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AUSTRALIAN WOMEN IN INFORMATION TECHNOLOGY

Editor:

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In 1992 the first Australian Women in Information Technology (AusWIT) conference took place in Launceston Tasmania with the theme 'Women in Computing – Keeping the Doors Open'. AusWIT formed with the mission of informing, sharing, community building, and re-energising those involved in the recruitment and retention of women in information technology. Since then the conference has successfully run every two to three years in different states across Australia. As the conference has grown it has attracted women from Europe and elsewhere reflecting the ongoing need for such dialogue to continue. As well, the conference now attracts funding from sponsors such as IBM and Google suggesting a growing recognition of the issues and the field.

Last year in December the AusWIT conference was held in Adelaide. The theme for the conference was "partICipaTion one year on". The theme was selected as it was one year on from the Federal Government's partICipaTion Summit hosted by Senator the Hon Helen Coonan, Minister for Communications, Information Technology and the Arts. The conference provided an opportunity to reflect on what was achieved by the summit as well as in the year since. . The best papers from that conference have been selected for this special edition of Australasian Journal of Information Systems.

ABS data reported that from 1999-2000, 23% of those enrolled in IT courses were women, by 2005 this had dropped to 20%. We know anecdotally that the number of women participating in the information technology industry has been declining in recent years. We need only look around us to see the dearth of female colleagues. Additionally the number of women looking to undertake a computing program at the tertiary level is also declining. Part of the ongoing debate in the research literature is around why this continues to happen.

At least since 1992, Australian researchers have been investigating and reporting on issues of gender and IT. People such as Professor Liisa von Hellens and Sue Nielson at Griffith University, Dr Joy Teague and Professor Val Clarke then at Deakin, Dr Lorraine Staehr and Mary Martin, Bendigo La Trobe, myself and Associate Professor Angela Scollary then at Victoria University, Associate Professor Ruth Christie at QUT, Charmaine Ryan University of Southern Queensland, Debbie Clayton at the then University of Central Queensland are just a few of the researchers who have been active in the area over the last 15-18 years.

If we reflect on where research has focused we can see emerging trends. The 1992 conference reported research on issues for women in the work force, changing girls' perceptions of IT and how to attract more women to the industry. Subsequent conferences published papers along similar themes. In 1998 we published a paper (Craig et al. 1998) which reported on a range of initiatives and research in Australia designed to support women and encourage women join the IT workforce. It is worth reflecting on the early research work that was undertaken. It can be summarised briefly as:

- Research which studied the perceptions secondary school girls have of IT and how this might be changed.

- At the tertiary level, research was conducted into why women are more likely to drop out of IT courses compared with men, identifying the factors and how can these issues can be addressed.

- Once women have entered the IT workforce the research focus shifts to the barriers women face, factors that lead to women leaving the industry and programs that support and / or encourage of women to stay.

Much of the research published at early AusWIT conferences involved reflections by women working in the IT industry, experiences of teaching IT in individual institutions, proposals of how things might be changed and examples of programs designed to change attitudes or improve the decline in numbers. Reflection and commentary were common approaches taken by the authors.

Today as a research field, women in IT has matured, this is reflected in the fact that although there have only been a handful of papers focusing on gender published, in the Australasian Journal of Information Systems, most of these have been published since 2000. We can see the further maturing of the field in Australia in the papers presented at the 2006 AusWIT conference, with a stronger research basis than perhaps, was the case earlier. This special edition is therefore timely. The papers published in this special edition were selected as the best from the conference. Each paper has been reworked and extended and undergone a second review process. Our reviewers included international scholars in the field and we are appreciative of their time and contribution.

The themes that attracted attention in the early years are still common today and highlight the issues of the low participation rate of women in the industry, issues relating to education and the declining number of women studying IT. The first paper reports on a significant survey of students involved in online learning at Deakin University. Coldwell, Goold, Craig and Mustard have analysed the data and identified the different characteristics of female students interacting online compared with the male students. This study is important because of the large data sets with which they were working. They conclude that irrespective of gender students are comfortable and confident working in the online environment. Women however, are more likely to participate in discussions compared with males. Further the female students placed greater value on using the online environment for communication and collaboration.

The second paper by Stockdale and Stoney presents research conducted in both Australia and New Zealand universities. The research sought to identify why women are not studying Information Systems, from the perspective of recent graduates and final year students. Both male and female students were involved in focus groups. The research is important because despite universities and academics being aware of the declining interest of women in studying IT, little progress has been made on any of the underlying factors that might be causing this decline. The authors recommend a stronger focus on curriculum and better marketing of Information Systems as possible approaches to arresting the decline.

Mentoring has long been considered an important support mechanism in organisations. For women in a male dominated industry mentoring can be the critical, providing support and guidance in the workplace. The third paper by Login and Crumps makes an important contribution to the discussion of why mentoring is important for women and how it can be successfully implemented. The authors' research was extensive involving interviews with 90 women working in the New Zealand ICT industry. They conclude that mentoring, at least in New Zealand, was successful but most relationships developed informally. A significant contribution of this paper is the reflection they provide on mentoring generally and recommendations to ensure success.

The final paper explores the issues facing the tertiary sector with regard to women in ICT. Lewis, Lang and McKay explore some of the reasons behind what they term the 'invisibility of women in ICT'. From theory and their research they reflect on what they have learnt from the Swinburne experience and propose a number of recommendations to address the issues they identify.

AusWIT attracts people from across the IT spectrum from Computer Science and Engineering to Information Systems, researchers, primary and secondary teachers and women from industry. The conference provides encouragement to those thinking about a career in IT, supports women already in the industry and gives those currently studying good reasons to continue. We are confident that future AusWIT (now OzWIT http://www.ozwit.org/) conferences will be as successful as the last conference and that the quality of research and papers presented will continue to demonstrate the high-quality work that is published in this special edition. We therefore encourage all researchers and other women interested in the area of women in IT to continue the good work and produce solid research in the future.

Craig, A., J. Fisher, A. Scollary and M. Singh (1998). "Closing the Gap: Women Education and Information Technology Courses in Australia." *Journal of Systems Software* **40**: 7-1