This note, for discussion, is written in response to the Apprenticeship Review.

New Apprenticeship System

Apprenticeship is a system of enabling people, recruited through employer collaboration, to acquire qualifications through a combination of mentored employment with formal education/training. The Apprenticeship Review is occurring when major national strategic questions are being discussed and this note suggests that apprentice, work-and-study, formats can play a major role in answering those questions.

The national strategic questions include:

- The future planning and arrangements for Higher Education (HE),
- The future roles of Education and Training Boards (ETB) and that of SOLAS,
- The effective resourcing of high quality post-second level education and the future balance between the contribution of the individual (or family), the State and employers,
- The implications of the growth in Ireland’s young population,
- The implications of the major projected growth of Ireland’s older adult population,
- The challenge of creating employment at unprecedented levels to match the needs of Ireland’s young and older populations,
- The necessity, in a global context, to achieve high comparative standards in qualifications, productivity and innovation.

Apprentice formats, this note suggests, have major potential in addressing these issues at various levels and in all sectors of the Irish economy.

Ireland may have one advantage. Apprentice education is so undeveloped that an opportunity exists to create a comprehensive New Apprenticeship System addressing future skill needs across sectors and the learning/training needs of diverse learners at various levels using the most advanced delivery, pedagogical and organisational methods.

Apprenticeship

Apprenticeship, that combination of mentored work experience with formal education/training, has the potential to enable the acquisition of qualifications at a range of levels and in many sectors. The advantages of apprenticeship are well known and include:

- They offer employers opportunities to address their future skill needs and to influence education/training programmes.
- They offer diverse learners the advantage of combining year round experience with learning. They motivate learners by the immediate relevance of learning. They enable learners to earn year round while learning in a more mature adult environment.
- They should enable older experienced people to acquire qualifications. The economics of investing in the up-skilling of older people have changed in favour of that investment.
- They offer the State a diversity and relevance in educational provision and a different resourcing model to full-time education. They can be cost effective.
- They graduate persons with a closer-to-market experience and with stronger employability and entrepreneurial skills.

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What is referred to in Ireland as “apprenticeship” is usually a “FÁS Apprenticeship”, a limited, but important all male scheme largely confined to engineering and construction trades and one level. During the height of the boom a quarter of the male age cohort was recruited annually to this “FÁS Apprenticeship” scheme with half of these recruited to train for three occupations – electrician, carpenter and plumber. Little effort was made to up-skill experienced workers.

An Apprentice Review, as a first step, should widen the national understanding of apprenticeship by level and sector. A possible future pattern of New Apprentice Qualifications (with NFQ levels) is the following:

- Junior Apprentice (Level 5)
- Apprentice (Level 6)
- Senior Apprentice (Level 7)
- Professional Trainee (Level 8)
- Graduate Trainee (Level 9)

Apprentice formats may be used in many sectors. Some examples:

- Internationally they are used to acquire professional qualifications in areas such as Engineering, Accountancy and Nursing. In England now, the Government, in actively promoting apprenticeships, is also promoting professional apprenticeships with the strong participation of major companies. Articled clerks are apprentices.
- Professional bodies can play an important role in promoting the apprentice format of earning membership at various levels.
- The Accelerated Technician Programme of the late 1990s, with employer involvement in recruitment of largely non-school-leavers, offered a sandwich programme of six months in College, then six months mentored employment and again six months in College. This led to Level 6 qualifications in Manufacturing, IT and Good Manufacturing Practice. Many progressed to Level 7.
- IT skills will continue to be strongly in international demand. Some forms of Computing and Programming lend themselves to apprentice formats at various levels.
- Seasonal Sectors such as Agriculture/Horticulture and Tourism offer possibilities of apprentice formats with employment in high season and education during low season.
- Sectors with low paid workers such as caring, catering and cleaning may, through Junior Apprentice formats, increase qualifications and productivity justifying higher pay rates.

There are profound changes since the last review of (FÁS) apprenticeship. Despite the recession there are over 0.75m. more people employed in this State. The sectorial breakdown of the economy changes. A higher proportion of young people complete Senior Cycle.

