

Editor

Julie Fisher

Monash University

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Local Chair: Su Spencer,

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Swinburne University of Technology

University of South Australia

ISSN:

0 85590 823 8

Welcome from the conference organisers

AusWIT has a mission of informing, sharing, community building, and re-energising those involved in the recruitment and retention of women in information technology.

We know that the number of women participating in the information technology industry has been declining in recent years. Additionally the number of women looking to undertake a computing program at the tertiary level is also declining. We hope through initiatives such as AusWIT that we can provide encouragement to those thinking about a career in I.T., support women already in the industry and give those currently studying good reasons to continue.

The theme for this year's conference is "partICipaTion one year on". We have selected this theme as it is now one year on from the Federal Government's partICipaTion Summit and provides us with an opportunity to reflect on what was achieved by the summit as well as in the year since..

We are pleased to present what we believe is an excellent conference program. We have had many excellent papers submitted for review. Each paper was double-blind refereed. We have also had a significant number of submissions for panel presentations.

Submissions came from a wide range of people from Australia and internationally who share a common interest of improving the number of women participating in ICT. The conference has attracted participants from industry, academia, researchers, teachers and students involved in women in information technology.

We would like to take the opportunity to thank all our sponsors and particularly the ACS and the AWISE/IBM partnership whose generous support has enabled us to bring two international keynote speakers to the conference. Sponsors have also provided funding for students to attend the conference.

We hope the conference encourages everyone to meet and share programs, discuss strategies and assess progress. We hope you enjoy the conference.

Julie Fisher (Program Chair)

Annemieke Craig (Conference Co-Chair)

Catherine Lang (Conference Co-Chair)

Su Spencer (Local Chair)

Keynote Speakers

Dr Tracy Camp



Tracy Camp is an Associate Professor of Computer Science at the Colorado School of Mines. She is the founder and Director of the Toilers (<http://toilers.mines.edu>), an active ad hoc networks research group currently consisting of five faculty and 18 students. Dr. Camp has received 12 grants from NSF, including a CAREER award in 1997. Her funding has produced 11 software packages which have been requested from more than 700 researchers in 49 countries (as of June 2006). Dr. Camp has published more than 50 refereed articles; as of August 2006, her articles have been cited over 1300 times (per Google Scholar). Dr. Camp recently returned from New Zealand, where she was a Fulbright Scholar. She is currently a member of the Ad Hoc Networks Journal editorial board, the elected Treasurer of ACM's Special Interest Group on Mobile Computing (SIGMOBILE), and a member of both ACM-W and NCWIT. In October 2006 Dr Camp was recognised for her many contributions by the ACM with the award of Distinguished Scientist.

Melody Hermon: Computer Clubs for Girls; eSkills, UK



Melody has extensive experience of the industry in both management and skills development in a large IT company. Since joining e-skills UK 5 years ago she has delivered on programmes focussing on graduate recruitment, addressing the gender imbalance across the industry and most recently has been the Programme Manager of one of e-skills UK's flagship programmes Computer Clubs for Girls (CC4G). CC4G is delivered across the UK to 2,000 schools and more than 62,000 girls. The programme has had a positive impact on the attainment of 10-14 year old girls in ICT and more widely across the curriculum. In terms of addressing the negative perceptions of the industry 66% of CC4G club members report that they are more likely to consider a career in technology. A key component of the programme is the e-learning courseware and Melody worked to develop 8 of the e-learning topics, working in partnership with a team of education specialists and a large software development team.

Sonja Bernhardt



Sonja Bernhardt, CEO Thoughtware Australia, is the founder of WIT –Women in Technology in Australia, as well as the chair and co founder of AWISE – Australian Women in IT and Science Entity. Sonja is the first Australian to be inducted into the Hall of Fame for Women in Technology International (Silicon Valley - 8 December 2005). Sonja has also taken on an impressive list of ICT industry board/committee and voluntary roles where she has inspired many by the contributions to diverse industry and community groups she has made. These appointments include roles such as judging Australian ICT innovation, providing suggestions for IT policy within her home state of Queensland and as a member of the [Federal ICT Summit Advisory Group](#) - the group which reported directly to the Senator Helen Coonan, the national Minister for Communications, Information Technology and the Arts

Reviewers

An event such as this cannot occur without the contributions of time and effort by many people. Each paper submitted went through a full review process with each paper blind refereed by at least two reviewers. We warmly thank these international reviewers for their time and energy as well as their insightful comments and suggestions. Without these contributions we would not have the quality of papers that we have for AusWIT 2006.

