Soft or Hard Boiled: Relevance of Soft Skills for IS Professionals

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ABSTRACT

IS students studying on the Bachelor of Applied Information Systems degree often regard 'soft skills' as irrelevant to their chosen course of study. Soft skills include such things as skills, abilities, and traits that pertain to personality, attitude and behaviour rather than formal or technical knowledge.

Research has shown that employers are increasingly seeking soft skills when they are recruiting potential employees. This research identifies which soft skills employers require and value from IS graduates and how they assess these skills via the CV and interview during the pre-employment phase. A search of the literature has been conducted to confirm the need for soft skills in the IS industry. Opinions on soft skills relevance have been gathered from current and past students via programme evaluation forms. A survey has been distributed to employers in the Manawatu region and recruitment agencies in Palmerston North and Wellington.

The results of this survey are reported and recommendations are made for assisting graduates to meet the challenge of securing an IS role in an increasingly competitive work environment. This research will also assist in the development of a module on pre-employment for final year degree students. Such a module could be used across any discipline with minor industry variations and requirements.

1. INTRODUCTION

The nature of work in the IS industry has changed in the last decade due to the development of desktop computing. This has resulted in the need for technical staff to interact with nontechnical staff on a regular basis (Vitiello, 1997). Technical staff now need to develop the ability to communicate in lay terms with their non-technical colleagues (Vitiello, 1997) and this has resulted in an increasing demand for soft skills from employees in the IS industry. Soft skills used to be considered an extra in the IS industry but now employers believe they are essential (Cafasso, 1996). In a recent Canadian survey 68% of CEOs surveyed said soft skills were more important than they were five years ago (Gurusinghe, 2000). Managers want people who can clearly explain processes, listen, interact and build relationships with others and these skills need to be demonstrated early during the job interview (Cafasso, 1996).

Soft Skills can be defined as skills, abilities, and traits that pertain to personality, attitude and behaviour rather than formal or technical knowledge. (Moss and Tilly, 1996). Soft skills include attributes such as team

work, communication and interpersonal skills, customer service, leadership, motivation and willingness to learn. Moss and Tilly (1996) have broken soft skills into two distinct groups - interactive skills and motivation skills. Interactive skills are where an employee needs to interact with other staff and motivation skills are focused on the intrapersonal factors that determine the level of work output of an individual. Aspects from both soft skills groups are required if an employee is to succeed in the current IS workplace. In contrast to these soft skills 'hard skills' are the technical skills relevant to a particular industry (Gurusinghe, 2000). In the IS industry some of these would include systems analysis, database concepts, networking and programming (Van Slyke *et al.* 1998).

Many specialist soft skills trainers believe that soft skills are the hardest skills to learn. Technical experts are used to working in isolation but the key to success in the workplace and the key to learning soft skills is to learn to collaborate effectively and to accept results through interdependence (Ganzel, 2001).

The future of many IS roles will be project based working in interdisciplinary teams which will require good interpersonal skills and the ability to take a gestalt view of a project considering all functioning aspects of a business (Solomon, 1999; Klien, 1991).

There is a plethora of literature that emphasises the importance of soft skills. However there have been few studies that have considered which soft skills are required. A recent study of science graduates by Coll *et al.* (2002) identified that ability

and willingness to learn, teamwork and initiative were the top ranking soft skills but there appears to be no New Zealand research on which soft skills are needed by IS graduates.

There also appears to be a gap in the literature as to how graduates should actually portray soft skills. Research conducted by Coll *et al.* (2001) reported that students felt their performance at interviews was lacking as they found it difficult to come up with enough examples within the tight timeframe of a job interview. The literature gives little guidance as to how employers assess for soft skills in the pre-employment phase. McCormack (1997) and Isaacs (1998) believe employers do not use detailed assessment procedures when hiring, relying instead on subjective judgements or instinct when making employment decisions rather than clearly identifying the skills necessary for the job.

