SEEKING THE GEEK GIRLS
EXPLORING WOMEN'S AND GIRL'S PERCEPTIONS OF INFORMATION TECHNOLOGY

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The Information Technology – IT Industry in 1999 is characterised by a particular perception:

> "a career in Information Technology is often viewed as a masculine career. It is often associated with high level mathematical competence, individualistic working conditions, and low levels of social skills (i.e.: the vision of the "geek" in the backroom programming, Gale, 1997, 44)".
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> Amanda Elliot, **Women in(to) Computing,** 1998, p.4

For many years the Australian Information Industry Association and the Information Technology (IT) Industry has been concerned about the ratio of women and men involved in this Industry. The development of the first training package – the IT Client Support Training Package made it possible to introduce an adaptation to the schools.

In 1998 the Vocational Education and Training IT (Information Technology) course was introduced as a pilot program into 40 schools in NSW. The initial enrolment reflected a smaller proportion of female students (one third) to male students. In 1999 it is anticipated that there will be approximately 200 schools and approximately 2,000 students participating in this program.

Concern was raised by the Information Technology Industry Training Advisory Board (ITITAB) that this ratio reflected the Information Technology Industry, i.e. there are significantly more men than women employed in the industry. The ITITAB is very aware of the shortage of women in the industry and commissioned a report in October 1998 to substantiate anecdotal information and consolidate research in this field.

A survey was developed and sent to Schools participating in the pilot program to ascertain the perceptions of the Information Technology Industry by girls in Years 11 and 12 .

The main findings indicated:

1. That there are very few girls doing the Information Technology Course.
2. Very few girls have considered doing Information Technology as a career.
3. Students had very little and often incorrect knowledge of the Information Technology Industry.

A Year 12 student contemplating a career in Information Technology stated that it was a "fast growing industry". However the majority of students reported that they did not know what type of jobs young women would choose in the Information Technology Industry.

Over half of the Year 11 and Year 12 students responded that they didn't have enough knowledge of the industry to answer the questions regarding women and career change within the Information Technology Industry.

When the students were asked how Information Technology could be made more interesting the majority of Year 11 students responded that they did not know. However, in the suggestions which were made, one student asked for "more information….so people can make informed decisions" and another stated "many people are ignorant of what information technology involves, me included, it would probably be more popular if it was publicised more".

Other students believed that the IT Industry needed to advertise the more interesting sides of IT: "(Industry needs to) emphasise that Information Technology is not about becoming a programmer or hacker – (there are) many other jobs that are more interesting". What are these Jobs? The range of

positions include Project Managers, Systems Analysts, Internet Designers, Business Development Strategists, Marketing roles, and many more. More importantly, the first career job is but a start on the career cobweb, that can be creative, diversified and fulfilling. If we think of our own experiences I am sure that the first job in which we first started is not what we are doing today.

In response to the previous question, the majority of Year 12 students responded that they did not know how Information Technology could be made more interesting. Of those who did answer this question the response ranged from stating that the industry needed to make it easier to enter and provide more opportunities for promotion.

Overall the data indicates that few of the Year 12 students know much about the IT Industry or the courses offered at TAFE. They appeared to be unaware of career opportunities and directions within the industry and these students have little, if any knowledge, of the Information Technology Industry and the career opportunities within this industry.

In recent discussions with John Price, Chairman AIIA Education and Training Forum, and InfoComP Chairman, he stated that the Victorian Government as well as the NSW Government, will be undertaking a campaign to promote IT careers. The AIIA Education and Training forum has released a presentation template to assist in promoting careers in IT and is available on their website www.AIIA.com.au. An IT training package, developed in close consultation with industry by the ITAB will be released in April 1999. This will act as a stimulus for training providers to build courses to support traineeships.

In addition a Skills Crisis Taskforce formed by the AIIA (Australian Information Industry Association), ATIA (Australian Telecommunications Industry Association) and Telstra was also planning to launch a national marketing campaign. It is hoped that these programs will encourage students to choose a career in Information Technology which has sustainable employment and career opportunities in Australia and overseas.

The link between students' perception and the IT Industry is a bit like a child in the first two years of their life. A child has the ability to walk and talk but mastering these skills takes time and effort. Educating students about the choice of careers and opportunities within the IT Industry will take an education program, which involves the active participation of schools, tertiary institutions and industry.

Seeking the Geek Grrls in TAFE

Current work in partnership with the IT ITAB and Northern Sydney Institute demonstrates an active relationship with schools and industry.

Within Northern Sydney Institute the participation rate of women in the Information Technology courses has been declining in recent years. In addition, young women school leavers are almost absent in the student profile of current high award TAFE courses in Information Technology. Mature aged women are represented in small numbers, many coming with assisted entry via an access course. It is an issue as to why the participation rate of women is so low in a vocational growth area.

In comparison young women predominate in related course areas eg Office Technology and matured aged women in courses such as Library Services Programs and Computer User Services. The vocational outcomes can be of significant difference due to the award of study within these program areas and their employment application.

Snapshot of Statistics

- In sum, young women are present in high numbers in the Office Technology course areas, as also are matured aged women. Young men predominate in the Information Technology courses, with mature aged women in smaller numbers.

- In Information Technology and Telecommunications programs, young women make up only 9% of the student group in the 15 to 19 year olds [Certificate 4 and Diploma courses], while their group make up 70% of the enrolments in Office Technology courses [principally Statement of Attainment and Certificate courses]. Women 25 years and over make up one third of the student group for this age group in Information Technology, and are 80% of the age group 25 and over in Office Technology.

- Girls in Joint TAFE Schools programs in our Institute make up slightly more than 50% of the student group but the pattern where computing is involved tells a similar story to the pattern within TAFE: ie young women participating in courses in office related technologies rather than Information Technology career routes.

Information Technology	8 girls, 54 boys [1998 figures]
Computer Applications for the Office	11 girls 4 boys
Computing Skills for the Office	26 girls 17 boys

It needs to be recognised that there are many factors which operate to shape the destination of a school student taking up a JSST course place eg teacher influence in steering students, or a negotiation of a narrow band of course options for a particular group of students by the school, geographics/locality etc.

We recognise many factors play a role in career selection and destinations of individuals. But a message lies within the application pools when the applicant profile is very narrow. Clearly the computing industry is not attracting a broad profile of students to move through the prerequisite training paths, and certainly not young women.

Surveying Girls

The opportunity of 45 Year 8 girls coming to Crows Nest Campus for an Information Technology Day was too great an opportunity to miss, so a short survey was included in their program to gather data on their perceptions of the computing industry. A survey of selected questions from the ITITAB commissioned survey were replicated.

The findings in summary :

- 44 of the 45 girls had access to a computer at home and regularly used it for homework, Internet access, games and 3 girls said for entertainment.
- 10 answered they would like a career in computing ['love using them', 'more convenient to use them', 'obsessed with computers and want to show it's not a male profession'], and a higher number said they would like a job in IT when they finished school.[15]
- 11 students felt there were definitely obstacles which prevented young women from choosing a career in IT ['it's not a female job', 'discrimination, not considered a women's job'.] ie one quarter of the girls surveyed held these beliefs, that it would be difficult to be a woman in this industry area.

Where to next?

Open Discussion

- Has anyone been involved in a successful career path education program for girls in an emerging industry area?
- Was there a magic formula – what worked?
- Has anyone had experience in linking the school, tertiary and industry environments – what would a good approach be?
- Does anyone know of a project being conducted into which we could link?