. CSPE is excluded as it is available at common level only. The data shows that

- in 2013, the majority of students in each of the selected subjects sat higher level papers
- at 83% each, the higher level participation rate was greatest for religious education and geography; it was smallest for mathematics (52%) and Irish (53%)
- when compared to 2009, there were increases in the higher level participation rates for all subjects, particularly for business studies, science, mathematics and French (which each rose by between eight and nine percentage points)
- most of the increase for mathematics occurred between 2012 and 2013 (+ four percentage points) and this is partly a reflection of the roll-out of Project Maths and the introduction of bonus points for Leaving Certificate higher level maths; nonetheless mathematics continues to have the lowest rate of higher level participation in the Junior Certificate examination.

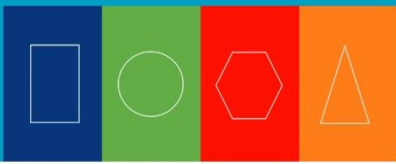
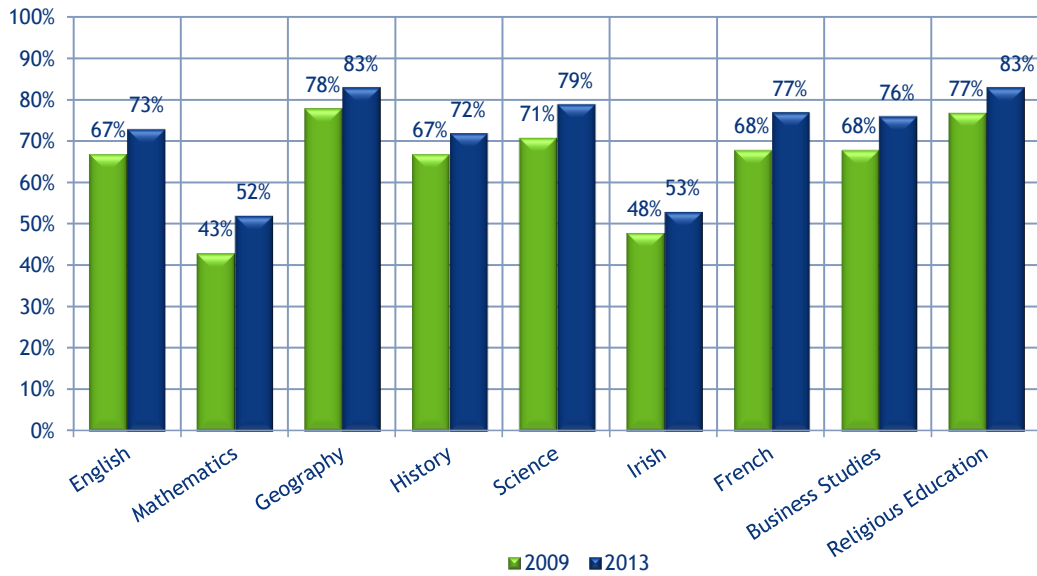


Figure 3.2 Junior Certificate Higher Level Participation Rates, 2009 and 2013



Source: State Examinations Commission

3.3.3 English, Mathematics and Scientific Literacy

Basic skills in English, mathematics and science are essential for work and participation in the economy as they form the core of basic education and lifelong learning. Table 3.2 provides details of students' achievements in the English, mathematics and science Junior Certificate examination. The data shows that

- in any given year, regardless of level, the vast majority (at least 93%) of candidates achieved a pass grade (i.e. grade D or higher) in Junior Certificate English, mathematics or science
- in mathematics and science, higher level candidates were slightly more likely to achieve a grade D or more than were their counterparts at ordinary level
- at 95% in 2013 and despite a two percentage point increase since 2012, ordinary level mathematics had the lowest pass rate each year.

Additionally, of the 3,901 students who sat foundation level mathematics, 97% (or 3,795) obtained at least a grade D in 2013 (not shown in Table). All told, the pass rate for mathematics (when all three levels are combined) averaged 96% in 2013, representing 56,712 candidates.

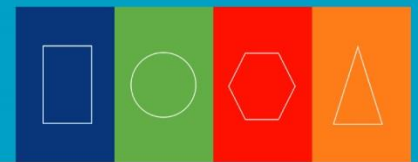


Table 3.2 Junior Cert Student Achievement in English, Maths and Science, 2009-2013

Subject	2009 ≥ D	2010 ≥ D	2011 ≥ D	2012 ≥ D	2013 ≥ D
Higher Level					
English	98%	99%	99%	98%	98%
Mathematics	96%	96%	96%	97%	97%
Science	98%	99%	99%	98%	99%
Ordinary Level					
English	98%	98%	98%	98%	98%
Mathematics	93%	93%	93%	93%	95%
Science	96%	96%	96%	96%	97%

Source: State Examinations Commission

3.3.4 Gender Distribution by Subject Choice 2013

Table 3.3 shows the distribution of males and females for each of the top ten Junior Certificate subjects (higher and ordinary level) in 2013. At higher level,

- the gender distribution was balanced for maths, geography and science; it was almost balanced (with just a one percentage point gap) for history and business studies
- the largest gender gap was in art, craft & design, where the number of female candidates was more than double that of males (females made up a 68% share; males a 32% share)
- females also strongly outnumbered males in languages and religious education with a gap of between six and 14 percentage points in the shares sitting each of these subjects.

At ordinary level, on the other hand, males outnumbered females in all selected subjects. In 2013,

- the gender gap was most pronounced for English (a 22 percentage point gap)
- males also greatly outnumbered females in science, other languages and religious education, each with a percentage point gap in excess of ten
- while there were slightly more males than females in history, the difference was small resulting in approximately equal shares of males and females.

Table 3.3 Gender Breakdown of Higher and Ordinary Level Subjects 2013

	Higher Level				Ordinary Level			
	Total Male	% Male	Total Female	% Female	Total Male	% Male	Total Female	% Female
English	20,541	47%	22,791	53%	8,858	61%	5,774	39%
Maths	15,129	50%	15,371	50%	12,778	52%	11,909	48%
Geography	23,154	50%	22,785	50%	4,884	52%	4,518	48%
History	19,732	51%	19,258	49%	7,781	50%	7,732	50%
Science	21,419	50%	21,004	50%	6,631	58%	4,858	42%
Irish	11,631	43%	15,729	57%	13,223	57%	10,022	43%
French	11,946	45%	14,366	55%	4,500	57%	3,461	43%
Business Studies	12,771	49%	13,065	51%	4,085	51%	3,898	49%
Religious Education	10,906	46%	12,892	54%	2,846	56%	2,201	44%
Art, Craft, Design	5,037	32%	10,933	68%	3,090	53%	2,695	47%

Source: State Examinations Commission

3.3.5 Gender Distribution of Junior Certificate Results

Tables 3.4 and 3.5 outline the achievements of males and females in terms of A, B and C grades in the most popular Junior Certificate subjects at higher and ordinary levels.

- At higher level (Table 3.4), while at least two thirds of males obtained a C grade or higher in any given subject, females had even higher shares; at least three quarters of females obtain a C grade or higher in each of the selected subjects, except geography and French
- The gender gap was most pronounced for English (a 13 percentage point gap) and art, craft & design (an eleven percentage point gap)
- Although there was also a considerable gap for other languages and religious education (between eight and nine percentage points each), it has narrowed somewhat compared to 2012
- At two percentage points, the smallest gender gap amongst higher level subjects was for mathematics
- At ordinary level, as at higher level, females outperform males in all selected subjects, except geography (Table 3.5)
- As at higher level, the gender gap at ordinary level was most pronounced for languages and art, craft & design; there was also an eight percentage point gap for business studies and religious education at ordinary level.

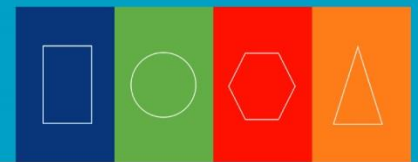


Table 3.4 Gender Differences in Achievement at Higher Level, Junior Certificate 2013

	Males \geq C	% Males*	Females \geq C	% Females*	Difference (Percentage Point)
English	13,958	68%	18,573	81%	13
Maths	11,715	77%	12,177	79%	2
Geography	16,203	70%	16,533	73%	3
History	13,704	69%	14,400	75%	6
Science	16,383	76%	17,011	81%	5
Irish	8,533	73%	12,857	82%	9
French	7,936	66%	10,632	74%	8
Business Studies	9,850	77%	10,515	80%	3
Religious Education	8,912	82%	11,619	90%	8
Art, Craft, Design	4,099	81%	10,067	92%	11

Source: State Examinations Commission

Table 3.5 Gender Differences in Achievement at Ordinary Level, Junior Certificate 2013

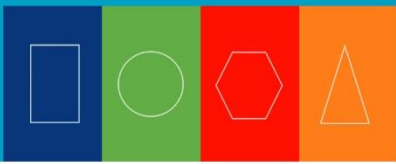
	Males \geq C	% Males*	Females \geq C	% Females*	Difference (Percentage Point)
English	6,740	76%	5,076	88%	12
Maths	9,560	75%	9,487	80%	5
Geography	3,727	76%	3,446	76%	0
History	5,806	75%	5,901	76%	1
Science	5,278	80%	4,133	85%	5
Irish	9,393	71%	8,283	83%	12
French	2,411	54%	2,200	64%	10
Business Studies	3,097	76%	3,275	84%	8
Religious Education	2,273	80%	1,931	88%	8
Art, Craft, Design	2,308	75%	2,264	84%	9

Source: State Examinations Commission

* % of all males/females sitting the subject at this level.

3.4 Early School Leavers

On completion of the Junior Certificate, the majority of students progress to the senior cycle and sit the Leaving Certificate two-three years later (see DES Retention Rates in Chapter 4). However, a small minority do not. Students who cease their education and training at this point are often



referred to as early school leavers. The CSO, among others, defines early school leavers as persons aged 18-24 years whose highest level of educational attainment is lower secondary or below and who have not received formal or informal education and training in the preceding four weeks prior to the survey. This section looks at the share of early school leavers in the population; the data is derived from the Quarterly National Household Survey (QNHS).

As shown in Table 3.6, 8.4% of all 18-24 year-olds had attained, at most, lower secondary education qualifications in quarter 4 2013. This is the lowest share of early school leavers observed over the period quarter 4 2009 - quarter 4 2013.

Males were more likely than females to be early school leavers. In quarter 4 2013, 9.5% of males in the relevant age cohort were early school leavers compared to 7.3% for females. While the female early school leaver rate declined by almost two percentage points between quarter 4 2009 and quarter 4 2013, the fall for their male counterparts was much more significant, going from 16% to 9.5% over the same period, possibly due, in part at least, to a lack of labour market opportunities in the construction sector for males in this cohort.

Table 3.6 Early School Leavers as a % of 18-24 Year-Olds by Gender, Quarter 4 2009- Quarter 4 2013

Early School Leavers	Q4 2009	Q4 2010	Q4 2011	Q4 2012	Q4 2013
Male	16.0%	12.9%	12.5%	10.1%	9.5%
Female	9.0%	9.6%	9.0%	7.3%	7.3%
Total	12.6%	11.3%	10.7%	8.7%	8.4%

Source: SLMRU (SOLAS) Analysis of CSO (QNHS) data

Figure 3.3 shows the share of early school leavers across EU countries in 2013. The share of early school leavers across the EU 28 countries in 2013 was, on average, 11.9%. Ireland, with an early school leaver rate of 8.4%, compares favourably internationally, ahead of countries such as the Spain (23.5%), the United Kingdom (12.4%), Germany (9.9%) and Finland (9.3%). Nonetheless, ten countries have early school leaver rates that are lower than Ireland's, among them Denmark, Austria and Sweden; other countries, such as Croatia and Slovenia, have rates that are less than half that observed for Ireland.

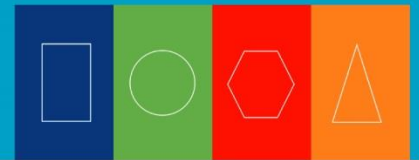
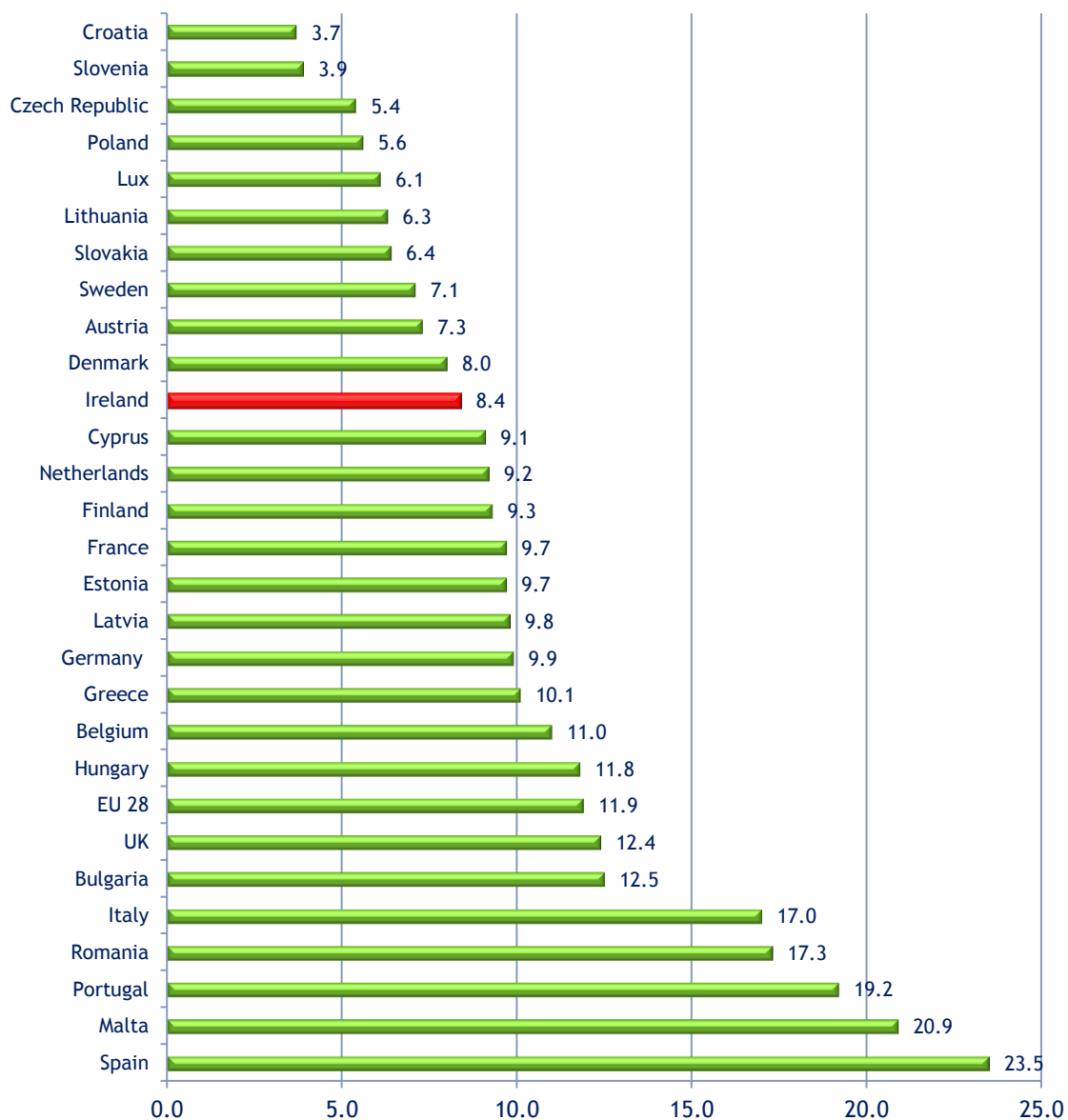


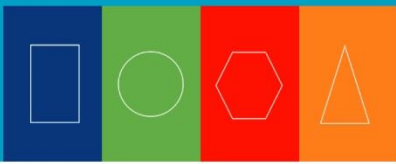
Figure 3.3 Early School Leavers as a Percentage of 18-24 Year-Olds in EU Member States, 2013



Source: Eurostat

3.5 International Comparison: PISA Results 2012

The Programme for International Assessment (PISA) is an international assessment of the knowledge and skills of 15-year-olds in reading, mathematics and science, sponsored by the Organisation for Economic Co-operation and Development (OECD). PISA takes place in OECD and partner countries every three years. The first PISA cycle was in 2000; the most recent in 2012. This section is based



on the findings of the most recent PISA cycle²¹, focusing on the achievements of 15-year-olds in Ireland as compared to their international peers across three domains: reading, mathematics and science.

In 2012, approximately 510,000 students in 65 countries (34 OECD countries + 31 partner countries and economies) participated in PISA 2012. In Ireland, approximately 5,000 students across 182 schools completed the PISA assessment in March 2012. The latest PISA results, presented in Table 3.7, show Ireland's 15-year-olds scored above the OECD average in each of the three assessment domains.

The sections that follow provide greater detail on each of the three subject areas tested in PISA 2012. It also provides details on the computer based assessments that were also carried out, in addition to the print assessments, mathematics and reading.

3.5.1 Mathematics

Overall performance

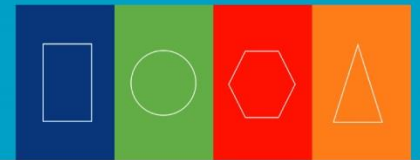
In 2012, Ireland's performance in mathematics was significantly above the OECD average, placing Ireland 13th out of 34 OECD countries overall, as detailed in Table 3.7. This above average performance was partly due to a relatively good performance of lower achieving students²² in Ireland when compared to their international peers: at 16.9%, the share of low-achievers in Ireland was below the OECD average of (23%) (Perkins et al. 2013). In contrast, higher achieving students in Ireland performed relatively less well than those in other countries: at 10.7% for Ireland, the share of top performers in mathematics was also below the OECD average (12.6%). It should be borne in mind that approximately 15% of Irish 15-year-olds had studied the revised mathematics syllabus (Project Maths) at the time they sat the PISA 2012 test and therefore the full impact of the roll-out of Project Maths is not reflected in the PISA 2012 results.

Previous mathematics assessment

When compared to previous assessments, the average score obtained by Ireland's students in mathematics did not differ significantly from that obtained in 2003 and 2006, although it was significantly higher than in 2009. However, for the first time, Ireland's mean score in mathematics was significantly above the OECD average; previously Ireland's mean score had been either at the OECD average (2003 and 2006) or significantly below the OECD average.

²¹ Findings for Ireland were published in *Learning for Life: the achievements of 15-year-olds in Ireland on mathematics, reading literacy and science in PISA 2012* (Perkins, Sheil, Merriman, Cosgrove & Moran: 2013), Education Research Centre.

²² Student achievement is assessed in terms of proficiency levels. There are six proficiency levels, with the lowest being level 1 and the highest, level 6. Lower achieving students are those who scored at or below level 2 on the proficiency scale; higher achieving students are those that scored at levels 5 or 6.



3.5.2 Reading literacy

Overall performance

In 2012, Ireland's performance in reading was significantly above the OECD average, placing Ireland fourth out of 34 OECD countries overall, as detailed in Table 3.7 (following page). The above average performance of Irish students in reading literacy is partly due to the strong performance of lower achievers in Ireland relative to their international counterparts (9.6% of Ireland's 15 year-olds were at or below level 2, which is considerably below the OECD average of 18%); in addition higher-achieving students in Ireland also performed at above-average levels: the share of top achievers amongst Ireland's 15-year-olds in reading was 11.4%, compared to the OECD average of 8.5%.

Previous reading literacy assessment

When compared to previous assessments, the average score obtained by Ireland's students in reading did not differ significantly from that obtained in 2000, 2003 and 2006, although it was significantly higher than in 2009. With the exception of 2009 (when it was at the average), Ireland's mean score in reading was significantly above the OECD average in each of the assessment cycles.

3.5.3 Science

Overall performance

In 2012, Ireland's performance in science was significantly above the OECD average, placing Ireland ninth out of 34 OECD countries overall, as detailed in Table 3.7. In addition, the share of lower achievers in science, at 11%, was below the OECD average (17.8%) and the share of top achievers was slightly above the OECD average (10.8% compared to 8.4%), indicating that Ireland's performance in science was partly due both to a relatively strong performance amongst low achievers and a better than average performance amongst high achievers.

Previous reading literacy assessment

When compared to previous assessments, the average score obtained by Ireland's students in science was significantly higher than that obtained in 2006 and 2009, as well as being significantly higher than the corresponding OECD averages in 2006, 2009 and 2012.

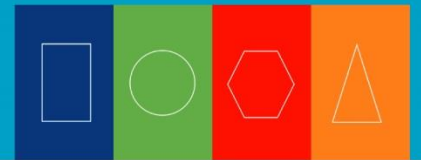
Table 3.7 Student Performance in Mathematics, OECD Countries (Rankings), 2012

Mathematics		Reading		Science	
1	Korea	1	Japan	1	Japan
2	Japan	2	Korea	2	Finland
3	Switzerland	3	Finland	3	Estonia
4	Netherlands	4	Ireland	4	Korea
5	Estonia	5	Canada	5	Poland
6	Finland	6	Poland	6	Canada
7	Canada	7	Estonia	7	Germany
8	Poland	8	New Zealand	8	Netherlands
9	Belgium	9	Australia	9	Ireland
10	Germany	10	Netherlands	10	Australia
11	Austria	11	Switzerland	11	New Zealand
12	Australia	12	Belgium	12	Switzerland
13	Ireland	13	Germany	13	Slovenia
14	Slovenia	14	France	14	United Kingdom
15	Denmark	15	Norway	15	Czech Republic
16	New Zealand	16	United Kingdom	16	Austria
17	Czech Republic	17	United States	17	Belgium
18	France	18	Denmark	18	OECD Average
	OECD Average		OECD Average	18	France
19	United Kingdom	19	Czech Republic	19	Denmark
20	Iceland	20	Italy	20	United States
21	Luxembourg	21	Austria	21	Spain
22	Norway	22	Hungary	22	Norway
23	Portugal	23	Spain	23	Hungary
24	Italy	24	Luxembourg	24	Italy
25	Spain	25	Portugal	25	Luxembourg
26	Slovak Republic	26	Israel	26	Portugal
27	United States	27	Sweden	27	Sweden
28	Sweden	28	Iceland	28	Iceland
29	Hungary	29	Slovenia	29	Slovak Republic
30	Israel	30	Greece	30	Israel
31	Greece	31	Turkey	31	Greece
32	Turkey	32	Slovak Republic	32	Turkey
33	Chile	33	Chile	33	Chile
34	Mexico	34	Mexico	34	Mexico

Source PISA 2012 Results²³

Note: Grey cells indicate students' performance did not significantly differ from the OECD average.

²³ Tables 1.2.3b, 1.4.3b and 1.5.3b; available at <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-i.html>



3.5.4 Computer Based Assessments

Mathematics

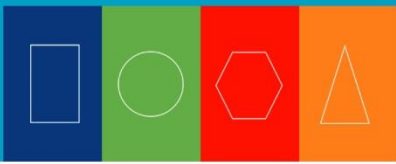
In addition to assessing mathematics performance on printed material, PISA 2012 also assessed computer-based mathematics performance. In computer-based mathematics, Ireland's 15 year-olds performed significantly less well than on the print mathematics assessment: Ireland was ranked 15th out of 23 participating OECD countries (not all countries participated in the computer-based assessment), with a score that was at the OECD average.

Digital reading performance

In addition to assessing print reading literacy, PISA 2012 also assessed digital reading literacy. In digital reading literacy, Ireland's 15 year-olds performed significantly above the OECD average, ranking fifth out of 23 OECD countries. There was no significant difference between Ireland's mean score on the print reading assessment when compared to the digital reading assessment.

Problem Solving

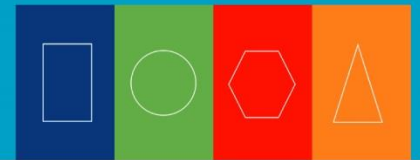
PISA 2012 also assessed computer based problem solving. The performance of Ireland's 15 year-olds was at the OECD average. Ireland's students performed less well on computer based problem solving tasks than would have been predicted on the basis of their scores in the print assessments of mathematics, reading and science.



Chapter 4 Leaving Certificate (Levels 4/5)

Key Points

- **Total sits:**
 - at just over 55,500 sits, the number of students who sat the Leaving Certificate in 2013 was broadly in line with that of 2012
- **Retention rate:**
 - The Leaving Certificate retention rate for those who entered the second level education system was just over 90%
 - Females were more likely to sit the Leaving Certificate examination, with a retention rate of 91.9%, compared to 88.4% for males
- **Subjects:**
 - With c.51,000 sits, English and mathematics had the highest number of sits, followed by CSPE
 - With a 60% uptake rate, biology was the most popular science subject followed by chemistry at 15% and physics at 12%; three quarters of all those who sat biology took the higher level paper
- **Higher level sits:**
 - More than half of all the students who sat the top ten subject choices in the Leaving Certificate opted for the higher level paper, with the exception of mathematics and Irish
 - Females outnumbered males in seven of the top ten higher level subjects; more males sat higher level papers in geography, mathematics and history
- **Mathematics:**
 - Just over one quarter (26%) of all those who sat mathematics, took the higher level paper, a three percentage point rise on the number of higher level sits in 2012
 - Of the cohort who took the higher level mathematics paper, 97% received at least a pass grade
- **CAO points:**
 - at 59% in 2013, the greater share of students achieved at least 300 CAO points (equivalent to at least a D2 grade in six higher level papers).



4.1 Introduction

This chapter provides an overview of the Leaving Certificate, which spans levels 4 and 5 on the National Framework of Qualifications, and the supply of skills from persons completing this examination. Following a brief description of the Leaving Certificate and the candidates who typically take the exam, an analysis of trends in Leaving Certificate subjects is presented according to (a) science and related subjects, (b) business and related subjects, (c) languages and (d) gender distribution of subject choices. Grade achievements for key subjects are also included. The final section of this chapter examines recent trends in CAO points achievements of Leaving Certificate candidates.

4.2 The Leaving Certificate - Examination and Candidates

The Leaving Certificate examination is taken by candidates typically aged 16-18 years following five or six years in full time education. It is the final examination taken at the end of the senior cycle. The Leaving Certificate examination may also be taken by candidates studying outside the formal school system. In 2012, 961 candidates were re-entrants to education, entered for the Leaving Certificate examination through the Vocational Training Opportunities Scheme (VTOS); this is a 7% decline on the number in 2011.

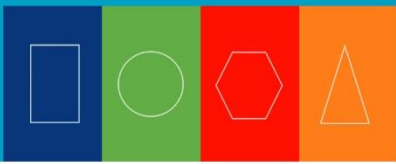
Not all students who enter second level education will complete the Leaving Certificate. The Department of Education and Skills (2014)²⁴ estimated that, of the total cohort of students who began the junior cycle (i.e. first year of second level) in 2007,

- approximately 90% sat the Leaving Certificate examination five to six years later, depending on whether they took the Transition Year programme; this is in line with the rate observed for the 2005 and 2006 entry cohorts
- with a retention rate of 91.9%, females were more likely than males to sit the examination, (the retention rate for males was 88.4%); despite this gap (of almost four percentage points), the difference between female and male retention rates has narrowed over the last number of years: the gap was more than eleven percentage points for the 1995 entry cohort and almost nine percentage points for the 2001 entry cohort.

Figure 4.1 shows the total number of Leaving Certificate candidates each year between 2009 and 2013. In 2013,

- there were approximately 55,600 Leaving Certificate candidates; the number of male candidates was marginally greater at 28,129 (compared to 27,443 female candidates)
- the number of Leaving Certificate sits was the lowest observed over the period 2009-2013, with numbers in 2013 being 3% lower than in 2009 (when there were almost 57,500 sits)
- when compared to 2012, however, there was little change in the number of sits (the 0.4% decrease in numbers amounted to approximately 250 fewer sits); this may indicate that the

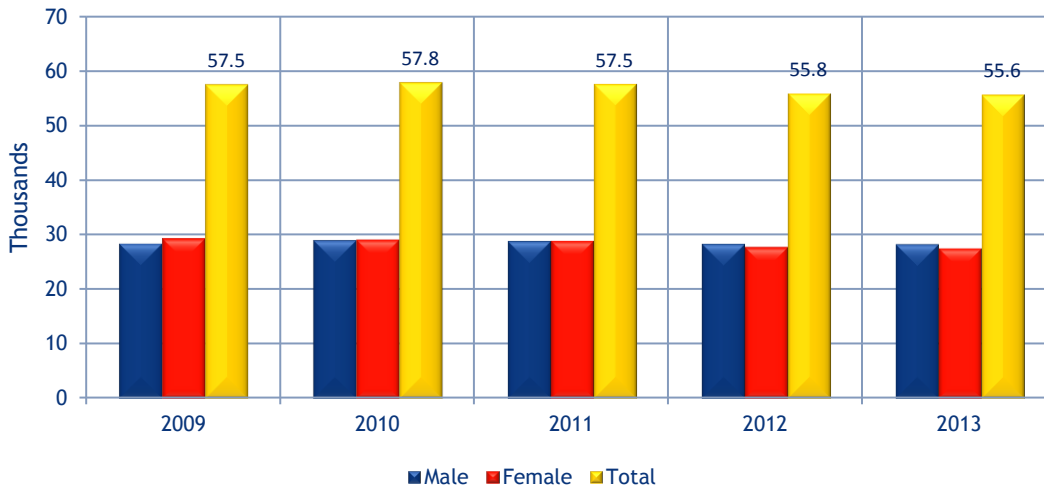
²⁴ *Retention Rates of Pupils in Second Level Schools: 2007 Entry Cohort* (Golden, G: 2014)



downward trend in Leaving Certificate candidate numbers has halted; based on increases in both junior cycle enrolments and Junior Certificate sits in recent years, the number of Leaving Certificate sits is likely to rise in the short-medium term

- there were 2,095 repeat Leaving Certificate candidates in 2013, representing a 16% decline since 2012.

Figure 4.1 Number of Leaving Certificate Candidates, 2009-2013



Source: State Examinations Commission

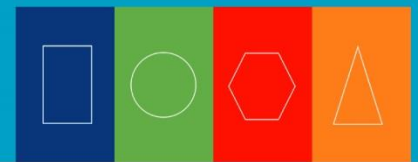
Note: Data for 2013 is provisional.

4.3 Leaving Certificate Programme Types

There are three types of programmes which lead to the Leaving Certificate award: Leaving Certificate Established, Leaving Certificate Vocational Programme and Leaving Certificate Applied.

- The Leaving Certificate Established (LCE) programme is designed to provide students with a broad and balanced education while allowing for some specialisation; the certificate is used for the purposes of progression to further and higher education and training or entry to the labour market.
- The Leaving Certificate Vocational Programme (LCVP) is an academic and experience based programme; it is not a separate stand-alone programme but is designed to provide a strong vocational dimension to the Leaving Certificate Established programme. This vocational focus is achieved by arranging Leaving Certificate subjects into Vocational Subject Groupings (VSGs)²⁵ and through the provision of additional courses of study in work preparation and enterprise known as the Link Modules.

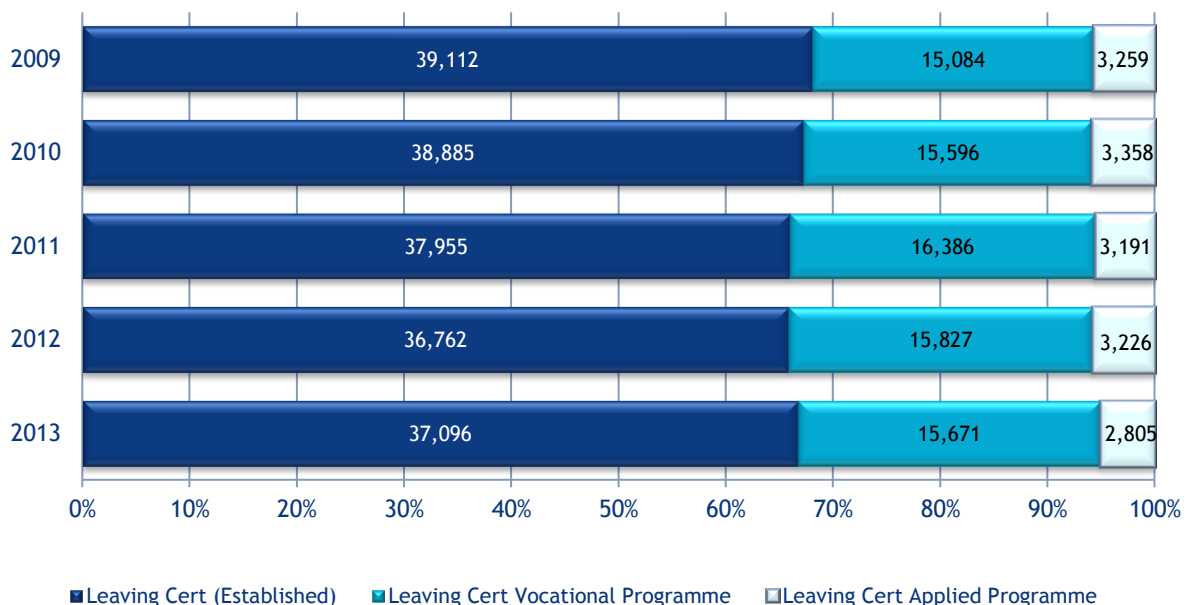
²⁵ VSGs: two subjects are selected from one of the Vocational Subject Groupings. These subjects aim to develop vocational skills and explore career options. The Specialist Groupings consist of subjects which complement one another naturally (e.g. any two subjects from the following: construction studies, engineering, design and communication graphics, or technology). The Services Groupings comprise subjects which complement one another in a commercial context (e.g. home economics and accounting or business or economics).



- The Leaving Certificate Applied (LCA) programme was introduced in 1995 and is designed for students who do not wish to proceed directly to higher education or whose needs and aptitudes are not fully served by the other two Leaving Certificate programmes; the LCA is a distinct, self-contained programme. While the certificate can be used for the purposes of progression to either further education/training or the labour market, direct entry to higher education is not possible.

Figure 4.2 shows that in 2013, approximately two thirds of all candidates took the Leaving Certificate Established, 28% the LCVP and the remaining 5%, the LCA programme. There was a one percentage point drop in the share of LCA candidates in 2013; this was offset by a one percentage point rise in the share of LCE candidates for the same year. The share of LCVP candidates remained the same.

Figure 4.2 Leaving Certificate Candidates by Programme Type, 2009-2013



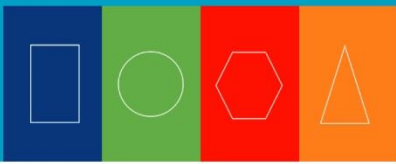
Source: State Examinations Commission

4.4 Leaving Certificate (LCE & LCVP): Subject Uptake & Higher Level Rates

4.4.1 Top Ten Subject Choice

Leaving Certificate Established students and Leaving Certificate Vocational Programme students sit the same examination for each of their subject choices (with the exception of the Links Module for the LCVP candidates). Figure 4.3 shows that

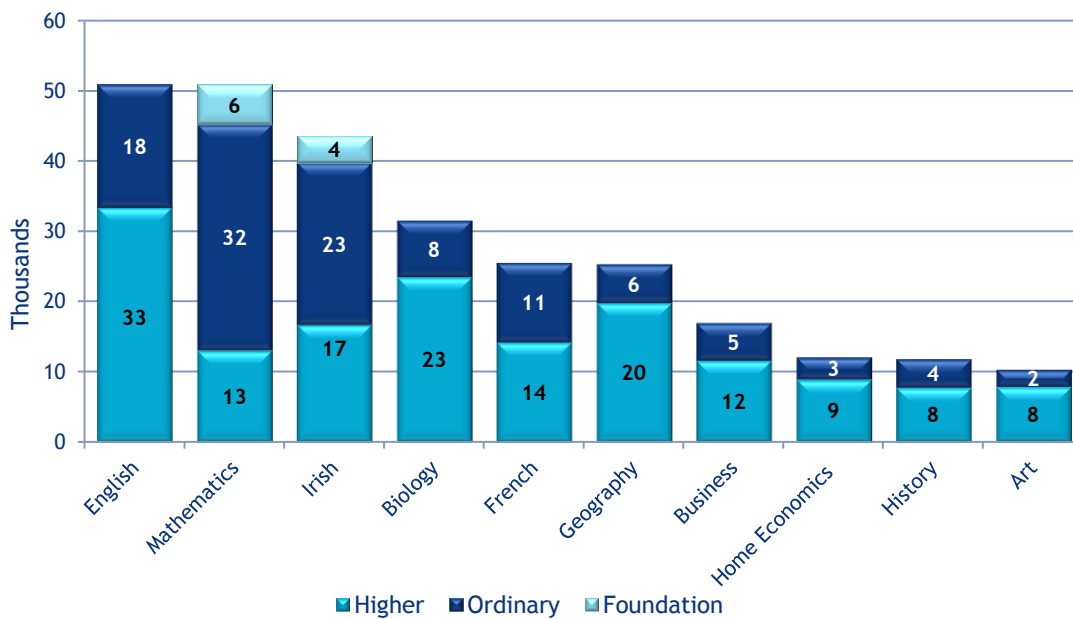
- English and mathematics had the highest number of sits, with almost 51,000 sits each; this was followed by Irish (over 43,500 sits); the relatively high number of sits in these three subjects is



related to the fact that for most second level students they are compulsory and often a requirement for entry to higher education

- biology was the fourth most popular Leaving Certificate subject with 31,500 sits; as in previous years, it was the only science subject in the top ten; chemistry, agricultural science and physics were ranked outside the top ten, in 11th, 13th and 15th place respectively
- with the exception of languages and mathematics, at least two thirds of candidates sitting each of the top ten Leaving Certificate subjects sat the higher level paper, with the share exceeding three quarters for art (76%) and geography (78%)
- at 26% (13,014 sits), mathematics had the smallest share of students taking the higher level paper; however, this marks an increase when compared to preceding years and it is the first time the higher level uptake rate has exceeded one quarter; furthermore, the number of Leaving Certificate students planning to sit higher level maths in 2014 has continued to grow relative to 2013, suggesting that this upward trend will continue into 2014
- approximately 11% of all mathematics students and 9% of all Irish students took the foundation level examination.

