

Reconciling the Perceptions and Aspirations of Stakeholders in a Technology Based Profession

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INTRODUCTION

Information systems professionals help to achieve business and organizational goals through the use of information technology.^a The information systems (IS) profession is team-oriented and project-based. It involves a blend of business knowledge and understanding, technical skills, and working relationships with business and technical professionals. The skills and knowledge involved range from traditional computing, wide ranging business related studies, to “soft” skills useful in working with individuals and teams to achieve organizational objectives.

IS students are first and foremost concerned with future employability. Employers, on the other hand, often indicate that they want new graduates who can be immediately productive in their environment.

Are the aspirations of students and employers fundamentally incompatible? How can IS educators help to find a workable and satisfying balance? How can information systems educators achieve a better fit between the workplace and the university “studyplace”?

BACKGROUND

The past decades have been characterized by a rapidly and constantly changing business environment. Lee, Trauth, and Farwell (1995) argued that technological and sociological developments facilitated by evolving information technology and changing business needs has made it necessary for IS professionals to develop a wider range of nontechnical skills than was previously the case. Similar views have been expressed by many others, including Burn, Ng, and Ma (1995), Cafasso (1996); Lowry, Morgan, and FitzGerald, (1996); Morgan, Lowry, and FitzGerald (1998). Beise, Niederman, Quan, and Moody (2005) saw a need for the reform of undergraduate IS programs to specifically target the global IT environment by adding a global business perspective to existing curricula or by developing new curricula focusing on globalized information management. The perpetual global

competition for skilled information systems professionals continues unabated (Florida, 2005; Schwarzkopf, Saunders, Jaspersen & Croes, 2004).

The preparation of IS professionals must encompass a body of knowledge and a repertoire of technical skills identified by various professional bodies (ACM-AIS, 2002; Cheney, Hale, & Kasper, 1990; Cohen, 2000; Davis, Gorgone, Feinstein & Longenecker, 1997; Gorgone & Gray, 1999; Lidtke, Stokes, Haines & Mulder, 1999; Lyytinen & King, 2004; Mulder & van Weert, 2000; Underwood, 1997). IS curricula must take cognizance of the greater diversity within the IT labour force as a result of globalization (Trauth, Huang, Morgan, Quesenberry & Yeo, 2006).

The persistent research finding that employers want graduates who possess better business skills has often been interpreted by academics to mean that more traditional, formal business subjects such as accounting, economics, business finance, and marketing should be taught alongside traditional technical or “hard” skill subjects such as systems analysis & design and programming in particular languages. (Amarego, 2005; Gardiner, 2005; Holt, MacKay & Smith, 2004; Lee, 2005; Leong & Tan, 2004; Litecky, Arnett & Prabhakar, 2004; Medlin, 2004; Trauth, Farwell, & Lee, 1993; Van Slyke, Kittner, & Cheney, 1997). Beachboard and Parker (2003) observed that course requirements in model curricula likely contain more technical material than can be covered in an undergraduate course. On the other hand, “soft” areas such as teamwork, communication skills, ability to accept direction, and others are expected to be somehow “picked up” along the way by students through an unspecified, osmotic process and not addressed as part of a curriculum. Unfortunately, anecdotal evidence continues to suggest that at least some new graduates continue to lack “soft skills” (Maiden, 2004). Berghel and Sallach (2004) maintain that a curriculum must take account of developments in technologies, business models, and applications to enable students to build the necessary competencies.

The work presented here is part of an ongoing research program that investigates the views of major IS curriculum stakeholders including employers, IS practitioners, currently

enrolled students, recent graduates, and academics. The data were gathered from surveys of IS practitioners and IS decision makers in Australia and covered all industry sectors as well as business unit sizes. We argue that IS practitioners, employers, and students see little value in some of the more formal business subject areas that often form the core of an IS degree offered in business or commerce faculties. These stakeholder groups see more value in the development of “soft skills” useful in client interaction, often through cooperative education in which students are placed in real-world roles as novice business analysts (Dressler & Keeling, 2004; Fincher, Clear, Petrova, Hoskyn, Birch & Claxton, 2004; Gallivan Truex & Kvasny, 2004). The findings have serious implications for IS educators and IS curriculum design

(Turner & Lowry, 1999a; 1999b; 2000; 2001; 2002; 2003; Turner, Fisher & Lowry, 2004a; 2004b; 2005a; 2005b; Lowry & Turner, 2005a; 2005b; Turner, Lowry & Fisher, 2005; Turner, Fisher & Lowry, 2005a; 2005b; Lowry, Turner & Fisher, 2006).

IS CURRICULUM CONTENT AND DELIVERY IN THE FIRST DECADE OF THE 21ST CENTURY

In a 1999 study, the authors began to suspect that the “other business skills” desired of new IS graduates were not syn-

Table 1. Comparative ratings of academic subjects by IS practitioners and employers

Skills	IS/IT Professionals		IS/IT Employers	
	Mean	sd	Mean	sd
Communications & Report Writing	6.02	1.05	6.09	0.81
Analysis & Design	5.87	1.09	5.63	1.26
Client server applications	5.67	0.92	5.37	1.15
Business Applications	5.65	1.11	5.76	1.20
Use operating systems	5.60	1.10	5.39	1.27
Database design	5.55	1.25	5.12	1.16
Management	5.54	1.03	5.20	1.10
Knowledge of PC apps	5.43	1.22	5.41	1.37
Project Management	5.43	1.16	5.60	1.24
E-Commerce/E-business development	5.33	1.23	4.78	1.38
Apply OOPs	5.26	1.25	4.61	1.51
LAN & Data Communications	5.22	1.27	5.55	1.22
Large System experience	5.12	1.19	4.54	1.53
Business Ethics	5.07	1.57	5.23	1.52
Web design/development	4.96	1.54	4.67	1.15
Organizational Behavior	4.90	1.41	4.92	1.34
Data mining/Data warehousing	4.76	1.36	4.66	1.36
Apply 3GLs	4.70	1.41	4.15	1.58
CASE applications	4.51	1.32	3.80	1.42
Knowledge base/Expert systems	4.49	1.42	4.20	1.37
ERP implementations & operations	4.48	1.39	4.33	1.61
Marketing	4.35	1.52	4.39	1.34
Business Finance	4.30	1.50	4.54	1.47
Operations Research	4.29	1.26	4.32	1.26
Mathematical Modeling	4.25	1.44	3.97	1.49
International Business	4.24	1.59	3.69	1.56
Business Statistics	4.18	1.40	4.33	1.38
Accounting	4.13	1.55	4.68	1.38
Business or Commercial Law	4.07	1.55	4.12	1.45
Psychology	3.70	1.76	3.85	1.46
Economics	3.63	1.50	3.68	1.47
Foreign Languages	3.15	1.78	3.04	1.46
n=	136		138	

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