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**Beyond our expectations: a review of an independent learning module in  
descriptive cataloguing at the Queensland University of Technology**

**Beyond our expectations: a review of an independent learning module in  
descriptive cataloguing at the Queensland University of Technology**

Gillian Hallam

**Abstract**

This paper discusses an innovative approach to teaching cataloguing. At Queensland University of Technology (QUT), students enrolled in the Graduate Diploma of Library and Information Studies were involved in an independent learning activity which aimed to develop LIS students' foundation knowledge of descriptive cataloguing, while simultaneously encouraging students to think critically about broader issues that would inevitably impact on their role as information professionals. In the self-study program, learning activities included an interactive multimedia CD-ROM and a printed workbook with exercises, augmented by the opportunity for group discussion in weekly tutorials to enable students to share key aspects of their independent learning. Students were asked to critically evaluate the CD-ROM and the workbook and also to develop their own professional views about the arguments for and against the inclusion of cataloguing in the LIS curriculum. The paper presents the outcomes of this pilot project.

**Keywords**

Cataloging education, library education, library schools, teaching and learning

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## **Introduction**

Over the past ten to fifteen years, library schools across the world have been criticised for their lack of commitment to the development of cataloguing skills, with Hill accusing library schools of “abrogating their responsibility to educate catalogers and technical services managers” (Hill, 2002, p.249). One of the major arguments against including cataloguing as a subject in tertiary library and information studies (LIS) courses has been founded on the idea that, in major libraries, the work primarily involves the task of copy cataloguing, ie retrieving records from a supplier of bibliographic records and modifying these records for the local catalogue. This work is generally undertaken by paraprofessional staff. Also, online library management systems that integrate ordering, cataloguing, public display and circulation systems have further shifted the responsibilities between librarians and technicians. Some library schools have followed the treatise of supply and demand: “if there are fewer openings for catalogers, then by golly, fewer people needed to be trained in cataloguing” (Zyoff, 1996, p.48).

Many writers have been vocal in their claims that knowledge of the principles of cataloguing remains critical for library and information professionals (Gorman, 2002, 1995, 1992; Hill and Intner, 1999; El-Sherbin and Klim, 1997; Olson, 1997; Thomas, 1997; Zyoff, 1996). At the pragmatic level, Gorman (1995) stresses the fact that collaborative cataloguing systems, such as OCLC, RLIN, WLN or Kinetica in Australia, depend just as much on the contribution of bibliographic records by their members as on the sale of records. In a special library or information centre, LIS professionals regularly need to do their own original cataloguing, as they may not be in a position to download records from an external supplier, or, if the collection

includes a considerable amount of grey literature, the records themselves may not be available for the resources held. The ability to create good quality bibliographic records remains an imperative for the delivery of good quality information retrieval services. On a higher level, Gorman contends that the structures and thought patterns that need to be applied bibliographic control reflect “literally, the way in which we, as librarians, think and should think” (1992, p.694). Both Gorman and Zyroff highlight the interdependency of high quality reference and cataloguing skills: “the intellectual framework of reference is based on the intellectual framework of cataloguing” (Zyroff, 1996, p.48).

In response to the ongoing criticism about the reduced interest in library schools in running cataloguing courses, ie what is not happening, recent literature provides considerable discussion about the curriculum of cataloguing courses (eg Hsieh-Yee, 2002; Intner, 2002; Joudrey, 2002; Taylor and Joudrey, 2002; Turvey and Letarte, 2002; Vellucci, 2002), but comparatively little about effective teaching and learning strategies. Changes in the information environment, however, are prompting a number of educators to highlight their efforts to redefine the teaching of information organisation and to discuss some of their approaches (Cloete, Snyman and Cronjé, 2003; Koh, 2002; Hider, 2000; Hsieh-Yee, 2000).

Hill recognises some of the challenges faced by library schools today, indicating that “catalogers and cataloging managers must realize that a library school education is insufficient to everybody’s needs, not just catalogers” (2002, p.249). Snyman validly indicates that the time limitations in LIS courses make it “impossible to master anything more than the basic principles and activities of bibliographic control”,

meaning educators should endeavour to become more innovative in order to “teach students thinking and decision making skills and not merely tools and techniques”(2001, p.15). This paper discusses one example of an innovative approach to teaching cataloguing: a pilot project run at Queensland University of Technology (QUT) which aimed to develop LIS students’ foundation knowledge of descriptive cataloguing, while simultaneously encouraging students to think critically about broader issues that would inevitably impact on their role as information professionals. The paper briefly outlines the professional context of LIS education in Australia and an overview of the academic context of the Graduate Diploma of Library and Information Studies (GDLIS) at QUT before reviewing the teaching and learning project.

