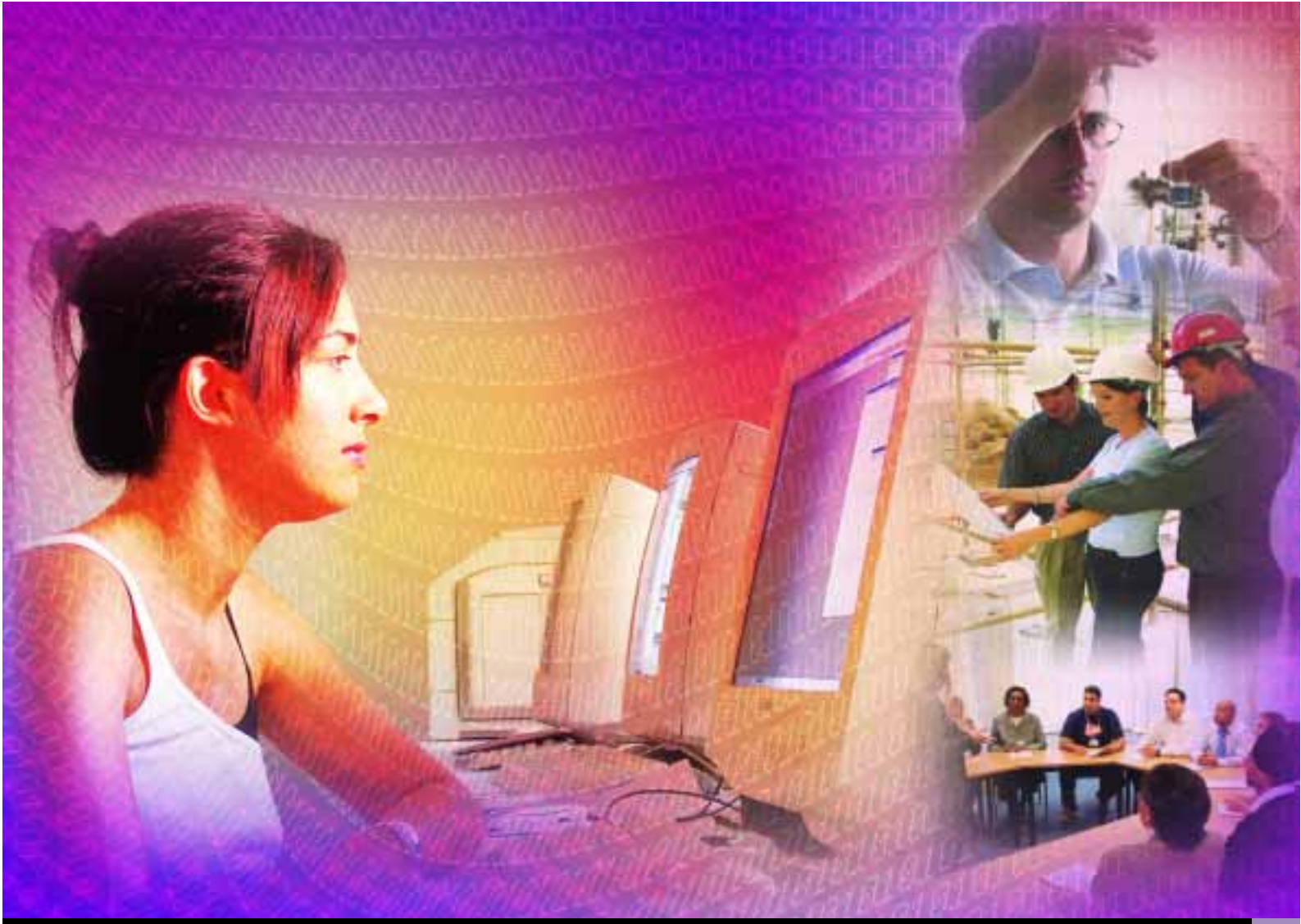

Data Analysis of

In-Employment Education and Training in Ireland

Expert Group on
Future Skills Needs

to the Minister for Enterprise, Trade and Employment and the Minister for Education and Science

Forfás

Expert Group on
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Data Analysis of

In-Employment Education and Training in Ireland

Prepared for the Expert Group on Future Skills Needs by Dr. Philip J. O'Connell, ESRI

To the Minister for Enterprise, Trade and Employment and the Minister for Education and Science

Forfás

NOVEMBER 2005

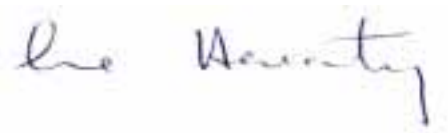
Foreword by Ms Anne Heraty, *Chairperson,* Expert Group on Future Skills Needs

The Expert Group on Future Skills Needs, as part of its ongoing work, endeavours to ensure the availability of appropriate levels of data and information in relation to skills and education and training provision. Data and information in relation to certain aspects of skill level and education and training is relatively freely available, while other aspects, particularly skills emanating from the education and training of those in employment is less accessible. The Expert Group decided to have this study undertaken to consolidate the data and information available on training activity for those in employment into a single accessible resource. The report also brings new perspectives in relation to the relative expenditure of the State and private enterprise in this area.

This report, undertaken by Dr. Philip O'Connell of the ESRI, also includes an international comparative perspective from which to view data. In doing so, it both confirms our existing awareness of certain key facts and also brings attention to others which have perhaps been less well known or understood. It also notes some areas where more comprehensive or greater frequency of data collection would be of benefit to policy formulation on education and training.

The Expert Group will use this data and consider some of its implications when advancing its current work programme over the next year. Our research over the years has demonstrated clearly that those already in the workforce will play an increasingly crucial role in meeting the future skills needs of the economy. The report reconfirms the fact that previous educational attainment is strongly related to participation in all forms of continuing education and training – the higher the level of educational attainment the greater the rate of participation in vocational education and training. These fundamental considerations will be at the forefront of the work of the Expert Group over the coming period.

I would like to thank Dr. O'Connell for producing this useful report. I would also like to thank the members of the Steering Group who guided the work and the Secretariat for their input to the production of the report.



Anne Heraty
Chairperson

Expert Group on Future Skills Needs

Data Analysis of In-Employment Education and Training in Ireland

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1. Executive Summary

This study focuses on continuing vocational education and training (CVET) of those at work. The objectives of the study are to gather existing information and provide analysis on expenditure, participation and access, providers, certification, educational attainment of those at work, and comparative indicators of CVET. By bringing together this information for the first time, the study contributes to the development of the kind of information infrastructure on education and training that is essential as a basis for informed policy recommendations. The research undertaken for the study has also, in the process, identified a number of areas where there are gaps in information that need to be highlighted.

1.1 Expenditure on Continuing Vocational Education and Training (CVET)

Patterns

Public expenditure on CVET

Expenditure on training and education of employed persons by public providers and bodies amounted to about €173 million and supported the training of about 260,000 workers in 2003. About €124 million of this was accounted for by apprenticeship training of about 27,000 young entrants to designated trades. This would suggest that outside of apprenticeship programmes, which should, in any event, be classified as Initial Vocational Education and Training (IVET), state funding to support the training of persons in employment – in the region of about €49 million in 2003 – is on a very modest scale. Apprenticeship training accounts for the lion's share of public support for VET for people at work.

In addition, there was public expenditure of about €41 million on part-time enrolments at third level institutions. While no direct correlation exists between part-time enrolments and labour market status, approximately 90% of part-time students are also in employment.

Private expenditure on CVET

Total expenditure by employers on training costs is estimated to have been in the region of €1 billion in 2003. This figure includes both the direct costs of training, including tuition fees, and the wage costs of employees while engaged in training. Of about €45 million paid in private fee expenditure, some of this amount is already included in the €1 billion expenditure from employers, where employers pay for, or subsidise, part-time study at third level institutions.

Public expenditure on assisting unemployed individuals

These figures can be compared with state expenditure on training to assist unemployed individuals secure work, which accounted for about €270 million in 2003. Some proportion of these programmes may, of course, also be regarded as contributing to the productive capacity of the economy as well as the employability of their participants.

FIGURE E.1: Total Expenditure on Continuing Vocational Education and Training, including training of those in Employment and the Unemployed, € millions, c.2003

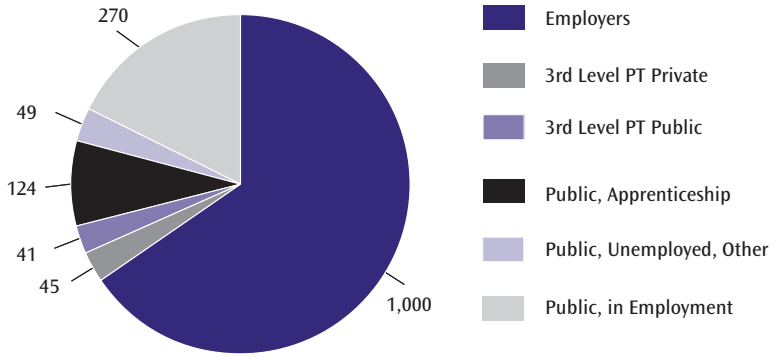


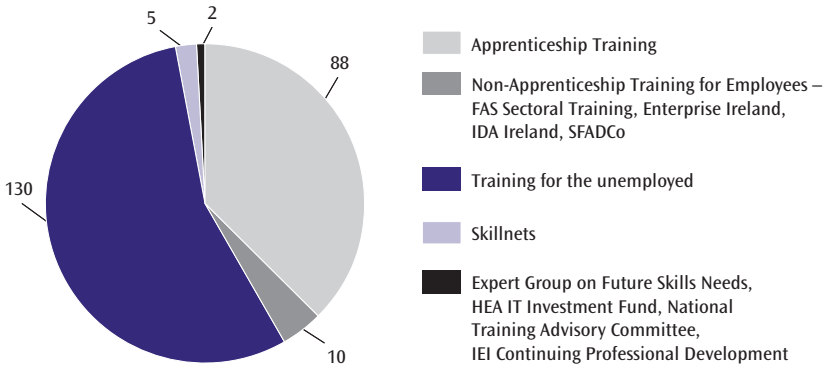
Figure E.1 summarises the estimates of expenditure on CVET.

- Employers account for the vast majority of expenditure on education and training of people at work.
- Outside of this, public support for training of those in employment is on a very modest scale.
- Well over half of all public funding of CVET is related to training of unemployed, rather than employed, persons.

National Training Fund

The National Training Fund (NTF) was established under the National Training Fund Act 2000 as a dedicated fund to finance a range of schemes aimed at (i) raising the skills of those in employment (ii) providing training to those who wish to acquire skills for the purposes of taking up employment and (iii) providing information in relation to existing, or likely future, skills requirements in the economy. The NTF is resourced by a levy on employers of 0.7% of reckonable earning in respect of employees in Class A and Class H employments – this represents approximately 75% of all insured employees.

FIGURE E.2: National Training Fund Expenditure, € millions, 2003



Total NTF expenditure amounted to almost €234 million in 2003, and thus accounted for a substantial proportion of public expenditure on VET outlined in Figure E1. The NTF contributed about €88 million to the training of Apprentices (IVET), another approximately €10 million to training of employees (CVET), including FÁS training of employees, sectoral training grants by the development agencies, and €5 million on the Skillnets programme. The NTF contribution to the training of the unemployed amounted to almost €130 million in 2003. The NTF also contributed €1.5 million to the information infrastructure on training, through its support of the Expert Group on Future Skills Needs, the Information Technology Investment Fund at the HEA, the National Training Advisory Committee[1] and the IEI Continuing Professional Development programme.

Indicators

Data, mainly aggregate, on expenditure on training by public providers and other agencies are available from administrative sources. It is also possible to obtain data on public expenditure on part-time enrolments in third level education. Private expenditure on continuing education and training must be estimated from a wide range of sources and based on assumptions about the distribution of training activities.

While the data on public expenditure and activity in relation to CVET of employed workers are useful, they represent a fraction of the overall expenditure and activity in the continuing education and training of those in employment. We have attempted to develop the best estimates of private expenditures by employers and individual workers by combining data from a range of surveys as well as national accounts and other administrative data.

1.2 Participation in CVET

Patterns

Overall in excess of 115,000 individuals, representing just under 7% of those at work, received formal education in the 12 months prior to the Quarterly National Household Survey in 2003[2]. Over 312,000 (18%) reported that they had received non-formal education or training[3], and over 770,000 (45%) had participated in informal education[4] in the previous twelve months. Some individuals participated in more than one form of CVET and 50% of all those employed in 2003 had participated in either formal, non-formal or informal education or training in the past 12 months.

Participation in CVET is highly structured:

- Women show much higher levels of participation in all forms of continuing education and training.
- Young workers aged 15-24 are much more likely to have participated in formal education in the previous year, partly because many are new entrants to the labour force.
- Participation in both non-formal and informal education peaks in the 35-44 year age group.
- Previous educational attainment is strongly related to participation in all forms of continuing education and training: the higher the level of educational attainment the greater the rate of participation in CVET.

[1] Since January 2004, in addition to identification of policy and actions required to meet the future skills needs of the enterprise sector, the Expert Group on Future Skills Needs (EGFSN) has been assigned the role previously undertaken by the National Training Advisory Committee to provide advice on overall training strategy for enterprise training in Ireland, including advice on the allocation of the National Training Fund.
[2] Formal education refers to regular education through schools, colleges and universities.
[3] Non-formal education refers to organised learning activities through school, colleges or universities.
[4] Informal education refers to non-taught learning, including self-learning with the purpose of improving skills or knowledge.

  - Just over 1% of those with no qualifications participated in formal education over the previous 12 months, as did less than 5% of those with lower secondary education (Junior Certificate level), compared to almost 10% of those with third level qualifications.
  - We find a similar pattern in respect of both non-formal and informal education and training.

- Employees are much more likely to have participated in formal and non-formal education. However, self-employed persons with paid employees also display comparatively high rates of participation in non-formal education.

- There is substantial variation in CVET participation between economic sectors:
  - Training is much more common in the public than the private sector.
  - Construction, education and health are the leading sectors in participation in formal education, with participation rates in excess of 9%.
  - Workers in education show the highest rates of participation in non-formal education, followed by those employed in utilities, financial intermediation, public administration and defence, and health.
  - Workers in primary production show very low rates of participation in both formal and non-formal education.

- Job characteristics are also important:
  - Full-time workers receive more training than part-timers.
  - Permanent workers receive more training than those on temporary contracts.
  - Union members are substantially more likely to participate in training than non-members.
  - Those employed in large organisations are much more likely to participate in CVET than those in small organisations.

The evidence for Ireland, as in many other countries, indicates that most employer-sponsored training is general rather than firm-specific in nature, and is therefore transferable to other jobs and employers. This suggests that the market-failure rationale for state intervention in the training of employed workers may be weaker than is often assumed.

Indicators

Information on the incidence of continuing education and training has improved dramatically with the publication of the *Ad-hoc Module on Life Long Learning* collected in conjunction with the *Quarterly National Household Survey* in the 2nd Quarter of 2003. The availability of the micro data from this source means that we can analyse patterns of individual participation in the various types of education and training by a wide range of socio-demographic factors, as presented in Section 4.2 of this report. These data can be supplemented with additional data, relating to job and organisational characteristics that may influence training, from occasional specialist surveys.

1.3 Student Enrolments

Patterns

Enrolment data on part-time students in third level institutions provide an additional alternative source of information about CVET. About 90% of part-time students are in paid employment.

