ENGINEERING e2e EDUCATION TO EMPLOYMENT

NEWSLETTER : APRIL 2015

8

WORK WITH US TO ACHIEVE THE GOVERNMENT GOAL OF INCREASING ENGINEERING GRADUATES BY 500+ PER ANNUM FROM 2017

IN THIS ISSUE…

we announce the upcoming pilot aimed at interesting more students in tertiary engineering study, plus the new Discoveries section on our website which shares thought-provoking resources we have come across in our work.

BETWEEN NOW AND THE END OF JUNE, *our Steering Group has a very full work programme. Together with the secondary-tertiary transition pilot programme featured in this newsletter, we have three other projects on the go:*

1. RESEARCH: *We'd like to know more about models for advanced apprenticeship that are being undertaken around the world – what works and what doesn't, and would they work in New Zealand? A small research project will get underway soon which explores models of delivery that allow both on-job training and completion of a degree level qualification in engineering.*

2. EMPLOYER ENGAGEMENT: *Emeritus Professor Geoff Scott, University of Western Sydney, will run a trial employer engagement workshop in early June. The purpose of employer engagement is twofold; to determine future graduate demand and to influence curriculum development. We're looking for broad representation from the engineering sector, both in terms of discipline, and size and maturity of company and will be inviting those who employ and work with graduates.*

3. IMPROVING LEVEL 6+7 LEARNING: *Our third project aims to support improvements to the quality of teaching and learning in engineering at Levels 6 and 7. Outcomes of this project may include work-integrated learning and new learning modalities.*

Over the next two months we'll also continue to add case studies to our website and, as always, we're interested in your feedback – contact us at ***engineeringe2e@tec.govt.nz***

SIR NEVILLE JORDAN
Chair, Engineering E2E Steering Group

A pilot to excite student interest in engineering

Engineering E2E's secondary-tertiary pilot programme gets underway later this year. The programme aims to generate interest in engineering careers by developing programmes of study that offer secondary students a flavour of engineering and engineering study.

Building on the Techlink Pathways Project

The pilot builds on the findings of a scoping project undertaken during 2013-14 by the Institution of Professional Engineers (IPENZ), the Board of Engineering Diplomas and the Metro Group of institutes of technology and polytechnics (ITPs).

The scoping project, better known as the Techlink Pathways Project, examined the interface between the secondary and tertiary education sectors in engineering and technology-related subjects. Project leader Glynn McGregor interviewed stakeholders, including: academic staff from engineering departments at the Metro Group of polytechnics and institutes of technology (Metro ITPs); technology, maths and science teachers; careers advisors and senior management at secondary schools; and employers in engineering-related industries. He also liaised with the Ministry of Education's Vocational Pathways team.

Three areas of focus

Glynn identified three key areas where obstructions can be cleared from the engineering pathway. "There are three main issues to overcome," he explains. "There's aligning school and tertiary programmes so students can be better prepared to succeed in their studies, raising awareness of qualifications offered at ITPs, and addressing commonly held attitudes and beliefs that studying at a polytech is somehow inferior to going to university. A lot of people

still think that engineers spend their time covered in machine oil, or are guys in hard hats on construction sites.

"Changing these perceptions won't happen overnight, but it can and must be done if we are to have real, long-term change in our engineering graduate numbers."

Graham Carson, head of WelTec's Engineering School, will manage the pilot which will form regional clusters of schools and ITPs in Waikato, Wellington and Otago. Glynn McGregor will continue in the role of project leader to utilise existing relationships with industry, local secondary schools, Futureintech, and Vocational Pathways.

A key outcome of the pilot programme will be published case studies of collaboration which address the barriers identified by the scoping exercise.

Updates on the pilot programme along with the resulting case study material will be available on our website.

For the latest developments, see **engineeringe2e.org.nz/Progress**

FEATURED CASE STUDY

INFORMING THE PUBLIC ABOUT ENGINEERING

A local project can make a great springboard to inform the public about engineering.

We look at how the Well-Connected Alliance (WCA) publicised the engineering involved in the Waterview Connection project – New Zealand's largest roading project that will provide a direct route from Auckland City to the airport, half of it underground.

We also consider how other employers could do something similar.

engineeringe2e.org.nz/Employers/Case_study.cfm?ID=23

A treasure trove of discoveries

The Discoveries pages of our website – **engineeringe2e.org.nz/Discoveries** – have relevant news articles, research reports and engineering-related initiatives we've come across.

WHAT WE'VE DISCOVERED

The research we've commissioned and reports that have provided a background for our work.

WHAT OTHERS ARE DOING

How others are trying to increase the numbers of students studying engineering.

WHAT OTHERS HAVE DISCOVERED

Research from other organisations, journal articles and other relevant stories.

WHAT'S MAKING US THINK

A large number of links to news articles and opinion pieces that we have found thought-provoking.

TELL US ABOUT **YOUR** DISCOVERIES

Do you have an article or information to add? Email us at **engineeringe2e@tec.govt.nz** , or phone **04-462 5256**.

IF YOU HAVE ANY ENQUIRIES, PLEASE CONTACT US: ENGINEERING E2E PROGRAMME TEAM
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