### **Professional context**

In Australia, education for the library and information profession is viewed as the collaborative effort of the universities and colleges, training providers, employers and the professional association, with emphasis placed on the need to remain responsive to change through career-long continuing professional development. The standards for education for the library and information profession are maintained by the Australian Library & Information Association (ALIA) through their course recognition process for entry level courses. Entry level courses are offered at both the undergraduate and postgraduate levels.

ALIA states that “entry level courses should provide an examination and analysis of all core knowledge areas and, within this context, develop generic knowledge, skills and attitudes” (ALIA, 2003a). In terms of defining ‘core knowledge areas’, reference

is made to providing “library and information services by analysing, evaluating, organising and synthesising information to meet client needs” (ALIA, 2003b). Courses should also “contribute to the development of students’ critical, analytical and creative thinking” (ALIA, 2000). ALIA’s policy document *The Library and information sector: core knowledge, skills and attributes* (2003c) is presented as a guiding statement to provide a foundation for the development of policies on the knowledge and skills required by library and information professionals. The document consequently delineates the high level principles, acknowledging that the specific level of skills and knowledge will depend on the formal qualifications, work experience, professional development and the role individual library and information professionals perform.

### **Academic context**

The course offered by the Faculty of Information Technology at QUT is a Graduate Diploma of Library and Information Studies (GDLIS), one year full-time or two years part-time program, comprising eight units of study, with seven core units and one elective. The course is only offered in the face-to-face mode. In 2003, the core units covered the areas of reference and information work, collection and access management, information organisation, library management, principles of information management and systems analysis and design. The capstone unit is *Professional Practice*, which provides students with the opportunity to consider topical issues impacting on the LIS profession and to undertake two fifteen day fieldwork placements.

The core unit *Information Organisation* is a one semester (13 week) unit, with 3 contact hours per week (1 hour lecture, 2 hours computer laboratory/tutorial). In Semester 1, 2003, there were 45 students enrolled in the unit. Only three students had any prior experience of cataloguing. The unit outline presents the learning objectives which cover the desired learning outcomes in terms of theory, practice and generic capabilities. Upon completion of the unit, students should demonstrate theoretical knowledge of the nature of information; the principles of bibliographic database construction, including basic strategies of information organisation: description, indexing and classification; the major forms of bibliographic databases, including library catalogues, indexing and abstracting services and fulltext resources; the importance of a client-oriented approach to knowledge organisation. Practical skills should include the ability to construct a bibliographic database using appropriate software; critically evaluate bibliographic databases; ensure that bibliographic records conform to standards in relation to description, indexing and classification; independently identify and research contemporary issues in the organisation of knowledge. Generic attributes to be developed include information literacy competencies; critical, reflective and creative thinking and evaluation; a high level of proficiency in written communication; and working productively both independently and in a team environment.

Strategies for teaching and learning in this unit reflect the view that the appropriate design of assessment is crucial for effective learning. Bowden and Marton believe that a holistic, or “integrative” approach to assessment (1998, p.162) can drive the teaching and learning process. There needs to be clear articulation of teaching and learning objectives, not only at the individual unit level, but also in terms of the

relationship between the unit objectives and the overall course objectives. The correlation between assessment and student learning outcomes is therefore critical. Ramsden discusses the importance of “more developed models of assessment” (1992, p.186). Simple models of assessment can be regarded “as an addition to teaching, rather than an essential part of it “(p.183), that is “something done *to* students” (p.183), which inevitably results in a surface approach to learning. On the other hand, “assessment which is the servant rather than the master of the educational process will necessarily be viewed as an integral part of teaching and the practice of improving teaching” (p.186), resulting in deeper learning outcomes.