Figure 4.3 Top Ten Leaving Certificate Subjects by Level (000s), 2013

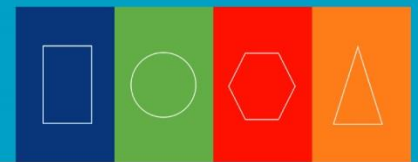


Source: State Examinations Commission

4.4.2 Science Subjects

This section focuses on mathematics and subjects known as ‘core science subjects’ or ‘laboratory science subjects’²⁶. Some programmes offered in higher education require at least one core science

²⁶ Laboratory science subjects include biology, physics, chemistry, and physics and chemistry. Physics and chemistry, sometimes abbreviated to phys-chem, is a Leaving Certificate subject which covers some elements of the physics syllabus and some of the chemistry syllabus. Candidates are not normally allowed to sit phys-chem in combination with either physics or chemistry. Subjects such as applied mathematics or agricultural science are sometimes accepted as laboratory science subjects, although this varies between college and course.



subject at Leaving Certificate in addition to mathematics. For example, entry to the dentistry programme at UCC requires at least a grade C in higher level chemistry (in addition to mathematics and either physics or biology) and the human health and disease programme at Trinity College requires at least a grade C in higher level biology (in addition to a grade C in higher level in one of the following: physics, chemistry or phys-chem).

Table 4.1 presents the total number of sits, the uptake rates (i.e. the share of total students who sat each subject) and the higher level participation rates for selected science subjects in 2013. In 2013,

- at 96%, almost all students sat mathematics
- of the remaining science-related subjects, biology continues to be the most popular with an uptake rate of 60%
- chemistry and physics each had an uptake rate of 15% and 12% respectively, while phys-chem had an uptake rate of 1%
- Chemistry had the greatest higher level participation of all science related subjects (83%), while mathematics had the lowest (26%).

Table 4.1 also compares the total sits, uptake rate and higher level participation rate over the five-year period between 2009 and 2013. The data shows that for the overall uptake rates, there was

- a rise for biology of eight percentage points between 2009 and 2013 (up from 52% to 60%)
- a one percentage-point increase for chemistry (from 14% to 15%)
- a decline in the rate for physics (from 13% to 12%), resulting in approximately 500 fewer sits

In terms of higher level participation, there was a rise for mathematics of ten percentage points (from 16% to 26%); despite this, the share of candidates sitting higher level mathematics continues to be the smallest higher level participation rate of all Leaving Certificate subjects outlined in this report.

Table 4.1 Selected Science Subjects: Total Sits, Uptake Rate and Higher Level Participation 2009 & 2013

	2009			2013		
	Sits	Uptake	Higher Level Participation	Sits	Uptake	Higher Level Participation
Maths	51,905	96%	16%	50,856	96%	26%
Biology	28,101	52%	72%	31,497	60%	74%
Chemistry	7,403	14%	82%	8,156	15%	83%
Physics	6,924	13%	68%	6,448	12%	75%
Phys-chem	519	1%	79%	423	1%	78%

Source: State Examinations Commission

Science Subject Combinations

- The Leaving Certificate students who took at least two science subjects (biology, physics, chemistry, or phys-chem) in 2012 and 2013 are shown in Table 4.2. In 2013, the most popular combination of core science subjects was biology and chemistry (5,850 sits), followed by biology and physics (2,118).
- When compared to 2012, there were small increases in the number of students sitting each of the two-subject combinations, except biology and physics (which remained unchanged).

Table 4.2 Students Sitting at Least Two Leaving Certificate Science Subjects, 2012 & 2013

Subject Combinations	2012 Sits	2013 Sits
Biology & Chemistry	5,814	5,850
Biology & Physics	2,118	2,118
Chemistry & Physics	1,976	2,095
Biology & Phys-Chem	181	232

Source: State Examinations Commission

4.4.3 Selected Business Related Subjects

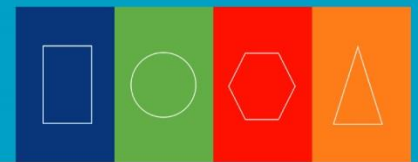
The number of Leaving Certificate students who took business related subjects in 2009 and 2013 is outlined in Table 4.3. In 2013,

- business was by far the most popular subject in this group with almost 17,000 sits, translating into an uptake rate of almost a third
- accounting and economics had considerably smaller uptake rates in comparison to business at (11%) and (9%) respectively
- at least two thirds of candidates in each of these subjects sat the higher level paper; economics had the greatest share of candidates participating at higher level (81%); however, the numbers involved are comparatively small
- when compared to 2009, the uptake rates declined slightly (by two percentage points each) for business and accounting but increased for economics (by one percentage point); higher level participation remained broadly similar for business and accounting, but increased by four percentage points for economics.

Table 4.3 Selected Business Subjects: Total Sits, Take-up and Higher Level Participation 2009 & 2013

	2009			2013		
	Sits	Uptake	% Higher Level	Sits	Uptake	% Higher Level
Business	18,423	34%	67%	16,932	32%	68%
Accounting	6,893	13%	70%	5,673	11%	69%
Economics	4,578	8%	77%	4,632	9%	81%

Source: State Examinations Commission



4.4.4 Selected Language Subjects

Table 4.4 presents the number of students who sat the seven most popular language subjects in the Leaving Certificate examination, along with the number of sits, uptake rates and higher level participation rates. For most Leaving Certificate students, English and Irish are compulsory subjects.

The data shows that

- the vast majority of Leaving Certificate candidates sat both English and Irish, with uptake rates in 2013 of 96% and 83% respectively
- the uptake rate for foreign²⁷ languages was less than 50% in all cases; French was by far the most popular foreign language with a 48% uptake rate, followed by German (13%) and Spanish(9%)
- with the exception of Irish, more than half of all language candidates sat the higher level paper; apart from mathematics, Irish has the smallest higher level participation rate out of all Leaving Certificate subjects (38%)

Between 2009 and 2013, there was a

- decrease in uptake rates for Irish, French and German; French had the largest decline (-three percentage points) followed by Irish and German (down by one percentage point each); in contrast the uptake for English and Spanish rose
- higher level participation rates rose for all subjects between 2009 and 2013, except for Japanese, which declined by three percentage points (although the numbers involved are small).

Table 4.4 Selected Languages: Total Sits, Uptake and Higher Level Participation 2009 and 2013

	2009			2013		
	Sits	Uptake	% Higher Level	Sits	Uptake	% Higher Level
English	51,033	94%	64%	50,817	96%	65%
Irish	45,643	84%	32%	43,651	83%	38%
French	27,675	51%	49%	25,517	48%	56%
German	7,574	14%	58%	6,644	13%	65%
Spanish	3,277	6%	57%	4,903	9%	60%
Italian	318	1%	70%	352	1%	73%
Japanese	249	0%	84%	257	0%	81%

Source: State Examinations Commission

²⁷ In this context, the word 'foreign' is used to denote a language which is not recognised as one of the official languages of Ireland. As such, languages other than Irish or English are referred to as foreign languages.

Foreign Language Subject Combinations

Table 4.5 shows the number of students who sat at least two of the selected foreign languages in the 2013 Leaving Certificate examination. The data is broken down by languages taken. The foreign languages covered are French, German, Spanish, Russian²⁸ and Japanese. The analysis excludes non-curricular languages, which are not formally taught in the second level system, but which are discussed later in this section.

- In 2013, as in previous years, students sitting more than one foreign language were most likely to take French in combination with one other language; the most popular combination was French and Spanish (235 sits), followed by French and German (229 sits)

Table 4.5 Students Sitting at Least Two Leaving Certificate Foreign Language Subjects, 2013

	French	German	Spanish	Japanese	Russian	Total
French	*	229	235	87	111	662
German	229	*	45	38	32	344
Spanish	235	45	*	25	31	336
Japanese	87	38	25	*	0	150
Russian	111	32	31	*	*	174

Source: State Examinations Commission

* Numbers not applicable or too small to report.

Non-Curricular EU Languages

Candidates may also sit the Leaving Certificate examination in a non-curricular EU language. A non-curricular EU language does not form part of the normal school curriculum but students who are from an EU member state and who speak the language as a mother tongue may opt to be examined in that language. Candidates may sit only one non-curricular language subject for the Leaving Certificate examination. Table 4.6 presents the total number of non-curricular language sits over the period 2009 - 2013, showing that

- at 1,470 sits, the total number of non-curricular language sits reached the highest number to date in 2013, having increased by 80% (more than 600 sits) since 2009
- although the absolute number of sits rose over the period 2009 and 2013, most of the increases occurred between 2009 and 2011 (when numbers increased by 54%); since then, growth between 2012 and 2013 slowed to 7%
- at 52% in 2013, more than half of all non-curricular language sits were for Polish, with numbers more than doubling when compared to 2009.

²⁸ Russian is unusual in that it is a curricular language, taught as a timetabled subject in some schools, but often taken by students for whom it is a 'heritage' language (i.e. they may have studied Russian as a foreign language in another country; or they may speak Russian in the home) rather than by students learning it as a foreign language.

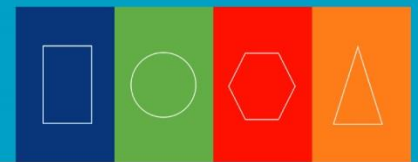


Table 4.6 Non-Curricular Languages (Sits) 2009-2013

	2009	2010	2011	2012	2013
Polish	328	451	574	707	769
Lithuanian	176	207	254	262	254
Romanian	92	121	115	109	130
Others*	87	97	122	122	129
Latvian	48	96	111	87	105
Portuguese	55	49	57	63	58
Dutch	31	29	29	20	25
Total	817	1,050	1,262	1,370	1,470

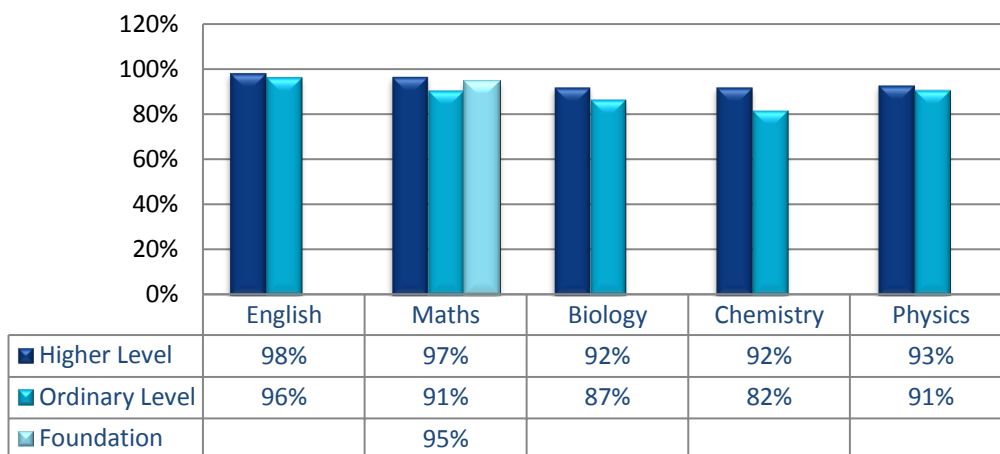
Source: State Examinations Commission

* Others: including Slovakian, Bulgarian, Hungarian, Swedish, Danish, Czech, Modern Greek, Finnish, and Estonian.

4.4.5 Leaving Cert Achievement by Subject and Level

- Figure 4.4 presents candidates' achievements in terms of the number of students obtaining at least a D grade in the key areas of mathematics, English and core science subjects. The data shows that
 - at any given level, more than 80% of all candidates obtained a pass grade in mathematics, English and each of the core science subjects
 - English had the highest pass rate for both higher and ordinary level at 98% and 96% respectively
 - Maths had the second highest pass rate at higher level (97%)
 - in each of the core science subjects, more than 90% of those who sat the higher level paper obtained at least a D grade; pass rates for ordinary level tended to be smaller, with 82% in ordinary level chemistry and 87% in ordinary level biology

Figure 4.4 Leaving Cert Achievements in Core Subjects by Level (% with grades ≥ D), 2013



Source: State Examinations Commission

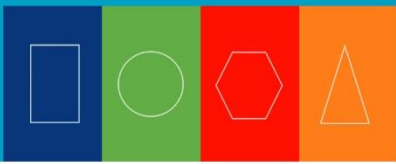
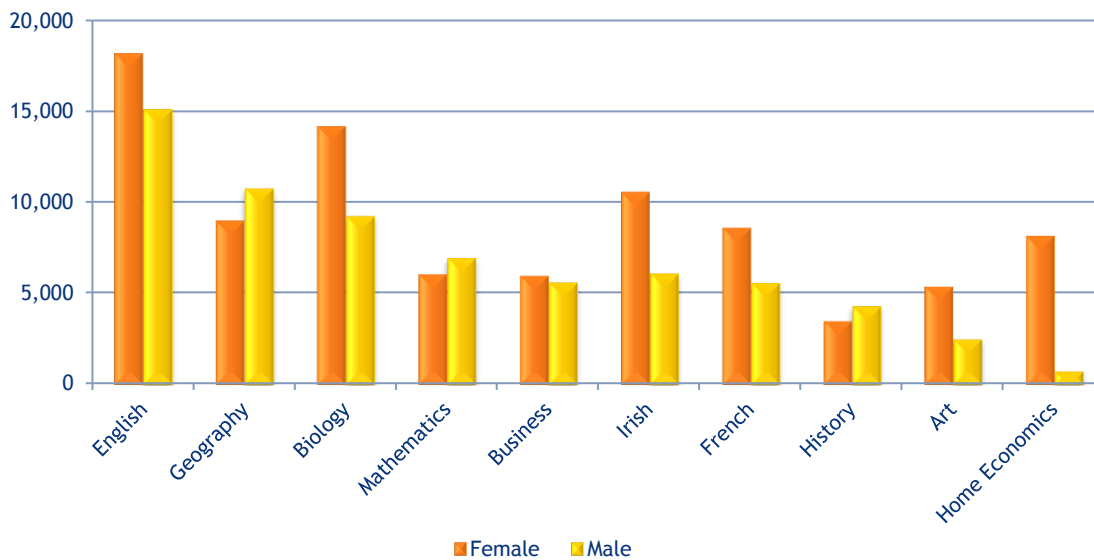


Figure 4.5 (higher level) and Figure 4.6 (ordinary level) outline the gender distribution of candidates who sat the ten most popular subjects in the Leaving Certificate examination in 2013. At higher level,

- females outnumbered males in seven of the top ten higher level subjects; the gender gap was largest in home economics (7,500 more females than males), biology (5,000 more) and Irish (4,500 more females)
- more males sat higher level papers in geography, mathematics and history
- the gender distribution was closest to balanced for business studies, where there were just over one half of all candidates were female.

Figure 4.5 Top Ten Leaving Cert Subject Choice by Gender (Higher Level), 2013



Source: State Examinations Commission

At ordinary level,

- males outnumbered females in English, Irish, history and geography, and, to a lesser extent (by just 217 extra persons) business;
- females outnumbered males in home economics, biology, mathematics and French; while they also outnumbered males for art, the difference was small (< 100 persons)

At foundation level, only offered in mathematics and Irish, (not in graph), more candidates sat foundation level mathematics (5,677) than Irish (3,916). Males outnumbered females in both subjects; 64% of those who sat mathematics were male while 48% of foundation level Irish candidates were female.

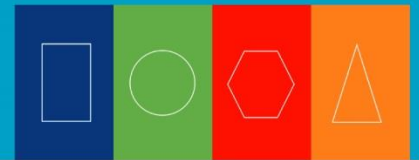
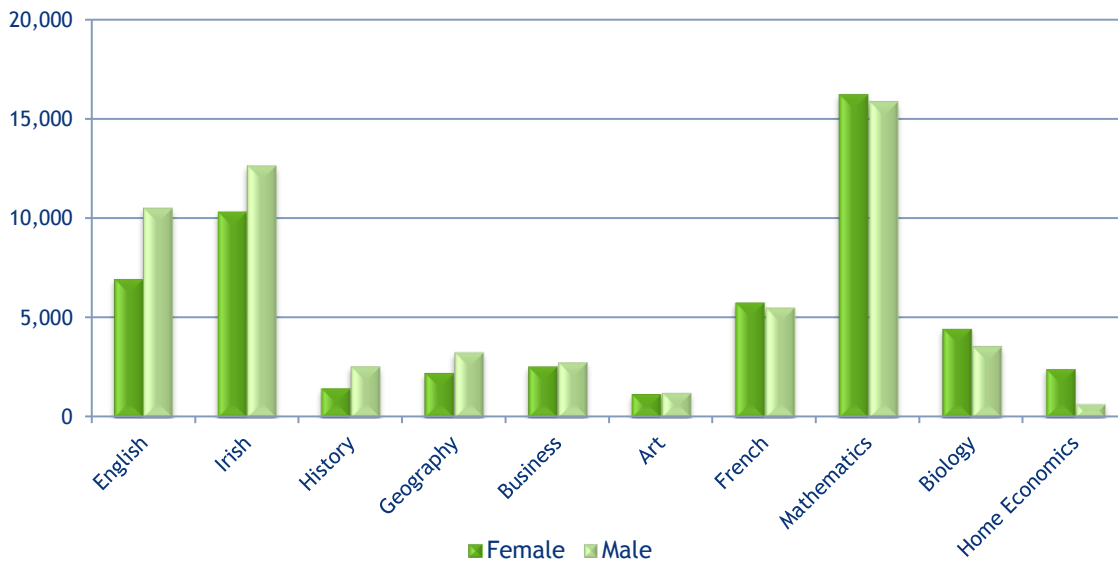


Figure 4.6 Top Ten Leaving Cert Subject Choice by Gender (Ordinary Level), 2013



Source: State Examinations Commission

The gender breakdown of achievement for students obtaining at least a D grade in the top ten Leaving Certificate subjects in 2013 is presented in Figures 4.7 (higher level) and 4.8 (ordinary level).

- With the exception of higher level Irish and ordinary level geography and history, females were more likely to achieve at least a D grade in all of the selected subjects, regardless of level; for higher level Irish and ordinary level geography, males and females were almost equally likely to obtain a pass grade, while for ordinary level history, males were more likely to gain a pass grade
- The difference between males and females was less pronounced at higher level, with the exception of home economics where the percentage point gap was larger at higher level (8 points, compared to 2 points at ordinary level)
- At ordinary level, the largest gender gap was observed in biology where 83% of males obtained at least a grade D, compared to 89% of females

At foundation level (not illustrated), in mathematics, 96% of females and 94% of males obtained at least a grade D; for Irish, 97% of females and 92% of males achieved at least a pass grade.

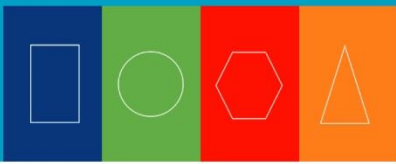
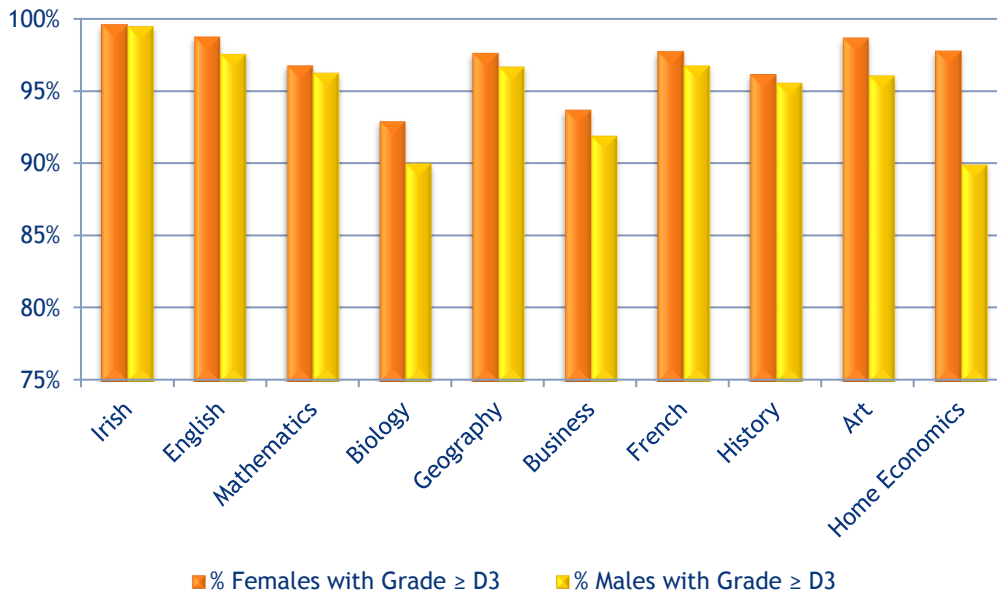
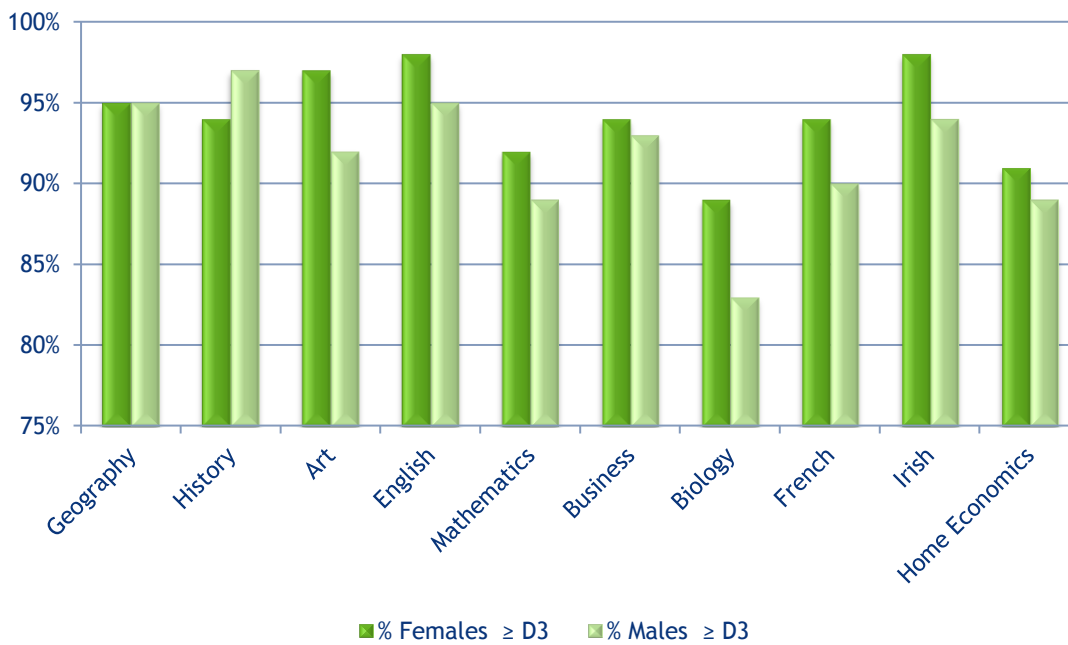


Figure 4.7 Gender Breakdown of Achievement (\geq D3) at Higher Level, 2013

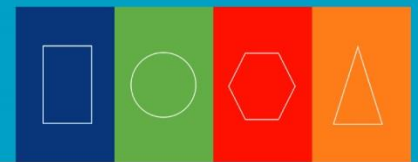


Source: State Examinations Commission

Figure 4.8 Gender Breakdown of Achievement (\geq D3) at Ordinary Level, 2013



Source: State Examinations Commission



4.5 Leaving Certificate Applied Results

The LCA programme is comprised of a range of courses, each designed on a modular basis and delivered over four half-year sessions. Participants complete a total of 44 modules with eleven modules per session. The outcome of student assessment in the LCA is stated in the form of credits: a maximum of 200 credits can be gained by each student through a combination of successful completion of modules and the sitting of final examinations. 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.

The Leaving Certificate Applied is awarded at three levels:

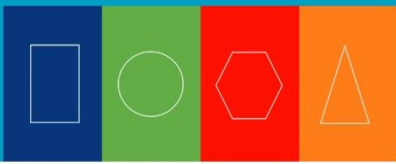
Pass	60-69%	120-139 Credits
Merit	70-84%	140-169 Credits
Distinction	85-100%	170-200 Credits

Candidates who obtain less than 60% (120 credits) or who leave school prior to the completion of the programme receive a record of credits.

Holders of the Leaving Certificate Applied award are eligible to enter a range of Post-Leaving Certificate (PLC) courses, apprenticeships, courses offered by Fáilte Ireland or other further education and training; many of these courses will lead to a QQI-FETAC level 5 award and in some cases a QQI-FETAC level 6 award. While Leaving Certificate Applied award holders cannot proceed directly through the Central Applications Office (CAO) system to the universities or institutes of technology, those who hold a QQI-FETAC level 5 or 6 award may subsequently apply for some third-level courses in higher education institutions (including universities, institutes of technology and private, independent colleges)²⁹.

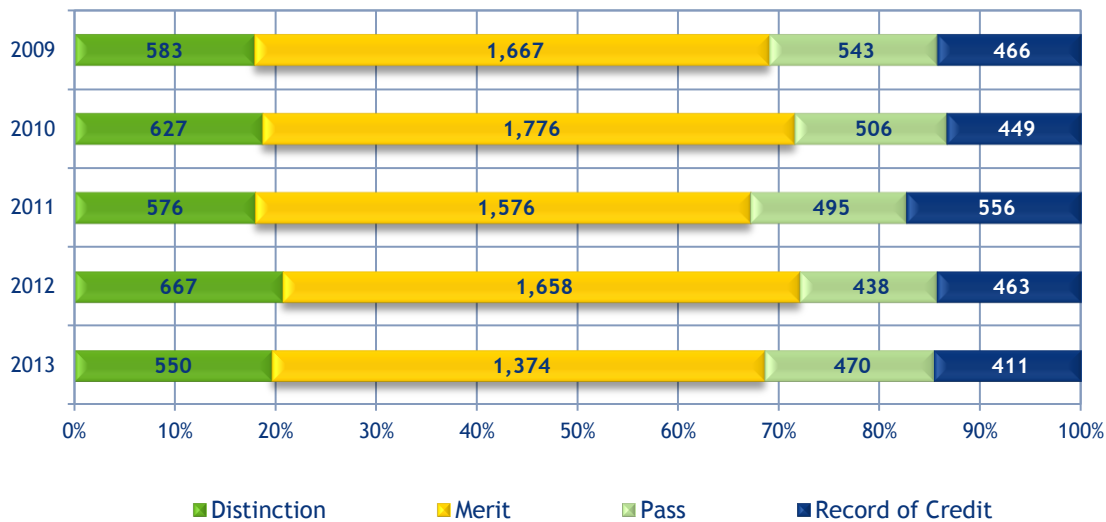
- More than 2,800 students sat the Leaving Certificate Applied programme in 2013, representing approximately 5% of all Leaving Certificate students that year (Figure 4.9)
- Of these, 20% received a distinction, over 49%, a merit, approximately 17% a pass, and the remaining 15%, a record of credit

²⁹ There are approximately 40 higher education institutions nationwide that make a number of places available to holders of FETAC major awards on undergraduate higher education programmes spanning levels 6-8 on the NFQ.



- Compared to the distribution of results in 2009, the share of students obtaining a distinction increased, by two percentage points to 20%; the shares awarded a merit, declined by two percentage points to 49%; the number of pass awards and records of credit also decreased by one percentage point each

Figure 4.9 Leaving Certificate Applied Results, 2009-2013



Source: State Examinations Commission

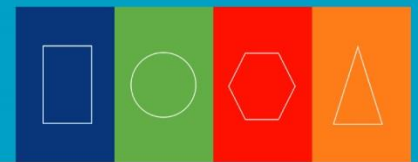
4.6 Overall Leaving Certificate Performance (LCE & LCVP Only)

The focus of this section is on the performance of Leaving Certificate students in terms of the number of CAO points achieved as prior education attainment (i.e. overall performance in the Leaving Certificate examination) is a strong indicator of progression to year two and beyond at third level (HEA: 2010)³⁰. The higher a student's prior educational attainment, the more likely they are to progress to the following academic year. For example, the non-progression rate of students who gained CAO 405-450 points (e.g. three C3 grades and three B3 grades at higher level) was 9%, compared to 14% for those who gained 355-400 points (e.g. six C3 grades at higher level).

Students wishing to apply for an undergraduate course of study (i.e. NFQ 6-8) in Ireland do so through the Central Applications Office (CAO), which processes applications on behalf of participating higher education institutions. Places are subsequently offered on the basis of points calculated from a candidate's Leaving Certificate performance³¹.

³⁰ HEA (2010) *A Study of Progression in Higher Education*

³¹ Not all course applicants do so through the CAO (e.g. some international students); in addition, not all course applicants are offered a place on the basis of Leaving Certificate performance (e.g. mature students, those disadvantaged backgrounds), although their applications may still be processed through the CAO, but not via a points system.



The points system gives priority to students with the better performance. The six best results in recognised subjects at higher and ordinary level are added up for points computation. With the exception of mathematics and the Link Modules (in the LCVP), subjects carry equal points and points are awarded for each grade as per the common scale points outlined in Table 4.7 below. For mathematics, higher education institutions award an extra 25 points for higher level mathematics (e.g. a candidate with a D1 in higher level mathematics will be awarded a total of 80 points (55 points for a D1 grade plus 25 bonus points). 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. Some higher education institutions also award points for foundation level mathematics.

Table 4.7 CAO Points (Leaving Certificate Grades (All Subjects) and Higher Level Mathematics)

	A1	A2	B1	B2	B3	C1	C2	C3	D1	D2	D3	<E
Level	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 Mathematics	125	115	110	105	100	95	90	85	80	75	70	0
Higher	100	90	85	80	75	70	65	60	55	50	45	0
Ordinary	60	50	45	40	35	30	25	20	15	10	5	0
Foundation Mathematics*	20	15	10	5	0	0	0	0	0	0	0	0

Source: CAO

*Not all institutions award points for this level.

The points achievements for CAO applicants in 2012 and 2013 are presented in Figure 4.10. While not all CAO applicants are school leavers, the vast majority are; the data in this section may therefore serve as an indication of the achievements of the students who sat the Leaving Certificate Established examination in 2012 and 2013. The data presented here refers to nominal points achievements, based on candidates' results in six subjects; bonus points that may be awarded for subjects such as higher level mathematics have not been considered.

- At 59% in 2013 and 58% in 2012, the greater share of students achieved at least 300 CAO points (equivalent to at least a D2 grade in six higher level papers) each year
- Top achievers, scoring between 500 and 600 CAO points (i.e. at least 6 B1 grades), made up less than 10% of the total in both 2012 and 2013
- The share of students with fewer than 100 points at almost 10% is exaggerated on the scale by the results of external candidates who may opt to sit just one subject

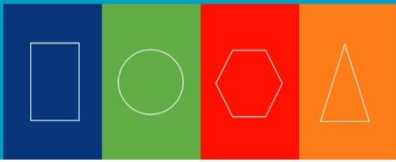
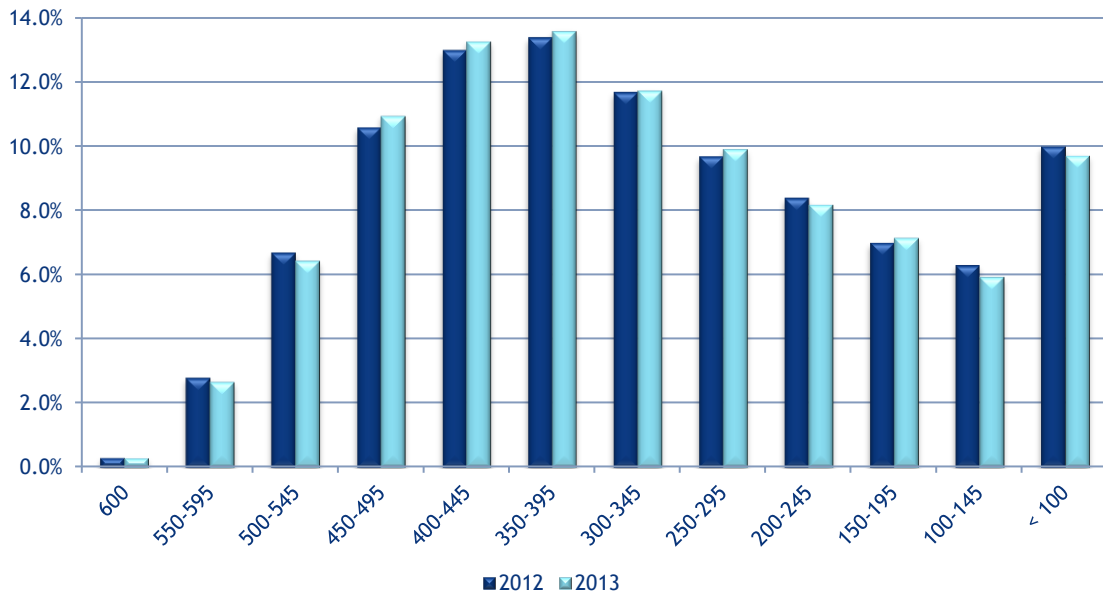
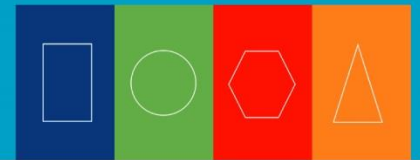


Figure 4.10 CAO Points Achievements for Leaving Certificate Applicants in 2012 and 2013



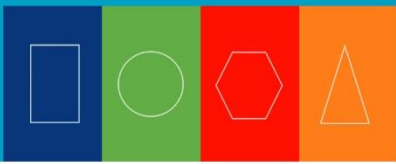
Source: CAO



Chapter 5 Further Education and Training

Key Points

- **Award Holders:**
 - there were almost 154,600 award holders in 2013, representing a 9% decline when compared to 2012
- **Awards:** there were almost 275,000 QQI-FETAC awards made in 2013
 - **Level:** the majority were made at level 5, accounting for 60%, or 166,000 awards
 - **Award type:** 13% were major awards (36,316 awards), 81% were minor awards, 5% were specific purpose awards, with supplemental awards accounting for less than 1%
 - **Field of learning:** the three most popular fields of learning were education and health (e.g. healthcare support), general studies (e.g. communications), and services (e.g. first aid); combined, these three fields of learning accounted for 58% of all QQI-FETAC awards
 - **Gender:** more than one half of all QQI-FETAC awards were made to female recipients; this, however, masks differences in the gender distribution of awards at NFQ levels (e.g. most awards at levels 3, 4 and 6 were made to males, but most level 5 awards (which constitute the bulk of FETAC-QQI awards) were made to females
 - **Age:** in 2013, almost a third (31%) of QQI-FETAC awards were made to learners aged less than 25 years
- **Comparison with 2012:** when compared to the preceding year,
 - **Overall total:** the number of awards decreased by 8% (amounting to 24,000 fewer awards); there were declines across all award types, with the greatest decline, in absolute terms, being for minor awards, which fell by more than 16,600; the number of major awards declined by 15% (or almost 6,300 fewer awards)
 - **Level:** there were declines at levels 4, 5 and 6, with the sharpest decline occurring at level 4 (18,000 fewer awards), followed by level 5 (9,900 fewer awards) and level 6 (9,200 fewer awards)
 - **Field of learning:** with the exception of the science, general studies, and tourism fields, there were declines in the number of awards across most fields of learning; the strongest absolute decline was for awards in services (-20%, or 13,000 fewer awards).



5.1 Introduction

The focus of this chapter is on the supply of skills emerging from the further education and training (FET) sector in Ireland. FET awards have been placed across levels 1-6 on the NFQ and are made in each category of award type (major, minor, special purpose and supplemental, as detailed in Chapter 1). The education and training provided in the FET sector ranges from short courses to longer programmes, including apprenticeships.

Providers of further education and training in Ireland range from state to semi-state and private organisations. However, a significant share of FET courses across all sectors lead to QQI-FETAC awards³². There are over 900 registered providers offering programmes that lead to QQI-FETAC awards. The main training centre types include Bord Iascaigh Mhara (BIM), Fáilte Ireland, FÁS, Teagasc, Vocational Education Committees (VECs), Institutes of Technology, adult and community education and training centres, a range of private providers, volunteer organisations and the workplace.

While QQI is the most significant awarding body in terms of the number of awards made in FET in Ireland, there also exist other awarding bodies (both Irish and international) operating in both the public and private FET sectors (e.g. City & Guilds). However, the availability of comparable data is limited and only further education and training that leads to a QQI-FETAC award is considered in this chapter.

This chapter examines QQI-FETAC awards data, looking first at the overall awards (all types) by variables such as candidate and award numbers, recipient age and gender, field of learning, and training centre type (Section 5.2). An analysis of individual award type then follows: sections 5.3, 5.4, 5.5 and 5.6 focus on major, minor, specific purpose and supplemental awards respectively.

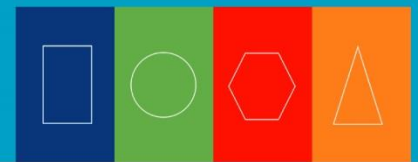
5.2 Overview of Awards Data

5.2.1 Award Holders (Learners)

Table 5.1 shows the number of QQI-FETAC awards and award holders for 2009, 2012 and 2013 by award type. As award holders may obtain more than one type of award, the number of award holders for individual award types does not sum up to the number in the 'Total' row of Table 5.1.

- There were almost 155,000 award holders in 2013, representing a 9% decrease (or almost 15,600 fewer learners) when compared to 2012 and a 12% decrease (more than 20,000 fewer learners) when compared to 2009
- The most notable changes over the period 2012-2013 were as follows:

³² The awarding body responsible for making awards in the FET sector in Ireland is Quality and Qualifications Ireland (QQI). Prior to the establishment of QQI in 2012 this responsibility was held by FETAC (Further Education and Training Awards Council).



- There was a decline in the number of award holders for each award type
 - the number of major award holders decreased by 15% (6,300 fewer learners) to 36,300
 - the largest absolute decline was for minor award holders, where numbers fell from almost 123,000 to over 112,000, representing a decline of almost 11,000 (or 9%)
 - specific purpose and supplemental award holders also declined (by 8% and 5% respectively), although the numbers involved are comparatively smaller
- When compared to 2009, the number of major award holders increased by almost 7,600 learners (or 18%); in contrast there were declines for all other award type holders: minor award holders fell by 19% (-23,600 learners); specific purpose awards, by 14% (or 2,100 fewer learners); the greatest relative decline was for supplemental award holders, at 80%, although in absolute terms the decline amounted to almost 600 fewer learners.