2. FINDINGS AND DISCUSSION

A survey was conducted of employers in the Manawatu region and recruitment agencies from Manawatu and Wellington. A purposive sample was chosen that comprised those employers and recruitment agencies who recruit IS graduates. The response rate for the survey was 37%. Of these respondents, 36% were female, 64% were male. Respondents' roles included IT Managers, Regional Directors, Team Leaders and Recruitment Consultants. Respondents have been in their current positions for an average of 4.3 years. Programme
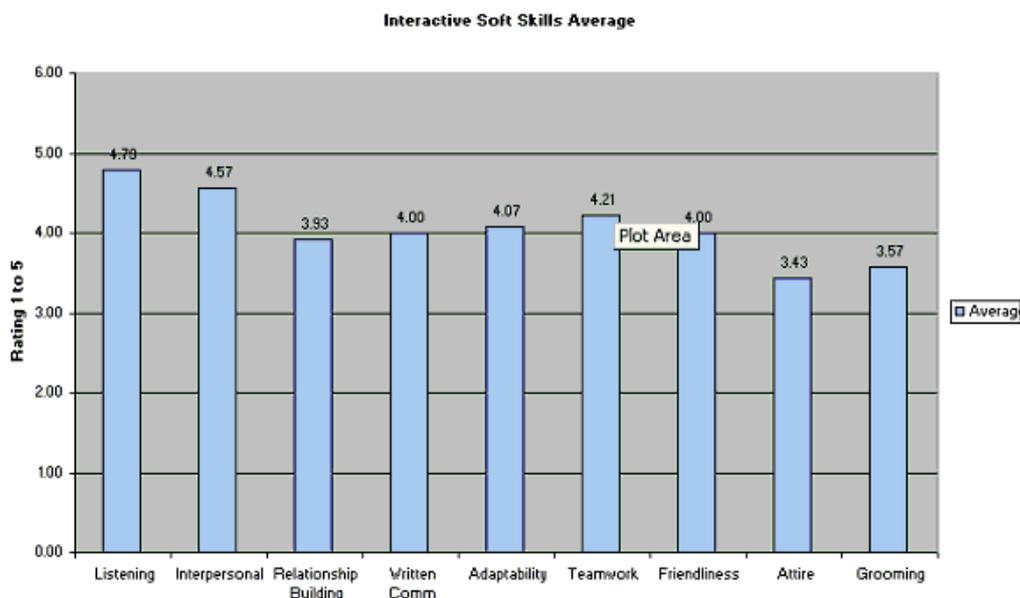

Figure 1: Interactive Soft Skills

evaluations were also used to identify the opinions of Bachelor of Applied Information Systems students towards soft skills.

3. THE IMPORTANCE OF INTERACTIVE AND MOTIVATION SOFT SKILLS

In section one of the survey, respondents were asked to rate the importance of 19 interactive and motivation soft skills on a Likert scale of one to five (five being the highest). The interactive and motivation soft skills categories were identified from research conducted from Moss and Tilly (1996) See Figure 1.

Nine interactive skills where listed as per the chart above. Listening, interpersonal and teamwork were ranked as the top three skills overall. All interactive skills scored above 3 with an overall average of 4.06.

Ten motivation skills were listed as per the chart above. Willingness to learn, enthusiasm, problem solving and initiative were ranked as the top four skills overall. These findings support the study by Coll, Zegwaard and Hodges (2002). Again all motivation skills scored above 3 with an overall average of 4.09.

In addition to the Interactive and Motivation Soft Skills included in the survey respondents added the following additional soft skills that they felt were also important. The ranking (using the same Likert scale) for the soft skill is shown alongside:

Maturity 4
Persuasiveness 4
Commercial Acumen 4
Commitment 5
Openness 5
Customer Focus 5
Improvement Focus 5

A comment was also received from one respondent who said they felt 'interactive skills were essential traits for any IT profession'. The findings suggest that all soft skills are considered to be of medium to high importance by respondents.

