MacGill Summer School, Thursday 23 July, 2009

The role of education in rebuilding the economy

Only the best will be good enough

- **Don Thornhill**[1]

[1] **Disclaimer.** The National Competiveness Council (NCC) which I currently chair has recently published a policy paper on education which I refer to in the paper. Nonetheless, except where otherwise attributed. The views and opinions expressed in this paper are my own and should not be attributed to any of the organisations with which I am associated including the National Competitiveness Council. Any errors are my responsibility.

1. Education is a vital activity and policy domain

Education at all levels of progression has an essential role to play in putting our economy back on a growth path. It is the key to enabling us to be both competitive and .prosperous. We should aim to have one of the best education systems in the world. Our future prosperity is acutely dependent on the quality of our knowledge and human capital because the success of our economy and of our businesses will depend on our ability to trade successfully in international markets with ever more knowledge intensive products and services.

The economic returns from investment in education tend to accrue mainly in the medium to long term but it is vital that we treat it as a priority area for investment even during this time of acute fiscal stress. If we are seen to falter, particularly in relation to our commitment to investment in third and fourth level education and research, we will lose the valuable momentum that we have achieved during the last decade. This does not imply that Exchequer spending on education can be exempted from the consequences of the need for major fiscal adjustment but it does mean that it should be treated as a priority area for policy attention and continued investment. Sustained attention must be given to improving the effectiveness of our system and to ensuring excellent outcomes.

NCC statement on education and training

This was the reasoning which prompted the National Competitiveness Council (NCC) to publish a paper on education[2]. **The Council takes the view that Ireland needs one of the best education and research systems in the world in order to drive and sustain economic recovery.** Nonetheless, we were, and remain, conscious of the reality that education is about much more than economics. It is truly a transcending area of policy encompassing concerns and values across the social, economic, moral, ethical, religious, civic and cultural domains – as well as in sport and physical education. Education is also the key to addressing economic and social disadvantage. Our recommendations in the paper were prompted by economic and competitiveness concerns but we saw many of them as also contributing to better outcomes in the other important areas of educational concern.

We were very encouraged by the response to our paper particularly as it was not always the case that economics and education were seen as comfortable bed fellows. The NCC paper makes recommendations across the full landscape from pre-school education to fourth level including R&D. We highlighted the importance of pre-school education, the need for persisting with the investment

[2] NCC Statement on Education and Training, 9 March 2009 – see http://www.competitiveness.ie/media/ncc090309_statement_on_education.pdf

strategies set out in the Strategy for Science, Technology and Innovation, a renewed focus on mathematics and science education in secondary schools, integrating IT into education, a comprehensive loan scheme for third level students and a review of the inadequate and inequitable student grant system. The NCC has long advocated the development of a formal pre-primary education system in Ireland to address educational disadvantage and improve longer term outcomes and the proposals in this area since the release the Council's paper are welcome.

Today I will move beyond the recommendations in the NCC report and put forward some guidelines which I believe will be essential in promoting an excellent education system.

2. How "good" or otherwise is Irish education?

It would probably take a full MacGill Summer School to unpack what we mean by a "good" education system! Comparing our performance with other countries provides us with some insights.

International benchmarks

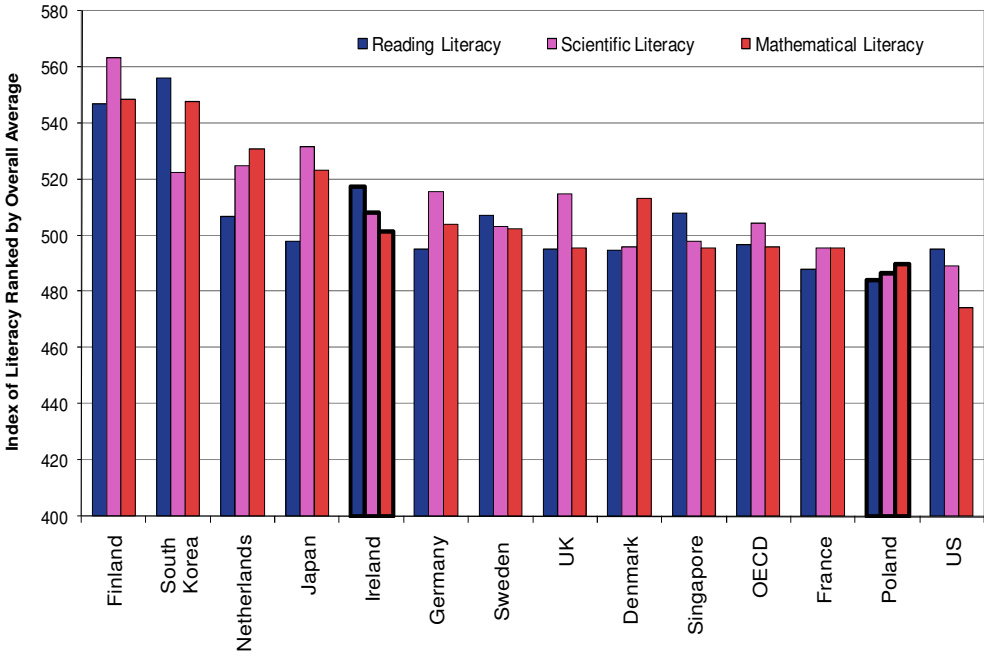
Unfortunately, there is limited data available on outcomes. Such internationally comparative data that we do have tends to support the conclusion reached by the NCC that "*In Ireland, strong educational outcomes have been achieved with relatively modest public financial resources. Funding is important but excellent teachers, policies, processes and the support of families and society matter even more in achieving strong educational outcomes*"[3].

One of the international studies in which we participate is the OECD PISA studies on Scientific, Reading and Mathematical Literacy.

The ***OECD PISA studies*** aim to assess students' preparedness at age 15 for the reading, mathematical and scientific demands of future education and adult life. It provides some of the few outcomes metrics which are internationally comparable.

[3] NCC Statement on Education and Training – page 6.

Figure 1: Scientific, Mathematical and Reading Literacy of 15 year Olds, 2006



Source: OECD, PISA Database, 2006

Ireland's students performed very well on the reading assessment, reasonably well on science, and about average on mathematics[4]. This pattern was also evident in both previous PISA studies and interestingly, the gap between the

[4] Irish students' best performance was on reading literacy, where the Irish mean score of 517.3 was well above the OECD mean of 491.8. This performance placed Ireland 5th among the thirty OECD countries. Performance on science was also slightly above the OECD average (508.3, compared to the OECD mean of 500.0). Ireland ranks 14th amongst OECD countries on the assessment of scientific competency. For mathematics, Ireland's mean score of 501.5 does not differ significantly from the OECD mean of 497.7, placing Ireland 16th in the OECD.