Table 5.1 QQI-FETAC Awards by Type and Candidate, 2009, 2012 & 2013

Year	2009		2012		2013	
	Awards	Award Holders	Awards	Award Holders	Awards	Award Holders
Certificates (Major)	28,722	28,722	42,593	42,593	36,316	36,316
Component (Minor)	268,680	135,804	240,094	122,876	223,485	112,220
Specific (Special) Purpose	16,087	16,087	15,134	15,134	13,982	13,982
Supplemental	1,281	1,281	730	730	695	695
Total	314,820	174,870*	298,551	170,136*	274,478	154,557*

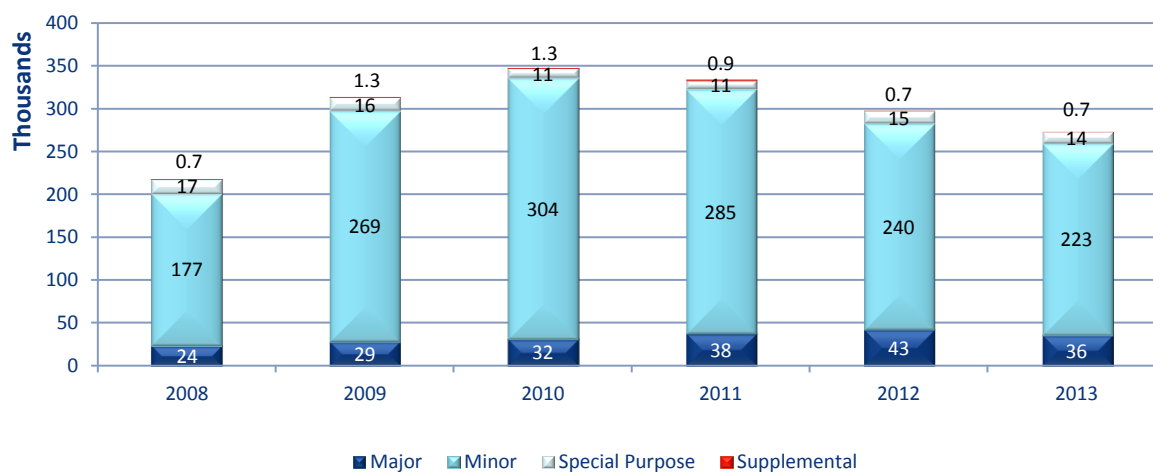
Source: QQI

*The number of award holders does not sum up as some candidates may obtain more than one award type.

5.2.2 Awards

- There were almost 275,000 QQI-FETAC awards made in 2013 (Table 5.1 and Figure 5.1), representing an 8% fall when compared to 2012, and an 18% decline when compared to 2009
- In 2013, there were 24,000 fewer awards than in 2012, with declines across all awards types; the greatest decline, in absolute terms was for minor awards, which fell by more than 16,600
- When compared to 2009, there were approximately 40,000 fewer awards, due mainly to a decline of over 45,000 minor awards; in contrast the number of major awards grew by almost a third, amounting to 7,600 additional awards; as a result, the share of major awards increased to 13% (up from 9% in 2009), with a concomitant decline in the share of minor awards (down from 85% in 2009 to 81% in 2013)
- It should be noted that there was a considerable increase in the number of QQI (FETAC) awards between 2008 and 2009 (almost 100,000 additional awards year-on-year) and therefore, despite the declines observed in 2012 and 2013, the number of awards for each award type except supplemental awards remains higher in 2013 than in 2008.

Figure 5.1 Number (000s) of QQI (FETAC) Awards by Type, 2008-2013



Source: QQI

5.2.3 Awards by Level

Figure 5.2 shows the number of awards by NFQ level.

- In any given year, level 5 had the highest number of awards, accounting for almost 166,000 of the total (or 60%) in 2013
- Between 2012 and 2013, the overall number of awards fell by 8%, with 24,000 fewer awards
 - the sharpest decline was in the number of level 4 awards, which declined by more than third, down to almost 32,000 (amounting to 18,000 fewer awards)
 - there were also declines in the number of awards made at level 5 (-6%, or 9,900 fewer awards) and level 6 (-23%, or 9,200 fewer awards)
 - in contrast, at 42%, the rise in level 3 awards was the strongest amongst growth observed, amounting to more than 11,000 additional awards year-on-year
 - there were also increases in the number of awards made at levels 1 and 2, although the numbers involved are comparatively small.
- When compared to 2009, there has been a shift towards the higher levels of the NFQ: the share of awards at levels 5 or 6 made up approximately 70% of all QQI (FETAC) awards in 2013, compared to just 61% in 2009; in contrast, while awards at levels 3 and 4 combined made up approximately one quarter of the total in 2013, they accounted for 39% in 2009.

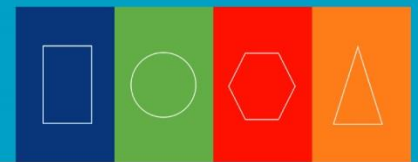
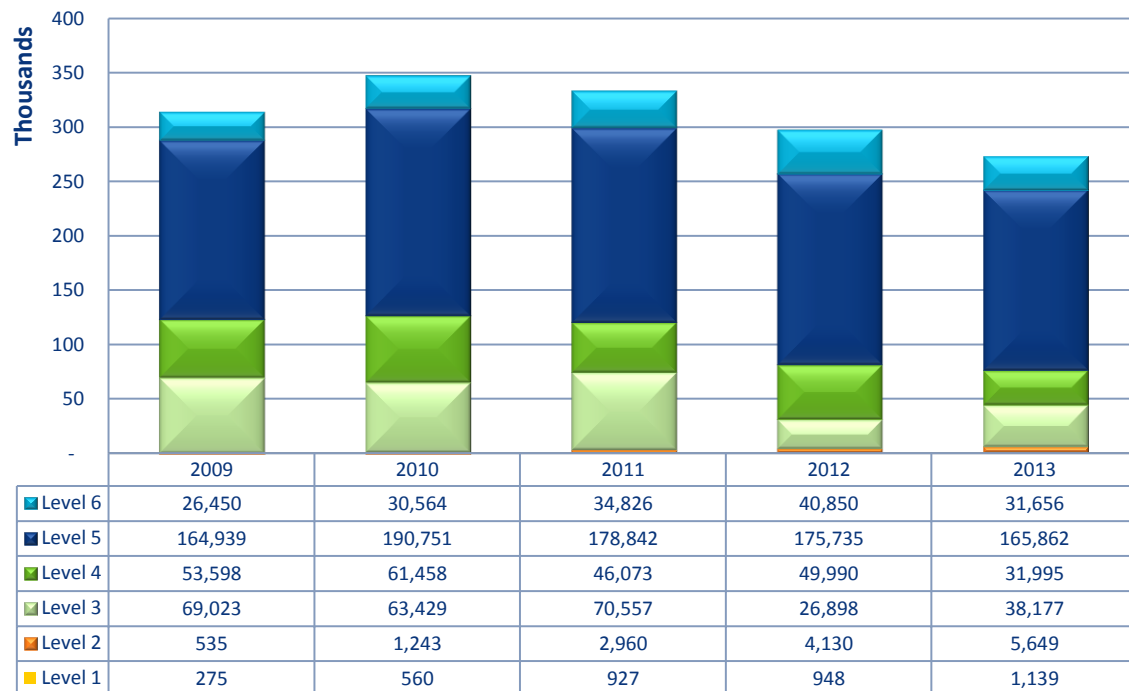


Figure 5.2 QQI-FETAC Awards (000s) by NFQ Level, 2009- 2013



Source: QQI

5.2.4 Awards by Field of Learning

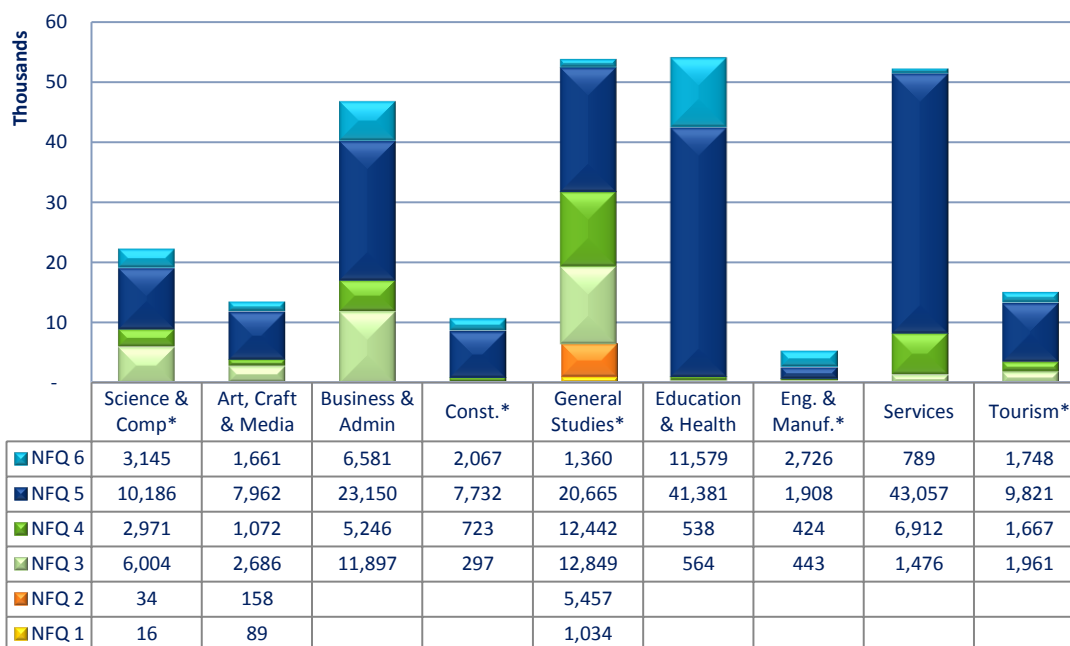
From 2010 onwards, the QQI-FETAC awards data detailed in the Monitoring Ireland's Skills Supply reports is based on the QQI-FETAC field of learning categories rather than ISCED (International Standard Classification of Education) field of learning categories³³. This contrasts with the data in Table 1 in the Executive Summary of this report which, for comparison purposes, is based on ISCED field of learning; the data presented in the aforementioned table is not comparable to the field of learning data in this chapter.

Figure 5.3 shows the distribution of QQI-FETAC awards by field of learning and NFQ level for 2013.

- With in excess of 52,000 awards each, the three most popular fields of learning were education and health (e.g. healthcare support), general studies (e.g. communications), and services (e.g. first aid); combined, these three fields of learning accounted for 58% of all QQI-FETAC awards made in 2013.
- While the vast majority of awards in education and health were made at level 5 or 6, and more than four fifths of awards in services were made at level 5, the greater share of general studies awards were made at levels 1-4.
- Between 2012 and 2013, there were declines in the number of awards across most fields of learning (except science & computing, general studies, and tourism); general studies had the strongest absolute increase (+5,800 awards).

³³ QQI-FETAC field of learning categories are provided in Appendix A.

Figure 5.3 QQI-FETAC Awards by Field of Learning, 2013



Source: QQI

* For ease of reading, some fields of learning have been shortened as follows: Const. = Construction & Built Environment; Tourism = Tourism, Hospitality & Sport; Science & Comp. = Agriculture, Science & Computing; Eng & Manuf = Engineering & Manufacturing; Education & Health = Education, Health and Welfare; General studies = Core Skills, Language & General Studies.

5.2.5 Awards by Recipient Gender

The distribution of awards made to males and females over the period 2009-2013 is shown in Table 5.2.

- Each year, more than one half of all QQI-FETAC awards were made to female recipients; this, however, masks differences in the gender distribution of awards at NFQ levels:
 - the largest gender gap in terms of the distribution of awards was at level 4 where, of the 32,000 awards at this level, 60% were made to males and 40% were made to females
 - males also dominated at level 3 (53% of all awards were made to males in 2013) and level 6 (52%); 2013 was the first time since 2009 where the majority of awards at level 6 were achieved by males (due mostly to a decline in childcare awards - typically achieved by females)
 - in contrast, the majority (57%) of level 5 awards were made to females, although the share of awards made to male learners at this level has, with the exception of 2011, increased each year over the period 2009-2013.

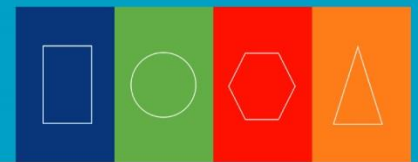


Table 5.2 QQI-FETAC Awards by Gender and NFQ Level, 2009, 2012 & 2013

	Level 1		Level 2		Level 3		Level 4		Level 5		Level 6		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
2009	52%	48%	54%	46%	45%	55%	56%	44%	39%	61%	58%	42%	45%	55%
2012	50%	50%	47%	53%	49%	51%	62%	38%	42%	58%	41%	59%	46%	54%
2013	49%	51%	49%	51%	53%	47%	60%	40%	43%	57%	52%	48%	47%	53%

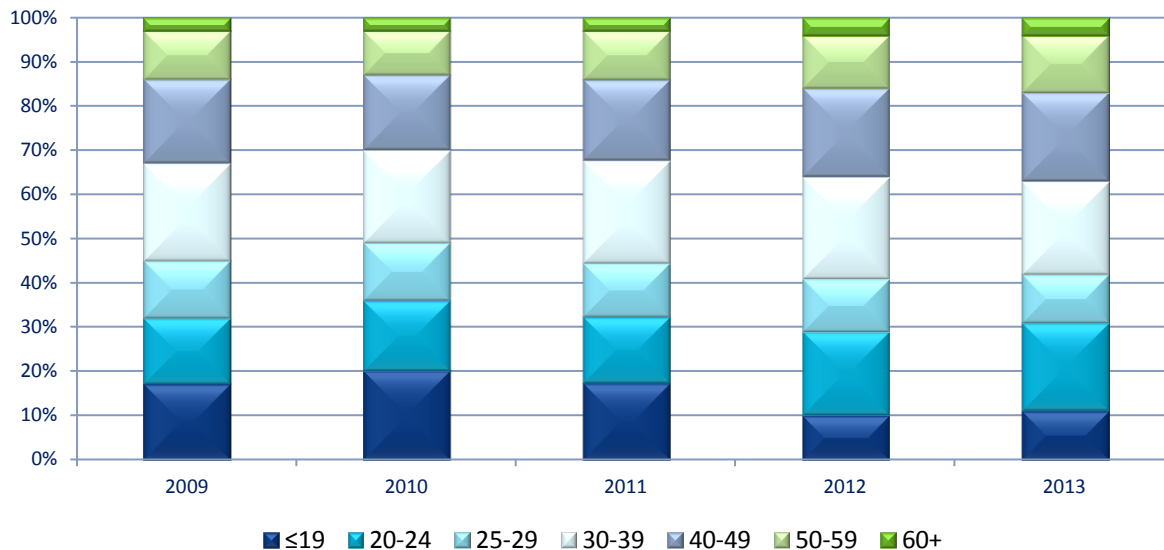
Source: QQI

5.2.6 Awards by Recipient Age

Figure 5.4 shows the distribution of awards by recipient age.

- In 2013, almost a third (31%) of QQI-FETAC awards were made to learners aged less than 25 years; award recipients aged between 25 years and 39 years accounted for almost a further third
- When compared to 2012, the distribution of awards by recipient age in 2013 was broadly similar; however, when compared to 2009, the share of awards made to younger learners (aged 19 or less) in 2013 had almost halved, going from 20% to 11%.

Figure 5.4 QQI-FETAC Awards by Recipient Age, 2009-2013



Source: QQI

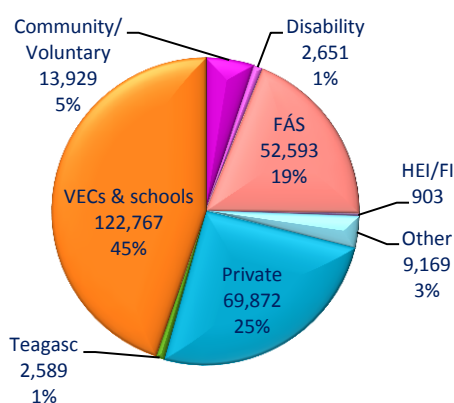
Note: Excludes awards for which recipient age was unavailable.

5.2.7 Provider Centre Type

The distribution of QQI-FETAC awards by centre type is shown in Figure 5.5. In this report, the data in respect of centre type reflects the number of awards by training centre type only; it is not a measurement of funding; as such it does not take account of the fact that some organisations may receive funding to supply training on behalf of another, thereby underestimating the provision of some training centre types and overestimating that of others.

- Of the 274,000 awards made in 2013, 45% were made to learners at VEC/schools; a quarter were made to learners at private provider centres, and almost a further fifth to learners at FÁS centres.
- This distribution is broadly similar to 2011 and 2012, although there were declines in the absolute number of awards made to learners across most centre types.

Figure 5.5 QQI-FETAC Awards by Centre Type, 2013



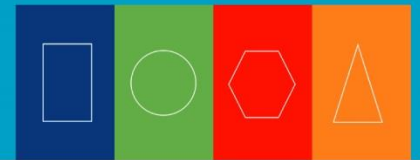
Source: QQI

*FI/HEI refers to the combined number of awards for courses at Fáilte Ireland and higher education institutions
Note: the 'other category includes, among others, awards made to learners in Skillnets, public service agency and sectoral representative body centres.

5.3 Major Awards

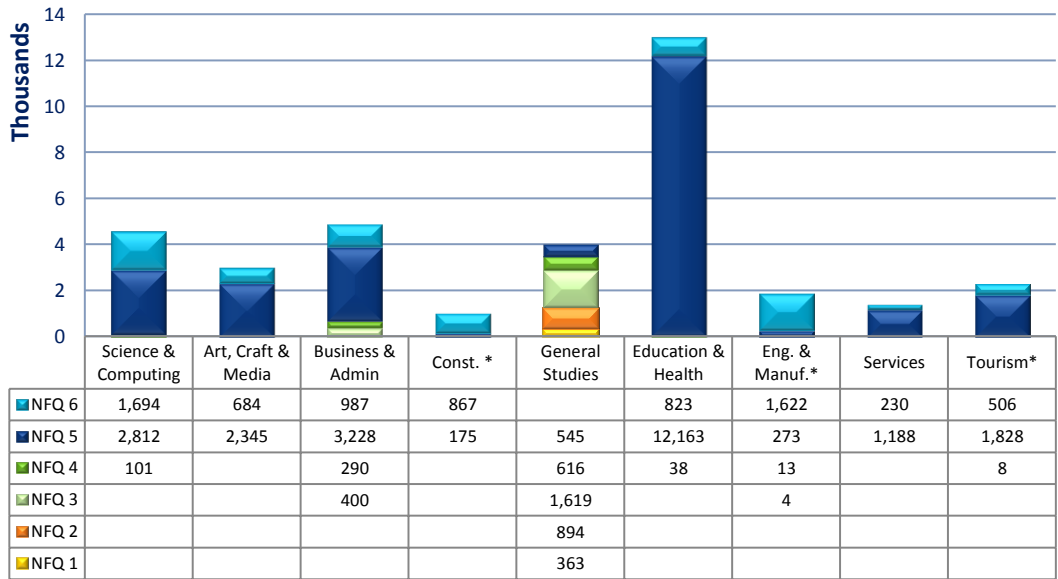
In 2013, there were 36,316 major awards, 15% (6,300) fewer than in 2012 but 26% (7,500) more than in 2009. Figure 5.6 shows the distribution of major awards in 2013 by level and field of learning.

- **Award Level:** of more than 36,300 major awards made in 2013,
 - more than two thirds were made at level 5, accounting for almost 25,500 awards
 - a fifth were made at level 6 (a further 7,400 awards)
 - combined, level 5 and level 6 made up 88% of all major awards; most of the remaining awards were made at levels 3 and 4, with awards at levels 1 and 2 combined making up just 3% of the total (amounting to almost 1,300 awards).



- When compared to 2012, the number of awards at levels 4, 5 and 6 declined; with 4,200 fewer awards, the largest absolute decline was at level 6; in relative terms, the largest decline was for level 4 awards, which fell by more than a half (mostly in the general learning field); while there were increases at the lower levels (NFQ 1-3), these were comparatively small (combined, amounting to 1,220 additional awards) and not sufficient to offset the declines at levels 4-6
- **Awards by Field of Learning:** in 2013,
 - The largest number of awards was in **education and health**, which, at over 13,000, accounted for 39% of all major awards; most awards in this field were at level 5 (e.g. healthcare support or childcare)
 - at more than 4,900 (or almost 14% of all major awards), **business and administration** had the second highest, mostly at level 5 and typically for office administration, business administration and/or management and ICT skills
 - **science and computing**, with more than 4,600 awards (making up almost 13% of the total), had the second largest number of awards; most were made at level 5 or, to a lesser extent, level 6, typically for courses in agriculture and horticulture
- Despite the decline (-15%) in the overall number of major awards between 2012 and 2013, there were modest increases in the number of awards for science and computing (+396 awards), services (e.g. hairdressing) (+343), tourism (+317), and general studies (+112)
- In contrast, there were declines in all other fields, with a particularly sharp decrease in education and health (-4,031 awards, or -24%); most of this decline was at level 6 (3,636 fewer awards) and related primarily to awards in childcare/supervision
- There was also a decline in the number of major awards in business and administration (-2,134 awards or -30%), primarily at level 5.
- **Age & Gender:** in 2013,
 - 58% of all major awards were made to females, due primarily to the fact that at level 5 two thirds of major awards went to females; in contrast, more than two thirds of all level 6 major awards were made to males
 - Major awards recipients tend to be in the younger age cohorts: 43% of awards went to those aged younger than 25; this compares to a 31% share for total QQI (FETAC) awards, as detailed earlier in Figure 5.4.

Figure 5.6 Major Awards by NFQ Level and Field of Learning, 2013

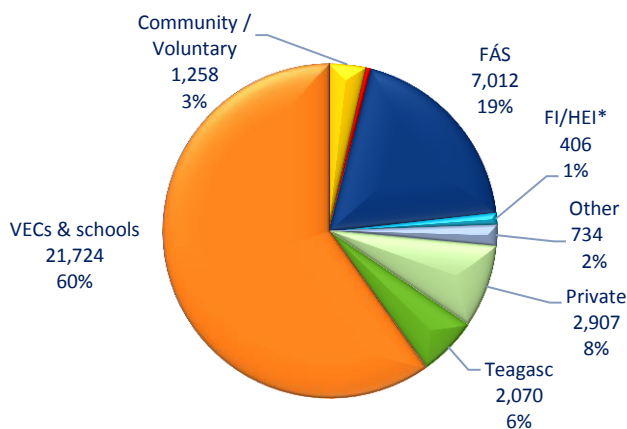


Source: QQI

* For ease of reading, some fields of learning have been shortened: Const = Construction & Built Environment; Tourism = Tourism, Hospitality & Sport; Science & Comp. = Agriculture, Science & Computing; Eng & Manuf = Engineering & Manufacturing; Education & Health = Education, Health and Welfare; General studies = Core Skills, Language & General Studies.

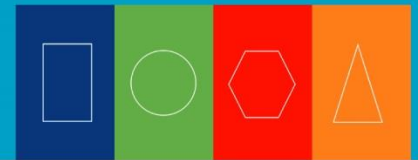
- **Centre Type:** the distribution of QQI-FETAC major awards by provider centre type in 2013 is shown in Figure 5.7
 - Of the almost 36,300 major awards made in 2013, the majority (60%) were made to learners at VECs/schools, almost a fifth were made to learners at FÁS centres, and a further 8% to learners at private provider centres
 - This distribution is broadly similar to 2012.

Figure 5.7 QQI-FETAC Major Awards by Centre Type, 2013



Source: QQI

*FI/HEI refers to the combined number of awards for courses at Fáilte Ireland and higher education institutions
 Note: the 'other category includes, among others, awards made to learners in Skillnets, public service agency and sectoral representative body centres.



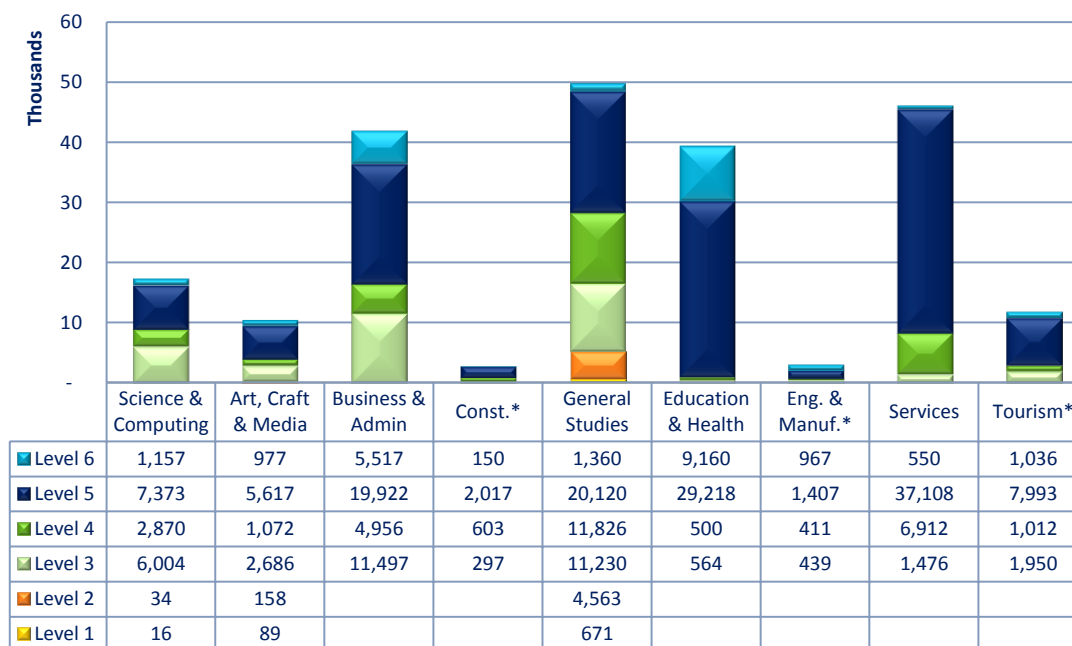
5.4 Minor Awards

In 2013, there were 112,220 minor award holders, with learners receiving on average two minor awards each. Figure 5.8 shows the distribution of minor awards in 2013 by level and field of learning.

- **Award level:** of the 223,000 minor awards in 2013,
 - more than one half (59%) were at level 5, amounting to almost 130,800 awards
 - level 3 awards made up a further 16%, followed by level 4 (13%) and level 6 (9%)
 - combined, awards at levels 1 and 2 made up the remaining 2% share
- Between 2012 and 2013, the overall number of minor awards declined by 16,600 (-7%); the bulk of this decline was observed at level 4, where the number of awards fell by 36%; while there were also declines at levels 5 and 6, the number of awards at level 3 increased markedly year-on-year (by 40%); there were smaller increases at levels 1 and 2
- **Field of learning:** almost 80% of minor awards were in one of four fields of learning - general studies, services, business and administration, and education and health:
 - at almost 50,000, **general studies had the highest number of awards**, accounting for more than a fifth of all minor awards; awards were mostly at level 5 (typically in communication and personal development)
 - the **second largest number of awards was in services** which, at over 46,000 awards, made up more than a fifth of the total for this award type; the vast majority (80%) were at level 5 (e.g. occupational first aid, safety and health at work, etc.)
 - there were **almost 42,000 awards in business and administration**, representing 19% of all minor awards; almost half were at level 5 and more than a further quarter were at level 3
 - there were **almost more than 39,400 awards in the education and health** field of learning; almost three quarters were made at level 5 (e.g. healthcare support, childcare, etc.) and most of the remainder was at level 6 (e.g. train the trainer, coaching)
- When compared to 2012, there were declines across several fields of learning (except science and computing (+3,100 awards - most of this increase was in horticulture and IT awards); general studies (+5,700 awards); and tourism (+131 awards))
 - with approximately 12,600 fewer awards, the largest absolute decrease was in services, which alone accounted for three quarters of the overall drop in minor awards; much of the decline was at level 4 (mostly for awards associated with door security, guarding skills, and health and safety)
 - the second largest decline in terms of numbers was in business and administration (4,600 fewer awards) followed by education and health (4,000 fewer awards); the decrease in business and administration was primarily at level 4 (e.g. computer applications; IT skills), while for education and health the decline was mostly at level 6 (for awards in childcare)
- **Age & Gender:** in 2013,
 - Approximately 30% of minor awards were made to learners aged less than 25 years; a further third were made to those aged between 25 and 39 years

- 55% of all minor awards were made to females; however, the share made to females at levels 5 and 6 is even greater at 60% and 58% respectively; in contrast, minor awards at levels 3 and 4 were made mostly to males (53% and 61% respectively).

Figure 5.8 Minor Awards by NFQ Level and Field of Learning, 2013



Source: QQI

* For ease of reading, some fields of learning have been shortened as follows: Construction = Construction & Built Environment; Tourism = Tourism, Hospitality & Sport; Science & Comp. = Agriculture, Science & Computing; Eng & Manuf = Engineering & Manufacturing; Education & Health = Education, Health and Welfare; General studies = Core Skills, Language & General Studies.

- Centre Type:** Figure 5.9 shows the distribution of minor awards by provider centre type.
 - Almost one half (45%) of all minor awards were made to learners at VEC/school centres; 27% were at private provider centres and a further 15% at FÁS centres
 - When compared to 2012, there was little change in the distribution of awards by centre type.

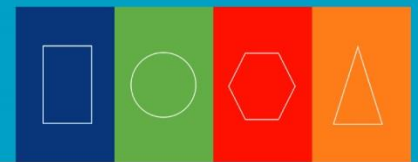
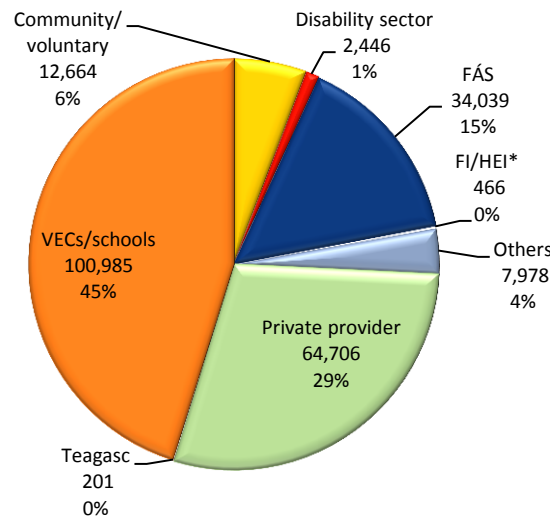


Figure 5.9 QQI-FETAC Minor Awards by Centre Type, 2013



Source: QQI

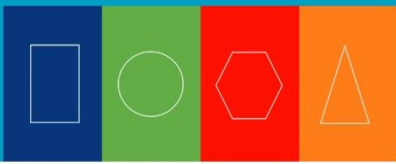
*FI/HEI refers to the combined number of awards for courses at Fáilte Ireland and higher education institutions
 Note: the 'other category includes, among others, awards made to learners in skillnets, public service agency and sectoral representative body centres.

5.5 Specific Purpose Awards

In 2013, there were almost 14,000 specific purpose award holders, with learners receiving one specific purpose award each. When compared to 2012, there were 8% (1,150) fewer awards. Figure 5.10 shows the distribution of specific purpose awards by level and field of learning.

- **Award Level:** three quarters of all specific purpose awards were made at level 5 (amounting to 10,530 awards), with most of the remainder at level 6 (19%, or 2,674 awards) or level 4 (5%, or a767 awards); when compared to 2012, the largest declines in absolute terms were at level 5 (900 fewer awards) and level 6 (600 fewer awards)
- **Awards by Field of Learning:** in 2013,
 - with approximately 6,000 and 4,800 awards each, the construction and services fields accounted for more than three quarters of all specific purpose awards made³⁴; most of these awards related to short courses in best practice training for employees working in the construction industry (e.g. roads construction)
 - education and health had the third largest number of awards at 1,596, which were all made at level 6; more than one half of awards in this category were for manual handling instruction; other awards included those related to driving instruction for different types of vehicles
 - When compared to 2012, there were declines across most fields of learning, except science/computing, construction and tourism; the largest declines, with approximately 800

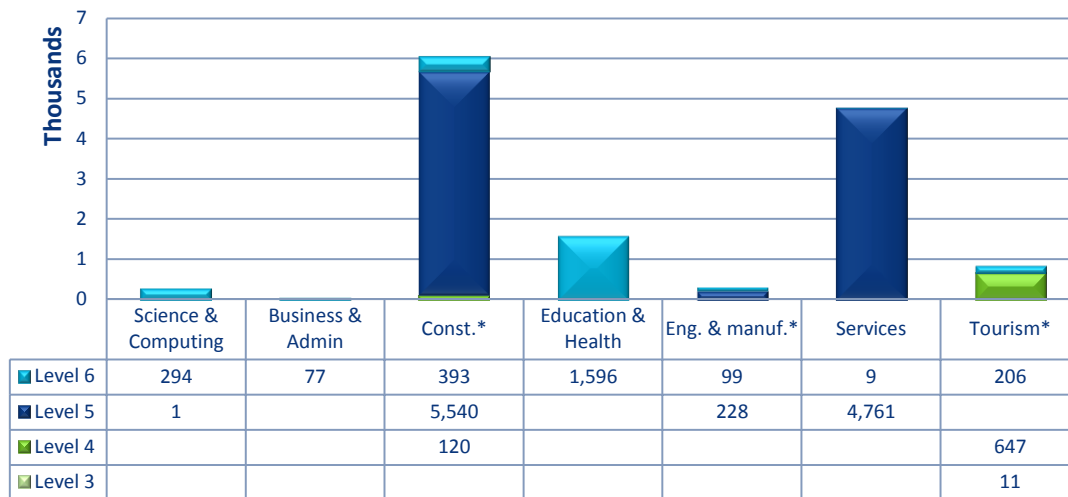
³⁴ Most of the specific purpose awards in the services field are made up of awards related to the construction field (e.g. excavator operations), but because they relate to driving skills, they were categorised in the services field of learning.



fewer awards each, were in health and education (manual handling instruction) and in services (e.g. driving)

- **Age & Gender:** in 2013,
 - specific purpose awards tend to be made to slightly older learners (compared to other award types); 58% of specific purpose awards were made to learners aged between 30 and 49 years; younger learners (i.e. those aged less than 25 years) made up 9% of the total
 - the vast majority (90%) of specific purpose awards were made to male learners; with the exception of level 4, where 60% of the awards were made to females, males dominated at each of the remaining NFQ levels at which this award type was made.

Figure 5.10 Specific Purpose Awards by NFQ Level and Field of Learning, 2013



Source: QQI

* For ease of reading, some fields of learning have been shortened as follows: Construction = Construction & Built Environment; Tourism = Tourism, Hospitality & Sport; Science & Comp. = Agriculture, Science & Computing; Eng & Manuf = Engineering & Manufacturing; Education & Health = Education, Health and Welfare; General studies = Core Skills, Language & General Studies

The distribution of QQI-FETAC specific purpose awards by provider centre type in 2013 is shown in Figure 5.11.

- Of the almost 14,000 specific purpose awards made in 2013, more than three quarters were made to learners at FÁS centres and a further 16% to learners at private provider centres
- This distribution is broadly in line with that observed in 2012.

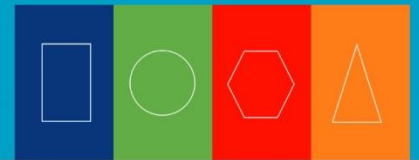
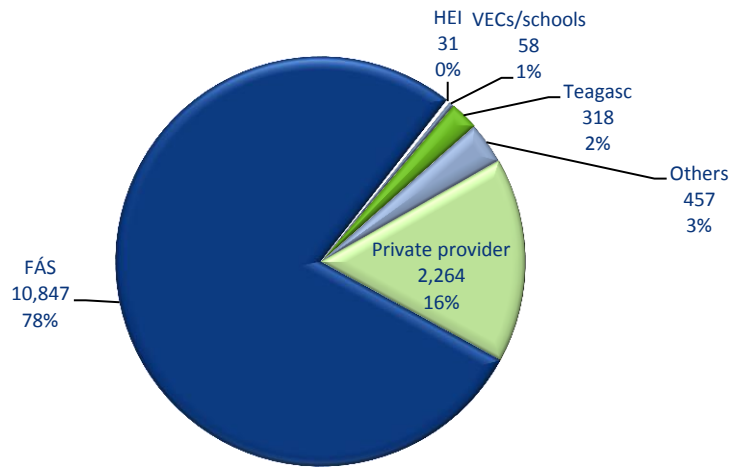


Figure 5.11 QQI-FETAC Specific Purpose Awards by Centre Type, 2013



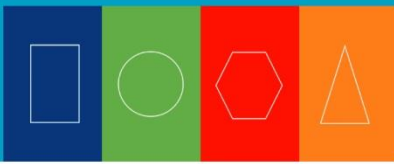
Source: QQI

*FI/HEI refers to the combined number of awards for courses at: Fáilte Ireland and higher education institutions
 Note: the 'other' category includes, among others, awards made to learners in Skillnets, public service agency and sectoral representative body centres.

5.6 Supplemental Awards

There were 695 supplemental awards holders in 2013, with learners receiving one supplemental award each. All supplemental awards were made at level 6, mostly for awards in domestic gas installation, installing domestic solar water systems and safety in gas installation. All supplemental awards were made to learners at FÁS centres; almost all were made to male learners, and almost two thirds were aged between 20 and 39 years.

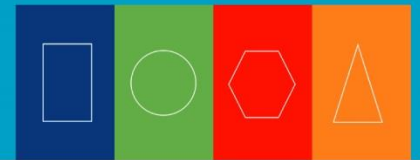
The number of supplemental awards declined by 6% when compared to 2012, resulting in an absolute decline of 45 awards.



