

Connectedness is the key to attracting tertiary science students

(Article submitted for presentation only)

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Since its inception, the Primary Industry Centre for Science Education (PICSE) has spread from the University of Tasmania to five additional hub sites around Australia including the University of the Sunshine Coast (USC), the University of Southern Queensland, the University of New England, the University of Western Australia, and Flinders University. PICSE is run using the Russell Model which links school students and their science teachers with university academics and industry mentors via science education officers. The Russell Model begins with science education officers finding local primary industries willing to provide facility tours for students / teachers and industry placements for students. Science education officers deliver this information to students during their school science classes via a 15 minute power point presentation. All teacher applicants participate in a 2 day professional development program. All student applicants participate in a 1 day biotechnology workshop (a USC PICSE hub innovation) and a 1 week science conference. Selected students complete the final phase of the Russell Model: a 1 week industry placement and a 5 minute power point presentation delivered at the report back session.

The USC has run the PICSE for 2 years. 12 teachers and 21 students have participated in the USC PICSE program thus far. Participants filled out surveys about the degree to which the USC PICSE program had improved their science abilities according to a five point scale (1 – not at all, 2 – somewhat, 3 – fairly, 4 – quite, 5 – very). A score of 4 or 5 was deemed to be a significant improvement. 92% of participating teachers significantly improved their ability to construct relevant and meaningful learning experiences that connect to the world and community beyond school. Likewise, 71% of participating students

significantly improved their ability to connect scientific concepts to the real world.

16 students were selected over the 2 years to complete the industry placement and report back session components of the USC PICSE program. 4 and 2 of these students will complete year 12 in 2009 and 2010, respectively. 10 of these students completed year 12 in 2008. All of these students are in the first quartile of their graduating class. 70% of these graduates are studying a degree in science at university, compared with 5% of all Queensland school leavers.