In 2002-2003 there were over 130,000 students enrolled full-time and almost 35,300 enrolled part-time in Irish universities and Institutes of Technology. Almost 7,000 third level awards were earned by part-time students in the 2003-2004 academic year. This could be considered as equivalent to the annual inflow of skills from this sector. Over 40% of all part-time awards were at sub-degree, certificate or diploma level, and about one fifth each were at primary degree, post-graduate diploma and post–graduate degree level[5]. Almost one-third of all awards were in social science, business and law. Another 22% of part-time awards were in health and welfare.

Indicators

Enrolment data on part-time students are generated as part of the administration systems of public educational institutions and bodies and, as such, tend not to provide data on the labour market status of students. Currently, detailed information on part-time enrolments by level and field of study are available for Universities, but not for the Institutes of Technology. Such data are collected/generated by Institutes of Technology, so it should be possible to collate the data from individual institutions to produce a national profile of the fields and levels of all part-time enrolments. Similar data are not currently available for private third level institutions although, again, it should be possible to collate such data with the cooperation of the colleges.

Professional organisations and bodies also represent a source of information on CVET participation and such data is provided relating to the financial services sector in this report. This data should be available from a range of such professional bodies, for example, in engineering and law.

1.4 Employer Data on CVET

Patterns

Surveys of employers provide useful indicators of the incidence and intensity or volume of training. In 2001-2002, 34% of private sector enterprises indicated that someone in the company (including managers and proprietors but excluding apprentices) had engaged in some formal structured training at some point in the previous 12 months. The corresponding figure for organisations within the public sector was substantially higher at 77.5%. The sector where the lowest proportion of enterprises provided any training was Transport and Personal Services (26%); and the sector with the highest such incidence was Hi-tech manufacturing, where 60% of enterprises provided some training. In the public sector, over 90% of organisations in the health field provided some training to their employees and the lowest such incidence was in respect of regional bodies.

- In the private sector 24% of all employees received structured training in the previous 12 months:
    - 33% of those working in Finance, Insurance and Business services received training, compared to 18% in Transport and Personal Services.

[5] With the development of the National Framework of Qualifications (NFQ) has come a change in the award types granted in the Irish education sector. The new third-level award types will come into effect, for the most part, in the course of the 2005 granting of awards. Appendix 6 summarises the main elements of the NFQ. For further information on awards, visit www.nqai.ie

- Almost 30% of employees in the public sector (83,000 workers) received training:
    - 60% of Civil Servants received training, compared to only 17% of those working in Health.

Indicators

Information on the provision of training by employers in different sectors has been collected by the ESRI in a series of national surveys of companies commissioned by FÁS and the Expert Group on Future Skills Needs. This provides very useful data on the incidence and volume of training on an occasional basis. It would be useful if surveys such as this were repeated on a regular basis, perhaps every 3 to 5 years, in order to monitor trends and developments in CVET in the workplace.

Two EU–wide surveys of training in enterprises, CVTS1 and CVTS2 relating to 1993 and 1999 respectively, have been published under the auspices of EUROSTAT. A new survey, to be collected under an EU Regulation and relating to the year 2005, will become available in 2006 or 2007.

1.5 Certification

Patterns

In 2002-2003 a total of 87,866 awards were recorded by FETAC. Over 53,000 were certificates and almost 35,000 were records of achievement. FÁS accounted for 40,000 of these. It should be noted that many of theses awards were earned by individuals who were not in employment, although the data do not distinguish employed workers from others.

Indicators

Data on certification of training of employed workers are, as yet, rudimentary, and are mainly limited to aggregate counts of the total number of awards under various headings by the main training bodies. It is not possible at this point to identify employed workers within the overall total of award recipients in the FETAC system but this situation is currently being addressed by FETAC.

1.6 Educational Attainment

Patterns

In 2003 about 19% of the population aged 25-64 had no formal qualifications, while another 19% had lower secondary. Almost 60% had completed secondary education (Leaving Certificate level) or higher. Only 12% of those at work had no formal qualifications and almost 70% had attained upper secondary education or higher. Almost one-third of those at work had attained a third level qualification. The educational profile of the unemployed cohort is a good deal less favourable, with substantially higher proportions with no qualifications or with a lower secondary level qualification (for example, the Junior Certificate).

The younger age groups have larger proportions at higher levels of education: 40% of those at work aged 25-34 have a third level qualification, compared to 36% in the 45-54 year age group and about 20% in the 55-64 year age group. This pattern reflects the relatively rapid but comparatively late expansion of participation in higher education achieved in Ireland in the past three or four decades.

Indicators

In general we have comprehensive information on the educational attainment of the labour force and those in employment. The most recent such comprehensive data was produced in the QNHS ad-hoc module on Educational Attainment relating to 2003. Good quarterly data are also available from the QNHS. However, we lack additional information on the vocational skills and qualifications of the Irish population – including up-to-date information on literacy and numeracy as well as functional vocational skills and competencies.

1.7 International Comparisons

Patterns

At the individual level, if we consider training of all adults aged 25-64 years, irrespective of labour market situation, the rate of participation in training in Ireland is at about the average for EU countries. However, if we confine the analysis to the employed, participation rates in non-formal training in Ireland are lower than average and substantially behind the leading countries.

If we consider enterprise data relating to 1999, the latest year for comparable such data in the EU, Ireland appears to be about average in terms of a series of indicators of company-sponsored training in Europe. Ireland lies 7th in a ranking of thirteen EU countries in terms of percentage of companies providing training for their employees. In Ireland, 41% of employees participated in training courses in 1999, compared to a high of 61% in Sweden and a low of 25% in Spain.

Average expenditure by enterprises on training courses ranged from 1.3% of total labour costs in Austria to 3.6% in the UK. Ireland, where the average expenditure was 2.4% of labour costs, was midway between the two extremes.

Compared to the European average, Ireland has higher-than-average proportions of both low skilled persons, with lower secondary education, and higher skilled persons, with third level qualifications. With respect to the proportion of low-skilled in the working-age population, Ireland falls well behind leading European countries, such as Germany, Sweden, Denmark and Finland. This means that greater investment in training the lower skilled is necessary if Ireland is to catch up with the countries with which it must compete for markets and foreign investment. Being at the average in terms of training is not enough to bridge the gap among the low-skilled.

Indicators

There are two main sources of internationally comparable data on CVET of employed persons in European countries. The European Labour Force Survey collects information on participation in education and training in the 4 weeks prior to the survey. The two EU–wide harmonised surveys of training in enterprises CVTS1 and CVTS2 relating to 1993 and 1999, published under the auspices of EUROSTAT, are very useful for establishing historical trends but are less useful as a guide to current policy. The new survey, relating to training in 2005, will be conducted in 2006 and data should become available in 2006 or 2007.

Much of the internationally comparable data are somewhat dated. When we extend the comparison beyond Europe, comparable data sets become scarce, and the most recent such data relates to a series of International Adult Literacy Surveys conducted by the OECD in the 1990s.

1.8 Exploiting Existing Data

This review has focused on what we can learn from existing indicators on CVET of those in employment and indicated how we might extend the range or improve the coverage of indicators of education and training. A clear implication of this study is that investing further resources could improve the measurement of the incidence, volume and quality of training. This would be a useful guide to policy. However, much could also be learned from further analysis of existing data sets on why individuals and companies engage in training, and why some do not. This would involve multivariate analysis of micro-data, to identify barriers to training and appropriate policy levers to increase training.[6] Empirical work on the returns to training, for both employers and individuals, would also be useful to demonstrate the case for investment in lifelong learning.

1.9 Enhancing the Information Infrastructure

Policy makers seeking to influence education and training behaviour, and social scientists attempting to understand that behaviour, all make similar assumptions about the decision-making process. They assume that decision makers make investment decisions on the basis of expected returns and that they are operating with full information. However, in the field of education and training that assumption is frequently invalid. Arguably there are three key decision makers in the field of CVET: employers, employees and the state. Each face significant information problems with respect to a series of key questions:

a. What, if any, CVET is needed?

b. What CVET is available, what is the cost and quality?

c. What are the returns to investment in CVET?

Welcome enhancements to the existing information infrastructure on education and training are being developed, notably through the work being undertaken by the Skills and Labour Market Research Unit on behalf of the EGFSN. However, the research undertaken for this study establishes that there are still a number of important gaps in information. To the extent that these gaps can be addressed, the work of policy advisory bodies such as the EGFSN from achieving the kinds of precise targeting of their recommendations that they would like, particularly in regard to the allocation of public expenditure, would be greatly facilitated. Section 7 of this study details the areas where such gaps arise. The frequent use of Data collection vehicles, such as repeated CSO special modules on Lifelong Learning and national surveys of employer's training activities, would make a substantial contribution to the policy-making process for what is a key area of national interest.

[6] Examples of such data sets include: the Lifelong Learning module of the QNHS among individuals, the ESRI/NCPP *Changing Workplace Survey of Employees* and the ESRI/FÁS/Forfás Vacancy Surveys of employers.

2. Introduction

The resurgence of interest in recent years in the importance of education and training in furthering the goals of economic progress, fuller employment and social integration coincides with a new emphasis on the need for 'life long learning'. This is in response both to current changes in the organisation and technology of production and service delivery, and to counter the potential for socially disruptive effects of increased labour market flexibility. This is reflected in the Lisbon Agenda, which established the goal of making Europe "the most competitive and dynamic knowledge-driven economy by 2010", and which placed education and training at the centre of European economic and social policy formation. In Ireland, investment in human capital is identified as a key source of competitive advantage in the report of the Enterprise Strategy Group (ESG) (2004) *Ahead of the Curve*. In this respect, the report of the ESG emphasised the importance of enhancing the skills of the existing workforce, particularly the low skilled, as well as investment in an adaptive and responsive higher education sector, to generate the intellectual capacity to fuel an innovation-driven economy.

Human capital, in the form of education, played a very significant role in the rapid economic development of Ireland over the last four decades (Nolan, O'Connell and Whelan, 2000, Duffy, Fitz Gerald, Hore, Kearney and MacCoille, 2001). Having converged with other advanced industrial societies at the end of the Twentieth Century, Ireland faces a series of challenges to achieve further economic and social progress in the Twenty-first Century. A series of reports have identified the challenges as:

- the high costs of doing business in an advanced and prosperous economy;
- increased competition both within the enlarged European Union, and more widely, in an increasingly globalised system of production and service delivery;
- the need to establish and maintain an innovation-based and knowledge-driven economy;
- the changing demographic profile, which will see a decline in the number of labour market entrants from the education system, and the aging of the workforce with an associated out-dating and/or depreciation of skills learned in the initial education system (Enterprise Strategy Group (2004), Expert Group on Future Skills Needs (2003), McIver Consulting (2004) National Training Advisory Council (2002)).

For Ireland to meet these challenges it is imperative to ensure that adequate resources are invested in human capital development. In initial education, before labour market entry, it is essential to ensure that participation to advanced educational levels must be increased, that educational under-achievement be minimized, and that the quality of education meets the need of the growing and developing economy. However, investment in initial education alone is not sufficient. The new development agenda for Ireland requires a substantial increase in continuing vocational education and training after labour market entry and throughout working life. Investment by enterprises and organisations in the training of their employees, with appropriate state interventions to support such investment, is critical to maintaining a strong economy and meeting Ireland's developmental objectives.

This study focuses on continuing vocational education and training (CVET) of those at work. The objectives of the study, as set out in the terms of reference are twofold:

A. To gather existing information and provide analysis in respect of:

(i) both State and private expenditure on education and training of those in employment for the year 2003[7],

participation rates corresponding with (i),

proportion of education and training undertaken that is certified by national or national accreditation and awarding bodies,

ional activity, breakdown of (a) major award types[8] being pursued and (b) main on provider bodies[9],

activity, breakdown as between (a) FETAC and other award types being pursued, (b) ing provider bodies[10] involved and (c) courses that are mandatory, aimed at meeting company needs or developmental in content,

on of educational and training activity by sector, geographical spread, and main recipient groups,

e educational and training attainment levels of all those in employment.

B. ative analysis of the nature and incidence of in-company education and training internationally.

[7] When commissioning the research 2003 was deemed to be the latest year for which full year data would be available; it also aligned with the QNHS Ad-Hoc Module on Lifelong Learning drawn on for the study.
[8] Certificate/diploma, degree, post-graduate or other
[9] Universities, IoTs, private colleges, other
[10] FÁS, Teagasc, Failte Ireland, other State providers, private providers.

3. Research Methodology

The study is based largely on existing data. The methodology comprised the following:

- Extensive review of research literature relating to CVET in Ireland.
- Extensive review of statistical information relating to CVET in Ireland, including data produced by: CSO, FÁS, DES, HEA, FETAC, HETAC.
- Consultations with key informants, including the Skills and Labour Market Research Unit at FÁS, Forfás, DES, HEA, FETAC.
- Special analysis of micro data:
  i. Quarterly National Household Survey, 2003, Q2.
  ii. Ad-hoc Module on Life-long Learning, QNHS 2003, Q2.
  iii. The Changing Workplace Survey of Employees, 2003.
- Review of international comparative indicators on CVET.
- Identification of gaps in information on CVET.

4. Education and Training Activity and Expenditure in Relation to Those in Employment in Ireland

4.1 Expenditure on Education and Training

In this section we attempt to assess expenditure on training of employed persons. We begin with an examination of administrative data on provision and expenditure by public training providers and other public bodies. We then use a diverse range of sources to derive estimates of both public and private expenditure on continuing education and training.

Expenditure by Public Providers

Table 4.1 shows the main programmes undertaken by the range of public agencies and bodies to support training in Ireland. FÁS is the single largest state provider of training for about 175,000 employees at a cost of around €147 million. Overall the table accounts for the training of about 260,000 employed workers at a cost of about €173 million. It should however be noted that the Apprenticeship programme accounts for about €124 million of this, to support the training of almost 27,000 apprentices. The Apprenticeship programme is a fundamentally important component of the Irish educational and training system and is essential to meeting the skill needs of the economy, but it is, effectively, part of the initial education and training system to prepare new entrants to employment, rather than to train the existing work-force. Outside of the Apprenticeship Programmes, state funding to support the training of persons in employment – in the region of about €49 million in 2003 – is on a very modest scale.

Of the €173 million public expenditure on training of employees in 2003, a substantial proportion – about €103 million (c.60%) – is drawn from the National Training Fund (NTF).

Table 4.1 also presents summary information on the content of training provided by public bodies, as well as the main target groups and the extent of certification. Most of the larger programmes entail a high degree of certification. For example, all Apprenticeship training is certified, as is most Sectoral Training undertaken by FÁS, Teagasc, and Bord Iascaigh Mhara.

It should also be noted that much of the training supported by public expenditure is of very short duration. The single largest training programme, in terms of the number of participants, the Safe Pass Programme, is a one-day safety awareness training programme for construction site personnel. In 2003 Safe Pass training was delivered to 125,000 individuals out of a total of 260,000 participants in State-funded training (48%). While such training is clearly essential for health and safety at work, it should not be regarded as developmental training.

