

Strong IT sector needs to attract talent for long-term growth

The troubled image of the IT sector often overshadows its excellent job opportunities and its continued critical importance to our economy. **Declan Fahy** reports on the sector's need to shake its image and attract the talent it needs.

Ireland's computing industry needs to overhaul its image to attract graduates critical to the country's continued economic and cultural success, a DCU Professor has warned.

Professor Michael Ryan, Head of the School of Computing, said the industry must shake off damaging perceptions that are fast becoming the generally-perceived wisdom. He said these include the views that there are no jobs and that the degree has little educational value.

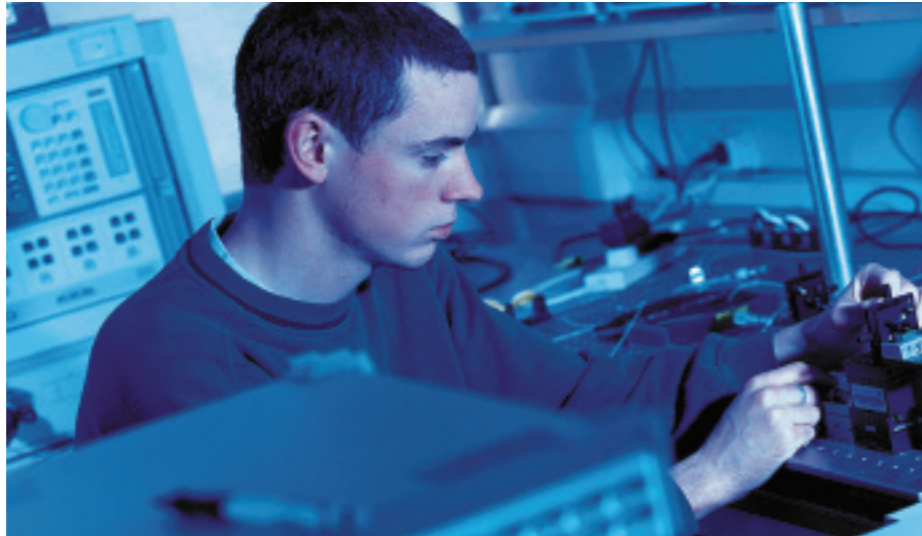
Professor Ryan was speaking after a recent DCU survey revealed there are 8,000 vacancies in Ireland for IT and technology graduates.

The danger to the country's long-term economic future lies if these dangerous myths are allowed persist, Professor Ryan believes. He said: "If this happens, then we might as well say goodbye now to the future of software development here and the knowledge-based economy. In the long run, we simply won't be able to find people with the kinds of interests, understanding and abilities that will be needed.

"Policy decisions will be unlikely to be anywhere near optimal. Maybe we'll be able to import people for a while, but that's about it."

He called on the industry – universities and corporates – to change the general perception, saying: "It's not enough to correct the false impressions that are around, that means being forever on the defensive. The industry was cool before the dot.com bubble burst. The question now is how to get the cool back."

Professor Ryan said that the IT sector needs to counter-attack, with its primary objective being the creation of a more realistic general perception of computing and its role in everybody's future. This involves demonstrating that



computing and its jobs are here to stay.

Effective use of computing will be critical to Ireland's economic and cultural success. The future will involve computing to an extent that is difficult to imagine.

"It's a pity the crazy jobs market of the bubble years came to be seen as the norm for computing. No qualification is a guarantee of a job, whether it's in medicine, law, accountancy, engineering, science, business, arts or whatever," said Professor Ryan. He believes the degree provides a rounded education, drawing on several disciplines that prepare graduates for work in several professional fields.

All of last year's 145 computer graduates from DCU are now in full-time jobs and the School of Computing has continuous inquiries from companies seeking to hire graduates.

Nevertheless, there are also fears that jobs will be lost to the emerging industries in India and China. Almost everything is cheaper in those countries, not just computer programming, so it begs the question, why doesn't everything move there?

Professor Ryan's answer is two-fold. He says: "Partly because in most cases it would actually cost more to try to do high-level work such as requirements

definition, design and content creation over there.

"Partly also because the time taken would be longer, and a window of opportunity missed. Some jobs should go, but many will still be here."

Professor Ryan believes computers will soon change the way business is conducted. Previously, computers were slotted into existing business procedures, instead of changing the procedures. He pointed to eBay and Amazon as examples of how the whole framework will change.

The gender imbalance within the IT profession needs to be redressed also, according to Professor Ryan. In the first two years of the computing course in DCU, in 1984 and 1985, both students at the top of the class students girls. The intake in the BSc in Computer Applications at DCU was roughly 50% female. In 2004 it was under 11%.

