GENERIC CAPABILITIES AND THE LIBRARY AND INFORMATION PROFESSIONAL: EMBEDDING GENERIC CAPABILITIES INTO QUT'S LIBRARY AND INFORMATION STUDIES (LIS) CURRICULUM

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ABSTRACT

Generic capabilities are essential to the success of new graduates entering the workforce and for their ongoing career development. The principal goals of the research project described are to identify the key generic capabilities relevant to the library and information professional, and to integrate these into the educational program through curriculum design and assessment techniques within the Graduate Diploma in Library and Information Studies at the Queensland University of Technology (QUT).

INTRODUCTION

Queensland University of Technology (QUT) is a member of the Australian Technology Network (ATN). The ATN is a consortium of technology and industry-focused institutions which includes Curtin University, RMIT University, University of South Australia, and University of Technology Sydney. In association with ATN, QUT has been involved in a project aimed at fostering the development of graduate capabilities within higher education programs. While satisfied with the discipline knowledge acquired by graduating students, employers have been critical about the low level of more general personal and interpersonal skills which are essential to successful performance in the workplace.

To facilitate the development of these generic capabilities in its educational programs, QUT has supported a project which involved the creation of a web-based tool known as the Student Capability Profile (SCP). The SCP aims to be a dynamic, flexible, and ongoing vehicle for documenting individual students' personal development and growth within the broad spectrum of workplace skills.

This paper discusses a specific research project currently being undertaken within the School of Information Systems in the Faculty of Information Technology which has the goal of determining the generic capabilities relevant to the information professional. The project seeks to build on the pioneering work of other faculties of QUT by integrating the facilities of the SCP into the discipline-specific context of the Graduate Diploma of Library and Information Studies.

The paper is divided into two parts. The first part considers the role of generic capabilities within higher education. A brief picture of the evolving context of Library and Information Studies (LIS) education will also be outlined. The second part will discuss the current research project. The research approach and expected outcomes will be outlined. In addition, the main findings from the first two phases of the project will be discussed. The paper concludes by briefly considering the next key steps in the research project.

GENERIC CAPABILITIES

Definition

Skills such as problem solving, critical thinking, effective communication, teamwork, and ethical thinking form the core set of workplace skills and abilities desirable in graduating students and new employees. They complement the discipline-specific skills and professional knowledge acquired by students in university study. Within the literature there have been many synonyms used to refer to this core set of skills. Such synonyms include workplace skills, transferable skills, core competences, generic skills, and graduate attributes. For the purpose of cohesion with QUT and ATN activities this paper will use the term 'generic capabilities' to refer to these skills and abilities (ATN, 2001).

Within the context of higher education

The concept of developing students' generic capabilities has become increasingly popular in recent years in universities in Australia and overseas. This popularity has emerged as the direct result of the increasing link between industry and education. Through this growing link there has developed an acceptance that one of the important roles of higher education is as a supplier of employees to industry. For example, in 1996 Gush suggested that "industry occupies

a high profile as a stakeholder of higher education and the role and responsibility of higher education is as a provider of graduates to industry". Based on this understanding of the role of universities, the view that the current higher education curriculum does not meet the needs of industry is becoming more widespread. Industry groups and professional bodies are beginning to more strongly advocate the need for universities to offer courses that more adequately meet current industry and marketplace needs, especially within the area of generic capabilities. Indeed, findings from a recent poll of employers commissioned by the Department of Education, Training and Youth Affairs (DETYA) (AC Nielsen Research Services, 2000) showed that employers believe that 75% of Australian university graduates are not in fact suited for the jobs they apply for. Employers indicated that the apparent lack of preparedness is not in the technical areas but in the 'generic' capabilities of oral and written communication, interpersonal dealings, critical thinking, problem solving, and ethics training. The findings of this study suggest that universities must be developing students who possess not only discipline knowledge but also high levels of personal and interpersonal skills.

In 1995 Ian Kemp and Liz Seagraves posed the question: "transferable skills - can higher education deliver?" In a survey of the students and staff at Glasgow Caledonian University these researchers gathered data on the views and experiences with regard to generic capabilities of both staff and students in five courses offered at the university. They concluded that "there is no question in our minds that [generic] skills can be delivered". However they suggest that a "radical rethinking of course structuring and delivery is required if these skills are to be addressed seriously in higher education".

