INNOVATIVE SUPPORT FOR INSTRUCTION
IN INFORMATION AND LIBRARY STUDIES
AT QUEENSLAND UNIVERSITY OF TECHNOLOGY

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ABSTRACT

A description is provided of the variety of mechanisms for instructional support that are used in library and information studies programmes at Queensland University of Technology. These include the use of various facilities within the University's online teaching system. Along with assessment initiatives such as professional portfolios, integration within the teaching framework of a supplementary instruction scheme, and increased attention to generic capabilities, these have enhanced instructional support.

Keywords: Library science education; Information science education; Instructional support; Australia;

INTRODUCTION

Information and library studies courses at Queensland University of Technology (QUT) are taught in separate Faculties. This paper focuses on generalist courses that are taught at graduate and undergraduate level within the Faculty of Information Technology at Gardens Point campus (Queensland University of Technology, 2003a). There is also a teacher librarianship course that is delivered from the Education Faculty at Kelvin Grove campus at graduate diploma level and externally (Queensland University of Technology, 2003b).

Access to teaching and learning support, software, and links with professional associations, in particular the Australian Library and Information Association (ALIA), has made possible a number of innovative support programmes that enhance the delivery of course material and enrich student learning experience. These programmes are complemented by access to a wide range of resources within the Information Technology Faculty that augment the initiatives that we describe following. These initiatives are undertaken within the context of a philosophy that frames an approach to producing generic information professionals with flexible capabilities. Such graduates are then able to turn their hands to a variety of specialist environments.

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BACKGROUND

A graduate diploma course in library science commenced in 1975 within the School of Business Studies at what was then the Queensland Institute of Technology. When an Information Technology Faculty was formed in 1987 with Schools of Computing Science and Information Systems established within it, the library course and associated staff moved from the Business Studies School to the School of Information Systems. During the period of consolidation of tertiary educational institutions in Australia in the 1980s, as part of the so-called Dawkins' reforms, QIT was redesignated as Queensland University of Technology in 1989. It was amalgamated with campuses of the Brisbane College of Advanced Education to commence operations as QUT in 1990.

The Faculty adopted a number of initiatives during the 1990s that had impact upon library and information studies (LIS). These included restructuring of the diploma course to a Graduate Diploma in Library and Information Studies (GDLIS) that included provision for students to articulate into one of the Faculty's Master of Information Technology programmes. There was also the establishment of an information management major within the undergraduate Bachelor of Information Technology degree course. This included an avenue that provides a stream of LIS subjects. As was the case with the Graduate Diploma course, this degree course attained recognition from the Australian Library and Information Association. The information management major has since been discontinued, but the LIS stream has been retained within an information systems major.

EDUCATIONAL PHILOSOPHY

Courses offered from within an information technology faculty necessarily are influenced by the discipline and professional focus of that faculty. However, although the technology is certainly of great significance within LIS courses, they have continued to retain a generalist approach. This is reflected for example in the objectives of the current GDLIS programme which are couched in terms of both library and information resource management. The objectives seek to foster in graduates an understanding of the theoretical basis of their field and their role in it, and an ability to apply management principles that take into account societal, ethical and technological issues in their field.

Specific outcomes that are sought include knowledge of:
- major sources of information coupled with the skill to identify, select, assemble and disseminate information resources, in the fulfilment of users' information needs;

- the main factors which influence the dissemination and utilisation of information in society and of how information agencies fit into and affect that process;
- the concepts involved in planning and delivering information services to individuals and groups of users, together with the analytic, synthetic and evaluative skills required to enable the application of these concepts to the advantage of specific individuals and groups;
- the principles involved in organising information for access, and skills in applying those principles to meet users' information requirements.

To take the last mentioned of these principles as an example, this means that our approach to information organisation is to avoid confining it to tools and manuals that are used in libraries. While these are used as exemplary because of the amount of thought and development work that has been applied to them, they are contrasted with alternative approaches to classification, vocabulary control and metadata, which may be applied outside library environments.

With this type of approach, we hope to imbue in students that they are becoming information professionals whose subsequent employment may be in a library setting, or alternatively in other areas of information management using similar skills that may include research assistance, business analysis, environmental scanning, project management, information architecture, content management, knowledge provision or combinations of these.

In a relatively short course such as a graduate diploma, this leaves us open to criticism that in the struggle between convergence and differentiation there is dilution of material that is the essence of the profession.