TABLE 4.1: Public Providers of Training to those in Employment

Organisation	Training Programme	Description	Target Group	Participants	Public Expenditure € million	*Of which* National Training Fund € m	Private Expenditure € million	Certification
FÁS and Institutes of Technology	Apprenticeship	Delivery of training and funding of allowances in off-the job phases of national apprenticeship system	Young entrants to designated trades	26,911	123.672	87.863		100%
FÁS	Sectoral Training	Range of FÁS activities in support of in-company training: Competency Development Programme, Sectoral Training Initiatives, Safe Pass, CSCS, Excellence through People	Companies and employees	c.130,000 Includes c.125,000 in one-day Safe Pass programme	17.195	4.534	3.189	c.90%
FÁS	Sponsored Training, Evening Courses, Net College	Training for employees and the general public using FÁS facilities	Employees General public	17,800 4,403 (Net) 11,160 (Evening) 2,282 (sponsored)	6.003		5.058	c.10%
Fáilte Ireland	Sectoral Training	Mostly short training courses for persons already working in the tourism industry	Tourism industry personnel	6,748	3.9		0.3	18% FETAC
Skillnets	Training Networks Programme	Support and funding for companies to jointly address training needs[11]	SMEs in all sectors	c.3,200 companies 18,000 employees, 35,000 participants over 2002-4	5	5	5.6	c.54% (FETAC, HETAC, and professional bodies).
City and County Enterprise Boards (CEB)	CEB Measure 2 or soft support activities	Advice, management training, E-commerce training, enterprise education, mentoring and the promotion of enterprise for women	Micro-enterprises (no more than 10 employees)	12,410 participants of which 6,841were female	7.3		N/A	1,662 (13%)

[11] Networks conduct training needs analysis, develop training strategies and activities to meet prioritised skills needs, design of new training programmes and approaches, establish sector competence/ occupational standards, develop certification.

TABLE 4.1: Public Providers of Training to those in Employment (cont.)

Organisation	Training Programme	Description	Target Group	Participants	Public Expenditure € million	*Of which* National Training Fund € m	Private Expenditure € million	Certification
Teagasc	Adult Training	Short courses in financial management, business development, technical updating, environmental matters, IT etc	Farmers, horticulturalists, foresters	11,852	3.0			100% (FETAC)
IDA	In-company Training	Training grants to companies	Workforce training		0.65	0.65	Yes No data	
SFADCo	In-company training	Training grants to companies	Workforce training		0.498	0.498		
International Equine Institute, University of Limerick		Developing and delivering third level courses in Equine Science	New entrants & those employed in industry	275				
Bord Iascaigh Mhara	BIM's Integrated plan for the Irish Seafood Industry	Statutory Certificates of Competency for fishing vessel officers and safety training crew, and non-statutory vocational training for aquaculture and processing personnel	Fishing vessel officers and crew and aquaculture and processing workforce	1,573	0.9		No data €0.17m course fees	Certs of Competency and Safety: DCMNR[12] Other: FETAC
Enterprise Ireland	In-Company Training (EHRDOP)	Support for Training under the EHRD OP	SMEs Manufacturing & internationally traded services	1,189	4.0	4.0	5.3	
Údaras na Gaeltachta	Sectoral Training	Upskilling workforce of companies in Gaeltacht areas		310	0.7		50%	
Total				**c.260,000**	**€172.818m**	**102.545m**		

[12] Department of Communications, Marine and Natural Resources.

TABLE 4.2: Public Providers of Training for the Unemployed

Organisation	Training Programme	Description	Target Group	Participants	Public Expenditure € million	*Of which* National Training Fund € m	Private Expenditure € million	Certification
FÁS	Specific Skills Training, Job Training Scheme	Wide range of training courses providing particular skills relevant to employment	Unemployed and other job-seekers	11,153	62.077	33.644	No	
FÁS	Traineeship	Occupationally focussed courses involving a mixture of off-the-job and on-the-job training	Unemployed and other job-seekers	1,790	24.063	6.13	No	
FÁS	Specialised Training	Special training courses for persons with a disability	Persons with a disability	1,419	41.669	39.792	No	
FÁS	Community Training	Training courses to meet local needs	Unemployed and other disadvantaged	2,912	24.93	18.636	No	
FÁS	Foundation training	Generic, foundation training	Unemployed and other disadvantaged	7,722	69.508	31.456	No	
Teagasc	Young Entrant Training	A range of fulltime and part-time vocational (further education) courses for those entering farming, horticulture & forestry. Delivered by institutes of higher education	School Leavers	974	27.3			100% FETAC
Údaras na Gaeltachta	Adaptability; Ongoing Sectoral Training – Gaeltacht (HRDOP)	a) Management development scheme; b) Apprentice development scheme; c) Various courses; d) Lifelong learning; e) Schools programme	a) Future managers b) Crafts people c) Unemployed etc d) Individuals & communities e) 2nd level students	Management & apprentices: 74; School leavers: 1,289; Other: 890; Total: 2,253	2.5			

Table 4.2: Public Providers of Training for the Unemployed (cont.)

Organisation	Training Programme	Description	Target Group	Participants	Public Expenditure € million	*Of which* National Training Fund € m	Private Expenditure € million	Certification
Failte Ireland	Sectoral Entry Training – Tourism – School Leavers (EHRDOP)	Training to facilitate the transition from second-level education to job placement within the tourism industry	School-leavers	2,152	8.9		.6	100% FETAC
Failte Ireland	Sectoral Entry Training – Tourism – School Leavers (EHRDOP)	Training in elementary hospitality at national, regional and local levels in technical, interpersonal and other skills necessary to take up employment opportunities in the tourism and hospitality industry	Unemployed, women returning to paid employment, early school-leavers and the socially excluded	1,816	7.8		.5	80% FETAC 20% Other
Bord Iascaigh Mhara	Certificates/modules in Commercial Fishing, Aquaculture and Seafood Processing	FETAC foundation and modular training courses for the Irish seafood industry	New entrants to fishing , aquaculture and fish processing sectors	87	0.35		Yes-no data. No course fees	FETAC NCVA Foundation & Levels 1-3
Bord Iascaigh Mhara	Certificate of Competency Training	Statutory training for fishing vessel crew. for seagoing engineers starting their careers	New and prospective entrants to the catching sector	21	0.18			DCMNR and FETAC
FIT	Fastrack to IT	Training to meet IT recruitment needs of industry. Training, support and career opportunities for unemployed and others	Unemployed and disadvantaged	c.600	0.35		Charitable donations from industry	
Total				**c.32,899**	**269.627m**	**129.658m**		

The data on the training of employed workers can be compared with state expenditure on training to assist unemployed individuals secure work, which accounted for about €270 million in 2003 to support the training of almost 33,000 individuals who were either unemployed, school-leavers, women returning to the labour force, or disadvantaged. These programmes are summarised in Table 4.2. About €130 million (48%) of public expenditure to support for-work training of those not in employment was drawn from the National Training Fund in 2003. Some proportion of these programmes may, of course, also be regarded as contributing to the productive capacity of the economy, as well as the employability of their participants.

Fig. E.2 on page 2 of this report shows the allocation of NTF expenditure both for those in employment and for those unemployed in 2003.

Expenditure on Higher Education

Table 4.3 shows estimated expenditure on part-time education courses at universities and Institutes of Technology in 2001-2002. It should be acknowledged that this represents a rough preliminary estimate on the basis of available information. It should also be noted that not all part-time students are also in employment. The estimates of both public expenditure and private fees in the Institutes of Technology represent the funding claim and fee income, respectively, in relation to part-time enrolments and were kindly supplied by the Department of Education and Science. The data on public expenditure in the universities is based on estimated unit costs allocated to part-time students, and were kindly provided by the Higher Education Authority.

TABLE 4.3: Estimated Expenditure on Part-time Education at Universities and Institutes of Technology, 2001-2002 and Updated to 2003

	Universities	Institutes of Technology	Total
		€ *million*	
Panel A: 2001-2002 Data			
Public expenditure	14.1	16.2	30.3
Private fees	32.7	7.2	39.9
Total	**46.8**	**23.4**	**70.2**
Panel B: Inflating to 2003			
Public expenditure	19.1	21.9	41.0
Private fees	37.1	8.2	45.2
Total	**56.2**	**30.1**	**86.3**

In order to estimate fees at the universities a quick survey of fees on the University College Dublin website was undertaken. The fees are based on the unweighted average fees quoted for 80 part-time courses at UCD, discounted by 20% to take account of students who continue to be enrolled, but at reduced fees, for extended periods of study, and also discounted by changes in third level fees between 2001 and 2004. Finally the resulting average estimated fee is grossed-up by 14,649, the number of part-time students enrolled in the university sector in 2002-3 (see Table 4.1.4). We also compared the estimated fee income relating to Institutes of Technology with fees charged at Dublin Institute of Technology and Waterford Institute of Technology. The €7.2 million in respect of 17,400

part-time students implies an average fee of about €450 in current prices that may underestimate the current fees by a margin of about 20%. The estimated total expenditure on part-time students at third level in 2001-2 amounted to just over €70 million, consisting of €30 million in public expenditure and another €40 million in private fees.

In Panel B of Table 4.3 we attempt to adjust the 2001-2002 to 2003-4 prices. Public expenditure in the universities increased by a margin of 7% between 2001/2 and by 6% in 2002/3, based on outturn figures published in the Revised Estimates Volumes. Public expenditure on third level education increased by a margin of 15.6% in 2001 and by another 17% in 2002. We assume that expenditure on part-time courses would increase in tandem with increases in total expenditures in the sector. Thus, given the baseline figures in Panel A of the table, public expenditure on part-time education in Universities is estimated to have increased from approximately €14 million to €19 million in the relevant period and from €16 million to €22 million in Institutes of Technology. In the case of third level fees, the Department of Education and Science sets an inflator applying to both Universities and Institutes of Technology. The inflator for 2002/2003 was 6% and the inflator for 2003/2004 was 6.5%. Applying these back to the 2001-2 data, private fees are estimated to have increased from €33m to €37 million in the Universities and from €7 million to €8 million in the Institutes of Technology.

Adjusting the total for price changes in the higher education sector between 2001-2003 would yield public expenditure of about €41 million, private expenditure of about €45 million, and total expenditure of about €86 million in 2003 prices.

Company Expenditure on Training

The *Labour Costs Survey* (LCS) is an occasional survey that collects data on a range of labour costs, including training costs, from enterprises with 10 or more employees. Training costs includes wages and salaries of trainees and apprentices, the employers' contributions to their PRSI, and any other training costs net of any training grants received. The most recent survey relates to the year 2000, so the data were collected before the introduction of the national training levy. Table 4.4 shows training costs expressed as a proportion of total payroll by sector. There is considerable variation in training costs, from a low of less than 1% of total payroll in financial intermediation, to a high of 4.5% in real estate and business services. The overall average for the sectors covered is 2.1% of payroll.[13]

TABLE 4.4: Training Costs as a Percentage of Total Payroll by Sector, 2000

	Number of enterprises	%
Industry	2,663	1.8
Wholesale & Retail	2,654	2.2
Hotels etc	1,699	2.8
Transport & Communication	414	1.2
Financial Intermediation	212	0.9
Real Estate & Business Services	1,384	4.5
	9,026	**2.1**

Source: CSO, 2002, Labour Costs Survey, 2000

[13] Table 6.1 shows average expenditure on training in Ireland in 1999 to be 2.4% of payroll. That figure is drawn from the results of the CVTS2 survey, which was a small sample survey of enterprises. In estimating total employer expenditure on training, the *Labour Costs Survey* estimate is used in preference to the VCTS data because it is more recent and based on a much larger sample of firms.

TABLE 4.5: Estimating Total Corporate Expenditure on Training in 2003

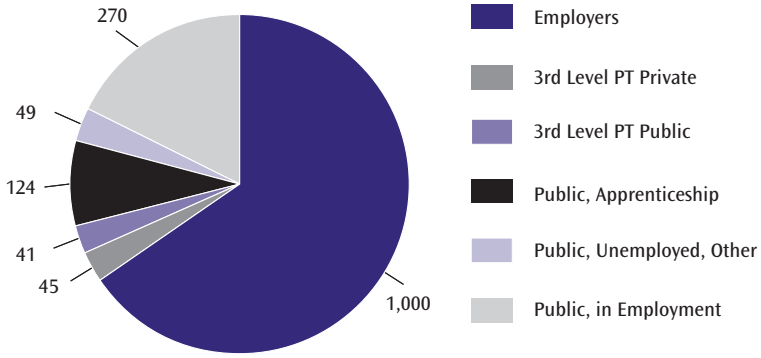
	Assumption A 12% of employees in organisations with less than 10 employees *€ million*	**Assumption B 25% of employees in organisations with less than 10 employees** *€ million*
Total Remuneration of Employees in Non-Agriculture Activities	53,402	53,402
Payroll in orgs with 10+ employees	46,994	40,052
Training expenditure at 2%	940	801
Payroll in orgs with less than 10 employees	6,408	13,351
Training expenditure at 1%	64	134
Total Expenditure on training	**1,004**	**935**

Table 4.5 represents an attempt to derive a rough estimate of total expenditure on training costs by organisations, using the information on training costs from the *Labour Costs Survey (LCS)*. Total remuneration of employees in the non-agricultural economy in Ireland in 2003, including wages, salaries, pensions and employers' contributions to social insurance, amounted to €53,402 million (CSO, 2003). The LCS data relates only to enterprises of 10 or more employees, so a key question is how the LCS data can be used in conjunction with the National Accounts data. The estimate in Column A is based on the assumption that 12% of all employees work in enterprises or organisations with less than 10 employees.[14] We then assume that the 2% average expenditure on training costs can be applied across the board to remuneration of employees in organisations with 10 or more employees, and that training costs in smaller organisations represent just 1% of payroll. This is a rough and conservative assumption, but consistent with previous research that shows that small enterprises engage in less training. On these assumptions total expenditure by employers on training costs amounted to about €1 billion in 2003. This is consistent with the estimate of annual training expenditure by employers arrived at independently by FÁS in its annual review of labour market trends (2004).

The estimate in Column B is based on an assumption that 25% of employees work in enterprises with less than 10 employees. This is based on QNHS data relating to size of local unit, so we know that it represents an overestimate of the true proportion of employees in enterprises. Applying similar rates of expenditure on training costs to remuneration of employees in small and larger establishments yields an estimate of €930 million in 2003. We consider this to be an underestimate, but it is useful to establish the sensitivity of the estimate to differing assumptions about the distribution of employees across size classes.

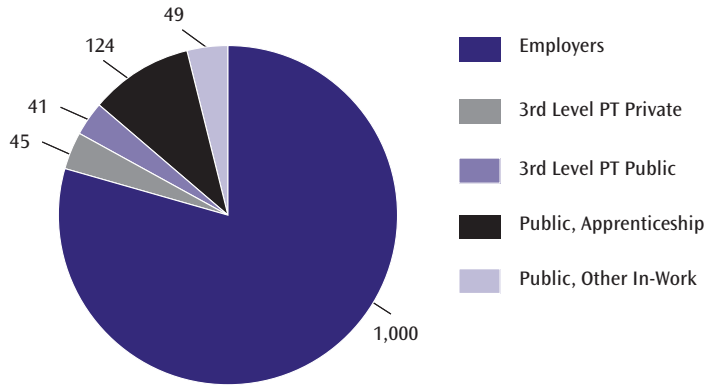
[14] This proportion is based on the results of the *Changing Workplace Survey* of 5,000 employees carried out by the ESRI on behalf of the NCPP in 2003, and relates to information collected about size of enterprise, rather than size of local unit (O'Connell et al., 2004).

FIGURE 4.1: Total Expenditure on Continuing Vocational Education and Training, including Training of those in Employment and the Unemployed, € millions, c.2003



Source: Derived from data in Tables 4.1, 4.2, 4.3 and 4.5

FIGURE 4.2: Total Expenditure on Continuing Vocational Education and Training, In-Employment Training only, and Distinguishing Expenditure on Apprenticeship and Other Public Training, c.2003



Source: Derived from data in Tables 4.1, 4.3 and 4.5

On the basis of this exercise, taking into account estimates based on both sets of alternative assumptions, total expenditure by employers on training costs is likely to have been close to €1 billion in 2003. It should be noted that this includes both the direct costs of training, including tuition fees, as well as the wage costs of employees while engaged in training. This can be compared with the approximately €173 million expenditure incurred by public agencies to support training of employed workers and the €270 million expenditure to support training of unemployed workers. It can also be set aside the public expenditure of €41 million on part-time third-level students and €45 million in private expenditure on fees at third level. It should be acknowledged that some of this latter figure relating to private expenditure on fees is already included in the €1 billion expenditure from employers, where employers pay for, or subsidise, part-time study at third level institutions. In this section we have distinguished between training expenditure by public training and other bodies and by employers. This is not simply a distinction between public versus private expenditure since a substantial proportion of training is undertaken by employers in the public sector.

