

ABSTRACT

Over 550 female students in Victoria and Singapore have been surveyed using a structured questionnaire, and interviewed to obtain a profile of the type of student that chooses computing at the senior secondary and tertiary level. The students were selected on the basis of their enrolment. They were either studying first year computing subjects in the Faculty of Information Technology at Monash University, or were studying a senior secondary Information Technology subject at a selection of Victorian secondary schools. A number of students from Singapore were also surveyed based on their enrolment in Information Technology at a senior secondary or tertiary level.

There is almost an equal gender balance in students studying Information Technology at Year 11 and 12 level in Victoria. This balance is not reflected in tertiary computing courses at Monash University where less than 30% of the students enrolled are female. In Singapore, very few females study Information Technology at secondary school level, while at tertiary level the number of females enrolled in computing courses is consistently over 40%.

The majority of the students believe that females are equal to males in ability and that computing is of equal importance to both sexes. Over thirty percent of the cohort from Singapore believe that males make better computer scientists and are better than females at mathematics. The students studying computing at a tertiary level in both Singapore and Victoria believe that computing courses require good mathematical ability, whereas a large number of the school students are unsure about this. The secondary school students are also unsure about the perceived lack of social interaction in computing careers. Most students surveyed chose to study computing because of an interest in the field, with forty-two percent of the secondary students seeing it as a necessary skill. Singaporean students are attracted to the financially lucrative career path three times more often than the Victorian students are. All cohorts agree that prior computing knowledge gives the best advantage for success in the subject. The students in Singapore have a greater awareness of the need for communication skills in this career path.

The need for more promotion of the variety of computing careers comes through strongly in both survey and interview results. There is a lack of knowledge about the variety of career paths available to students who study computing at a tertiary level, particularly in secondary schools. The need for more advertising is supported through interviews with professionals in the field. An awareness of the market that needs to be targeted is also emphasized, with the view that females respond more to interaction and word of mouth than they do to brochures and videos. Affirmative action is also advised, through the awarding of scholarships and incentives to encourage females to enter tertiary computing courses.