Library and Information Studies (LIS) education

Over the years much has been written on the development and changes necessary in Library and Information Studies (LIS) education if it is to remain dynamic and responsive to the evolving information age and to ever-changing marketplace demands. In recent months the quality of Australian library education specifically has been a topic of much debate, initiated by a provocative article by Ross Harvey (2001). Harvey observed that "something's amiss with university-based education for librarianship in Australia", suggesting that those involved in library education need to consider three fundamental questions: "What is our field? What is out product? Where's the quality?" (Harvey, 2001). Ultimately what Harvey is proposing is that now is the time for Library and Information Studies education to re-examine and reinvent itself if it is to remain relevant in an ever-changing information age. A similar cry was made in the United States only five years earlier when at a 1997 focus group at the Feather River Institute it was concluded that "the time is ripe for major changes in the curricula of library schools" (cited in Dahlin, 1998).

According to Huber (1995) "restructuring the curriculum in schools of library and information studies requires a realistic, unbiased look at the profession and the information revolution occurring throughout society in order to design flexible programs that will produce effective future practitioners". Australian library education possesses a strong tradition of liaising with industry, with a number of conferences and seminars taking place over the last two decades that were dedicated to examining the future of the library and information profession and its subsequent education. In 1996 the 'Reading the Future for Library and Information Services Education and Practice Conference' held in Melbourne made several important recommendations regarding LIS education, including: better collaboration between library information schools, benchmarking for measuring success of service delivery, and incorporating generic transferable skills into the LIS curriculum (Todd, 1997).

The importance of the latter point has been emphasised by ongoing dialogue and research throughout the world and by the emphasis given by professional bodies such as the American Library Association (ALA), the Australian Library and Information Association (ALIA), and the International Federation of Library Associations and Institutions (IFLA) to continuing education that not only incorporates discipline-specific knowledge but also generic capabilities. As a case in point, the Continuing Professional Development (CPD) program recently established by ALIA provides a means by which members can document and monitor their professional growth.

> "The dynamic environment of the library and information sector dictates the need for library and information professionals to remain flexible and adaptable to change...Lifelong learning extends and develops the knowledge, skills and competencies of practitioners. It also enables them to prepare for their work more

> effectively, to broaden their career and to undertake new tasks" (ALIA, 2001, para 2-3).

Significantly, the distinction is made in the program between the necessity of developing both "LIS Specific Areas" and "Generic Areas". The latter refers to skills such as team membership, effective communication, and critical and evaluative thinking. It is becoming apparent that library educators must not lose sight of the need for LIS courses to "equip graduates with a range of enterprise skills, transferable skills, including interpersonal communication, teamwork, report writing skills, numeracy, computer literacy, time management and so on" (Day, 1997). Generic capabilities must be considered in the current climate of curriculum reform in Australian LIS education.

QUT AND THE STUDENT CAPABILITY PROFILE (SCP)

QUT is committed to fostering the development of generic capabilities in its graduating students. The policy on generic capabilities adopted by QUT openly acknowledges that the "appropriate curriculum design and teaching, in the context of discipline knowledge, provide the foundation for the development of graduate capabilities" (QUT, 2001a, para 1.3.2). To this end the university has actively supported a project which involved the creation of a web-based tool known as the Student Capabilities Profile (SCP). The SCP aims to be a dynamic, flexible, and ongoing vehicle for documenting individual students' personal development and growth across the broad spectrum of workplace skills.

The SCP package will allow students to document and record for later access experiences and activities they have undertaken that have helped them to develop as professionals. It will allow them to reflect on the generic capabilities that relate to those experiences and activities. Through this reflection students will be able to identify personal strengths and improve upon weaknesses. The personal profile created via the SCP for each student will be an invaluable tool for graduating students, especially during the recruitment process. In addition, the SCP provides the functionality to enable teaching staff to set specifically-designed activities that will facilitate the development of and reflection on the students' generic capabilities.

The SCP is itself in a stage of development and refinement. It has been the centre of a small but growing number of teaching and learning projects in QUT that have endeavoured to explore its many features for relevancy within specific disciplines. Under the QUT policy, teaching staff are encouraged to "review the use of the SCP to document activities in courses and units which develop generic capabilities, and encourage students to use the SCP to systematically record and reflect upon learning experiences and activities that illustrate their development of generic skills at QUT" (QUT, 2001a, para 1.3.2). Feedback from these projects will aid in the development of the subsequent stage of the system.