Figures 4.1 and 4.2 summarise the estimates of expenditure on CVET. Our analysis reveals three broad patterns:

- Employers account for the vast majority of expenditure on education and training of people at work.

- Apprenticeship training accounts for the lion's share of public support for CVET for people at work and should be classified as Initial Vocational Education and Training, or IVET rather than CVET. Outside of this, public support for training of those in employment is on a very modest scale.

- Over 70% of all public funding of CVET is related to training of unemployed, rather than employed, persons, where we exclude apprenticeship training from CVET.

The expenditure on CVET for employed workers, and indeed also that on training of the unemployed and other disadvantaged individuals, should also be compared with the very substantial state investment in initial education, amounting to €5.7 billion in 2003.

4.2 Participation in Training

Information on the incidence of continuing education and training has improved dramatically with the publication of the *Ad-hoc Module on Life Long Learning* collected in conjunction with the *Quarterly National Household Survey* in the 2nd Quarter of 2003 (LLL, QNHS, 2003 Q2). The following tables present new analyses of the micro-data to explore patterns of participation in continuing education and training in 2003.

The definition of CVET is not unproblematic. Job-related training of employees covers a wide range of activities, from class-based formal training events though participation in seminars, to very informal self-directed individual learning, perhaps with the aid of information technology. A distinction that is beginning to gain acceptance, and is used in the *Ad-hoc Module on Life Long Learning*, is that between formal education, which is class-room based and part of the mainstream education system; non-formal education or training, which refers to all organised learning activities outside regular education, and includes seminars as well as correspondence courses; and informal learning which is performed by the individual without reference to an instructor or training institution.

Table 4.6 shows that about 16% of all persons aged 15 and over reported that they had participated in formal education in the 12 months prior to the survey. Formal education refers to regular education through schools, colleges and universities. Over 13% reported that they had participated in non-formal education (organised learning activities outside the regular education system). However, another 30% did not respond either positively or negatively to this question. Over 43% responded that they had received informal education (i.e. non-taught learning, including self-learning with the purpose of improving skills or knowledge) in the previous twelve months.

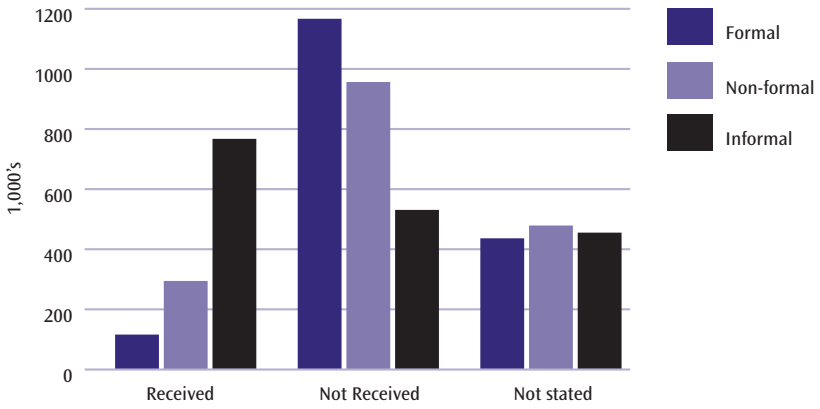
TABLE 4.6: Participation in Education or Training in past 12 Months, Population aged 15 years and over, 2003

	Received	Not Received	Not stated	Total	% Received
Formal Education	514,549	1,898,564	731,950	3,145,063	16.4
Non-formal	423,439	1,777,238	944,385	3,145,062	13.5
Informal	1,367,824	927,879	849,361	3,145,064	43.5

Source: Derived from CSO, LLL, QNHS, 2003 Q2 micro-data

The principal focus of this report is on education and training of those in employment, so the remainder of the analyses presented in this section will be confined to those whose Principal Economic Status (PES) was 'At Work' at the time of the QNHS Survey in 2003.

FIGURE 4.3: Participation in Education or Training in past 12 Months, All persons at Work (PES), 2003



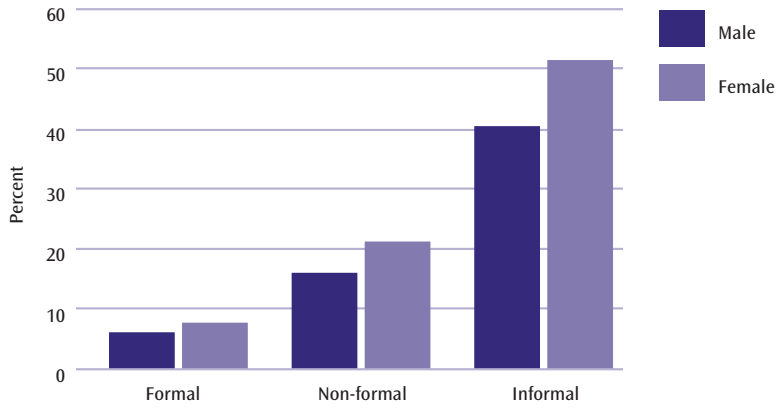
Source: Derived from CSO, LLL, QNHS, 2003 Q2 micro-data

Figure 4.3 shows that over 115,000 individuals, representing just under 7% of those at work in PES terms, received formal education in the 12 months prior to the QNHS survey.[15] Over 312,000 (18% of those at work) reported that they had received education or training and over 770,000 (45%) had participated in informal education. Obviously some individuals may have participated in more than one form of CVET: further analysis of the micro-data reveals that 50% of all those employed in 2003 had participated in either formal, or informal or non-formal education or training in the past 12 months.

Figure 4.4 shows participation in CVET by gender for those at work. Females show higher levels of training activity than males in each category. For example, 21% of women at work participated in training, compared to 16% of men.

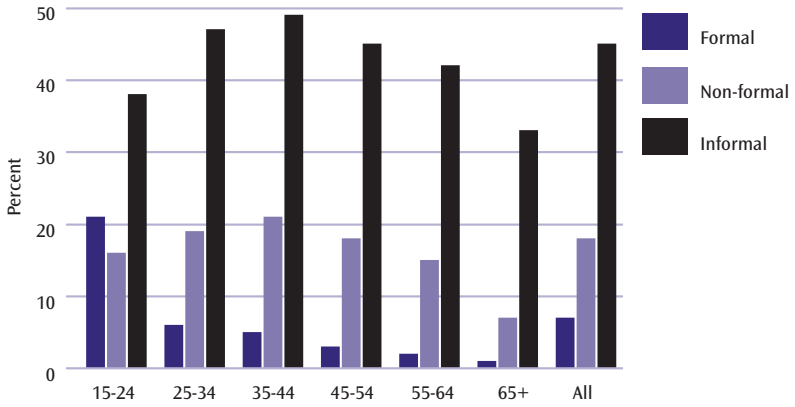
[15] Principal Economic Status is based on a single question in which respondents are asked to indicate their usual situation with to regard to employment and appears to be more suitable for the present analysis than the ILO definition of employment, which includes those who have worked for at least one hour in the previous week in the total employed. Those counted as employed in the ILO system include part-time workers and students. Over 60,000 students were counted as in employment and as having participated in formal education in the QNHS Life Long Learning Module.

FIGURE 4.4: Participation in Education or Training in past 12 Months, All Persons at Work (PES), 2003, by Gender



Source: Derived from CSO, LLL, QNHS, 2003 Q2 micro-data

FIGURE 4.5: Participation in Education or Training in past 12 Months, All Persons at Work (PES), 2003, by Age Group

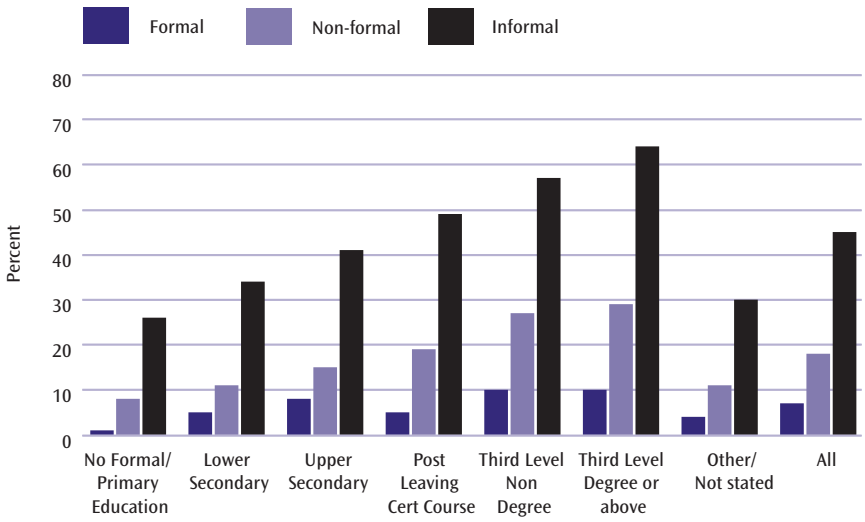


Source: Derived from CSO, LLL, QNHS, 2003 Q2 micro-data

Younger workers, aged 15-24 are much more likely to have participated in formal education in the past 12 months, partly because many in this age group are new entrants to the labour force. 21% of this age group had received formal education, compared to 6% in the 25-34 year age group, and less than 2% among those aged over 55. Participation in both non-formal and informal CVET peaks in the 35-44 year age group.

Figure 4.6 shows participation in CVET by educational attainment for those at work. The table reveals a clear 'step' pattern in relation to each category of continuing education and training. Just over 1% of those with no qualifications participated in formal education over the previous 12 months, as had less than 5% of those with lower secondary education (Junior Certificate level), compared to almost 10% of those with third level qualifications. We find a similar pattern in respect of both non-formal and informal education and training.

FIGURE 4.6: Participation in Education or Training in past 12 Months, All Persons at Work (PES), 2003, by Educational Attainment



Source: Derived from CSO, LLL, QNHS, 2003 Q2 micro-data

This graph uses the conventional classification system for educational attainment used by the CSO. Appendix 6 (II), presents rough equivalences between this classification system and the levels of the new National Framework of Qualifications.

Employees are much more likely to have participated in formal education than the self-employed. Those working as assisting relatives also show high rates of participation in formal education and this may be related to individuals working in family businesses while studying. Employees are also more likely to have participated in non-formal education, although self-employed with paid employees also display comparatively high rates of participation in non-formal education. There is much less variation in participation in informal training by employment status.

TABLE 4.7: Participation in Education or Training in past 12 Months, All Persons at Work (PES), 2003, by Employment status

	Formal %	Non-formal %	Informal %	Number At Work
Self-employed with paid employees	1.8	16.1	46.0	102,843
Self-employed with no paid employees	1.9	11.1	38.0	191,313
Employee	7.7	19.4	45.8	1,405,707
Assisting Relatives	6.2	11.1	44.3	9,442
All	**6.7**	**18.2**	**45.0**	**1,718,026**

Source: Derived from CSO, LLL, QNHS, 2003 Q2 micro-data

TABLE 4.8: Participation in Education or Training in past 12 Months, All Persons at Work (PES), 2003, by Economic Sector

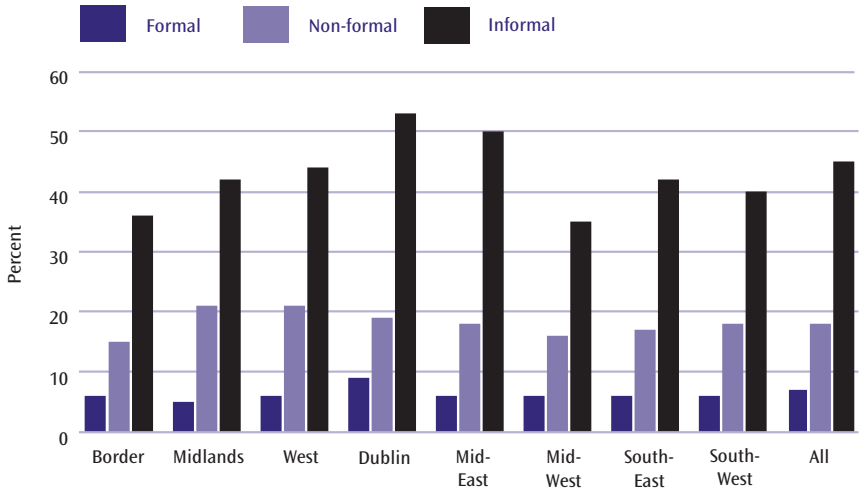
	Formal %	Non-formal %	Informal %	Number At Work
Agriculture Forestry, Fishing	1.5	9.1	28.8	109,462
Mining and Quarrying	0.7	12.3	25.9	6,642
Manufacturing	5.3	15.0	41.1	282,792
Electricity, gas and water supply	8.9	26.0	45.9	12,504
Construction	9.7	14.3	32.2	188,357
Wholesale and Retail	4.7	12.7	41.6	223,365
Hotels and Restaurants	5.2	11.6	38.2	96,114
Transport, Storage, Communication	3.5	14.2	41.2	110,019
Financial intermediation	7.9	25.8	52.7	72,154
Real estate, renting and business activities	8.2	21.0	57.3	149,576
Public Administration; Defence; Social Security	7.5	27.0	53.4	91,973
Education	9.7	33.3	64.5	112,961
Health	9.5	26.7	54.0	164,690
Other	7.3	18.0	49.9	82,346
All	**6.7**	**18.2**	**45.0**	**1,718,026**

Source: Derived from CSO, LLL, QNHS, 2003 Q2 micro-data

There is substantial variation in CVET participation between economic sectors. Construction, education and health are the leading sectors in participation in formal education, with participation rates in excess of 9%. The comparatively high incidence of participation in formal education in the construction sector may be due to the inclusion of apprenticeship training within formal education. Workers in primary production show very low rates of participation in formal education. Workers in education also show comparatively high rates of participation in non-formal education (33%). Over a quarter of those employed in utilities, financial intermediation, public administration and defence and in health also participated in non-formal education in the 12 months before the survey. Agriculture, forestry and fishing was the only sector in which participation in non-formal training was less than 10%.

Those employed in education were also the most likely to have engaged in informal learning over the past 12 months (65%). Over half those in finance, real estate and business services, public administration and defence, and health had engaged in informal learning.