As technological, social and economic changes rapidly modify modern day library and information work, LIS educators need to consider how best to assess the ability and knowledge of future information professionals – even when the future itself is still being defined. The design and development of the assessment tasks in the GDLIS at QUT are focused by the question: “How can we assess students in a way that addresses their capacity to handle situations in the future that they have not previously encountered?” (Bowden & Marton, 1998, p.167). Teachers are advised to “assess the capabilities which... have been shown... to be central to dealing with the unknown future, viz. discernment and simultaneity” (p.167), so that the “assessment tasks [students] are faced with must require them to discern what is relevant and deal with the situation accordingly” (p.167). The ability to distil the critical aspects of any given situation is a vital factor to help students learn to deal with the uncertainty of future events.

Reflective practice has an important role to play in the students' own active process of learning to learn, enabling them to establish the links or connections between their prior experience, their personal lives and their coursework. Herman discusses the meaning of "good assessment", drawing on the findings of cognitive research which indicate that "meaningful learning is reflective, constructive and self-regulated" (1992, p.75). He goes on to state that "to know something is not just to have received information but to have interpreted it and related it to other knowledge one already has" (1992, p.75).

Over the past few years, the assessment activities in the unit had concentrated on the analysis of bibliographic databases as an individual task, and the construction of a database using DB/TextWorks undertaken as a group assignment. In constructing their database, comprising 50 records describing a range of items in different media, students were expected to make decisions about whether they would apply or reject specific bibliographic standards, eg the use of AACR2 in the record structure, authority control for authors, subjects etc. Topics such as AACR2, Dewey Classification, Library of Congress Classification, Library of Congress Subject Headings were all touched upon in class, but there was little opportunity to develop a strong practical understanding of these bibliographic tools.

Needless to say, the major criticism of QUT students by industry practitioners when they went to complete the practicum component of the course was the lack of sound knowledge of the principles and practice of cataloguing. A number of students also returned from fieldwork having engaged in discussions about the 'death of cataloguing skills' and were eager to know more about the detail of bibliographic

description “even if they had to do it on their own”. As a response to this student and industry feedback, teaching staff believed that, as a pilot in Semester 1, 2003, there was scope to shift the emphasis in the learning activities to incorporate an independent learning module that would offer the opportunity for students to develop more practical skills in cataloguing.

### **Pilot project**

Clack (1993) stresses the need for cataloguing teachers to be innovative in their teaching strategies and methodologies to support active learning strategies, with a “mix” of pedagogical approaches to foster student involvement in their learning (Romero, 1995, p.7; Koh, 2002, p.263). The QUT pilot project endeavoured to be innovative, utilising a range of different approaches and media for the teaching and learning activities. Independent learning was balanced by group discussion and the main resources were a printed workbook and a CD-ROM training program, supported by reflective practice and collaborative learning. The CD-ROM tool was an example of “a training resource that included interactive instruction with the utilisation of multimedia... to provide a meaningful learning experience” (Cloete, Snyman and Cronjé, 2003).

The learning objectives for this new activity were outlined to students:

- To develop a general understanding of the principles of cataloguing
- To be able to apply the rules of AACR2 to create library catalogue records
- To understand the issues associated with subject indexing and classification
- To develop skills in working independently

- To feel confident about reflecting on your learning
- To become aware of the process of learning to learn.

Hill has indicated that “the most practical skill of all for both catalogers and those who manage cataloging operations is knowing how to learn” (2002, p.258). The last two learning objectives also relate to one of the course-wide objectives for the GDLIS, which encourages the development of skills in critical evaluation of a wide range of information and instructional resources, supporting ALIA’s desire to see LIS professionals develop skills in “critical, analytical and creative thinking”. In addition, LIS education in Australia has seen a growing focus on the importance of information literacy skills in the community, and on the role of library and information professionals to support the development of develop of these skills amongst their clients. In Australia, there is a push for knowledge and skills in the area of information literacy and cognitive processes to be included as a core subject in LIS courses.

At the beginning of the semester, students were invited to begin to think about some of the differing views in the profession about the curriculum of library courses. They were made aware of arguments for and against the inclusion of cataloguing in a LIS program and they were advised that one of the primary goals of the learning activity was to help them, as individuals, develop their own professional views about this issue. The experimental nature of the project was highlighted, encouraging students to contribute to and provide evaluative comment on curriculum issues and approaches to teaching and learning in a professional course. Not unsurprisingly, there was a mixed response from the students about this initiative. Some students had their own

assumptions about university education and expected there to be a given body of knowledge to be learned, with tried and true 'traditional' pedagogical strategies in place. Other students were excited at being participants in an action research project.