THE RESEARCH PROJECT

The research aim

The research project has two primary aims. Firstly, it seeks to identify the generic capabilities essential for a successful Library and Information Professional graduate. Secondly, it will explore the SCP package developed by QUT as a means of embedding the identified Library and Information Professional's generic capabilities into the LIS curriculum. The results of this project will be used to develop an LIS curriculum within QUT that is more responsive to the needs of the library and information industry. In addition the project will develop graduates who can competently enter their new careers well versed both in discipline knowledge and generic capabilities.

Research approach

The action research method was identified as the most appropriate research approach for the current project. Action research is "an approach to improving education by changing it and learning from the consequences of changes" (Kemmis & McTaggart, 1988, p. 22). Consequently, action research fulfils the project's combined objective of facilitating change within the LIS curriculum whilst developing a deeper understanding of the central issues of generic capabilities and graduate attributes. As depicted by Stringer (1996) action research involves the three phase routine of "look, think, act". "In the first phase – *look* – participants *define and describe* the problem to be investigated and the general context in which it is set. In the second phase – *think* – they *analyze and interpret* the situation to extend their understanding of the nature and context of the problem. In the third phase they *act* to formulate *solutions* to the problem" (p.39). Guided by the routine outlined by Stringer, the current research project evolved into two stages:

Stage One consisted of a review of the literature in order to determine the scope of the topic and to identify the key issues and to discover any gaps in the literature which could be addressed by the project. A report outlining the key findings was produced. As a result of Stage One the specific generic capabilities relevant for information professionals were identified. Stage One of the project incorporates the first two phases of the "look, think, act" routine espoused by Stringer.

Stage Two involved the exploration of the SCP package and the development of a pilot study to develop ways of embedding the generic capabilities identified in Stage One into the LIS curriculum. Funding for the second stage was provided through the auspices of a QUT Teaching & Learning Grant. Stage Two of the project incorporates phases two and three of the "look, think, act" routine of action research. A detailed discussion on each of these stages will follow.

Stage One: The literature review

The literature review for the project was undertaken by five volunteer LIS students enrolled in the Graduate Diploma in Library and Information Studies in 2001. Involving students in the project ensured that a collaborative and participative approach was taken to the research (Kemmis & McTaggart, 1988; Stringer, 1996). One group of students searched the literature on generic capabilities within the fields of higher education and human resources management. A second group searched the literature on generic capabilities within the information professions specifically, as discussed in reports which were relevant to education and employment in the library and information sector, as well as in materials published by the professional library and information associations internationally.

Generic capabilities have been the topic of much discussion and research in Australia, the United States, and the United Kingdom. Traditionally the research has taken a broad approach in trying to define the generic capabilities required in mainstream commercial and industrial sectors. More recently, efforts have been made to consider this list within the context of specific disciplines, of which the library and information profession is one.

In synthesising the findings of the literature review, a list of the key generic capabilities relevant to the LIS field was developed.

- Communication: written and oral, with the ability to select and use the appropriate level, style, and means of communication for a range of audiences.
- Teamwork and interpersonal skills: interpersonal understanding and the ability to lead, manage, and contribute effectively to teams.
- Computing and information technology skills: the ability to select and use appropriate IT tools and to access and employ online technologies effectively.
- Information literacy and lifelong learning: the capacity to learn and maintain intellectual curiosity and a commitment to continuous learning throughout life.
- Critical thinking and problem solving: the ability to identify, assess and formulate problems and apply logical, critical and creative thinking to decision making.

In addition to these capabilities, there was a wide range of general professional, ethical, business, and socio-cultural skills which contributed to the idea of a well-rounded LIS professional.

Stage Two: Pilot study

The Graduate Diploma course consists of seven core units with a number of potential electives. An informal review of the unit outlines for the core units revealed that little emphasis was placed on incorporating generic capabilities into the teaching and learning program. One of the core units, ITN336 Information Sources, was chosen for a pilot study. The principal reason for selecting this particular unit was the opportunity for team teaching offered to the researchers which would allow for more efficient and effective project management. The manageability of the pilot study was important. It did not need to be too involved or complex, but it required sufficient depth to clearly demonstrate several cycles of the action research process, as advised by Kemmis & McTaggart (1988): "action research starts small. It normally begins with small changes which even a single person can try, and works towards more extensive changes" (p.24).

The principal aim of the study was to develop an appropriate framework for embedding generic capabilities into the curriculum of the ITN336 Information Sources unit. Two core capabilities were selected from the literature review findings to provide the central focus for the pilot study:

written and oral communication, and teamwork. A further significant aim of the pilot study was to examine the benefits and shortcomings of the existing SCP system. As this model had originally been developed for use by undergraduate students in the Faculty of Built Environment and Engineering, it was important to determine the extent to which it may need to be adapted to better suit the disciplinary context of postgraduate library and information students.