Chapter 6 Higher Education (Undergraduate - Levels 6-8)

Key Points

- **CAO Acceptances:**
 - there were 46,162 CAO acceptances (NFQ 6-8) in 2013, a 1% increase on 2009; between 2012 and 2013, acceptances for level 6 and level 7 courses declined by 8% each, while level 8 acceptances increased by approximately 2%
- **Enrolments:**
 - total enrolments increased by 13% in the five-year period to 2012 to reach 157,000; this increase relates primarily to level 8 enrolments
- **Graduate Output:**
 - there were 43,600 graduates at levels 6-8 in 2012, an overall increase of 6% on the previous year and 9% since 2008; output increased across all levels since 2011, with a 7% increase at both levels 6 and 8 and an increase of 2% at level 7
- **Outlook:**
 - the steady growth in enrolments at level 8 in recent years is reflected in the 2012 output figures; future growth, albeit at a modest level, is expected in the short to medium term while output at levels 6 and 7 will likely remain relatively unchanged
- **Engineering:**
 - graduate output has been increasing steadily in recent years; increases in CAO acceptances have not equated to significant gains in enrolments, which would suggest further significant growth in output is not expected in the immediate future
- **Construction:**
 - CAO applicant data suggests a turnaround for some construction related courses; the decline in enrolments in recent years has resulted in a fall in numbers graduating from level 6 and 7 courses but has not significantly impacted on output at level 8 as yet, with declines expected at least in the short term
- **Computing:**
 - the data shows a 6.2% decline in output between 2011 and 2012; the significant increases in CAO acceptances and enrolments in recent years suggest this decline will be reversed in the short to medium term
- **Science:**
 - graduate output grew by 6% since 2011, the first growth to occur in recent years; the slow but steady growth in CAO acceptances and enrolments suggest this growth in output should be maintained in future years
- **International Comparison:**
 - with graduation rates of 22% (higher certificate/ordinary bachelor degree level) and 43.1% (honours bachelor degree level) in 2011, Ireland ranks well above the OECD averages (11% and 38.9% respectively) and EU 21 averages (9% and 37.9% respectively) in terms of graduate output at undergraduate level.



6.1 Introduction

Undergraduate education includes programmes leading to a higher certificate (NFQ 6), an ordinary bachelor degree (NFQ 7) or an honours bachelor degree (NFQ 8). Through an examination of CAO acceptance data and enrolment and graduation data, the aim of this section is to provide a comprehensive overview of the supply of skills emerging from undergraduate level higher education detailing those intending to enter (Section 6.2), those already in (Section 6.3), and students emerging from (Section 6.4) Irish higher education programmes spanning levels 6-8 on the NFQ. The final section of this chapter compares Ireland's performance internationally in terms of graduate output at undergraduate level.

6.2 CAO Acceptances

In Ireland, higher education institutions have delegated to the Central Applications Office (CAO) the task of processing applications to their first year undergraduate courses. The majority of those entering full-time higher education at levels 6, 7 and 8 apply for their desired courses through the CAO.

CAO course acceptances are not the same as student enrolments: some acceptors do not enrol and some seek deferment; CAO acceptance data refers only to full-time courses and does not include some mature, access or foreign students (who may enter through direct entry methods); in addition CAO acceptance data includes some students attending private independent colleges not included in the higher education data. Therefore, the numbers are likely to differ from the new entrant enrolment figures. Nonetheless, with CAO acceptance data available a year ahead of enrolment data, it remains the most up-to-date indication of the number of full-time first year entrants to programmes at levels 6-8.

6.2.1 CAO Acceptances by NFQ Level

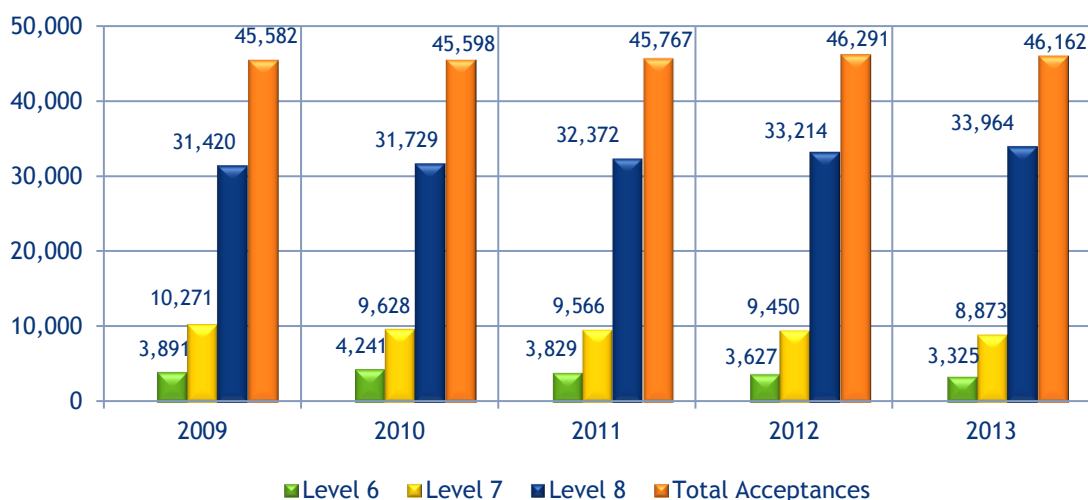
Figure 6.1 provides the total number of CAO acceptances by NFQ level for the five-year period 2009-2013. The number of acceptances has remained relatively unchanged in recent years with a 1% growth occurring between 2009 and 2013.

Level 6: CAO acceptances peaked in 2010 for this level but have been declining since with an 8% fall between 2012 and 2013

Level 7: acceptances at this level have been in decline in recent years, with a 14% decline occurring between 2009 and 2013 and in particular an 8% fall year-on-year since 2012

Level 8: in contrast, there has been a gradual increase in the number of acceptances at this level with an 8% increase over the five-year period examined and a 2% increase between 2012 and 2013; the share of level 8 acceptances has also increased from 69% in 2009 to 74% in 2013.

Figure 6.1 CAO Total Acceptances by Level, 2009-2013



Source: CAO

6.2.2 CAO Acceptances by Age

Table 6.1 provides a breakdown of CAO acceptances by age group and NFQ level. The continued decline in the number of CAO acceptances at level 7/6 since 2009 was reflected across all age categories; the percentage decline was greatest for those aged 16-17 with a fall of 24% between 2009 and 2013. While there was an initial gain in the number of those aged 23 years and above between 2009 and 2010, their numbers have since decreased, falling by 7% between 2012 and 2013.

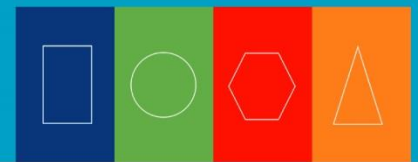
At level 8 in 2013, those aged 18-22 years accounted for the largest share of CAO acceptors at 48%, followed by 16-17 year olds at 40% and those aged 23 and above at 12%. The number of acceptors aged 16-17 years has remained relatively static over the period 2009 to 2013. Those in the 18-22 years age category have experienced steady increases in the same time period with a 19% increase since 2009 and a 6% increase on 2012; the number of CAO acceptors aged 23 years and above has remained relatively unchanged in recent years with a 2% decline since 2012.

Table 6.1 CAO Acceptances by Level and Age, 2009-2013

Age	Level 7/6					Level 8				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
16-17	5,523	4,904	4,555	4,522	4,194	13,930	13,339	13,342	13,660	13,595
18-22	6,118	6,095	6,220	6,071	5,664	13,791	14,150	14,976	15,559	16,450
23+	2,518	2,892	2,624	2,471	2,343	3,701	4,239	4,046	3,996	3,919
Total	14,159	13,891	13,399	13,064	12,201	31,422	31,728	32,364	33,215	33,964

Source: CAO Directors Reports

Note: There are slight variations in the data between this and Figure 6.1 due to two different data collection intervals.



6.2.3 CAO Acceptances by Discipline

This section examines the distribution of CAO acceptances by discipline and NFQ level (as illustrated in Table 6.2).

Table 6.2 CAO Acceptances by Discipline, Level 6-8, 2013

	Level 6		Level 7		Level 8	
	Acceptances 2013	% Change 12-13	Acceptances 2013	% Change 12-13	Acceptances 2013	% Change 12-13
Engineering	355	-32%	1,457	3%	1,819	2%
Construction	115	8%	543	-18%	659	-14%
Computing	235	-1%	1,359	3%	2,445	7%
Science	271	-11%	800	1%	3,893	1%
Total Technology	976	-17%	4,159	-1%	8,816	1%
Health & Welfare	171	31%	275	15%	4,071	4%
Agriculture & Veterinary	64	68%	431	-1%	490	6%
Total Health, Vet & Agriculture	235	39%	706	5%	4,561	4%
Arts & Humanities	134	6%	594	-14%	10,328	3%
Social Sciences, Business & Law	1,151	-10%	2,181	-9%	7,084	3%
Education	31	-47%	129	3%	2,539	1%
Services	798	-3%	1,104	-20%	636	-14%
Total Other	2,114	-8%	4,008	-13%	20,587	2%
TOTAL	3,325	-8%	8,873	-6%	33,964	2%

Source: CAO

Technology (Levels 6-8)

Further declines occurred at level 6, whereas there has been little change in the overall number of technology acceptances at levels 7 and 8 between 2012 and 2013. The main findings were:

- **Engineering:** level 6 acceptances continued to decline in 2013; there has been little change at level 7 in recent years while level 8 acceptances have been growing steadily in recent years
- **Construction:** the number of level 6 acceptances remained low; level 7 and 8 acceptances continued to decline with an 18% and 14% fall since 2012 respectively
- **Computing:** level 6 and 7 acceptances remained relatively unchanged in 2013; level 8 acceptances have been increasing steadily in recent years with a 7% increase between 2012 and 2013
- **Science:** level 6 acceptances have been in decline in recent years; slight increases have occurred at level 7 and level 8 acceptances since 2012



Health, Veterinary & Agriculture: (Levels 6-8)

- **Health and Welfare:** level 8 acceptances account for the vast majority (90%) of healthcare course acceptances, primarily in nursing; the continuing increase that occurred between 2012 and 2013 was mainly related to an increase in acceptances for sports related courses
- **Agriculture & Veterinary:** the numbers of acceptances were very small at level 6; acceptances at level 7 were unchanged over the last three years with small increases occurring at level 8

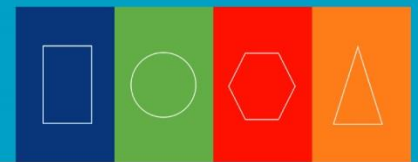
Other Disciplines: (Levels 6-8)

- **Arts & Humanities:** 93% of acceptances in this discipline were at level 8; indeed this discipline accounted for 30% of all level 8 acceptances; there was a marginal increase (+3%) on the previous year
- **Social Science, Business & Law:** there has been a continued decline in acceptances at level 6 and 7 whereas level 8 acceptances have been increasing since 2011, with a 3% increase since 2012
- **Education:** acceptances were primarily at level 8 for this discipline with a 1% increase at this level since 2012
- **Services:** declines occurred across all levels in 2013.

6.2.4 CAO Applicant Data 2014

CAO applicant statistics from February 1st 2014 give early indications of trends emerging for those potentially entering the higher education system in September 2014, although it should be borne in mind that CAO applicant data does not equal future enrolments. The key points from the first round of CAO applicant data for 2014 include:

- **Overall:** in 2014, February applications stood at 73,063, a 3% increase on the previous year; level 8 1st preference applications increased by 2.6%, while level 7/6 1st preference applications declined by 0.2%
- **Technology:** the number of 1st preference applications for level 8 technology courses increased between 2013 and 2014; the number of 1st preference applications for level 8 science courses remained unchanged whereas there were gains for engineering related courses and particularly for construction related courses (albeit from a small base); at level 7/6, declines occurred for engineering courses with gains for science and construction courses
- **Health, Veterinary & Agriculture:** the overall number of 1st preference applications for level 8 health and welfare courses remained unchanged between 2013 and 2014; this masks a decline in the number of 1st preference applicants to medicine and an increase in applicants for other healthcare courses; applicant numbers for agriculture at all levels remained relatively unchanged since 2013
- **Other Disciplines:** the most notable changes for 1st preference applications at level 8 were increases for education and law; at level 7/6 there were declines for most subjects
- **Student Statistics:** the number of mature students applying for higher education courses through the CAO system peaked in 2010 and has been in decline since, with a 3% decline between 2013 and 2014.



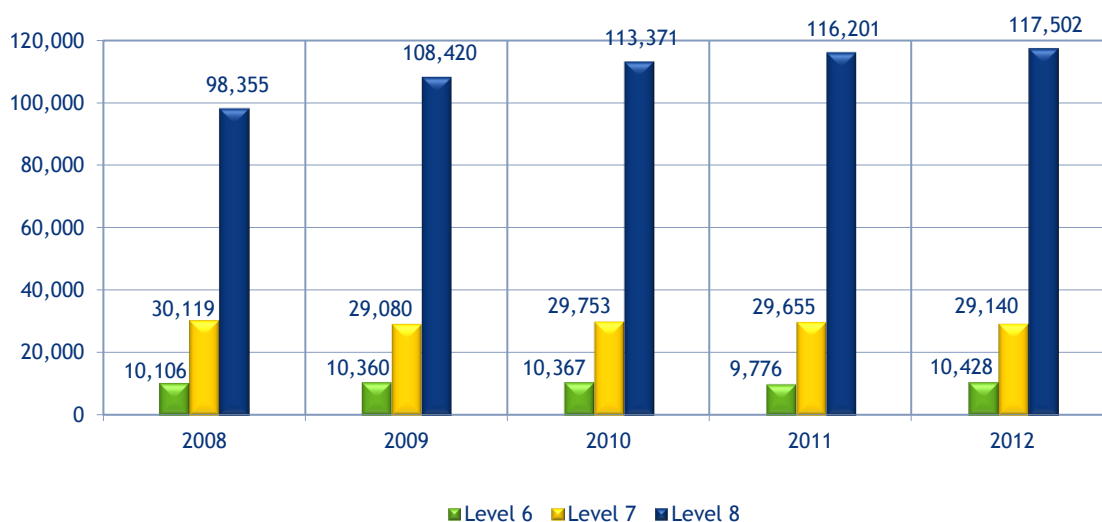
6.3 Undergraduate Enrolments

While enrolment data lags behind that of CAO acceptance data (by one academic year), it captures part-time students and others who may have entered higher education directly rather than through the CAO process. In addition, while CAO acceptance data is a good indicator of entry to higher education, enrolment data is more accurate as some CAO acceptors may not actually go on to enrol in higher education. The enrolment data examined in this section also indicates the total number of persons studying at higher level each year, providing a picture of the overall magnitude of higher education at undergraduate level.

Figure 6.2 shows the total number of undergraduate enrolments by NFQ level over the period 2008-2012. Enrolments have risen by 13% since 2008 reaching over 157,000 in 2012. These increases did not occur evenly across the three NFQ levels:

- **Level 6:** following a decline in 2011, the number of enrolments at this level saw an increase of 7% in 2012
- **Level 7:** enrolments at this level have shown small declines since 2010 with a 2% decline between 2011 and 2012
- **Level 8:** at 19%, level 8 had the highest rate of growth in enrolments over the period 2008 to 2012 although this growth has been more gradual in recent years with just a 1% increase between 2011 and 2012.

Figure 6.2 Total Enrolments by Level (6-8), 2008-2012



Source: HEA

6.3.1 Enrolments: Student Details

This section examines the student profile of those enrolling in higher education at undergraduate level by providing details of the mode of study, gender and institution type attended (i.e. IoT vs university) and age.

Mode of Study

- **Level 6:** approximately one half of those enrolled in level 6 courses were full-time; there has been a 42% increase in the number of part-time students enrolled when compared to 2011
- **Level 7:** 80% of those enrolled in level 7 courses were full-time; between 2011 and 2012, the number of remained almost unchanged, while there was a 6% increase in the number of part-time enrolments
- **Level 8:** almost all students at this level studied full-time (95%); there were increases in both full- and part-time enrolments.

Table 6.3 Enrolments by Mode of Study, Level 6-8, 2012

	Level 6		Level 7		Level 8	
	2012	% Change 11-12	2012	% Change 11-12	2012	% Change 11-12
Full-time	5,197	-4%	23,312	0%	111,993	2%
Part-time	5,231	42%	5,828	6%	5,509	15%
Total	10,428	7%	29,140	1%	117,502	2%

Source: HEA

Provider Type and Gender (Figure 6.3)

- **Level 6 and 7:** IoTs account for the majority of enrolments at these levels (73% at level 6 and 91% at level 7); males had a higher share of enrolments than females at both levels but this was particularly the case at level 7 with males having a 62% share of total enrolments; the overall increase in enrolments since 2011 at level 6 was primarily related to a 72% increase in the number of female enrolments in university courses (from 1,060 in 2011 to 1,821 in 2012)
- **Level 8:** at this level the majority of enrolments were for females (a 53% share) with no change to the share since 2011; universities accounted for 69% of enrolments at this level although the share has declined slightly since 2011 due to an increase in the number of enrolments for IoTs and static enrolments for universities.

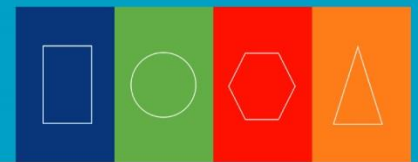
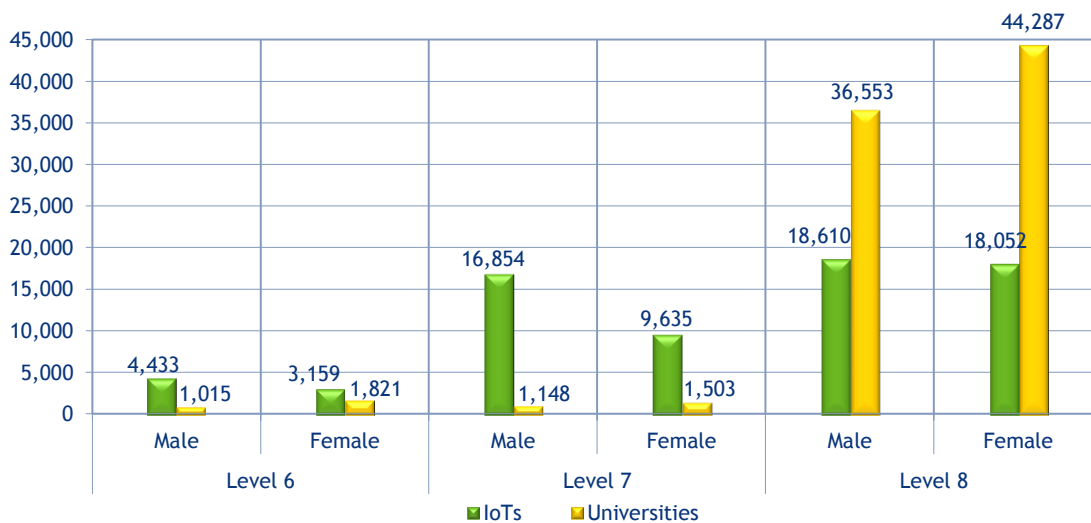


Figure 6.3 Total Enrolments by Provider Type and Gender, Level 6-8, 2012



Source: HEA

Age (Table 6.4)

In 2012, the majority of those enrolled in full-time education in the higher education sector were aged 22 or less, with 69% at levels 6/7 and 79% at level 8; on the other hand, the vast majority of part-time students were aged 23 or more (91% at levels 6/7, 95% at level 8). There was little change in the shares since 2011.

Table 6.4 Full-Time/Part-Time Enrolments by Age, Level 6-8, 2012

	Level 6/7		Level 8	
	Full-time	Part-time	Full-time	Part-time
17 and under	2%	1%	1%	0%
18	12%	0%	11%	0%
19	19%	1%	19%	1%
20	18%	2%	20%	1%
21	12%	2%	17%	2%
22	6%	2%	10%	2%
23-29	17%	22%	13%	22%
30+	14%	69%	7%	73%
Total	100%	100%	100%	100%

Source: HEA

6.3.2 Enrolments by Discipline

Table 6.5 shows the number of undergraduate enrolments by discipline for NFQ levels 6-8 in 2012.

Table 6.5 Total Enrolments by Discipline and Level, 2012

Discipline	Level 6 2012	% change 11-12	Level 7 2012	% change 11-12	Level 8 2012	% change 11-12
Engineering & Manufacturing	1,145	3%	5,412	-2%	6,841	0%
Construction	229	-12%	1,579	-25%	3,370	-24%
Computing	876	3%	2,950	12%	6,367	12%
Science	452	-23%	2,016	4%	13,571	5%
Total Technology	2,702	-4%	11,957	-2%	30,149	1%
Health & Welfare	1,479	7%	3,589	1%	22,930	3%
Agriculture/Veterinary	140	-52%	1,168	15%	2,053	12%
Total Health, Vet & Agriculture	1,619	-3%	4,757	4%	24,983	4%
Arts & Humanities*	890	12%	2,389	-4%	25,248	2%
Education	191	-9%	112	22%	5,668	0%
Social Sciences, Business & Law	3,419	32%	5,663	-7%	28,942	-2%
Services	1,607	-5%	4,262	1%	2,512	11%
Total Other	6,107	15%	12,426	-4%	62,370	0%
Total All	10,428	7%	29,140	-2%	117,502	1%

Source: HEA

*Includes broad programmes and/or combined studies.

- **Technology:** there was very little change in overall technology enrolments between 2011 and 2012 although changes varied across disciplines; enrolments in engineering remained relatively unchanged, in construction there were declines across all levels, computing continued to show strong growth, particularly at level 8, whereas science enrolments grew at levels 7 and 8
- **Health, Veterinary & Agriculture:** overall agriculture enrolments saw an increase in 2012 due to gains at levels 7 and 8; health and welfare enrolments increased across all levels albeit at a modest rate
- **Other Disciplines:** there was no change to overall enrolment levels in this category, with gains at level 6 offset by declines at level 7 and with level 8 enrolments remaining unchanged.

6.4 Undergraduate Output

This sub-section examines the latest graduation data and trends for the period 2008-2012. There were 43,600 graduates at levels 6-8 in 2012, an overall increase of 6% on the previous year and 9% since 2008 (Figure 6.4).

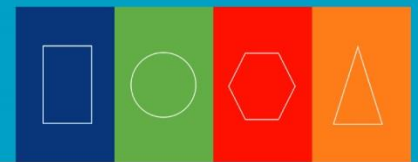
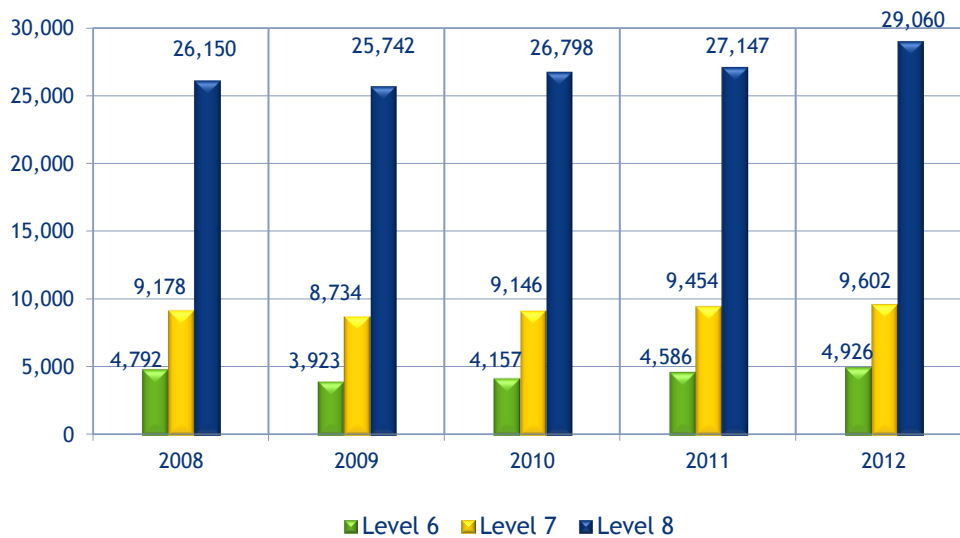


Figure 6.4 Total Graduate Output by Level (6-8), 2008-2012



Source: HEA

- **Level 6:** output at this level has been increasing since 2009 with a 7% year-on-year increase between 2011 and 2012
- **Level 7:** there were also gains at this level since 2009, albeit at a slower pace, with a year-on-year increase of 2% since 2011
- **Level 8:** following a number of years of relatively little change at this level, a 7% rise occurred since 2011, reflecting the jump in enrolments between 2008 and 2009

6.4.1 Graduate Output: Student Details

This section examines the student profile of those graduating from higher education at undergraduate level by providing details of the gender and institution type attended (i.e. IoT vs university).

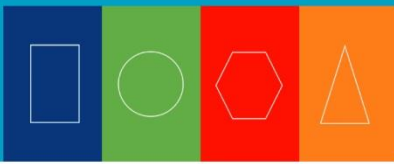
Provider Type and Gender

Table 6.6 details the breakdown of graduate output by level, provider type and gender.

Table 6.6 Graduate Output by Provider Type, Gender and Level, 2012

	Level 6			Level 7			Level 8		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
IoT's	1,543	1,086	2,629	4,829	3,082	7,911	5,054	5,186	10,240
Universities	954	1,343	2,297	647	1,044	1,691	7,729	11,091	18,820
Total	2,497	2,429	4,926	5,476	4,126	9,602	12,783	16,277	29,060

Source: HEA



- **Level 6:** IoT graduates accounted for over a half of all output at this level although the university sector is increasing its share; declines have occurred for IoTs across both genders since 2011, whereas universities saw gains particularly in the number of female graduates
- **Level 7:** output at this level was primarily from IoTs and primarily male; the overall increase in output since 2011 related to an increase in the number of male graduates from both IoTs and universities, whereas the number of females declined for both
- **Level 8:** output at this level was primarily from universities; approximately two thirds of the increase in the number of graduates since 2011 (of almost 1,700) was attributed to the university sector and primarily due to an increase in the number of male graduates.

6.4.2 Graduate Output by Discipline

This section examines graduate output by discipline for levels 6 and 7 (Table 6.7) and level 8 (Table 6.8) over the period 2011-2012. The 'other' category accounts for the majority of graduate output at both levels 6 and 7. Technology courses accounted for 19% of output at level 6 and for 37% at level 7.

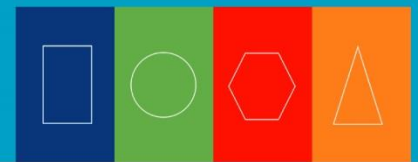
Table 6.7 Level 6 and 7 Graduate Output by Discipline, 2011-2012

Discipline	Level 6			Level 7		
	2011	2012	% Change 2011-12	2011	2012	% Change 2011-12
Engineering & Manufacturing	389	362	-7%	1,344	1,558	16%
Construction	193	155	-20%	972	786	-19%
Computing	226	247	9%	599	691	15%
Science	177	152	-14%	400	544	36%
Total Technology	985	916	-7%	3,315	3,579	8%
Agriculture/Veterinary	152	154	1%	298	310	4%
Health & Welfare	807	854	6%	1,369	1,235	-10%
Total Health, Vet & Agriculture	959	1,008	5%	1,667	1,545	-7%
Arts & Humanities*	369	628	70%	932	1,020	9%
Education	29	63	117%	29	43	48%
Social Sciences, Business & Law	1,178	1,457	24%	2,482	2,320	-7%
Services	1,066	854	-20%	1,029	1,095	6%
Total Other	2,642	3,002	14%	4,472	4,478	0%
OVERALL Total	4,586	4,926	7%	9,454	9,602	2%

Source: HEA

*Also includes studies in combined and general programmes

- **Technology (Level 6 and 7):** declines occurred across all subjects at level 6 excluding computing, whereas at level 7 all subjects, excluding construction, experienced increases with engineering in particular continuing to show steady growth in absolute terms at this level



- **Health, Veterinary & Agriculture (Level 6 and 7):** output for agriculture/veterinary courses increased year-on-year at both levels although the numbers involved are small; health and welfare output at level 6 grew slightly, while a 10% decline occurred at level 7 since 2011
- **Other Disciplines (Level 6 and 7):** social sciences, business and law, and services account for the largest share of output for both levels in this category; changes at level 7 were minimal whereas at level 6 social sciences, business and law saw an increase in output of 24% with services declining by 20%

Table 6.8 sets out the total number of level 8 graduates by discipline for 2011 and 2012.

Table 6.8 Level 8 Graduate Output by Discipline, 2011 & 2012

Level 8 graduates	2011	2012	% Change 2011-12
Engineering & Manufacturing	1,647	1,879	14%
Construction	1,457	1,596	10%
Computing ³⁵	979	918	-6%
Science	2,380	2,534	6%
Total Technology	6,463	6,927	7%
Agriculture/ Veterinary	301	363	21%
Health & Welfare	4,604	4,881	6%
Total Health, Vet. & Agriculture	4,905	5,244	7%
Arts & Humanities*	5,347	5,858	10%
Education	1,806	1,801	0%
Social Sciences, Business & Law	7,895	8,564	8%
Services	731	666	-9%
Total Other	15,779	16,889	7%
OVERALL TOTAL	27,147	29,060	7%

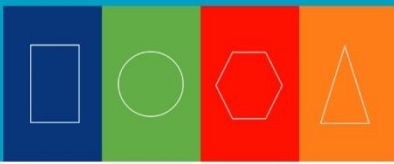
*Also includes studies in combined and general programmes

Source: HEA

Technology (Level 8)

- **Engineering:** graduate output has been increasing steadily in recent years; previous increases in CAO acceptances have not equated to significant gains in enrolments which would suggest further significant growth in output is not expected

³⁵ The 2011 Computing data varies from HEA numbers for ISCED 481 & 482 due to a once off graduate output for a WIT course run in China. As these students are based in China it was deemed more suitable to extract these numbers as they are not immediately available to work in Ireland.



- **Construction:** CAO applicant data suggests a turnaround for some construction related courses; the decline in enrolments in recent years has not significantly impacted output at level 8 as yet, with declines expected, at least in the short term
- **Computing:** the data shows a 6.2% decline in output between 2011 and 2012; the significant increases in CAO acceptances and enrolments in recent years suggest this decline will be reversed in the short to medium term
- **Science:** graduate output grew by 6% since 2011, the first growth to occur in recent years; the slow but steady growth in CAO acceptances and enrolments suggest this growth in output should be maintained in future years.

Healthcare, Veterinary & Agriculture (Level 8)

- **Health and Welfare:** despite a fall in graduate output from nursing related courses since 2011, output increased by 6%, primarily due to increases in output for therapy and rehabilitation courses and those relating to childcare and youth services; further increases in output are expected due to growth in the number of CAO acceptances and enrolments in this discipline
- **Agriculture/Veterinary:** output is expected to continue to grow as the impact of increases in enrolments since 2009 have yet to be fully realised, although it should be borne in mind that the numbers involved are small.

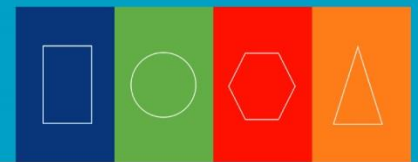
Other Disciplines (Level 8)

- **Arts & Humanities:** there was a 10% increase in output since 2011, due to the inclusion of general/combined studies in this category in 2012; when these are excluded there was a 16% decline on the previous year; recent growth in CAO acceptances may result in a reversal of this decline in the short term
- **Education:** there was no change in the output in this discipline since 2011³⁶; an examination of CAO applicant data, however, indicates that the popularity of level 8 education courses may be on the rise
- **Social Sciences, Business & Law:** this discipline accounted for the largest share of output in 2012; output increased by 8%, primarily due to an increase in graduates from business related courses; CAO acceptances have been increasing since 2011 suggesting that continued growth in output is expected
- **Services:** CAO acceptance and enrolment data signal potential further growth in output although numbers remain relatively small.

6.4.3 Other Education and Training Provision

Education and training in Ireland also takes place outside the public education and training system. Private schools, colleges and professional bodies provide various types of education and training within the higher education sector and professional level training. Data for such education and training is limited in its availability and therefore the numbers presented here capture only a subset of education and training taking place outside the public education and training system.

³⁶ It should be noted that there is a significant number of teacher education graduates emerging from HETAC accredited courses delivered through private independent colleges; these numbers are not reflected in Table 6.8.



Many private independent colleges (e.g. Dublin Business School, Hibernia College) offer programmes that are accredited by one or more awarding bodies, including, among others, QQI, Irish universities and/or foreign universities. Table 6.9 shows the number of QQI (HETAC) awards made to students at selected private, independent colleges³⁷.

In 2013, outside the HEA sector, there were over 2,200 major awards made to learners in selected private provider education institutions; of these 65% were at level 8; in addition there were 2,886 partial awards (special purpose or minor awards) made, of which 61% were at level 6. Major awards were chiefly made in the fields of education, business or health and welfare studies. Partial awards were made primarily for business and related subjects.

Table 6.9 Awards Made to Learners in Selected Private Colleges, 2013

	Higher Education	
	Major Awards	Partial Awards
Level 6	161	1,152
Level 7	619	404
Level 8	1,431	330
Total	2,211	1,886

Source: QQI (HETAC)

6.5 International Comparison

This section outlines the findings of the OECD publication ‘Education at a Glance 2013’ in order to compare Ireland’s performance in terms of undergraduate output with that of other countries. As outlined in Chapter 1 (Section 1.3), programmes leading to higher certificates and ordinary bachelor degrees correspond to ISCED level 5 Tertiary Type B; programmes leading to an honours bachelor degree correspond to ISCED level 5 Tertiary Type A first degree.

6.5.1 International Comparison (Tertiary Type B)

Graduation rates refer to the number of graduates divided by the population at the typical age of graduation. Figure 6.5 shows the graduation rates from ISCED level 5B programmes in selected OECD countries in 2010 and 2011.

- Ireland’s graduation rate at this level (22%) ranks well above the OECD and EU21 averages (11% and 9% respectively)
- Ireland’s graduation rate remained unchanged when compared to 2010; however, there were one percentage-point increases for both the OECD and EU21 averages, while the graduation rate of the top performing country, New Zealand, increased from 26% to 29% over the same period.

³⁷ A list of private independent colleges is outlined in Appendix C.

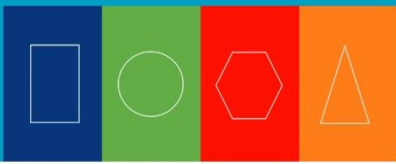
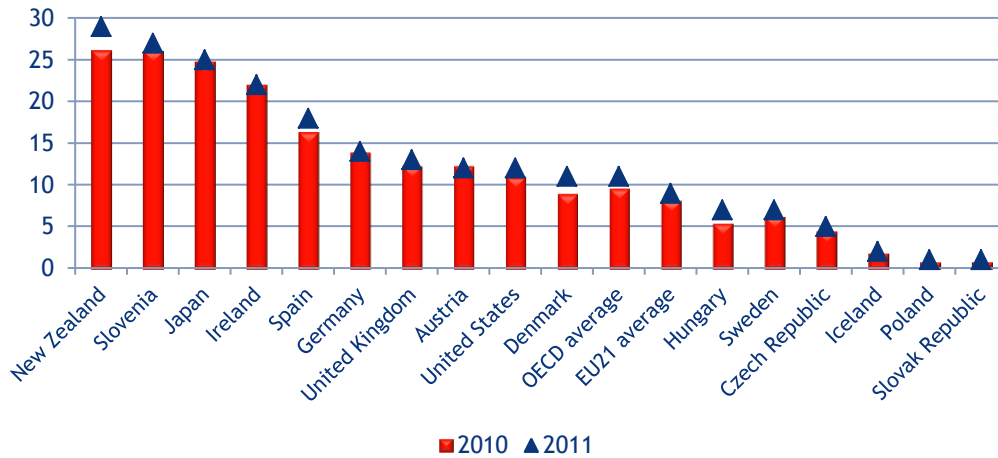


Figure 6.5 Tertiary Type B Graduation Rates (%) in Selected Countries, 2010 and 2011



Source: OECD Education at a Glance 2013 (2011 data) and 2012 (2010 data)

Data extracted December 2013.

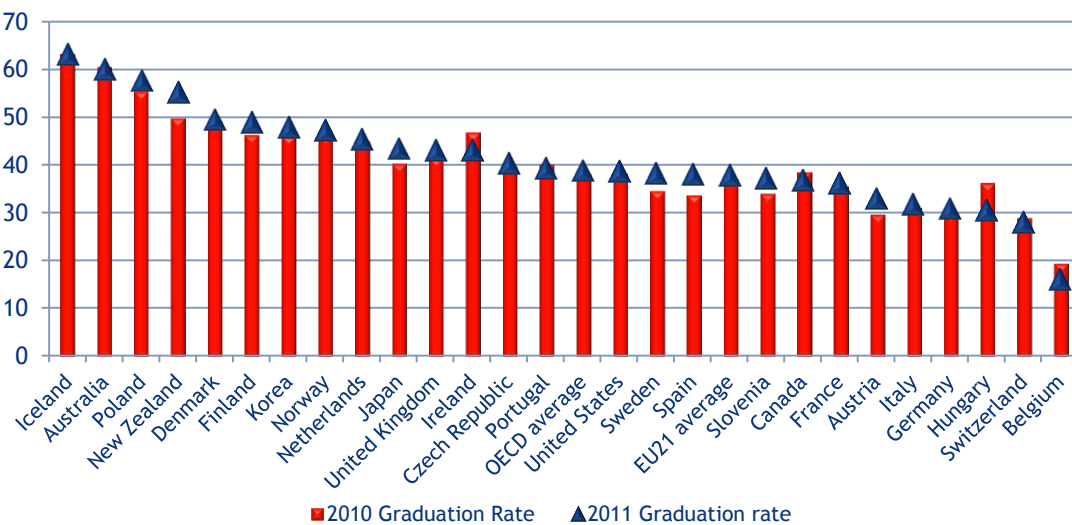
Note: not all countries have higher education programmes at this level (e.g. Finland).

6.5.2 International Comparison (Tertiary Type A)

Figure 6.6 shows the rates for ISCED level 5A first degree programmes.

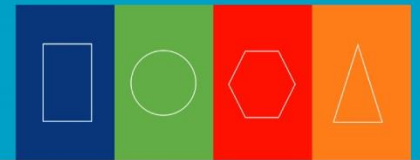
- Ireland graduation rate (43.1%) is well above the OECD(38.9%) and EU21 averages (37.9%)
- The graduation rate at this level declined by four percentage points for Ireland between 2010 and 2011; this contrasts with a one percentage point increase for the EU21 average (the OECD average remained unchanged) as well as increases for several of the top ranking countries at this level (e.g. graduation rates for Poland, New Zealand, Finland, Korea, Japan and the UK, each increased by at least two percentage points).

Figure 6.6 Tertiary Type A (First Degree) Graduation Rates (%) in Selected Countries, 2010 and 2011



Source: OECD Education at a Glance 2013 (2011 data) and 2012 (2010 data)

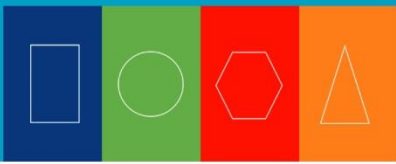
Data extracted December 2013.