Bettina Bair	Department of Computer Science and Engineering The Ohio State University, USA
Angela Carbone	Faculty of IT, Monash University, Melbourne
Yen Cheung	Faculty of IT, Monash University, Melbourne
Kaylene Clayton	Griffith University, Qld
Jo Coldwell	Deakin University, Geelong
Julie Fisher	Faculty of IT, Monash University, Melbourne
Sue Foster	Faculty of IT, Monash University, Melbourne
Catherine Lang	Swinburne University of Technology, Melbourne
Sue Lewis	Swinburne University of Technology, Melbourne
Sharman Lichtenstein	Deakin University, Melbourne
Kerri Logan	Massey University, New Zealand
Kathy Lynch	Faculty of IT, Monash University, Melbourne
Mary Martin	Bendigo University, Melbourne
Joanne McGrath Cohoon	University of Virginia, Science, Technology, & Society, UVA and National Center for Women & IT
Jeria Quesenberry	College of Information Sciences and Technology, The Pennsylvania State University
Judy Sheard	Faculty of IT, Monash University, Melbourne
Lorraine Staehr	Bendigo University, Bendigo
Rosemary Stockdale	Massey University, New Zealand
Eileen Trauth	College of Information Sciences and Technology, The Pennsylvania State University

Sponsors

The organisers would like to thank our sponsors for their generous support of this conference:



Australian Government
**Department of Communications,
Information Technology and the Arts**



Australian Government
Office for Women

The IBM logo, consisting of the letters 'IBM' in a blue, horizontally-striped font.

The logo for Australian Women in IT and Science Entity (awise). It features the word 'awise' in a purple, lowercase, sans-serif font. Above the 'i' and 's' are three green dots of varying sizes. Below the word is the text 'Australian Women in IT and Science Entity' in a smaller, green, sans-serif font.



The Google logo, featuring the word 'Google' in its characteristic multi-colored font (blue, red, yellow, blue, green, red) with a trademark symbol (TM) to the right.

2006 AusWIT Program - Day One - Monday

8.30 – 9.00	Registration	
9.00- 9.20	<i>Opening and welcome</i> – video message from Senator the Hon Helen Coonan, Minister for Communications, Information Technology and the Arts, Deputy Leader of the Government in the Senate	
9.20 -9.45	Sonja Bernhart “Old Women Don’t Get IT”	
9.45 -10.30	<i>Keynote:</i> Tracy Camp, Associate Professor of Computer Science, Colorado School of Mines ACM	
10.30 – 11.00	Morning Tea	
11.00 – 1.00	<i>Panel 1: Women and the ICT Industry</i> Speakers: Newhouse – Maiden, Alexander, Steiler, O’Donnell, Barbour	
1.00 – 2.10	Lunch	
	Session 1	Session 2
2.10-3.10	<i>Panel 2 Perspectives on Gender</i> Downes, Reid, Vickers Lamp	<i>Papers: Issues and programs in Primary and Secondary Education.</i> Clayton, Webster
3.10-3.30	Afternoon Tea	
3.30 – 5.00	<i>Papers: Issues and programs in Tertiary Education.</i> Miliszewka Coldwell, Craig Shi	<i>Papers: Women and Industry</i> Uitdenbogerd, Beekhuyzen, Anderson
	<i>Conference Dinner:</i> De Castella's Restaurant, National Wine Centre, Hackney Road Adelaide	

2006 AusWIT Program - Day Two - Tuesday

9.00- 9.45	<i>Keynote</i> – Melody Hermon, Computer Clubs for Girls; eSkills, UK	
9.45-10.10	Morning Tea	
	Session 1	Session 2
10.10 -12.10	<i>Papers: Networking.</i> Spencer, Heinze, Oelinger, Logan, Coldwell, Zupanovic	<i>Papers: Technology and Tertiary Education</i> Lynch, Webb, Lewis
12.10 -1.25	Lunch	
1.25-2.25	<i>Presentations</i> Bernhart (AWise), Argy (ACS)	<i>Panel: Is there a female perspective and does it impact on an Information Technology career advancement?</i> Ryan, Crabb
2.25-2.50	Afternoon Tea	
2.50 -4.50	<i>Panel: Girls, Schools and IT</i> Woolley, Dittman, Steiler, Baird	<i>Papers: Mentoring in Tertiary Education</i> Stockdale, Martin, Falkenberg, Lund, Thomas
4.50-5.15	Plenary – Future of Aus Wit	

Papers¹

Author

Anderson N, Timms C, Courtney L.