**Youth Demographic**

Ireland has the highest proportion of 0-14 year olds in the EU-28. It has the highest Youth Dependency Rate (YDR), 0.32, in the EU. The YDR is the ratio of 0-14 year olds to 15-64 year olds. The EU YDR is 0.23. The number of births in Ireland in the last five years has been the highest in the history of the State. The average birth rate in the period 2006-2011, 73,000, exceeded by 23,000 the annual rate in the period 1991-1996. For the next 25 years the maintenance of an inclusive, growing,
high quality Educational and Qualifications System and youth employment growth will require major investment. This resource challenge will require a focus on strategic requirements and effective delivery methods.

Apprentice formats have a potential role in focussing on key future skills and ensuring effective resource utilisation.

In the coming 25 years the average age of Ireland’s population will strongly increase bringing other educational/skill demands. Apprentice formats can enable older workers also (see below).

Youth Unemployment

Ireland has a strong and growing young population at a time when youth unemployment is a major global challenge. Across the EU-27 unemployment of those under 25 is 23.5%. Ireland’s rate is higher at 30.3%, a figure ameliorated by the emigration of young Irish people, including many with high qualifications.

Youth unemployment rates vary strongly across Europe. Spain and Greece have rates above 50% while Italy nears 40%. The lowest values of youth unemployment, below 8.0%, are to be found in Austria and Germany. There are many reasons for these sharply contrasting rates. One of them is that Germany and Austria have the dual-system of vocational education through Employer/State collaboration which confers vocational qualifications on high proportions of their populations. The dual system enables strong employer contribution to the acquisition of skills and qualifications.

- Education at a Glance 2012 gives the proportion of the 25-64 population with vocational qualifications as follows: Germany 56.2%, Austria 57.5%, Ireland 11.1%.
- In comparison to many European countries Ireland has an undeveloped apprentice system.
- The German and Austrian figures challenge that lack of development. They challenge Ireland’s ambition to recruit over 70% of school leavers directly into full-time (i.e. academic year) Higher Education. They challenge the rate of involvement of Irish employers across all sectors in work-and-study formats addressing future skill needs.
- Recently Germany signed memoranda with Greece, Italy, Spain, Portugal, Latvia and Slovakia to assist these countries in establishing vocational educational systems. Germany recently recruited 5,000 young Spaniards to apprenticeships in the dual-system.
- The EU is supporting member States to develop high quality apprenticeship and trainee programmes. England is now strongly promoting apprentice formats, up to professional level.
- Germany’s economic success owes much to its Mittelstand, its high technology medium sized export oriented enterprises. Their effectiveness owes much to the dual system of skill education.
- Ireland, to provide the vast additional employment its population requires, needs to further develop its own Mittelstand. Work-and-study initiatives can promote key future sectors such as Energy Production and Conservation, Marine Resources, Food Production/Processing, Caring Services, Activity and Cultural Tourism, IT Delivered Services.
National Framework of Qualifications (NFQ)

The international frameworks ISCED and ISCO give levels of qualifications and occupations respectively. These are obviously related. Those concerned with international competitiveness ensure the quality of qualifications, the matching of qualifications to future skill needs and the productivity of occupations at all levels.

Within Ireland’s NFQ, this note suggests the important role that apprentice formats at Level 5-9 can play in ensuring that quality, that matching and that productivity. It suggests the titles Junior Apprentice, Apprentice, Senior Apprentice, Professional Trainee and Graduate Apprentice for these levels. The minimum entry standards, through qualification and experiential learning, should be appropriate to each Level involved. The system should be designed to enable progression to higher levels for those earning that progression.

The minimum entry standard to a “FÁS Apprenticeship” is at Level 3. A successfully completed FÁS Apprenticeship leads to a Level 6 qualification. Prior achievement is not given adequate recognition. The common end level does not adequately distinguish between occupations/trades/technologies.

- A Level 5 qualification might give encouragement, employment and further opportunity to those with lower school achievement.
- An advanced Senior Apprentice programme might build on excellent school achievement and significant experience to merit a Level 7 qualification appropriate to the occupations targeted.

Immediate enrolment of school leavers into full time (i.e. academic year) Higher Education has been increasing and targets above 70% of the age cohort are advocated. It is questionable whether the preparedness or motivation of school leavers justifies such high targets. Non-completion is costly for the State and the individual. As enrolments have increased the pattern by level has changed. Much fewer Level 6 courses are on offer. The enrolment at level 7 has decreased. This changed pattern raises serious questions including the matching of qualifications to future occupational levels.