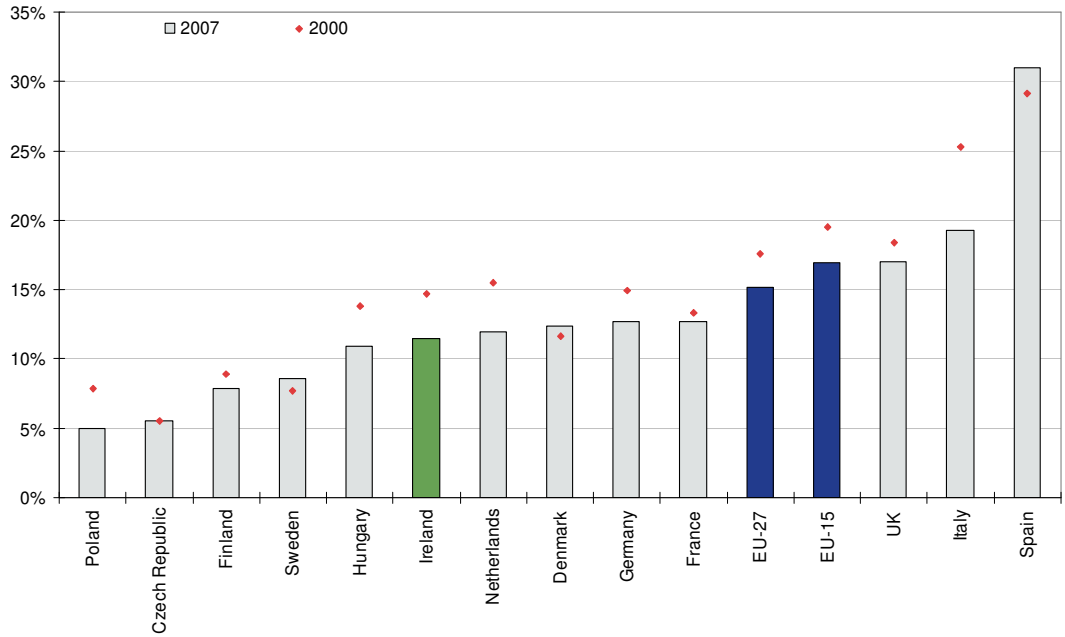
strongest and weakest students in Ireland is less than that in many other countries for mathematics, reading and science.

I believe we need to aim higher and ensure we are in a position to match countries such as Finland, Hong Kong and Canada, where performance is well above average in all three domains.

The NCC also recommended more extensive participation in international benchmarking exercises. We need comprehensive benchmarking and data on the performance of our pupils – I would urge in particular that we consider participation in the very important ***Trends in International Mathematics and Science Study (TIMSS)*** or the ***Progress in International Reading Literacy Study (PIRLS)*** [5] with which we have not been involved since 1995.

Time spent in education is another important indicator of performance

Figure 2: Early School Leavers, Aged 18-24, 2007



Source: Eurostat, Structural Indicators

The 11.5 percent of Irish people aged 18-24 who have not completed the Leaving Certificate or equivalent remains compares favourably with the EU-27 average was 15.2 percent. Nonetheless I believe 11.5 percent remains too high.

[5] http://timss.bc.edu/

While our performance is better than the EU average, non completion has significant short and long run costs for the individuals involved and we must continue to improve retention rates in our schools by addressing disadvantage.

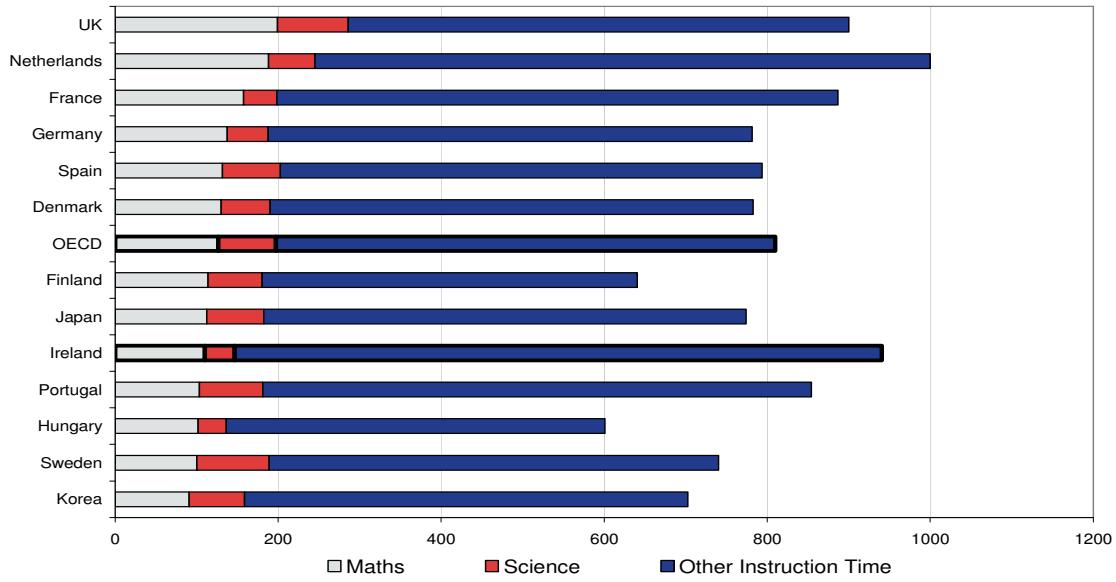
Poorly qualified school leavers are at very high risk of unemployment and we need to strengthen efforts to prevent early school leaving. There is also an imperative to deliver effective education and training to those who already have left school without a Leaving Cert and are now unemployed.

Inputs into education

Much of the debate in this country about education policy focuses on inputs. This can be a poor guideline for policy. Outcomes are what are important but nonetheless a brief look at some inputs provides us with an interesting view of the link between policy priorities and needs and where we actually spend the money.

