# OECD REVIEW OF HIGHER EDUCATION IN IRELAND

## Higher Education System and Responding to Ireland's Skills Needs

**Submission by:**


**Date: 4th February 2004**

# OECD REVIEW OF HIGHER EDUCATION IN IRELAND
# Higher Education System and Responding to Ireland's Skills Needs

## Introduction

The Expert Group on Future Skills Needs (EGFSN) advises Government on skills and labour supply issues for the enterprise sector and makes recommendations on the steps required to address Ireland's skills needs. The National Training Advisory Committee, which was recently merged with the Expert Group, provides independent and strategic advice in relation to training people in employment. The EGFSN considers Higher Education to be crucial to meeting the future skills needs of the Irish economy and it is in this context that we wish to make a submission to this important review.

## Setting the Context

Much economic progress has been achieved in Ireland over the past decade. The higher education system has played a key role in contributing to our progress by rapidly increasing the output of well qualified people with relevant skills.

We are now at a new stage in our economic development. Our strategic goal of making the transition from an *investment*-driven economy to an *innovation*-driven economy will require fundamental changes in both the education and business environment. Building and sustaining knowledge intensive industry will depend critically on the supply of highly-skilled people, including people with world class research skills. Ensuring the necessary skills are in place is even more essential, particularly against a backdrop of high costs at home, rapidly intensifying competition from abroad and our heavy reliance on a small number of key industrial sector, including ICT, Life-sciences and Food.

The EGFSN has, in its reports, outlined the skills requirements of the economy to 2010 in these key sectors. Our report, *Benchmarking Education and Training in Ireland for Economic Development* also highlights gaps within the broader educational system that need to be addressed. Our submission draws on the EGFSN's research findings and reflects those areas within the Higher Education System which we believe require further focus.

## Key Issues for Higher Education System Emerging from EGFSN Research

### Research Excellence

- The importance of promoting Ireland as a Centre for Research Excellence can not be understated. Efforts in this regard made by SFI (e.g. attracting world class Irish and foreign researchers) are strongly commended.

**Diverse Skills Needs of the Economy, Role of IoTs, Universities and Vocational Institutes**

- The binary system in operation provides the basis for different but complementary roles of the IoTs and universities. The advantages of IoTs (e.g. strong industry links, proximity to industry, regional location, turnout of technically skilled students), should not be lost.

- Recognition must also be given to the importance of middle level skills to meet the changing needs of the economy. In this context, a balance of skills between the vocational/technical training system and higher education system needs to be maintained.

**Links between Enterprise and Third-Level**

- The higher education system is required to meet the needs of different types of customers: learners, enterprise, and society as a whole. From an enterprise perspective, there is a need for third level institutions to respond to and adapt to the changing needs of the environment (the Global Competitiveness Report 2003-2004 (WEF, 2003) ranks Ireland in 11$^{th}$ place in terms of the strength of collaboration between university/industry).

- There is a need for all third level institutions to adopt a much greater and more strategic enterprise focus, both in terms of satisfying the training requirements of business and industry as well as fostering new business and start-ups. While there have been major advancements in this area by some institutions in recent years, an institutional wide policy needs to be developed.

**Skills Mismatch /Multi-Disciplinary Skills**

- Research by EGFSN indicates employers are concerned that courses undertaken by graduates often do not reflect the changing skills needs of the economy. A better balance between the courses studied, the length for which they are studied, and the requirements of industry is needed.

- More inter-disciplinary courses are required. Increasingly, there is a need for graduates to have skills beyond their core disciplines e.g. software engineers need to have business skills in addition to technology skills. Higher education institutions will need to become more responsive and offer greater flexibility in course choice.

**LLL and Upskilling the Workforce**

- Priority should be given to the critical importance of embedding a culture of life-long learning in Ireland. According to the ILO, 80% of all persons working 10 years from now are already in the workplace; meanwhile 80% of today's technology will have been replaced by that time. The extent to which adults participate in continued

education and training in Ireland is poor relative to OECD countries (Ireland is ranked 13 out of 15 countires for the proportion of 25-64 year olds who participated in some form of continuing education and training within a 12 month period).

- The economic arguments for life-long learning and upskilling of the workforce are well documented in the *Report of the Task Force on Lifelong Learning*. There is a need to implement the recommendations set out in this report. Particular focus needs to be given to the funding anomaly between full-time and part-time education. Issues such as course flexibility and design need to be examined.

- The need to increase participation of low-skilled workers in continuing education and training is likely to require some additional support to such workers when engaging in education and training

**Greater Participation in Higher Education**

- Despite the Government target that Ireland should aim to be at or above the top quartile of OECD countries with regards to participation in higher education, examination of the key measures (graduation rates for certificate/diploma, degree and advanced research programmes) shows that Ireland has not achieved its strategic target.

- In the longer term, it is also appropriate to question whether the target of top quartile is sufficient for policy. Given that investment in higher education and research is critical for future competitiveness, it is appropriate to consider benchmarking Ireland against the best in the OECD, rather than just the top quartile. In the longer term, the most appropriate target should be considered e.g. placement at or above the top decile.