FIGURE 4.7: Participation in Education or Training in past 12 Months, All Persons at Work (PES), 2003, by NUTS3 Region[16]

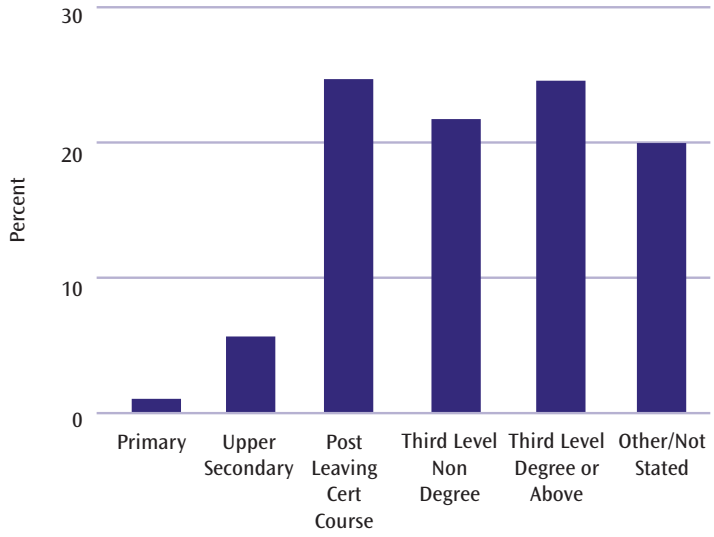


Source: Derived from CSO, LLL, QNHS, 2003 Q2 micro-data

Rates of participation in formal education were highest in the Dublin region (8.7%), reflecting the concentration of educational opportunities in Dublin. They were lowest in the Midlands (5%). However, the midlands showed the highest rate of participation in non-formal education (21%). The rate of participation in non-formal education was lowest in the Border Region (16%). Dublin also exhibited higher rates of informal learning (53%) than any other region, while the Mid-West showed the lowest rate (35%).

[16] The **Nomenclature of Territorial Units for Statistics (NUTS)** is a geocode standard for referencing the administrative division of countries for statistical purposes. The standard was developed by the European Union, and thus only covers the member states of the EU in detail; Eurostat also devised a hierarchy for the 10 countries which joined the EU in 2004, but these are subject to minor changes. The NUTS divisions do not necessarily correspond to administrative divisions within the country. The acronym is derived from the French name for the scheme, *nomenclature des unités territoriales statistiques*.

FIGURE 4.8: Levels of Formal Education Received in past 12 Months, Percentage of all Persons at Work, (PES), 2003



Source: Derived from CSO, LLL, QNHS, 2003 Q2 micro-data

Figure 4.8 examines the distribution of participation in formal education by level. Most formal education of those at work is at a comparatively advanced level. The vast majority of formal education engaged in by those in employment was at post-secondary level. When we discount those who made no response to this question, about one third is described as Post-Leaving Certificate level. About 60% was at third level, 27% at non-degree and 33% at degree level.

TABLE 4.9: Fields of Formal Education Received in past 12 Months, All persons at Work (PES), 2003

	Number	Percent	Valid Percent
General programmes	4,408	3.8	5.9
Teaching/training/education science	3,170	2.7	4.2
Humanities and arts	6,182	5.3	8.2
Social Sciences/Business/Law	16,280	14.1	21.7
Science/Mathematics/Computing	12,772	11.0	17.0
Engineering/Manufacturing/Construction	13,466	11.6	17.9
Agriculture and Veterinary	1,189	1.0	1.6
Health and Welfare	8,271	7.2	11.0
Services	9,291	8.0	12.4
Not Stated/Not Applicable	40,592	35.1	
Total	**115,621**	**100.0**	**100.0**

Source: Derived from CSO, LLL, QNHS, 2003 Q2 micro-data

The most common fields of formal education were social sciences, business and law (22% of those who indicated their field of study); engineering, manufacturing and construction (18%); and science, mathematics and construction (17%). A large majority (35%) did not respond to this question.

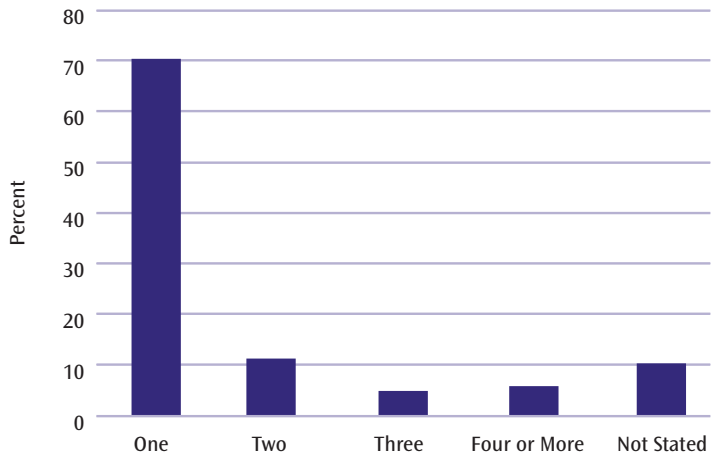
TABLE 4.10: Fields of Non-formal Education Received in Past 12 months, All Persons at Work (PES), 2003

	Number	Percent	Valid Percent
General programmes	24,866	8.0	9.1
Teaching/training/education science	17,320	5.6	6.4
Humanities and arts	16,009	5.1	5.9
Social Sciences/Business/Law	31,700	10.2	11.7
Science/Mathematics/Computing	61,134	19.6	22.5
Engineering/Manufacturing/Construction	16,762	5.4	6.2
Agriculture and Veterinary	7,357	2.4	2.7
Health and Welfare	70,660	22.6	26.0
Services	26,250	8.4	9.6
Not Stated/Not Applicable	39,992	12.8	
Total	**312,049**	**100.0**	**100.0**

Source: Derived from CSO, LLL, QNHS, 2003 Q2 micro-data

In non-formal education and training, health and welfare was a much more prominent field (26%), followed closely by science, mathematics and computing (23%).

FIGURE 4.9: Number of Non-formal Education/Training Courses Received in past 12 Months, All Persons at Work (PES), 2003

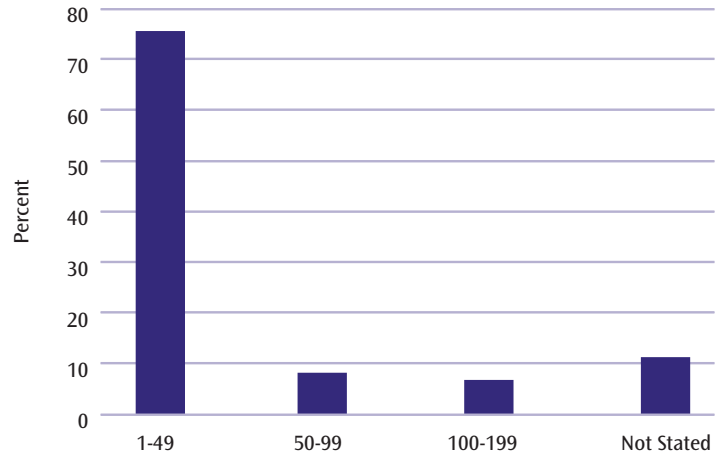


Source: Derived from CSO, LLL, QNHS, 2003 Q2 micro-data

Of those, in employment, who indicated that they had participated in non-formal CVET in the previous 12 months, the large majority (70%) indicated that they had participated in a single course, and another 11% that they had participated in two.

Figure 4.10 provides some indication of the volume of CVET. The vast majority (85%) of those who participated in a non-formal taught course spent less than 50 hours in training.

FIGURE 4.10: Number of Hours Spent at Most Recent Non-formal Taught Activity in past 12 Months, All Persons at Work (PES), 2003



Source: Derived from CSO, LLL, QNHS, 2003 Q2 micro-data

TABLE 4.11: Main Reason for Most Recent Non-formal Taught Activity in past 12 Months, All Persons at Work (PES), 2003

	Frequency	Frequency	Valid Percent
Mainly job related activity	233,049	74.7	83.6
Mainly personal/social activity	45,564	14.6	16.4
Not stated	33,437	10.7	
Total	**312,049**	**100.0**	**100.0**

Source: Derived from CSO, LLL, QNHS, 2003 Q2 micro-data

Most non-formal training is vocational. The vast majority (84%) of participants in non-formal CVET indicated that the training was mainly job related.

TABLE 4.12: Persons At Work (PES), 2003, in Receipt of Informal Education, by Type, as % of all Those Engaged in Informal Training and as % of all Those at Work

	Number	% of All Engaged in Informal Training %	% of All At Work %
Used Professional Books (e.g. DIY, cooking, gardening etc)	588,696	76.2	34.3
Online Internet Based Education (e.g. Online lectures, websites of educational interest)	374,383	48.5	21.8
Educational Broadcasting (Videos, tapes, TV, off-line computers	282,464	36.6	16.4
Visited Libraries	328,669	42.5	19.1

Source: Derived from CSO, LLL, QNHS, 2003 Q2 micro-data

Table 4.12 provides a breakdown of the types of informal learning engaged in. About three-quarters of all those who indicated that they had engaged in informal learning, and just over one-third of those at work indicated that they had used professional books or magazines in the past 12 months. However, these materials cover a wide range of subject matters (e.g. Do-it-Yourself, cooking etc.) and many are not directly job-related. Unfortunately the survey does not distinguish job-related from other, lifestyle related learning. About 22% of all those at work have used internet-based education in the previous 12 months, and 20% visited a library. Again, the purpose of such learning is not specified.

In general, information on the incidence of continuing education and training has improved dramatically with the publication of the *Ad-hoc Module on Life Long Learning* collected in conjunction with the *Quarterly National Household Survey* in the 2nd Quarter of 2003. The availability of the micro data from this source means that we can analyse patterns of individual participation in the various types of education and training by a wide range of socio-demographic factors. It would, however, be useful to have additional information about the content of training, allowing us to distinguish, for example, training in different fields, such as information technology, specific vocational skills, management, team-working, problem solving, literacy, and health and safety.

Up to this we have analysed patterns of participation in CVET by drawing on the special module on life long learning in the QNHS. However, there are a number of additional influential factors relating to the characteristics of jobs that are not captured in the special module. To examine some of these job-related factors we draw on a special analysis of data from the *Changing Workplace Survey of Employees*, which, *inter alia*, collected data on participation in employer sponsored training in the past 2 years. Table 4.13 shows data on the relationship between training and contract type, union membership, public versus private sector, and size of enterprise.

TABLE 4.13: Participation in Employer Sponsored Training in Past Two Years, by Job and Organisational Characteristics

	% Trained
Part-time	39.6
Full-time	49.8
Permanent	50.0
Temporary	37.0
Union Member	58.9
Non-union	41.2
Public Sector	60.0
Private Sector	45.1
1-4 employees	23.7
5-19 employees	33.6
20-99 employees	45.4
100-499	53.4
>500 employees	60.5
All	47.9

Source: Special analysis of the Changing Workplace Survey of Employees, O'Connell, 2004

The terms of employment are important: full-time workers receive more training than part-timers, permanent workers receive more training than those on temporary contracts, union members are substantially more likely to have participated in training than non-members.

Training is much more common in the public sector: 60% of workers in the public sector, compared with 45% of those in the private sector participated in employer sponsored training in the previous 2 years.[17] Size is also important: those working in enterprises with 500 or more employees were two-and-a-half times more likely to have participated in training than those in enterprises with 1-4 employees (61% versus 24%, respectively).

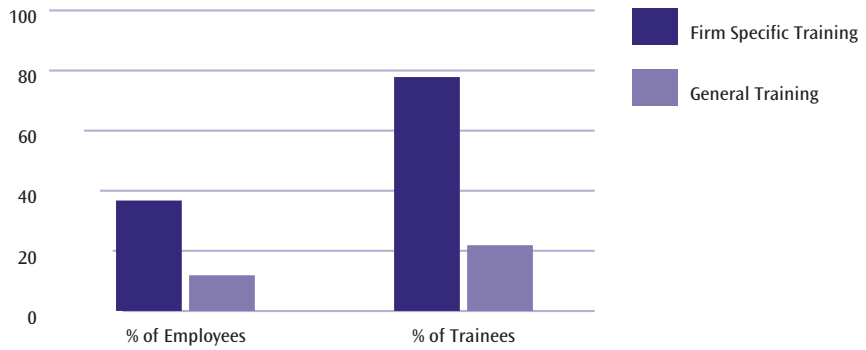
General vs Specific training

The dominant theoretical framework in the field of training is the human capital approach, deriving from Becker (1975), which emphasises the distinction between "general" versus "specific" training. General training is defined in terms of its transferability and may be of use to current and subsequent employers, whereas specific training is of use only to the current employer. In this approach employers are less likely to pay for general than specific training. If employers were to pay for general training, they would have to recoup the cost by paying a wage below marginal productivity after training, and in a competitive labour market the workers would leave to earn their full marginal product with another employer. This gives rise to the poaching problem, whereby 'non-training' employers can pay higher rates to workers who have received general training from a previous employer. This has obvious implications for who bears the cost of training, and a consequence of this market failure is that there is under-investment in training. This then gives rise to a demand for state

[17] About one in five employees work in the public sector in Ireland.

intervention to correct the market failure by providing support for training or though levy-grant schemes, which force employers to contribute to collective training funds, such as the National Training Fund in Ireland.

FIGURE 4.11: Participation in Employer-sponsored Training in past 2 years by Type of Training, 2003



Source: Special analysis of the Changing Workplace Survey of Employees, O'Connell, 2004

The data from the *Changing Workplace Survey of Employees* also allows us to examine the distribution of general versus firm-specific training. Overall, almost half of all employees indicated that they had participated in training sponsored by their employer in the two years preceding the survey. Most training is general in nature. Almost 80% of employees indicated that the training was general and could be used both in their current job or be of use to another employer. This is consistent with the results of similar surveys in the UK, the US and Sweden. For example, in a survey of employees in the UK, Booth and Bryan (2002) find that about 85% of all training is general in nature. Evertsson's (2004) analysis of employee survey in Sweden shows that only about 5% of training is regarded as firm-specific in Sweden, another 38% is industry- but not firm-specific, and over half is general and fully portable across sectors and firms.

These findings suggest that most employer-sponsored training in Ireland is general in nature, and portable between employers. As such, the findings challenge the assumptions about poaching and market failure that have underpinned the case for state intervention in the training of employed workers and suggest that employers may not be as concerned about the difficulties of realising the gains from investment in general training, nor as reluctant to invest in such training, as has been assumed.

4.3 Enrolment Data from CVET Providers

In this section we examine data from providers of education and training. Most of these data have been generated for administrative purposes. As such they can give some information about the nature and scale of CVET in certain sectors, but they cannot provide a comprehensive account of the breadth of CVET among those in employment in Ireland.

Table 4.14 shows full- and part-time enrolments in third level institutions in Ireland. In 2002-2003 there were over 130,000 students enrolled full-time and almost 35,300 enrolled part-time. This report focuses on CVET among those at work, so we are mainly interested in the sub-set of part-time students who are also at work. About 90% of part-time third level students are also at work.

