

PROFESSIONAL PANEL

IT EMPLOYMENT AND SHIFTING ENROLMENT PATTERNS IN INFORMATION SYSTEMS

Panellists:

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Issues:

The shifting economic setting around many IT organizations has been defined by an economic contraction following a period of massive IT investments. In general economic terms, the recession was short-lived in some national economies and even non-existent in other economies. However, organizations had spent heavily on IT through the Y2K and dot-com boom. The impact on IT was complex. Sitting on a weighty IT capacity, many organizations cut back on IT investments, or stopped altogether. At least partly because of this same capacity, worker productivity continued at very high levels for many months after the spending hiatus began. In some economies, a jobless recovery was notable, as economic expansion continued on the basis of the under utilised worker productivity that accumulated from the boom. Organizations focused on leveraging this productivity, demanding increased business value from their IT investments. Every IT project was scrutinized as managers sought to balance the somewhat uncontrolled IT infrastructure and portfolios that persisted in the wake of the boom.

While spending cutbacks account for part of the unsettled economy around IT, the profession began to harvest rewards from growing use of practices intended to make IT highly effective. ERP systems, development productivity suites, web development, and agile development practices have improved organizational abilities to deploy IT and cope with change. Better information systems architectures, taking advantage of object-oriented and service-oriented techniques, are finding adoption.

In addition, accessibility of low-cost global IT sourcing opportunities is becoming widespread, spurred by national initiatives, advanced international communications infrastructure, and newly developed, globalised organizations and partnerships. Many IT jobs have become “commoditised” along with the IT services that are being threaded through networked organizations and conglomerates.

As a result of such earthshaking changes in the IT economy, the IT employment landscape is shifting, and employment patterns are changing worldwide. In some countries, the IT “entry level position” has all but disappeared. Many companies hire only at senior, experienced levels because the entry-level jobs have been “offshored” to subsidiaries or partners or eliminated by productivity gains.

These effects have not escaped savvy business school students, and a noticeable shift in enrolment patterns has streaked across the world’s academic IT departments. According to the 2003 Taulbee Survey, enrolments in U.S. computing programs dropped 23% in 2003. Anecdotal reports of information systems programs report enrolment declines of 60% or more during the period 2002 – 2004.

Fundamental questions are being drawn about IT instructional programs, and will be regarded by the panel. What are the factors leading to the shifting patterns of employment and student enrolment? What skills will entry-level IT workers need in the coming years? Are universities out-of-sync with student and industry needs? This panel is comprised of heads of academic units from several different parts of the world, and will discuss the trends, the strategies, and the issues that are developing as a result of this shifting employment and enrolment landscape. The panel will include short presentations from each of the panellists in order to stimulate the thinking among the participants, and then open the discussion to engage the broader group in the audience.

Presentations:

Richard Baskerville will introduce the panel and provide an overview of the North American enrolment trends in information systems. He will also describe the paradoxes in the North American trends, including the larger fall of interest in business computing compared with general computing, and the loss of the entry level position, with industry expectations for only hiring experienced IT workers henceforth. There are some early indications that educational institutions will increasing merge programs with hiring organizations, creating transitional roles for student-employees, a form of internship that replaces the entry-level positions of past years. In addition, he will explore strategies for academic IT organizations to participate in the growing niche IT educational marketplace Driven by wildly swinging enrolment patterns, a potential strategy for a portfolio diversification of the “academic product line” for information systems begins to emerge.

Alison Adam will review the enrolment situation in the UK, where there are similar trends to those of the USA (i.e. sharper drop in business computing, pressure for academic diversification). However with a smaller academic and industry base, we face the prospect, inconceivable a few years ago, that some IS, IT and computing schools may disappear by the end of the decade. In the UK, where the academic base is not very large, as the elders of the academic discipline retire and younger talent diverts itself into other areas we may have lost an ‘academic generation’ when demand increases as industry picks up by the end of the decade. There is also the prospect of a significant knock on effect on research in information systems and computing.

We need to recognize that increasingly IT is not seen as a separate industry and that college and university entrants often regard themselves as already conversant in IT when they arrive at our doors. This suggests that we are increasingly likely to look to

'joint honours' courses where IT or computing is one component rather than the whole. Many business schools take this approach already. Although one year Masters level courses have been hit by a downturn in overseas recruitment, we can be much more flexible with one year courses. These, and other initiatives, will be reviewed in regard to the UK scene.

