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Case Study on Higher Vocational Education and Training at EQF-Levels 5 to 7 in Ireland

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Case Study on Higher Vocational Education and Training at EQF-Levels 5 to 7 in Ireland

By

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Commissioned by BiBB, Bonn, Germany

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Abbreviations

| | |
|---------------|--|
| CAO | Central Applications Office |
| CIT | Cork Institute of Technology |
| DIT | Dublin Institute of Technology |
| EQF | European Qualifications Framework |
| ETB(s) | Education and Training Board(s) |
| FAS | Irish National Training and Employment Authority (dissolved) |
| FE | Further Education |
| HE | Higher Education |
| HEA | Higher Education Authority |
| HEI(s) | Higher Education Institution(s) |
| IBEC | Irish Business and Employers' Confederation |
| KCFE | Killester College of Further Education |
| MAMF | Mechanical Automation and Maintenance Fitting |
| NFQ | National Framework of Qualifications |
| NQAI | National Qualifications Authority Ireland (merged into QQI) |
| OECD | Organisation for Economic Co-operation & Development |
| QQI | Quality and Qualifications Ireland |
| SOLAS | Further Education & Training Authority |
| UCC | University College, Cork |
| UCD | University College, Dublin |
| UL | University of Limerick |
| VEC(s) | Vocational Education Committee(s) (since merged into ETBs) |
| VET | Vocational Education and Training |

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Part 1: Tertiary and Further Education

1.1 The Irish Education System

The Irish education system may be analysed in terms of the ages of participants, commencing with the education of young children.

Early Childhood/Pre-school: While the compulsory school age in Ireland is 6, virtually all 5-year-olds and approx. 40% of 4-year-olds attend primary school. All forms of pre-primary education are optional and are delivered for the most part outside the formal education system and are delivered by a diverse range of private, community and voluntary interests. The Department of Education and Skills funds some specific pre-primary services in areas such as urban disadvantage. In addition, the Department of Children and Youth Affairs funds a free Pre-School Year scheme for all children between the ages 3 years 2 months and 4 years 7 months. The vast majority of children of that age group avail of the scheme as evidenced by the OECD Education at a Glance (2014) which reported that 97% of Irish 4-year-olds are participating in education, where the EU average is 89%.

Primary Education: the Irish constitution, enacted in 1937, includes a provision that “the state shall provide for free primary education”. For historical reasons, most primary schools are state-aided parish schools, although this pattern is changing. The state pays the bulk of the building and running costs but a local contribution towards running costs is made. Teachers’ salaries are paid by the state. Some parents opt to send their children to a private primary school. Primary education consists of an eight year cycle after which pupils transfer to a post-primary school at the age of twelve.

Post Primary Education: this sector comprises secondary, vocational, community and comprehensive schools. Secondary schools are privately owned and managed. Vocational schools are state-established and administered by Education and Training Boards (ETBs) while community and comprehensive schools are managed by Boards of Management of differing compositions. Post-primary education consists of a three-year Junior Cycle followed by a two or three year Senior Cycle depending on whether the optional Transition Year is taken. The Transition Year provides an opportunity for students to experience a wide range of educational inputs including work experience in a year that is free from formal examinations. At the end of the final two years of the Senior Cycle, students take one of three programmes, each leading to a State Examination; the traditional Leaving Certificate, The Leaving Certificate Vocational Programme or the Leaving Certificate Applied.

- The Leaving Certificate, taken at 17 or 18 years of age is available in more than 30 subjects of which students are required to take at least five. Normally students take 7 or 8 subjects including English, Irish and Mathematics. This is the normal route from secondary education to higher education.

- The Leaving Certificate Vocational Programme (LCVP) is similar to the traditional Leaving Cert with a concentration on technical subjects and some additional modules which have a vocational focus. This route does not normally lead to higher education.
- The Leaving Certificate Applied Programme (LCAP) is a self-contained two-year course for those students who are not adequately catered for by the other Leaving Certificate programmes. It is a person-centred course involving a cross-curricular approach rather than a subject-based structure.

In 2013, there were 55, 572 candidates who took the Leaving Certificate examination of whom 37,096, just over two thirds of the total, took the traditional Leaving Certificate examination while 15,671 took the LCVP and 2,805 took the Applied examination (Expert Group on Future Skills Needs, 2014, page 51).

Further Education and Training (FE and T): this covers education which occurs after second level schooling but which is not part of the third level system. Full-time programmes in this sector include Post-Leaving Certificate programmes, Vocational Training Opportunities Scheme and Youthreach while part-time programmes include Back to Education Initiative, Adult Literacy and Community Education. Traditionally, much of this provision was organised by Vocational Education Committees (VECs) in each county and city but the large number of providers was rationalised in 2013. Now 16 Education and Training Boards have replaced the 33 VECs. In addition, a new agency, SOLAS, was established to take responsibility for the provision of programmes. In launching the new agency in October, 2013, the Minister for Education and Skills said that “SOLAS will be tasked with ensuring the provision of 21st century high quality Further Education and Training programmes which are responsive to the needs of learners and the requirements of a changed and changing economy”

Apprentice Education and Training and Traineeships are also part of the FE and T provision.

Higher Education: according to the Department of Education and Skills website “higher education is provided by 7 universities, 14 Institutes of Technology including the Dublin Institute of Technology and 7 Colleges of Education. In addition a number of other third level institutions provide specialist education” (DES, 2014). These specialist institutions include the Garda (Police) College, the Military College, the Royal Irish Academy of Music, the Law Society and the Pontifical University. In all there are 44 HEIs that receive state funding in addition to which there are many private institutions. The number of HEIs is likely to reduce in the near future as the government is encouraging the merger of institutions. Institutes of Technology which are seeking re-designation as Technological Universities are required to merge and already three such groupings have sought re-designation involving seven IoTs; thus there will be a reduction of four in the number of HEIs. There is also a plan for the merger of Colleges of Education (teacher training colleges).

1.2 Tertiary and Further Education at EQF level 5/NFQ level 6 and above

Further Education Programmes

Post Leaving Certificate (PLC) programmes

FE courses include so-called Post Leaving Certificate (PLC) programmes. There are currently 1,871 such programmes (Qualifax, 2014) and they lead to awards at level 4, 5 or 6 on the NFQ which is the equivalent of EQF levels 3, 4 and 5. The disciplines involved include Accounting, Computing, Health Care, Film Production, Early Childhood Care, Furniture Design and Making and Sport. Most of the courses are offered by FE colleges operated by ETBs but there are many other providers, mainly private colleges. Course duration is either one year or two years. Tuition fees are low, approx. 200 Euro to 500 per annum. They are marketed nationally through Qualifax, a database for learners. Total enrolments on these courses in 2011 were 38,774 (ESRI, 2014) of whom the vast majority were in year 1 (many of the programmes are of one year's duration). The current enrolment represents a decline since 2010. This is due, at least in part, to a continual expansion of opportunities in HEIs which are generally perceived to be more attractive than FE opportunities.

Progression opportunities are listed for each programme and in some instances they include progression to year 2 of a cognate degree programme. For example, a PLC Advanced Certificate in Business offered at Portlaoise College of Further Education states it was developed in conjunction with Carlow Institute of Technology (ITC) and a successful student may progress to the second year of a programme at ITC (Portlaoise College, 2014). Likewise, a Social Care Advanced programme at Waterford College of Further Education offers the prospect of progression into second year of a Social Studies BA degree Waterford College, 2014). Such progression opportunities are dependent on the cooperation of the relevant HEI but progression routes have been encouraged by the NQAI for the past 10 years.

Apprentice Education and Training is also part of the FE and T provision. For many years, the agency FAS, established by the government, had responsibility for all apprentice programmes which operated under the legal umbrella of the Apprenticeship Act, 1959. It established an Apprentice Advisory Committee which developed the curricula for the programmes. Membership of the Advisory committee included representatives of the Ministry of Education, Institutes of Technology and the social partners, both trade unions and employers. In fact the social partners had a majority of places on the committee so were in a position to determine the content of the apprentice programmes. The training programmes included periods of on-the-job training and periods in Institutes of Technology and in training centres (originally operated by FAS, the Apprenticeship Authority). To gain entry to an apprentice programme, a student must first gain employment with a registered employer. Typically, a programme will involve 4 periods of work in an industry setting and 3 periods of study in an Institute of Technology (state funded higher education institutions) or a Training Centre.

Table 1: Typical structure of an Apprenticeship Programme

| Phase | Location | Duration |
|-------|-------------------------|----------|
| 1 | Industry | 20 weeks |
| 2 | Training Centre | 20 weeks |
| 3 | Industry | 40 weeks |
| 4 | Institute of Technology | 11 weeks |
| 5 | Industry | 26 weeks |
| 6 | Institute of Technology | 11 weeks |
| 7 | Industry | 12 weeks |

For many years the Training Centres were run by FAS, the Apprenticeship Authority (since 2013, replaced by SOLAS) but in the recent reorganisation it was decided that the Training Centres will henceforth be owned by the Education and Training Boards.

Successful completion of an apprenticeship programme leads to the award of an Advanced Certificate which is at level 5 or 6 on the NFQ which is the equivalent of EQF Level 4 or 5.

The number of trades for which there are formal apprenticeship programmes is much more limited in Ireland than in some other countries such as Germany. Currently, there are 26 trades designated under the act; these are grouped under the headings Construction (8 trades), Electrical (6 trades), Engineering (6 trades), Motor (5 trades) and Printing (1 trade) (Department of Education and Skills, 2013 page 57).

In 2004, there were 28,050 trainees registered on these courses (SOLAS 2, 2014) but with the general economic problems and in particular the problems in the Construction Industry, the number enrolled declined to 7,150 in 2013. It has since recovered somewhat but is still a long way from its peak.

Table 2: Apprentice Education and Training in Ireland

| Year | First year enrolments | Total enrolled |
|---------------|-----------------------|----------------|
| 2004 | 8,239 | 28,050 |
| 2008 | 3765 | 26,150 |
| 2012 | 1,434 | 8,850 |
| 2014 (August) | 1,890 | 7,483 |

Some of those who complete an apprenticeship subsequently progress to a degree programme. This was most evident in the case of Electrical apprentices for whom there is a designated pathway into a Level 7 NFQ degree (Ordinary Bachelor Degree) in Electrical Engineering and from that they may progress to a Level 8 (Honours Bachelor Degree), also in Electrical Engineering.

Those who complete other apprenticeships are more likely to pursue higher education programmes in Business subjects as they may well be self-employed and see the need for expertise in Business disciplines. However, as they do not rely on their apprentice qualification to gain entry to the Business programme, there are no statistics on the number who progress.

Traineeships leading to a NFQ level 6 award

In addition to Apprenticeships, there are some Traineeships which share many of the characteristics of apprenticeships but which are not designated by the Apprenticeship Act, 1959. These programmes are developed by industry and delivered by industry in conjunction with Training Centres but without the participation of Institutes of Technology. They lead to the award of a NFQ award at levels 4, 5 or 6. There were at least 20 such traineeship programmes in areas such as Beauty Therapist and Legal Secretary supported by FAS (fore-runner of SOLAS) but only two of them (Software Developer and IT Support Specialist) led to awards at NFQ Level 6 (EQF level 5) (Source: SOLAS 3 during interview by this author, October, 2014). While FAS was responsible for Apprentice training, it indicated that it was happy to co-operate with employers for the implementation of new Traineeships. The current discussions on greatly expanding the number of designated Apprenticeships may make Traineeships irrelevant.