TABLE 4.14: Number of Students Enrolled in 3rd Level Courses in Institutions Aided by the Department of Education and Science in 2002-2003

Institutions	Full-time Enrolments	Part-time (3rd level only)
National University of Ireland, Cork	12,492	1,273
National University of Ireland, Dublin	15,888	4,271
National University of Ireland, Galway	11,020	1,686
Trinity College Dublin	11,628	2,798
National University of Ireland, Maynooth	4,707	574
Dublin City University	6,205	1,445
University of Limerick	8,142	1,576
St. Patrick's Teacher Training College, Drumcondra	2,033	171
Mary Immaculate College of Education, Limerick	1,983	198
National College of Art & Design	824	44
Royal College of Surgeons, Ireland	1,524	613
Higher Education Authority	**76,446**	**14,649**
Dublin Institute of Technology	10,240	5,634
Athlone Institute of Technology	3,466	365
Institute of Technology, Carlow	2,476	534
Cork Institute of Technology	6,068	3,187
Dundalk Institute of Technology	2,624	395
Galway – Mayo Institute of Technology	4,563	1,090
Letterkenny Institute of Technology	1,927	274
Limerick Institute of Technology	3,602	904
Institute of Technology, Sligo	3,441	400
Institute of Technology, Tallaght	2,297	1,371
Institute of Technology, Tralee	2,422	197
Waterford Institute of Technology	5,711	2,430
Dun Laoghaire Institute of Art, Design and Technology	1,255	53
Institute of Technology, Blanchardstown	856	297
Tipperary Institute	354	224
Hotel Training/Catering College,Killybegs	205	49
Institutes of Technology/Other Technological Colleges	**51,507**	**17,404**
Colaiste Mhuire,Marino,Dublin	417	0
C.O.I. College of Education,Rathmines	90	77
Froebel College, Blackrock,Co. Dublin	253	0
St. Angela's College, Lough Gill,Co Sligo	299	75
St. Catherine's College,Sion Hill	99	0
National College of Ireland	1,072	2,919
Mater Dei Institute, Clonliffe Road, Dublin	280	132
Pontifical College, Maynooth, Co. Kildare	344	37
Other Colleges	**2,854**	**3240**
Overall Total	**130,807**	**35,293**

Source: www.hea.ie

TABLE 4.15: Enrolment of Part-time Students in Universities in 2003-2004, Number

	Cert/ Diploma	Primary Degree	Post-Grad, Diploma	Masters Degree	Doctorate	Total
			Number			
Education	146	0	309	174	27	656
Humanities and Arts	704	710	39	362	225	2,040
Social sciences, Business and Law	751	533	153	1,108	49	2,594
Science	22	415	142	316	258	1,153
Engineering, Manufacturing and Construction	114	207	183	181	54	739
Agriculture	0	3	0	4	4	11
Health and Welfare	451	1,086	846	435	21	2,839
Services	941	66	16	17	3	1,043
Total	**3,129**	**3,020**	**1,688**	**2,597**	**641**	**11,075**

Source: Special analysis, Skills and Labour Market Research Unit FÁS

TABLE 4.16: Enrolment of Part-time Students in Universities in 2003-2004, Percent

	Cert/ Diploma	Primary Degree	Post-Grad Diploma	Masters Degree	Doctorate	Total
			%			
Education	4.7	0.0	18.3	6.7	4.2	5.9
Humanities and Arts	22.5	23.5	2.3	13.9	35.1	18.4
Social sciences, Business and Law	24.0	17.6	9.1	42.7	7.6	23.4
Science	0.7	13.7	8.4	12.2	40.2	10.4
Engineering, Manufacturing and Construction	3.6	6.9	10.8	7.0	8.4	6.7
Agriculture	0.0	0.1	0.0	0.2	0.6	0.1
Health and Welfare	14.4	36.0	50.1	16.8	3.3	25.6
Services	30.1	2.2	0.9	0.7	0.5	9.4
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: Special analysis, Skills and Labour Market Research Unit, FÁS

Tables 4.15 and 4.16 show fields and levels of study for over 11,000 part-time students enrolled in universities in 2003-2004. Overall, about 26% of part-time students were studying health and welfare, and another 23% were studying social science, business and law. Only 10% studied science and less than 7% studied engineering, manufacturing and construction. Unfortunately, field of study is not readily available for part-time students at Institutes of Technology. However, field and level of study is available for graduates in this sector.

Table 4.17 shows graduates of part-time courses by field and level for universities and Institutes of Technology combined in 2003-4. Overall, just under 7,000 part-time students graduated from third level education institutions in 2003-4.

TABLE 4.17: Graduates from Part-time Courses, Universities and Institutes of Technology Combined, 2003-4, Number

	Cert/ Diploma	Primary Degree	Post-Grad Diploma	Masters Degree	Doctorate	Total
			Number			
Education	49	39	223	206	0	517
Humanities and Arts	137	68	14	104	16	339
Social sciences, Business and Law	1,084	366	187	607	1	2,245
Science	255	168	133	126	45	727
Engineering, Manufacturing and Construction	420	65	118	140	12	755
Agriculture	0	0	0	4	0	4
Health and Welfare	162	604	609	167	15	1,557
Services	769	18	32	31	0	850
Total	**2,876**	**1,328**	**1,316**	**1,385**	**89**	**6,994**

Source: Special analysis, Skills and Labour Market Research Unit, FÁS

TABLE 4.18: Graduates from Part-time Courses, Universities and Institutes of Technology Combined, 2003-4, Percent

	Cert/ Diploma	Primary Degree	Post-Grad Diploma	Masters Degree	Doctorate	Total
			%			
Education	1.7	2.9	16.9	14.9	0.0	7.4
Humanities and Arts	4.8	5.1	1.1	7.5	18.0	4.8
Social sciences, Business and Law	37.7	27.6	14.2	43.8	1.1	32.1
Science	8.9	12.7	10.1	9.1	50.6	10.4
Engineering, Manufacturing and Construction	14.6	4.9	9.0	10.1	13.5	10.8
Agriculture	0.0	0.0	0.0	0.3	0.0	0.1
Health and Welfare	5.6	45.5	46.3	12.1	16.9	22.3
Services	26.7	1.4	2.4	2.2	0.0	12.2
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Distribution by level	**41.1**	**19.0**	**18.8**	**19.8**	**1.3**	**100.0**

Source: Special analysis, Skills and Labour Market Research Unit, FÁS

Over 40% of all part-time awards were at sub-degree, Certificate or Diploma level, and about one fifth each were at primary degree, post-graduate diploma and post-graduate degree level. Almost one-third of all awards were in social science, business and law (these fields accounted for 44% of Masters degrees). Another 22% of part-time awards were in health and welfare.

There is also some information available from professional organisations. For example, Table 4.19 shows data on the number of individuals registered as trainees of professional organisations in the financial services sector. The table also shows estimates of the annual numbers achieving professional qualifications for some of these organisations.

TABLE 4.19: Registered Students (Part-time) in Selected Professional Institutions in the Financial Services Sector, 2003

	Registered	Qualifying (per annum)
Chartered Institute of Management Accountants	2,500	300
Institute of Chartered Accountants	3,328	600
Institute of Accounting Technicians	5,000	
Institute of Certified Public Accountants	1,507	200
Association of Chartered Certified Accountants	5,500	350
Society of Actuaries	240	
Insurance Institute of Ireland	723	
Taxation Institute		200
Life Insurance Association	2,366	
Institute of Credit Management	45	20
Total	**21,209**	

Source: Special analysis, Skills and Labour Market Research Unit, FÁS

It should be possible to collect such information from a range of professional bodies including, for example, engineering and law, and it is recommended that this be undertaken on a national basis. However, it should be noted that care would have to be taken to avoid double counting of individuals pursuing professional qualifications and enrolled for courses at institutions of higher education.

4.4 Employer Data

Information on the provision of training by employers in different sectors has been collected by the ESRI in a series of national surveys of companies in Ireland.[18] Tables 4.20 and 4.21 show summary indicators of employer-sponsored, formal, structured training courses undertaken in the 12 months preceding the survey. In these surveys training refers to systematic, supervised training courses during which the trainees were not engaged in productive activity, and the questionnaire explicitly excluded "on-the-job" training. The training could have taken place in the company's premises or at locations outside the company.

[18] These enterprise surveys were commissioned by FÁS and Forfás on behalf of the Expert Group on Future Skills Needs and carried out by the Survey Unit of the Economic and Social Research Institute.

In the private sector 34% of enterprises indicated that someone in the company (including managers and proprietors but excluding apprentices) had engaged in some formal, structured training at some point in the previous 12 months. The corresponding figure for the public sector was 77.5%. The sector where the lowest proportion of enterprises provided any training was Transport and Personal Services (26%) and the sector with the highest such incidence was Hi-tech manufacturing where 60% of enterprises provided some training. In the public sector, over 90% of organisations in the health field provided some training to their employees, and the lowest such incidence was in respect of regional bodies.

TABLE 4.20: Indicators of Employer-sponsored Formal Structured Training Courses undertaken in the 12 months preceding the Survey, Private Sector, 2001-2002

	Percent of organisations providing any training	% of employees trained	Number of employees trained	Duration of training	Avge number of days training per employee
	%	*%*	*1,000s*	*Days*	*Days*
Trad Manufacturing	52.5	21.0	27.9	1.9	0.4
Hi-tech Manufacturing	60.1	30.0	52.5	2.0	0.6
Construction	38.1	24.0	32.3	2.5	0.6
Distribution	29.6	24.0	55.6	1.7	0.4
Finance/Insurance/Business	42.2	33.0	62.2	2.4	0.8
Transport/Personal Service	26.2	18.0	57.3	1.2	0.2
All	34.0	24.0	287.8	1.9	0.5

Source: National Survey of Vacancies in the Private Non-Agricultural Sector 2001/2002

TABLE 4.21: Indicators of Employer-sponsored Formal Structured Training Courses undertaken in the 12 months preceding the Survey, Public Sector, 2001-2002

	Percent of organisations providing any training	% of employees trained	Number of employees trained	Duration of training	Avge number of days training per employee
	%	*%*	*1,000s*	*Days*	*Days*
Civil Service	88.4	59.5	22.3	2.3	1.4
Regional Bodies	68.4	38.2	14.2	1.7	0.6
Non-Commercial Semi-state	77.9	39.4	4.0	3.3	1.3
Health	92.9	17.3	16.1	0.8	0.1
Gardaí/Defence/Education	81.6	25.6	26.5	2.0	0.5
All	77.5	29.5	83.0	1.9	0.6

Source: National Survey of Vacancies in the Public Sector 2001/2002

In the private sector 24% of all employees working in these sectors (representing almost 290,000 individual workers) received structured training in the previous 12 months. 33% of those working in Finance, Insurance and Business services received training, compared to 18% in Transport and Personal Services. Almost 30% of employees in the public sector (83,000 workers) received training. 60% of Civil Servants received training, compared to only 17% of those working in Health. The data relating to the Health sector suggest that most organisations in the sector provide some training, but that it is concentrated on a narrow range of occupation or functions within those organisations.

On average, duration of training, measured as total days training per trainee, was similar in the public and private sector (1.9 days per trainee). The longest training duration in the private sector was in Construction (2.5 days) followed closely by Finance/Insurance and Business services (2.4) days. In the public sector the longest training duration was in Non-commercial Semi-state organisations (3.3 days per trainee).

We can combine data on incidence and duration to derive the number of days training per employee as a measure of average number of training days per person employed. By this measure the public and private sectors look very similar with 0.5 days structured training per employee in the private sector and 0.6 days in the public sector. The largest volume of training took place in the Civil Service (1.4 days training per person employed) and the lowest was in health (0.1 days per person employed). These training volume measures would suggest that there is ample scope for increasing overall CVET activity levels.

E-learning

A survey of Chartered Institute of Personnel and Development (CIPD) members in Ireland suggests that 44% of responding organisations use e-learning in some form (O'Donnell and Garavan, 2003). However, the achieved sample is highly skewed towards larger organisations: 84% of the sample organisations had more than 100 employees whereas, in the national economy, only about 2% of organisations had more than 50 employees in 1999 (National Competitiveness Council, 1999). The survey also indicated that over 90% of sampled organisations engage in on-the-job training, and in formal educational courses.

4.5 Certification

Ireland has a highly developed accreditation and certification system for mainstream formal education, and the system has seen substantial further development in recent years, notably with the advent of the National Framework of Qualifications. It has also developed a system for the recognition of non-formal and informal learning. However data on certification of training of employed workers is, as yet, rudimentary, and is mainly limited to aggregate counts of the total number of awards under various headings by the main training bodies.

Table 4.22 shows the total number of awards recorded by FETAC (the Further Education and Training Awards Council) from June 2002-June 2003. A total of 87,866 awards were recorded, of which over 53,000 were certificates and almost 35,000 were records of achievement. FÁS accounted for 40,000 of these. We can get a rough sense of how broad the coverage of certification is by noting that over 400,000 individuals in the population and over 300,000 of those at work had participated in non-formal education in the previous 12 months *(QNHS Ad-hoc Module on Life Long Learning, 2003)*. It should be noted that many of these awards were earned by individuals who were not in employment, although the data do not distinguish employed workers from others.

TABLE 4.22: FETAC Awards 2002-2003

	Credits	Certificate	Total No. of Awards
CERT/NTCB (now Failte Ireland)	***760***	***2,051***	***2,811***
Elementary Certificate	-	842	842
National Craft Certificate	-	883	883
Advanced National Certificate	-	326	326
Single Modules	760	-	760
			.
FÁS	***1,525***	***40,026***	***41,551***
IVS[19] Certificate	-	4,000	4,000
National Skills Certificate	-	400	400
National Craft Certificate	-	4,100	4,100
Specific Skills Certificate	1,525	31,486	33,011
Centre Assessor Qualification		40	40
			.
NCVA	***32,475***	***9,615***	***42,090***
Record Of Achievement	32,475	-	32,475
National Foundation Certificate	-	929	929
National Vocational Certificate Level 1	-	81	81
National Vocational Certificate Level 2	-	8,441	8,441
National Vocational Certificate Level 3	-	164	164
			.
TEAGASC	***0***	***1,414***	***1,414***
Level 1	-	92	92
Level 2	-	505	505
Level 3	-	710	710
Other	-	107	107
Total	**34,760**	**53,106**	**87,866**

Source: www.fetac.ie

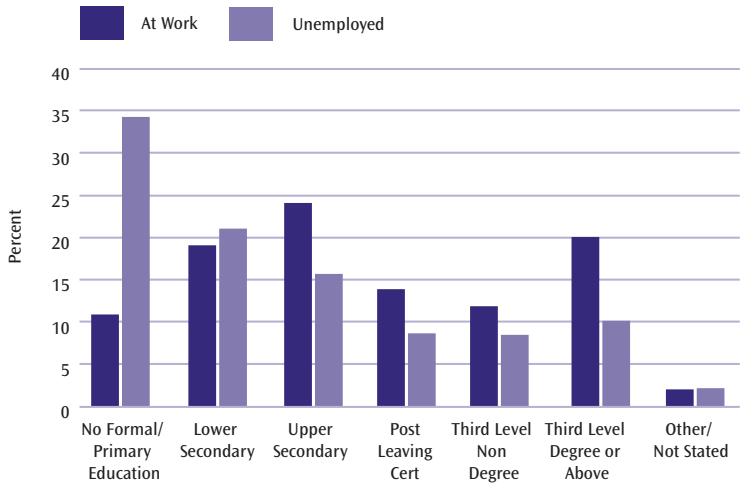
Certification is important to achieving an increase in lifelong learning and useful information on certification could be generated if the collection of basic socio-demographic data were integrated into the certification process in further education. Such indicators could include gender, age and labour market situation.

[19] Introductory Vocational Skills.

5. The Educational Attainment Levels of Those in Employment

Figure 5.1 shows the educational attainment of the population aged 25-64 years in 2003.[20] Overall, almost 19% had no formal qualifications and another 19% had lower secondary. Almost 60% had completed secondary education (Leaving Certificate level) or higher. As might be expected, the educational profile of those at work is more favourable. Only 12% of those at work had no formal qualifications and almost 70% had attained upper secondary education or higher. Almost one-third of those at work had attained a third level qualification. The educational profile of the unemployed is a good deal less favourable, with substantially higher proportions with no qualifications or with a lower secondary level qualification (for example, the Junior Certificate).

FIGURE 5.1: Educational Attainment by Principal Economic Status (PES), Population aged 25-64 years



Source: Derived from CSO, QNHS, 2003 Q2 micro-data

This graph uses the conventional classification system for educational attainment used by the CSO. Appendix 6 (II), presents rough equivalences between this classification system and the levels of the new National Framework of Qualifications.