Beekhuyzen J, Nielsen S, von Hellens L.

Clayton K

Coldwell J, Zupanovic I.

Coldwell J, Goold A, Craig A, Mustard J.

Falkenberg Lund K, Spanner Witzke S.

Lewis S.

Logan K.

Lynch K.

Martin M, McClellan J, Staehr L.

Miliszewka I, Venables A, Tan G.

Oelinger M, Heinze A.

Shi H.

Spencer S.

Stockdale R, Stoney S.

Uitdenbogerd A.

Webb S.

Webster S, Mancilla B, Graham C, Woo D, Marcus N.

Paper Title

“If you want to advance in the ICT industry, you have to work harder than your male peers.” Women in ICT Industry Survey: Preliminary findings

Making IT Fit: Research and Action in Queensland

Showing girls IT’s amazing

Video Games Research: gender inequities

Gender and Equity in eLearning

Innovative Reinforcement of Computer Science to Girls

Women ICT students: the paradox of invisibility and visibility

Facilitating Upward Mobility: The Value of Mentoring

Gadgets, gizmos and girls

Tweaking a Mentoring Program for Women in IT Courses for Better Outcomes

Addressing attrition in CS courses

Initiating successful Female IT Networks: Summer University vs Congress

Reshaping ICT Industry Projects in 3 Years– My Experience

Working from Within: Professional Societies supporting Women in ICT

Developing a Positive Experience of Introductory Information Systems for Women at two Australasian Universities

Gender, Conversation Style, Schemas and Policy

Leading the way: Developing effective ICT role models and mentors for girls

Anita Borg Workshops for Primary Schools

¹ All papers were double-blind refereed by an international panel

Panels

Presenter

Alexander M, Shin N

Dittman, D

Downes T, Reid C, Vickers M.

Lamp J

Newhouse-Maiden L.

O'Donnell, R

Ryan C, Crabb D.

Stieler C.

Stieler C

Thomas L.

Woolley, R

Panel Title

Females in Information Technology & Telecommunications - a program in action to support women in ICT

Panel: Boys Conquer, GIRLS CREATE!!,

Perspectives on Gender and Secondary School Computing – A Panel Proposal

Perception of gender of editorial boards in IS journals

Re-focussing on the Human Software: Addressing the Gender Gap in ICT Industries and Education in Australia

Industry, Education and Government Collaboration – The Vic ICT for Women Business Model Case Study

Is there a female perspective and does it impact on an Information Technology career advancement

Girls and ICT in Queensland

Association of Women Educators National Girls and ICT Project

Believe it or not I am not the Administrative Assistant!!! How do we change the perceptions of others about women in IT, in trades or with technical careers?

Digi Girls Program

PAPERS

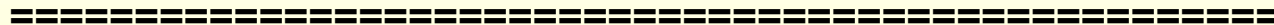
“If you want to advance in the ICT industry, you have to work harder than your male peers.” Women in ICT Industry Survey: Preliminary findings

N. Anderson, C. Timms, L. Courtney, School of Education, James Cook University, Cairns, Qld

Abstract

This paper provides early findings from the ‘Women in Information and Communication Technology (ICT) Industry’ survey, which is the final stage of a large research project into low participation rates of girls in ICT. Preliminary results from 289 women in ICT industries, Australia-wide, suggest that ICT career women are extremely satisfied with their career choice overall. However, further findings, and comparisons with a study conducted in the United Kingdom (UK), suggest that subtle discrimination, a ‘glass ceiling’ effect, in the ICT workplace continues to provide a source of job dissatisfaction for women in this industry.

Keywords: Women, Information and Communication Technology, Discrimination, Glass Ceiling



Making IT Fit: Research and Action in Queensland

J Beekhuyzen, S Nielsen, L von Hellens, Griffith University, School of Information and Communication Technology, Griffith University

Abstract

There are many strategies to reverse the downward trend of female participation in information technology education and industry, but to date there has been little evidence of their success. This paper reflects on a selection of these strategies, and relates them to the relevant research. Several issues are identified, which complicate research and action in this area. The lack of agreement over what constitutes the IT industry makes it difficult to assess progress in equity. The notion of female ‘contribution’ and the masculinisation of the IT industry are subject to competing definitions and viewpoints, indicating that there is no consensus on the aims or rationale for research and intervention in this area. However, although these problems and the lack of consensus may be considered inhibiting, the diversity of approaches may be best suited to a rapidly changing and dynamic industry.

