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**INFORMATION AND  
COMMUNICATION TECHNOLOGIES  
AND REAL-LIFE LEARNING**

## **IFIP – The International Federation for Information Processing**

IFIP was founded in 1960 under the auspices of UNESCO, following the First World Computer Congress held in Paris the previous year. An umbrella organization for societies working in information processing, IFIP's aim is two-fold: to support information processing within its member countries and to encourage technology transfer to developing nations. As its mission statement clearly states,

*IFIP's mission is to be the leading, truly international, apolitical organization which encourages and assists in the development, exploitation and application of information technology for the benefit of all people.*

IFIP is a non-profitmaking organization, run almost solely by 2500 volunteers. It operates through a number of technical committees, which organize events and publications. IFIP's events range from an international congress to local seminars, but the most important are:

- The IFIP World Computer Congress, held every second year;
- Open conferences;
- Working conferences.

The flagship event is the IFIP World Computer Congress, at which both invited and contributed papers are presented. Contributed papers are rigorously refereed and the rejection rate is high.

As with the Congress, participation in the open conferences is open to all and papers may be invited or submitted. Again, submitted papers are stringently refereed.

The working conferences are structured differently. They are usually run by a working group and attendance is small and by invitation only. Their purpose is to create an atmosphere conducive to innovation and development. Refereeing is less rigorous and papers are subjected to extensive group discussion.

Publications arising from IFIP events vary. The papers presented at the IFIP World Computer Congress and at open conferences are published as conference proceedings, while the results of the working conferences are often published as collections of selected and edited papers.

Any national society whose primary activity is in information may apply to become a full member of IFIP, although full membership is restricted to one society per country. Full members are entitled to vote at the annual General Assembly, National societies preferring a less committed involvement may apply for associate or corresponding membership. Associate members enjoy the same benefits as full members, but without voting rights. Corresponding members are not represented in IFIP bodies. Affiliated membership is open to non-national societies, and individual and honorary membership schemes are also offered.

# INFORMATION AND COMMUNICATION TECHNOLOGIES AND REAL-LIFE LEARNING

*New Education for the Knowledge Society*

*Edited by*

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## **PREFACE**

### *Information and Communication Technologies and Real-Life Learning – an IFIP Working Conference*

This book presents the results of an International Federation for Information Processing (IFIP) working conference, held December 2004 in Melbourne, Australia. The working conference was organised by IFIP Working Group 3.2 (Informatics and ICT in Higher Education) and IFIP Working Group 3.4 (Professional and Vocational Education in Information Technology).

Challenges originating in large scale economic and social change, rapid transition to a knowledge-based society and shortage of knowledge workers demand new approaches in higher and professional education. International trends can be observed towards:

- Learning in real-life situations;
- Development of relationships with business and industry;
- New forms of assessment.

The International Programme Committee of this event was formed by:

- Bill Davey, Australia (IFIP Working Group 3.4, Professional and Vocational Education in IT)
- Mike Kendall, United Kingdom (IFIP TC3 Special Interest Group on Lifelong Learning; IFIP Working Group 3.1 Secondary Education)
- Mikko Ruohonen, Finland (IFIP Working Group 3.4, Professional and Vocational Education in IT)
- Organising Committee Chair: Arthur Tatnall, Australia (IFIP Working Group 3.4, Professional and Vocational Education in IT)
- Programme Committee Chair : Tom van Weert, Netherlands (IFIP Working Group 3.2 Higher Education; IFIP TC3 Special Interest Group on Lifelong Learning )



## THE EDITORS

**Tom J. van Weert** holds the chair in ICT and Higher Education of the Hogeschool van Utrecht, University of Professional Education and Applied Science, Utrecht, The Netherlands. Earlier he was managing director of Cetis, centre of expertise for educational innovation and ICT, of the same university. Before that he was director of the School of Informatics (Computing Science) at the University of Nijmegen, The Netherlands. Tom has studied applied mathematics and computing science. He started his working career in teacher education and software engineering. He has been chair of the International Federation for Information Processing (IFIP) Working Groups on Secondary Education and Higher Education. He currently is vice-chair of IFIP Technical Committee 3 (TC3) on Education. He is also member of the TC3 Special Interest Group on Lifelong Learning.

**Arthur Tatnall** is an Associate Professor in the Graduate School of Business at Victoria University in Melbourne, Australia. He holds bachelors degrees in science and education, a Graduate Diploma in Computer Science, and a research Master of Arts in which he explored the origins of business computing education in Australian universities. His PhD involved a study in curriculum innovation in which he investigated the manner in which Visual Basic entered the curriculum of an Australian university. Arthur's research interests include technological innovation, information technology in educational management, information systems curriculum, project management and electronic commerce. He has written several books relating to information systems and has published widely. Arthur is currently vice-chair of IFIP working group 3.4 (Professional and Vocational Education).

## THE PAPERS

This book has been produced from peer-refereed papers by invited authors from Australia, Austria, Belgium, Brazil, Estonia, Finland, Germany, The Netherlands and the United Kingdom. In addition the book contains Focus Group reports, produced during the working conference, on:

1. Experiences and challenges in fostering industry and university collaborations.
2. The developing importance of formal and informal professional communities of practice.
3. The challenge of creating and establishing the role of online and virtual learning environments for all.

The papers in this book present a cross-section of issues in real-life learning in which Information and Communication Technology plays an important role:

- Educational models for real-life learning enabled by Information and Communication Technology (ICT)
- How to effectively organise a real-life learning environment, including its ICT-components;
- Changing role of the student;
- Changing role of educational institutions and their relationship with business and industry;
- Changing role of teachers and their use of ICT;
- Management of ICT-rich educational change.

The papers will help educationalists, researchers, practitioners and educational designers to develop and implement real-life learning in diverse settings. But also technologists, policy makers, educational managers and community learning organisers will find approaches to deal with the issues of Real-life learning.

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