Concerns too were raised by employers' organisation IBEC about the take-up of students for DCU's engineering courses.

The Dean of the Faculty of Engineering and Computing, Professor Charles McCorkell, says the demand for civil and construction engineering courses has affected DCU.

He says: "During the Celtic Tiger years, there were no problems getting students. We were as big, if not bigger, than anywhere else." However, after the dot.com bubble burst and businesses failed, there was a simultaneous rise in the construction and infrastructure spheres – and students switched.

Professor McCorkell admits that overall, the impact of the shift to construction and civil engineering jobs hit IT across the board, but insists the faculty is in a very healthy situation. "We have a strong foothold in the taught

postgraduate and research areas. We have 200 PhD students," he says. The faculty will make some changes to attract students to its wide choice of engineering disciplines. It currently has nine separate entries on the CAO form.

According to Professor McCorkell, the way the courses are presented on the form would be altered. Courses would also be offered as a BEng/MEng, giving students the chance to graduate after three years with a degree, four years with an honours degree or five

years with a Masters degree.

The faculty is also examining the possibility of establishing a new degree in construction, design or medical diagnostics.

But, echoing Professor Ryan, Professor McCorkell says that with Ireland's well-developed ICT sector, there will always be a demand for qualified electronic and computer engineers.

He says: "This sector was built up in the 1990s. It employs 100,000 people. And it hasn't gone away. Companies are starting to recruit again."

BA Festival of Science – a jam-packed week of entertainment and discovery

Thousands participated in this celebration of science and how it interacts with literature, music, drama, popular culture and social issues. **Brian Trench** gives a festival snapshot.

For a week in September, Dublin residents and visitors had the opportunity to join debates on science in pubs, to hear readings on science in a night club, to engage with the history of science on guided walks of the city centre, to do a scientific experiment in a shopping centre, and to see pictures from science in the city's much-loved dead zoo. They took the opportunity in their thousands, as they participated in the city programme of the BA Festival of Science.

The core festival programme at Trinity College Dublin was a series of lectures, panels and debates, featuring natural and social scientists. Also in Trinity, groups of school students attended events in a young people's programme managed by Eleanor Cooke (MSc Science Communication, 2000) on behalf of DCU's Centre for Talented Youth. Over 1,000 pupils came into the college each day of the festival, and it was heartening to hear two groups of school girls greeting each other with: "Are you going to the nanotechnology lecture?"

As the ripples from the festival continued, guidance counsellor Brian Mooney, writer of a Q&A column in the Irish Times, was asked: "[What about] the contrast between the excitement generated among young people by the recent BA Festival of Science in Trinity and the decline in interest in science among my children as they progress through the school system."

Mooney referred to the inadequacy of school facilities, the shortage of laboratory technicians, and to several initiatives aimed at generating increased interest in science among young people – a standard answer from teachers. But they and the Department might also reflect on weaknesses in the science curricula, which, despite some recent changes, give little

attention to science in social, historical and cultural contexts.

That was what the festival offered. It was co-ordinated from DCU's School of Communications. Philip O'Reilly (MSc Science Communication, 2004) and I put together a series of events that set science in the context of literature, music, drama, popular entertainment and social issues.

Young physicists worked with a drama group to produce three-minute dramatisations of big ideas in modern physics. Scientists, politicians and lobbyists debated the agenda for science with Ireland's chief science adviser, Barry McSweeney and the BA president, Lord Robert Winston. Family groups crowded into the Royal Dublin Society on the closing afternoon of the festival for science demonstrations and a discussion on what hormones do to teenagers.

From DCU, Professor Dermot Diamond presented a scientific commentary on the physics in Flann O'Brien's novel, *The Third Policeman*, from which actor Donal O'Kelly read excerpts. Prof Diamond suggested, almost plausibly, that Flann/Myles was "the grand-father of nanotechnology".

Also from DCU, researchers at the National Institute of Cellular Biotechnology sought to answer a question in front of a partly sceptical audience: Does science have an answer to cancer?

In addition, the DCU science communication and journalism graduates, who make up Dublin's Alchemists Café, co-hosted a debate on the increasing effect of spin in science with the Society for Experimental Biology.

Walks around the city centre led by science writer and broadcaster Mary Mulvihill (GDip Journalism, 1988) took in the birthplaces, residences and places of work of leading figures in the history of science.

The festival challenged those concerned with boosting interest in science to think of not only the economic issues but also the broader social and cultural issues. Maybe by engaging young people's sense of intellectual curiosity and social responsibility we'll see more growth in science student numbers.