Keywords: Women in IT, IT industry, Equity, Masculinisation



Showing girls IT's amazing

K. Clayton, Griffith University, Institute for Integrated and Intelligent Systems, Brisbane, Queensland

Abstract

The importance of encouraging students, especially females, into the ICT field cannot be understated. Throughout Queensland and Australia, mentoring programs and other initiatives have been instigated in order to encourage girls into ICT study paths and careers. Three initiatives targeting different groups of female primary and high school students in various ways have been described in this article. All of these initiatives have provided optimistic results in the interim in terms of promoting positive ICT attitudes and/or encouraging females into ICT careers and study paths.

Keywords: Education, role models, mentoring, hands-on activities, school, students, girls and ICT

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Video Games Research: gender inequities

Coldwell J, Zupanovic I.

Abstract

In this paper we explore current research on violence in video games, with a focus on gender inequalities and imbalance, and introduce a project being undertaken as part of an honours programme in Information Technology. The research focuses on the portrayal of violence in games as perceived by future game developers and the parallel issue of lack of female participation as players and developers. Although the project is in its infancy it has already highlighted a major shortcoming in video games research which will have a major impact on the results. Lack of gender representation in the population being surveyed limits the generality of any results obtained, which has a domino effect on the ability of the games industry to address gender issues.

Keywords: Video games, violence, gender inequities, IT education, games industry

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Gender and Equity in eLearning

J. Coldwell*, A. Goold*, A. Craig#, J. Mustard#, *School of Engineering Information Technology, #School of Information Systems, Deakin University, Geelong, Vic

Abstract

This paper reports on a large scale survey of the perceptions of university students to their use of an online learning environment. The aim of the survey was to gather data to inform online learning practices at the university. The results were explored, amongst other factors, for gender differences. Findings include no significant differences between the female and male students with respect to being able to use the online learning environment confidently and effectively. In general the female students were more willing to participate in online discussions though there was no difference between the female and male students as to whether they were willing to voice their opinions online. An unexpected result was the greater value placed by female students on using this environment for working with students of diverse backgrounds.

Keywords: Gender, eLearning, ICT, confidence, effective use, online learning

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Women ICT students: the paradox of invisibility and visibility

S Lewis, Institute for Social Research, Swinburne University of Technology, C Lang, J McKay, Faculty of Communication and Information Technologies, Swinburne University of Technology

Abstract

If half of our young women studying information and communication technologies come from overseas and from single-sex schools, are at an age when they are vulnerable to evaluating themselves negatively even when they are high achievers, have less background experience of computers and less computer confidence from a range of previous gendered experiences at home and school, learn better in a learning centred rather than performance centred classroom, prefer the socio-technical contextual curriculum over the abstract.....then why are these findings consistently ignored? Despite numerous studies replicating each other, why are the needs of these women pedagogically invisible?

Keywords: Gendered faculties, gender and ICT education, invisibility.

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Facilitating the Retention and Promotion of Women in IT: The Value of Mentoring

K. Logan, Massey University, Information Systems Department, Wellington, New Zealand

Abstract

The low employment and poor retention of women in the Information Technology (IT) work force remains a serious concern and it is essential that effective intervention strategies are developed to ensure that women are not only retained, but are in senior decision making positions. This paper presents the results from two qualitative studies of women in the IT workforce in New Zealand. The results confirm findings from previous research indicating that mentoring is an important factor in women gaining visibility and therefore promotion, leading to better retention.

Keywords: Information Technology, women, mentoring, retention, visibility, promotion

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Innovative Reinforcement of Computer Science to Girls

K Falkenberg Lund, A Spanner Witzke, The Alexandra Institute, University of Aarhus, Aarhus, Denmark

Abstract

With less than 5% female students in Computer Science at universities in Denmark the gender distribution is heavily skewed. Few initiatives have been taken to change this situation acting neither internally on a department level nor externally at a political or commercial level. The Alexandra Institute, a research-based company owned by the University of Aarhus, companies, and partly financed governmentally, holds a unique position acting on all areas concomitantly. Recently, the institute has launched the project Girls and IT which includes career-days, code-camps, and support. The project is an important step towards a balanced gender distribution in Computer Science bridging corporate, research and educational levels.