4. PRE-EMPLOYMENT FACTORS

Section two of the survey included qualitative questions on pre-employment. Respondents were asked if there was one thing above all others that they would advise people to prepare for a job interview. There were four key themes identified:

♦ Research organisation before interview
♦ Presentation eg; grooming, attitude, confidence, interpersonal skills
♦ Vision for future goals/career
♦ Be prepared to explain and clarify skills/experience as outlined in the CV.

When asked what makes an application letter and/ or CV stand out, a significant number of respondents indicated that they look for professionally written
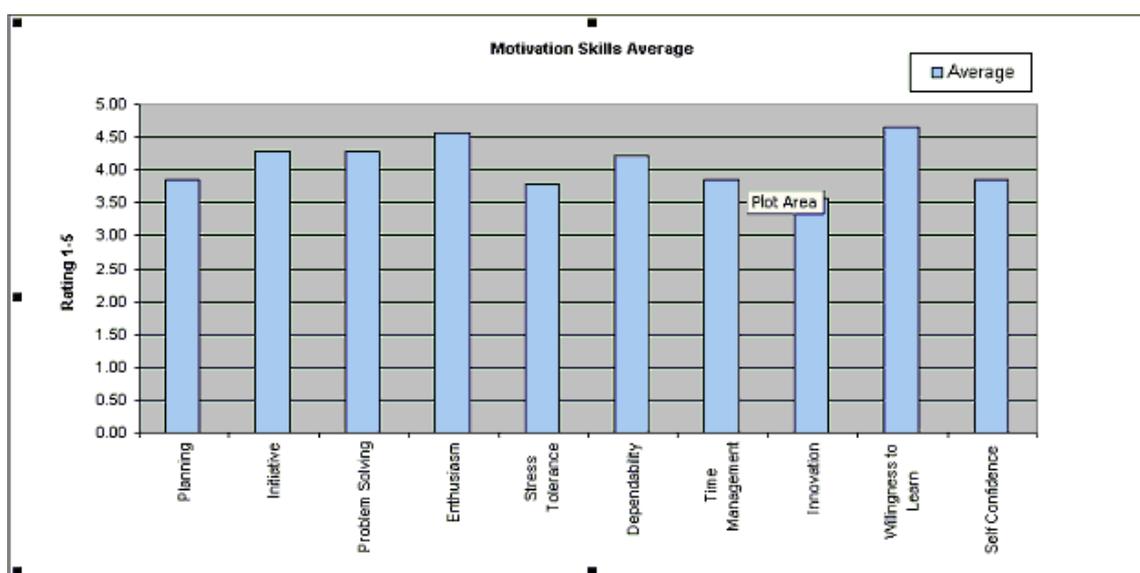

Figure 2: Motivation Soft Skills

concise documents with no grammatical or spelling errors. Some respondents suggested that a covering letter explaining how an applicant would add value to the organisation would enhance an application, one respondent even stated that "90% of IT applicants don't bother including it [a covering letter]". The ability to portray past work and non-work related achievements as relevant to the role being applied for was also stated as important. Only one respondent from the survey group indicated a photograph would be helpful.

Respondents were asked how they shortlist applicants and approximately how many. The majority of respondents indicated they shortlist between two to four people. Shortlisted applicants were evaluated by considering their experience, skills or how close they met the job requirements. Only one respondent stated qualifications as a contributing factor when shortlisting. The employer respondents were asked if they used recruitment agencies to assist with the shortlisting of applicants but only a small percentage chose this option and time saving was the main reason given.

The survey asked what factors contributed towards making a good first impression at the interview. Self confidence, a positive attitude and effective non-verbal communication were identified as the three most important factors. Spillane (2000)

notes that most employees would have only 30 seconds to make an effective first impression of their appropriateness for the job at a job interview.