The need for high quality learning outcomes in mathematics and sciences has been repeatedly emphasised as being important for competitiveness, yet OECD data shows that the time spent teaching science and mathematics in Irish primary and second level schools is noticeably lower than in many other countries. The time devoted to science teaching at primary level is just half the OECD average.

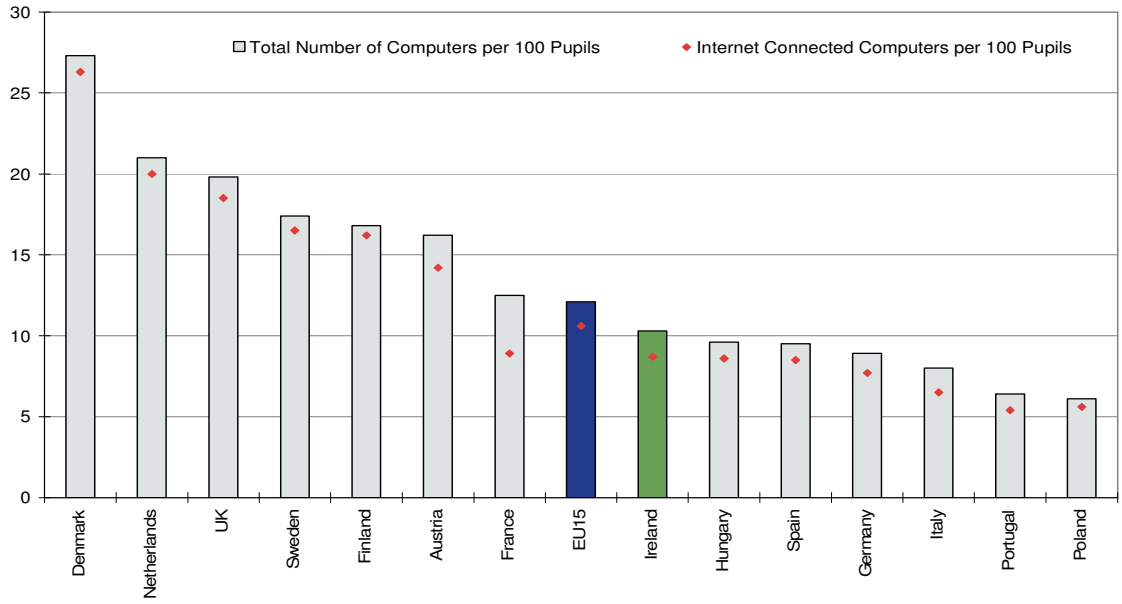
Figure 3: Tuition hours for Mathematics and Science, 9-11 year olds, 2006



Source: OECD, Education at a Glance, 2008

We also devote fewer resources to ICT in education than other countries

Figure 4: Computers and Number of Internet Connected Computers per 100 Pupils, 2006



Between 2000 and 2005 the number of pupils per computer in schools fell from 16 to 11 and 9 to 7 at primary and second level respectively[6].

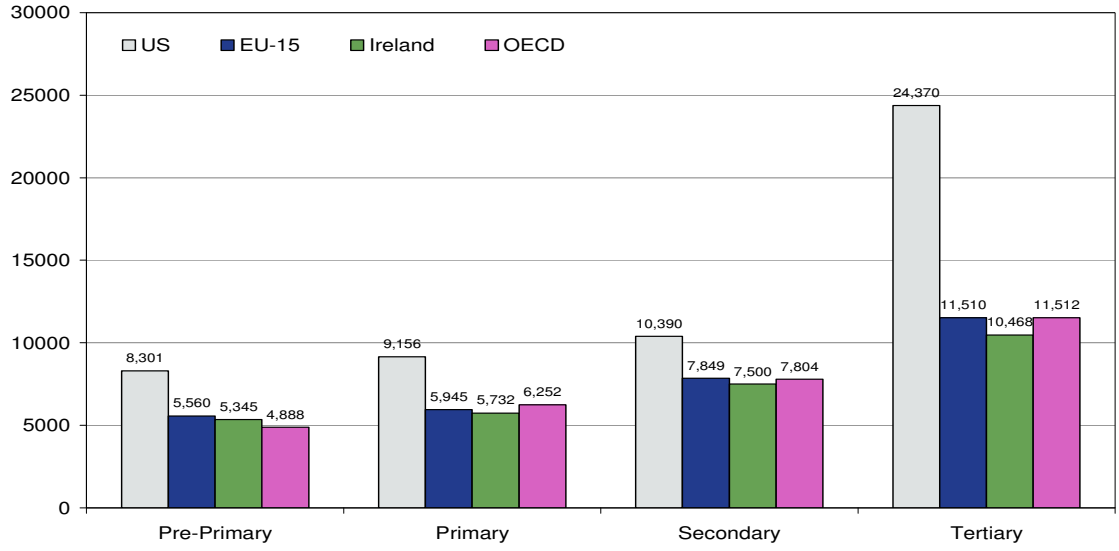
The availability of computers in Irish schools remains very low relative to leading countries and ICT is not effectively integrated into teaching practices on a system-wide basis. There is an urgent need to improve ICT infrastructure across a range of areas including broadband speed and access, technical support and school networking.

[6] Department of Education and Science.

Overall spending and pupil–teacher ratios

Our national conversations about education are driven to a great extent by the recurring attention given, particularly insisted on by teachers and school managers, to expenditure data and pupil–teacher ratios.

Figure 5: Annual Expenditure on Educational Institutions – per Student (US$ PPP), 2005