National Framework of Qualifications: Awards in Irish Further and Higher Education at or above NFQ Level 6: (Source: QQI website at www.qqi.ie)

Advanced Certificate (NFQ Level 6/ EQF Level 5)

The Advanced Certificate is normally awarded after completion of a programme in Further Education such as some Apprenticeships (4 years) or a Post-Leaving Certificate (2-years). The Advanced Certificate is not regarded as a Higher Education award but there are articulation agreements that enable recipients of some such certificates to progress to Higher Education programmes, sometimes with advanced standing (e.g. admission to second year).

Higher Certificate (NFQ Level 6/EQF Level 5)

The Higher Certificate is normally awarded after completion of a programme of two years duration (120 ECTS credits). Entry to these programmes is generally for school leavers (with Leaving Certificate) and those with equivalent qualifications. The Higher Certificate is an intermediate qualification within the Bologna First Cycle.

Ordinary Bachelor Degree (NFQ Level 7/ EQF Level 6)

The Ordinary Bachelor Degree is normally awarded after completion of a programme of three years duration (180 ECTS credits). Entry to a programme leading to an Ordinary Bachelor degree is typically for school leavers and those with equivalent qualifications. In

addition, there are transfer arrangements in place across higher education and a number of programmes of one year duration leading to the Ordinary Bachelor Degree for holders of the Higher Certificate. The Ordinary Bachelor Degree is compatible with the Bologna First Cycle descriptor, though holders of this award do not generally immediately access programmes leading to Second Cycle awards in Ireland.

Honours Bachelor Degree (NFQ Level 8/ EQF Level 6)

The Honours Bachelor Degree is normally awarded following completion of a programme of three to four years duration (180-240 ECTS credits), although there are examples of longer programmes in areas such as architecture, dentistry and medicine. Entry to a programme leading to an Honours Bachelor degree is typically for high achieving school leavers and those with equivalent qualifications. In addition, there are transfer arrangements across higher education, and a number of programmes of 1 year duration leading to Honours Bachelor Degrees for holders of the Ordinary Bachelor Degree. The Honours Bachelor Degree is a Bologna First Cycle qualification

Higher Diploma (NFQ Level 8/ EQF Level 6)

The Higher Diploma is normally awarded following completion of a programme of one year duration (60 ECTS credits). Entry to a programme leading to a Higher Diploma is typically for holders of Honours Bachelor Degrees but can also be for holders of Ordinary Bachelor Degrees. It is of note that the Higher Diploma is typically in a different field of learning than the initial award. The Higher Diploma is a qualification at the same level as completion of the Bologna First Cycle.

Master's Degree (NFQ Level 9/ EQF Level 7)

There are two types of Master's Degree in Ireland: taught Master's Degrees and research Master's Degrees. The taught Master's Degree is awarded following the completion of a programme of one to two years duration (60-120 ECTS credits). Entry to a programme leading to a taught Master's Degree is typically for holders of Honours Bachelor Degrees. In some cases, entry to such programmes can be permitted for those with Ordinary Bachelor Degrees or equivalent. Research Master's Degree programmes are typically of two years duration (120 ECTS credits) though not all such programmes are credit rated. The Irish Master's Degree is compatible with completion of the Bologna Second Cycle.

Post Graduate Diploma (NFQ Level 9/ EQF Level 7)

The Postgraduate Diploma is normally awarded following completion of a programme of one year duration (60 ECTS credits). Entry to a programme leading to a Postgraduate Diploma is typically for holders of Honours Bachelor Degrees in a cognate area but can also be for holders of Ordinary Bachelor Degrees. The Post-graduate Diploma is an intermediate qualification within the Bologna Second Cycle.

Doctoral Degree (NFQ Level 10/ EQF Level 8)

Possession of an Honours Bachelor Degree is normally required for entry to a doctoral programme. In some disciplines, a Master's Degree is also preferred. Normally those entering a doctoral programme with an Honours Bachelor Degree initially register for a research Master's Degree or provisional doctoral candidature. Upon successful completion of this initial stage, the candidate acquires full doctoral candidature. Doctoral programmes are between three and four years in duration. Varying doctoral programmes now exist, including professional and performance/practice based doctorates. The Irish Doctoral Degree is compatible with completion of the Bologna Third Cycle.

Higher Doctorate (NFQ Level 10/ EQF Level 8)

This award largely recognises excellent and distinguished contributions to learning. It may be used for career progression to advanced levels of academia and research. This award is never based on a provider's programme and, as such, is not subject to validation but is assessed by the awarding body for each individual provider. Normally, the learner already holds a first doctorate or equivalent for some period of time prior to becoming a candidate for the higher doctorate. The Irish Higher Doctorate is compatible with completion of the Bologna Third Cycle.

1.3 Description of the main route and other pathways to higher education

Most students go directly to higher education from post-primary school (secondary school). Applications for higher education are made to the Central Applications Office for virtually all programmes in all HEIs and places are allocated on the basis of the score achieved in the school Leaving Certificate, an examination conducted nationally each June.

HEIs keep some places, typically around 20%, to be filled by alternative routes such as mature students (over 23 years of age), students with a disability, students from socio-economic deprived backgrounds and students who have undertaken a Further Education course after the Leaving Certificate. The number of students who sought and gained a place in higher education as a result of completing a Further Education (VET) programme are as follows:

Table 3: FETAC Award holders applying to enter higher education

| Year | Applicants with FE award | Offers | Acceptances with FE award | Total HE acceptances |
|-------------|---------------------------------|---------------|----------------------------------|-----------------------------|
| 2001 | 2093 | 955 | 615 | 36,625 |
| 2005 | 5165 | 2102 | 1,049 | 38,175 |
| 2009 | 11,255 | 2699 | 1,721 | 45,586 |
| 2013 | 15,767 | 8051 | 3,031 | 46,169 |

[Source: Central Applications Office statistics supplied by the CEO]

The table above indicates a rapid growth in the number of students who seek to use Further Education as a pathway to higher education and a substantial growth in the number who achieve that goal – up almost 400% in a twelve year period. Nevertheless, it still constitutes less than 7% of entrants to higher education. The HEA has proposed a target of 10% of entrants to HE to come from the FE sector by 2016 (SOLAS, 2014 page 29).

Table 3 above may understate the number of FET award holders who progress to higher education. A study conducted by QQI concluded that just over 5,000 students who received a major FETAC award in 2009 were registered in a HEI in academic year 2009-10 (Dempsey et al, 2013). There are several reasons why the latter figure is higher than the CAO estimate of the number who progressed:

- The CAO figure relates to full-time programmes in HEIs but the FETAC study covered all programmes, including part-time programmes
- It is possible for a FETAC award holder to have a Leaving Certificate that ensured entry to higher education without recourse to his/her FETAC award and accordingly he/she may not have referred to the FETAC award when applying to the CAO
- A mature student may be admitted to HE on the basis of maturity rather than his/her FETAC award.

Access routes to higher and further education in Ireland

The chart that follows sets out the main routes through the Irish education system, including the routes to higher education and to further education. Whilst most students proceeding to HE do so directly from secondary school, there are routes to HE via FE.

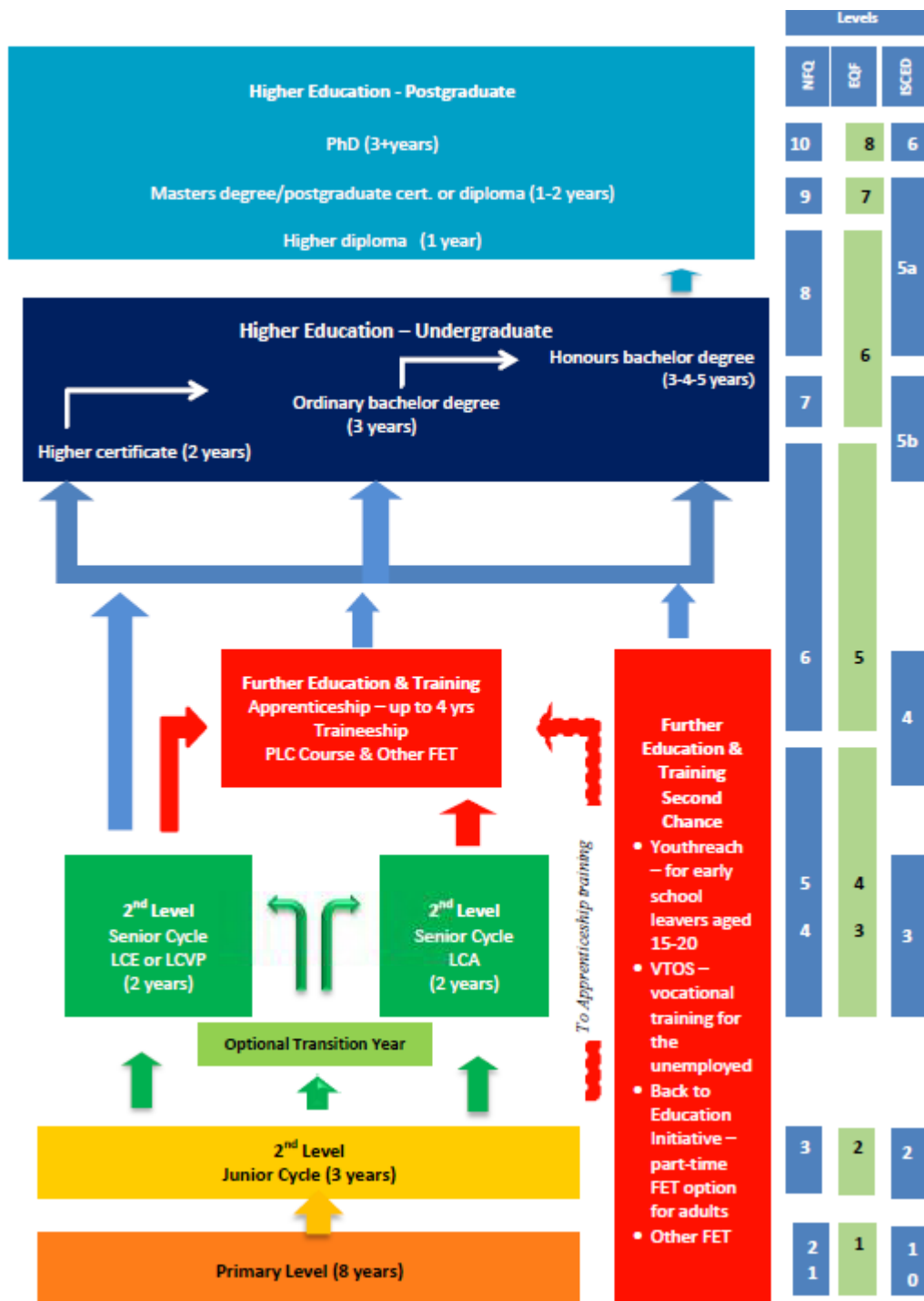


Figure 1. Irish education system

[Source: Monitoring Ireland's Skills Supply, 2014, SOLAS.ie]

The types of FET programmes taken by those who subsequently progress to HE is of interest. The largest grouping by far is those who study programmes in the area of Engineering and Construction, an area for which there are formal Apprenticeship

programmes that lead to a FETAC award. A summary of the findings of the QQI study of progression of 2009 FETAC award recipients is set out in Table 4 below:

Table 4: FETAC Major Award Recipients 2009 who progressed to HE in 2009-10

| FETAC Award | Number | % of those who progressed to HE |
|--|---------------|--|
| Humanities, Arts, General, Education | 741 | 15% |
| Social Sc, Business, Law | 900 | 18% |
| Science | 178 | 4% |
| Engineering, Manufacture, Construction | 1998 | 39% |
| Agriculture | 129 | 15% |
| Services | 347 | 7% |
| Total | 5079 | 100% |

(Source: Dempsey et al, 2013)

The 5,079 who were registered in a HEI in 2009/10 were among the 28,000 who received a FETAC major award in 2009. A further 6,000 of the awardees progressed to a second FET programme in 2009/10 while 11,000 were in employment and 7,000 received unemployment assistance. It is possible that some people are counted twice; for example, one could be in employment and also registered for a part-time programme in a HEI.