Respondents were also asked if they assessed for evidence of soft skills during the interview and all but one respondent said they did. The methods used to identify soft skills ranged from questioning techniques such as situational (focused on the present), behavioural (focused on the past) and probing questions. Informal methods were also used such as evaluating non-verbal communication skills, assessing conversational ability, subjective judgements and gut instinct. Subjective judgements and instinct were factors also identified by McCormack (1997) and Isaacs (1998) as discussed in the introduction.

5. TECHNICAL VS SOFT SKILLS WEIGHTINGS

The final section asked respondents to weight technical and soft skills for a range of IS roles (see figure 3).

The findings show that only three jobs were ranked on average as requiring a higher percentage of soft than technical skills (User Support, Trainer and Project Managers). However, the average ranking
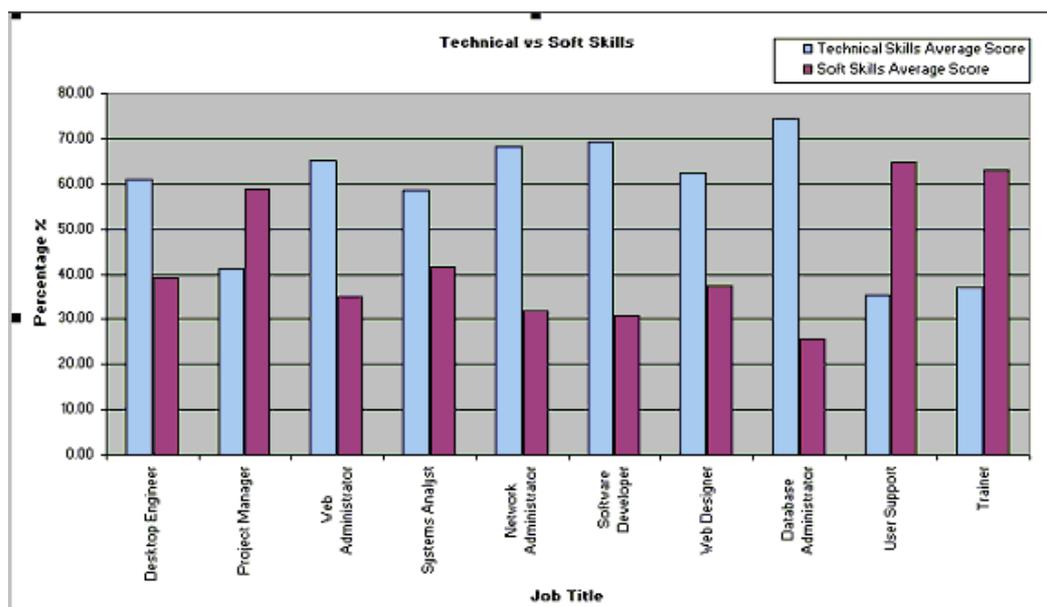

Figure 3: Technical vs Soft Skills

for soft skills across all roles indicated a 42% level of importance. (See figure 4).

6. STUDENT FEEDBACK

Each semester students are asked to provide feedback via formal programme evaluations. A consistent theme across a period of 3 years highlighted that students found the soft skills modules (communication and training) irrelevant to their programme of study. A selection of reoccurring comments were:

♦ Need more technical subjects

♦ Not related to computing

♦ Didn't really see why this is part of the course

♦ Maybe communication could be made optional.

7. CONCLUSIONS AND RECOMMENDATIONS

While it is clear from the literature that soft skills are becoming increasingly important to employers there is still a lack of information on how employers identify these skills or how graduates should portray them during the pre-employment phase. There is also limited information on which soft skills are of most relevance to the IS industry so that they can be identified to graduates to help them to prepare for employment. The survey went some way towards identifying which soft skills are important. It is interesting to note that while the soft skills on average achieved above four on the Likert scale for importance, this was contradicted when employers were asked to weight soft skills for specific IS roles. It is further evident from the survey that identifying soft skills is challenging for an employer. This, therefore, poses a challenge for the graduate to display appropriate soft skills during the job interview. There is enough evidence to suggest that the importance of soft skills in the workplace has grown to the extent that more research is needed in this area.

