



Making science sense

MARTINA SIMOS
NIE MANAGER

SOME northern schools have reported a rise in Year 12 science and maths enrolments after participating in a hands-on education program with industry.

Ten schools have been involved with the Northern Advanced Manufacturing Industry Group to introduce Concept2Creation – a vocational education initiative designed to promote career awareness, employability and engagement with science, maths and technology.

An evaluation report by Flinders University has found participation in specialist maths subjects has almost doubled from a modest 2.4 per cent participation rate to just over 7 per cent of students. The program did not encourage more students towards less advanced or intermediary maths, though take-up has stabilised after declining since 2003, but did propel more towards chemistry and physics.

The report pointed out that while much more data and analysis was needed, it was a positive outcome for an industry and education partnership which had involved 3000 students from the northern suburbs since 2005, including 1000 last year.

The project-based learning program asks small groups of Year 10-12 students to develop a product or service from start to finish. The activity includes factory tours, talks with business, mentoring and training to develop complex projects. While the students develop the concept, they have support by an industry mentor. The C2C program also counts towards SACE.

Projects include development of control systems for a fully automated house, and developing unmanned flight vehicles with controls for navigation and the release of a package from the model plane.

Valley View Secondary principal Liz Mead said her school had witnessed “a noticeable increase” in the Year 12 enrolments for physics and maths since the introduction of the C2C to Year 10 students.

“This year, we had 17 Year 12 students doing physics. Normally we have five students and that’s the kind of difference it has made to our students,” she said.

“Of that 17, 12 are also doing the high-end maths to go with it and normally we would have three students.

“That’s the most we have had in the eight years.”

She said that last year, eight of the Year 12 students went on to do different types of engineering when usually only one student would go on to study engineering.

NAMIG general manager Bernie Fitzsimmons said that while NAMIG did not claim all the credit for the success, “it certainly has contributed towards it”.

“The project has had its history largely around Year 10 and 11 and in those participating schools there has been an increase uptake in subjects like maths, physics and chemistry,” he said.

“There is a growth in the number of industries partnering us and there is a growth in the number of schools.

“We are projecting that we will probably have something like 15 to 20 schools in northern Adelaide involved this year. There is interest from the State Government to try to grow the program even broader in the long term.”

Ms Mead said the learning that took place was “phenomenal”.

“Suddenly the maths and the physics – then it might be the chemistry for some of them – make sense because they actually need to do it,” she said.

Year 10 students from Valley View Secondary are involved in developing control systems that will create a simulated environment for aquaculture – in particular yabby farming.

Their device would be used to control power pumps, filters and monitoring devices for water quality, temperature, light and feed.



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AQUAPONICS PROJECT: Valley View High School students Matt Brown, Bridgette Humphrys and Jessica Golja