1.4 Image and value of VET in society and culture in general and VET in higher education in particular

The image and standing of education in Ireland has been consistently high. There has been strong growth in the number of people entering higher education where there is now a participation rate of approx. 65%. The emphasis of government economic policy has been on the development of high-tech industries such as ICT and Pharmaceutical Manufacturing and new degree and higher degree programmes have been developed in higher education to meet the needs of those industries. Intermediate level skills (level 5 and 6 in NFQ) and lower level skills (levels 1-4 in NFQ) have received much less attention so that paradoxically Ireland has one of the highest rates of graduates in the OECD in the age group 25 - 34 but also scores below average in literacy and numeracy. The success of school leavers in gaining places in higher education is celebrated in all the public media each August but FET attracts no such publicity.

The report on Further Education and Training in Ireland published in 2014 by the Economic and Social Research Institute reviewed the status of FET relative to HE. It concluded that there was a strong consensus that FET was seen as having a lower status than other parts of the educational system, especially higher education. Terms repeatedly used to characterise

the sector included “the poor relation” and the “Cinderella sector”. FET was seen as the second-best option for those who failed to get into higher education (ESRI, 2014).

SOLAS in its Further Education and Training Strategy (2014) has concluded “that the standing and esteem in which FET is held by Irish society stands in contrast to the higher esteem in which higher education is held by learners and parents alike”. It is seeking to address this problem in its new strategy. As part of its mission, it sees itself as assisting “individuals to progress to higher education who otherwise could not directly do so” and another important role is “to provide second chance education for the many individuals who have not completed second level education” (SOLAS,2014). Further details of the SOLAS strategy are given in section 4.4.

Review of Apprenticeship Training in Ireland, Dec 2013

An important review of Apprenticeship Training was announced by the Minister for Education and Skills in May, 2013 under the chairmanship of the Head of the Labour Court. It issued a report in December 2013 (DES, 2013). Among its conclusions was one that “Apprenticeships should be enterprise led with a key role for employers in identifying occupational standards and in shaping the content of the curriculum in collaboration with education and training providers” (Department of Education and Skills, 2013).

The report sought “the full input and engagement of employers, trade unions, education and training providers and professional bodies in the process” It further recommended that all programmes should be subject to the quality assurance arrangements of QQI.

It noted that while many apprentices progressed to degree courses, “the progression opportunities should be made far more transparent”.

The report noted the “significant scope to expand apprenticeships into a wide range of business sectors such as ICT, Retail, Hospitality, Business Administration, Medical Devices, Sport and Leisure, Childcare and Social Care, Financial Services, Accounting, Hairdressing and Beauty Care Sectors”. If the proposed expansion of apprenticeships enjoys the support of both employers and trade unions (and that appears to be the case) then it is likely to proceed. When this is implemented, it will take Ireland much closer to the German model which the report claims is being implemented in many European countries.

The key role envisaged for employers is illustrated by the comment that “Apprenticeships would not be successful unless there was a strong commitment from employers to identify occupational needs, recruitment and payment of apprentices and joint collaboration with education and training providers in programme delivery”. It was recommended that employer led consortia should identify the occupations which were considered by them to be suitable for apprenticeships.” (p. 84). The review recommended the establishment of an

Apprenticeship Council (whose responsibilities included curriculum development) with a membership to include representatives of SOLAS, HEA, DES, QQI and “*representatives of business and trade unions sufficient to ensure an enterprise led approach*” (p.8). Clearly, it is envisaged that employers and unions will effectively control the content of apprentice training programmes.

1.5 Governance/main institutions

DES: The Department of Education & Skills is the government department responsible for education policy at all levels. Generally it chooses to allow other agencies to implement the policy, such as the Higher Education Authority and SOLAS for higher education and further education respectively. Both the HEA and SOLAS are funded via the Department of Education and Skills and they acknowledge the pre-eminence of the Department in determining overall policy.

ETBs: In July 2013, 16 Education and Training Boards replaced 33 Vocational Education Committees and are responsible for education and training and youth work. They operate second level schools, further education colleges and adult and FE centres delivering education and training programmes.

HEA: The Higher Education Authority is the statutory planning and policy development body for higher education and research in Ireland. It is also the funding authority for the universities, the institutes of technology and some other designated institutions.

HEIs: HEIs in Ireland include seven universities, 14 institutes of technology, seven colleges of education (teacher training) and some specialist institutions and many private colleges. A total of 45 institutions, including private HEIs, recruit students for higher education programmes via the Central Applications Office.

QQI: Quality and Qualifications Ireland was established in 2012 by the merger of four existing agencies, Further Education and Training Awards Council, Higher Education and Training Awards Council, Irish Universities Quality Board and the National Qualifications Authority. QQI now performs the duties previously performed by the four agencies it subsumed including the development of awards and standards, quality assurance for further and higher education, the development and maintenance of a national framework of qualifications, the recognition of awards from other jurisdictions, the validation of education and training programme and the review of providers of education and training.

SOLAS: It was established in 2013 as the Further Education and Training Authority of Ireland. It is responsible for funding, planning and coordinating training and further education programmes.

1.6 Role of social partners e.g. employers' associations, trade unions in VET

The social partners play a role in most higher education and further education institutions. Under the 1997 Universities Act, there is provision for representatives of the social partners on the Governing Body of most universities with the notable exception of Trinity College, Ireland's oldest university (more than 400 years old). It argued successfully that its model of governance should not be required to change from its traditional model. As well as representatives of business and trade unions, there is provision for representatives of the world of the arts and culture. In addition to the membership on Governing Bodies, universities have Industry Liaison Committees which enable the viewpoint of industry to influence the content of degree programmes.

Dublin Institute of Technology has provision for five members of the Governing Body (out of 20 members) to be nominated by business and professional bodies. Other institutes of technology have similar provisions for representation on their governing bodies. The relatively strong representation of industry ensures that its interests are reflected in decisions about the nature and content of higher education programmes.

Trade Unions are represented on Governing Bodies of HEIs but only to the extent of representing members of the unions who work in the HEIs.

In the Further Education sector, the board of SOLAS has representatives of both employer bodies and trade unions. Traditionally, both employer bodies and trade unions play a strong role in determining the content of Apprentice programme as outlined on page 6 above. Education and Training Boards are governed mainly by elected members of local authorities and thus reflect the strength of the various political parties.

In addition to the role of the social partners in the governance of institutions, employers and representatives of professional bodies also play a major role in the Quality Assurance process in many institutions but more so in institutes of technology than in universities. For example, every taught programme in IoTs is assessed by a panel of experts which must include external academics and at least one representative of the profession. The panel to assess a degree in Mechanical Engineering will include at least one professor of Mechanical Engineering from a university and a senior Mechanical Engineer from industry. And after the programme is validated, two external examiners are appointed, one of whom is a practising Mechanical Engineer. The external examiners monitor the implementation of the programme and the standards achieved by the students. In addition, it is common practice to include an industry-based practitioner on interview boards for the appointment of academic staff. So this three-pronged approach – membership of the validation committee, service as an external examiner and membership of staff selection committees combine to ensure, as far as possible, that programmes in institutes of technology are responsive to the needs of the labour market. Surprisingly, employers play a less active role in the validation of FE programmes. Until recently, the validation of programmes was the responsibility of

FETAC (since merged into QQI) and its procedures were largely paper-based. Providers were required to sign off on certain regulations and there was some external verification but no panel visit and no role for employers, unless specifically invited. Since the formation of QQI the approach to quality assurance is being re-thought and the new system that emerges may have some of the characteristics of the former HETAC approach i.e. visit by a panel which includes industry personnel.

On 15th October, 2014 SOLAS, HEA and QQI simultaneously published on their websites an invitation to employers, large and small, to participate in an on-line survey to express their views on the quality of graduates emerging each year from Irish further and higher education institutions. The survey is a partnership between the HEA, SOLAS and QQI and is the first to be undertaken on this scale. It was indicated that the survey was developed by a steering group which included the Department of Education & Skills, Industrial Development Authority, Chambers of Commerce, Irish Business and Economic Confederation, Enterprise Ireland, Expert Group on Future Skills Needs and Irish Small & Medium Enterprises, among others. It is hoped to use the results to inform policy direction across further and higher education. The fact that the three statutory bodies, SOLAS, HEA and QQI came together to launch the survey and the fact that so many significant players participated in the steering group is a clear indication of the wish to hear the views of industry on graduate attributes.

2. Education Programmes and qualifications on EQF levels 5-7

2.1 Admission requirements

Admission to all tertiary level programmes is based mainly on performance in the school Leaving Certificate (high school diploma). Each programme has minimum entry requirement specified by the institution offering the programme e.g. Grade C or higher in Maths and English plus pass in at least four other subjects.

There is some provision for entry as a mature student (over 23 years of age) or via a Further Education programme.

There is a Central Applications Office (CAO) owned by the universities and DIT which acts as the single point to which all potential students make application and which matches students to places based on the student's performance in the school Leaving Certificate. The CAO acts for 44 institutions which is virtually all higher education in Ireland. It does not act on behalf of Further Education colleges or their programmes.

Further Education colleges recruit students directly and Apprentices are recruited by employers and are subsequently registered by SOLAS (a state agency for Further Education and Training).

2.2 National definitions: tertiary, vocational, dual, professional

Tertiary education is defined as the sector of education provided by universities, institutes of technology, colleges of education and other specialist colleges.

The term “vocational education” was used for many years to indicate a sector of education that was technical/technology based and offered programmes at second level and above. In recent years the term Further Education is used, probably to overcome the negative image of the term “vocational education”, and it occupies a position between secondary school and higher education.

The term “dual” is not used in Irish education.

The term “professional” is used to describe programmes that lead to a particular profession such as law or accountancy.