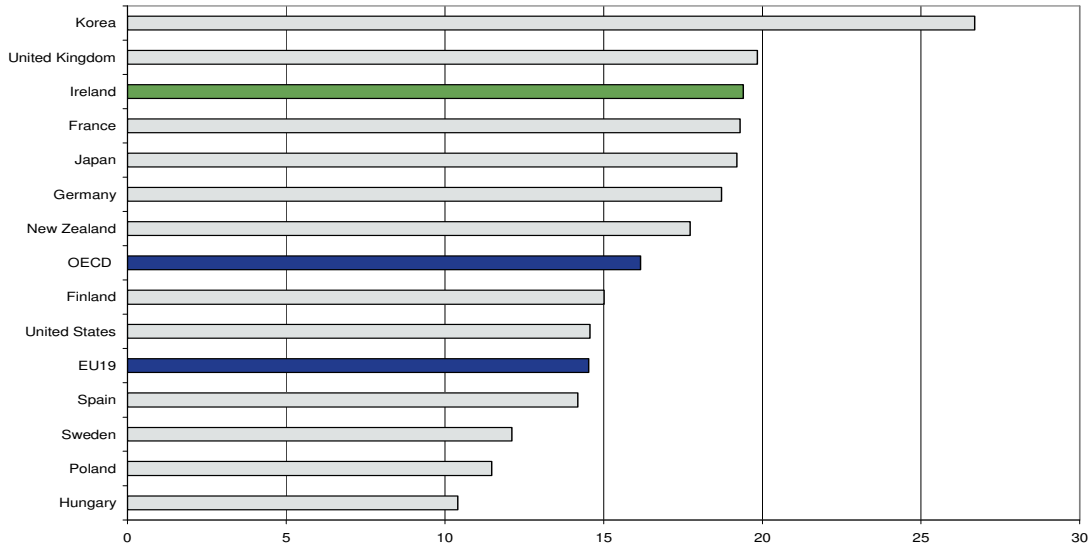


Source: OECD, Education at a Glance, 2008

Measured by OECD data, Irish rates of expenditure per student are below the EU and OECD average at primary, secondary and tertiary levels and the expenditure data for pre-primary education in Ireland refer only to the funding of pilot programmes in which only a small number of pupils participate. In 2005 expenditure on all levels of education accounted for 5.4 percent of GNP (4.6

percent of GDP). This compares with an OECD average of 5.8 percent and an EU-19 average of 5.5 percent[7].

Figure 6: Ratio of Students to Teaching Staff in Primary Education, 2006



Source: OECD, Education at a Glance, 2008

At 19.4, Ireland has the third highest reported student-teacher ratio in the OECD-28[8]. The average student-teacher ratio for primary schools in the OECD was 16.2. The ratio for second level schools as a whole is 14.6 compared to an OECD average of 13.2 –see Figure 7.

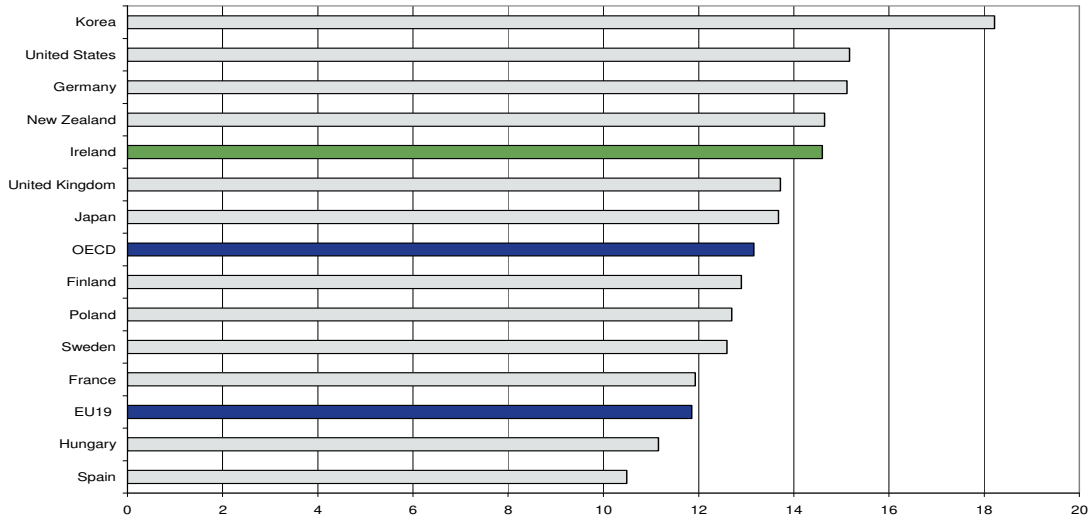
Class size is an alternative measure. At primary level Ireland ranks above the OECD average (21.5) and the EU-19 average (20.3) with 24.5 students per

[7] Source: OECD, Education at a Glance 2008. Table B2.2

8 OECD, 2008, Education at a Glance, Paris. Pupil-teacher ratio is calculated by dividing the number of full-time equivalent pupils at a given level of education by the number of full-time equivalent teachers teaching at that level.

class. At second level the Irish figure (20.1) is lower than the OECD average of 23.8 for lower second level school class sizes in public institutions.

Figure 7: Ratio of Students to Teaching Staff in Second Level Education Institutions, 2006



Source: OECD, Education at a Glance, 2008

Focusing on inputs can be misleading

The absence of comprehensive international outcome comparisons tends to intensify the already strong tendency in this country to compare our inputs – money and staff numbers – with those of other countries. Inputs are clearly important but, no more than in health, high levels of expenditure do not guarantee successful outcomes. At a time of serious fiscal stress which requires significant public expenditure reductions as well as the need to spend public resources with maximum efficiency, comparing inputs alone is not a sufficient guideline for policy. Indeed focusing on inputs alone can lead us astray.

Pupil teacher ratios are a relevant example. The public debate seems to take it for granted that the lower the ratio the better the quality of educational outcomes. The available evidence does not support the view that lower class sizes automatically equate to better student outcomes. The conclusion that the NCC came to was that there is a need for greater balance between a focus on absolute levels of funding and the need for other reforms that have the potential to improve student performance. Reducing class sizes is expensive and an excessive focus on this area can deflect scarce resources from ensuring our teachers can avail of frequent professional development and providing students and teachers with suitable physical and technological infrastructure (e.g. school buildings, science labs, sports facilities, adequate computers and broadband access).

Against this background, and particularly given the need for significant reductions in public expenditure (as consistently argued by many advisors and organisations, including the NCC, and most recently by Colm McCarthy and his colleagues in the report of "An Bord Snip Nua" (BSN))[9] there is an urgent need to establish structural principles which will ensure excellent outcomes and effective expenditure of Exchequer funds as well as providing opportunities for teachers and others working in education to use their skills and commitment to maximum effect.

[9] Report of the Special Group on Public Service Numbers and Expenditure Programmes, July 2009; see www.**finance**.gov.ie

Three guidelines for public policy

There are three guidelines which I believe should underpin an educational system that aims for excellent outcomes.

1. **Pay relentless attention to teacher quality.**

2. **Provide choice for parents and students by stimulating competition and contestability between schools and other educational institutions …but balance this with appropriate co-operation.**

3. **Government' s role should be to:**

    a) **Provide funding using financial mechanisms which promote incentivise excellent outcomes**
    b) **Regulate quality**
    c) **Set policies**

Guideline 1. Pay relentless attention to teacher quality

An absolutely essential precondition for an excellent education system is that it has excellent teachers.

