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< TECHNOLOGY

Shortage of IT graduates a critical threat

James Hutchinson and Edmund Tadros - 04 Feb 2014 00:05:29



Chief scientist Ian Chubb has warned on an IT skills shortage. **Photo: Alex Ellinghaus**

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Chief scientist Ian Chubb has urged universities to do a better job of encouraging the take-up of degrees, as lack of interest in the subject fuels fears of a skills shortage in a crucial growth secto

An analysis by *The Australian Financial Review* of university course take-up by domestic undergrad shows a 36 per cent decline in students starting IT degrees, and a 41 per cent decline in student degrees in the same time frame

degrees in the same time frame.

Although there has been a slight recovery in commencement numbers since 2009, when Australian number of students they enrolled in each course, the number of IT students still lags significantly increase in new undergraduate students since 2001.

The figures show for the first time the stark contrast between those taking up degrees in the science and mathematics (STEM) fields of study, which are considered key to boosting Australia's research

Among the STEM fields, only IT degrees showed a loss since 2001.

The uptick in students since 2009 has predominantly been led by male students, who now make up 75 per cent of those who commenced in 2012. Although females once made up 25 per cent of students commencing in 2009, they are now closer to 10 per cent.

Universities say stereotypes of the typical IT job – as geeky, back-room support staff likely to be in a basement – continue to dog the field and stop high school graduates studying computer science or information technology. Chubb said the onus was on the institutions to better encourage student take-up.

“We’ve used it for decades about why women didn’t do engineering ... it’s almost a cliché,” he told ABC. “I don’t know if it’s anything like it used to be, but as a general thing we’ve made some big improvements in the last few years.”

“The real issue is how are we teaching what we’re teaching and why aren’t we making it so compelling? Do you want to do it first, and second; that they want to finish?”

The Australian Computer Society, said there had been 100,000 new jobs created in the technology sector over the last five years but just 49,500 students graduated from technology degrees over the same period.

Freelancer.com chief executive Matt Barrie said in a recent global survey of technology entrepreneurs that Australia was comparatively high in Australia, the low number graduating from STEM degrees was a significant barrier to growth in the country.

“We’re trying to hire computer science graduates by the metric tonne. When we place a job ad, we get 100 applicants per day,” he said in a World Economic Forum report. In contrast, he said, a job for an experienced professional attracts only two applicants in two days.

“We need significantly more people entering the industry. Otherwise companies like us will be forced to look overseas for talent.”

find talent," he said.

Professor Justin Zobel, head of the department of computing and information systems at the University of Queensland, said that computing had become a commodity over recent decades and was no longer treasured as a rare skill.

"We see students who have learnt software development to a reasonably high level since they will come having 10 years experience of coding," he said.

"Those students may feel they have nothing to learn from an IT degree, and would have less to learn than those who have never coded."

Adam Redman, head of policy and external affairs at the Australian Computer Society (ACS), said the government and universities were showing renewed interest in IT to avoid a potential shortage of skills.

"There just isn't enough to meet industry demand. That demand is increasing as other sectors turn to digital ways of doing business are being disrupted. Manufacturing and retail are clear examples of that."

Universities have reported renewed interest in the subject in recent years, with the number of students enrolling in IT courses increasing 27 per cent since 2009, when the institutions removed caps on student numbers.

A spokeswoman for the University of New South Wales said the number of entering students picking IT as their first preference increased 23 per cent between 2013 and 2014.

"When the dotcom bubble burst the bottom fell out of IT enrolments rapidly. To a large extent it was a result of perceptions of the value of an IT degree and the career prospects it led to," said Professor David Foray, a senior lecturer in education at the University of Sydney's School of Information Technologies.

"Enrolment numbers in Australia tend to lag other major areas, particularly Europe and the US, but they are starting to climb again. In the US they had the same pattern of having the bottom years ago they started to climb and climb fairly quickly," he said.

"Over the next two or three years I think we're going to see that pattern grow fairly significantly."

The introduction of a revised national curriculum at primary and secondary schools as early as next year will require teachers to educate students on technology, in a move that proponents of the field hope will lead to more IT courses at universities.

Mr Redman said the ACS supported the move, but feared there would not be enough support from

Mr Keenan said the ACS supported the move, but feared they would not be enough support for teachers, as part of the new school curriculum.

Professor Chubb last year called for a strategic approach to science, technology, engineering and mathematics, a proposal that was not adopted by Labor and is still in discussion with the federal government.

“Somewhere along the line it does mean sitting back, and saying there are some things that are in the future,” he said.

“That means we have to take other steps to make sure they’re compellingly interesting and people want to do them. If they get to that point, we have to find other incentives so that people will nevertheless take on science and technology.”

“The government has to be engaged in this. Precisely how they would be engaged I don’t know, but it will be left to the study choices at the end of year 10.”

The Australian Financial Review

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