Writers such as Rayward (1994) have noted the emergence of separate modern professions of librarianship, archives administration, records management and museology. In these cases he supposes that each has differentiated itself with a characteristically different form of organisational incorporation based on historically determined commitments to different technologies, media of communication and record, and primary client groups. However, our philosophy is more along the lines of attempting to identify the areas of convergence particularly where they have been promoted by digitisation that diminishes the distinction between document types and ways of organising them. We therefore hope to strengthen with additional skills and help to redefine, rather than dilute, the essence of an information profession. Here, the intermediation role continues to exist, is more challenging, and must be applicable in a great variety of environments.

The intermediation role is advanced by emphasising the need to acquire skills to identify and deal with user information needs. This is following the argument advanced by Rohde and Herther (1993, p. 231). They remark that different types of information professionals work together effectively in an information centre, despite different education and socialisation. However they consider that all could benefit from reconceptualisation of their education to encourage recognition of similarities in what they do. However, in our view this must be tempered by knowledge of the differences. For example, there is the necessary orientation towards problem solving in the education of programmers and analysts where user information needs are addressed more with respect to the tasks the information users perform, rather than the content of the sources that they require (Middleton, 1997).

Our view is that library skills and capabilities are part of a broader ambit of information skills that should be assimilated. This view is strengthened when we examine trying to provide for specific types of niche information environments. For example, in the context of the legal information environment, we have contended that students themselves bring a wide range of different experiences and talents to a graduate course, and they take with them a spectrum of new competencies, skills and interests. One argument for the broad scope, rather than a narrow area of specialisation, is that students can never know precisely what direction their future career might take. Initial interests may be modified or new interests may emerge as they are introduced to new topics and issues. There are many librarians serendipitously working in roles they never envisaged. The more general curriculum enables students to develop an understanding of standard principles that will offer them greater flexibility in their career (Middleton & Hallam, 2001).

ELEMENTS OF CURRENT PROGRAMME

Although students may proceed from the GDLIS to a Master of Information Technology, many exit with the basic recognised professional qualification seeking employment as soon as possible. Because the GDLIS is a course packed with material, the teaching team is constantly developing flexible ways that encourage students to embrace the range of material during their relatively short time in the course. We also try to motivate students to extend themselves by self-directed learning using the many options that are available to them

A number of strategies have been developed to allow the student to engage more directly with the curriculum. These strategies include the augmenting of classes by the application of the University's online teaching (OLT) system, considerable employment of practicing professionals as guest speakers,

supervisors of practice, and mentors, use of supplemental instruction termed Peer Assisted Study Scheme (PASS), design of course assessment to require students to develop professional portfolios, and the focus on strengthening of generic capabilities. We elaborate upon these below.

Online Teaching (OLT)

Most universities are utilising course delivery and management systems to some extent. Rather than use a commercial system, QUT has chosen to develop its own OLT system. This has been described in a case study by Goss, Cochrane and Hart (2002). Prior to OLT implementation, our Faculty had developed its own internal delivery system. When OLT was brought online, we migrated our teaching materials to it.

The OLT framework provides a mechanism through which course materials such as assessment guides, lecture notes and tutorial activities can be delivered. Additional online tools have been created within the LIS curriculum to complement this process and to support independent learning. For example, Edwards and Partridge (2002) have described the challenges faced and lessons learnt in incorporating the OLT within the teaching of an information resources subject. They also reported on the use of an complementary online tool developed by the Faculty, the Online Assignment System (OAS). The OAS, linked from the subject's OLT site, allowed the students to electronically submit assignments day or night, on campus or off. Based upon the experience within this unit it was concluded that online tools, such as the OLT and the OAS, are an invaluable component of the modern educator's toolkit in establishing a well rounded learning experience for the LIS student.

Various online tools have been developed more specifically for information management, including LIS students. An example is a self-paced module on how to evaluate Websites. This was created following a project conducted in conjunction with Griffith University and QUT libraries. The project involved the identification and evaluation of electronic and print resources. These resources were described within the framework of *UKOLN ROADS* (Resource Organisation And Discovery in Subject-based services) software. The resources were made available via the libraries' Websites as *Infoquest* subject guides (Middleton, Edwards & Collins, 1999). As an outcome of the project, an instrument was developed that consolidated the experience gained from the exercise along with material from established guides to Internet Website evaluation. This instrument, taking the form of a self-instructional site provides a categorised approach to Website evaluation that takes into account features such as functionality, organisation, accessibility, content, level and range (Middleton, 1999)

Another self-instructional package dealing with library statistics has reached a prototype stage following grant support. It now awaits further development.

Many of the subjects taught have also used the OLT site to act as a portal to key resources within respective LIS sub-fields. This allows students not only to have access to the cutting edge publications but to see a working example of best practice in information organisation.