- Despite the marked decline in the school-leaving cohort since 1998, enrolment at third level has remained relatively static. This fact is attributed to an upsurge in the numbers of mature students enrolling in higher education. The fact that this has occurred in absence of significant promotion by state or institutes, suggests that there is a considerable latent demand for higher education among the adult population. The EGFSN believes that mechanisms to increase the proportion that enter the higher education system through alternative routes to the CAO process should be explored.

- There is a need to examine measures required to increase the transfer rate from upper secondary education and further education to higher education in particular in relation to science, engineering and technology disciplines. Greater interaction is required by the relevant institutions.

- Variation in participation in higher education taking account of differences in regional location and socio-economic background should be reviewed. Gender balance issues should also be addressed. In particular, there is a need to examine measures to increase female participation in science, engineering, manufacturing and construction disciplines which was found to be considerably lower than that of males.

**Quality of Graduates**

- The impact on the quality of graduates as a result of a fall in the requirements to enter particular courses e.g. computing needs to be examined (effect on completion rates, etc.)

**Postgraduate Studies**

- Policy should focus on encouraging greater take-up of postgraduate studies, particularly research-related, given the strategic role of Ireland in becoming a knowledge-based economy. There is need to ensure that undertaking PhD level research is a viable option for those who wish to do so

**Maximising Completion Rates**

- Colleges have learned a good deal in recent years about how to address non-completion. Some current initiatives on non-completion appear to be deserving of being mainstreamed. The HEA should continue to fund initiatives on non-completion. Particular emphasis should be given to improving completion rates in IoTs. Colleges should make a significant effort to mainstream initiatives that are found to be successful. Better support/mentoring for students experiencing difficulties should be provided.

**Practical Experience, Project-based Learning and Flexibility/Innovation Skills**

- Industry is increasingly looking to recruit those graduates with practical work experience and commercial understanding. As a result, students with strong technical abilities but little practical experience are loosing out on potential jobs. Institutions should aim to grow/ expand the level of internships.

- Fostering adaptability, flexibility, and innovation skills must become integral to the education system at all levels if the needs of a changing workforce are to be met.

- Project-based learning should be adopted widely at third level. By moving in this direction, there is significant scope to improve both the quality of learning and the development of soft skills relevant to the workplace, without compromising the intellectual content of courses.

**Science at Tertiary Level**

- The importance of the physical sciences in a knowledge-based economy is widely recognised. Despite the general decline in the take up of science subjects, Ireland has so far performed well compared to other OECD countries in terms of numbers graduating in these subjects. While there are limits to the extent by which the numbers graduating in science can be increased, issues around the teaching and resourcing of science, set out clearly in the *Report of the Task Force on Physical Sciences*, have not

been adequately addressed. The EGFSN has fully endorsed this report and is disappointed with the slow progress on the implementation of the report's recommendations. This issue needs to be examined further.

- The possibility of increasing the numbers of graduates in science and engineering programmes through greater participation by adults needs to be examined.

**Management Skills for the 21st Century**

- Given the critical importance management skills have to play on the economic development of a nation, there is a need to ensure that students are well equipped in the necessary management skills. The need to ensure *technology transfer* from the research lab into the commercial arena requires specialised management expertise such as the management of technology transfer and intellectual property. There is a need to examine the introduction of specialised management courses.

**ICT Skills**

- Given the rapid diffusion of computing technologies, there has been a huge increase in the number of jobs involving the use of IT. This has resulted in IT skills becoming increasingly important. Workforce IT skills is becoming one of the most important factors affecting business competitiveness. Such skills are increasingly viewed by employers as a basic skills requirement.

**Generic Skills**

- Generic skills include basic skills such as literacy and numeracy, and also key skills such as communication, team working, planning, problem solving, and customer handling. Research indicates that an increased number are working in professional and managerial occupations and that the importance of skills such as communication and planning is growing.

**Flexibility of Education/Training Systems**

- The need for greater flexibility in higher education institutions has been reiterated in various reports by the Group and others. Part-time higher education requires to be further developed in Ireland. While inflexibilities in the universities and IoTs are being partly addressed, more portability and cross recognition of programmes is required, and not just in IoTs, but *between* the IoTs and universities. Restructuring of courses requires to be examined e.g. modularisation, together with the practicalities and benefits of outsourcing and on-site delivery of programmes for promoting greater effectiveness.

**Selection Process**

- The current selection process (CAO Points System) needs to be reviewed. The EGFSN believes the system is suboptimal and misallocation of talent can occur.

**HEA Database**

- The production of the Database on Higher Education within the HEA needs to be given priority as a matter of urgency.

## Guiding Principles for Change

Ireland must invest more in higher education and address the weaknesses in the system to ensure the future skills needs of the economy will be met. In this context, the EGFSN is of the view that a higher education system with the following characteristics is required:

- Responsive: timely accommodation of external changes;
- Flexible and adaptive;
- Creative and innovative; and
- Supportive of high levels of participation in life-long-learning.

Such a system will require greater autonomy and accountability by all third level institutions, and the setting of strategic goals by the State for the sector as a whole.