Table 5.1 shows educational attainment of those at work (PES) by age group. The educational distribution of the youngest age group (15-24 years olds) is skewed to the lower attainment levels because many workers in this age group are not old enough to have achieved higher levels of qualification. Among the other age groups we can see a clear pattern in which the younger age groups have larger proportions at higher levels of education. For example, 40% of those at work aged 25-34 have a third level qualification, compared to 26% in the 45-54 year age group and about 21% in the 55-64 year age group. This pattern reflects the relatively rapid but comparatively late expansion of participation in higher education achieved in Ireland in the past three or four decades. If we are interested in future labour supply, we learn more from the pattern among the 25-34 year age group. Over the next decade the proportion of this age group with third level qualifications can be expected to continue to increase.

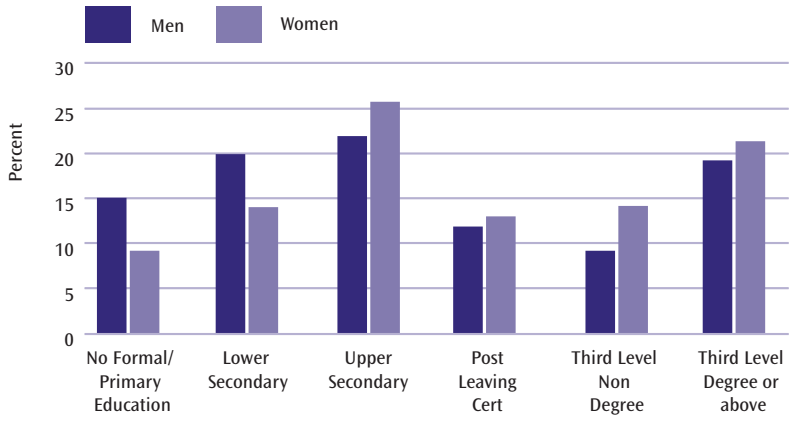
[20] Here we focus on the 25-64 year age group as the prime working age population. A large proportion of those in the 15-24 year age group have yet to complete their education.

TABLE 5.1: Educational Attainment of those at Work (PES) by Age Group

	15-24	25-34	35-44	45-54	55-64	25-64
			%			
No Formal Qual/Primary	3.2	3.5	8.1	18.6	34.9	12.2
Lower secondary	16.9	13.1	19.8	21.5	17.6	17.6
Upper secondary	42.1	25.6	26.0	21.7	15.9	23.7
Post Leaving	12.6	15.2	13.5	10.5	9.2	12.8
3rd Level Non-degree	10.5	14.7	11.4	9.3	6.8	11.5
3rd Level Degree	12.8	25.6	19.4	16.7	14.1	20.3
Other/not stated	2.0	2.4	1.8	1.6	1.6	1.9
All	100	100	100	100	100	100
Number	237,740	500,266	433,880	336,562	176,308	1,684,756

Source: Derived from CSO, QNHS, 2003 Q2 micro-data

FIGURE 5.2: Educational Attainment of Persons aged 25-64 at Work (PES), 2003



Source: Derived from CSO, QNHS, 2003 Q2 micro-data

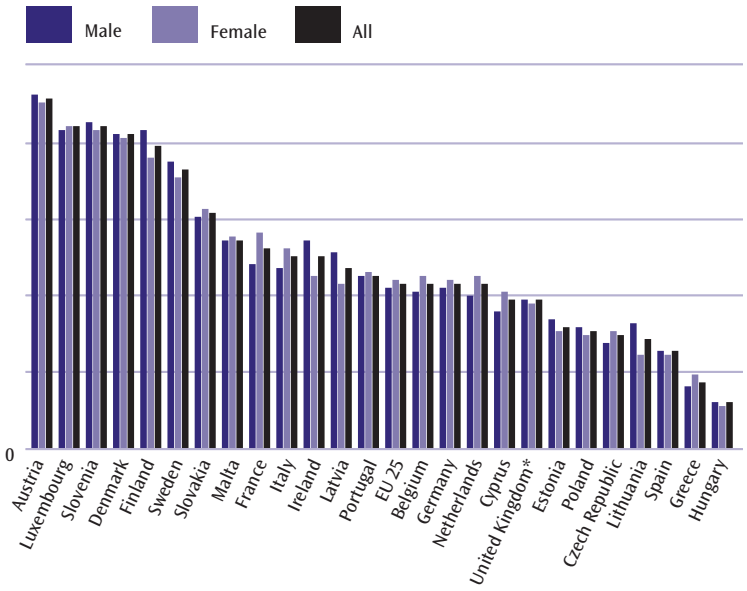
Figure 5.2 shows educational attainment of persons at work by gender. Larger proportions of men are found in the two lowest educational attainment levels, whereas larger proportions of women are to be found in the higher attainment levels. This reflects differential patterns of labour force participation between men and women: women with lower educational attainments are less likely to participate in the labour force and this pattern is particularly strong among older women.

In general we have comprehensive information on the educational attainment of the labour force and those at work. The most recent such comprehensive data was produced in the QNHS ad-hoc module on Educational Attainment relating to 2003 and good data are also available from the QNHS. However, we lack additional information on the vocational skills and qualifications of the Irish population – including up-to-date information on literacy and numeracy as well as functional vocational skills and competencies. Consideration should be given to implementing a data collection to measure such vocational skills and competencies, perhaps within the framework of a special module of the QNHS.

6. Comparative International Indicators of CVET

Figure 6.1 shows comparative indicators of the percentage of persons aged 25-64 in participating in any kind of education, training or learning activity, including formal and non-formal education and learning, in the twelve months preceding the European Labour Force Survey Ad hoc module on Lifelong Learning conducted in 2003 (Data presented in Appendix 2, Table A6.1). This relates to all persons rather than to the employed sub-population, but it does provide some indication of where Ireland is ranked in comparison to other European countries.

Percentage of Population aged 25-64 Participating in any Kind of Learning, 2003



Source: Eurostat, 2005 "Lifelong Learning in Europe" Statistics in Focus, 8/2005.
http://epp.eurostat.cec.eu.int/cache/ITY_OFFPUB/KS-NK-05-008/EN/KS-NK-05-008-EN.PDF
** Informal training is not included in the UK.*

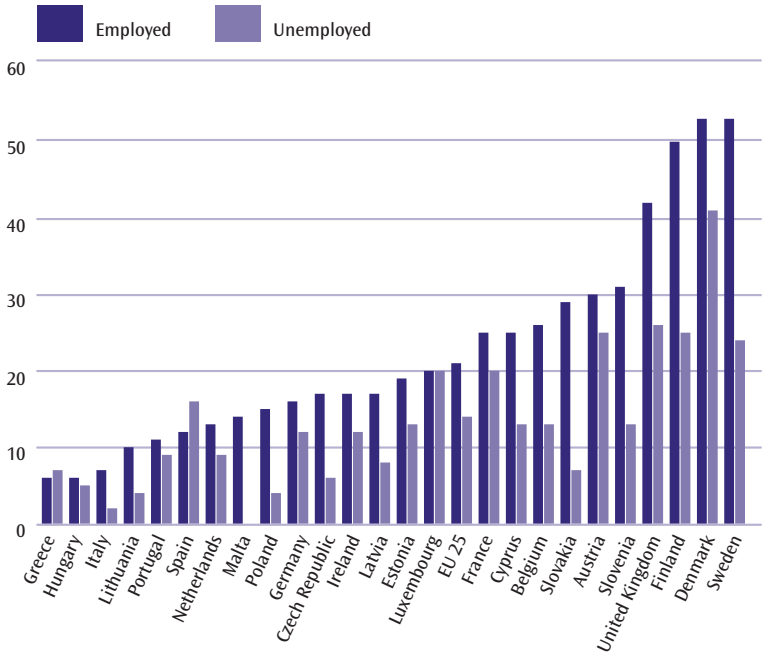
Almost 50% of the population aged in Ireland indicated that they had participated in some form of education or training activity in the previous twelve months. This is ahead of the average of 42% for the 25 EU member countries, but well behind such leading countries as Austria, Slovenia, Luxembourg, Denmark, and Finland, where participation rates ranged between 80-90%.

Figure 6.2 focuses more specifically on those economically active, and looks at rates of participation in non-formal learning by employed and unemployed persons. In Ireland, about 17% of the employed participated in non-formal training in the previous twelve months, compared with an EU-25 average of 21%, and well below Denmark, Sweden and Finland, where over 50% of employed workers participated in such training.

In most countries participation in non-formal training is higher among the employed than the unemployed. In Ireland, 12% of the unemployed indicated that they had participated non-formal training in the previous twelve months, compared to 14% across the EU-25 as a whole,. This is well behind Denmark, where the participation rate was over 40%, and about half that in Sweden, Finland,

the United Kingdom and Austria, where about one-quarter of the unemployed had participated in such training.

FIGURE 6.2: Participation Rate in Non-formal Learning by Employed and Unemployed, 25-64 year age group, 2003



Sources: Ireland: Derived from CSO, QNHS, 2002 Q2 micro-data. All other countries: Fox (2003).

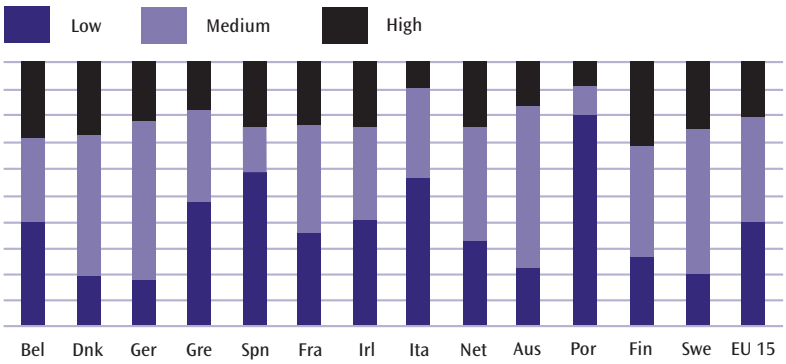
TABLE 6.1: Comparative Indicators of Company Sponsored Training in Selected European Countries, 1999

	% of Companies providing training	% of Employees on training courses	Training course hours per employee	Expenditure on training courses as % of total labour costs
	%	*%*	***Hours***	*%*
Denmark	96	53	22	3.0
Sweden	91	61	19	2.8
Netherlands	88	41	15	2.8
United Kingdom	87	49	13	3.6
Norway	86	48	16	1.7
Finland	82	50	18	2.4
Ireland	79	41	17	2.4
France	76	46	17	2.4
Germany	75	32	9	1.5
Austria	71	32	9	1.3
Luxembourg	71	35	14	1.9
Belgium	71	41	13	1.6
Spain	36	25	11	1.5

Source: CVTS2

Table 6.1 shows comparative indicators of company-sponsored training drawn from the 1999 Continuing Vocational Training Survey (CVTS2) for selected European countries (Fox, 2002). Ireland ranks seventh in terms of the percentage of companies providing training for their employees. The Nordic countries, the UK, and the Netherlands had high rates, with over 80% of companies providing training. Ireland, along with France and Germany, fell into the middle ranked group with 70-80% of companies providing training. In Ireland, 41% of employees participated in training courses, ared to a high of 61% in Sweden and a low of 25% in Spain. Ireland ranked fourth in terms of age number of hours training per employee: 17 hours per employee in Ireland, compared to 2 hours in Denmark and 9 hours in Germany and Austria. Average expenditure on training percentage of total labour costs ranged from 1.3% in Austria to 3.6% in the UK. Ireland, rage expenditure was 2.4% of labour costs, was midway between the two extremes. So, s to be about average in terms of a series of indicators of company-sponsored training d also conforms to a general European pattern in which the incidence of training is ge in smaller firms and in wholesale and retail trade.

ational Attainment of the Population aged 25-64, 2002



Source: Department of Education and Science, Annual Report, 2003.
Data presented in Appendix 2 Table A6.2
Low attainment = Lower Secondary education or less
Medium attainment = Completion of Upper Secondary education
High attainment = Third level education

Figure 6.3 shows educational attainment of the population aged 25-64, including the main age groups from which the workforce is drawn (Data presented in Appendix 2, Table A6.2). Ireland compares favourably with other EU countries in the proportion of the working age population with higher levels of educational: 25% of the population in this age group in Ireland have third level qualifications, compared to an EU average of 21%. However, Ireland also has a larger proportion at low levels of education: 40% of the population aged 25-64 in Ireland have lower secondary education, or less, compared to an EU average of 38%, and to only 17% in Germany, 19% in Sweden, 20% in Denmark, and 25% in Finland. In this respect Ireland falls well behind the leading countries with which it must compete for markets and mobile capital.

TABLE 6.2: Percentage of Persons Aged 20-24 with at least Upper Secondary Level Education, 2003, 2nd Quarter, EU Member and Accession States

Country	Males	Females	All
		%	
Austria	85.6	84.4	85.0
Belgium	77.6	84.7	81.1
Czech Republic	92.7	91.4	92.0
Denmark	72.6	76.2	74.4
Germany	72.6	73.8	73.3
Estonia	78.5	84.2	81.4
Greece	76.5	86.9	81.7
Spain	57.1	70.1	63.4
Finland	81.9	90.4	86.2
France	78.9	83.4	81.1
Ireland	**80.2**	**86.5**	**83.3**
Italy	66.4	73.4	69.9
Cyprus	76.1	87.8	82.2
Latvia	68.5	79.7	74.0
Lithuania	78.3	85.8	82.1
Luxembourg	74.0	65.5	69.8
Hungary	83.9	86.1	85.0
Malta	39.6	46.0	42.8
Netherlands	70.0	76.7	73.3
Poland	86.1	91.5	88.8
Portugal	40.4	54.1	47.2
Slovenia	87.4	94.2	90.7
Slovakia	94.1	94.2	94.1
Sweden	84.1	87.1	85.6
United Kingdom	78.2	78.1	78.2
EU 15	**74.3**	**79.4**	**76.8**
EU 25	**71.4**	**76.6**	**74.0**

Source: Eurostat

Table 6.2 shows comparative data on educational attainment among young adults (aged 20-24). Ireland lies in 9th place in respect of the overall percentage who have completed upper secondary, and well ahead of the EU averages. This is important and optimistic for several reasons. First it indicates that Ireland has a good supply of young labour market entrants educated to this level. Second, it indicates that a substantial part of the young population in Ireland are sufficiently prepared to attend third level education. Third, it indicates that there is a substantial proportion of the young age cohort that are likely to participate in continuing education and training during their working life. Finally, Ireland follows a common international pattern in which women are more likely to achieve higher educational attainments than men. It should be a priority to ensure that this investment in human capital is fully used.

7. Conclusions on Availability of Data

This study focuses on continuing vocational education and training (CVET) of those at work. The objectives of the study are to gather existing information and provide analysis on expenditure, participation and access, providers, certification, educational attainment of those at work, and comparative indicators of CVET.

7.1 Expenditure on CVET

Data, mainly aggregate, on expenditure on training by public providers and other agencies are available from administrative sources. It is also possible to obtain data on public expenditure on part-time enrolments in third level education. Private expenditure on continuing education and training must be estimated from a wide range of sources and based on assumptions about the distribution of training activities.

While the data on public expenditure and activity in relation to CVET of employed workers are useful, they represent a fraction of the overall expenditure and activity in the continuing education and training of those in employment. We have attempted to develop the best estimates of private expenditures by employers and individual workers by combining data from a range of surveys as well as national accounts and other administrative data.

7.2 Participation in Training

Information on the incidence of continuing education and training has improved dramatically with the publication of the *Ad-hoc Module on Life Long Learning* collected in conjunction with the *Quarterly National Household Survey* in the 2nd Quarter of 2003. The availability of the micro data from this source means that we can analyse patterns of individual participation in the various types of education and training by a wide range of socio-demographic factors – as presented in Section 4.2 of this report. These data can be supplemented with additional data, relating to job and organisational characteristics that may influence training, from occasional specialist surveys.

