

Report on ALTA project

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Project Title: "Motivating students to engage in postgraduate research degrees in ICT"

Project leaders:

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Outcomes achieved or expected

Survey instruments were designed for final year undergraduates, Honours/Masters, and current research students. Ethics approval was gained from all 3 universities. The surveys were conducted at 2 universities during 2012, then at Flinders University in February 2013 owing to delays in ethics approval from that institution.

Focus groups have also been conducted at all 3 universities (with kind help from Ivan Lee at University of South Australia and Said Al-Sarawi at Adelaide University). An extra focus group was also conducted at the Doctoral Symposium held as part of Australasian Computer Science Week in Adelaide.

Although analysis is not yet complete, trends are emerging to indicate the primary motivations for those considering or already undertaking research degrees in ICT.

Surveys

Responses from all 3 universities have been collated. The initial findings are as follows.

Undergraduates (n=69)

Most compelling reasons for NOT continuing into research (n=59) are

- they wanted to start earning money
- they were tired of study

Those who DO want to do research (n=10) are attracted by

- wanting to invent/create/discover new things
- their lecturer demonstrated relevance of research to real life

Honours & Masters (n=46)

Most compelling reasons for NOT continuing into research are

- want to start working
- want to earn money

Those who DO want to do research are attracted by

- wanting to invent/create/discover new things
- wanting to do their own research

Current research students PhD (n=35)

Most compelling reasons for going into research degrees are

- want to find out more about their topic
- want to invent/create/discover new things

The results will be subjected to further factor analysis to confirm the factors that motivate students at each level to undertake research degrees.

Focus groups

Four focus groups have been conducted of approximately 1 hour each, and transcribing of the recorded discussions has been partially completed.

Where	Gender	Origin
Adelaide University	5 male, 4 female	3 local, 7 international
Flinders University	4 male	3 local, 1 international
University of South Australia	10 male	10 international
Australasian Computer Science Week	3 male, 3 female	2 local, 2 permanent residents, 2 international

A more complex picture is provided by the focus groups, in which a number of students talked about working in industry for a few years, but then felt bored by the work and wanted to go back to research degrees for the intellectual stimulation provided by the university setting.

Focus groups also raised the issue of career development and opportunities that a PhD would offer, and some participants said that they had enjoyed doing some university teaching in their Masters year which prompted them to consider an academic career.

Many participants also talked about how much they had enjoyed Honours/capstone research projects and had felt inspired to continue into research after those experiences.

Interestingly, many others who hadn't had such experiences as undergraduates admitted that they really didn't know much about what 'research' meant in the fields they had studied as undergraduates. This might well become an important element that can be more directly taught and discussed in undergraduate teaching.

Dissemination of findings

On completion of the statistical and qualitative analyses, the findings will be reported in a publication in an Education journal with an ICT readership.

It is also intended to report on these findings at

- a national ICT conference
- staff seminars at the 3 universities involved in the project

Sustaining identified benefits

Once we have identified factors that motivate students to undertake research

degrees in ICT, strategies will also be recommended for optimising recruitment of potential research students. These strategies will be discussed at the staff seminars at the 3 universities involved, and it is intended that these strategies will inform decisions regarding undergraduate and Honours/Masters teaching. It is hoped that publication of the findings will result in similar strategies being implemented at other universities as well.

Expenses to date

Surveymonkey licence	\$300
Catering for focus groups	\$324.44
Transcription of focus group recordings	(approx 20 hours so far, estimated at around \$900 but not yet claimed)
Initial statistical analysis of survey results	\$1823.16 (more still to come)
Total	\$2447.60 (+ \$900)

Expenses still to come (costs according to original budget)

Completion of statistical analysis and transcribing of focus group recordings

Costs associated with presenting results at a national conference

Costs for seminars at the 3 universities to present results