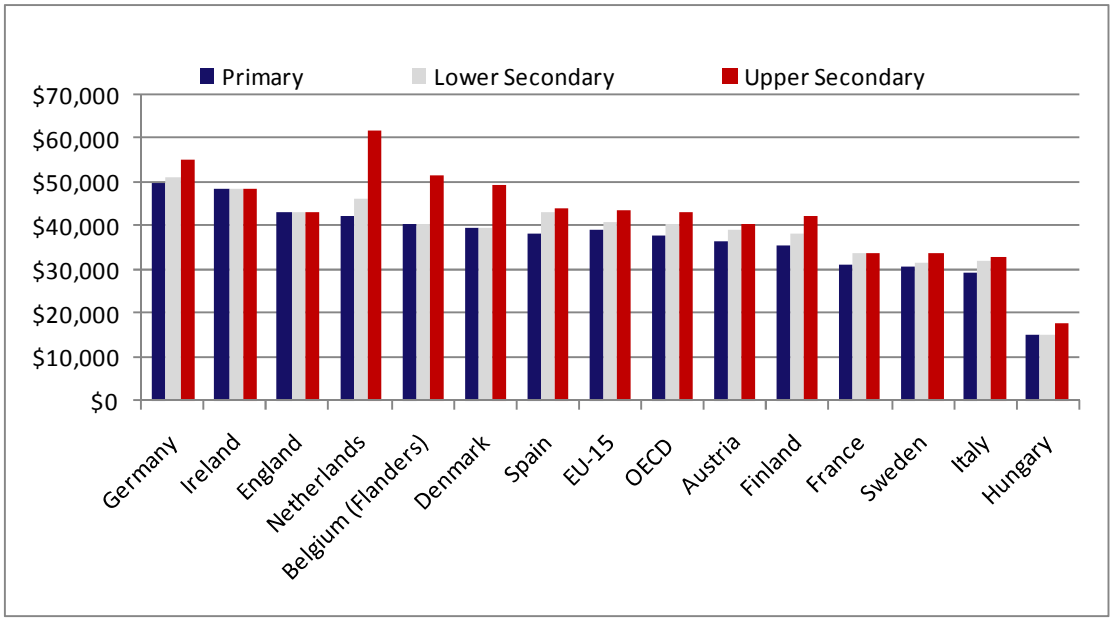
Excellent teachers do much more than provide content. They guide student learning, stimulate a spirit of enquiry and a desire to learn more about life and the world. Many of us who have been fortunate to experience the transforming effect of an excellent teacher will readily appreciate this. Ireland is well placed internationally for teacher quality. Entry into teaching is intensely competitive. The Irish primary teacher cohort is drawn from the top 14% of CAO applicants. For secondary level, the selection criteria for entry to the Higher Diploma in Education (H.Dip) put a high emphasis on academic achievement so that almost all graduates accepted onto the H.Dip now have a First Class or 2.1 Honours degree.

Policy makers in other countries envy the quality of our teachers …and in my view public policy should work to sustain that situation.

Arising from this I would argue that one of the roles of Government is to ensure that teaching is an attractive and prestigious profession – which means that pay and conditions be attractive.

Department of Education figures show that primary school teachers earn on average €57,000 which compares favourably with other sectors in the economy[10].Irish teachers are well paid by international standards and relative to other occupations in Ireland.

Figure 8: Teacher Salaries after 15 years of experience, 2006



Source: OECD, Education at a Glance, 2008

Figure 8 shows teachers' salaries after 15 years experience in US dollars converted using Purchasing Power Parities[11]. By this measure, Irish teachers enjoy a premium over the EU-15 average of 24 percent at primary level, 18 percent at lower secondary level and 11 percent at upper secondary level. Even

[10] For more detail see a provocative blog post by Ronan Lyons on teacher salaries http://www.ronanlyons.com/2009/04/20/tackling-the-thorny-issue-of-teachers-pay/

[11] PPP is used to compare living standards in different countries. It indicates the appropriate exchange rate to use when expressing incomes and prices in different countries in a common currency. PPP is the exchange rate that equates the price of a basket of identical traded goods and services the countries being compared.

adjusting for high price levels in Ireland, Irish teachers are well paid relative to their peers internationally.

What did disquiet me though when I was in the Department of Education and Science were the many rigidities in the system – which I believe are neither in the interests of education or of teachers themselves. These included what was then the overwhelming importance of school based seniority for promotion in most schools, the initial opposition from teachers to whole-school assessment by the Inspectorate of the Department, the reluctance to engage with parents, through for example parent-teacher meetings, other than at times which suited teachers more than other working adults – and what seemed to be an almost obsessive focus on ensuring that time spent on professional development would be compensated for by teaching time off in lieu. These behaviours are legacies of another era and were accompanied by a mind set which sought additional payment for any structural change, and are unaffordable. These inefficiencies and their costs are described in the Bord Snip Nua report[12]. I agree with Colm McCarthy and his colleagues that future contract arrangements for teachers should include a total statutory working time which would provide for activities such as school planning, parent teacher meetings, in-service training and development, supervision of students and middle-management duties where and when appropriate as defined by school management. The relevance of this recommendation is borne out by the concern at primary and secondary levels that the burdens of management and legislative compliance fall disproportionately on school principals. In many cases this leaves them with insufficient time to focus on learning outcomes. Principals, through their boards of management, should be accountable for school performance – but they need support in terms of being able to distribute responsibilities and tasks within the school team to those best fitted to carry them out.

In addition to ensuring that teaching be an attractive and prestigious profession with attractive salaries and good conditions of service there are other important roles for public policy.

1. **Entry into teaching should attract candidates for teacher education and academic careers from among the most talented people in the population.** If I have a criticism to make of teacher formation in this country, it is that for a long time we relied too much on the school leaver cohort for entry into teaching. It is important to create opportunities for people with valuable experience and insights from other areas of work to enter teaching. This is particularly true for science and mathematics where work place experience can help enliven learning. I welcome the increased avenues for graduate entry - particularly into primary teaching.

[12] Report of the Special Group on Public Service Numbers and Expenditure Programmes, July 2009; see www.**finance**.gov.ie – see Volume II, pages 58-60.