Keywords: Image campaign, recruitment of female students, network, girls and IT

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Gadgets, gizmos and girls

K Lynch, Senior Lecturer, Faculty of IT, Monash University, Australia

Abstract

Marc Prensky (2001) claims that students of today have been exposed to digital technologies since their birth, and that these “toys and tools of the digital age” (p1) are embedded into their existence: They internalise digital technologies rather than adopt them. This paper presents a preliminary study undertaken to explore undergraduate students’ frequency of use of particular digital ‘toys and tools’ (or information and communication technologies – ICTs). The ICTs selected for the study were mobile phones, email, synchronous chat (text, and video/audio), asynchronous text chat, computer applications and computer games. In addition to examining the frequency of use of these ICTs, the study looked at the perceived value of the ICTs for work and for social interactions.

One hundred and fifty (57 females, 98 males) students enrolled in a three year undergraduate information technology program at a large Australian university participated in the study.

Findings from the study revealed that females are just as comfortable in using modern day ICTs used by IT professionals as their male counterparts, however, females are less comfortable in using computer games. This is of concern to the author and should be of other educators and it seems that computer game-play is to become the pedagogy of the near future (Gee, 2003). If this is so, then ‘girls’ will need to become more comfortable and apt in playing computer games, otherwise there is a high danger that their learning will be left behind they male counterparts.

Keywords: Gender, generation Y, information and communication technologies , ICTs

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Tweaking a Mentoring Program for Women in IT Courses for Better Outcomes

M. Martin, Dept of Computer Science & Computer Engineering, La Trobe University, Bendigo, J. McClellan, Bendigo Bank, Bendigo, Victoria, L Staehr, Dept of Computer Science & Computer Engineering, La Trobe University, Bendigo, Victoria

Abstract

A Mentoring Program for women IT students at the Bendigo campus of La Trobe University was altered in subtle but important ways. Firstly, instead of using a woman senior student to run the weekly sessions, a woman IT Professional was employed. Secondly, the diary entries of a women student on an Industry Based Learning scholarship at IBM, Melbourne were provided to program participants each week. Finally, each week the planned content was reviewed and altered in light of the previous week’s topics, and in response to the student’s needs if necessary. Compared with the previous semester’s mentoring program, the women’s participation increased. Although the very small numbers of women involved in both iterations of the program mean that it is not possible to draw definite conclusions, the outcomes suggest that the changes to the mentoring program had a positive effect.

Keywords: Women in Information Technology, IT Mentoring Programs, Mentoring Women in IT courses

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Addressing Female Attrition in Computer Science Courses through Improved Personalisation of the Learning Environment

I Miliszewska, A Venables, G Tan, School of Computer Science and Mathematics, Victoria University, Melbourne, Victoria

Abstract

The high attrition of females in computing courses at Victoria University is a persisting concern. Despite various initiatives created to remedy the problem, attrition of females after their first year of study reached 40% in 2003. A recent research study investigated this negative trend with respect to possible gender bias in the learning environment. While the study found little evidence of gender bias in the learning environment, it identified other problems as possible contributors to high attrition. This led to a concerted effort to align the computing learning environment with the needs of female students by personalising it.

Keywords: attrition, computing education, female under-representation, gender bias, learning environment,

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Initiating successful Female IT Networks: Summer University vs Congress

M Oelinger, University Duisburg-Essen, Dept. of Computer Science, Germany, A Hinze, University of Waikato, Dept. of Computer Science, Hamilton, New Zealand,

Abstract

Over the last decade, several networks and communities for women in IT have been initiated. It has been known that specific needs for support exist where members of a minority have difficulties in finding like-minded people in their everyday environment. This paper investigates different forms of female networks in Computer Science and IT. In particular, it analyses forms of network initiation, which often involves face-to-face meetings at regular conferences or, increasingly, at summer universities for female students. We interview participants regarding their expectations and needs for support. This paper aims at identifying effective models for these initiating female networks.

Keywords: Women in Computing, female networks, mentoring, female support in IT communities

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Reshaping ICT Industry Projects– My Three-Year Experience

H Shi, ICT Industry Project Coordinator, School of Computer Science and Mathematics, Victoria University

Abstract

This paper documented my last three years experience as the ICT Industry Projects coordinator at School of Computer Science and Mathematics, Victoria University. My journey started in March 2003 when I was recruited by the School and appointed as the coordinator. Due to the complexity of the existing subject structure, the Industry Projects remained the most challenging subject in the school despite of many efforts and good will. I have completely reshaped the two project subjects and transferred them to be one of the seven project models in "Learning in Workplace" at Victoria University. The breakthrough finally arrived after the launch of the University Learning in Workplace policy and Victorian Government pilot programs. The first engagement with our industry partner marked the new era for the Industry Projects. My discussion has shown that gender doesn't play any role in the success of their Industry Projects but the appreciation from female students towards male students is importance as it is often the key to solve the team conflicts.