- Apprentice formats have the potential to play a role in answering those questions.
- As the school leaving population increases these patterns suggest a major provision of apprentice, work-and-study, formats at Levels 6 and 7.

The State now resources a Transition Year (TY) with about 25,000 participants annually. It is a regressive investment in those statistically performing better at school from statistically better off homes. It gains no credit for the participants in the NFQ. The State could finance major apprenticeship programmes including programmes for weaker students from less affluent backgrounds and for older lower skilled workers with the resources allocated to TY.

The establishment of ETBs and SOLAS should be the occasion for a major review and up-grading of Vocational Education. Part of that review should reflect the importance of Apprentice formats. Some PLC courses that have employer recognition should be considered for transformation to a work-and-study apprentice format through the employment of the participants in significant mentored paid work experience and the incorporation of that experience in the award.

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Older Demographic

In developed countries the median age is predicted by the UN to increase from 37.4 now to 46.2 in 2050. Ireland, with the lowest median age in the EU now will also share in that aging. The increase will have profound effects on social, cultural and economic life. It will change the economics of investing in the up-skilling of older adults in its favour. Already in Ireland the age for pension entitlements has been raised.

Table 1 below seeks to illustrate the growth of the older population by taking a middle range prediction of the CSO. It shows the increase in population of all those over 50, all those over 65 and over 80. This unprecedented change will make many demands. It will require greater, longer and more productive participation in the workforce by older people. This can be enabled by investment in up-skilling and the professional development of older people. Apprentice work-and-study formats have a role to play in this endeavour.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>2011</th>
<th>2026</th>
<th>2041</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>4,575 (100%)</td>
<td>5,103 (100%)</td>
<td>5,701 (100%)</td>
</tr>
<tr>
<td>All 50+</td>
<td>1,266 (27.6%)</td>
<td>1,819 (35.6%)</td>
<td>2,259 (39.6%)</td>
</tr>
<tr>
<td>All 65+</td>
<td>532 (11.6%)</td>
<td>855 (16.8%)</td>
<td>1,276 (22.4%)</td>
</tr>
<tr>
<td>All 80+</td>
<td>128 (02.8%)</td>
<td>219 (4.3%)</td>
<td>406 (7.1%)</td>
</tr>
</tbody>
</table>

By 2026 over 35% of the population will be over 50. The number over 65 will have increased by more than 300,000

By 2041 the proportion over 65 will have doubled and the number will exceed 1.25m.

Older Adult Employment

Ireland now faces the severe challenge of having both to create skilled employment for its growing young population as well as increasing the work force participation of its growing older population. Table 2 shows the participation rates by older adults. In the future much higher rates will be required and desired by 55-64 year olds and by a greater proportion of those over 65.

<table>
<thead>
<tr>
<th>AGE</th>
<th>45-54</th>
<th>55-64</th>
<th>65+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>80.0</td>
<td>59.8</td>
<td>8.9</td>
</tr>
<tr>
<td>Male</td>
<td>89.6</td>
<td>70.7</td>
<td>13.6</td>
</tr>
<tr>
<td>Female</td>
<td>70.5</td>
<td>48.9</td>
<td>5.1</td>
</tr>
</tbody>
</table>

Participation by older adults in the workforce is strongly related to qualifications. Ireland has a larger gap between the average qualifications of its older citizens and younger people than European countries and it is known that, by international comparison, older Irish adults participate less in forms of adult education. The promotion of greater workforce participation, now a national priority, requires new educational/training initiatives and apprentice formats may play a valuable effective role in these.
Many adults engage in part-time work and for some it may be possible to formalise and log such work experience through employer cooperation with educational activity into an apprentice programme leading to a qualification ensuring more productive enduring satisfying employment. This may also facilitate some in returning to part-time work.

Ireland, unlike, say, Norway, has never had an apprentice system that recruited experienced people and gave recognition to that experience. This should now be actively considered.

Recent research published by Anglia Ruskin/Syracuse University addressed entrepreneurial activity by older people. It disproves the conventional wisdom that such activity is a “young person’s game”. The opportunity for starting an enterprise increases with age because many entrepreneurial resources such as professional and industry experience, disposable income and assets accumulate with age. It is possible to envisage an “apprentice” format with older enterprising people embarking on mentored self-employment with related education/training leading to self-employment if not owner manager status.