2.3 Duration

Tertiary education programmes offered by the universities are generally 3 or 4 years for a Bachelor degree (Arts and Business degrees can be either 3 or 4, Engineering and Science degrees usually 4 years. Medicine and Architecture degrees are longer).

Master’s degrees are generally one calendar year in duration (3 semesters, involving the two normal semesters plus the summer months following the second semester).

Tertiary education programmes offered by institutes of technology are similar in duration but they also offer short cycle programmes of two-years duration leading to a Higher Certificate.

The FE sector offers programmes that are vocational in character and lead to awards at various EQF levels, mainly level 3 or 4 but some lead to an award at EQF level 5. These programmes include apprenticeships, PLCs and traineeships.

2.4 Places of learning

There are 7 public universities in Ireland, 14 institutes of technology (including DIT which has a unique position in that it is an awarding body), 6 recognised colleges of universities, 7 colleges of education (teacher training colleges) and some specialist colleges. In all there are 44 HEIs that receive public funding,

In addition to the public HEIs, there are some private colleges that offer degree programmes, mainly in Business and Computer Studies. They recruit students via the CAO and their programmes lead to awards made by QQI.

Further Education is organised by 16 Education and Training Boards (ETBs) which operate on a geographical basis. They offer programmes through FE colleges and most of the programmes are not classified as being within the EQF levels 5-7 (they are at level 4) but there are some programmes (including Post-Leaving Certificate programmes) which are at EQF level 5. Apprentice programmes are not based in a single place of learning but involve periods of on-the-job training, training centres and institutes of technology.

2.5 Learning in practice

One of the features of many HE and FE (VET) systems is that employers are actively engaged in the provision of the programme either as initiators of the programme or as providers of work experience which is a part of the programme. In Ireland, several HEIs utilise the second of the two approaches in that they put a particular emphasis on work placement as an integral part of degree programmes.

Details of the approaches taken by four Irish HEIs are given in section 3 below. At a more general level, the approach of HEIs is that such internships are a compulsory feature of the programme and must be satisfactorily completed before the student can progress in the programme. Usually, internships or placements occur in year 3 of a 4-year programme or occasionally there are internships in both year 2 and year 3. It is rare for internships to occur in the final year.

Internships have long been a feature of medical courses and in that profession they often occur after the final examination but before the graduate qualifies for registration.

The duration of internships in HE varies between 3 months and 1 year but most commonly are around 6 months on Irish degree courses other than medical degrees.

In apprenticeships, the period spent in industry is typically almost two years and thus constitutes two thirds of the total duration of the programme.

2.6 Qualifications: titles, EQF level, labelled as vocational, professional, academic

The most common Irish award titles which correspond to EQF levels 5 to 7 are as follows:

| EQF Level | Irish NFQ Level | Award Titles |
|-----------|-----------------|---|
| 5 | 6 | Higher Certificate (Higher education award) Advanced Certificate (Further education/VET award) |
| 6 | 7 8 | Ordinary Bachelor Degree Honours Bachelor Degree Higher Diploma in Education |
| 7 | 9 | Master's Degree Postgraduate Diploma |
| 8 | 10 | PhD Doctorate |

The label “vocational” is rarely used in relation to higher education awards but rather it is commonly used to describe Further Education awards which are awards with a strong technical or vocational (as opposed to academic) bias. In terms of the National Framework of Qualifications, Further Education awards are made at Level 4, 5 and 6 which correspond to EQF levels 3, 4 and 5 respectively. There is some provision for holders of Further Education awards to progress to Higher Education programmes in universities and institutes of technology. Usually such progression involves access to year 1 of a Bachelor degree programme where they will sit alongside students who have progressed directly from

secondary school after the successful completion of the school Leaving Certificate examination.

The label “Professional” is used to describe some higher education programmes which relate clearly to a particular profession such as Accountancy, Law and Engineering

2.7 Focus of the education programmes

The focus of most programmes in higher education in Ireland is towards the labour market and the jobs that students of the programmes may obtain after they graduate. The extent to which the above statement is true varies somewhat from discipline to discipline and from institution to institution as illustrated by the following examples:

Programmes in Medicine, Dentistry, Pharmacy and Veterinary Medicine at Bachelor degree level, are offered in universities only and are very much geared towards meeting the requirements for registration for the relevant profession on graduation.

The same is true of Bachelor degrees in Nursing, Optometry, Physiotherapy offered in various HEIs.

Engineering degrees are mainly either 4-year Bachelor Honours degrees or 3-year Ordinary Bachelor degrees. Chartered Engineering (CE) status (available after completion of a 4-year Honours degree until recently and now requiring a Master’s degree for admission) is deemed important so programme providers must adhere to the requirements of Engineers Ireland which controls the award of CE status.

Many Business degrees also gain exemptions from some stages of the process to become an accountant so again HEIs need to adhere to the requirements of the Accountancy bodies (there are several).

Education Colleges qualify graduates to become Primary school teachers provided they follow the approved syllabus. There are Higher Diplomas in Education offered by universities to holders of Bachelor degrees who wish to qualify to become secondary school teachers. The focus of such Higher Diplomas is totally on teaching careers and it is difficult to envisage anyone taking such a programme unless they wish to become a teacher.

Science degrees include both honours degrees in a single discipline e.g. Physics or Chemistry and applied sciences degrees in an area such as Environmental Health.

There are many career-focussed degree courses in Journalism and Media Studies.

There are some areas where the goal of a particular job is not so evident. Students who pursue an Arts degree (and the BA degree in UCD has the single biggest in-take of any degree programme in Ireland) may subsequently opt for a career as a secondary school teacher by taking a Higher Diploma in Education after the degree. But while pursuing their Arts degree, there is no obvious influence of any particular job.

2.8 Quantitative relevance/number of participants

Table 5 below sets out details of the number of whole-time equivalent students enrolled in higher education programmes in public HEIs in selected years, together with the number of whole-time equivalent academic staff and the ratio of academic staff to students. The decline in the staff to student ratio was caused by the efforts to curb expenditure during a period of fiscal austerity and it is a cause of concern from the point of view of quality.

Table 5: Higher Education Whole-time Equivalent students and staff: student ratio

| | 2007/08 | 2010/11 | 2012/13 |
|---|---------|---------|---------|
| WTE Student Numbers <small>fulltime + part-time /2</small> | 158,057 | 177,329 | 181,308 |
| WTE Academic Staff | 10,100 | 9,697 | 9,297 |
| Ratio Staff to Students | 1:15.6 | 1:18.3 | 1:19.5 |

[Source: HEA Report on Higher Education System Performance, 2014]

It is followed by Table 6 which shows the number of graduates from all Irish HEIs and FE Colleges in the year 2012 analysed on the basis of NFQ level.

Table 6: Summary of Awards by NFQ Level, 2012

| | NFQ 5 | NFQ 6 | NFQ 7 | NFQ 8 | NFQ 9/10 | Total |
|---------------------------------|--------|--------|-------|--------|----------|--------|
| QQI-FETAC | 24,560 | 7,410 | - | - | - | 31,970 |
| Institutes of Technology | - | 2,630 | 7,910 | 10,240 | 2,260 | 23,040 |
| Universities | - | 2,300 | 1,690 | 18,820 | 14,800 | 37,610 |
| Total | 24,560 | 12,340 | 9,600 | 29,060 | 17,060 | 92,620 |

Source: Expert Group for Future Skills Needs (2014, p.51)

The awards at NFQ level 5 include many PLC, apprentice, traineeships and vocational training awards. The awards at NFQ level 6 include both Higher Certificates awarded by IoTs and universities and Advanced Certificates awarded for some PLCs, apprentice programmes and some traineeships.

The awards at NFQ level 7 and NFQ level 8 include the Bachelor degrees at Ordinary and Honours levels respectively awarded by universities, IoTs and other HEIs.

The awards at NFQ levels 9 and 10 include the Master's degrees, Postgraduate Diplomas and PhDs awarded by universities, IoTs and other HEIs

Table 7 gives a summary of awards analysed by the field of education in which they were granted.

Table 7: Summary of Awards by Field of Education, 2012

| Field | NQF 5 EQF 4 | NQF 6 EQF 5 | NFQ 7 EQF 6 | NFQ 8 EQF 6 | NFQ 9/10 EQF 7/8 | Total |
|--------------------------------|----------------|----------------|----------------|----------------|---------------------|---------------|
| General | 130 | 310 | - | - | 30 | 470 |
| Education | - | 80 | - | 1,800 | 2,990 | 4,870 |
| Humanities and Arts | 2,760 | 1,000 | 1,020 | 5,860 | 1,990 | 12,630 |
| Social Science, Business & Law | 3,230 | 2,440 | 2,320 | 8,560 | 5,710 | 22,260 |
| Science & Computing | 990 | 770 | 1,240 | 3,450 | 2,080 | 8,530 |
| Engineering & Construction | 450 | 3,010 | 2,340 | 3,480 | 940 | 10,220 |
| Agriculture & Veterinary | 1,820 | 1,470 | 310 | 360 | 130 | 4,090 |
| Health & Welfare | 12,160 | 1,660 | 1,240 | 4,880 | 2,900 | 22,840 |
| Services | 3,020 | 1,590 | 1,100 | 670 | 310 | 6,690 |
| Total | 24,560 | 12,330 | 9,570 | 29,060 | 17,080 | 92,600 |

Source: Expert Group for Future Skills Needs (2014, p.51)

Note: the table above relates to awards made by public institutions including universities, colleges of education and institutes of technology. It does not include awards made as a result of programmes studied at private colleges.

If one analyses the number of awards in Table 7 above, one can see that there were over 8,000 awards made at NFQ levels 5 – 8 inclusive in each of the groupings Humanities & Arts, Social Science, Business & Law, Science & Computing, Engineering & Construction and Health & Welfare but the percentage that progresses to a higher degree differs greatly from discipline to discipline. For example, many more progress in Science than in Engineering, perhaps because Engineering has traditionally been focussed on advancement in industry. There are also many who progress to Master's degree in Business but not so many who complete a Doctorate.

It was noted earlier (in Table 3) that more than 3,000 entrants to HE came via an FE award. The table below indicates the fields to which holders of FET awards moved in their transfer to higher education.

Table 8: Analysis of acceptances of offers based on FETAC results, 2013

| Course Group | Female | Male | Total |
|---------------------|---------------|-------------|--------------|
| Arts/Social Science | 620 | 246 | 866 |
| Science/Agriculture | 187 | 187 | 374 |
| Education | 68 | 6 | 74 |
| Business | 392 | 430 | 822 |
| Engineering/Tech | 55 | 472 | 527 |
| Art & Design | 103 | 72 | 175 |
| Law | 28 | 23 | 51 |

Source: CAO Chief Executive in correspondence with this author, 2014

The three main fields are Arts/Social Sciences, Business and Engineering/Technology. It is interesting that two of the fields show a huge discrepancy between male and female participation. Engineering is hugely dominated by male students while Arts/Social Science is almost as dominated by female students; of the three fields, only Business comes close to an equality of numbers.

2.9 Financing

Higher Education and Further Education (VET) in public institutions is largely financed by the state. Irish and other EU nationals enrolling in higher education institutions pay a maximum of 2,500 Euro per annum even though the cost of providing programmes costs an average of 10,000 Euro per annum while some programmes such as Engineering, Medicine and Veterinary Science cost a great deal more (up to 30,000 Euro per annum). Thus, the state subsidises the cost to the extent of at least 75%.