Keywords: ICT, Industry Projects, management, curriculum, software engineering, IT education

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Working from Within: Professional Societies supporting Women in ICT

Spencer S.

Abstract

Groups and individuals attempting to increase participation and enhance the position of women within the ICT professions frequently work outside the professional societies that are themselves engaged in activities and campaigns designed to develop those same professions. However, many professional societies now include committees that are specifically focused on the role of women within the ICT professions. These groups could be in a unique position of working to change attitudes, practices and even definitions of ICT work rather than concentrating solely on attitudes and understanding of women. This paper reviews opportunities for the professional societies to influence changes in the ICT professions themselves, using a framework for categorising initiatives to highlight the degree of systemic intervention. It argues that a focus on changing women's and girls' attitudes, while supportive of individuals, is a level of self-help that should not be the final objective of the professional societies that are in a position to challenge the dominant paradigms of the profession.

Keywords: Professional societies, Gender equity, Professional development

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Developing a Positive Experience of Introductory Information Systems for Women at two Australasian Universities

R Stockdale, Institute of Information and Mathematical Sciences, Massey University, Auckland, New Zealand, S Stoney, School of Management Information Systems, Edith Cowan University, Perth, Western Australia

Abstract

This paper examines how academics can contribute to encouraging greater uptake of IS majors by women. Using a qualitative reflective approach we identify the perceptions and experiences of female undergraduates taking introductory IS courses in two universities, one in Australia and one in New Zealand, and discuss ways in which to improve their learning experience. We examine ways to improve the delivery of introductory IS courses in order to make information systems more relevant and less dreary to women undergraduates. The paper concludes with some recommendations for marketing courses and areas of further research.

Keywords: Information systems, gender, IT related degrees

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Gender, Conversation Style, Schemas and Policy

A Uitdenbogerd, RMIT University, School of Computer Science and Information Technology

Abstract

Since the discovery that both gender conversation styles and gender schemas influence perceptions of competence in the workplace, little has changed with respect to the glass ceiling. Differences in communication style often lead to women being thought of as less competent, with consequences including slower progression through the workplace hierarchy than their male colleagues. Gender schemas have strong effects where women are a minority. On examining the policies of several Australian employers, no explicit recognition of schemas or communication differences was found. To address these known problems of perception, training is required, and policy should reflect this.

Keywords: interactional sociolinguistics, gender schemas, policy

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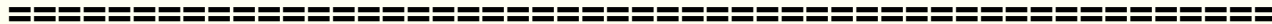
Leading the way: Developing effective ICT role models and mentors for girls and young women

S Webb, School of Computer and Information Science, Edith Cowan University, Perth, WA.

Abstract

In western society, the participation rate of females studying ICT at a tertiary level has been in steady decline since the mid-eighties. Gender-savvy mentors and role models can show girls and young women that ICT is not just 'for the boys'. This paper looks at the current levels of participation of females studying ICT at a tertiary level. It will then address ways in which mentors and role models might help to shift some of the negative perceptions that females, especially girls and young women, have of technology.

Keywords: Mentors, Role Models, Self-Efficacy, Attribution Theory, Computer Anxiety



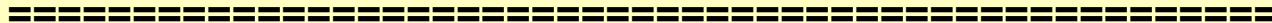
Anita Borg Workshop for Primary School Girls

Sarah Webster, Blanca Mancilla, Daniel Woo, Nadine Marcus, School of Computer Science and Engineering, University of New South Wales, Sydney, New South Wales
Carroll Graham, Faculty of Pharmacy, University of Sydney, Sydney, New South Wales

Abstract

In 1999, Anita Borg visited the School of Computer Science and Engineering at the University of New South Wales, and conducted a workshop to encourage young girls to engage with science and technology. The workshop has since run every year, and had various additions and improvements. There are many positive results of the workshop, as well as future plans. The success of this workshop could be replicated by other groups throughout Australia.

