Chapter XVII
Enhancing the Employability of ICT Students with Hybrid Skills:
Insights from a UK Survey with Small Business Managers

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ABSTRACT

This chapter describes an empirical study that aimed to collect UK small business managers' views on the importance of staff skills in supporting their business operations and success. The study formed an important part of the HAPPINESS Project funded by the European Commission. The project proposed a hybrid skills model for identifying skill needs to meet the demand in Small and Medium Sized Enterprises (SMEs) across Europe. It is argued that a competent ICT worker should possess not only technical skills, but also other skills such as skills in communication and management, and skills to enable them to operate effectively in a business environment. This argument is discussed in the literature and supported by the empirical evidence collected in the survey conducted with UK small business managers. The hybrid training approach proposed by HAPPINESS attempts to address the problem of skills shortage in ICT by developing appropriate training needs identification methods and matching the identified personal training needs with a proposed hybrid training provision. The challenge, however, remains for higher education institutes and training organizations to prepare ICT students to respond to the hybrid skill needs of enterprises.

INTRODUCTION

Rapid development in emerging ICT, such as the Internet, the World Wide Web, e-commerce, and e-business has brought about enormous opportunities as well as challenges for companies of all sizes and across all sectors. The huge potential benefit of ICT, however, can only be realized by capable managers and skilled employees. As a result, managers and workers are under greater pressure than ever before. An employers skill survey showed that for the first time skills shortage has emerged as the chief worry facing directors of Britain's leading firms ("Skill shortage," 2001). The demand for highly knowledgeable and skilled workforces places enormous pressure upon companies to recruit more qualified and capable employees and to improve the skills of their current employees.

Much of the literature on ICT skills is concerned with skill shortages and the trends of the labor market. With limited studies on skill needs analysis, a common theme emerging from the literature is the growing demand for "hybrid" ICT staff. There are a number of definitions of hybrid, but all suggest a need for more than just *technical* expertise. Connor (1992) and Yellowbrick (1995) describe hybrid staff as possessing a wide range of technical and "complementary" skills. Earl and Skyrme (1992) define hybrids as "people with technical skills who are able to work in user areas doing a functional job, but adept at developing and implementing ICT application ideas." Dench, Perryman, and Giles (1998) go even further, arguing that ICT staff needs six types of skills: (1) technical skills; (2) skills understanding business needs; (3) consultancy skills; (4) management skills; (5) problem solving and analytical skills; and (6) personal characteristics and interpersonal skills. Kodz, Dench, Pollard, and Evans (1998) also suggest six key skills, but with slightly different focuses. These are: (1) communication, (2) numeracy, (3) information technology, (4) working with others, (5) improving own learning and performance, and (6) problem solving.

This chapter presents an empirical study that aimed to investigate SME managers' perceptions on the importance of hybrid skills of ICT staff in supporting their business success. The survey was an important part of the HAPPINESS Project. HAPPINESS (Holistic APProach to INventing European Staff Solutions) was a 2-year pilot project funded by European Commission's Leonardo Da Vinci program. The project involved five European partners from Austria, Greece, Italy, Spain, and the UK. The project proposed a hybrid skills model for identifying skill needs for ICT staff to meet the demand in SMEs across Europe. It is argued by the HAPPINESS project that a competent ICT worker should not only possess technical skills, but also other key skills such as skills in communication and management, and skills to enable them to operate effectively in a business environment. Existing training designs seem to put too much emphasis on technical aspects, but underestimate the importance of other key skills and competence. The survey findings confirm the importance of ICT staff's hybrid skills from small business managers' point of view and add further empirical evidence to support the call for a change in ICT staff training design and development in education and training organizations. The proposed hybrid training approach by HAPPINESS attempts to address the skill shortage problem in ICT areas by developing appropriate training needs identification methods and matching the identified personal training needs with the proposed hybrid training recommendations.

The emergence of e-commerce and e-business has brought profound impact on the ICT skills shortage and demand. As a result of the globalization, many large organizations are outsourcing ICT software and service operations to less expensive and more skilled workers in developing countries. This role of globalization seems to have less impact on ICT outsourcing among small businesses due to their different