

SCIENCE, TECHNOLOGY AND INNOVATION CULTURE

A STATEMENT ISSUED BY THE IRISH COUNCIL FOR SCIENCE, TECHNOLOGY AND INNOVATION ON THE OCCASION OF SCIENCE WEEK IRELAND (NOVEMBER 1998)

An increasing number of the opportunities and challenges facing our society revolve around the application of science and technology. Many of the jobs being created in Ireland come, for example, from new uses of sophisticated telecommunications. But difficult issues, alongside business and employment opportunities, can also arise from developments in technology, for example, from advances in genetic engineering. In order to sustain a viable economy and develop a vibrant culture into the 21st century, Irish society needs to develop greater confidence in dealing with the opportunities and challenges which science and technology present.

Science, engineering and technology make major contributions to economic, social and cultural development. Government, business, education and the wider community need to be more aware of that contribution and policy-makers, legislators and administrators from all sectors need to ensure they have access to the best available scientific and technical information.

To this end, it is vital that scientists and technologists increase their efforts to explain their work to the public and become more involved in policy development. Increasingly, they have to face the social, ethical and cultural implications of their work. Irish society needs to find the means for scientists and technologists to discuss the significance of their work and to allow citizens to learn about the latest developments in science and technology.

The public needs also to understand how science is done, so that they can appreciate how scientists reach their conclusions. Progress in solving scientific problems is usually slow; it takes time for scientific ideas to be tested and either accepted or rejected by the international community of scientists. The public is often caught in the middle of rows between scientists and may find it difficult to distinguish one scientific finding or viewpoint from another. An understanding of the scientific method can help distinguish good and bad science and promote the public's confidence in dealing with science.

Exchanges between scientists, engineers and technologists and the wider community can happen in many different ways - through committees and consultations, through 'open days' and exhibitions and in schools and colleges. The media have an especially important role to play in facilitating mutual understanding between scientists and the public. While media coverage of science and technology has increased in recent times, there is a continuing need - and demand - for more information and discussion on science and technology.

Public debate of some issues arising from the application of science and technology has been sharply polarised, reflecting a low level of trust between those involved. Irish society needs to develop mechanisms for public consultation which acknowledge both the concerns of the public and the contribution of science and technology. Government and media can both contribute to ensuring that the relevant information is available and that opinions are expressed openly.

The education system can play a larger part in developing the public's interest in and engagement with science and technology. ICSTI welcomes the revised primary school curriculum's increased emphasis on science and urges teachers, parents and the scientific and technological community to ensure the change is effective.

Major changes are needed in the content, teaching methods and assessment of science and technology subjects at second level, in order to reverse the decline in the numbers taking some of those subjects, and to improve the performance of those who do take them. ICSTI recommends that this be addressed as a high priority by educational interests.

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Almost every country in Europe, with the exception of Ireland, has science centres, through whose exhibits children and adults can explore developments in science and the products and processes of technology and engineering. A network of science centres around the country, each with its own specialist area and with its own outreach activities for schools, would be an invaluable support for science education and for the promotion of greater awareness of science and technology. ICTSI recommends an allocation of £0.5 million should be made in 1999 to support the development of a plan for a network of science centres (including feasibility study, consultancy etc.) with a view to securing EU, private sector and government funding for its implementation.

Professional organisations, companies and state organisations all take initiatives aimed at raising public awareness of science and technology. These efforts need to be further intensified. ICSTI urges, in particular, the professional bodies representing scientists, engineers and technologists to establish a forum which can co-ordinate such efforts.

We will shortly be celebrating the beginning of a new millennium in which many of the most pressing questions will be raised or resolved through the application of science and technology. In recognition of their contribution to the shaping of the 20th century and of their likely impact on the 21st century, science and technology should be represented in the cultural activities being organised to mark the new millennium.

Science and technology are an integral part of contemporary culture and will play an even more important part in the culture of the next century. This reality should be reflected in Ireland's educational and cultural policy and activities.