Chapter XXIII

Generic Attributes of IS Graduates: An Analysis of Australian Views

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This chapter describes the final phase of a study that validates a group of generic attributes of graduates of Australian undergraduate degree programs with majors in Information Systems (IS). The study, sponsored by the Australian Computer Society (ACS), involved 105 academics from all Australian universities that offer IS undergraduate degree programs of study and 53 industry representatives. A three-round Delphi questionnaire was used in the study. The results of this study are compared with a previous study of generic attributes conducted by the authors in Queensland, Australia. Differences between academe and industry are identified. The top three attributes in each study are the same, although the order is reversed in the national study. Some of the differences include the higher ranking of interpersonal skills, teamwork, and knowledge of the IS discipline by academics compared with the higher ranking by industry of self-motivation and the ability to learn independently. Other major findings include the high ratings of the attributes of team participation and the commitment to further learning and intellectual development. Oral and written communications are significantly rated as more important than a comprehensive knowledge of IS. This study has a very strong overall correlation with the previous Queensland study.

INTRODUCTION

This chapter reports on the final phase of a study (Snoke & Underwood, 1998a, 1998b, 1999, 2000, 2001) that validates a group of generic attributes of graduates of Australian tertiary information systems (IS) programs of study. This study was motivated by increasing anecdotal reports from newspapers, statements from industry representatives, including professional societies such as the Australian Computer Society (ACS) and a study by Turner.
(Turner & Lowry, 1999) suggesting that tertiary curricula do not meet the needs of industry. Educators and trainers of future IS professionals, in order to gain accreditation and recognition for their programs of study from professional associations, must be able to identify and validate the generic attributes desired by employers of IS graduates. Apart from being a unique Australian study, the results are significant in that they sample a wide cross-section of the IS community in Australia, including both academics and industry representatives. The study also provides a comparison of industry and academic views on the importance of preferred student attributes. These comparisons reveal a number of disparities, suggesting the need for closer collaboration between industry and academe in the development of courses in information systems. The study will form the basis for the development of an instrument for accreditation of courses by the ACS.

The sample population included both academics and representatives from industry who employ the graduates of IS courses. The total sample population of 449 consisted of 354 academics and 95 industry representatives. A significant number of academics (30 percent) responded to all three rounds, while a high number of industry representatives (51 percent) participated giving an overall participation rate of 34 percent.

A three-round Delphi study was used in which respondents were asked to rate rather than rank questionnaire items. The study used, as its initial question set, a previously identified set of attributes (Snoke & Underwood, 1998b). Respondents were asked to rate them according to their importance in the workplace. These responses were then ranked according to their mean rating. Industry and academic comparisons are made.

The chapter proceeds as follows. First the aims of the study are explained and the definition of key terms given. The research method is then described, along with the results of the study and data analysis. Conclusions are drawn and recommendations made from the study.

**AIM OF THE STUDY**

This Australian study identifies and examines the generic attributes required of entry-level employees from IS programs of study. This project will help provide a focus for IS curriculum development in the next millennium.

The results of the study will be used to develop a technique for developing a more responsive tertiary curriculum that meets the needs of the information systems industry. Institutions will be able to map their IS curriculum offerings against those of the Australian Computer Society (ACS) Core Body of Knowledge (Underwood, 1996) to identify strengths and weaknesses in their curricula. They will be able to offer a curriculum that is more responsive to the local employment market that their institution serves. This is particularly important for regional institutions, as they serve a much smaller employment area.

**DEFINITIONS**

This paper uses the term generic attributes to describe a core set of abilities and characteristics of an individual (Sandberg, 1994, 1997). It has many meanings, interpretations, and synonyms such as generic skills, basic skills, qualities, knowledge and understanding and competencies (Moss & Liang, 1990; Stasz, McArthur et al., 1993; Crebert, 1995; Doyle, 1996; Bradley, 1997).
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