Keywords: Primary school girls, science and technology, workshop



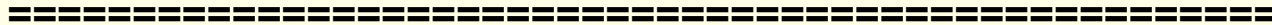
Panel Presentations

Females in Information Technology & Telecommunications - a program in action to support women in ICT

M Alexander, Females in Information Technology & Telecommunications, N Shin, Females in Information Technology & Telecommunications

Females in Information Technology and Telecommunications (FITT) is a voluntary, not-for-profit group established in 1989 that encourages and supports women in the Information and Communications Technology (ICT) industry. Through a range of programs, FITT supports its 900 members and provides opportunities for networking and ICT career development. Regular past surveys of members reveal that networking opportunities are the most valuable contribution FITT makes. The results of the October 2006 member survey and its implications will be presented at the AusWIT Conference.

Keywords: Females, ICT, Information Technology, Telecommunications



Panel: Boys Conquer, GIRLS CREATE!!

D Dittman, Chancellor State College

Girls love using IT just as much as boys. However boys use computers to conquer and girls want to create. There are three contributing factors when discussing girls and their use of ICT – parents, school and their friends. Getting started with ICT comes from one of these three sources.

This presentation will put forward my experiences around the following questions:

- What is the difference between boys and girls when it comes to IT?
- What do I mean when I say Boys Conquer and Girls Create?
- How is it that girls get into IT?
- Girls who are into IT, what is it that they do?
- At what age should girls be introduced to IT?
- What is it that girls like to do with their computers – at school and at home?
- What have I done to encourage girls into IT? What has worked? What hasn't?

Getting girls into IT starts early in the majority of cases. By the time girls are in Year 6 ie 11 years of age, their love of IT has formed. Parents are the strongest contributing factor with schools also playing a vital role. Some girls get into IT because their friends are into IT however unless a parent supports their involvement then their skill level is minimal.

Further to the above I will present my all girls computer club journey in Toowoomba and now on the Sunshine Coast.



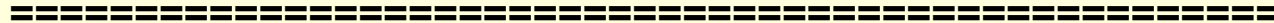
Perspectives on Gender and Secondary School Computing – A Panel Proposal

T Downes, Faculty of Education, Charles Sturt University, Bathurst, NSW, C Reid, M Vickers, School of Education, University of Western Sydney, NSW

The panel session will provide preliminary findings from an ARC project being conducted in three states, NSW, Victoria and South Australia that seeks to better understand how processes at the secondary school level might contribute to the continuing under-representation of female applications and enrolments university IT and Computing Courses. The three panellist will each take a different angle to explore some of the processes identified through surveys of over 400 Yrs 10 and 11 students in Secondary Schools across the three states, interviews with over 30 teachers and focus groups with over 30 groups of students in Years 10 and 11.

The first panellist draws on data from the survey to examine the extent to which the differences in participation are based on different access and/or curriculum construction. The second panellist draws on data from interviews with teachers and students to explore the complexities and confusions that exist among and between the three groups who collectively create and negotiate the 'enacted' curriculum: the curriculum makers, the teachers and the students. The third panellist draws on data from one school to discuss the multiple and overlapping knowledge and strategies employed by one female teacher that produced an increased uptake of IT subjects by both girls and boys in one rural high school in NSW.

Keywords gender, syllabus, curriculum, access, pedagogy, secondary schools



Perception of gender of editorial boards in IS journals

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Nine years on from the publication of Tracy Camp's "The Incredible Shrinking Pipeline" and it is arguable that the gender balance of IS academics has seen little change. Initiatives such as "Go Girl, go for IT" are still seen as necessary to attract women into the ICT sector. In contrast to the promotional image is the reality of academic life. Success in academia is largely measured by research publication. Success in research publication is at the discretion of the editorial gatekeepers of academic journals. What do new researchers see when looking at the composition of journal editorial structures? John Lamp has analysed the gender balance of editorial structures of over 500 journals publishing IS research, using the data on the Index of Information Systems Journals. This data is presented together with other data on indexing, age of the journal and areas of publication.



Re-focussing on the Human Software: Addressing the Gender Gap in ICT Industries and Education in Australia.

L Newhouse-Maiden, School of Education, Edith Cowan University, Perth, WA

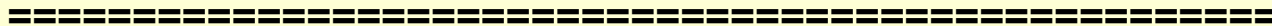
This paper relates to the author's contribution to the writing of a summit position report of the Business and Higher Education Round Table (BHERT) Women in ICT Task Force (2005, April) in addressing the under-representation of women in Information Communication Technology Industries in Australia. It is also about promoting women's pro-activity as valued contributors to the Knowledge Society.