A "virtual learning community" has been established through an OLT site dedicated to the GDLIS course. The site provides details on employment opportunities, upcoming events and functions, key LIS resources, details of prizes, scholarships and awards. The site also gives access to an online discussion forum through which students can communicate freely with others in the course regardless of time or distance. Students could contribute to the learning community by adding the details of any interesting or relevant materials found during the course of the semester via Student Recommendations Bulletin Boards.

Professional and peer support

The School makes considerable use of guest speakers from government and business, and sees this as essential complement to learning. Their involvement allows students to learn about and appreciate the real work implications of the theory being discussed in lectures and tutorials. The inclusion of guest speakers into the curriculum also allows the creation of ongoing channels of communication between LIS educators and industry the primary benefit of which is that both parties work together to ensure that the curriculum is current and relevant to industry needs.

This involvement is taken further within the Professional Practice subjects in the graduate and undergraduate programmes. Guest speakers are regularly involved in weekly colloquia, and a major part of the subject involves two three week placements for each student in different working environments. Students are able to choose these placements from a database of work experience possibilities that is maintained through the cooperation of many willing professionals.

The Peer Assisted Study Scheme (PASS) is a programme designed to give students an alternative way to engage with the material and to help overcome the isolation experienced by many new to the content area. It was introduced to QUT about ten years ago utilising the supplemental instruction model developed at the University of Missouri - Kansas City (Queensland University of Technology, 2003c) It was introduced by the Faculty for undergraduate students, but has found to be useful also for graduate students re-entering education after a significant break. The sessions offer a collaborative learning

experience in which the students are free to discuss assignments and the many concepts raised during the lectures and tutorials. PASS is not designed as a "formal teaching" session as evidenced by the use of a recent graduates or senior students, rather than a member of the teaching staff, to facilitate the sessions. PASS is a voluntary session and has been in effect each year since 2001. Linked to this desire to encourage students to establish a peer support network frequent social/professional events are held throughout the duration of the course.

Other initiatives have been introduced to provide professional experiences beyond the curriculum. With the aim of furthering the close relationship between the LIS graduates and industry a mentoring scheme was established in 2002 (Hallam and Gissing, 2003). The programme is one indication of the collaborative approach between the QUT and ALIA to prepare students for entry into the workforce. The significance of the programme has been recognised through the award of a QUT Faculty of Information Technology Teaching and Learning Grant 2002 and a 2002 Award for Innovation in Teaching. The mentoring programme offers a valuable opportunity for collaboration between the University and industry to align the student's learning environment with the professional context in which they will be employed.

The definition for mentoring adopted was that used by Faure (2000, p.3): "Mentoring is a supportive learning relationship between a caring individual who shares his/her knowledge, professional experience and insights with another individual who is ready and willing to benefit from this exchange to develop his or her skills, confidence and abilities and to enrich his or her professional journey."

The programme offers an additional avenue to further the aims of the Professional Practice subject, with a specific focus on generic capabilities and professional awareness extending beyond the discipline-specific knowledge of the classroom. The attention to communication skills, specifically oral communication, along with interpersonal relations and self-insight, are emphasised in the mentoring relationship.

From the programme, it is anticipated that students will also have the chance to develop the more complex attributes of critical thinking and problem solving as they are exposed to, and contemplate the various issues currently affecting the profession.

The importance of lifelong learning is seen as a major issue for new professionals entering the workforce, both for themselves and for others. The mentoring programme encapsulates the significance of continuing professional

development for both mentors and mentees (those who are being mentored) alike. Articulation of personal goals and the ability to develop a career plan are seen as an important step for the mentees.

Among the learning outcomes that we aspire to for the students is a deeper understanding of professional and ethical topics resulting from the ongoing dialogue with their mentor. In this respect, they have the opportunity to consider specific issues and the role played by management in a practical way in the working environment. Another outcome sought is the development of self-awareness as students recognise the role they can each play as active and engaged information professionals. As reflective practice is currently an integral aspect of the teaching and learning approaches in the Professional Practice unit, this is being further encouraged within the mentoring programme.

Students have been provided with a range of ideas to stimulate their interest in maintaining a professional journal to enable reflection on their learning experiences. Their enthusiasm has prompted several of the mentors to follow suit, adding an extra dimension to the mentors' own professional development.

Research arising from the project includes exploration of the concept of mutuality in the relationship between mentor and mentee, to consider the extent to which each of the parties benefits and grows through the interaction. Benefits for the mentor appear to include satisfaction about the ability to learn through the exchange of ideas; to network and introduce the mentee to a range of other information professionals; to develop a relationship with a new member of the profession; and to contribute to the broader objectives of the programme, and the interaction between the University and industry.