Chapter 7 Postgraduate Higher Education (Levels 9/10)

Key Points

- **Enrolments:**
 - there were almost 35,000 postgraduate students enrolled in Ireland's universities and IoTs in 2012, a 4% increase on 2011; there were year-on-year increases in postgraduate cert/diploma and masters enrolments whereas PhD enrolments fell for the first time in recent years (by 8%)
- **Graduate Output:**
 - a total of 17,058 students graduated with a postgraduate qualification in 2012, a 3% decline annually since 2010 although output levels in 2012 remained 12% higher than that of 2008
- **Outlook:**
 - the increase in enrolments at masters level should lead to gains in output in the medium term; postgraduate cert/diploma and PhD output is not expected to grow significantly in the short term with small declines potentially occurring
- **Engineering & Manufacturing:**
 - overall output has been in decline in recent years, primarily due to a fall in output from masters programmes; an increase in enrolments between 2011 and 2012 suggests a reversal of this decline in the short term
- **Construction:**
 - there was an increase in the overall output for this discipline although the numbers involved are small
- **Computing:**
 - output from masters programmes has been in decline in recent years although a jump in postgraduate cert/diploma output in 2012 led to an overall increase in the number of graduates since 2011; an increase in enrolments in recent years suggests further growth will occur in the short to medium term
- **Science:**
 - the recent decline in masters enrolments impacted on the 2012 output figures with an overall decline of 9%; science still retains the largest share of PhD graduates with no change in output levels since 2011
- **International Comparison:**
 - at 22.7%, Ireland's graduation rate from ISCED level 5 Tertiary Type A (second degree programmes) (e.g. masters) is well above the OECD and EU 21 averages (16.5% and 18.8% respectively); Ireland's graduation rate of 1.9% for advanced research degrees (PhDs) exceeded the OECD and EU21 averages (1.6% and 1.7% respectively).



7.1 Introduction

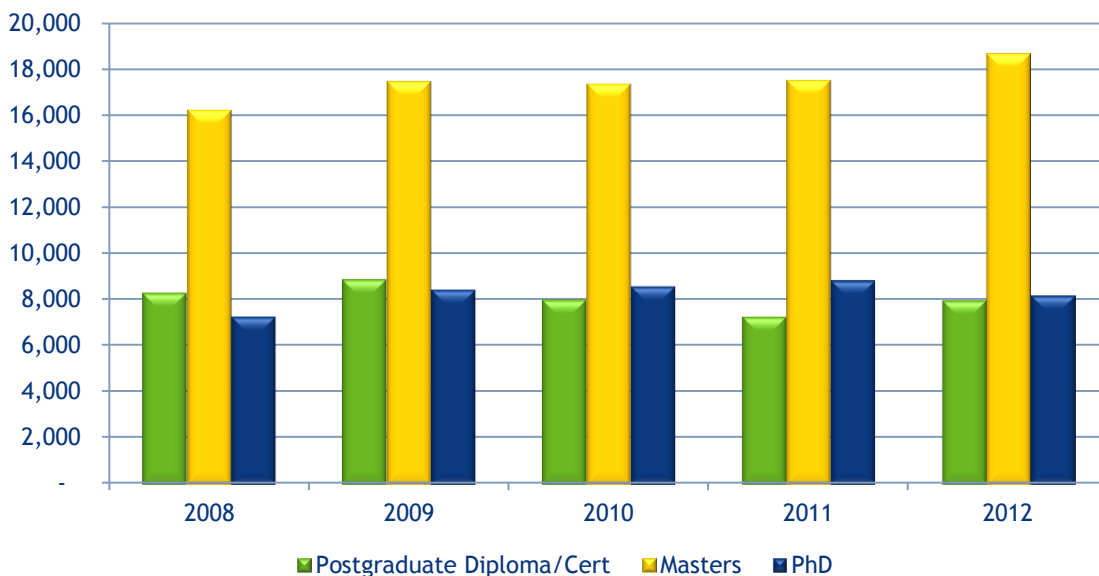
This chapter focuses on the supply of skills emerging from higher education programmes at postgraduate level which span levels 9 and 10 on the National Framework of Qualifications. Master degrees and postgraduate diplomas (first stage of a master degree) are placed at level 9 with doctoral degrees at level 10. For presentation purposes higher diplomas from universities and all postgraduate diplomas, whether conversion or leading to a master degree, are also discussed in this chapter.

Section 7.2 examines enrolments in postgraduate education at levels 9/10. This is followed by an analysis of graduate output at these levels. Variables examined for both enrolment and graduation data include a discipline breakdown and student details (such as gender, higher education provider type etc.). The final section provides an international perspective on how Ireland's performance in terms of graduate output at postgraduate level compares with that of other OECD countries.

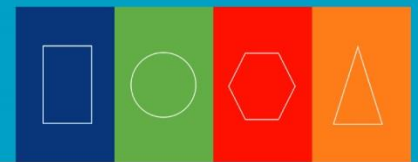
7.2 Level 9/10 Enrolments

There were almost 35,000 postgraduate students enrolled in Ireland's universities and IoTs in 2012 (Figure 7.1); this represents a 4% increase on the previous year and 10% increase on 2008. The numbers enrolled on postgraduate cert/diploma courses saw an increase in uptake of 10% year-on-year after a number of years of decline. The numbers enrolling on masters courses continue to increase whereas there was a fall of 8% in the numbers enrolling on PhD programmes, the first decline in recent years.

Figure 7.1 Level 9/10 IoT and University Enrolments, 2008-2012



Source: HEA; DES



7.2.1 Postgraduate Enrolments: Student Details

This section examines the student profile of those enrolled in postgraduate programmes by providing details of the gender, institution type attended (i.e. IoT or university), mode of study and age.

Gender and Provider Type

An analysis of the gender of those enrolling on postgraduate programmes and the providers of these courses is illustrated in Table 7.1.

- **Postgraduate certs/diplomas:** universities accounted for 87% of all enrolments for this programme type in 2012; the share of females stood at 62%; there were increases across both genders and provider types between 2011 and 2012 but the rise was most pronounced for females in universities
- **Masters:** there was a slight shift in the gender distribution for this programme type since 2011: males accounted for the majority of enrolments, with a 51% share in 2012; there were increases across almost all categories (excluding females in universities) but most significant was an increase of over 1,000 male enrolments in universities
- **PhDs:** declines in enrolments between 2011 and 2012 occurred across both genders and providers but were largest in universities where the majority of enrolments are.

Table 7.1 Enrolments by Provider Type and Gender, 2011 & 2012

	Postgraduate Certs/Diplomas				Masters				PhD			
	2011		2012		2011		2012		2011		2012	
	M	F	M	F	M	F	M	F	M	F	M	F
IoT	467	332	594	440	2,072	1,696	2,189	1,733	306	243	283	231
Uni	2,299	4,147	2,432	4,486	6,205	7,567	7,295	7,478	4,120	4,157	3,811	3,838
Total	2,766	4,479	3,026	4,926	8,277	9,263	9,484	9,211	4,426	4,400	4,094	4,069

Source: HEA

Full-time/Part-time

- **Postgraduate certs/diplomas:** the decline experienced up to 2011 occurred for both full- and part-time enrolments; in contrast, the increase that occurred between 2011 and 2012 was particularly apparent in the number of part-time enrolments with a year-on-year increase of 15%; part-time enrolments accounted for 56% of all enrolments for this programme type in 2012
- **Masters:** following declines in recent years, there was a 9% increase in the numbers enrolled on full-time masters courses since 2011 with part-time enrolments increasing by 4% over the same period
- **PhDs:** the decline in PhD enrolments since 2011 relates entirely to a fall in full-time enrolments leading to a two percentage point change in the share of full-time enrolments (85% in 2012).

Table 7.2 Enrolments by Full-Time and Part-Time Status, 2009-2012

	Postgraduate Certs /Diplomas				Masters				PhD			
	2009	2010	2011	2012	2009	2010	2011	2012	2009	2010	2011	2012
Full-time	4,028	3,620	3,390	3,503	10,909	10,628	10,327	11,214	7,414	7,512	7,684	6,953
Part-time	4,832	4,351	3,855	4,449	6,589	6,753	7,213	7,481	1,005	1,059	1,142	1,210
Total	8,860	7,971	7,245	7,952	17,498	17,381	17,540	18,695	8,419	8,571	8,826	8,163

Source: HEA

Age

- **Postgraduate certs/diplomas:** the majority of those enrolled in this programme type were aged 30 and above; the share of those aged 23-29 declined by two percentage points between 2011 and 2012
- **Masters:** this programme type had the highest share of persons aged 17-22, at 16%
- **PhDs:** almost all (98% in 2012) persons enrolled on PhD programmes were aged 23 or above

Table 7.3 Enrolments by Age, 2011-2012

	PG Certs/Diplomas		Masters		PhDs	
	2011	2012	2011	2012	2011	2012
17-22	9%	10%	16%	16%	3%	3%
23-29	39%	37%	40%	39%	51%	50%
30+	52%	53%	44%	45%	46%	48%
Total	100%	100%	100%	100%	100%	100%

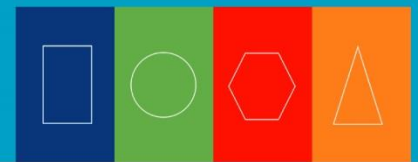
Source: HEA

7.2.2 Level 9/10 Enrolments by Discipline

Table 7.4 details student enrolments by discipline and programme type for 2011 and 2012.

Table 7.4 Level 9/10 Enrolments in Higher Education by Discipline, 2011-2012

	Postgraduate Certs/Diplomas		Masters		PhD	
	2011	2012	2011	2012	2011	2012
Engineering & Manufacturing	84	90	1,106	1,823	958	905
Construction	119	82	352	252	219	193
Computing	432	578	1,624	2,161	506	429
Science	274	221	941	956	2,140	1,878
Total Technology	909	971	4,023	5,192	3,823	3,405
Agriculture/ Veterinary	34	59	134	150	134	141
Health & Welfare	1,728	1,587	2,489	2,660	1,454	1,400
Total Health, Vet. & Agriculture	1,762	1,646	2,623	2,810	1,588	1,541



	Postgraduate Certs/Diplomas		Masters		PhD	
Arts & Humanities*	236	297	2,655	2,467	1,465	1,327
Education	2,572	2,998	1,515	1,339	473	480
Social Sciences, Business & Law	1,640	1,924	6,422	6,612	1,401	1,345
Services	126	116	302	275	76	65
Total Other	4,574	5,335	10,894	10,693	3,415	3,217
OVERALL TOTAL	7,245	7,952	17,540	18,695	8,826	8,163

Source: HEA

*Includes general, broad and combined programmes.

Technology

- **Engineering and Manufacturing:** enrolments on masters courses increased by 65% since 2011 whereas PhD enrolments declined by 6%
- **Construction:** declines occurred across all programme types since 2011, although numbers are small
- **Computing:** numbers enrolled have more than doubled on postgraduate certs/diplomas and masters courses since 2010; in contrast, there was a 15% decline in enrolments on PhD programmes since 2011
- **Science:** there were declines for both postgraduate certs/diplomas and PhD enrolments but small gains for masters courses; despite the decline, science still accounted for the largest share of PhD enrolments

Health, Agriculture and Veterinary

- **Agriculture & Vet:** increases occurred across all programme types but the numbers are small
- **Health & Welfare:** the numbers enrolled on postgraduate certs/diplomas courses continued to decline (by 8% since 2011); there were also declines for PhD programme enrolments but masters courses continued to see increases in enrolment levels

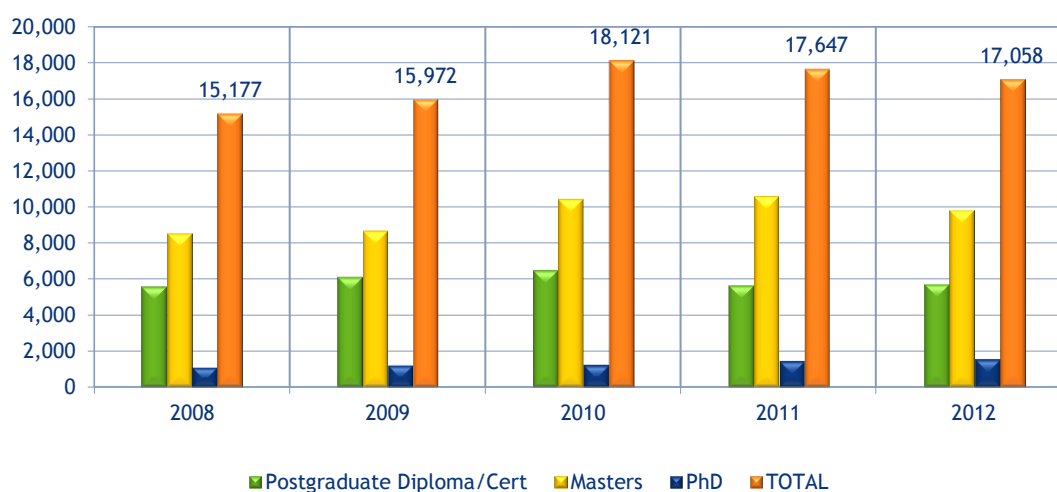
Other Disciplines

- **Arts & Humanities:** enrolments were primarily in masters and PhD programmes, both of which declined year-on-year since 2011
- **Education:** enrolments were primarily for postgraduate certs/diplomas which experienced a 17% increase on 2011; masters course enrolments declined by 12% whereas PhD enrolment levels remained unchanged
- **Social science, Business & Law:** masters courses accounted for the majority of enrolments in this discipline with a 3% increase occurring since 2011; postgraduate certs/diplomas course enrolments increased by 17% but PhD programmes declined by 4%
- **Services:** enrolments declined across all programme types although the numbers involved are small.

7.3 Level 9/10 Graduates

A total of 17,058 students graduated with a postgraduate qualification in 2012 as shown in Figure 7.2. Total output peaked in 2010 and has declined by 3% in each of the subsequent years although output levels in 2012 were still 12% higher than that of 2008. Of the total output, 33.5% were postgraduate certs/diplomas, 57.5% were masters and 9% were for PhD programmes; output for masters courses declined by 7% since 2011 whereas there were increases in output for both postgraduate certs/diplomas and PhDs in the same time period.

Figure 7.2 Level 9/10 Graduate Output by Award Type, 2008-2012



Source: HEA

7.3.1 Graduate Details

This section examines the student profile of those emerging from postgraduate programmes by providing details of the gender and institution type attended (i.e. IoT vs university).

Provider Type & Gender

Universities accounted for the highest share of postgraduate output (at 87%). Females accounted for 57% of postgraduate output; this share rises to 65% for female graduates from university postgraduate cert/diploma programmes (Table 7.5). When compared with 2011:

- **Postgraduate certs/diplomas:** there was very little change across genders in IoTs; an increase in output from universities relates to increased male output
- **Masters:** universities account for the largest share (82%) of output at masters level; declines occurred for both males and females since 2011 for this provider type
- **PhDs:** output was primarily from universities where increases occurred for both genders.

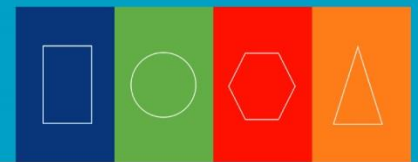


Table 7.5 Graduates by Provider Type and Gender, 2011 and 2012

	Postgraduate Certs/Diplomas				Masters				PhD			
	2011		2012		2011		2012		2011		2012	
	M	F	M	F	M	F	M	F	M	F	M	F
IoTs	231	246	240	225	841	896	854	847	61	43	49	47
Universities	1,749	3,407	1,841	3,410	4,036	4,794	3,600	4,509	674	669	736	700
Total	1,980	3,653	2,081	3,635	4,877	5,690	4,454	5,356	735	712	785	747

Source: HEA

7.3.2 Level 9/10 Graduates by Discipline

Table 7.6 compares the distribution of level 9/10 graduates by discipline for 2011 and 2012³⁸.

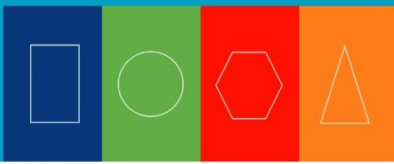
Table 7.6 Level 9/10 Graduations by Discipline, 2011-2012

Level 9/10 Graduates	2011				2012				% Change 11-12
	PG Cert/ Dip	Masters	PhDs	Total	PG Cert/ Dip	Masters	PhDs	Total	
Engineering & Manufacturing	99	586	178	863	73	397	177	647	-25%
Construction	66	165	26	257	74	191	25	290	13%
Computing	242	674	68	984	313	623	76	1,012	3%
Science	208	524	444	1,176	197	426	443	1,066	-9%
Total Technology	615	1,949	716	3,280	657	1,637	721	3,015	-8%
Agriculture/ Vet	1	37	15	53	27	72	32	131	147%
Health & Welfare	1,288	1,239	213	2,735	1,403	1,252	240	2,895	6%
Total Health, Vet. & Agriculture	1,289	1,276	228	2,788	1,430	1,324	272	3,026	9%
Arts & Humanities*	254	1,807	234	2,295	167	1,602	243	2,012	-12%
Social Sciences, Business & Law	1,147	4,576	218	5,941	1,138	4,356	214	5,708	-4%
Education	2,238	731	36	3,004	2,234	685	67	2,986	-1%
Services	90	228	15	333	90	206	15	311	-7%
Total Other	3,729	7,342	503	11,573	3,629	6,849	539	11,017	-5%
OVERALL TOTAL	5,633	10,567	1,447	17,641	5,716	9,810	1,532	17,058	-3%

Source: HEA

*Includes general and combined studies.

³⁸ The data in these tables does not include output from Springboard courses as these relate mostly to partial awards.



Technology

- **Engineering & Manufacturing:** overall output has been in decline in recent years primarily due to a fall in output from masters programmes; an increase in enrolments between 2011 and 2012 suggests a reversal of this decline in the short term
- **Construction:** there was an increase in the overall output for this discipline although the numbers involved are small
- **Computing:** output from masters programmes has been in decline in recent years although a jump in postgraduate cert/diploma output in 2012 led to an overall increase in the number of graduates since 2011; an increase in enrolments in recent years suggests further growth will occur in the short to medium term
- **Science:** the recent decline in masters enrolments impacted on the 2012 output figures with an overall decline of 9%; science still retains the largest share of PhD graduates with no change in output levels since 2011

Health, Vet and Agriculture

- **Agriculture & Vet:** output increased by 147%, albeit from a small base
- **Health & Welfare:** the increase in output relates primarily to an increase in the number of graduates from postgraduate cert/diploma courses

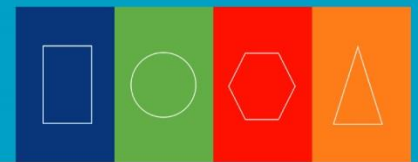
Other Disciplines

- **Arts & Humanities:** output declined for postgraduate cert/diploma and masters courses, but there was a marginal increase in PhD output
- **Social science, Business & Law:** this discipline accounts for the highest share of postgraduate output; the 4% decline since 2011 was as a result of a fall in output for masters programmes
- **Education:** there was little change in output for this discipline between 2011 and 2012; the increase in enrolments on postgraduate cert/diploma courses suggests a recovery should occur following a previous decline in the number of postgraduate cert/diploma graduates³⁹
- **Services:** output declined by 7% since 2011 although the numbers involved are small.

7.4 Other Education and Training Provision

Education and training in Ireland also takes place outside the public education and training system. Private schools, colleges and professional bodies provide various types of education and training within the higher education sector and professional level training. Data for such education and training is limited in its availability and therefore the numbers presented here capture only a subset of education and training taking place outside the public education and training system.

³⁹ It should be noted that there is a significant number of graduates from HETAC accredited education courses delivered through private independent colleges.



Many private independent colleges offer programmes that are accredited by one or more awarding bodies, including, among others, QQI, Irish universities and/or foreign universities. Professional bodies also provide accredited qualifications, some of which are aligned with the NFQ. Table 7.7 shows the number of QQI awards and professional qualifications made to students at selected private, independent colleges⁴⁰ and professional bodies (those colleges and professional bodies (e.g. IMI, Institute of Bankers) whose awards are made by Irish universities are not included as they are included in the HEA data).

Outside the HEA sector, there were 272 level 9 major awards and 200 level 9 partial awards made to learners in selected private provider education institutions, mostly in health and welfare related areas; in addition there were almost 1,900 professional qualifications in 2013, most of which were aligned to the NFQ at level 9, and primarily in business related areas.

Table 7.7 Awards and Qualifications Obtained by Learners, Selected Private Colleges and Professional Bodies, 2013

	Higher Education		Professional Education
	Major Awards	Partial Awards	
Level 9	272	200	1,305
Non-NFQ aligned professional education	-	-	584
Total	272	200	1,889

Source: QQI (HETAC) and IAASA (ACCA, ICAI, ICAEW, ICPAI, IIPA, CIMA) and Irish Tax Institute

7.5 International Comparison

This section outlines the findings of the OECD publication ‘Education at a Glance 2013’ in order to compare Ireland’s performance in terms of undergraduate output with that of other countries. As outlined in Chapter 1 (Section 1.3), programmes leading to postgraduate qualifications (e.g. masters degree) correspond to ISCED level 5 Tertiary Type A (second degree); programmes leading to a PhD award correspond to ISCED level 6 advanced research degree. Graduation rate refers to the number of graduates to the population at typical age of graduation.

Figure 7.3 shows the graduation rates for selected OECD countries in 2010 and 2011 from ISCED level 5 Tertiary Type A (second degrees).

- Ireland’s graduation rate at this level in 2011 was 22.7%, well above the OECD and EU 21 averages (16.5% and 18.8% respectively)
- The graduation rate for Ireland declined by almost three percentage points between 2010 and 2011; at the same time, graduation rates for almost all other countries (except Finland and Estonia) increased, with the result that Ireland’s overall ranking fell from 3rd place to 9th between 2010 and 2011 (the Slovak Republic and Italy are not presented in the graph, but ranked above Ireland in 2011).

⁴⁰ A list of private independent colleges is outlined in Appendix C.

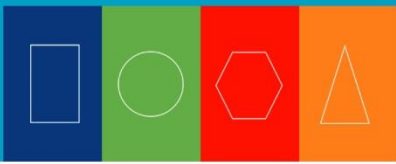
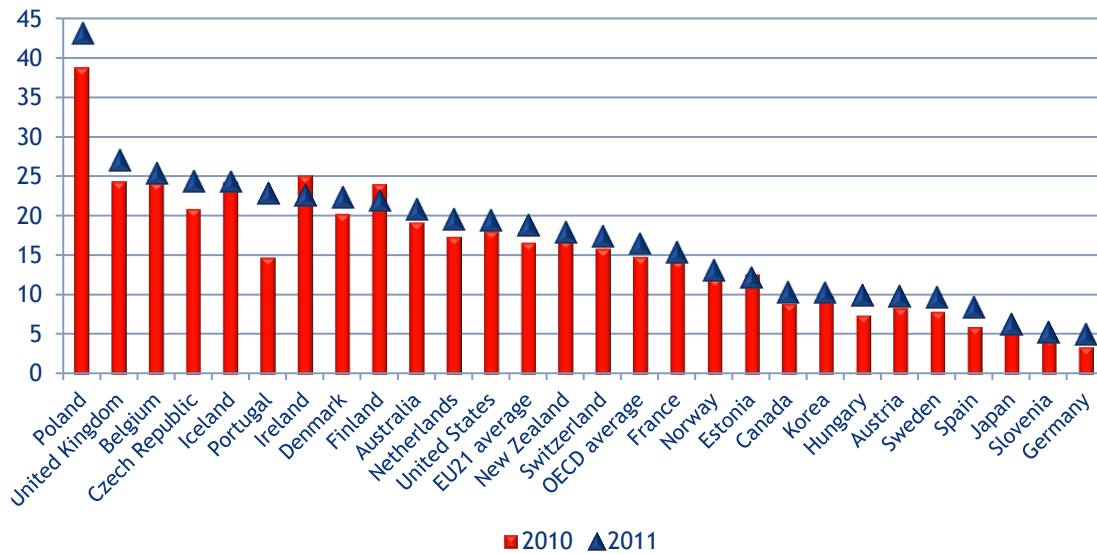


Figure 7.3 Tertiary Type A (2nd Degree) Graduation Rates (%) in Selected Countries, 2010- 2011

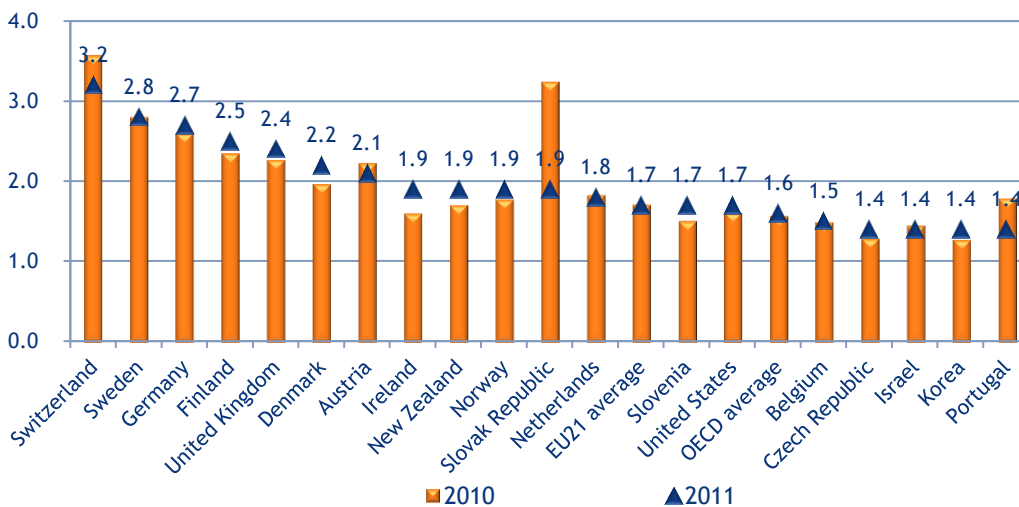


Source: OECD Education at a Glance 2013 (2011 data) and 2012 (2010 data)
Data extracted December 2013

Figure 7.4 shows that graduation rates in selected OECD countries for ISCED level 6 advanced research programmes (equivalent to doctoral degree programmes).

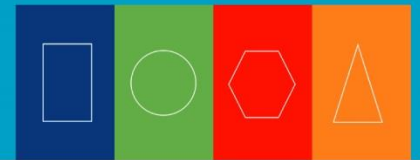
- For the first time, Ireland’s graduation rate at this level (1.9%) exceeded the OECD average of 1.6%; in addition, as in 2010, Ireland also ranked above the EU21 average of 1.7%
- Although Ireland’s PhD graduation rate increased slightly from 1.6% in 2010 to 1.9% in 2011, many of the top performing countries also increased their graduation rates (e.g. Germany, Finland the UK and Austria).

Figure 7.4 Advanced Research Degree Graduation Rates in Selected OECD Countries, 2010-2011



Source: OECD Education at a Glance 2013 (2011 data) and 2012 (2010 data)

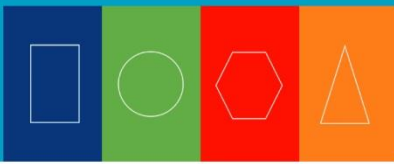
Data extracted December 2013



Chapter 8 Where do Graduates Go?

Key Points

- **First Destination Survey:**
 - the share of graduates in employment in Ireland has been increasing in recent years; in 2012, 42% of level 8 graduates and 61% of level 9/10 graduates were in employment nine months after graduation, an increase of four percentage points each since 2010
- **Population:**
 - the number of 25-29 year-olds in the population has been in decline since 2007 due to a combination of lower birth rates in the 1980s and migration; this population decline has been more pronounced for those with lower levels of education; those with level 8+ qualifications experienced the smallest declines and, indeed, have been increasing in numbers in recent years
- **Economic status (25-29 year olds):**
 - the higher the education level the more likely an individual was to be in employment and the less likely they were to be unemployed
- **Employment levels (25-29 year olds):**
 - between quarter 4 2009 and quarter 4 2013, the numbers in employment with level 8+ qualifications remained relatively unchanged whereas declines occurred for all other education categories
- **Gender (25-29 year olds):**
 - there were more females than males with level 8+ qualifications in quarter 4 2013; for those with a level 8+ qualification, the number of unemployed females increased by 26% since quarter 4 2009 whereas the number of unemployed males declined by 8% over the same period
- **New graduates (25-29 year olds):**
 - new level 8+ graduates were less likely to be in employment than those who graduated more than five years earlier; this gap was more pronounced in quarter 4 2013 than in quarter 4 2009
- **Field of learning (25-29 year olds):**
 - social sciences, business and law accounted for the largest share of persons with level 8+ qualifications; those with education and health-related qualifications were most likely to be in employment and to be working in a related field to their qualification
- **Occupation (25-29 year olds):**
 - level 8+ graduates were most likely to be employed in professional occupations with no change in employment levels in this occupational group when compared to quarter 4 2009; the number of level 8+ graduates employed as managers and administrative roles declined over this period whereas increases occurred in the numbers employed in sales and elementary occupations
- **Sector (25-29 year olds):**
 - level 8+ graduates were primarily employed in education, health and professional activities in 2013



8.1 Introduction

This chapter focuses on those who have recently attained a higher education qualification. Following a summary of key data from the HEA's First Destination Survey (FDS) on recent graduates from Irish higher education institutions, Section 8.3 presents an analysis of the economic status of Ireland's young graduates (25-29 year-olds) based on the Central Statistics Office (CSO) Quarterly National Household Survey (QNHS).

8.2 First Destination

On completion of their studies at higher education, students have a number of options available, including, among others, entering the labour market or remaining within the education and training system. The HEA regularly compiles this information based on a survey of recent graduates nine months after they graduate in order to capture their first destination choices. The latest data currently available relates to those who graduated in 2012 from the university sector⁴¹. The number of level 7/6 graduates from universities is not representative of the total level 7/6 population and is therefore excluded from this analysis; it is, however, estimated that approximately 70% of level 7/6 graduates from IoTs pursue further study or training.

Figure 8.1 illustrates the first destination of graduates at levels 8-10 from universities in 2012. The key findings are:

- level 9/10 graduates had a higher share of persons in employment in Ireland than that of level 8 graduates, with 61% and 42% respectively; they each had a similar share of persons employed overseas
- almost 40% of level 8 graduates were in further studies nine months after graduating compared to 11% of level 9/10 graduates
- a higher rate of level 9/10 graduates were seeking employment at 13% compared to 7% for level 8 graduates
- a small share of graduates were in a work experience scheme or unavailable for work or study, with 3% for level 8 graduates and 5% for level 9/10 graduates.

⁴¹ What Do Graduates Do? The Class of 2012. An Analysis of the Universities First Destination of Graduates Survey, 2013, HEA, December 2013

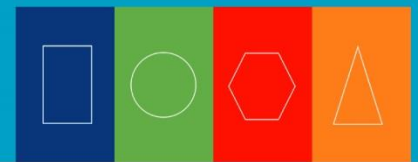
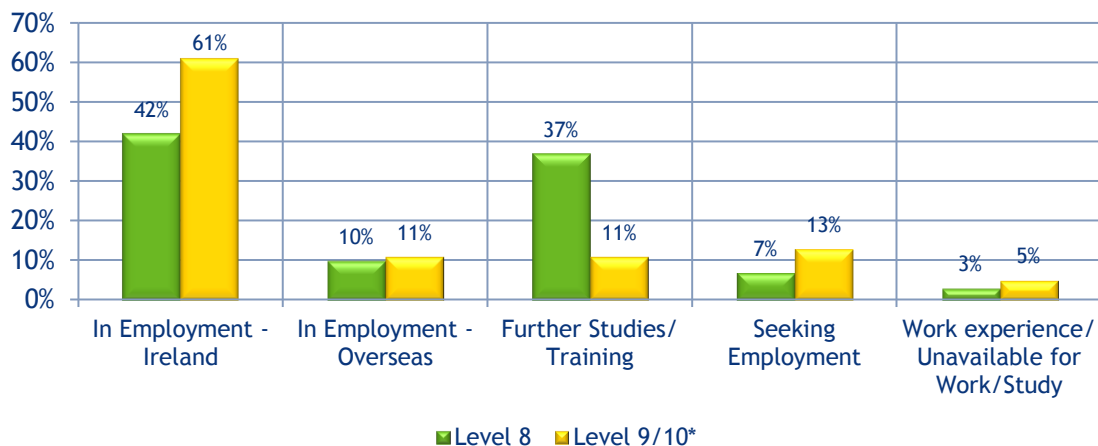


Figure 8.1 First Destination of Level 8-10 Higher Education Graduates, 2012



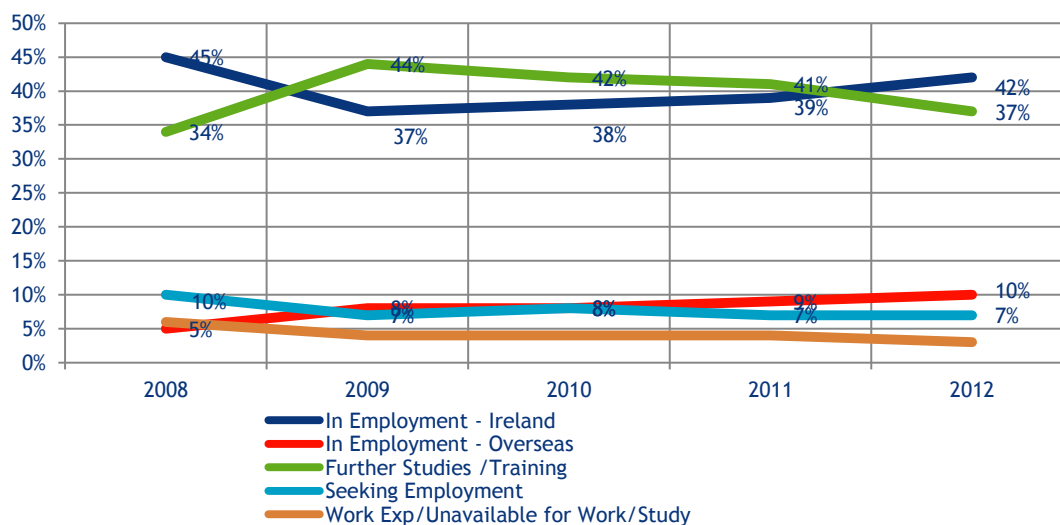
*Level 9/10 includes Masters and PhDs only

Source: HEA

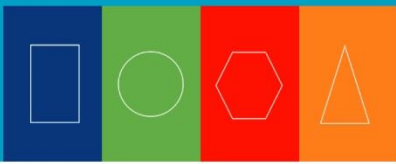
Figure 8.2 provides an analysis of trends relating to level 8 graduates over a five-year period from 2008 to 2012. The main findings are:

- at 42%, the share of level 8 graduates in employment in Ireland grew by three percentage points between 2011 and 2012, the share has been increasing since 2009
- the share of level 8 graduates in employment overseas continues to grow (increased by one percentage point between 2011 and 2012)
- the share of level 8 graduates in further studies/training fell by two percentage points between 2011 and 2012; the share of level 8 graduates in this category has been declining since a peak of 44% in 2009
- the shares seeking employment remained unchanged between 2011 and 2012 whereas the share of those unavailable for work declined by one percentage point over the same period.

Figure 8.2 First Destination of Level 8 Graduates, 2008-2012



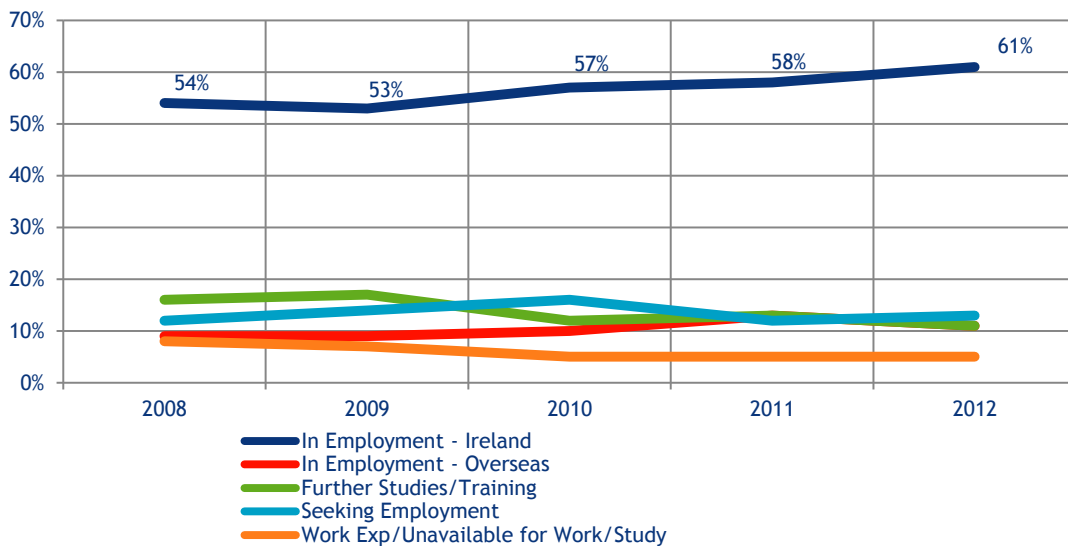
Source: HEA



The main findings from the five-year trend for level 9/10 as illustrated in Figure 8.3 are:

- the share of level 9/10 graduates in employment in Ireland has been increasing since 2009 with a three percentage point increase between 2011 and 2012
- the share of those in employment overseas increased in the period between 2008 and 2011 but declined by two percentage points between 2011 and 2012
- the share of those in further studies or training peaked at 17% in 2009 but declined to 11% by 2012
- the proportion of level 9/10 graduates seeking employment increased slightly between 2011 and 2012 but remained below the peak of 16% in 2010
- there has been little change in the share of those unavailable for work or study since 2010.

Figure 8.3 First Destination of Level 9 Masters and Level 10 PhD Graduates, 2008-2012

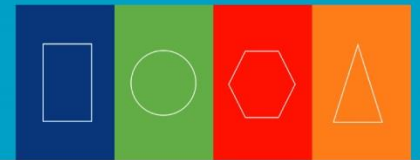


Source: HEA

8.3 Graduates in the Labour Force

This section focuses on the profile of young graduates in Ireland based on the CSO's Quarterly National Household Survey (QNHS). For the purposes of this analysis we examine only those aged 25-29 years as this age cohort is the closest proxy for recent graduates from higher education. The educational attainment of recent graduates is examined as is their employment profile.