While students may have to pay 2,500 Euro per annum, many are exempted on the basis of the low level of the family income. On the other hand, students from outside the EU are liable to pay full fees, often 10,000 Euro per annum and sometimes considerably more.

Costs for FE programmes are much lower and generally do not involve a fee for the students (apart from €200 registration fee). The exception to this approach is in respect of non-EU students who pay a fee of €3650 which was reckoned to be the cost of providing the programme. That figure, which has been unchanged for quite some time, would suggest that the cost of providing FE programmes is less than half the cost of HE programmes.

3 Programmes at EQF levels 5 - 7 with practical learning phases

3.1 Practical Learning Phases

Irish HEIs and FE colleges have been developing increasing involvement with their local communities in recent years. A survey in 2011 indicated that 75% of respondents felt that their HEI has strong connections with the local community and that senior management were supportive (Campus Engage, 2011) . This process culminated in an historic ceremony in Dublin Castle on 16th June, 2014 when the presidents of 22 HEIs, including all the universities and IoTs, signed a charter committing them to continue to promote civic and community engagement in their institutions. This will involve community-based learning, volunteering activities, the opening of campuses to local communities and partnerships with relevant stakeholders to address local and regional development.

Some domains of higher education have a long history of involving practical learning phases including medicine, teacher training, business studies and engineering. In recent years the Ministers of Education of Europe, meeting in the Bologna Process, have encouraged an enhanced role for employers in working with HEIs in the development of curricula.

One of the features of many VET systems is that employers are actively engaged in the provision of the programme either as initiators of the programme or as providers of work experience which is a part of the programme. In Ireland, several HEIs utilise the second of the two approaches in that they put a particular emphasis on work placement as an integral part of degree programmes. This will be illustrated by examples in respect of two major disciplines, Business Management (3.2 below) and Engineering (3.3 below). But before proceeding to those examples there are some general approaches to liaison with industry which show the extent to which Irish HEIs interact with industry.

- **University of Limerick (UL)**

UL is a relatively young university having been founded in 1971 as a National Institute of Higher Education and it was re-designated as a university in 1989. From the beginning it has fostered what it terms Cooperative Education under which all students, regardless of the discipline, undertake relevant work experience normally of eight months duration.

This policy involves the placement of about 2,000 students every year, most of them in Ireland but about 30% are placed internationally. Their experience has been that most of the employers who take students on placement also employ UL graduates.

The scheme of placement includes all teaching degrees whereby students enrolled on undergraduate teaching degrees complete two teaching practice assignments while those enrolled on the Graduate Diplomas complete one assignment. The academic assessment of students on teaching practice is regarded as a critical activity and is at the core of the teaching practice process.

UL has a network of over 1,600 employers and the university promotes the work placement programme to employers by indicating that it gives the employer the opportunity to vet potential graduates first-hand over an extended period in a real work environment.

- **University College, Cork (UCC)**

UCC is one of Ireland's oldest universities having been founded as one of the Queens Colleges in the mid-19th century. At UCC a number of undergraduate and postgraduate courses have an integrated Work Placement Programme. These placements are organised by the Careers Service in most instances but some such as the Business Information Systems degree are managed directly by the relevant academic department. The UCC website lists 19 programmes which include a placement of which three are Master's degree courses while the remainder are undergraduate courses.

UCC has committed itself in its Strategic Plan, 2013-17 to continue "to work to provide a world-class student experience through ... improving placement opportunities so that all UCC students have the opportunity to develop the generic and transferable skills needed for effective engagement in the workplace and society". When the university underwent an institutional review in 2012-13, the reviewers reported that "the Careers Office provides a high level of service to students that was greatly valued". The period of the placements vary somewhat in different disciplines but generally they are 24 weeks (April to September) in the College of Science and Engineering and approximately the same in the College of Business and Law. Note that the timing of the placement (April to September) minimises the disruption to the academic year as most of the placement period falls in the students' summer vacation period.

Dublin Institute of Technology (DIT)

DIT traces its origins back to 1878 when the employers helped to found a college to provide education and training for their employees. Thus, originally all the students were part-time students, generally released by their employers to attend classes. Now DIT is one of the largest HEIs in Ireland and has its own awarding powers to make awards up to PhD. It has long fostered the idea of work placement which its web-site defines as "a period of work-based learning related to an academic course as an integral part of an undergraduate programme".

The School of Hospitality Management and Tourism in DIT has Work Placement as an integral part of all its undergraduate programmes. The school cites the benefits of this approach as "providing the opportunity for students to put theory into practice and to develop new skills which will better equip them for employment". Employers who offer a work placement "will benefit from the extra resource of new ideas and a fresh approach while investing in the workforce of the future". The placements are co-ordinated by a Placement Office which seeks to maximise learning opportunities and offer support to both student and employer. An additional benefit to the school is that academic staff members, who visit the students on placement and discuss their progress with employers, are thereby

kept up to date with the latest developments in industry. Prior to commencement of a placement, employers receive a set of Guidelines with information on mentoring, contact with the School, visits (by school staff to students), assessment and appraisal. The duration of the placements is either 6 months (on a 4-year Level 8 degree) or 3 months (on a 3-year Level 7 degree).

Cork Institute of Technology (CIT)

CIT is a relatively young institution though it has absorbed some older colleges. It has shown a particular interest in the involvement of employers in the educational process and has led two major projects on related themes:

- Education in Employment
- Roadmap for Employment-Academic Partnerships

The projects were funded by the Strategic Innovation Fund administered by the Higher Education Authority (HEA) and both projects were carried out by consortia of HEIs led by CIT and involving UCC, DIT and many others (15 HEIs in all). One of the outputs from the projects were publications including the following:

Beyond Big Business for Student Work Placement, a Guide for Family Businesses and Community and Voluntary Groups, UCC, REAP and HEA

Beyond Big Business for Student Work Placement, a Guide for Placement Practitioners, UCC and REAP.

Sheridan, I and Linehan, M (2011) Work Placements in Third-Level Programmes, CIT.

The Sheridan and Linehan report provides a very detailed analysis of work placements in Ireland including the characteristics of good quality placements, the benefits of such arrangements and the concerns of academic staff and others that need to be addressed.

CIT currently places more than 800 students per annum in workplace situations. It also involves employers in final year projects for both undergraduate and postgraduate programmes.

In the current project, the author offered to work with the leaders of the research in BiBB to choose education programmes which have a practical learning phase for a detailed analysis and description. Those chosen by BiBB are an Apprentice programme and a Post-Leaving Certificate programme (both in FE), and Business Management and Engineering (both in HE).

3.2.1 An Apprenticeship programme: Mechanical Automation and Maintenance Fitting

Currently there are 26 designated Apprenticeship programmes which operate under the supervision of SOLAS, the FE and Apprenticeship Authority. To illustrate the teaching approach, the content and the roles of the different organisations (including employers) involved, one example has been chosen: Mechanical Automation and Mechanical Fitting (MAMF). This section is based on the MAMF document produced by SOLAS (2013).

Programme title: MAMF

Admission requirements: The minimum age at which one can commence an apprenticeship is 16 years. The minimum educational requirements are 5 passes in the Junior Certificate (a national examination operated by the Department of Education & Skills after 3 years of secondary education) or equivalent.

Prospective apprentices must first obtain employment with a SOLAS approved employer.

Award: On successful completion of their apprenticeship, a NFQ level 6 (EQF level 5) Advanced Certificate is awarded by QQI.

Progression opportunities: Routes of progression are being established by QQI for all awards including Level 6 Advanced Certificates but are not yet published.

Programme design: all apprenticeship programmes are standards-based, written as learning outcomes and structured in a modular format.

Programme structure: the MAMF programme follows the usual apprentice format of phases with the employer interspersed with phases Off-the-Job. The particular arrangements for MAMF are as follows:

Table 9: Structure of the MAMF Apprenticeship Programme

| Phase | Location | Duration |
|-------|-------------------------|------------------|
| 1 | Employer | Minimum 12 weeks |
| 2 | Training centre | 20 weeks |
| 3 | Employer | Minimum 26 weeks |
| 4 | Institute of Technology | 10 weeks |
| 5 | Employer | Minimum 26 weeks |
| 6 | Institute of Technology | 10 weeks |
| 7 | Employer | Minimum 12 weeks |

While the total duration of all phases is a minimum of 116 weeks, in practice the apprenticeship takes approx. 4 years because of gaps between phases and the holiday periods of apprentices.

Duties and responsibilities of employers: Employers must comply with the statutory obligations under the Industrial Training Act, 1967 the Labour Services Act 1987- 2009 and any Apprenticeship rules (which may apply from time to time). They are expected to train the apprentice in the required On-the Job aspects of apprenticeship and to provide the apprentice with the opportunities to practise new skills. Consequently, they are required to employ a suitably qualified craftsman to act as workplace assessor with responsibility for training, marking assessments, recording and processing assessment checklists and On-the-Job schedules as specified by SOLAS.

Employers are expected to ensure that all the On-the-Job assessments are fairly conducted and are recorded and submitted to SOLAS. They must release the apprentice(s) for the Off-the-Job phases.

Funding arrangements: During the On-the-Job phases the apprentice is paid the normal apprentice wage rate by the employer. While attending the Off-the-Job phases the apprentice is paid an allowance by SOLAS.

Content of MAMF Phases

Phase 1 (with employer):

The purpose of this phase is to provide apprentices with introductory training as they learn and practise basic skills in the workplace which are developed further throughout their apprenticeship.

Phase 1 is divided into four sections consisting of

- Induction training
- Introduction to Health and Safety
- Introduction to Tools & Equipment
- Introduction to Basic Skills

At the end of each section the manager/verifier in the company must sign a statement in respect of each apprentice certifying that the assessments have been successfully completed.

In addition there are five common modules on Health & Safety Awareness, Introduction to Learning to Learn, Introduction to ICT, Employment Legislation Awareness and Environmental Awareness. The five common modules are made available to the apprentices through e-learning. Each module contains a self-assessment built in and it is designed so that the learner cannot progress through the modules unless the self assessments in the form of multi choice assessments are successfully completed.

Phase 2 (in Training Centre)

This phase consists of 8 modules starting with Introduction and General Workshop Skills and continuing with Turning, Milling, Thermal Processes, Plant & Machine Maintenance, Fluid

Power Systems, Introduction to CNC and Introduction to Abrasive Wheels. It is intended that the 8 modules should be completed in the order they are listed.

Each module consists of a number of learning units which describe:

- The skills to be developed
- The key learning points for the integrated practical and knowledge elements
- Examples of exercises to be conducted at the end of the learning unit.

The information given for each module is very detailed and includes both the content of the module and the estimated number of hours to be allocated to each unit of each module. The learning outcomes of each module are detailed and include the standards which the apprentice should achieve. Thus, it is not surprising that the document describing MAMF runs to over 700 pages.

