Perceptions of ICT Careers in German Schools: An Exploratory Study

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Abstract

This paper reports on an exploratory investigation of the perceptions of information and communication technology (ICT) as a field of study and work in German secondary schools. A total of 160 students from five secondary schools in Lower Saxony participated in the study in February 2007, and four teachers of the students were interviewed. The investigation is part of the research carried out by the authors within the Griffith University Women in Information Technology (WinIT) project, which has been studying the problem of low female participation since 1995. In this paper we discuss German school students' views of ICT, its use at school and home, their influences in using technology, and their ideas about working with technology in the future. We drew on the challenges faced and opportunities available to teachers in the study to put this in context. We found that many senior secondary students have not decided what they want to do when they finish school, suggesting that the environment is ripe for them to receive relevant and useful information that may help them to choose to study tertiary ICT courses. By dispelling negative ICT perceptions and allowing students to make an informed choice as to whether to take up a career in ICT, we can hopefully encourage more students into this ever-growing and exciting industry.

Keywords: Information technology (ICT) education, perceptions of ICT careers, secondary school students, secondary school teachers, gender in ICT education, cross-cultural comparison, German schools, Australian schools.

Biographies

Kaylene Clayton's 2007 Ph.D. in the School of Information and Communication Technology at Griffith University investigated the influence of middle-school ICT experiences on girls' ICT study and career choices. As a product of this research, a model to assist researchers investigating under-representation of females in ICT has been created. She has previously completed an IT degree with honours, winning two medals for academic excellence. Her honours research project involved the exploration of ICT perceptions and experiences of Year 9 and 12 students and their teachers. In 2007, her achievements were recognized when she won the Queensland Government's ICT post–graduate student Smart Women – Smart State award. Over the past few years, she has been actively involved in a number of projects aimed at correcting the imbalance of females choosing to become involved in ICT by providing hands on activities, access to role models and mentoring.

Liisa von Hellens is Associate Professor in Information Systems in the School of Information and Communication Technology at Griffith University. She is a published author on the subject of Enterprise Wide System Implementation and software quality management. Her doctoral dissertation investigated package software development and use; and her PhD degree is from Templeton College at Oxford University. She is Associate Editor of the Information Systems Journal and served at the Editorial Advisory Board for the Encyclopedia of Gender and Information Technology (Idea Group Reference). She was invited by Senator Helen Coonan while the Federal Minister for Communications, IT and the Arts to sit on the Advisory Committee for the 2005 Summit on Women in ICT. In 1995, Liisa von Hellens and Sue Nielsen established the Women in Information Technology Project (www.winitproject.com). In 2007 Liisa served as invited visiting Professor in Gender and IT in Hanover, Germany within the Maria Goeppert-Mayer programme.

Jenine Beekhuyzen is a full time PhD student in the School of Information and Communication Technology at Griffith University, investigating technology and the online music experience. Jenine has been working in the WinIT Project (Women in IT) longitudinal study since 2000. Being an active researcher, she serves as a reviewer for a number information systems academic journals and conferences. She also puts this research into practice by working in the community. She has a keen interest in encouraging more girls into information technology and supporting the women that are currently in the industry and does this by being part of the organising group of the annual 'Technology Can Take You Anywhere' day (~1500 girls), and she is also the editor of the book 'Tech girls are chic, not just geek'. She works at employing innovative methods (like mobile technology) to support these activities.

Sue Nielsen has taught and worked in Information Management and Information Systems for more than thirty years and is currently adjunct Senior Research Fellow in the School of Information and Communication Technology at Griffith University. As well as her involvement in the WinIT project (www.winitproject.com), she has carried out research on organisational culture and employee commitment in information systems development and software quality management. Her PhD from Griffith University used ethnographic methods and discourse analysis to study change management in an information technology centre. Her other major interests are Auslan (Australian sign language) and science fiction; her new novel "Behind the Sun" is now available from amazon.com