7.3 Student Enrolments

Enrolment data on part-time students are generated as part of the administration systems of public educational institutions and bodies and, as such, tend not to provide data on the labour market status of students. Currently, detailed information on part-time enrolments by level and field of study are available for Universities, but not for the Institutes of Technology. Such data are collected/generated by Institutes of Technology, so it should be possible to collate the data from individual institutions to produce a national profile of the fields and levels of all part-time enrolments. Similar data are not currently available for private third level institutions although, again, it should be possible to collate such data with the cooperation of the colleges.

Professional organisations and bodies also represent a source of information on CVET participation and such data is provided relating to the financial services sector in this report. This data should be available from a range of such professional bodies, for example, engineering and law.

7.4 Employer Data

Information on the provision of training by employers in different sectors has been collected by the ESRI in a series of national surveys of companies commissioned by FÁS and the Expert Group on Future Skills Needs. This provides very useful data on the incidence and volume of training on an occasional basis. The frequent use of surveys such as this would assist in monitoring trends and developments in CVET in the workplace.

Two EU–wide surveys of training in enterprises CVTS1 and CVTS2 relating to 1993 and 1999 respectively have been published under the auspices of EUROSTAT. A new survey, to be collected under an EU Regulation, and relating to the year 2005, will become available in 2006 or 2007.

7.5 Certification

Data on certification of training of employed workers is, as yet, rudimentary, and is mainly limited to aggregate counts of the total number of awards under various headings by the main training bodies. It is not possible at this point to identify employed workers within the overall total of award recipients in the FETAC system but this situation is currently being addressed by FETAC.

7.6 Educational Attainment

In general we have comprehensive information on the educational attainment of the labour force and those at work. The most recent such comprehensive data was produced in the QNHS ad hoc module on Educational Attainment relating to 2003. Good quarterly data are also available from the QNHS. However, we lack additional information on the vocational skills and qualifications of the Irish population – including up-to-date information on literacy and numeracy as well as functional vocational skills and competencies.

7.7 International Comparisons

There are two main sources of internationally comparable data on CVET of employed persons in European countries. First, the European Labour Force Survey (LFS) collects information on participation in education and training in the 4 weeks prior to the survey. The Ad–hoc Module on Lifelong Learning, collected in conjunction with the European LFS in 2003, represents a useful addition to internationally comparable data on education and training for adults in the 25 EU member states, and allows dissaggregation by labour market situation as well as other socio-demographic factors.

Second, the two EU–wide harmonised surveys of training in enterprises CVTS 1 and CVTS2 relating to 1993 and 1999, published under the auspices of EUROSTAT, are very useful for establishing historical trends but are less useful as a guide to current policy. The new survey, relating to training in 2005, will be conducted in 2006 and data should become available in 2006 or 2007.

Much of the internationally comparable data are dated. When we extend the comparison beyond Europe, comparable data become scarce, and the most recent such data relates to a series of International Adult Literacy Surveys conducted by the OECD in the 1990s.

7.8 Exploiting Existing Data

This review has focused on what we can learn from existing indicators on CVET of those in employment and has made a number of recommendations to extend the range or improve the coverage of indicators of education and training. A clear implication of this study is that investing further resources could improve the measurement of the incidence, volume and quality of training. This would be a useful guide to policy. However, much could also be learned from further analysis of existing data sets on why individuals and companies engage in training, and why some do not. This would involve multivariate analysis of micro-data, to identify barriers to training and appropriate policy levers to increase training. Empirical work on the returns to training,[21] for both employers and individuals, would also be useful to demonstrate the case for investment in lifelong learning.

7.9 Enhancing the Information Infrastructure

Policy makers seeking to influence education and training behaviour, and social scientists attempting to understand that behaviour, all make similar assumptions about the decision-making process. They assume that decision makers make investment decisions on the basis of expected returns and that they are operating with full information. However, in the field of education and training that assumption is frequently invalid. Arguably there are three key decision makers in the field of CVET: employers, employees and the state. Each face significant information problems with respect to a series of key questions:

a. What, if any, CVET is needed? Individuals are often not well informed about what training they need. Employers may also have difficulty and this is a particular problem for small enterprises.

b. What CVET is available, what is the cost and quality? Individuals also encounter difficulties in assessing which training providers are best and best value. Employers face the same information deficit, and the problem is particularly severe for small enterprises – large enterprises may be better placed to survey the training market.

c. What are the returns to investment in CVET? Individuals typically have, at best, a rough sense that CVET may be useful and lead to better career prospects, but without any precision. Employers also encounter severe difficulties in assessing the returns to training. Many employers rely on subjective evaluations by trainees of the quality of training received, but this does not generate useful information on the impact of investment in training on corporate performance – productivity, market share, quality or profitability. States also have difficulty in establishing in a rigorous manner the returns to investment in training.

In the light of these information gaps, actions to enhance the information infrastructure in relation to CVET would represent a potentially valuable use of public resources. The following are sources of information that, if collected and made available on a repeated basis, would greatly enhance the decision-making process in regard to education and training.

i. The frequent use of a vehicle such as the CSO Life Long Learning (LLL) module, perhaps every 3-5 years, would assist in monitoring trends and developments in LLL in general and CVET of employed persons in particular. This might include vocational skills and competencies.

[21] Examples of such data sets include: the Lifelong Learning module of the QNHS among individuals, the ESRI/NCPP *Changing Workplace Survey of Employees* and the ESRI/FÁS/Forfás Vacancy Surveys of employers.

ii. Enrolments and fees data in respect of part-time students at both public and private higher education institutions and comparable information from professional organisations is required[22].

iii. Additional information is required also about the content of training, allowing for distinction, for example, between training in different fields, such as information technology, specific vocational skills, management, team-working, problem solving, literacy, and health and safety.

Other useful sources of information would include:

iv. Data on the financing of training (e.g. personal, employer or shared costs) as well as on firm-specific training versus training in general or transferable skills.

v. Integration of the collection of basic socio-demographic data into the certification process in further education. Such indicators could include gender, age and labour market situation.

vi. use of national surveys of employers' training activities, to assist in monitoring elopments in CVET in the workplace.

Irish agencies when opportunities arise to cooperate in international collections t themselves, such as through the EU or the OECD, in order to improve the rnational indicators.

[22] Care would need to be taken to avoid duplication of counting of individuals pursuing professional qualifications and enrolled for courses at institutions of higher education.

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Appendix 1: Glossary

Education Classification

Formal Education

The regular education system:

- Purpose and format are predetermined.
- Provided in system of school, colleges etc.
- Constitutes continuous ladder of education.
- Structured in terms of learning objectives, time and support.
- Intended to lead to certification.

Non-formal Education

All organised learning activities outside regular education:

- Involves registration for each activity.
- Course/seminar to get or improve skills, knowledge or competence.
- Certification and non-cert.
- Correspondence course or other teacher supported distance learning.

Informal Education

Sole learning activity:

- No teacher, school or institution.

Initial Education refers to education that takes place prior to labour market entry, usually in the mainstream educational system.

Principal Economic Status (PES) is based on a single question in which respondents are asked to indicate their usual situation with to regard to employment. In this report PES appears to be more suitable for the analysis of participation in education and training than the ILO definition of employment, which includes those who have worked for at least one hour in the previous week in the total employed.

Appendix 2

TABLE A6.1: Percentage of population aged 25-64 participating in any kind of learning, 2003

	Male %	Female %	All %
Austria	90	88	89
Luxembourg	81	82	82
Slovenia	83	81	82
Denmark	80	79	80
Finland	81	74	77
Sweden	73	69	71
Slovakia	59	61	60
Malta	53	54	53
France	47	55	51
Italy	46	51	49
Ireland	**53**	**44**	**49**
Latvia	50	42	46
Portugal	44	45	44
EU 25	41	43	42
Belgium	40	44	42
Germany	41	43	42
Netherlands	39	44	42
Cyprus	35	40	38
United Kingdom*	38	37	38
Estonia	33	30	31
Poland	31	29	30
Czech Republic	27	30	29
Lithuania	32	24	28
Spain	25	24	25
Greece	16	19	17
Hungary	12	11	12

Source: Eurostat, 2005 "Lifelong Learning in Europe" Statistics in Focus, 8/2005.
http://epp.eurostat.cec.eu.int/cache/ITY_OFFPUB/KS-NK-05-008/EN/KS-NK-05-008-EN.PDF
** Informal training is not included in the UK.*

TABLE A6.2: Participation rate in non-formal learning by employed and unemployed, 25-64 year age group, 2003

	Employed	Unemployed
	%	%
Denmark	53	41
Sweden	53	24
Finland	50	25
United Kingdom	42	26
Slovenia	31	13
Austria	30	25
Slovakia	29	7
Belgium	26	13
France	25	20
Cyprus	25	13
EU 25	21	14
Luxembourg	20	20
Estonia	19	13
Czech Republic	17	6
Ireland	**17**	**12**
Latvia	17	8
Germany	16	12
Poland	15	4
Malta	14	:
Netherlands	13	9
Spain	12	16
Portugal	11	9
Lithuania	10	4
Italy	7	2
Greece	6	7
Hungary	6	5

Source: Eurostat, 2005 "Lifelong Learning in Europe" Statistics in Focus, 8/2005

Appendix 3: Steering Group Membership

Joe McCarthy	Arkaon (Chair)
Aileen O'Donoghue	IBEC
Ann Nolan	Department of Finance
David Barry	Department of Enterprise, Trade & Employment
Fergal Costello	HEA
Peter Rigney	ICTU
Roger Fox	FÁS
Senan Cooke	Waterford Crystal

Secretariat

Martin Shanahan	Forfás
Kay Hallahan	Forfás

Appendix 4: Members of the Expert Group on Future Skills Needs

Anne Heraty	CPL Resources PLC	*Chairperson*
Senan Cooke	Waterford Crystal Ltd.	*Member*
Jack Golden	Cement Roadstone Holdings PLC/IEI	*Member*
Una Halligan	Hewlett Packard	*Member*
Joe McCarthy	Arkaon Ltd.	*Member*
Dr. Sean McDonagh	Former Director of Dundalk IT	*Member*
Dr.Brendan Murphy	Director, Cork IT	*Member*
Aileen O'Donoghue	IBEC	*Member*
Peter Rigney	ICTU	*Member*
Linda Tanham	Mandate	*Member*
Pat Hayden*	Dept. of Enterprise, Trade & Employment	*Advisor*
Ruth Carmody	Dept. of Education & Science	*Advisor*
Andrew McDowell**	Forfás	*Advisor*
Fergal Costello	Higher Education Authority	*Advisor*
Roger Fox	FÁS	*Advisor*
Ann Nolan	Dept. of Finance	*Advisor*
Martin Shanahan	Forfás	*Head of Secretariat*

* Replaced David Barry, DETE, with effect from August 2005.

** Replaced Brian Cogan, Forfás, with effect from August 2005.

Appendix 5: Publications by the Expert Group on Future Skills Needs

Report	Date of Publication
Skills Needs in the Irish Economy: The Role of Migration	October 2005
National Skills Bulletin 2005	October 2005
The Demand & Supply of Foreign Language Skills in the Enterprise Sector	May 2005
Skills Requirements of the Digital Content Industry in Ireland Phase I	February 2005
Innovate Market Sell	November 2004
The Supply and Demand for Researchers and Research Personnel	September 2004
Literature Review on Aspects of Training of those at Work in Ireland	June 2004
Financial Skills Monitoring Report	November 2003
Responding to Ireland's Growing Skills Needs – The Fourth Report of the Expert Group on Future Skills Needs	October 2003
The Demand and Supply of Skills in the Biotechnology Sector	September 2003
Skills Monitoring Report – Construction Industry 2003/10	July 2003
Benchmarking Education and Training for Economic Development in Ireland	July 2003
The Demand and Supply of Engineers and Engineering Technicians	June 2003
The Demand and Supply of Skills in the Food Processing Sector	April 2003
National Survey of Vacancies in the Private Non-Agricultural Sector 2001/2002	March 2003
National Survey of Vacancies in the Public Sector 2001/2002	March 2003
The Irish Labour Market: Prospects for 2002 and Beyond	January 2002
Labour Participation Rates of the over 55s in Ireland	December 2001
The Third Report of the Expert Group on Future Skills Needs – Responding to Ireland's Growing Skills Needs	August 2001
Benchmarking Mechanisms and Strategies to Attract Researchers to Ireland	July 2001
Report on E-Business Skills	August 2000
Report on In-Company Training	August 2000
The Second Report of the Expert Group on Future Skills Needs – Responding to Ireland's Growing Skills Needs	March 2000
Business Education and Training Partnership 2nd Forum, Dublin	March 2000
Business Education and Training Partnership Report on the Inaugural Forum, Royal Hospital Kilmainham	March 1999
The First Report of the Expert Group on Future Skills Needs – Responding to Ireland's Growing Skills Needs	December 1998

Appendix 6: The National Framework of Qualifications

(I) Background

The National Framework of Qualifications is defined as a "The single, nationally and internationally accepted entity, through which all learning achievements may be measured and related to each other in a coherent way and which defines the relationship between all education and training awards".

The Framework comprises ten levels, with each level on specified standards of knowledge, skill and competence. These standards define the outcomes to be achieved by learners seeking to gain awards at each level. The ten levels will accommodate awards gained in schools, the workplace, the community, training centres, colleges and universities, from the most basic to the most advanced levels of learning. Learning achieved through experience in the workplace or other non-formal settings will also be recognised in awards.

The intention is not just to provide a frame of reference for existing awards: the awards Councils will develop systems of new awards for the National Framework of Qualifications. These new awards will be made on the basis of 'learning outcomes' defined in terms of standards of knowledge, skill and competence. The outcomes-based nature of the new awards is a significant change from the practice in most existing awards systems of basing awards on inputs, or on time spent in programmes.

Extract from NQAI document 'The National Framework of Qualification – An Overview'. (www.nqai.ie)

(II) CSO Educational Attainment Categories/NFQ levels

CSO Educational Attainment Categories	National Framework of Qualifications Level
No formal/ primary education	0
Lower secondary	2, 3
Upper secondary	4, 5
Post Leaving Cert Course	5, 6
Third level non degree	6
Third level – degree or above	7, 8, 9, 10

(III) Placement of existing and former awards

The Authority and the Higher Education and Training Awards Council agreed on 18 March 2004 to the placement of the following existing and former awards (previously made by HETAC and/or by the former National Council for Education Awards) in the National Framework of Qualifications:

- Level 6 – One-Year Certificate, Advanced Certificate, National Certificate
- Level 7 – National Diploma
- Level 8 – Bachelor Degree (3 and 4 year honours) and Graduate Diploma (conversion)
- Level 9 – Graduate Diploma (first stage of Masters) and Masters Degree
- Level 10 – Doctor of Philosophy

The Authority and the Dublin Institute of Technology agreed on 23 March 2005 to the placement of the Institute's following former awards in the National Framework of Qualifications:

- Level 6 – Certificate awards (two year f/t or equivalent)
- Level 7 – Diploma awards (three year f/t or equivalent) [a small number of pre-Framework Ordinary Batchelor/Batchelor degrees]
- Level 8 – Honours Diploma, higher Diploma, Advanced Diploma, Graduate Diploma*, Diploma (four and five year f/t equivalent)** [pre-Framework DIT Honours Bachelor degree awards}
- Level 9 – Graduate Diploma, Masters Degree
- Level 10 – Doctoral degree

* in music performance

** programmes that were recognised by the Institute and the University of Dublin under a partnership arrangement since 1975 as being at honours degree level.

Data Analysis of In-Employment Education and Training in Ireland

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