**ICT and the Apprentice Review**

The power of Information and Communication Technologies will continue to grow into the future. A Review of Apprenticeship must take full account of ICT for a variety of powerful reasons. These include:

- IT skills are in demand. The EU reports a deficit of 900,000 people with IT skills at various levels. Apprentice formats can play a major role in addressing this deficit. This should be a priority.
- Every sector uses ICT. It is essential in the design of apprentice programmes for any sector that a mastery of the relevant IT usage and application be a central part of the training and experience.
- ICT can be the medium of delivery of skills in a variety of blended learning formats. A review of apprenticeship and a recommendation of a New Apprenticeship programme for Ireland should incorporate the most effective interactive ICT pedagogy.
- This note draws attention to the urgent employment and skill needs of older people. A particular emphasis in formats addressing older learners is a full mastery of ICT skills and the enabling of autonomous access to information and ICT training.
- The Review of Apprenticeship gives important emphasis to literacy and numeracy for apprentices. It is known that high literacy and numeracy are keys to success and progression. A third key skill is a mastery of ICT. Therefore a national multi-level New Apprentice programme should incorporate across sectors a common phased literacy, numeracy and ICT programme. Its delivery by interactive blended learning should improve standards, promote progression and reduce costs.
- ICT has the capacity to enable the variety of career, educational and employment advisory services now available to be replaced by a National Advisory Service accessible on the internet and the High Street by individuals, adults and schools. Many would be advised to seek apprentice formats if these became available.

In many ways a Review of Apprenticeship will be judged by its understanding of the future role and potential of Information and Communication Technologies.

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New Apprentice System

This note advocates the promotion of a national New Apprentice System where apprentice formats enable the acquisition of qualifications relevant to future occupations at various levels across all sectors of the economy. The advantages of apprentice formats – advantages such as relevance, experience, motivated learning, employability – commend themselves in a State with an unprecedented need to create further employment for both young people and older workers.

- The New Apprentice System should include apprentice formats at various levels: Junior Apprentice (Level 5), Apprentice (level 6), Senior Apprentice (Level 7), Professional Trainee (level 8), Graduate Apprentice (Level 9).
- The New Apprentice System should include apprentices in every sector of the economy at levels appropriate to future occupations in these sectors.
- The New Apprentice System should be organised, overseen and promoted by a National Apprentice Committee with representatives from Employers and Employer Organisations, Employees, SOLAS/ETBs, IoTs, Universities, Professional Bodies, Development Agencies.
- A national target of 10,000 entrants to apprentice formats per annum – 6,000 school leavers and 4,000 mature and older adults – should be set. To ensure continuity of provision and to avoid fluctuation a rolling five year intake plan should be agreed by employers and education/training providers in each sector. Initiatives and intakes above this should be individually agreed.
- Initially a target of 50 occupations across sectors and levels should be adopted. These should be chosen to give priority to future skills, to gender equity and inclusiveness, and, in particular, to indigenous sectors of future importance.
- Flexibility in format and duration should be enabled provided the combination and phasing of mentored logged experience and formal education/training meets quality criteria. Formats will vary by level, sector, and entry level. The National Committee, in the light of experience, should recommend a range of “standard” formats.
- Special formats should recognise appropriate experience and facilitate older workers.
- Training grants to employers and welfare provision to individuals should favour participation in apprentice formats. For school leaver entrants payment during formal education/training should relate to weekly full time student grant rates.
- In the New Apprentice System a common feature should be a phased programme of literacy, numeracy and ICT skills. This promotes success and progression and meets employer needs. Other common elements between different apprentice programmes should be exploited to effect economy of delivery. In some Level 5 Junior Apprenticeships, ETBs and SOLAS and employers may wish to include individual Leaving Certificate subjects or their equivalent.
- Professional bodies should encourage apprentice formats as routes to membership at various levels.
- The introduction of a new system offers an opportunity to design an exemplary system which incorporates the most up-to-date pedagogy, delivery methods and blended learning. ICT skills should be addressed in all programmes and their use in promoting learning fully exploited.