Phase 3 (with employer)

Phase 3 consists of 11 assessments of which the apprentice must complete 5. The assessments are:

Bracket Fabrication

Stepped Pin, Bush or Sleeve

Milling Machine Competence

MMA Welding

Oxy-Acetylene Welding

Plant Investigation/| Reporting

Component Unit Replacement/Alignment

Pipework Fabrication/Installation

Replace/Checkout Power System Components

Computerised Maintenance/Production System Components

Lifting Project

For each of the 11 assessments, the activity, the conditions and the standards to be achieved by the apprentices are specified.

Phase 4 (in Institute of Technology)

This phase lasts for 10 weeks in an institute of technology and involves the completion of seven modules as follows: Bench Fitting, Milling, Thermal Processes, Plant, Machine Maintenance & Electrical, Automation & Control and CNC Programming, Operations & Communications.

As for phase 2 above, each module consists of a number of learning units which describe:

- The skills to be developed
- The key learning points for the integrated practical and knowledge elements
- Examples of exercises to be conducted at the end of the learning unit.

The objectives of each module are analysed in respect of the activities the apprentice should be able to perform, the conditions under which he/she should be able to complete the activity and the standards to which the activity should be completed.

Phase 5 (with employer)

Each apprentice is required to pass 5 of the 9 assessments listed below:

Bench Fitting: integrating multi-part workpieces to predetermined accuracy, fit and finish

Turning – Thread Cutting: turn mild steel components incorporating machine cut threads

Taper Turning: turn tapers on mild steel components

Milling Slots: mild steel components having slots, tee/slots and dovetails

Thermal Processes: cut, prepare steel components and weld mild using MIG/MAG process

Service and Maintenance of Machine Tools

CNC: Design operational sequencing programmes for CNC machining centre

Power Systems/Fault Finding: diagnose and repair faults

Service and Overhaul: Service and overhaul plants and machinery

Phase 6 (in institute of technology)

This phase lasts for 10 weeks and consists of five modules: Manufacturing Processes, Integrated Automation & Control, CAM, CAD & Computing, Plant and Machine Diagnostics, and Thermal Processes.

Again, each module consists of a number of learning units which describe:

- The skills to be developed
- The key learning points for the integrated practical and knowledge elements
- Examples of exercises to be conducted at the end of the learning unit.

There are detailed lists of the contents of each module and the activities that apprentices should be able to accomplish at the end of the module, the conditions under which they should be able to do them and the standards to be achieved.

Phase 7 (with employer)

Each apprentice is required to pass 5 of the 10 assessments listed below:

Surface Grinding: surface grind workpieces to predetermined accuracy and finish

Eccentric Turning: turn eccentric components

Milling/Simple Indexing: divide head setup and component machining

TIG Welding: weld stainless steel/aluminium components

Plant Servicing and Maintenance: service and repair faults in plant/machinery

Cylindrical Grinding: precision grinding of shafts/bushes/bores

System Servicing: service flexible manufacturing systems

Component Design: design/draw components/mechanical units

Design and Fabrication: fabricate basic machine/product handling system

Service Fluid Power System: servicing, maintenance of a fluid power system and recording of work done in a maintenance log

3.2.2 A Post-Leaving Certificate programme: Data Networking (CISCO)

For more than 10 years now, FE colleges have provided Post-Leaving Certificate (PLC) programmes. These programmes are meant to prepare students for careers in industry or services. While most such programmes are one-year programmes that lead to awards at EQF level 4, there are some two-year programmes that lead to level 5 EQF awards. To illustrate this, and to explore the links with industry, one example has been chosen: Data Networking (CISCO) at Killester College of Further Education, Dublin. The college operates under the aegis of the City of Dublin Education and Training Board.

Programme details:

Programme title: Data Networking (CISCO)

Duration: The total programme extends over two years, full-time but one can leave with a certificate after one year

Entry requirements: There are no formal admission requirements but generally the college looks for a Leaving Certificate (either the traditional Leaving Certificate, or the LCVP or LC Applied (see page 6 for details). A facility in Mathematics is required as evidenced by Leaving Certificate performance or an aptitude test on application. It is not necessary to be in employment when applying for entry. The programme has tended to attract slightly mature candidates (aged 20 to 30) rather than 18 year olds.

A maximum of 24 students are recruited into year 1 annually. A feature of the recruitment has been the high proportion of non-Irish nationals who apply (generally these are resident in Ireland at the time of application).

Costs/fees: students pay a fee of 500 Euro for year 1 and 450 Euro for year 2 unless they are exempt from fees because of socio-economic disadvantage. This is substantially less than equivalent fees in HEIs.

Awards: students who successfully complete year 1 will be awarded a level 5 NFQ QQI certificate. Students who successfully complete year 2 will be awarded a QQI level 6 NFQ

Advanced Certificate In Computer Network Technology. In addition to the QQI awards, students are prepared for the CISCO examinations which may be sat elsewhere in Dublin (they are on-line examinations).

Programme content, Year 1

There are 10 modules offered including placement in industry. Students must pass at least 8 of the modules, including the placement, to qualify for the certificate

Programme content, year 2

There are 10 modules offered including placement in industry and students must pass at least 8 of the modules including the placement to qualify for the certificate.

Industry placement

Students must find their own placement in the computer industry but if they are unable to do so then the college may assist. The duration of the placement is one day per week plus one week full-time in industry. The work to be undertaken in industry is assigned by the employer. Generally, students are not paid for the work they do in industry during placement. However, students may opt to remain in the placement during the summer months between first and second year and the college encourages such work. In that event they may be paid.

It was the policy of the college that students were visited by a staff member during the placement but this is no longer the case because of cutbacks in the college budget. Students are contacted by phone by their college tutor.

Assessment of placement

Students are assessed on their performance during the placement. Each student is required to write a log book which describes their industry experiences on a week by week basis. The log book should commence with a description of how they got the job.

At the end of the placement the employer writes an assessment of the student and sends it directly to the college. The employers assessment and the student's log book are assessed by a college staff member and a mark is assigned.

There are 15 credits assigned for the placement (the credit system being used is based on 120 credits per annum).

Progression

Students have a choice at the end of year 1 to continue their studies or to go into industry; most students opt to continue. At the end of year 2 students may opt to transfer to a degree programme in an Institute of Technology. The college has arranged advanced entry into year

2 of Computer-related degree programmes in Institute of Technology, Blanchardstown and in DIT, provide the student achieves good grades. In the past 6 years, 57% of the students who completed year 2 progressed to degree programmes; 30 % went into employment while the remaining 12% were unaccounted for (perhaps emigrated).

3.2.3 Business Management programmes operating close to industry: a case study of the DIT College of Business

Progression of Higher Certificate holders to degree programmes:

Students leaving secondary school and aspiring to gain a degree in Business Management will often choose to enrol on a Higher Certificate programme in DIT with a view to progressing to a degree programme. This is evident from the statistics on CAO points for enrolling on DIT higher certificate programmes, often well in excess of 300 points. That same points score would gain a place on a Business degree in most Institutes of Technology but students are attracted by the reputation of the DIT Business College. In 2014, DIT sought 80 students for the higher certificate in Business Management but ended up enrolling 170 students.

The success rate of students making the transfer to a degree programme is very good.

Work placement in programmes:

Five of the DIT college's Honours Bachelor degree programmes involve a placement in industry as part of the programme. These are:

Bachelor of Business & Management

Bachelor of Retail and Services Management

Bachelor of Human Resource Management

Bachelor of Business Computing

Bachelor of Logistics and Supply Change Management

Bachelor of Marketing

A total of 330 places in industry are involved each year and all are paid placements (the college will not place a student in an unpaid placement).

Details of placements

Each of the six programmes listed above is a 4-year programme leading to an Honours Bachelor degree. In all but one of the programmes the placement is situated in the second

semester of the third year. Thus, students have completed two and a half years of academic study before they go on placement and the College of Business maintains that this ensures they are of value to employers.

By having the placement in the second semester and continuing the placement through the summer, the College is able to achieve a 6-month placement. This applies to four of the programmes listed and in each case 30 ECTS credits are earned by the successful completion of the placement. The two programmes that differ from this approach are the Marketing degree (15 weeks in first semester of year 3) and the Business & Management degree (5 months in second semester of year 3 plus summer).

It is the policy of the College that all students are assigned an academic mentor for the placement and this mentor will visit the student at least once during the placement. During the visit the mentor will discuss progress with the student and with the industry supervisor.

Each student is required to maintain a log or journal of his/her progress and to have this log book signed by the supervisor each week. When the academic mentor visits, the log book will be discussed by the student and the mentor.

Role of companies

The College has a database of companies willing to take students on placement. This database is maintained by a Placement Office in the College and from time to time new companies are added and some leave the database.

When a company decides to take a student it determines the role the student will play. It discusses this role with the Placement Office and it is the policy of the Placement Office to get the company to produce a written Job Specification to bring certainty to the process. The company designates one of its staff to be the Placement Supervisor and this person is responsible for the smooth operation of the placement including (a) ensuring that the student is following the agreed job specification (b) signing off the student's weekly log of what they have been doing (c) meeting the student mentor when he/she visits and (d) completing the student assessment form at the end of the placement.

Assessment of placements

The student is assessed on the basis of two documents, the Log Book that he/she maintains showing the activities and analysis of issues on a weekly basis and a Placement Assessment Form completed by the supervisor and discussed with the mentor.

Programmes without industry placement

There are other programmes that do not include a placement in industry including Accounting & Finance, Business & Law, Economics & Finance and International Business & Languages (with either French, German, Spanish, Italian or Chinese). A feature of the

International Business & Language programmes is that the student must spend year 3 in a university in a country in which the language is spoken so this does not leave room for an industry placement.

There are no work placements on Master's degrees in the College of Business as the duration of the programmes (one calendar year) does not allow space for such a placement.

Relationship with Accountancy Bodies:

This is seen as vital by the college management. The Accountancy bodies set the standards for the study of that subject and accordingly, it is vital that the programmes are aligned with those standards. Since many students aspire to become accountants, their interests are best served by ensuring the students receive appropriate exemptions when they undertake professional accountancy examinations. Such exemptions result in a shortening of the time the graduate must serve before achieving membership of the accountancy body for which s/he is studying.

Programmes of DIT College of Business in which Industry is involved in the design of the programme:

There are several programmes at post-graduate level in which industry has played a key role in the initiation of the programme and the development of its contents. These include:

- 1. International Selling Programme** designed in conjunction with Enterprise Ireland, a state agency to promote Irish enterprises. The programme is offered leading to a Postgraduate Diploma or Master's degree (both of which are at Level 9 in NFQ, Level 7 in EQF).
- 2. Ericssons/ITC Ireland Programme** leading to a Master's degree in Applied Software Technology recruits 40 to 50 students per annum and on successful completion each graduate is guaranteed a two year job contract in Ericssons. In addition to the job guarantee, Ericssons pays all the costs of providing the programme.
- 3. Management and Aeronautical Services** leading to a BSc degree in conjunction with the Irish Air Corps
- 4. BBS Retail Management** in conjunction with Musgrave, Supervalu and Centra (supermarket groups)
- 5. International Business Development programme** leads to a Postgraduate Diploma or a Master's degree. This programme is run In conjunction with IBEC, taught during the summer months. For 110 students who are involved in export activities. Each student gets a salary with an Irish company and is based in Europe, USA, Japan or another key export market.