The QNHS is a quarterly survey conducted by the CSO and captures data on a wide range of variables. Included in these variables are questions on an individual's current economic status (ILO) (i.e. in employment, unemployed, not active), the highest level of education attained, the



education field and, for those in employment, their occupation and the sector in which they are employed.

As this survey collects data on respondents' education attainment, it is possible to examine the economic status of third level graduates in Ireland and to identify their field of education. However, it should be borne in mind that the education field refers to the field of learning from the highest qualification attained and as such may mask a person's primary degree i.e. those with a computing degree may go on to attain an MBA and would therefore be captured in the social science, business & law category rather than in computing. Quarter 4 2013 is the latest available data at the time of writing; quarter 4 2009 is utilised as a comparison point.

8.3.1 Graduates in the Population

A total of 315,300 persons in the population in Ireland were aged between 25 and 29 years in quarter 4 2013. Of these,

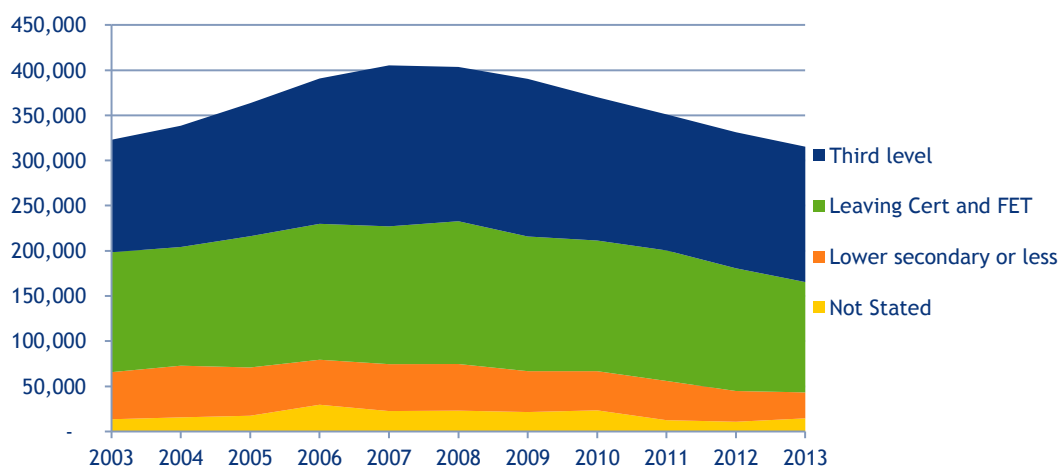
- over a third, or 110,200, had attained a third level honours degree or above (corresponding to NFQ levels 8-10)
- a further 39,700, or 13%, had attained a third level non-honours degree qualification (corresponding to NFQ levels 6-7)
- Leaving Cert and further education and training (FET) accounted for the largest educational group accounting for 39% of the total for this age cohort.

As Figure 8.4 illustrates, there has been a marked decrease in the number of persons aged 25-29 in the population in recent years with a 22% decline since the peak of 405,400 in 2007. The decline is related to both a natural decline in this age group due to lower birth rates in the 1980s along with migration. The decline was not uniform across all education levels:

- the numbers with lower secondary education almost halved over the period
- those with Leaving Cert/FET education levels represent the biggest decline, in absolute terms, at 30,400
- those with third level qualifications peaked at 178,000 in 2007 and proceeded to fall by 16% since then; although it is not possible to disaggregate the non-honours degrees from the honours degrees prior to 2009⁴², since then the number of 25-29 year-olds in the population holding third level non-honours degrees has been in decline whereas the number of those holding honours degrees or above has increased slightly.

⁴² The classification of educational levels in the QNHS was revised in Q2 2009 in order to align the education attainment to the NFQ Framework and led to changes in the third level qualification categories to separate the attainment of Ordinary degrees from Honours Bachelor degrees. Because of this, detailed results prior to Q2 2009 are not directly comparable with results from Q2 2009 onwards.

Figure 8.4 Population Aged 25-29 by Education Attainment, Quarter 4 2003 - Quarter 4 2013



Source: SLMRU (SOLAS) analysis of CSO data (QNHS)

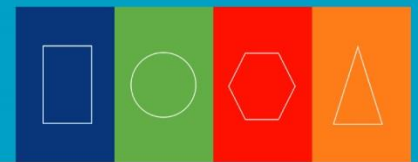
8.3.2 Economic Status of Graduates

Table 8.1 focuses on the economic status of 25-29 year-olds by education attainment for quarter 4 2009 and quarter 4 2013. The overall proportion of persons aged 25-29 years in employment dropped by three percentage points, from 71% in quarter 4 2009 to 68% in quarter 4 2013. The share of those not economically active increased over this time frame, reaching 20% by quarter 4 2013, while the share of unemployed 25-29 year-olds remained unchanged.

Table 8.1 Population aged 25-29 by Education Attainment and Economic Status (ILO), Quarter 4 2009 and Quarter 4 2013

	Q4 2009				Q4 2013			
	In Employment	Unemployed	Not Active	Total	In Employment	Unemployed	Not Active	Total
Third level honours degree or above (NFQ Level 8+)	84%	6%	9%	100%	81%	7%	12%	100%
Third level non-honours degree (NFQ Level 6/7)	78%	11%	11%	100%	75%	10%	15%	100%
Leaving Cert and FET (NFQ Level 4/5)	68%	15%	17%	100%	63%	15%	22%	100%
Lower Secondary or less (NFQ Level 3 or less)	46%	20%	35%	100%	32%	21%	47%	100%
Total	71%	12%	16%	100%	68%	12%	20%	100%

Source: SLMRU (SOLAS) analysis of CSO data (QNHS)

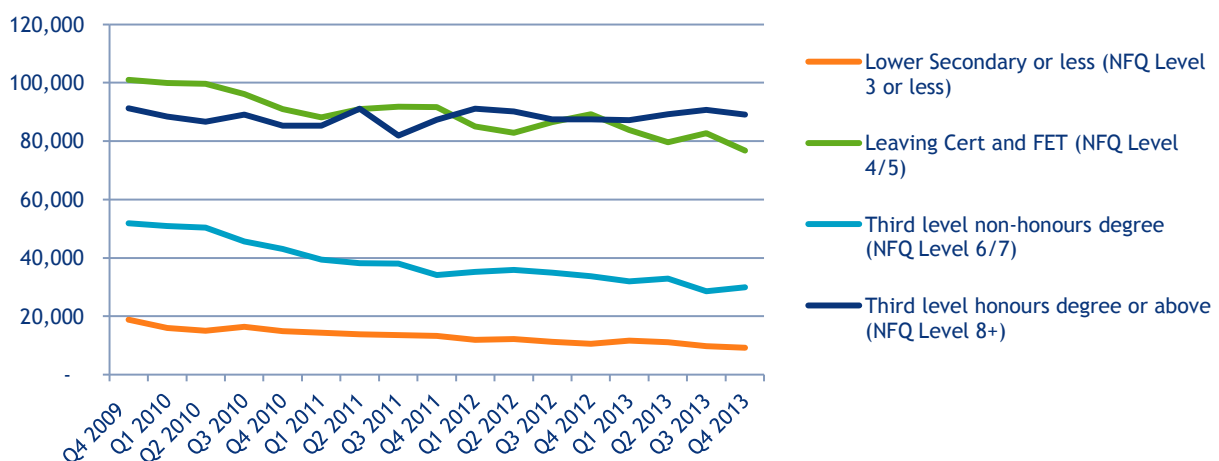


- **In employment:** the higher the level of educational attainment, the more likely an individual was to be in employment in both time periods
- **Unemployed:** conversely, the lower the level of educational attainment the greater the chances of being unemployed
- **Not active:** the share of 25-29 year-olds classified as not active increased by four percentage points over the period; in absolute terms, those with level 8+ qualifications had the largest increase in this category primarily due to an increase of over 4,000 persons classified as students

While overall rates may not have changed considerably when comparing the two points in time, an examination of trends for those in employment for each quarter from quarter 4 2009 by education attainment (Figure 8.5) reveals a number of key findings:

- **Third level degree or above:** in quarter 4 2013 this category accounted for the largest number of persons employed; the numbers have remained relatively stable over the period examined with a 2% decline occurring between quarter 4 2009 and quarter 4 2013
- **Third level non-degree:** the number of persons employed in this education category declined significantly over the period examined, by 22,000, or 42%; this suggests that factors such as migration have been affecting persons with lower than level 8+ qualifications more so than those with higher qualifications
- **Leaving Cert and FET:** the numbers in employment in this category fell by 24,000, or 24%, over the period examined
- **Lower secondary education levels or less:** this group experienced the most significant percentage decline in employment, dropping by 51%, although this represents fewer than 10,000 persons.

Figure 8.5 Persons in Employment Aged 25-29 by Education Attainment, Quarter 4 2009 - Quarter 4 2013



Source: SLMRU (SOLAS) analysis of CSO data (QNHS)

Graduates by Gender

This section examines only those with level 8+ qualifications to ascertain the profile of recent graduates from higher education.

Table 8.2 details the gender differences of those with level 8+ qualifications in quarter 4 2013 by economic status and compares it to levels in quarter 4 2009.

Table 8.2 Level 8+ Graduates aged 25-29 by Gender and Economic Status (ILO), Quarter 4 2009 and Quarter 4 2013

	Level 8+ Males			Level 8+ Females		
	Q4 2013	% of Total	% change 09q4-13q4	Q4 2013	% of Total	% change 09q4-13q4
In Employment	38,600	81%	-3%	50,500	81%	-2%
Unemployed	3,200	7%	-8%	4,200	7%	26%
Not Active	6,100	13%	37%	7,600	12%	39%
Total	47,800	100%	0%	62,400	100%	3%

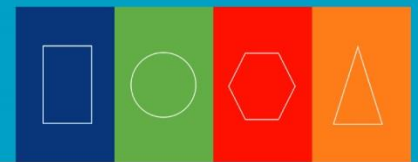
Source: SLMRU (SOLAS) analysis of CSO data (QNHS)

- There are more females than males in the population aged 25-29 with a level 8+ qualification
- Both genders had a similar breakdown by economic status
- For both genders there was a decline in the numbers in employment between quarter 4 2009 and quarter 4 2013; the 3% decline for males masks a greater fluctuation that occurred during this time period with a 21% decline occurring between quarter 4 2009 and quarter 3 2011 and a subsequent recovery in more recent years
- While the numbers unemployed declined by 8% for males in the period examined there was an increase of over a quarter in the number of females unemployed, albeit from a low base
- An increase in the number of level 8+ graduates classified as not active occurred for both genders primarily related to level 8+ graduates remaining in or returning to education.

Graduates by year of education completion

Table 8.3 details the economic status of level 8+ graduates aged 25-29 years depending on how recently they completed their highest level of education. Over 60,000 of all level 8+ graduates in quarter 4 2013 had completed their highest level of education in the previous five years with the remaining 43,000 having gained their highest level of education at least six years earlier.

- In quarter 4 2013, 76% of those who completed their highest level of education in the previous five years were in employment, 8% were unemployed and a further 16% were not active in the labour market



- Those who had attained their qualifications over six years previously had a higher share of employment at 88% in quarter 4 2013 than more recent graduates, with a twelve percentage point gap
- When compared to quarter 4 2009, those who attained their highest level of education in the previous five years were less likely to be in employment and more likely to be classified as not active (primarily as students); this suggests that newer graduates are not as successful in gaining employment than was previously the case.

Table 8.3 Level 8+ Graduates aged 25-29 by Year of Highest Level of Education Completion and Economic Status (ILO), Quarter 4 2009 and Quarter 4 2013

	Quarter 4 2009		Quarter 4 2013	
	Previous Five Years	Previous Six Years +	Previous Five Years	Previous Six Years +
In employment	83%	87%	76%	88%
Unemployed	8%	5%	8%	4%
Not Active	10%	8%	16%	8%
Total	100%	100%	100%	100%

Source: SLMRU (SOLAS) analysis of CSO data (QNHS)

Graduates by Field of Learning

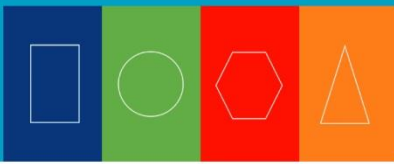
Table 8.4 compares the economic status of those aged 25-29 with level 8+ qualifications by field of education for the highest level of education attained between quarter 4 2009 and quarter 4 2013.

Table 8.4 Education Field of Those Aged 25-29 with Level 8+ Qualifications in the Population and in Employment (%), Quarter 4 2009 and Quarter 4 2013

	Quarter 4 2009		Quarter 4 2013	
	Total	In employment (%)	Total	In employment (%)
Education	8,700	93%	11,900	91%
Humanities and Arts	10,200	82%	11,000	76%
Social sciences, Business & Law	42,000	88%	37,200	79%
Science, Maths & Computing	10,900	68%	11,000	74%
Engineering, Manufacturing & Construction	14,900	77%	13,700	81%
Health and Welfare	10,400	90%	14,400	85%
Services	3,200	85%	4,800	79%
Other	5,800	86%	4,100	76%
Total	106,100	84%	110,200	81%

Source: SLMRU (SOLAS) analysis of CSO data (QNHS)

Note: Agriculture & Veterinary were excluded from this analysis as numbers involved are too small to report.



- Social sciences, business and law level 8+ graduates accounted for the highest share of graduates in both time periods
- The employment rate was highest for level 8+ graduates whose highest level of education was in an education-related field at 91% in quarter 4 2013, followed by health and welfare at 85%
- The number of level 8+ graduates aged 25-29 years in the population went up for each education field excluding social sciences, business and law, engineering, manufacturing and construction and the other category which declined by 4,800, 1,200 and 1,700 persons respectively
- The share of persons employed declined for the majority of education fields, excluding science and engineering related fields where the share of graduate employment increased by six percentage points and four percentage points respectively.

8.3.3 Graduates in Employment

This subsection looks at those level 8+ graduates in employment by gender, occupation and sector.

Gender Distribution by Field of Learning

Table 8.5 details the gender breakdown of 25-29 year-old level 8+ graduates in employment.

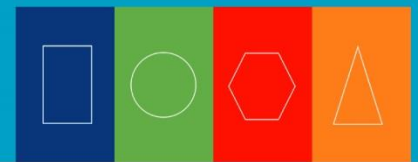
Table 8.5 Education Field of those Aged 25-29 with Level 8+ Qualifications in Employment by Gender, Quarter 4 2009 and Quarter 4 2013

Education Fields	Quarter 4 2009		Quarter 4 2013	
	Males	Females	Males	Females
Education	21%	79%	23%	77%
Humanities & Arts	34%	66%	29%	71%
Social sciences, Business & Law	43%	57%	40%	60%
Science, Mathematics & Computing	62%	38%	72%	28%
Engineering, Manufacturing & Construction	77%	23%	80%	20%
Health & Welfare	19%	81%	16%	84%
Services	36%	64%	54%	46%
Total	44%	56%	43%	57%

Source: SLMRU (SOLAS) analysis of CSO data (QNHS)

Note: Agriculture & Veterinary excluded as numbers involved are too small to report.

- Females had higher shares of persons employed than males in all but three education fields with males having higher shares in engineering (80%), science (at 72%) and services (at 54%) in quarter 4 2013



- Science and services saw the largest increases in both the number and share of employed males with level 8+ qualifications; in contrast, the number of employed males with social science qualifications declined by over 4,000, or a three percentage point share decline
- Despite a decline in the share of employed females in education, in absolute terms this cohort increased by almost 2,000 females; increases also occurred in the number of employed females with health and welfare qualifications (+2,700) whereas declines occurred in both shares and absolute numbers for some fields, particularly in social science (-3,300)
- The sharp decline in the proportion of females in employment whose highest level of education was in science related fields did not correspond to a large drop in absolute terms and was more related to the increase in the number of employed males in this cohort.

Occupational Distribution of Graduates

This subsection first examines the extent to which level 8+ graduates aged 25-29 years are employed in areas related to their education qualification. This is followed by an occupational breakdown of all level 8+ graduates in employment and contrasts it with that of the total in employment for this age group (i.e. 25-29 years) to show the extent to which a level 8+ qualification affects the occupation in which one works.

The SLMRU conducted an exercise which grouped occupations in to a relevant field of education group (see Appendix B for details on which occupations are included within each occupational field)⁴³. These occupation fields were then compared to the education fields of the highest level of education for all level 8+ graduates in employment to ascertain the share of graduates employed in areas related to their education qualification (Table 8.6). This led to the following findings:

- Those with education as their highest qualification attained were most likely to be employed in education-related occupations; their share increased by thirteen percentage points between quarter 4 2009 and quarter 4 2013 from 75% to 88%
- Science, mathematics and computing level 8+ graduates had the lowest share of persons employed in occupations related to their field of education qualifications at 32% in quarter 4 2013 (a further 44% of these employed graduates were employed in related areas including engineering, economics and statistics)
- When compared to quarter 4 2009, the share of science, mathematics and computing level 8+ graduates working in a related field declined by twenty two percentage points - the largest decline amongst all fields of learning.

⁴³ The field in which an individual worked was categorised by the SLMRU by aligning SOC 2010 occupations with International Standard Classification of Education (ISCED) fields of training. It should be borne in mind that the analysis is approximate and intended as an indicator of skills matching.

Table 8.6 Share of Level 8+ Graduates Aged 25-29 in Employment in Occupation Fields Related to Their Qualification, Quarter 4 2009 and Quarter 4 2013

	Q4 2009	Q4 2013
Education qualification (working in education)	75%	88%
Humanities & Arts qualification (working in humanities/arts)	*	*
Social sciences, Business & Law qualification (working in social science etc.)	80%	74%
Science, Mathematics & Computing qualification (working in science etc.)	54%	32%
Engineering, Manufacturing & Construction qualification (working in engineering etc.)	51%	43%
Agriculture & Veterinary qualification (working in agriculture etc.)	*	*
Health & Welfare qualification (working in health/welfare)	77%	80%
Services qualification (working in services)	53%	53%

Source: SLMRU (SOLAS) analysis of CSO data (QNHS)

* Numbers involved are too small to report.

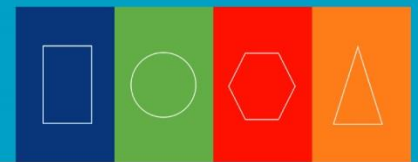
Table 8.7 details the occupational distribution of 25-29 year-olds in employment for both level 8+ graduates and the total in employment for quarter 4 2009 and quarter 4 2013.

Table 8.7 Occupational Breakdown of Those in Employment Aged 25-29 by Education Level, Quarter 4 2009 & Quarter 4 2013

	Q4 2009		Q4 2013	
	Level 8+ Grads	All others in employment	Level 8+ Grads	All others in employment
Managers, Directors and Senior Officials	5,000	8,300	2,700	5,700
Professional Occupations	41,400	10,000	41,400	4,900
Associate Professional & Technical Occupations	15,400	19,300	15,500	10,700
Administrative and Secretarial Occupations	11,300	30,100	8,800	13,800
Skilled Trades Occupations	4,200	33,500	4,300	21,900
Caring, Leisure and Other Service Occupations	3,300	18,600	4,000	13,900
Sales and Customer Services Occupations	4,700	21,700	6,000	20,500
Process, Plant and Machine Operatives	1,300	13,300	*	10,800
Elementary Occupations	4,600	32,700	5,500	21,300
Total	91,200	187,500	89,000	124,000

Source: SLMRU (SOLAS) analysis of CSO data (QNHS)

* Numbers involved are too small to report.



The total number of level 8+ graduates aged 25-29 in employment declined only slightly between quarter 4 2009 and quarter 4 2013 whereas those with lower levels of education experienced a 63,000 drop in the numbers employed. This affected persons from each occupation and education level differently.

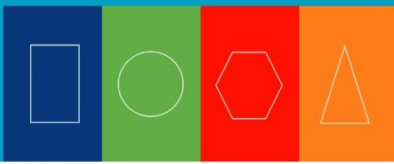
- Level 8+ graduates accounted for 89% of all persons employed in professional occupations in quarter 4 2013; while the number of persons with all other education levels halved for this occupational group between 2009 and 2013, the number of level 8+ graduates remained unchanged
- The share of associate professionals who hold level 8+ qualifications increased from 44% in quarter 4 2009 to 59% in quarter 4 2013 due to a decline in the number of persons employed with lower levels of education
- Declines occurred across all occupations for all others in employment since quarter 4 2009; for those with level 8+ qualifications, the number of persons employed as managers almost halved to 2,700 in quarter 4 2013 while those in admin occupations declined by 2,500
- For level 8+ graduates the only increases in employment levels occurred for the lower skilled occupations including caring, sales and elementary occupations; there have been significant fluctuations in employment levels in these occupations during the time period examined which prohibit the identification of emerging patterns at this point in time.

Sectoral Employment of Graduates

Table 8.8 compares the distribution of level 8+ graduates by sector with all others aged 25-29 years in employment.

Table 8.8 Sectoral Employment of those aged 25-29 by Education Attainment, Quarter 4 2009 & Quarter 4 2013

Sector	Q4 2009		Q4 2013	
	Level 8+ Grads	All others in employment	Level 8+ Grads	All others in employment
Agriculture, forestry & fishing	*	3,500	*	3,600
Industry	11,300	26,200	7,900	17,000
Construction	*	16,500	*	8,300
Wholesale & retail trade; repair of motor vehicles & motorcycles	7,800	36,200	9,700	28,300
Transportation & storage	*	8,600	*	5,100
Accommodation & food service activities	4,000	20,600	6,000	16,000
Information & communication	8,000	5,200	7,300	3,900
Financial, insurance & real estate activities	12,100	13,300	8,500	5,200
Professional, scientific & technical activities	11,600	7,100	11,200	3,800
Administrative & support service activities	*	7,100	2,800	5,600
Public admin & defence; compulsory social security	3,300	8,800	2,600	5,000

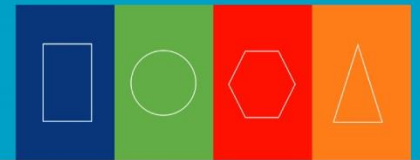


Sector	Q4 2009		Q4 2013	
	Level 8+ Grads	All others in employment	Level 8+ Grads	All others in employment
Education	13,200	5,400	15,900	3,300
Human health & social work activities	11,100	16,100	12,300	8,900
Other NACE activities	3,600	12,900	2,700	9,900
Total	91,300	187,500	89,000	124,000

Source: SLMRU (SOLAS) analysis of CSO data (QNHS)

* Numbers involved are too small to report.

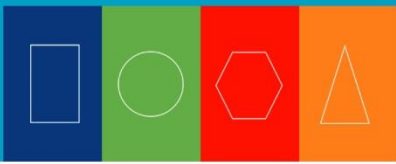
- Level 8+ graduates were primarily employed in education, health and professional activities in 2013
- Level 8+ graduates accounted for the higher share of persons employed in five sectors in quarter 4 2013, namely, IT, financial and professional activities, education and health; this is a reverse for two sectors since quarter 4 2009 when all others in employment had a greater share in financial activities and health
- The largest decline in the number of level 8+ graduates employed between quarter 4 2009 and quarter 4 2013 occurred in industry and financial activities, each declining by approximately 3,500 persons
- The most significant gains in level 8+ employment occurred for the wholesale and retail trade sector along with accommodation and food and education
- For all others in employment, all sectors experienced a decline in employment levels excluding agriculture which increased marginally.



Chapter 9 Irish Students Abroad

Key Points

- **Total students abroad:**
 - there were almost 19,300 Irish students enrolled in higher education abroad in 2011 - a 2% increase compared to 2010
- **Programme type:**
 - almost three quarters of Irish students abroad were enrolled on ISCED level 5 Tertiary Type A programmes of study (honours bachelor degrees/master degrees)
- **Destination country:**
 - the vast majority (87%) of Irish students abroad opted to study in the UK in 2011; this is unchanged compared to 2010
- **UCAS acceptances:**
 - through UCAS (similar to the CAO in Ireland), 2,120 Irish students accepted a place to study on full-time undergraduate courses in the UK in 2013; this is a 6% increase (112 additional acceptors) when compared to 2012, but well below the 2,992 acceptors in 2010
- **Irish graduates in the UK:**
 - Approximately 6,000 Irish-domiciled students qualified from undergraduate and postgraduate courses in UK higher education institutions in 2013, 8% fewer than in 2012
 - Irish-domiciled graduates from UK institutions in 2013 were primarily distributed across three broad fields: social studies, business and law; health, vet and agriculture; and technology related subjects ; this distribution is similar to 2012
- **ERASMUS:**
 - In 2011/2012, almost 2,800 students from Irish HEIs participated, the highest number to date; this is a 10% increase on the preceding year and more than a 50% increase when compared to 2007/2008
 - The most popular destinations are France, Spain and the UK; combined, these three countries account for over one half of all Ireland's outgoing ERASMUS students annually



9.1 Introduction

This chapter provides an overview of the Irish-domiciled students at higher education institutions (HEIs) outside of the Republic of Ireland. The OECD defines international students as either students who are not permanent/usual residents of their country of study or alternatively as students who obtained their prior education in a different country⁴⁴. Section 9.2 looks at the number of Irish-domiciled students enrolled in third level education in other OECD countries. Data on Irish-domiciled students in higher education in the United Kingdom is available in greater detail from additional sources and is examined in Section 9.3: data from the UK based Universities and Colleges Admission Service (UCAS)⁴⁵ provides an overview of the number of Irish-domiciled students who accepted an offer of a place to study at HEIs in the UK; data provided by the Higher Education Statistics Authority (HESA) shows the number of Irish students who graduated from higher education programmes in the UK. The final section of this chapter presents the number of students enrolled in Irish HEIs who participated in the ERASMUS study abroad programme.

9.2 Irish Students in Other OECD Countries

Students who leave their country of origin and move to another country for study purposes are classified as international students. Table 9.1 shows the number of international students, domiciled in Ireland but enrolled in third level courses abroad. In 2011,

- there were 19,272 Irish students enrolled in higher education abroad, approximately 2% more (or 397 additional students) than in 2010
- as in preceding years, the United Kingdom is by far the most popular destination for Irish students opting to study abroad, accounting for 87% of the total
- the vast majority of Irish students abroad study in other anglophone countries, including the United States (6%), Australia (1%) and Canada (0.65%)
- almost three quarters of Irish students abroad were enrolled on ISCED level 5 Tertiary Type A programmes of study (honours bachelor degrees/master degrees); 14% were enrolled on ISCED level 5 Tertiary Type B programmes (e.g. ordinary bachelor degree); 7% were on advanced research programmes.

⁴⁴ International student data excludes numbers relating to those undertaking shorter, temporary courses as part of international exchange programmes such as ERASMUS.

⁴⁵ UCAS is the organisation responsible for managing applications to higher education courses in the UK and is similar to the CAO in Ireland.

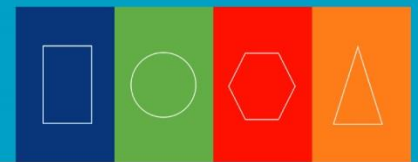


Table 9.1 Irish Enrolments in OECD Countries by Programme Type & Destination Country, 2011

Country	Tertiary B (ISCED 5)	Tertiary A (ISCED 5)	Advanced Research (ISCED 6)	Tertiary unknown	Total
United Kingdom	2,583	13,037	1,128	-	16,748
USA	-	-	-	1,145**	1,145
Germany	-	314	-	-	314
Australia	2	211	41	-	254
Hungary	-	192	-	-	192
Canada	9	96	18	-	123
Spain	14	55	4	-	73
Netherlands	-	71	16	-	87
New Zealand	10	37	19	-	66
Others*	12	215	43	-	270
Total	2,630	14,228	1,269	1,145	19,272

Source: OECD online database

*The 'Others' category includes Poland, Belgium, Denmark, Slovak Republic, Sweden, Switzerland, Portugal and Denmark.

** While data by level is unavailable for the USA, it is estimated that more than a third (39%) of Irish students in the USA follow an undergraduate programme, 32% follow a postgraduate programme, with the remaining students on other types of courses (including non-degree)⁴⁶.

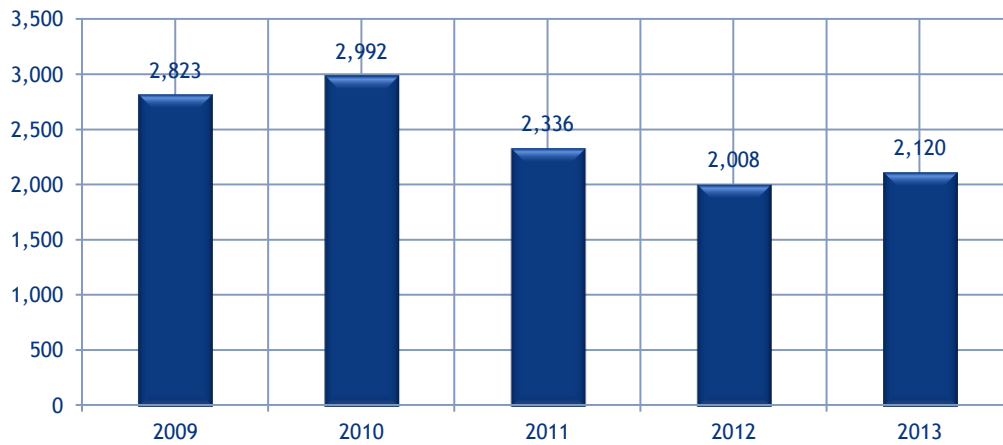
9.3 Irish students in the United Kingdom

9.3.1 Inflows - UCAS Acceptances

In 2013, over 2,100 Irish-domiciled students accepted a place in higher education institutions in the UK (Figure 9.1). The number of Irish-domiciled acceptors reached almost 3,000 in 2010 but declined sharply in 2011 and 2012, possibly due to the introduction of increased tuition fees in many UK higher education institutions; as a result, the number of acceptors in 2013 was 29% lower than in 2010, amounting to 872 fewer students. Nonetheless, the number of acceptors in 2013 increased slightly by 6% (112 additional acceptors) since 2012.

⁴⁶ Institute of International Education. (2013). "International Students by Academic Level and Place of Origin, 2012/13." *Open Doors Report on International Educational Exchange*. Retrieved from <http://www.iie.org/Research-and-Publications/Open-Doors/Data/International-Students/By-Academic-Level-and-Place-of-Origin/2012-13>

Figure 9.1 Republic of Ireland Domiciled UCAS Acceptors, 2009-2013



Source: UCAS

9.3.2 Outflows - Irish Domiciled Graduates in the UK

Approximately 6,000 Irish-domiciled students graduated from UK higher education institutions in 2013 (Table 9.2).

- Irish-domiciled graduates (undergraduate and postgraduate level) in 2013 were primarily distributed across the following subject areas:
 - social studies, business and law, which had the highest number of Irish-domiciled graduates (almost 1,800 graduates, or 30% of the total)
 - health, vet and agriculture, where graduates made up over a quarter of the total (1,620 students)
 - technology related subjects (science, computing, engineering and technology combined), accounting for 1,055 students, or approximately a fifth of the total.
- The total number of graduates in 2013 was 8% lower than in 2012, with declines in almost all subject areas except health, vet & agriculture (+6%) and social studies, business & law (+4%); the strongest declines were in architecture, building & planning (-42%, or 130 fewer graduates), engineering/technology (-33%, or 165 fewer graduates), and education (-24%, or 205 fewer graduates)
- Between 2009 and 2013, the overall number of graduates increased by 6%, amounting to 320 additional graduates; the largest growth was for social studies, business and law, where there were an additional 650 graduates, 59% more than in 2009; in contrast, the number of architecture etc graduates declined by 60%, going from 455 to 180 over the period.

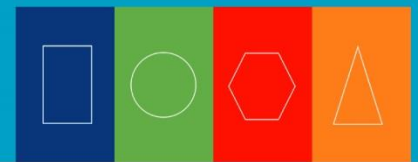


Table 9.2 Irish Domiciled 3rd Level Graduates in UK Higher Education (All Levels) 2009-2013

Discipline	2009	2010	2011	2012	2013	% Change 2009-2013	% Change 2012-2013
Health, Vet & Agriculture	1,455	1,430	1,415	1,535	1,620	11%	6%
Science & Computing	685	690	745	805	720	5%	-11%
Engineering & Technology	455	490	655	500	335	-26%	-33%
Architecture, Building & Planning	455	485	430	310	180	-60%	-42%
Social Studies, Business & Law	1,100	1,050	1,565	1,675	1,750	59%	4%
Arts, Humanities & Combined Studies	630	695	770	755	675	7%	-11%
Education	825	1,015	865	850	645	-22%	-24%
Total	5,605	5,855	6,445	6,450	5,925	6%	-8%

Source: HESA (UK)

9.4 Erasmus Students

9.4.1 - Outgoing from Ireland

The European region action scheme for the mobility of university students (ERASMUS) is a programme that enables higher education students to study or do a company work placement for three to 12 months in one of 30 other European countries as part of their studies⁴⁷. Students on ERASMUS programmes are usually registered students in their home universities. The numbers included in this section are therefore a subset of the numbers outlined in Chapters 6 and 7 of this report.

Table 9.3 shows the number of students from Irish higher education institutions (HEIs) who went abroad to either work or study as part of their third level studies.

- In 2011/2012, almost 2,800 students from Irish HEIs participated in ERASMUS; this is the highest number to date; the number represents a 10% increase on the preceding year and more than a 50% increase when compared to 2007/2008
- In 2011/2012, approximately 70% of participants went abroad for study, the remainder were on work placements
- The most popular destinations are France, Spain and the UK; combined, these three countries account for over one half of all Ireland's outgoing ERASMUS students annually.

⁴⁷ ERASMUS participating institutions are not confined to the EU and include those in Norway, Iceland and Turkey.

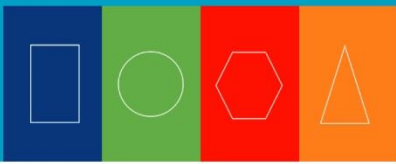


Table 9.3 Outgoing ERASMUS Students* from Ireland by Destination Country, 2007/08-2011/12

Destination Country	2007/08	2008/09	2009/10	2010/11	2011/12
France	464	473	514	649	637
Spain	324	316	391	451	449
UK	158	224	238	349	412
Germany	245	252	251	276	365
Netherlands	68	86	121	144	154
Others**	558	485	613	642	737
Total	1,817	1,836	2,128	2,511	2,754

Source: European Commission (ERASMUS statistics)

*Numbers include students going abroad to higher education institutions and on work placements.

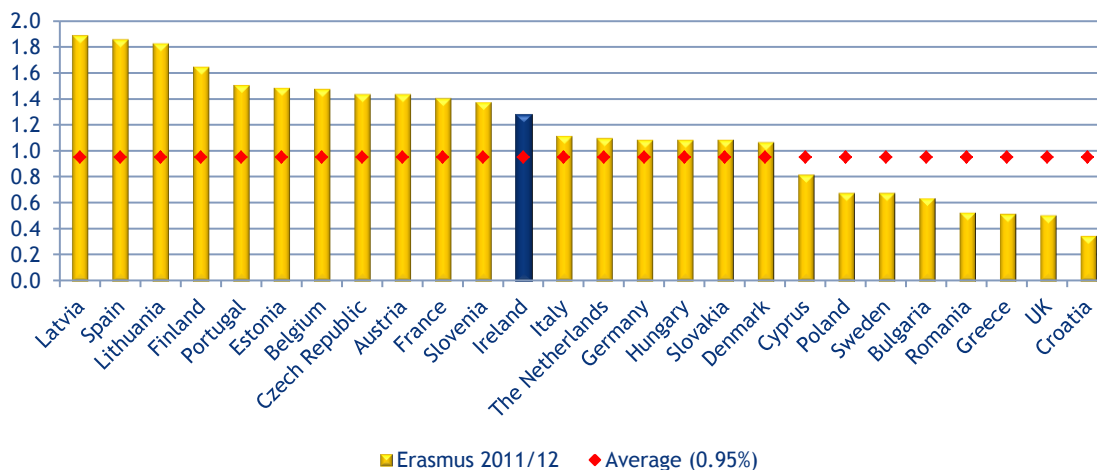
**Includes: Other EU countries as well as Iceland, Liechtenstein, Norway and Turkey.

9.4.2 ERASMUS Students - European Comparison

Figure 9.2 shows 2011/2012 Erasmus students as a proportion of the student population by country.

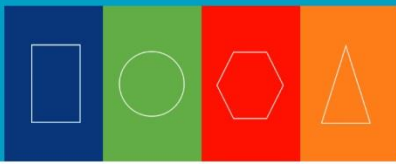
- On average Erasmus students accounted for 0.95% of all enrolments across Europe
- The share for Ireland, at 1.28%, is slightly above average and more than double that of countries such as the UK, although behind others such as Latvia and Spain, each with a share of 1.9%

Figure 9.2 ERASMUS Students as a Share of Student Population for Selected EU Countries, 2011/12



Source: European Commission (ERASMUS statistics)

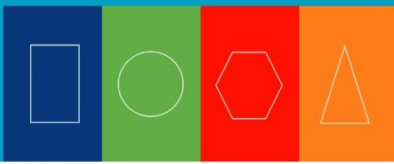
On average, Erasmus students spent 5.9 months abroad as part of their third level studies. At an average of 6.6 months, students from Ireland tend to spend slightly longer abroad than their European counterparts: only students from Spain and the UK (at 7.4 and 6.9 months respectively) had longer average durations.



Chapter 10 Lifelong Learning: the Adult Population

Key Points

- **Formal learning:** approximately 133,000 persons, or 5.4% of the adult population (aged 25-64), participated in formal learning activities in quarter 4 2013
- **Non-formal learning:** approximately 76,000 persons, or 3.1% of the adult population (aged 25-64), participated in formal learning activities in quarter 4 2013
- **Lifelong learning:** approximately 203,000 persons aged 25-64 years participated in lifelong learning activities in quarter 4 2013, representing 8.2% of the adult population (as some persons participated in both types, the total number of lifelong learning participants is less than the sum of formal and non-formal learning); the rates were higher for
 - females (8.5%)
 - 25-34-year-olds (13.7%)
 - third level graduates (12%)
 - those who were economically inactive (12.9%)
 - those working in professional (11.1%) or caring and services (9.2%) occupations
 - those working in the finance, insurance and real estate sector (11.3%)
- **Field and level of education:** almost one third of formal education participants in quarter 4 2013 had studied social science, business and law; more than three quarters had studied at third level
- **Time comparison:** over the period quarter 4 2008 - quarter 4 2013, the lifelong learning participation rate increased, going from 7.9% to 8.2%; this growth was due to an increase in formal learning participation, primarily amongst males
- **EU comparison:** at 7.3% in 2013, Ireland lags well behind the top performers such as Denmark (31.4%) and the EU 2020 target (15%) in terms of adult participation in lifelong learning
- **PIAAC 2012:** Among the key findings were,
 - Ireland's performance was below the OECD average in each of the three assessments: literacy, numeracy and problem solving in technology rich environments
 - The highest mean scores in literacy and numeracy were for those aged less than 45 years, third level graduates, persons in full-time employment or students
 - The highest mean scores in problem solving in technology rich environments were found for those aged less than 35 years, third level graduates and students.