The Programme has therefore emerged as a kind of model, being an example of content and process coming together. The professional networking required to establish the programme reflects the nature of the programme itself - encouraging and developing professional networking. Students consequently become aware of the productive ties between members of the profession, and that beyond the professional interaction, real friendships can evolve, so that professional development is interwoven with personal self-development. Some have found that this situation mirrors and builds on what they themselves have already experienced through personal and academic interaction with their peers during the course.

Assessment

Although the traditional assessment of examinations and written assignments of various types is employed throughout the courses, students are able to complete a wide range of other assessment options. These include computer-administered

self-assessment, group case study work, the use of workbooks completed while on their professional practice, presentations directed at particular information use groups, and support for project and research work being undertaken within the Faculty.

We have found the use of portfolios to be a rewarding aspect of assessment. Elsewhere we have documented this approach in some detail (Bruce and Middleton, 1999), noting that two major goals of contemporary higher education come together: learning for entering the workplace and achieving the higher order learning outcomes associated with critical and reflective thinking.

The reflective character of the portfolios operates at a number of levels such as: in the selection of evidence of learning; in the development of current awareness and professional development strategies; in 'reflective writing', and in the preparation of a statement of self-assessment. In developing a reflective component to their portfolios, students are encouraged to consider focussing on their personal experience and thinking about: reactions to current issues; changing responses to and understanding of the profession; changing interpretations of coursework; and personal future directions.

As they progress through their final semester of studies, the portfolio empowers students by facilitating reflection on learning outcomes along with personal achievement and future plans; facilitating communication with employers, clarifying students thought processes for teachers and developing student-teacher collaboration; and conveying the importance of professional development, encouraging the design of strategies for this development, and introducing a professional development tool of ongoing value.

The portfolio is a highly personal piece of work, which naturally reflects the personality of each student. It provides the opportunity for students to begin planning their entry into the profession and to reflect upon their personal and professional goals and to put into place the foundations by which these goals can be met. The portfolio can be submitted either as a hard copy or an electronic document. It is anticipated that in the future, students will participate in a university pilot project to test the validity of electronic portfolios for subsequent graduate use.

Generic capabilities
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 from 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 it has been 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 (Gush, 1996).

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 becoming stronger advocates of the need for universities to offer courses that more adequately meet current industry and market place 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 a high level of personal and interpersonal skills.

In 1995 researchers posed the question: *transferable skills - can higher education deliver*? It was then investigated as part of a survey of the students and staff at Glasgow Caledonian University in which data were gathered on the views and experiences with regard to generic capabilities of both staff and students in five courses offered at the university. The researchers concluded that "there is no question in our minds that [generic] skills can be delivered". However the authors suggested that a "radical rethinking of course structuring and delivery is required if these skills are to be addressed seriously in higher education" (Kemp and Seagraves, p. 315).

Committed to ensuring that its students are not only discipline savvy but also skilled in generic capabilities the LIS educators have been engaged in a project aimed at identifying the personal skills required by the information professional. A QUT Small Teaching and Learning Grant funded the project. The project called upon the collaboration of both industry and LIS educators and the project's findings are guiding the curriculum renewal process to encompass both discipline knowledge and transferable skills. Teamwork skills, peer and self-assessment, oral and written communication and reflective practice are just some of the generic capabilities being embedded into the curriculum.

A web-based tool called the Student Capability Profile (SCP) has been explored as a potential vehicle for documenting individual students' personal

development and growth within the broad spectrum of workplace skills. The SCP package allows students to document and record for later access, experiences and activities they have undertaken that have helped them to develop as professionals. It allows 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 SCP personal profile for each student is expected to be a valuable 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.

A full account of the challenges and issues faced in using such a Web-based tool to document and develop generic capabilities is provided in an earlier publication (Hallam & Partridge, 2002). In short, generic capabilities are a vital part in the education of the modern day library and information professional and tools such as the SCP, whilst possessing both strengths and weaknesses, will continue to be explored.

CONCLUSION

LIS staff are involved in a range of stimulating projects that reflect the technology available for programme support, the links with the profession, and the need to produce adaptable graduates entering a broadly defined information profession.

These projects while already bearing fruit, are expected to see greater rewards with practicing professionals over the next decade. A significant issue for us at the graduate level, is how we can effectively pack the amount of material into an all-too-brief graduate diploma course. At present we provide a Masters Course as an extension to the programme. However, following course review, a Masters programme is likely to become the basic graduate programme seen as necessary for producing information professionals.

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