A version of the programme is being developed in conjunction with Tourism Ireland for 30 participants.

6. **Master's Degree and Post-graduate Diploma in Technology and Innovation Management** with ICT Ireland for part-time students. Supported by Intel and Hewlett-Packard, etc. Approx. 20 students per annum.
7. **Master's degree and Post-graduate Diploma in Software Product Management** in conjunction with the Irish Software Association. The programme recruits 25 students per annum
8. **IAPI/DIT Advertising and Digital Communications programme is run in conjunction with the Institute of Advertising Practitioners in Ireland.** The IAPI co-delivers this part-time post-graduate programme which leads to the award of a Postgraduate Diploma (level 9 on NFQ). Most of the lecturers are working in the Advertising industry. The programme involves attendance at classes each Tuesday evening, Thursday evening and Saturdays (all day) for a calendar year.
9. **Postgraduate Diploma in Financial Services** is offered in conjunction with Summit Finuas Network (a national network of partner associations and companies operating in international financial services in Ireland).
10. **Programmes with the Marketing Institute of Ireland**

There are three programmes being offered:

- Executive Master's degree in Marketing which leads to the award of a MSc in Marketing
- Conversion course in Marketing for non-Business graduates leading to a Postgraduate Diploma.
- Digital Marketing and Analytics which leads to an MSc degree. Attendance is required two evenings per week and Saturdays over a 16-month period. The programme is delivered by leading marketing academics and digital marketing practitioners and requires each student to complete a company-based project in the final semester.

The Marketing Institute pays the lecturers on these three programmes but the award given on successful completion of the programme is a DIT award.

In addition to the list above of programmes that lead to a major award, there are fourteen other collaborations that lead to a minor award such as a Continuing Professional Development certificate.

The examples of collaboration with enterprises by a single institution are given to illustrate the closeness of at least some Irish HEIs to industry and the labour market in respect of Business Management programmes.

3.2.4 Engineering education operating close to industry including a case study of UCD

Degree programmes in Engineering include 3-year programmes in Engineering Technology leading to an Ordinary Bachelor degree (NFQ level 7) and 4-year programmes in Engineering leading to an Honours Bachelor degree (NFQ level 8). While traditionally the 4-year degree was the academic qualification which was required to attain Chartered Engineering (CE) status, this has changed recently so that now a Master's degree is required by those seeking CE status. Master's degrees generally require a further calendar year of studies in which 90 ECTS are earned.

There are pathways from Apprentice programmes for Electricians to Engineering Technology degrees, from there to Engineering Honours degrees and thence to Chartered Engineering status. These pathways are offered in CIT and DIT.

Two pathways from Apprentice to degree programmes: have been available in recent years:

- (a) Those who have completed the Apprentice programme and who have the school Leaving Certificate could take a bridging course during the summer and then gain direct entry to year 2 of the Ordinary Bachelor degree. The bridging course included modules on Mathematics, Electric Circuits, Autocad and ECDL (European Computer Driving Licence). There were 30 students per annum availing of this route but has declined in recent years to about 6 per annum.
- (b) The Electricity Supply Board (a state-owned company, the main supplier of electricity in Ireland) sponsored students who had completed the first two years of the Apprentice programme for Electricians to transfer to year 2 of the Ordinary Bachelor degree. After completing the Ordinary Bachelor degree students could then proceed to the Honours Bachelor degree and Master's degree if they wished. Approx. 30 students per annum availed of this route. They usually involve a 2-year programme including bridging studies in Maths and Physics plus a Master's degree.

Both the above schemes are in danger of falling into disuse as the number commencing Apprenticeships has decreased sharply in recent years to about 20% of the peak levels.

Placement/Internship in Engineering Education Programmes

While programme designers are strongly influenced by the requirements of Engineers Ireland, the latter body makes no requirements for student placement in the bachelor or master's degrees it accredits. It does, however, require graduates to develop specific competences which are related to practice in industry before it grants CE status. These competences can be acquired during work in industry following graduation.

Some engineering programmes include a mandatory period in industry as part of the Honours bachelor degree programme and the case study chosen to illustrate this is the College of Engineering and Architecture at University College, Dublin.

University College, Dublin (UCD)

UCD is Ireland's largest university and has a long history in the provision of Engineering programmes. Traditionally, honours degrees in engineering were 4-year programmes and that degree was required for admission to Chartered Engineer status. However, in the light of an amended requirement of a Master's degree for admission to Chartered Engineer status, UCD has amended its provision of Engineering programmes to a Bachelor (3-years) plus Master's (2-year) format. While this format of 3 + 2 is very common in continental Europe, it is very uncommon in Ireland.

As part of the new structure of degrees, UCD has introduced a mandatory internship in the second semester of the first year of the Master's degree. The duration of this internship is approx. 8 months from January to September, thus encompassing the second semester plus the summer vacation. These placements are organised by the relevant school within the college but it is possible for a student to find his/her placement but it must be approved by the school. The student can earn 30 ECTS credits for the placement.

To support internships, UCD has established a support office headed by a Head of Internships; this service is part of the Registrar's Office. There is also a Steering Committee chaired by the Deputy Registrar and a Forum of all managers of internships. In addition, each college or school can allocate duties to either academic staff members or administrators to support student internships. It is estimated that approx. 800 students go on internships each year. In the case of Engineering, there is an Internship Manager for the college which has five schools of engineering.

Generally, students are paid for the placement but that is not mandatory. The placement earns credits for the student and usually involves an assignment and a report by the students but can also involve the maintenance of a diary. The assessment of the student's performance is carried out by faculty members based on the assignments and report. It would cause problems for the school if the assessment were carried out by industry personnel as the rules of the university state that those undertaking assessment of student work must be trained to do so.

UCD has drawn up a standard Internship Agreement which can be used by any school. It sets out the rules governing internships and includes

- Responsibilities of the host (employer)
- Intellectual property rights
- Student discipline
- Employers liability insurance (must be provided by the employer)

The agreement must be signed by the employer, the student and UCD. In addition, there is a Student Internship Acceptance Form which the student must sign and which sets out in greater detail the duties and responsibilities of the student. There has been a rapid increase in the number of internships undertaken by UCD students in recent years and so the university has produced a policy document entitled Internship/Work Practice Experience: Guidelines and Good Practice which has been approved by the Academic Council of UCD. While initially approved in 2007, the document was updated in May 2014.

Most internships take place in Ireland but it is permissible to have an overseas internships provided the relevant School approves it. The experience of the university is that employers prefer students in their penultimate years (final year students are too pre-occupied with their final exams). Increasingly, employers see the internship as part of a recruitment policy; if the student does well, quite often a job offer follows when the student completes the final year.

Role of companies in the curricula development process for Engineering

There are no examples of industry as the initiator of a programme but most universities have an Industry Liaison Committee which influences programme development at bachelor and master's degree level. Industry directly influences the professional development of Engineering graduates who are seeking CE status as candidates must acquire competences specified by Engineers Ireland.

These competences are

1. Design Skills: Deepened technical understanding of Design and Experimentation
2. Project management: Involvement in multidisciplinary projects
3. Commercial Awareness: explored the various steps between idea and reaching the marketplace; developed Business Planning and Technology Transfer

All these competences can be developed in the world of work rather than academia. It is estimated that a period of approx. 4 years working in industry is required to develop the competences.

International Recognition of Engineering Qualifications

The Bologna Process has been making progress in advancing the international recognition of academic awards, including Engineering qualifications since 1999. But progress has been slow and the international recognition of professional engineering qualifications has long been divided between the Washington Accord countries (including USA, Canada, UK, Ireland, Japan, India and Korea) and the FEANI countries (32 European countries). In recent years there has been a project to produce certification for engineering countries that would

encompass all countries in Europe and some outside Europe. This project has resulted in the formation of the European Network for Accreditation of Engineering Education (ENAAEE)

ENAAEE quality assurance agencies and accreditation agencies to award the EUR-ACE certificate to an engineering degree programme which has reached certain educational standards. To date, thirteen agencies are participating in the EUR-ACE scheme: ASIIN (Germany), CTI (France) Engineering Council UK, Engineers Ireland, AEER (Russia), OAQ (Switzerland), KAUT (Poland), ANECA (Spain), FINEEC (Finland), QUACING (Italy), ARACIS (Romania)MUDEK (Turkey) and Ordem dos Engenheiros (Portugal). While these are important agencies with a wide geographical spread, they by no means reach all engineering graduates in Europe. Some countries have refused to participate because the status of the network is a private company, albeit a not-for-profit company.

4 Developments and main reforms in the last few years, current political debates

4.1 National Strategy for HE 2030 (Hunt Report)

The government established a Higher Education Strategy Group chaired by Dr Colin Hunt, an industrialist, and gave it responsibility for the development of a strategy for higher education. It reported in 2011 at a time of severe constraints on government finances. Its main recommendations included:

- Higher education students should have an excellent teaching and learning experience with state-of-the-art resources
- HEIs should put in place systems to capture feedback from students
- There should be clear routes of progression and transfer, as well as non-traditional entry routes
- All HEIs must ensure that all teaching staff are both qualified and competent in teaching and learning
- Investment in R & D should be increased
- Engagement with the wider community must become more firmly embedded in the mission of HEIs
- There should be system-wide collaboration between HEIs and smaller HEIs should merge
- Technological universities may be established
- The funding base should be broadened through reform of student financing including a direct student contribution based on an upfront fee with a deferred payment facility (Strategy Group, 2011).

4.2 Technological universities

Arising from the recommendations of the Hunt Report (above), the government initiated a process whereby Institutes of Technology could merge and seek re-designation as a Technological University for the merged entity. A detailed process was designed to assess any applications received, including criteria for such universities. At the time of writing (October, 2014) two groups have successfully passed phase 1 of the process. These are a merged group in Dublin of DIT with the IoTs in Blanchardstown and Tallaght and a merged group in the south west involving CIT and Tralee IoT.

4.3 Mergers of support organisations and HEIs

A merger of agencies supporting higher and further education has taken place. Four agencies (Irish Universities Quality Board, Higher Education and Training Awards Council, Further Education and Training Awards Council and the National Qualifications Authority of Ireland) have merged to form Quality and Qualifications Ireland.

There are proposed mergers of institutes of technology including the two mentioned above. Other groupings of IoTs are also in discussions about possible mergers and applications to be designated as Technological Universities.

Teacher training colleges are being asked to merge with each other and with universities under a plan devised by an International Review Panel which reported in July 2012.

So the scene that will likely emerge in the next three years is a higher education sector with a greatly reduced number of institutions

4.4 SOLAS and Further Education

A new agency, named SOLAS has replaced FAS as the agency with responsibility for apprenticeships and the co-ordination of FE.