10.1 Introduction

While the main focus of this report is on students who have yet to complete full-time education, there are also a number of people returning to education, either on a full- or part-time basis, across all levels of the education system (ranging from those taking basic literacy programmes through to third level and professional training). The data outlined thus far in this report includes such re-entrants to education; however, while their numbers or shares may be captured by mode of study or age variables, due to the limited nature of the data, and the limited availability of some education and training awards, such data may not reflect the true extent of education and training undertaken by the adult population in Ireland.

This chapter focuses primarily on adults who have engaged in lifelong learning, looking at the extent to which those aged 25-64 years have undertaken formal and non-formal learning, by variables including age, gender, highest level of education attained, economic status, sector, and occupation. A section summarising the results from the PIAAC study (2012), which examines adults' skills in the key areas of literacy, numeracy and problem solving amongst Ireland's 16-65 year-olds is also included.

10.2 Definitions

Formal Education covers the regular education and training system where courses are

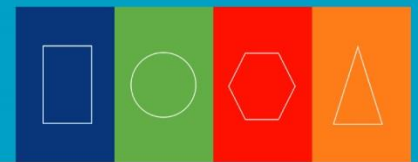
- of a predetermined purpose and format
- provided in the system of schools, colleges, universities and other educational institutions
- normally constitute a continuous ladder of education
- structured in terms of learning objectives, learning time and learning support
- normally intended to lead to a certification/qualification recognised by national authorities qualifying for a specific education/programme).

Non-formal Education refers to all organised learning activities outside regular or formal education.

The learner normally has to register for each learning activity. Non-formal education includes

- participating in a course or a seminar to acquire/improve skills, knowledge and competence; courses can be aimed at improving job-related knowledge or enhancing skills for social and personal purposes
- both courses leading to certificates and courses not leading to certificates
- grinds, music lessons, night classes, art courses, piano lessons, letter writing, using the internet, courses in Tai Chi, driving lessons, etc.

Informal Learning includes learning that is not organised or structured in terms of purpose, time or instruction (e.g. language skills acquired during a stay abroad, IT skills acquired at work, skills acquired through sports, reading a professional magazine etc.)



Lifelong learning as defined by Eurostat includes ‘all purposeful learning activity, whether formal, non-formal or informal, undertaken on an ongoing basis with the aim of improving knowledge, skills and competence’⁴⁸. However, statistics on informal learning are not always available and the CSO (QNHS) and international data on lifelong learning encompasses formal and non-formal learning only⁴⁹. In this section, therefore, the term **lifelong learning** refers to the percentage of persons aged 25-64 years who received formal and/or non-formal education and training in the four weeks prior to the survey.

In the Quarterly National Household Survey (QNHS), the Central Statistics Office gathers data on those who have (a) been a student or apprentice in regular education in the preceding four weeks (formal education) and (b) those who have attended taught learning activities (non-formal education) in the preceding four weeks. The analysis of this data provides for the formal education, non-formal education and, by derivation, lifelong learning participation rates for Ireland’s adult (aged 25-64 years) population.

This measure of lifelong learning in this paper differs from that used by the Central Statistics Office (CSO) in its 2010 publication on lifelong learning since the CSO publication was based on a special module included in the QNHS in which participants were asked about formal, non-formal learning and informal learning activities in **the preceding year**, rather than in the preceding four weeks (as is the case with the latest QNHS data). Therefore the data detailed in this Report and in the CSO publication are not comparable.

10.3 Participation Rates in Formal, Non-Formal and Lifelong Learning

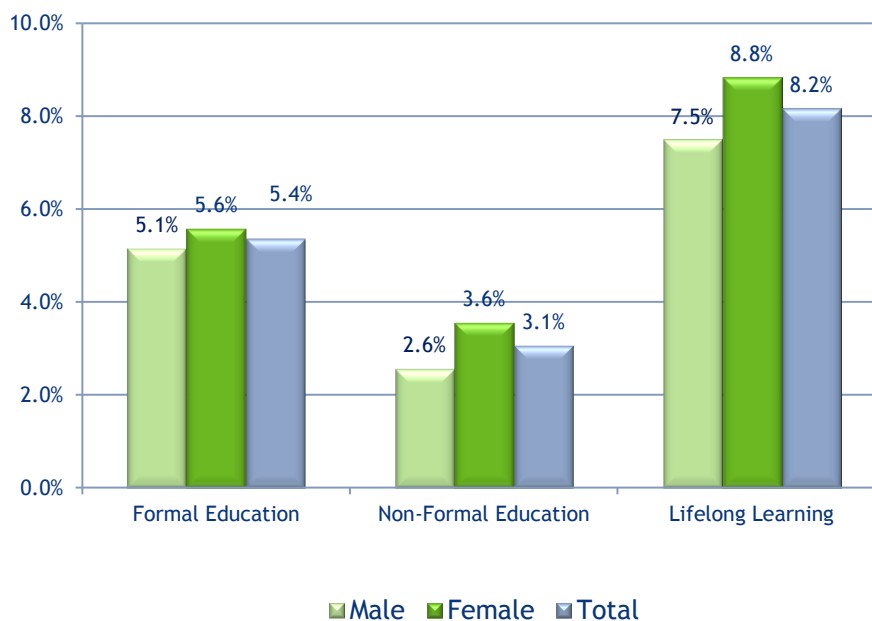
Figure 10.1 shows the participation rates, by gender, for adults (aged 25-64) in formal, non-formal and lifelong learning. As some individuals participated in both formal and non-formal education, the sum of the rates for formal and non-formal education does not add up to the total observed for lifelong learning.

⁴⁸ http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Lifelong_learning_statistics

⁴⁹ Lifelong learning statistics: data sources and availability.

http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Lifelong_learning_statistics#Data_sources_and_availability

Figure 10.1 Formal, Non-Formal and Lifelong Learning Participation Rates (Adults aged 25-64), Quarter 4 2013



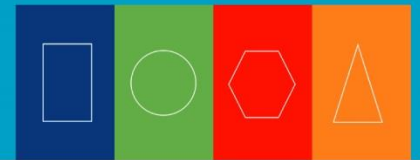
Source: SLMRU (SOLAS) analysis of CSO (QNHS) data

Formal Education

- Of the almost 2.5 million adults (aged 25-64 years) in the population in quarter 4 2013, more than 133,000 reported receiving formal education in the four weeks prior to the survey. This represents a participation rate of 5.4%
- Females were slightly more likely than males to participate in formal education, with a participation rate of 5.6% compared to 5.1% for males
- Younger age cohorts were more likely to have pursued formal education activities than their older counterparts: at 10.9%, participation was highest for those aged 25-34 years and lowest for those aged 55-64 years (1.4%)
- The likelihood of participating in formal education activities tended to increase with higher levels of educational attainment; third level graduates had the greatest participation rate at 7.6%, followed by those with higher secondary/further education and training (FET) qualifications at 4.9%. Adults with at most a Junior Certificate or equivalent were least likely to participate at 1.5%

Non-Formal Education

- Of the almost 2.5 million adults (aged 25-64 years) in the population in quarter 4 2013, approximately 76,000 stated they had participated in non-formal education activities, representing a participation rate of 3.1% (a small number did not answer the question)



- Non-formal education participation rates were higher for females than for males (3.6% for females compared to 2.6% for males)
- There was little variation in participation rates amongst different age groups, with a 3.2% rate for those aged 25-34 years and 2.6% for those aged 55-64 years
- The higher the educational attainment, the greater the likelihood of participating in non-formal education; third level graduates had a participation rate of 4.8%, which was more than double that of higher secondary/FET graduates (2%); the lowest participation rate was for those who held at most a Junior Certificate or equivalent at 1.7%

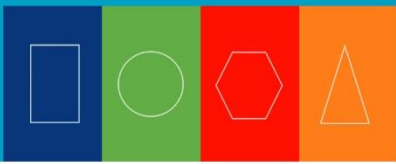
Lifelong Learning

- In quarter 4 2013, almost 203,000, or 8.2% of adults (aged 25-64 years) had participated in lifelong learning (i.e. formal and/or non-formal education) in the four weeks prior to the survey (Lifelong learning numbers are not the sum of formal and non-formal learning as some adults participated in both learning types)
- At 8.8%, however, females had a higher participation rate when compared to males (7.5%)
- The likelihood of participating in lifelong learning activities decreased with age: at 13.7%, younger adults (aged 25-34) had the highest participation rate - more than double that of 45-54-year-olds (6.1%) and also considerably higher than that of 35-44-year-olds age cohort 7.4%)
- Those with higher educational attainment were most likely to participate in lifelong learning activities: almost 12% of adults who were third level graduates participated compared to 6.8% for higher secondary/FET graduates and 3.2% of those with lower secondary or less qualifications

10.4 Participation Rates in Formal, Non-Formal and Lifelong Learning by Economic Status

Formal Education (Figure 10.2)

- At 4.4%, the unemployed were more likely than the employed (3.6%) to participate in formal learning activities; the highest participation rates were amongst persons who were economically inactive, at 11%; however, the vast majority (c80%) of those in the economically inactive category were students
- In terms of gender, economically inactive males had the highest participation rate at 17.2%; in contrast, the rate for economically inactive females was less than half that at 8.3%
- Unemployed females were more likely than their male counterparts to participate in formal education activities (5.1% for females compared to 4.1% for males)
- At 4.2%, females in employment were also more likely than their male counterparts to participate in formal education (3%)



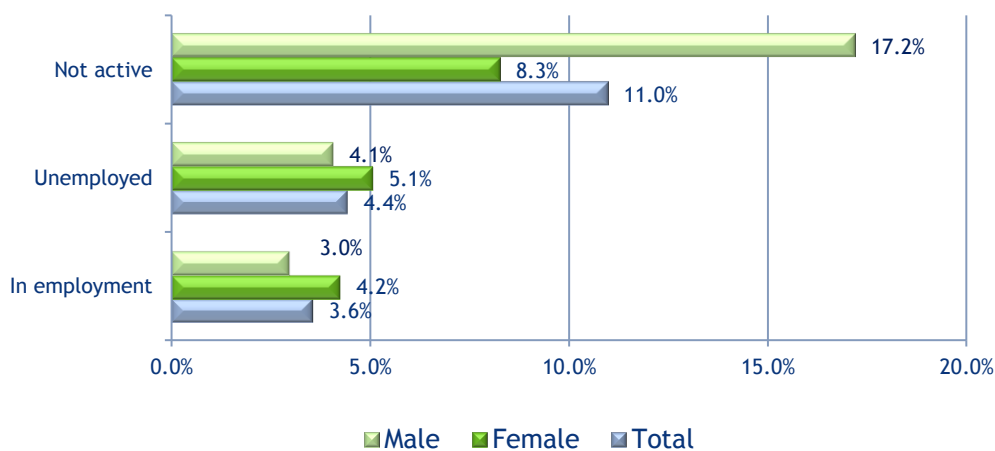
Non-Formal Education (Figure 10.3)

- In contrast to formal education, those in employment were more likely than unemployed persons to participate in non-formal learning activities (3.4% participation rate compared to 3% for the unemployed); the lowest rate, again contrasting with the situation observed for formal education, was in the economically inactive category where just 2.1% of adults participated in non-formal learning
- In terms of gender, the participation rate was highest amongst employed and unemployed females (both with rates of 4.1%); economically inactive males had the lowest rate of non-formal learning participation
- Males in employment (2.8%) were more likely than their unemployed counterparts (2.3%) to participate in non-formal education activities
- Of the 76,000 individuals who stated they had engaged in non-formal education activities, 43% stated they had done so for job related reasons; the share was even higher for those aged 35-44 years (46%) and those aged 45-54 years (48%)

Lifelong Learning Education (Figure 10.3)

- Lifelong learning rates were slightly higher for the unemployed than for those in employment (7.2% compared to 6.7%); however, the highest participation rate was in the economically inactive category, where nearly 13% of adults had engaged in lifelong learning activities
- The highest participation rate was amongst economically inactive males, at 18.4%
- In contrast, employed females were more considerably more likely than employed males to participate in lifelong learning (8% for females compared to 5.5% for males)
- Amongst the unemployed, females were also more likely than their male counterparts to participate in lifelong learning (8.7% vs 6.3%)

Figure 10.2 Formal Learning Participation Rates (Adults aged 25-64) by Economic Status, Q 4 2013



Source: SLMRU (SOLAS) analysis of CSO (QNHS) data

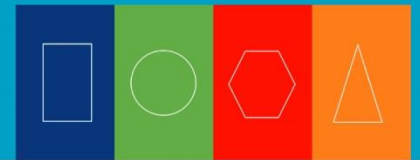
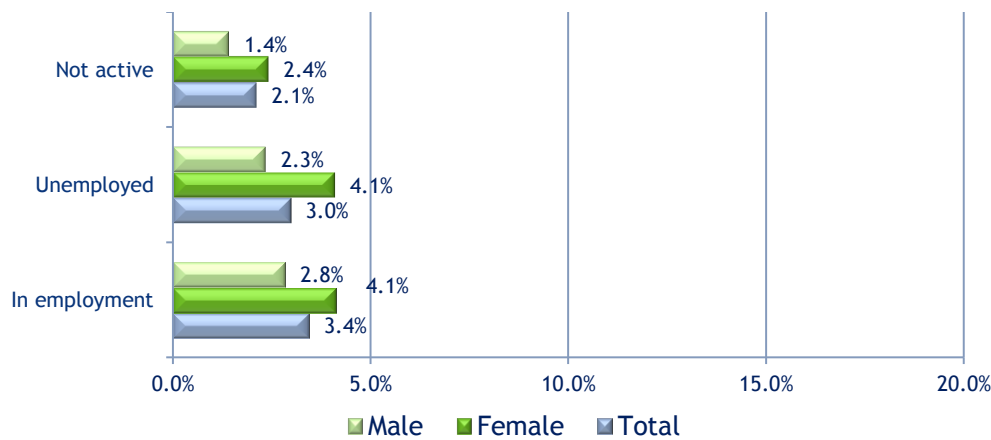
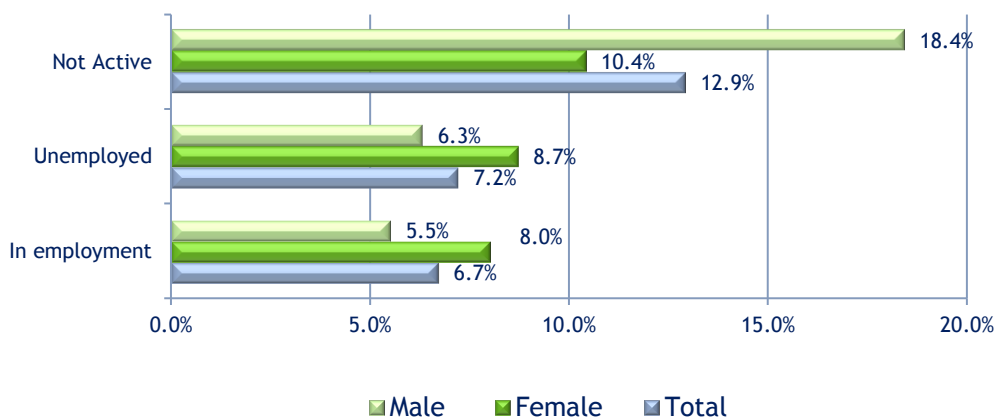


Figure 10.3 Non-Formal Learning Participation Rates (Adults aged 25-64) by Economic Status, Q4 2013



Source: SLMRU (SOLAS) analysis of CSO (QNHS) data

Figure 10.4 Lifelong Learning Participation Rates (Adults aged 25-64) by Economic Status, Q4 2013



Source: SLMRU (SOLAS) analysis of CSO (QNHS) data

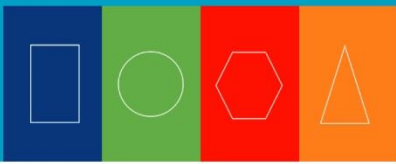
10.5 Formal, Non-Formal and Lifelong Learning by Occupation (employed)

Formal Learning

- Of employed persons in receipt of formal education and training, those engaged in professional occupations had the highest participation rate at 5.5%; this was followed by those in caring and services occupations at 4.4%
- The comparatively high rates for professional and caring services occupations are linked to best practice training for health professionals, teachers, careworkers and child minders

Non-Formal Learning

- As with formal learning, of those employed in receipt of non-formal education and training, those most likely to participate in non-formal learning were those in professional, caring and



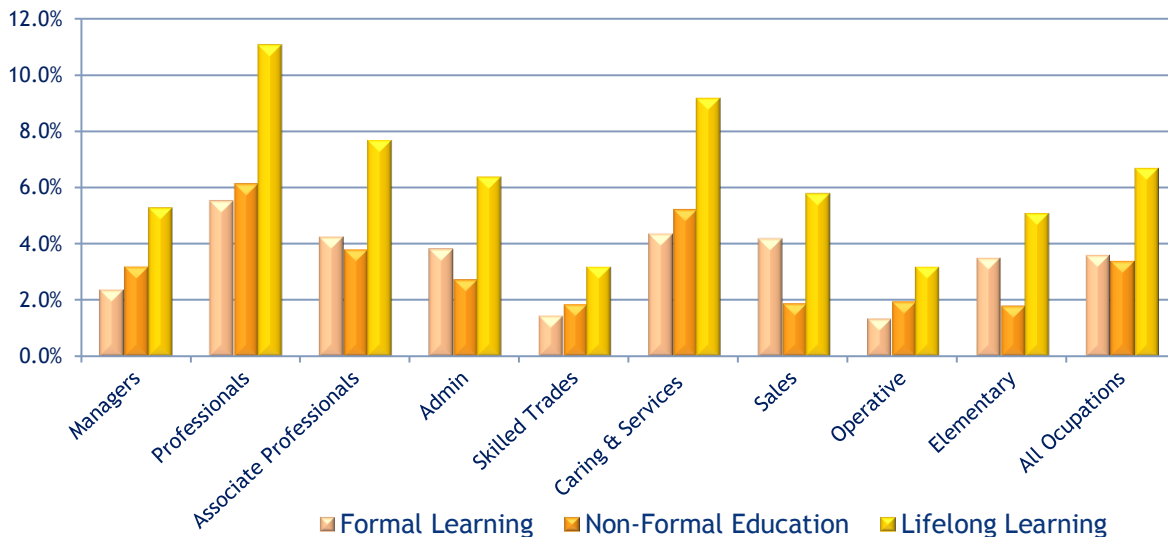
services and associate professional occupations with rates of 6.1%, 5.2% and 3.8%, respectively; the participation rate of all other occupational groups was below the average of 3.4%

- Of those who stated a reason, the vast majority (four fifths or more) in managerial, professional and caring service occupations had engaged in non-formal learning for work-related purposes

Lifelong Learning

- Of employed persons in receipt of lifelong learning, professionals had the highest participation rate (11.1%), followed by caring services occupations (9.2%). Those least likely to participate were those in skilled trades occupations and operative occupations, each with a rate of 3.2%

Figure 10.5 Lifelong Learning Participation Rates (Adults aged 25-64) by Occupation, Q4 2013

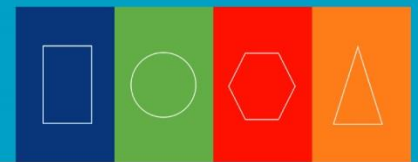


Source: SLMRU (SOLAS) analysis of CSO (QNHS) data

10.6 Formal, Non-Formal and Lifelong Learning by Sector (employed)

Formal Learning

- Of the almost 1.7 million employed adults in quarter 4 2013, those working in the finance, insurance and real estate sector had the highest participation rate in formal learning activities at 6.5%; this was followed by those working in education and in accommodation and food, at 6% each
- Those working in construction, transport and storage and industry had the lowest participation rates at 1.1%, 1.7% and 2.1% respectively, well below the average across all sectors (3.6%)



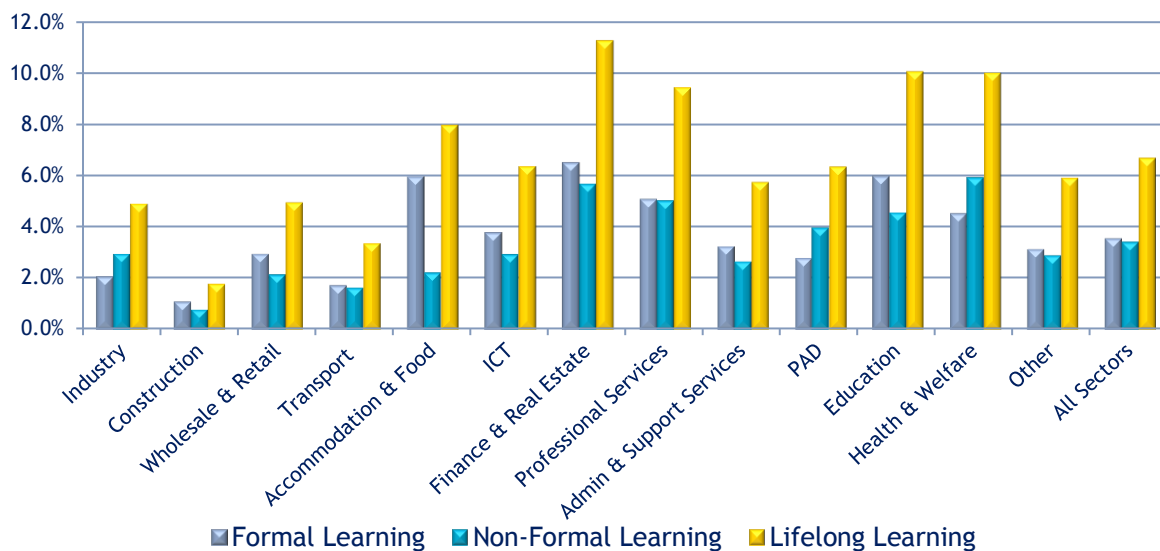
Non-Formal Learning

- With a participation rate of 5.9% and 5.7% respectively, those working in the health and welfare sector and in the finance, insurance and real estate sector were most likely to have undertaken non-formal learning in quarter 4 2013
- The lowest non-formal learning rate was for those working in construction (0.8%)

Lifelong Learning

- Overall, in quarter 4 2013, persons working in finance, insurance and real estate were most likely to participate in lifelong learning: at 11.3%; those least likely to engage in lifelong learning were in construction (1.8%)

Figure 10.6 Formal, Non-Formal & Lifelong Learning Rates (Adults aged 25-64) by Sector*, Q4 2013



Source: SLMRU (SOLAS) analysis of CSO (QNHS) data

* Excludes agriculture as the numbers are too small to report.

10.7 Formal Learning by Field and Level⁵⁰

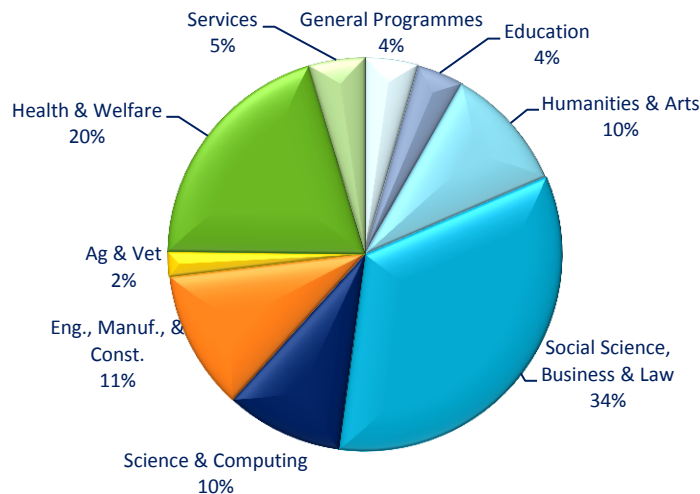
Formal Learning by Field of Education

- Of the almost 133,000 adult participants in formal education in quarter 4 2013, almost 108,000 stated a field of education; of these, approximately one third had studied social science, business and law in the four weeks prior to the survey
- A fifth had studied health and welfare courses

⁵⁰ Field of learning and level of education is available for formal education only

- Combined, those who had studied science and computing and engineering, manufacturing and construction accounted for a further fifth.
- Adults studying services, arts & humanities, and engineering, manufacturing & construction tended to be younger than those in all other disciplines: at least 62% of formal learning participants in these three fields were aged 25-34 years; in contrast, just 39% of those in general programmes and 40% of those in education were in this age category

Figure 10.7 Formal Learning Participants (Adults aged 25-64) by Field of Learning by Sector, Q4 2013



Source: SLMRU (SOLAS) analysis of CSO (QNHS) data

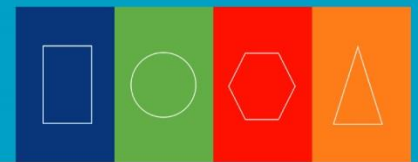
Note: the field of education variable is captured only for studies at higher secondary or above

Formal Learning by Level of Education

- Of the 110,000 who stated the level of education and training undertaken in the preceding four weeks, more than three quarters were engaged in third level studies, with most of the remainder in further education and training.

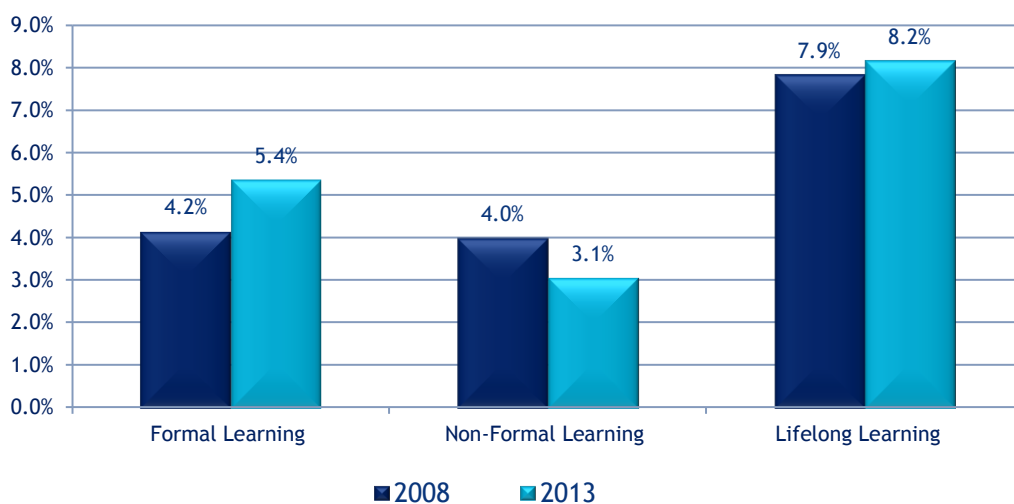
10.8 Formal, Non-Formal and Lifelong Learning, Q4 2008 & Q4 2013

- Between quarter 4 2008 and quarter 4 2013, the share of adults (aged 25-64) participating in formal education activities increased, going from 4.2% to 5.4% over the five-year period; in contrast the share participating in non-formal education declined, going from 4% to 3.1%; the increase in total lifelong learning participation observed between quarter 4 2008 and quarter 4 2009 was therefore attributable to the increased participation in formal learning
- Further analysis shows that the increase in the formal learning participation rate was primarily due to increased participation by males, and in particular, males who were economically inactive



- the participation rate of economically inactive males almost doubled between quarter 4 2008 and quarter 4 2013, going from 8.9% to 17.2%; this translated into approximately 17,000 additional male formal learning participants; in absolute terms the number of economically inactive males participating in formal learning grew from almost 14,000 to over 30,000 over the five-year period
- while the share of economically inactive females also grew, it was by a considerably smaller share (6.3% to 8.3% over the five-year period), resulting in approximately 8,000 additional learners.

Figure 10.8 Formal, Non-Formal and Lifelong Learning, Q4 2008 & Q4 2013

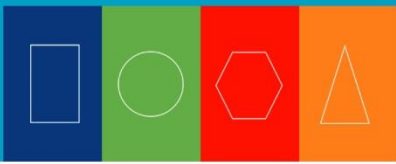


Source: SLMRU (SOLAS) analysis of CSO (QNHS) data

10.9 EU Comparison

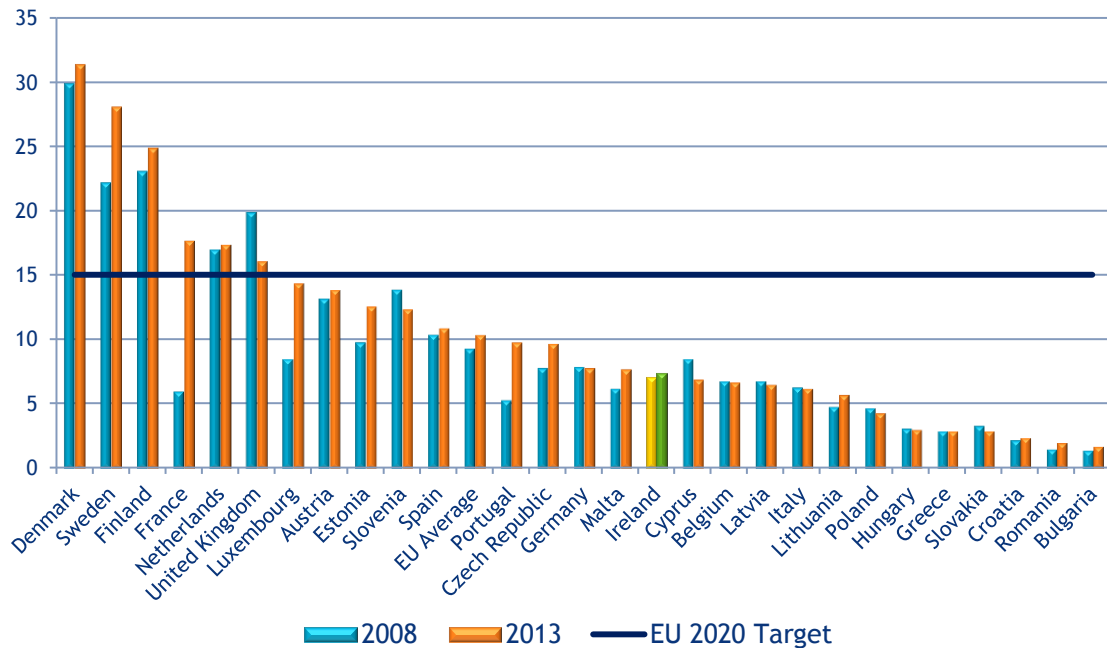
Eurostat, the European Union statistics agency, gathers statistics on lifelong learning based on data collected through the labour force survey, supplemented by the adult education survey. The data presented here refers to the average of four quarters for each calendar year and as a result the figures for Ireland, outlined in Figure 10.9 below, differ from those provided in Figure 10.8 (which were based on quarter 4 only). Nonetheless, as they are comparable over time and geographically, it allows for a measure of how Ireland compares internationally in terms of lifelong learning participation.

- At 7.3% in 2013, Ireland ranks below the EU average (10.4%) and lags well behind the top performing countries (e.g. Denmark (31.4%), Sweden (28.1%)) in terms of adult participation in lifelong learning



- Ireland also lags considerably behind the EU benchmark for adult participation in lifelong learning by 2020⁵¹, when an average of at least 15% of adults (25-64 years) should participate in lifelong learning.

Figure 10.9 Formal, Non-Formal and Lifelong Learning (%), 2008 & 2013



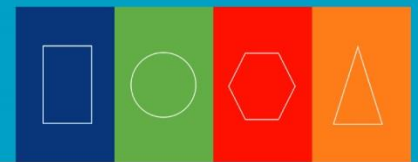
Source: Eurostat

10.10 Programme for the International Assessment of Adult Competencies (PIAAC)

The Programme for the International Assessment of Adult Competencies (PIAAC) was designed to collect information on adults' skills in the key areas of literacy, numeracy and problem solving in technology-rich environments. A representative sample of 16-65 year-olds in each country was selected to participate in the study. Assessment tasks were designed to reflect the type of tasks that individuals encounter in every-day life.

In literacy, Ireland's mean score (266) was slightly below the study average (270), ranking Ireland 17th out of 24 countries and well behind the top-performing countries such as Japan and Finland (Table 10.1). Further analysis shows that across all participating countries, an average of 16.7% of adults scored at or below the lowest level (level 1); in comparison, Ireland has a larger share of adults at the lowest level (17.9%), although it not statistically different from the study average.

⁵¹ http://ec.europa.eu/education/policy/strategic-framework/index_en.htm



In numeracy, Ireland’s mean score (255) was significantly below the study average (Table 10.1). Ireland had a greater share than the study average scoring below level 1 (26% for Ireland compared to 20% overall); in addition the share scoring in the higher level range (3-5) was smaller for Ireland than the international average (36% for Ireland compared to 47% on average across participating countries).

Table 10.1 Adjusted Mean Scores in Literacy and Numeracy Proficiency, PIAAC 2012

Adjusted Mean (Literacy)		Adjusted Mean (Numeracy)	
294	Japan	286	Japan
288	Finland	282	Finland
280	Netherlands	279	Sweden
279	Sweden	278	Denmark
277	Australia	276	Netherlands
275	Estonia	275	Slovak Republic
274	Norway	275	Czech Republic
273	Slovak Republic	274	Norway
273	Czech Republic	272	Estonia
272	Korea	272	Austria
272	Canada	269	Germany
270	Average	266	Average
270	Denmark	264	Australia
270	England/N. Ireland (UK)	264	Canada
267	Germany	263	Korea
267	Poland	260	Poland
266	Austria	259	England/N. Ireland (UK)
266	Ireland	255	Ireland
262	United States	253	France
261	France	246	Italy
251	Spain	246	United States
249	Italy	245	Spain
236	Cyprus ^{1 2}	233	Cyprus ^{1 2}

Source: *Proficiency In Key Information-Processing Skills Among Working-Age Adults* (OECD 2013)

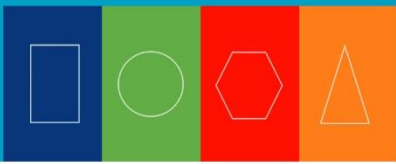
Figure 2.2b & Figure 2.6b⁵²

Legend

Statistically above average	Not statistically different from the average	Statistically below average
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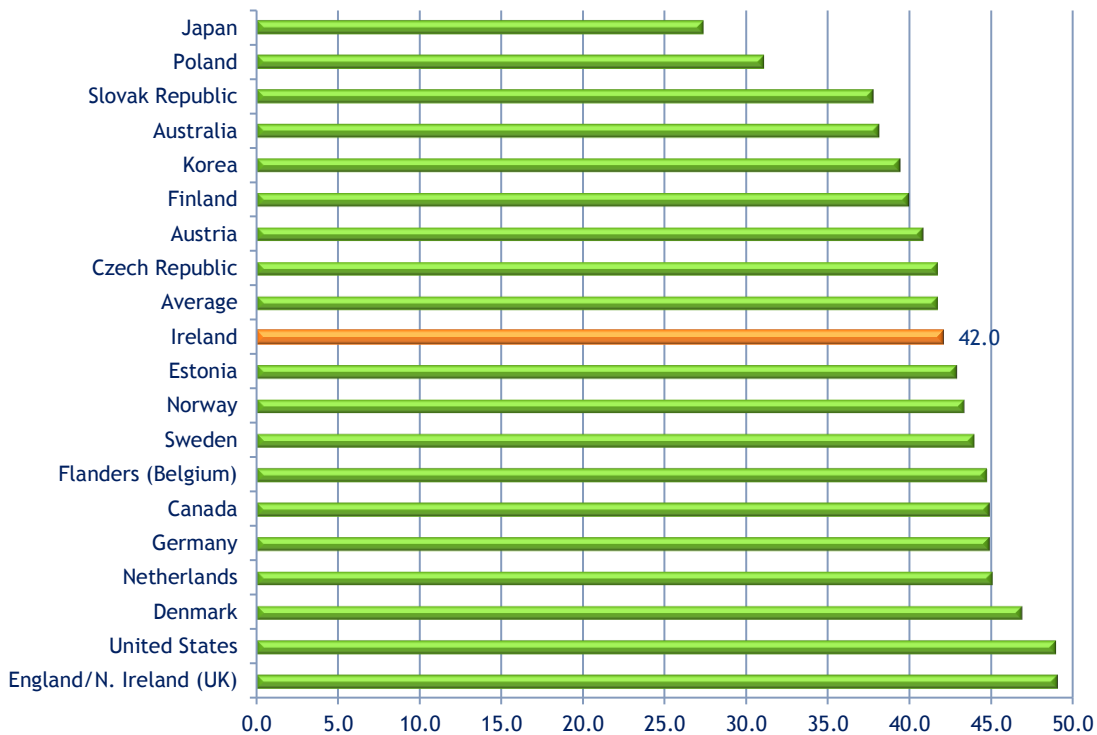
For the assessment of problem solving in technology-rich environments, only three levels were created and therefore the mean scores and levels for problem solving are not comparable with

⁵² [http://www.oecd.org/site/piaac/Skills%20volume%201%20\(eng\)--full%20v12--eBook%20\(04%2011%202013\).pdf](http://www.oecd.org/site/piaac/Skills%20volume%201%20(eng)--full%20v12--eBook%20(04%2011%202013).pdf)



those of literacy and numeracy. Across the 20 countries who implemented the problem solving assessment, an average of 41.7% of adults scored at below level 1; this is broadly in line with the share for Ireland (42%) and six other countries, including Finland (39.9%), Estonia (42.8%) and Sweden (43.9%). Japan had the lowest share of adults performing at this level (27%). However, it should be noted that while on average 10% of adults across the 20 countries opted out of the ICT test, 17% opted out of the computer based assessment in Ireland.