2. **Teacher education and training should be of high quality and should involve considerable teaching practice under supervision of experienced teachers.**

3. **Professional and in-service development should be frequent, continuing and progressive during a teacher's career**. Teachers should have opportunities to develop their skills and to benefit from peer review and collaboration with colleagues. This should be sufficiently frequent to ensure that teachers have ample opportunities to engage with professional colleagues and mentors about their work and are up to date with new developments in pedagogy. Teaching can be a lonely profession and teachers, just like any of us, gain from engagement with colleagues. This is especially important in an age when information technology has increasing capacity to empower teaching and learning. Teacher professional development should be frequent, continuing and progressive during a teacher's career and not limited to introduction of new syllabi. Successful schools and systems are ones where a substantial part of continuing professional development should take place in the teacher's own school. Career progression should reward outstanding teachers. Professional development should also include opportunities for secondment to different working environments.

4. **There should be reasonable arrangements in place to allow teachers, whose performance is not satisfactory, to leave the profession with dignity and with preparation for changing career**.

There have been schemes which provided for this. They are expensive and difficult to administer. But the social and economic costs of poor teaching are considerable – and society and the teaching profession would gain considerably by allowing for dignified exit mechanisms for teachers who are ill-suited to the profession.

Guideline 2: Provide choice for parents and students

The availability of choice for students and parents is a powerful stimulus for improving the quality of school and educational outcomes. It is also necessary to ensure that the school system caters for different needs, choices and aptitudes.

It can also enhance the responsiveness of schools and other institutions to meeting the challenges of different needs and of a changing environment.

There are two aspects to school choice.

The first is enabling parents to send their children to a school which has an ethos[13] they share or which they regard as acceptable. Notwithstanding the increase in the numbers of schools established by Gaelscoileanna, Educate Together and Islamic organisations, choice is still limited. Parents who seek or prefer a secular or non–denominational schooling for their children consider that their preference is not catered for.

The second dimension of choice relates to the ability of parents to select a school on the basis of criteria, other than ethos, which they regard as important - such as academic achievement, choice within the curriculum and perhaps extra-curricular activities including sports. In this regard many parents, particularly those living in urban areas, have been able to exercise a significant degree of choice. My own sense is that this factor, reinforced by the high value which Irish society places on education, provides a partial explanation as to why we have achieved relatively strong educational outcomes with modest financial resources – and historically, of course, the Catholic religious orders made a major contribution to providing second level education at a low cost to the State.

We tend not to think of our educational system as being one which offers choice – except perhaps at third level. Yet compared to other countries (where defined school catchment areas are often rigorously enforced) parents of school going children in many parts of Ireland can select between two or more schools. In addition, organisations and groups can establish primary and second level schools provided they meet a number of essential conditions. These include securing sufficient enrolments, complying with national curricular requirements, employing qualified teachers and adhering to other national regulations and policy requirements.

One of the paradoxes of Irish education is that this current day policy pluralism is in stark contrast both with the history and current ownership and management of schools. Schooling at primary and second level was historically provided through the Christian churches (Roman Catholic, Anglican and other Protestant) and the Jewish faith and later by the VECs and continues to be so. Roman Catholic Church schools still account for the greater part of primary and secondary school provision.

However, the landscape is changing dramatically. For some time the Roman Catholic religious orders (for example through trustee arrangements) have been planning for and dealing with the circumstances where they no longer have the personnel to manage the schools which they formerly controlled.

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[13] School ethos is apparently very difficult to define or describe. A statutory definition of the *characteristic spirit* of a school is provided in Section 15(2)(b) of the Education Act 1998 as follows: "the characteristic spirit of the school as determined by the cultural, educational, moral, religious, social, linguistic and spiritual values and traditions which inform and are characteristic of the objectives and conduct of the school"

Archbishop Diarmuid Martin of Dublin has indicated his comfort with a significantly more pluralistic educational landscape – in doing so he has signalled a very significant departure from the Hierarchy's traditional position. The Archbishop has proposed a national forum to consider the patronage arrangements for Irish schools[14]. The aftermath of the Ryan Report on the Industrial Schools[15] has led to suggestions from senior political figures that the State should take over the ownership of schools. Archbishop Martin has suggested a forum to consider and chart future directions.

His suggestion is a good one. The area is complex and requires careful mapping out of the possible solutions. We have had good experiences of where broadly based fora in this country have advanced policy in constructive ways – including the New Ireland Forum and the National Education Convention.

There is now an opportunity to reconfigure ownership and management in ways which reflect modern Irish society but which would also support, strengthen and make more widely available the features of choice and contestability which I believe are positive characteristics of our system. Any new arrangement would have to have regard to one of the "facts on the ground" which is not commonly understood. This is that the vast majority of our school properties, sites and building, at both primary and post-primary levels, are privately owned and managed – despite the fact that much of the capital expenditure on these sites and the current running costs, including the pay of teachers, are met by the State.

My own view is that it would be a serious mistake to replace a previously dominant ownership and management position (which nonetheless allowed for some choice and diversity) with a monopoly which could be one consequence of the transfer of school management and ownership to the State or to local authorities. This would lead, over time, to the erosion of competition between schools for pupils and could have seriously negative effects on outcomes. It would also deny parents choice as to the ethos of the schools to which they would send their children.

The key to addressing these challenges is to distinguish between ownership and management.

I would be very comfortable with a situation where the ownership of schools and properties (land and buildings) was vested in or leased on long term arrangements to the State but where school patronage (i.e. the management and operation of schools) was undertaken by independent recognised organisations (including but, not exclusively, faith based organisations, as well organisations such as Educate Together and Gaelscoileanna and the VECs). As part of a comprehensive school planning process, the Department of Education and

[14] See http://www.rte.ie/news/2009/0617/education.html
[15] See http://www.childabusecommission.ie/rpt/ExecSummary.php and related websites.

Science would identify, review and monitor the needs for schooling in different areas and would seek proposals from patronage groups for provision. Arrangements would also need to be put in place which would ensure that the decisions on patronage assignment were transparent and reflected the wishes and needs and preferences (including minority ones) of the communities which they were intended to serve and would allow for some evolution in choice and preferences. The assignment of schools to particular patronage groups would not be of indefinite duration – an assignment might be for a period of say 15 years, renewable only on the basis of continued community satisfaction and satisfactory inspection reports.

This would be a major change from the current situation. It poses some major transitional challenges and would take some time to evolve. But it would be important that in addressing the changing situation, the features of choice and competition (which I believe have served our students and society well) are preserved and strengthened.