The coursework program for the unit was adapted to incorporate the pedagogical issues of communication and teamwork skills, and new assessment tasks (formative and summative) were developed to enable the students to demonstrate the skills and to reflect on their learning and understanding. With the support of the SCP design and maintenance staff, the functionality and interface of the system were modified to enable the new assessment tasks – with the associated generic capabilities – to be presented to students and to enable them to submit their assignment documents and reflections for assessment. The experimental nature of the pilot study has necessitated the redesign of specific aspects of the system, followed by testing, evaluation, modification, retesting and re-evaluation, then possible additional refinements, retesting, and further evaluation. Active student participation in the testing and evaluation processes and their willingness to provide critical feedback and alternative ideas has underscored the collaborative approach taken in the study.

Expected outcomes

The principal outcome of the project will be an enhanced appreciation of the concept of generic capabilities within the Library and Information Studies course. More specifically, the project will foster a deeper understanding of the teaching and learning approaches and the technological framework required to effectively integrate generic capabilities into the curriculum design and assessment tasks. The project will enable students to consider the process of skills acquisition, supported by the development of their own meta-cognitive learning skills through self-evaluation and reflective practice. It is hoped that this in turn will strengthen the relationship between the students' university studies and their future careers, encouraging a commitment to lifelong learning which will be demonstrated by continuing professional development, in turn complemented by the CPD program run by the professional association, ALIA.

The future objective is that all the core units in the Graduate Diploma course will be reviewed to identify the extent to which generic capabilities are already embedded in the teaching and learning activities. The steps involved in this review process are discussed in the next section of the paper. It is hoped that the findings will facilitate the development of a cohesive whole-of-course approach to integrate the component skills into all units of the course so that students graduate with the full spectrum of attributes identified in the research literature as desirable for information professionals.

THE NEXT STEPS: WORK IN PROGRESS

Stage Two, the pilot study, will be evaluated through a reflective analysis by the researchers and by consultation with students through focus groups. The aims of the evaluation will be to determine the relevancy of the selected capabilities and component skills to the specific unit, to consider the effectiveness of the strategies used to embed them in the curriculum, and to assess the appropriateness of the assignment tasks to assess skill development. The challenges presented through the use of the SCP system in the curriculum for assignment delivery and reflective practice will also be examined.

A new phase of the pilot study will begin in semester two within the core unit ITN339 Professional Practice. This phase will build upon the results of the evaluation of the first phase of the pilot study. In ITN339 students are introduced to current industry issues and practices. Fieldwork placement is an essential element in this unit. Consequently, the skills of oral and written communication and teamwork are again of central importance. The curriculum and assessment tasks of the unit will be reviewed and modified to adapt the use of the SCP framework to the individual requirements of this unit.

Additionally a self-audit questionnaire will be developed to determine the level of students' skills and capabilities on entering the unit. The questionnaire will help students establish the current level of their skills within the framework of the generic capabilities. Each student will be able to identify his or her own perceived strengths and weaknesses and through this process it will be possible to determine the specific capabilities which require further development.

At the end of the academic year the entire project will be rigorously evaluated in order to fulfil the reporting requirements for the teaching and learning grant. This process will be supported by consultation with students and colleagues to consider the level of success of the project as a whole and whether the concept could be extended to other units of the LIS program. The value of the SCP as the technological framework to support the development of generic capabilities for information professionals will be a critical element of the evaluation.

CONCLUSION

The authors are involved in an exciting project which has already stimulated the interest and commitment of the students who have been involved in the research to date. The significance of the project has been recognised through the financial assistance of a QUT teaching and learning grant and the support of colleagues within the School of Information Systems.

The authors are aware that the success of the pilot project within the one academic unit is crucial if the concept of embedding generic capabilities into the curriculum is ultimately to be extended to the Graduate Diploma course as a whole. Indeed, a further goal for the Faculty of Information Technology is to consider the relevance of the project to its undergraduate courses, in line with the strategy to develop the generic attributes of its students, outlined in the Faculty Strategic Plan 2001-2004 (QUT, 2001b). Beyond the context of the University itself, it will be important to liaise with staff at the Australian Library and Information Association to consider ways of using the SCP system to help alumni to continue to monitor their personal and professional development throughout their careers.

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