Industry, Education and Government Collaboration – The Vic ICT for Women Business Model Case Study

R O'Donnell, Chair Vic ICT for Women and President, Novell Asia Pacific

The Victorian ICT for Women Network is an industry-driven initiative which aims to facilitate entry, retention and progression for women working in ICT and acts as a critical link between government, business, the education sector and other industry associations to collaborate on, and influence the direction of ICT in Victoria. It was established in response to a growing acknowledgement by government and the industry of the declining number of women entering the industry as well as the impact of current low participation levels on the skills base of ICT in Victoria. The Network represents a real desire by government, corporates and vendors to 'invest in action' to address the skills gap and lack of interest in pursuing ICT careers by increasing awareness of the diversity of ICT roles.

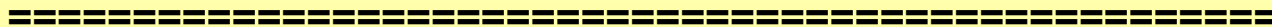


Is there a female perspective and does it impact on an Information Technology career advancement

C Ryan, D Crabb, A Howard University of Southern Queensland, Toowoomba, Qld,

The panel will lead a discussion exploring current experiences of women in the Information Technology industry, such areas as career planning, experience development, ongoing and occasional mentors, and serendipity. It will also identify strategies to maximise opportunities and overcome barriers met by women in their workplace. It will discuss how the lessons learned from these experiences can be used to retain women in the industry as well as attract the next generation of young women into the industry.

Keywords: Career progression, generational cohorts, Information Technology



Girls and ICT in Queensland

C Stieler: The Queensland Department of Education

The Queensland Department of Education, Training and the Arts has developed a Girls and ICT strategy 2005 – 2008 to: Change attitudes about ICT careers and study opportunities at all levels: schoolgirls, parents of school students, teachers and teacher aides, and careers guidance officers. ICT is fun, people-oriented and can take you anywhere. Change the practices of parents, teachers and teacher aides and careers guidance officers to make the teaching and use of ICT at school at home more inclusive. To increase the engagement of girls with ICT by providing access, appropriate experiences and opportunities for advancement for girls with ICT. Performance targets of the strategy are:

By 2008, 35 percent of state secondary school students enrolled in ICT specialty subjects will be girls.

By 2008, 70 percent of state secondary schools will have participated in girls and ICT initiatives.

By 2008, 30 percent of state primary schools will have participated in girls and ICT initiatives.

The Girls and ICT strategy is a component of the Department of Education, Training and the Arts Smart Classrooms strategy and the Queensland Office for Women's Smart Women – Smart State strategy. The Smart Women – Smart State strategy supports women's participation in emerging industries.

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Association of Women Educators National Girls and ICT Project

C Stieler: The Queensland Department of Education

In 2006 AWE (Association of Women Educators) received funding from the Australian Government's Office for Women to run the project *Building sustainable networks for young women and ICTs throughout Australia*.

The project aims to increase the participation of girls in ICT across Australia by building bridges among existing local networks including local industry groups, professional teaching associations, government departments, tertiary education providers and women's associations.

Each Australian State and Territory will establish a local organising committee which will organise and run a Girls and ICT role models event. At least one event will be held outside of a capital city. Members of the local organising committees include representatives from schools, local ICT industry, women's associations, universities, TAFEs, vocational training providers, ICT industry groups, government departments and teachers' associations.

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BELIEVE IT OR NOT I AM NOT THE ADMINISTRATIVE ASSISTANT!!! How do we change the perceptions of others about women in IT, in trades or with technical careers?

L Thomas, (Voc Ed & Training), Trade and Technician Skills Institute, Acacia Ridge, Qld

This paper explores how effective mentoring can empower women to feel more confident and proud of their position within the information technology workforce. It also identifies how important it is for women to announce their successes to the world so as to ensure that others are able to understand exactly how influential women are in the Information Technology arena and thus make the industry, as a whole, more attractive to those that we are trying to lure.



Digi Girls Program

R Woolley: Institute Women's Strategy Officer, Northern Sydney Institute,

The *Digi-girls Program* run by TAFE NSW Northern Sydney Institute over the past 5 years was designed to provide a targeted learning opportunity to Year 10 girls from co-educational comprehensive schools to broaden their understanding of IT career opportunities and the pathways into the various fields within the industry.

Digi-Girls has targeted girls from high schools in the Northern Region of Sydney for some years mainly attracting girls in Year 10 but the program has also included girls in Years 9, 11 and 12. Co-educational schools were specifically targeted to provide girls with a different leaning environment in order to accelerate their interest and skills in Information Technology, as it was considered it was these girls 'who were doing it hard'. The program now also includes girls from single sex and non government schools as the Program has gained a profile and demand has grown.