Cooperation between schools would also have an important role in this new arrangement. Facilities such as science laboratories, sports halls could be a shared between schools as would specialist teachers or teachers in subjects with low enrolments. This is an important area for the Department to provide leadership.

At third level, there would appear to be much greater scope for advanced level specialisation and in some cases amalgamation or joint provision of courses while retaining the strongly competitive features of the current landscape.

The ongoing rise in unemployment demands an urgent need for a smart and effective educational response which will up skill and equip people for the jobs where future demand will arise such as in the high technology manufacturing and service sectors. The scale and speed at which the challenge is developing suggests that inter institutional cooperation at third level and with employers will have an important part to play - particularly in relation to curriculum and course design.

Guideline 3: Government's role should be to:

a) **Provide funding using financial mechanisms which promote incentivise excellent outcomes**
b) **Regulate quality**
c) **Set policies**

I do not believe that the function of Government is to manage schools and higher education institutions. That is best done by the institutions themselves. But Government does have a number of vital roles as policy formulator, funder, and regulator – particularly in regard to quality and outcomes.

Funding

Public funding of education is essential. Education is a classic example of what economists call a "public good" – the benefits to society are considerable and an individual trying to fund his or her own education solely from their own or family resources may not invest sufficiently in their education because of insufficient direct returns, particularly in the short term. So government funding is needed in order to maximise the gains to society. This argument initially was thought to apply only to funding of universal access to primary education but it has gradually been accepted as applying to participation in second and by some to third level education. Many believe that there are strong arguments on social equity grounds for public funding of universal access to all three levels of education – although others estimate that the private gains at third level outweigh the public ones. As regards third level, the NCC believes that it is sensible that graduates who will benefit significantly from higher education in terms of increased earnings over the course of their lives should contribute a portion of the cost of their education. The Council would prefer to avoid the upfront payment of tuition fees, which would act as a barrier to participation by students from lower income groups. Instead the NCC would favour a comprehensive loan scheme and a review of the current inequitable and inadequate student maintenance grant system, which excludes assets from the assessment criteria.

The mechanism is important

The ways by which governments allocate funding to schools and institutions are important. I am not a fan of providing annual operating budgets to individual schools or institutions. This runs the risk of embedding rigidities.

Ideally, Exchequer funds should follow the students. In this way institutions that are perceived to be successful gain and others are challenged to perform better. It is one of the strengths of the Irish system that this is by and large how voluntary schools (through capitation funding and pupil teacher ratios) and

universities (through a unit cost mechanism) are funded and the allocation of Exchequer funds to the Institutes of Technology is progressing in that direction. Capitation funding is also differentiated – for example in targeting special needs and at third level in taking account of the differences in costs between the teachings of different subject areas.

This model is a powerful tool for policy. In addition to the foundation, capitation based funding, incentive funding can be made available to schools and colleges where they meet or exceed targets set in consultation with government or public agencies. In addition, the basic capitation based funding can be supplemented by competitive funding mechanisms where institutions compete with one another for funding for new and developmental projects. This can be particularly effective for targeting resources to meet particular policy objectives such as skills needs. The provision of competitive funding, in addition to basic foundation funding, has proven very powerful in promoting institutional responsiveness to changing demands at third level – in the universities and institutes of technology. Competition (both between institutions and individual researchers) is and should continue be a cornerstone for research funding. Competitive funding mechanisms managed by both the Higher Education Authority and Science Foundation Ireland also encourage inter- institutional co-operation and thereby encourage the effective use of resources.

This model can also be used, particularly at third and fourth level, to realise the potential for constructive collaboration between the State and private and independent institutions (both for- profit and non –profit) through contractual relationships[16]. This can be done by inviting these institutions to tender for the provision of educational services on competitive and level playing field basis with publicly funded institutions. In this way the public interest can gain from the investments made by these institutions in educational innovation and facilities.

One of the advantages of the money following the students is that Irish schools, colleges, institutes and universities have considerable levels of operational autonomy by international standards – which in turn have been shown to be a good predictor of effectiveness. This is a feature which should be strengthened not eroded. It is particularly important at a time when money is scarce. I hope that the present fiscal environment, or indeed the Review of Higher Education, will not have the effect of pulling back autonomy and the ability to manage their own affairs from Irish universities and institutes of technology. Institutional autonomy for publicly funded educational institutions is not the licence to manage institutions without regard for public policy concerns but rather the freedom and flexibility to effectively use the public funds entrusted to the institutions for public policy purposes. The challenges for Government departments are not to pull back the ability to manage but to set the outcome expectations and to link the

[16] I am associated with the Royal College of Surgeons in Ireland – a not for profit third and fourth level institution with charitable status.

desired outcomes to funding. This will stimulate the innovation and value for money which will be so vital to achieving better outcomes.

Quality

Quality assurance and improvement should be at the centre of public policy concerns. At third level the work which has been done in the construction of the National Framework of Qualifications (NFQ) is a considerable achievement and I support the Minister's proposals to consolidate the quality assurance and certification bodies into a single organisation. At first and second level I have the impression that the Whole School Evaluation approach being pursued by the Inspectorate of the Department of Education and Science, and particularly the publication of the Inspection reports, is being applied with increasing effectiveness and confidence.

At first and second level, the State also has a vital role in determining and regularly updating the curriculum. We are also fortunate that over the years the State Examinations, particularly the Leaving Certificate, have developed a "gold standard" reputation in the sense of being fair, impartial and …perhaps predictable. This reputation should be treasured and not lightly tampered with. Nonetheless, the expressions of concern about the damaging effects of the weight of rote learning and the importance of prescribed and detailed marking schemes are worrying. Life, as we know is not fair or predictable and one of the purposes of education should be to prepare students to cope successfully with change. We should be cautious though about experimentation and carefully look for exemplars and good practice among the most highly regarded international examinations – such as the International Baccalaureate. We should also subject the Leaving Certificate to continuing international expert review. The Leaving Certificate and third level entry can be intensely competitive and that this can, if it is proportionate, be a worthwhile life experience and preparation for our students.

Setting policies

Government is a vital trustee of the education system and has the lead role in setting policies. This covers a wide range of areas including funding, curriculum and the determination of policy priorities. I have touched on many of these throughout the paper but there are two, international education and policy on research and development, which in my view are immediately related to the contribution of education to restoring economic growth and where careful policy attention is required.