A recommendation from this research is that soft skills should continue to be taught within an Information Systems degree and that the relevance of soft skills to the IS industry is clarified to students. It is also recommended that an intensive pre-
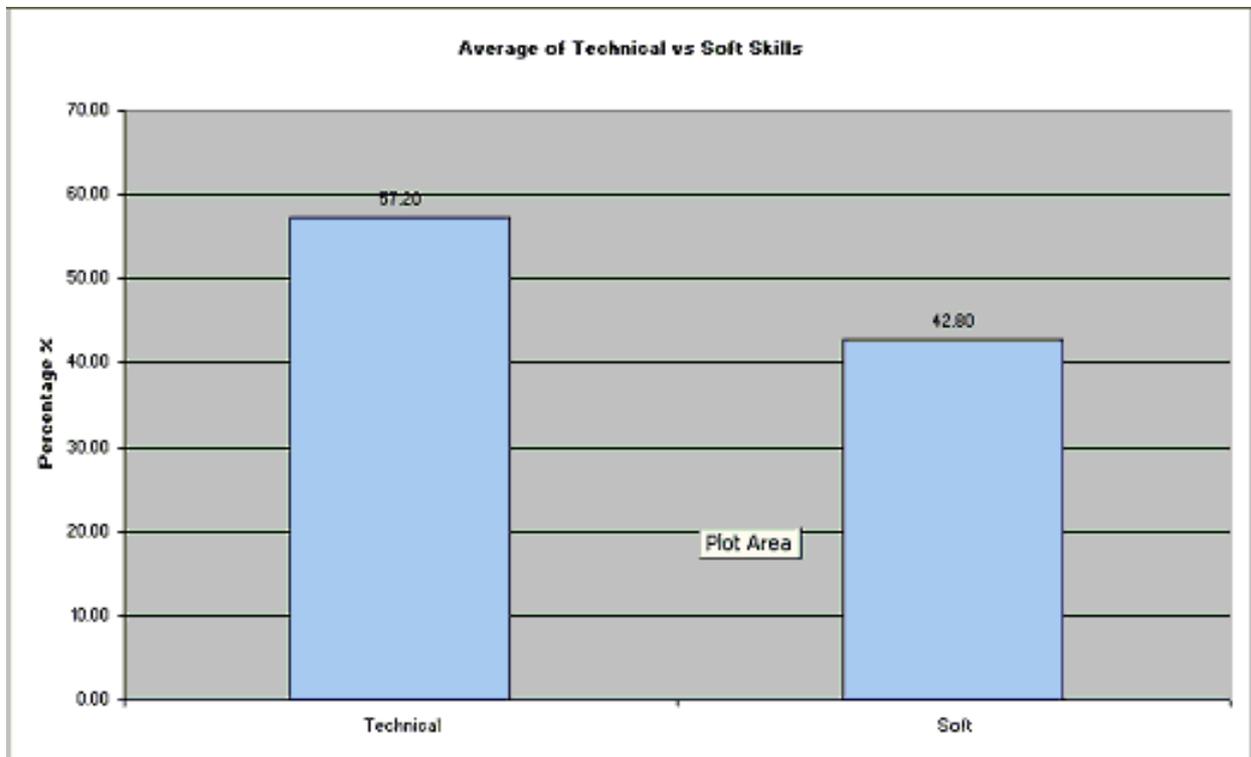

Figure 4: Overall Average of Technical vs Soft Skills

employment module is provided to final year degree students to assist them in meeting the requirements highlighted by the respondents in the survey. As a result it is intended that a pilot pre-employment module will be developed for delivery in 2002. This module would attempt to incorporate factors identified in the survey. The development and success of the first iteration will be reported on.

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