The number of regional education bodies, previously called Vocational Education Committees, has been reduced from 33 to 16 bodies named Education and Training Boards

In 2014, SOLAS published its strategic plan (SOLAS, 2014). It has defined its overall aim as being to develop a world-class integrated system of FET which will promote economic development and meet the needs of all citizens. Five high level strategic goals were set out:

- Skills for the economy (needs of learners, jobseekers, employers and employees)
- Active inclusion of people of all abilities with special reference to literacy and numeracy
- Quality provision (high quality education & training programmes)
- Integrated planning and funding on the basis of objective analysis and needs
- Standing of FET (a valued learning path to employment, career, personal and social options)

The Department of Education & Skills (DES) accepted the strategic plan proposed by SOLAS and more recently DES published an Apprenticeship Implementation Plan (Department of Education and Skills, 2014). This plan was summarised into 10 Key Implementation Actions, starting with the appointment of a National Apprenticeship Council in Q3 2014. The new Council was announced on 18 November, 2014 and is chaired by the Chief Executive of the Electricity Supply Board and includes 14 other members of whom seven are employer representative, two are trade union representatives, five are representatives of education bodies and one is a senior staff member of SOLAS. Subsequent steps include a review of existing apprenticeships and a call for proposals for new apprenticeships later this year. These activities (the SOLAS strategic plan and the DES Apprenticeship Implementation Plan) arise out of the Review of Apprenticeship which was described in Section 1.4 of this report (see page 15).

4.5 Financing

The financing of HE and FE is a topic of current debate. In 1997, the government introduced virtually free HE at undergraduate level but since then the increased number of students combined with an economic crisis to make the policy unaffordable. The Hunt Report (2011) had recommended a broadening of the financial base for HE through the reform student financing including a new form of direct student contribution. In July, 2014 the Minister for Education & Skills appointed an Expert Group chaired by former trade union leader, Peter Cassells on Future Funding of Higher Education and this group is expected to report by the end of 2015.

5 Conclusions

Ireland is seeking to introduce a number of reforms including the introduction of technological universities, a reduction in the number of support agencies and a wider spectrum of apprenticeships. The higher and further education systems are being increasingly aligned to the needs of the economy as evidenced by the changes being introduced and the letter sent by the Minister for Education and Skills to the chairman of the HEA on 30th May, 2013 setting out the key objectives of the higher education system for the period 2014-16:

To meet Ireland's human capital needs across the spectrum of skills by engaged institutions through a diverse mix of provision across the system and specifically targeted initiatives

To promote access for disadvantaged groups and to put in place coherent pathways from second level education, from further education and other non-traditional entry routes

In a report to the Minister for Education & Skills by the HEA which sets out how the key elements of the National Strategy can become a reality, it is recommended that

“The Department of Education and Skills should without delay begin the process of putting in place the arrangements for integrated strategic planning between Further Education and Higher Education sectors” (April, 2013).

Part 2: National Framework of Qualifications

1. Short introduction

The Irish National Framework of Qualifications was launched in October, 2003. It had been preceded by the establishment in 2001 of a special agency, the National Qualifications Authority of Ireland (NQAI), which was given the responsibility for the establishment and maintenance of a NFQ. In the period 2001 to 2003, the NQAI had indulged in widespread consultations with all relevant bodies that might be affected by the new NFQ.

The types and expected learning outcomes of national awards made by further and higher education institutions at undergraduate and postgraduate level are described in the National Framework for Qualifications (NFQ) (www.nfq.ie). The Framework has ten levels, which include awards made by schools, further and higher education and training institutions. Awards in the NFQ are nationally and internationally recognised and are underpinned by legislative quality assurance arrangements. There are overarching level indicators at each of the 10 levels of the Framework with associated sub-strands of knowledge, skill and competence appropriate to the achievement of an award at each of these levels. The NFQ is aligned with the Bologna Framework (Framework for Qualifications Framework for Lifelong Learning (EQF)).

Education and Training Awards

There are two overall groups of classes of awards in the NFQ: Major and Non-Major. Major awards are the principal class of awards made at each level. They have a larger volume and breadth associated with them than non-major awards. There are sixteen Major award-types included across the ten levels of the Framework including eight higher education and training award-types which are made from levels 6 - 10. There are three classes of non-major award: minor, special purpose and supplemental. Non-major award types facilitate the provision of a wide range and variety of programmes. The volume associated with higher education and training awards is expressed in terms of the allocation of European Credit Transfer and Accumulation System (ECTS) compatible credit. The equivalent system for VET (ECVET) which has been much discussed at European level has not yet been implemented.

Access to initial higher education and training is largely on a competitive basis following successful completion of the School Leaving Certificate examinations. Access may also be gained through a range of alternative progression mechanisms, including those for mature entrants (23+); for holders of further education and training awards; or through the recognition of prior learning.

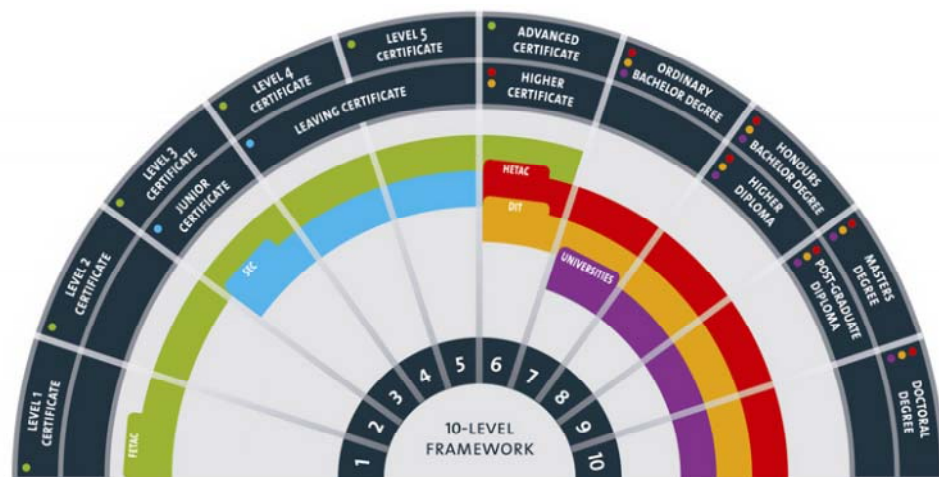
1.1 Which education sectors/qualifications are covered?

All education and training awards are covered by the NFQ. It was an important decision of NQAI that there should be no distinction between education awards and training awards. Hence, the awards in the framework cover all awards made in Ireland.

1.2 Are there other separate qualification frameworks e.g. for higher education

No, there are no separate qualification frameworks for sectors. But all FET awards are within the range 1 – 6 while all HE awards are within the range 6-10. The framework facilitates the progression of learners from lower levels to higher levels.

The one level where there is overlap is level 6, the highest level for FE awards and the lowest certificate level for HE awards.



2. Status quo of the European referencing process to EQF

In 2006 the Irish NFQ was deemed compatible with the EHEA (Bologna) framework following its review by a panel of experts. It was the first framework in the EHEA (Bologna Process) to be deemed compatible.

In 2009 the Irish NFQ was deemed compatible with the EQF following a review by a panel of experts. Again it was first in Europe to be deemed compatible.

Since the NFQ was devised many countries in the Bologna Process have devised their own frameworks and the EQF was adopted. There will be a major review of the NFQ in 2016.

3. The Structure of NFQ

a. **Number of levels:** 10 levels. When the NFQ was established there were virtually no models on which it could be based. Since then, the EQF and many countries have opted for 8 levels and the number of levels is likely to be an issue for the NFQ when it is reviewed in 2016.

b. **Types of descriptors:**

They are based on learning outcomes, using 8 sub-strands of knowledge, skills and competences.

c. **Feature on levels**

Levels 1 – 5 include all school examinations and some further (vocational) awards. Levels 6 – 10 include all higher education awards and the upper level of further (vocational) education awards

4. Legal form (e.g. law) and legal impact (e.g. for the individual learner)?

The framework enjoys a legal status based on the Qualifications (Education and Training Act), 1999.

There is no direct legal impact for the individual learner. Rather, the 1999 Act operates at system level and creates obligations for the institutions which provide programmes leading to awards.

5. Main political objectives

(a) Facilitate inclusive Lifelong Learning

(b) Improve quality and relevance of education to the labour market and society

One step being taken by QQI in this respect is the updating of its policy on the alignment of professional qualifications with academic qualifications. This should lead to an increase in the number of professional qualifications (e.g. Accountancy and Legal qualifications) on the framework.

6. Link to other national strategies (e.g. LLL, Quality, Permeability, Transparency, Credit systems)

The framework is linked to the national skills strategy. It is also linked to the national strategy for higher education and the national strategy for further education and training (VET).

7. Inclusion of informal or non-formal learning outcomes?

Both formal and non-formal learning outcomes can be recognised in the NFQ. All HEIs were required by NQAI to produce a policy on the recognition of non-formal learning. These policies are subject to revision by QQI based on the 2012 Act under which NQAI was subsumed into QQI. However, there are no immediate plans to require HEIs to modify their RPL policies.

8. Connection to the labour market?

When the NFQ was being developed in the period 2001 -2003, representatives of the labour market were consulted by NQAI. Following the launch of the NFQ in October 2003, workshops were held around the country to familiarise the labour market with the new NFQ.

In June 2013, QQI sought submissions from social partners on the appropriateness of its draft strategy statement. A response from IBEC indicated that 70% of its members had indicated that accreditation of an award was significant when assessing the value of an award. This suggests a high level of connection between the NFQ and the labour market.

9. Role of social partners in the development process

Representatives of the social partners (employers, teachers' unions, students' unions, professional associations) were consulted and served on the consultative committee alongside representatives of educational institutions. The NQF has sought to encompass all awards, both education and training awards and to include awards of public HEIs and private HEIs on an equal basis. Historic awards, i.e. awards made before the NFQ was published have been included in the framework.

10. Quality assurance mechanisms/establishment of new institutions e.g. accreditation agencies

QQI and Irish HEIs have implemented the European Standards and Guidelines for Quality Assurance.

The guidelines for external Quality Assurance were pursued by all awarding bodies and are now being pursued by QQI.

11. Public communication/level indications in certificates?

It has become common for academics to refer to a "Level 8 degree" or a "level 9 programme". But it is not usual to include the NFQ level on the parchment issued by universities and other higher education awarding bodies. Recently, QQI has taken a decision that it will include both the NFQ level and the EQF level on all parchments it issues from January, 2015. This will apply to both Further Education and Higher Education awards made by QQI.

Information about the level of the programme is also included in the Diploma Supplement and Certificate Supplement to which every graduate is entitled. Practice in regard to the Diploma Supplement varies in Ireland, with some HEIs

issuing a hard copy to every graduate together with the degree parchment, some issuing electronic copies which the graduate can print and some HEIs issuing the document only when requested.

12. Current political debates, latest developments.

NQAI was merged with three other agencies (Irish Universities Quality Board, Higher Education and Training Council and Further Education and Training Council) to form Quality and Qualifications Ireland (QQI) which was launched in November 2012. QQI now has responsibility for the maintenance of the NFQ. Currently, activation policies for export markets e.g. international students recruited for Irish HEIs and Irish partnerships with foreign HEIs is a hot topic. This follows recent controversy surrounding foreign students registered in language schools but it is alleged they are enrolled to enable them to live and work in Ireland, not to study.

The labour market relevance of education and training for apprentices and further education programmes is being assessed by SOLAS, the new authority for FET.

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