Internationalisation of Education: Seizing the Opportunity

The internationalisation of education presents significant growth opportunities for Ireland in terms of exporting a high quality service – opportunities to which we have not paid strategic attention. Strategically managed, the attraction of

overseas students to Ireland could have a range of educational, economic, social and cultural benefits. It is an important source of foreign earnings, employment and Exchequer revenue. Foreign students can bolster Ireland's stock of human capital, improve the quality of our higher education institutions, foster new economic, financial and political links, and promote tourism and exports of Irish goods and services. There is a need to deepen engagement with emerging economies (such as Brazil, Russia, India and China) and to market Ireland as an attractive location to study.

Ireland performs relatively poorly in terms of attracting overseas students and is a net exporter of students. In 2006, foreign tertiary students comprised 6.8 percent of the student population in Ireland which compares poorly to other English-speaking countries such as the UK (14.1 percent), Australia (17.8 percent) and New Zealand (15.5 percent). We have only one higher education institution, the Royal College of Surgeons in Ireland, which has a significant international footprint.

In both Australia and New Zealand, the generation of foreign earnings from education have now become major contributors to the economy and to the resourcing of the education system. There are also growing markets for the online delivery of courses to students in other countries.

Demand in this rapidly growing services sector is mainly fuelled by demand for high-quality education delivered in English. Ireland has significant strengths in this area. We have an education system which is well regarded internationally. Our membership of the European Union and our strong links with the United States are also major attractions. We are missing out on opportunities to generate foreign income and employment and need to make further progress in terms of developing our education system as an international service which will enhance its capacity to meet domestic needs.

Investing in research, development and innovation - this is not a time to falter

Our prosperity depends critically on knowledge and education. A 2006 World Bank report[17] , apportioned the sources of wealth of countries between three categories of capital- human and social, production and natural resources. For Ireland, the human and social capital content of the overall sources of growth accounted for 83 per cent of our wealth – as compared for example with 80 per

[17] Source: Where is the wealth of nations ? World Bank, 2006

cent for most of the richer countries and as low as 73% for Canada. For the poor countries human and social capital accounted for only 55 per cent of wealth generation. Until the 1990s the increasing numbers graduating with first degrees, diplomas and certificates from our universities and the former regional technical colleges and DIT provided the human and knowledge capital which brought Ireland up the value chain of increased value added and prosperity. The entry of the post-Communist countries, China and India and other countries into the world trading system plus our own increasing costs and prosperity meant that we have to continue to move up the value chain of production and this can be seen for example in the increased proportion of services in our exports.

Investment in research and development is now the key to future prosperity and this lesson has been understood by Government. Since the late 1990s public investment in R&D has increased from very low levels – stimulated by extraordinarily generous philanthropy from Chuck Feeney's organisation, Atlantic Philanthropies. Encouragingly this has been matched by a comparable increase in private expenditure which accounts for two thirds of total expenditure.

Foreign direct investors (FDI) have been impressed even though our levels of expenditure at less than 2.5 percent of GNP are below those of our direct economic competitors including Finland, Sweden, Switzerland, Singapore and South Korea. This has been accompanied by enhanced quality outcomes. Ireland's global citation ranking had improved from 27th place in 2003 to 17th in 2008 and Irish universities are moving up the world rankings. In 2008 over 40 IDA projects had a significant R&D dimension – attracted here by the increasing levels of human and knowledge capital resulting from the R&D investment by Government in research in higher education institutions (mainly through Science Foundation Ireland and the Higher Education Authority).

Exports are the foundation for our economic growth. We rank among the most export dependent economies in the world and in turn FDI companies account for 80 percent of our exports. The perception by these companies of Irish policies is of vital concern to us. They have seen us as a location which provides the assurance of high levels of policy consistency – on corporate taxation since the late 1950s, on increased access to education since the late 1960s and more recently in investment in research, development and innovation. Our policy makers have to date understood that investment in these strategies is a marathon not a sprint. Any serious deviation from this, particularly any pause in our commitment to investment in science, technology and innovation, will have major damaging effects on our international competitiveness and will seriously impair national recovery.

In summary

- Education spending cannot escape the compelling national need for fiscal adjustment – but must be a priority for policy
- Education is hugely important for competitiveness and for economic recovery
- We should aspire to having one of the best education systems in the world
- Outcomes, rather than inputs (such as funding levels and pupil teacher ratios), should be the focus of policy
- Government policy should aim to stimulate, where possible, choice for parents and students and contestability between schools and other educational institutions ...strengthened by appropriate cooperation
- Government policy, funding and regulatory roles are essential
- But, governments should avoid getting directly involved in the management of schools and other educational institutions
- National policy objectives and high quality educational outcomes can be achieved with market –like funding mechanisms; a significant part of funding should follow the student and there should be competition between institutions for additional developmental funding and new initiatives
- Sustain the policy priority for education and research within the framework of reduced overall resources
- Exploit the opportunities for greater engagement in international education…..and
- Cherish and empower the teachers.

The Author

A former top civil servant, Dr. Don Thornhill is now a consultant and adviser on strategy and policy. He is also a board member of a number of organisations in the public and private sectors. He is Chairman of the National Competitiveness Council of Ireland, Chairman of the Irish Payments Services Organisation and is a member of the boards of Forfás, the Irish Taxation Institute and Science Foundation Ireland. He is deputy chairperson of the Chartered Accountants Regulatory Board. Dr. Thornhill is former chairman of the US/Ireland Fulbright Commission and a former Board member of the Irish Management Institute and of the Digital Hub Agency. He is also a council member of the Statistical and Social Inquiry Society of Ireland.

During his career in the public service he was centrally involved in many of the policy developments which transformed the Irish economy and society, particularly education and research. He played the key role in the development and roll out of the Programme for Research in Third Level Institutions (PRTLI).

He completed a seven year term as executive chairman of the Higher Education Authority (HEA) in January 2005. Prior to his appointment to the HEA he was Secretary General of the Department of Education and Science from 1993 to 1998 and also worked in the Departments of Foreign Affairs, Finance and in the Office of the Revenue Commissioners.

He is a graduate of University College Dublin (B.Sc. and Ph.D. (Chemistry)) and Trinity College Dublin (M.Sc. (Econ). He was recently awarded an honorary doctorate by the National University of Ireland. During 1987 he was a Fulbright

Scholar at the Brookings Institution in Washington DC. He is an elected member of the Royal Irish Academy and an honorary life member of the Royal Dublin Society.