Helmut Krcmar will review the impact of the changing employment situation in Germany and the impact of this on academic institutions in Information Systems in Business faculties as well as informatics in Computer Science faculties. He will also focus on the transition from a one-level diploma system to the bachelor/master model, which is underway in Germany at present. He will comment on the specific character of the German IS-programmes as one reason for not-so-sharp decline in the IS-student enrolment.

Joe Peppard will bring dual roles to bear on the issues. As well as being Director of Postgraduate Programmes, he is also a Director of an application development software company. Sitting on both sides, producing and recruiting graduates from various IS/Computer Science programmes, he provides a distinctive viewpoint of the changing jobs and educational settings. His opening statement will describe the recruitment situation faced by Fineos Corporation, an Irish based developer of package application software for the global financial services market. With revenues of 30 million Euros and customers in the USA, Canada, New Zealand, Australia as well as Europe, its experiences are similar to those of other medium sized European software houses. What is perhaps unique about the Irish context is that the Irish Government responded rapidly to the impending technology boom of the late 1990's by providing funding for new facilities and the establishment of new computing IS programmes. However, despite increasing the number and range of programmes, there will be significantly less graduates in Computing/IS this year than in 2001. There is also a corresponding decline in students choosing further postgraduate studies. The implications for the Irish economy as it seeks to maintain its place as the worlds number one exporter of software is being challenged as demand for employees is now outstripping supply, upward pressure on salaries is effecting competitiveness, and the lack of postgraduates eroding overall R&D capability. Possible responses will be outlined.

John Venable will offer insights into the enrolment situation in Australia, along with strategies evolving in response. Due to a low level of federal government funding for universities, Australian academic institutions have developed and become highly reliant on overseas programmes and recruitment of overseas students to come to Australia. Recent downturns in Asian economies and fluctuation of exchange rates have exacerbated the problem of decline in enrolments. This has been mitigated by recent increases in federal government funding levels per IS/IT/Computer Science student enrolment.

Strategies to address the issues include (1) development of closer relationships and new partnerships with Asian academic institutions, (2) development of curricula that focus on bringing business knowledge and problem analysis and solving skills to bear to provide business value (as these are the capabilities least likely to be outsourced), and (3) development of partnerships with both industry organisations and government (which recognise the long-term necessity of IT-skilled personnel) with the goal of encouraging students to study in IT-related programmes.

About the Panelists:

Richard L. Baskerville is Professor and Chair of Computer Information Systems at Georgia State University. His research and authored works regard security of information systems, methods of information systems design and development, and the interaction of information systems and organizations. He is a Chartered Engineer, holds a B.S. *summa cum laude*, from The University of Maryland, and the M.Sc. and Ph.D. degrees from The London School of Economics, University of London.

Alison Adam is Professor of Information Systems and Head of the Information Systems Institute, University of Salford where she also leads the Information Systems, Organizations and Society Research Centre. Her research interests are gender and IS, computer ethics, critical IS and science and technology studies. Her new book, 'Gender, Ethics and Information Technology' has just been published by Palgrave Macmillan.

Helmut Krcmar is Professor of Information Sciences at the Technical University Munich. The research interests of Professor Dr. Krcmar are focused mostly on information and knowledge management, engineering and management of IT based services, piloting of innovative information systems in health services, environmental management and e-Government, as well as computer-supported collaboration in distributed and mobile work and learning processes.

Joe Peppard holds the Chair in Information Systems in the Business School, Loughborough University, where he is also Director of Postgraduate studies. Previously, he was a Reader at Cranfield School of Management and, over the years has held academic appointments at Trinity College Dublin, Ireland, Groningen University the Netherlands and University of South Australia. He holds BBS Period and MSc degrees from Trinity College Dublin, and a PhD from Cranfield School of Management, UK. He is European Editor of the Journal of Information Technology.

John Venable is Assoc. Prof. and Head, School of Information Systems, Curtin University of Technology, Perth, Western Australia. He holds a B.S. from the United States Air Force Academy and an M.S. in Management Science, an M.S. in Advanced Technology, a PhD in Advanced Technology (Information Systems) from Binghamton. He has previously lectured in IS at Binghamton University and Central Connecticut State University in the USA, Aalborg University in Denmark, the University of Waikato in New Zealand, and at Murdoch University in Perth, Western Australia. His main research interests are in IS development methods and practice, IS and data modeling, digital library systems, GSS, and IS research methods.