Figure 10.10 Share (%) of Adults at or Below Level 1 in Problem Solving in Technology-Rich Environments, PIAAC 2012



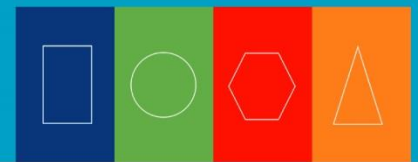
Source: Proficiency In Key Information-Processing Skills Among Working-Age Adults (OECD 2013), Figure 2.10a

10.10.2 Within-Ireland Comparisons

Using the PIAAC International Data Explorer⁵³ further analysis on the Ireland sample revealed that performance on the three PIAAC assessments varied according to age, educational attainment⁵⁴ and economic status. Across each of the variables discussed below, the score for Ireland is below that of the OECD average for participating countries, with the exception literacy skills amongst retired persons, where Ireland's score is slightly higher.

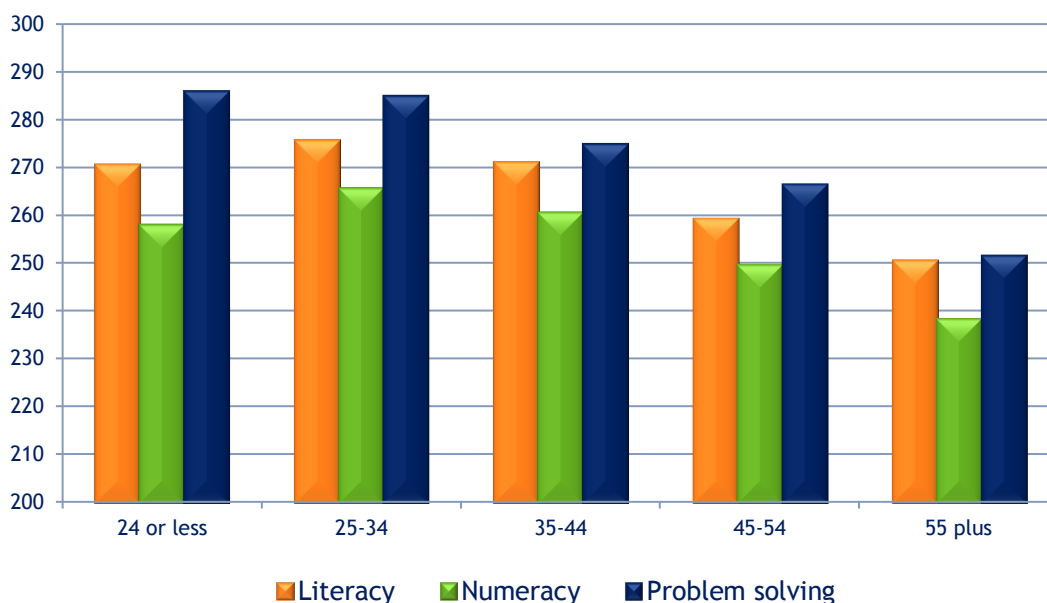
⁵³ <http://piaacdataexplorer.oecd.org>

⁵⁴ The educational attainment bands used in the PIAAC study refer to ISCED levels (detailed in Chapter 1 of this report).



- **Age (Figure 10.11):**
 - **in literacy**, the mean scores for the younger age cohorts (aged less than 45 years) tend to be higher than those of the older age groups: for those in the 16-24 year cohort, the 25-34 year cohort, and 35-44 year cohort, the mean scores are broadly similar; however, the scores decline considerably for those aged 45-54 years and those aged 55-65 years;
 - **in numeracy**, a similar pattern was observed, although the mean scores were lower than they were for literacy, regardless of age group
 - **in problem solving**, those aged under 35 years had the highest scores, with the older age cohorts achieving the lowest scores.

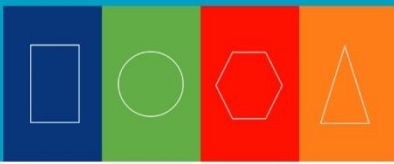
Figure 10.11 Mean Scores in PIAAC 2012 for 16-65 Year-Olds in Ireland, by Age Group



Source: OECD (PIAAC International Data Explorer)

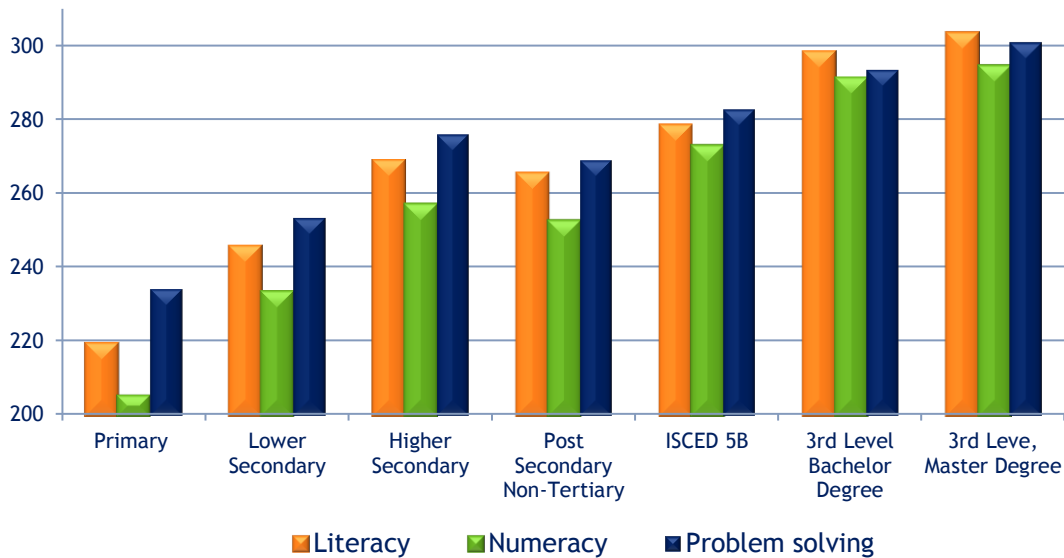
- **Educational Attainment⁵⁵ (Figure 10.12):**
 - **in literacy**, in general, those with the highest educational attainment tended to have higher mean scores, with third level graduates attaining, on average scores of 294-301 compared to 220 for those with primary level education; the scores of those with post-secondary non-tertiary education (e.g. FET) were slightly lower than were those with higher secondary (e.g. Leaving Certificate) educational attainment; this may be due, in part, to the fact that the entry requirement to many FET programmes, particularly in the past, was a lower secondary qualification (e.g. Junior Certificate) rather than a Leaving Certificate or equivalent

⁵⁵ The data for the 'below ISCED 1' and 'ISCED 6' categories (corresponding to 'no formal education' and 'doctoral degrees' was unavailable for Ireland.



- in numeracy and problem solving, the overall pattern was similar to that observed in the literacy assessment, with the mean scores for each educational attainment group being lower for numeracy than for literacy.

Figure 10.12 Mean Scores in PIAAC 2012 for 16-65 Year-Olds in Ireland, by Education Level



Source: OECD (PIAAC International Data Explorer)

- Economic Status (Figure 10.13):**
 - in literacy, persons in full-time employment and students had the highest mean scores, while unemployed persons and those engaged in home duties had the lowest
 - in numeracy, the full-time employed had the highest mean score (271), followed by students (267); when compared to literacy, the gap between the full-time employed and students was slightly larger (four points in numeracy compared to one point in literacy); as in literacy, those engaged in home duties and the unemployed had the lowest mean scores
 - in problem solving, students considerably out-performed all other groups, with a score of 291; the second highest score was for the full-time employed (282); those in retirement had the lowest score (246).

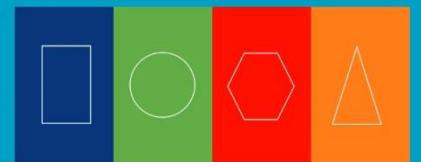
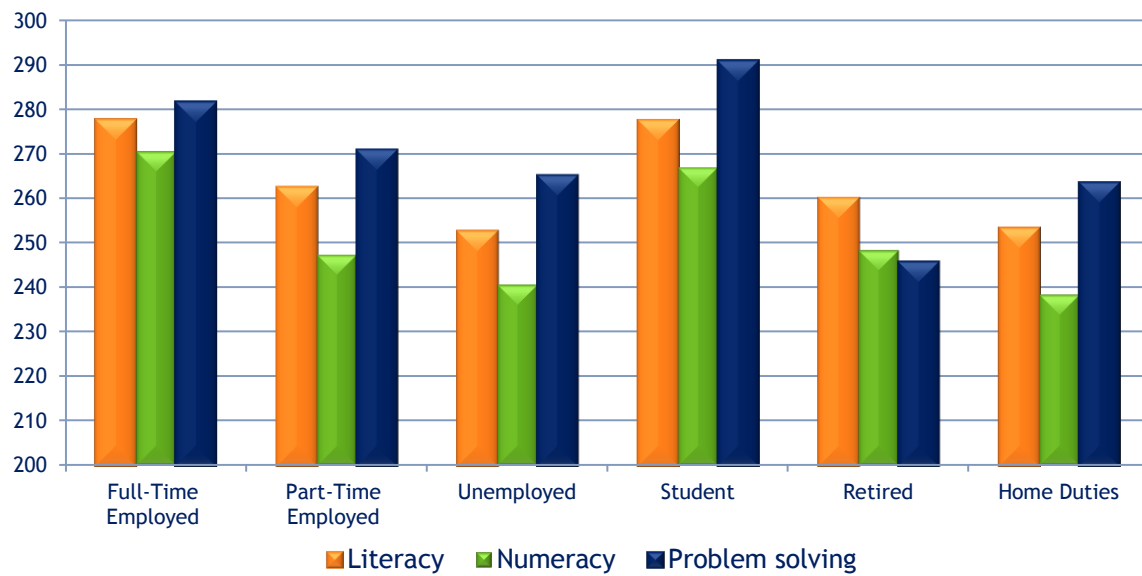
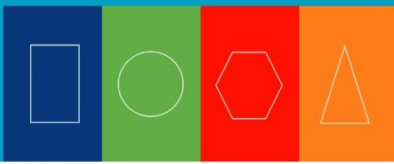


Figure 10.13 Mean Scores in PIAAC 2012 for 16-65 Year-Olds in Ireland, by Education Status



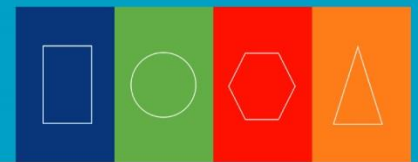
Source: OECD (PIAAC International Data Explorer)



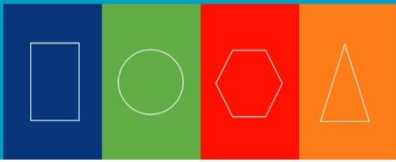
Appendix A QQI-FETAC Field of Learning Classification

Table A.1 FETAC Field of Learning Classification

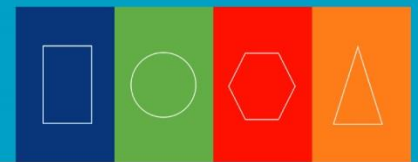
1. Agriculture, Science and Computing
Agriculture(1.1)
Agriculture (livestock, farm animals, crops, farming, land)
Horticulture (fruit, vegetables, plants, gardens, landscape)
Floristry (flower arranging, display)
Veterinary/Pets/non-Farm Animals
Poultry (Geese, Ducks, Hens, Eggs)
Aquaculture
Equitation (horses, stables, equine)
Fisheries (commercial fishing, nets, fishing equipment)
Forestry (trees, timber)
Science(1.2)
Natural Sciences/Food Science/Environmental Science, Environment, Conservation, Botany, Biology
Applied Science - Chemistry/Physics/Materials
Laboratory Skills
Statistics/Mathematics/Research
Computing(1.3)
Hardware
Systems + Networks
Web Design/Internet
Software Engineering/Design/Software Development/ Programming
2. Arts, Craft & Media
Arts (2.1)
Music
Drama (the play and the players)
Theatre (lighting, production tasks, scene-painting)
Dance
Visual Arts, Craft. Design(2.2)
Craft/Design (furniture, stained glass, jewellery, ceramics/upholstery/restoration/wood-turning/pottery)
Textiles - woven/constructed, print, fashion design/tailoring (not manufacture)
Interior/Décor Design (feng shui, decorative painting techniques)
Fine Art - sculpture, painting/drawing, print (etching/screen-printing/litho)
Media(2.3)
Photography
Television/video/Film (including production)
Radio/Broadcasting/Sound
Multi-Media/animation (other than web see 1.3.3.)
Printing + Publishing/DTP
Graphic Design



3. Business & Administration
Business
Legal
Retail/Wholesale/Trade/Sales/Estate Agency/Purchasing/applied Economics
Finance/Banking/Insurance/Taxation/Accounting
Enterprise/Business Development/Entrepreneur/SYOB/Gen Business/
Marketing/PR
Human Resource/Customers/Organisational DEV + Sk./Personnel
Advertising/Display/Merchandising
Management Skills/Principles/Project Mgmt (motivation/delegation)
Journalism
Social and Behavioural Science
Library
Administration
Secretarial/Admin Skills/TeleServices/Payroll
Office Work/filing/Telephone
Admin-related ICT Applications/data entry
4. Construction & Built Environment
Planning and Design
Architectural Assistant Skills
Draughting/CAD
Planning Services, surveying
Housing & Building Construction
Construction Trades
Technical Operatives/Scaffolding/
Construction Site Activities/Building Work/General Maintenance
Civil Engineering
Civil Works, e.g. Roads , Plant Operators
Engineering Technicians
Restoration, Traditional, Heritage
Heritage Craft Skills (stone wall building)
Restoration Skills
5. Core Skills, Language & General Studies
Core Skills
Communication (writing, speaking, listening except literacy see 5.1.2.)
Numeracy + Literacy + Visual Literacy
ICT Introduction (basic keyboard Sk, computer literacy)
Preparation for Work (CV, Interview Techniques)
Lifeskills (culture/day-to-day living/the world around us)
Personal Development (learning to learn, study skills)
Language
European Language, International Language (other than European)
English (incl ESOL)
Irish



General Studies
Irish Tradition + Culture
EU Studies + Culture
History/Geography/Archaeology
Civics/Politics/Liberal Arts/Classics
Philosophy
6 Education, Health & Welfare
Education & Training
Trainer/Train the Trainer/Mentor
Assessor/Evaluator
Prof. Development Studies
Supervisory Studies
Education Studies/Montessori
Classroom Assistant
YouthWork
ChildCare
Community Care/Social Work
Health and Welfare
Complementary Therapies
Nursing - Allied Skills
Health Care Support
Dental Studies
Disability Studies
7 Engineering & Manufacturing
Engineering
Electrical/Electronics/Electromechanical
Mechanics/Mechanical/Tools
Refrigeration
AirCRAFT/Naval/Boats/Navigation
Engineering Processes/Fitting/Turning/Metals/tool-making
TeleComms/Audio/TV Servicing
Environmental (Energy, Waste) Processes
Chemicals + Processing/Pharmaceuticals
Building Security - Alarm Installation
Manufacturing and Processing
Manufacturing Ops/Production Line/Factory
Food + Dairy Processing
Textiles + Footware Manufacture
Materials (plastic, glass, paper, wood) Manufacture
Medical Devices/Instrumentation
8. Services
Personal
Beauty
Hairdressing



Domestic Services (commercial cleaning)/DIY
Funeral/Other Services
Logistics
Warehouse/ForkLift/Storage
Transport/Logistics
Driving (HGV eg)
Freight/Forwarding
Security
Door Security (Bouncer)
Commercial Security
Military
Prison/Prisoner Security (Dept. Justice)
Emergency Service Personnel/Occupational Health and Safety
Environmental protection
Wastewater treatment/Water protection
9. Tourism, Hospitality & Sport
Tourism
Travel
Tourism (non Hospitality)/rural tourism/sports tourism
Tour Guiding
Visitor/Heritage Centre Operations/Skills
Hospitality
Hotels + Guest House (Accomm, Front Office, B+B e.g.)
Catering/kitchen
Restaurant + Bar
Food Safety/Hygiene (HACCP)
Customer Care Hospitality
Sport
Leisure Centre Activities/Leisure/Recreation/Sports Safety/Lifeguard
All Sports (football/soccer/volleyball/surfing.....)
Health + Fitness/health-related fitness/exercise
Coaching + Training/Sports Instructor
10. Unclassified

Source: QQI

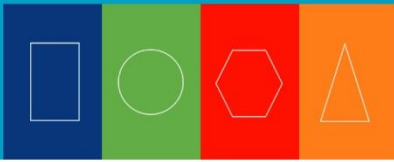


Table A.2 FETAC Provider Centre Groups

Community/voluntary

Community / Voluntary Sector Organisation
Youth Service

FÁS

Community Employment Programme
Community Training Centre
Dept. Justice Centre
FAS Training Centre
Local Training Initiative

FI/HEI*

Failte Ireland Centre
Higher Education Institute

Private providers

Private Provider - College
Private Provider - Company
Private Provider - Individual

Teagasc

Teagasc Centre

Disability sector

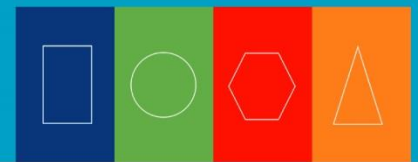
Training for People with Disabilities

VEC School

Special School (DE&S)
VEC Adult Education Centre
VEC Further Education College
VEC Literacy Service
VEC Prison Education Centre
VEC School
VEC Traveller Education Centre
VEC VTOS Centre
VEC YouthReach Centre
Voluntary Secondary School
Community / Comprehensive School

Others

Bord Iascaigh Mhara Centre
Hospital CNE
Other
Public Service Agency
Sectoral Representative Body
Skillnet
Employer / Work Based Learning

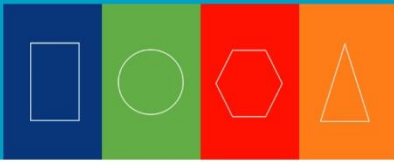


Appendix B Education Field Occupations

Table B.1 Occupations Included in Education Fields

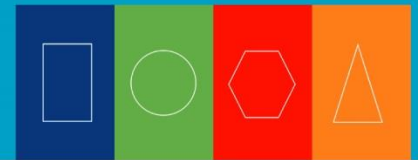
Field of Education & Training	Occupations
Education	Careers advisers & vocational guidance specialists
	Education advisers & school inspectors
	Educational support assistants
	Further education teaching professionals
	Higher education teaching professionals
	Primary & nursery education teaching professionals
	Secondary education teaching professionals
	Senior professionals of educational establishments
	Special needs education teaching professionals
	Teaching & Educational Professionals
	Teaching & other educational professionals n.e.c.
	Teaching assistants
	Vocational & industrial trainers and instructors
	Humanities & Arts
Artistic, Literary & Media Occupations	
Artists	
Arts officers, producers & directors	
Authors, writers & translators	
Clergy	
Dancers & choreographers	
Design Occupations	
Florists	
Graphic designers	
Musicians	
Photographers, audio-visual & broadcasting equipment operators	
Pre-press technicians	
Print finishing & binding workers	
Printers	
Printing Trades	
Product, clothing & related designers	

Field of Education & Training	Occupations
Social science, business & law	Actuaries, economists & statisticians
	Administrative Occupations: Finance
	Administrative Occupations: Government & Related Organisations
	Administrative Occupations: Office Managers & Supervisors
	Administrative Occupations: Records
	Advertising accounts managers & creative directors
	Advertising & public relations directors
	Archivists & curators
	Bank & post office clerks
	Barristers & judges
	Book-keepers, payroll managers & wages clerks
	Brokers
	Business & financial project management professionals
	Business & related associate professionals n.e.c.
	Business & related research professionals
	Business sales executives
	Business, Finance & Related Associate Professionals
	Business, Research & Administrative Professionals
	Business, research & administrative professionals n.e.c.
	Buyers & procurement officers
	Call & contact centre occupations
	Chartered & certified accountants
	Chief Executives & Senior Officials
	Collector salespersons & credit agents
	Communication operators
	Company secretaries
	Conference & exhibition managers & organisers
	Credit controllers
	Customer Service Managers & Supervisors
	Customer Service Occupations
	Customer service occupations n.e.c.
	Debt, rent & other cash collectors



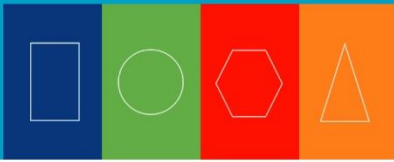
Field of Education & Training	Occupations
	Elected officers & representatives
	Elementary Administration Occupations
	Elementary Sales Occupations
	Estate agents & auctioneers
	Estimators, valuers & assessors
	Finance & investment analysts & advisers
	Finance officers
	Financial accounts managers
	Financial administrative occupations n.e.c.
	Financial & accounting technicians
	Financial Institution Managers & Directors
	Financial managers & directors
	Functional Managers & Directors
	Functional managers & directors n.e.c.
	Garage managers & proprietors
	Human resource managers & directors
	Human resources administrative occupations
	Human resources & industrial relations officers
	Importers & exporters
	Insurance underwriters
	Journalists, newspaper & periodical editors
	Legal Associate Professionals
	Legal Professionals
	Legal professionals n.e.c.
	Legal secretaries
	Librarians
	Librarians & Related Professionals
	Library clerks & assistants
	Local government administrative occupations
	Management consultants & business analysts
	Managers & Directors in Retail & Wholesale
	Managers & directors in storage & warehousing
	Managers & directors in transport & distribution
	Managers & Directors in Transport & Logistics
	Market & street traders & assistants
	Market research interviewers

Field of Education & Training	Occupations
	Marketing & sales directors
	Marketing associate professionals
	Media Professionals
	Medical secretaries
	Merchandisers & window dressers
	National government administrative occupations
	Office managers
	Office supervisors
	Officers of non-governmental organisations
	Other Administrative Occupations
	Other administrative occupations n.e.c.
	Pensions & insurance clerks & assistants
	Personal assistants & other secretaries
	Pharmacy and other dispensing assistants
	Probation officers
	Public relations professionals
	Public Services and Other Associate Professionals
	Public services associate professionals
	Purchasing managers and directors
	Quality and Regulatory Professionals
	Quality assurance and regulatory professionals
	Receptionists
	Records clerks and assistants
	Retail cashiers and check-out operators
	Roundspersons and van salespersons
	Sales accounts and business development managers
	Sales administrators
	Sales and retail assistants
	Sales Assistants and Retail Cashiers
	Sales Related Occupations
	Sales related occupations n.e.c.
	Sales Supervisors
	Sales, Marketing and Related Associate Professionals
	School secretaries
	Secretarial and Related Occupations
	Shopkeepers and proprietors – wholesale and retail
	Social and humanities scientists



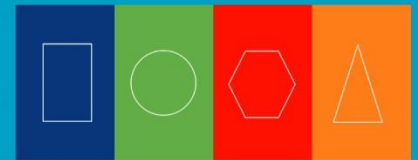
Field of Education & Training	Occupations
	Social workers
	Solicitors
	Stock control clerks and assistants
	Taxation experts
	Telephone salespersons
	Telephonists
	Transport and distribution clerks and assistants
	Typists and related keyboard occupations
	Vehicle and parts salespersons and advisers
	Welfare Professionals
Science, maths and computing	Biological scientists and biochemists
	Chemical scientists
	Conservation and Environment Professionals
	Conservation and Environmental Associate Professionals
	Conservation professionals
	Environment professionals
	Information technology and telecommunications directors
	Information Technology and Telecommunications Professionals
	Information technology and telecommunications professionals n.e.c.
	Information Technology Technicians
	IT business analysts, architects and systems designers
	IT operations technicians
	IT project and programme managers
	IT specialist managers
	IT user support technicians
	Laboratory technicians
	Natural and Social Science Professionals
	Natural & social science professionals n.e.c.
	Physical scientists
	Programmers & software development professionals
	Research & development managers
	Research & Development Managers
	Web design & development professionals
Engineering, Manufacturing &	Air-conditioning & refrigeration engineers

Field of Education & Training	Occupations
Construction	Aircraft maintenance & related trades
	Architects
	Architects, Town Planners & Surveyors
	Architectural & town planning technicians
	Assemblers (electrical & electronic products)
	Assemblers (vehicles & metal goods)
	Assemblers & Routine Operatives
	Assemblers & routine operatives n.e.c.
	Bakers & flour confectioners
	Boat & ship builders & repairers
	Bricklayers & masons
	Building & civil engineering technicians
	Building Finishing Trades
	Butchers
	Carpenters & joiners
	Chartered architectural technologists
	Chartered surveyors
	Chemical & related process operatives
	Civil engineers
	Coal mine operatives
	Construction & Building Trades
	Construction & building trades n.e.c.
	Construction & Building Trades Supervisors
	Construction Operatives
	Construction operatives n.e.c.
	Construction project managers & related professionals
	Crane drivers
	Design & development engineers
	Draughtspersons
	Draughtspersons & Related Architectural Technicians
	Electrical & Electronic Trades
	Electrical & electronic trades n.e.c.
	Electrical & electronics technicians
	Electrical engineers
	Electricians & electrical fitters
	Electronics engineers
	Electroplaters
	Elementary Construction Occupations



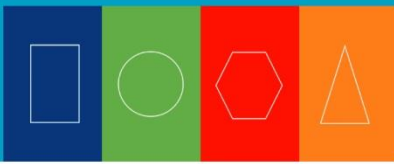
Field of Education & Training	Occupations
	Elementary Process Plant Occupations
	Elementary process plant occupations n.e.c.
	Elementary sales occupations n.e.c.
	Energy plant operatives
	Engineering Professionals
	Engineering professionals n.e.c.
	Engineering technicians
	Fishmongers & poultry dressers
	Floorers & wall tilers
	Food, drink & tobacco process operatives
	Footwear & leather working trades
	Furniture makers & other craft woodworkers
	Glass & ceramics makers, decorators & finishers
	Glass & ceramics process operatives
	Glaziers, window fabricators & fitters
	Industrial cleaning process occupations
	IT engineers
	Mechanical engineers
	Metal Forming, Welding & Related Trades
	Metal machining setters & setter-operators
	Metal Machining, Fitting & Instrument Making Trades
	Metal making & treating process operatives
	Metal plate workers, & riveters
	Metal working machine operatives
	Metal working production & maintenance fitters
	Mobile Machine Drivers & Operatives
	Moulders, core makers & die casters
	Other Skilled Trades
	Other skilled trades n.e.c.
	Packers, bottlers, canners & fillers
	Painters & decorators
	Paper & wood machine operatives
	Pipe fitters
	Planning, process & production technicians
	Plant & Machine Operatives
	Plant & machine operatives n.e.c.
	Plasterers

Field of Education & Training	Occupations
	Plastics process operatives
	Plumbers & heating & ventilating engineers
	Precision instrument makers & repairers
	Printing machine assistants
	Process Operatives
	Process operatives n.e.c.
	Production & process engineers
	Production Managers & Directors
	Production managers & directors in construction
	Production managers & directors in manufacturing
	Production managers & directors in mining & energy
	Quality assurance technicians
	Quality control & planning engineers
	Quantity surveyors
	Quarry workers & related operatives
	Rail & rolling stock builders & repairers
	Rail construction & maintenance operatives
	Road construction operatives
	Roofers, roof tilers & slaters
	Routine inspectors & testers
	Rubber process operatives
	Scaffolders, staggers & riggers
	Science, Engineering & Production Technicians
	Science, engineering & production technicians n.e.c.
	Sewing machinists
	Sheet metal workers
	Skilled Metal, Electrical & Electronic Trades Supervisors
	Smiths & forge workers
	Steel erectors
	Tailors & dressmakers
	Telecommunications engineers
	Textile process operatives
	Textiles & Garments Trades
	Textiles, garments & related trades n.e.c.
	Tool makers, tool fitters & markers-out
	Town planning officers
	TV, video & audio engineers



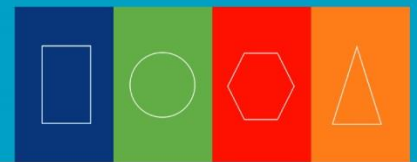
Field of Education & Training	Occupations
	Tyre, exhaust & windscreen fitters
	Upholsterers
	Vehicle body builders & repairers
	Vehicle paint technicians
	Vehicle technicians, mechanics & electricians
	Vehicle Trades
	Water & sewerage plant operatives
	Weavers & knitters
	Weighers, graders & sorters
	Welding trades
Agriculture & Veterinary	Agricultural & fishing trades n.e.c.
	Agricultural & Related Trades
	Animal Care & Control Services
	Animal care services occupations n.e.c.
	Elementary Agricultural Occupations
	Farm workers
	Farmers
	Fishing & other elementary agriculture occupations n.e.c.
	Forestry workers
	Gardeners & landscape gardeners
	Groundsmen & greenkeepers
	Horticultural trades
	Managers and proprietors in agriculture and horticulture
	Managers and Proprietors in Agriculture Related Services
	Managers and proprietors in forestry, fishing and related services
	Pest control officers
	Veterinarians
Veterinary nurses	
Health and Welfare	Ambulance staff (excluding paramedics)
	Care escorts
	Care workers and home carers
	Caring Personal Services
	Child & early years officers
	Childcare & Related Personal Services
	Childminders & related occupations
	Counsellors
	Dental nurses
	Dental practitioners

Field of Education & Training	Occupations
	Dispensing opticians
	Health & Social Services Managers & Directors
	Health Associate Professionals
	Health associate professionals n.e.c.
	Health care practice managers
	Health Professionals
	Health professionals n.e.c.
	Health services & public health managers & directors
	Hospital porters
	Houseparents & residential wardens
	Housing officers
	Managers & Proprietors in Health & Care Services
	Medical & dental technicians
	Medical practitioners
	Medical radiographers
	Midwives
	Nursery nurses & assistants
	Nurses
	Nursing & Midwifery Professionals
	Nursing auxiliaries & assistants
	Occupational therapists
	Ophthalmic opticians
	Paramedics
	Pharmaceutical technicians
	Pharmacists
	Physiotherapists
	Playworkers
	Podiatrists
	Psychologists
	Residential, day & domiciliary care managers & proprietors
	Senior care workers
	Social services managers & directors
	Speech & language therapists
	Therapy Professionals
	Therapy professionals n.e.c.
	Welfare & Housing Associate Professionals
	Welfare & housing associate professionals n.e.c.
	Welfare professionals n.e.c.

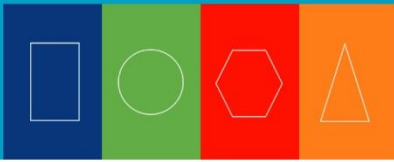


Field of Education & Training	Occupations
	Youth & community workers
Services	Agricultural machinery drivers
	Air traffic controllers
	Air transport operatives
	Air travel assistants
	Aircraft pilots & flight engineers
	Bar staff
	Beauticians & related occupations
	Bus & coach drivers
	Caretakers
	Catering & bar managers
	Chefs
	Cleaners & domestics
	Cleaning & Housekeeping Managers & Supervisors
	Cooks
	Driving instructors
	Elementary administration occupations n.e.c.
	Elementary Cleaning Occupations
	Elementary cleaning occupations n.e.c.
	Elementary Security Occupations
	Elementary security occupations n.e.c.
	Elementary Storage Occupations
	Environmental health professionals
	Fire service officers (watch manager & below)
	Fitness instructors
	Food Preparation & Hospitality Trades
	Fork-lift truck drivers
	Hairdressers & barbers
	Hairdressers & Related Services
	Hairdressing & beauty salon managers & proprietors
	Health & safety officers
	Hotel & accommodation managers & proprietors
	Housekeepers & related occupations
	Housekeeping & Related Services
Inspectors of standards & regulations	
Kitchen and catering assistants	
Large goods vehicle drivers	
Launderers, dry cleaners & pressers	

Field of Education & Training	Occupations
	Leisure & sports managers
	Leisure & theme park attendants
	Leisure & travel service occupations n.e.c.
	Leisure & Travel Services
	Managers & Proprietors in Hospitality & Leisure Services
	Managers & Proprietors in Other Services
	Managers & proprietors in other services n.e.c.
	Marine and waterways transport operatives
	Mobile machine drivers&operatives n.e.c.
	NCOs&other ranks
	Officers in armed forces
	Other Drivers&Transport Operatives
	Other drivers and transport operatives n.e.c.
	Other Elementary Services Occupations
	Other elementary services occupations n.e.c.
	Parking and civil enforcement occupations
	Police community support officers
	Police officers (sergeant & below)
	Postal workers, mail sorters, messengers & couriers
	Prison service officers (below principal officer)
	Property, housing & estate managers
	Protective service associate professionals n.e.c.
	Protective Service Occupations
	Publicans & managers of licensed premises
	Rail transport operatives
	Rail travel assistants
	Refuse & salvage occupations
	Restaurant & catering establishment managers and proprietors
	Road Transport Drivers
	School midday and crossing patrol occupations
	Security guards & related occupations
	Senior officers in fire, ambulance, prison & related services
	Senior Officers in Protective Services
Senior police officers	
Ship & hovercraft officers	



Field of Education & Training	Occupations
	Sports & Fitness Occupations
	Sports & leisure assistants
	Sports coaches, instructors & officials
	Sports players
	Street cleaners
	Taxi & cab drivers & chauffeurs
	Train & tram drivers
	Transport Associate Professionals
	Travel agency managers & proprietors
	Travel agents
	Undertakers, mortuary & crematorium assistants
	Van drivers
	Vehicle valeters & cleaners
	Waiters & waitresses
	Waste disposal & environmental services managers
	Window cleaners



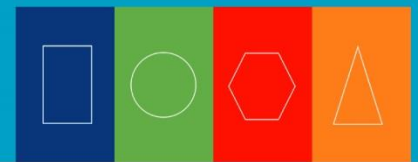
Appendix C Other Higher & Professional Education Providers

Appendix C1 Training providers whose main activities are focused on the provision of education and training

Griffith College
Dublin Business School
Hibernia College
IBAT College Dublin
Carlow College
Children's Therapy Centre Ltd
Clanwilliam Institute
College of Computer Training
Development Studies Centre, Kimmage
Gárda College
Grafton College of Management Sciences
IBAT College Dublin
ICD Business School
IICP Education and Training
Independent Colleges
Institute of Physical Therapy and Applied Science
Irish Business and Employers' Confederation (IBEC)
Irish College of Humanities and Applied Sciences
Irish Institute of Purchasing and Materials
Management
Leinster Academy, Leinster Rugby IRFU
Newpark Music Centre
National College of Ireland
Portobello Institute
Setanta College
SQT Training
St Nicholas Montessori College Ireland
The American College, Dublin
The Open Training College

Appendix C2. Professional Bodies

Association of Chartered Certified Accountants
Association of International Accountants
Chartered Institute of Management Accountants
Chartered Institute of Public Finance and Accountancy
Institute of Chartered Accountants in England & Wales
Institute of Chartered Accountants in Ireland
Institute of Chartered Accountants of Scotland
Institute of Certified Public Accountants in Ireland
Institute of Incorporated Public Accountants
Irish Tax Institute



Members of the Expert Group on Future Skills Needs

Ms. Una Halligan	Chairperson
Ms. Marie Bourke	Head of Secretariat and Department Manager, Department of Jobs, Enterprise and Innovation
Mr. John Bourke	Principal Officer, Department of Public Expenditure and Reform
Ms. Inez Bailey	Director, National Adult Literacy Agency
Mr. Peter Baldwin	Assistant Secretary, Department of Education and Skills
Mr. Ray Bowe	IDA Ireland
Ms. Liz Carroll	Training and Development Manager, ISME
Mr. Ned Costello	Chief Executive, Irish Universities Association
Ms. Margaret Cox	Managing Director, I.C.E. Group
Mr. Bill Doherty	Executive Vice President, EMEA, Cook Medical
Mr. Tony Donohoe	Head of Education, Social and Innovation Policy, IBEC
Dr. Bryan Fields	Director, Curriculum Development / Programme Innovation, SOLAS
Ms. Sonia Flynn	EMEA Director for User Operations, Facebook
Mr. Joe Hogan	Founder, Chief Technology Officer & VP Openet Labs & IP Management
Ms. Deirdre McDonnell	Principal Officer, Department of Education and Skills
Mr. Jerry Moloney	Director of Skills, Enterprise Ireland
Mr. Frank Mulvihill	Former President of the Institute of Guidance Counsellors
Dr. Brendan Murphy	President, Cork Institute of Technology
Mr. Alan Nuzum	CEO, Skillnets
Dr. Peter Rigney	Industrial Officer, ICTU
Mr. Martin Shanagher	Assistant Secretary, Department of Jobs, Enterprise and Innovation
Ms. Mary-Liz Trant	Higher Education Authority

Recent Publications by the Expert Group on Future Skills Needs

Report	Date of Publication
National Skills Bulletin 2014	July 2014
Vacancy Overview 2013	May 2014
Assessing the Demand for Big Data and Analytics Skills, 2013-20120	May 2014
The Expert Group on Future Skills Needs Statement of Activity 2013	April 2014
ICT Skills Action Plan	March 2014
Regional Labour Markets Bulletin	March 2014
Future Skills Requirements of the Manufacturing Sector to 2020	April 2013
The Expert Group on Future Skills Needs Statement of Activity 2012	April 2013
Guidance for Higher Education Providers on Current and Future Skills Needs of Enterprise: Springboard 2013	February 2013
Vacancy Overview 2012	February 2013
Regional Labour Markets Bulletin 2012	January 2013
Monitoring Ireland's Skills Supply: Trends in Education and Training Outputs 2012	July 2012
National Skills Bulletin 2012	July 2012
Key Skills for Enterprise to Trade Internationally	June 2012
EGFSN Statement of Activity 2011	April 2012
Vacancy Overview 2011	February 2012
Guidance for Higher Education Providers on Current and Future Skills Needs of Enterprise (<i>Forfás report based on EGFSN identified future skills needs</i>)	February 2012
Addressing High-Level ICT Skills Recruitment Needs: Research Findings	January 2012
Monitoring Ireland's Skills Supply: Trends in Education and Training Outputs	July 2011
National Skills Bulletin 2011	July 2011
EGFSN Statement of Activity 2010	May 2011
Developing Recognition of Prior Learning: The Role of RPL In the Context of the National Skills Strategy Upskilling Objectives	April 2011
Vacancy Overview 2010	March 2011
Future Skills Needs of Enterprise within the Green Economy in Ireland	November 2010
Future Skills Requirements of the Biopharma-Pharmachem Sector	November 2010
Monitoring Ireland's Skills Supply - Trends in Education and Training Outputs 2010	July 2010
National Skills Bulletin 2010	July 2010
Future Skills Needs of the Wholesale and Retail Sector	May 2010
EGFSN Statement of Activity 2009	April 2010

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