For their independent learning activity, students were introduced to Mary Mortimer's text *Learn descriptive cataloguing*, which aims to "cover the skills necessary for a cataloguer in a library or other information agency, at a professional or paraprofessional level" (Mortimer, 2002, p.6). This text has been designed "for use on its own, in a formal course of study, or in conjunction with the interactive multimedia training package *CatSkill*" (p.6). The flexibility offered by the workbook, plus the Australian focus of the exercises, made it a valuable resource to use in the learning activities. The use of MARC coding for bibliographic description and headings is optional for users of the workbook.

Originally it was hoped that the students would be able to pilot the web version of *CatSkill*, but due to developmental problems with the online format of the resource, these plans were thwarted. Students could only use the CD-ROM version of the multimedia instructional tool, which could be accessed either in the networked Faculty computer laboratories or loaded for direct access on their home computers. *CatSkill* is described as a self-paced interactive learning tool which enables students to work at their own pace through a series of modules, culminating in a test to monitor progress. The program provides a certificate of successful completion when all tests have been passed.

Students were provided with a range of resources to support them in their independent learning: copies of AACR2 were available to students in both hardcopy and electronic formats (via a subscription to *Cataloger's Desktop*). Scanned copies (pdf files) of key chapters of AACR2 could be accessed through the university's electronic document distribution service, the Course Materials Database (CMD). Students could print out these chapters, download the files onto their computers or copy them to CD-ROM. Additional readings were made available via the university's online teaching and learning environment (OLT).

Students were given a recommended schedule of activities for the semester to help them schedule their progress through both the workbook and *CatSkill* which would hopefully encourage them stay on track with the learning activities. The weekly self-study topics were aligned to the theoretical content presented in the lectures. While the program was to be undertaken primarily in a self-study mode, a group learning dimension was planned by allocating time in the tutorials to discuss what students had covered during the week, what issues arose for them and how they went about resolving any problems. An electronic discussion forum was also available on the OLT. These strategies meant that students could contribute to a collaborative learning environment.

One of the major issues to consider was how to best assess the independent learning activity. The *CatSkill* exercises had to be completed correctly before the student could move on to the next module, and the workbook provided model answers, so the teaching staff decided there would be little value in asking students to submit the actual exercises for marking. Nevertheless, it was felt that some aspect of assessment

should be factored into the program, if only to motivate students to complete the course of study. In the past the teaching staff had been altruistic and encouraged students to undertake certain learning tasks without any formal assessment attached to them. All too often, however, the result was zero motivation and, consequently, zero learning. Sadly there had to be some method of assessment if students were to fulfil the desired learning tasks.

It was decided that students would be asked to maintain a learning journal. Learning journals are used in a number of disciplines, eg education, psychology and law, to support the development of critical thinking skills, to deepen the understanding of the learning process and to facilitate reflective practice (Ballantyne and Packer, 1995; Bain et al, 1997; Moon, 1999). The learning framework of constructivism argues that human learning is not achieved through the passive transmission of information from teacher to learner, but through building new knowledge upon the foundation of previous knowledge, thus students *construct their learning*. Reflective practice is used in the GDLIS to support the concepts of adult learning and to encourage students, as adult learners, to take control of and responsibility for their own learning.

In *Information Organisation*, the learning journal was introduced to help students become aware of the ways they learn and the ways in which they acquire new skills and knowledge as information professionals. One of the primary goals of the learning journal was to encourage students to achieve deep, rather than surface learning outcomes by starting to think about their thinking and to learn about their learning. Personal learning styles were also the topic of discussion in another unit coordinated by the same teaching staff.

Critical reflection has been described as those intellectual and affective activities in which individuals engage to explore their experiences in order to lead to new understandings and appreciations (Boud, Keogh and Walker, 1985, p.18). Boud (2001), drawing on the ideas of Moon (1999), highlights some of the key purposes of learning journals:

- To deepen the quality of learning, in the form of critical thinking or developing a questioning attitude
- To enable learners to understand their own learning process
- To increase active involvement in learning and personal ownership of learning
- To enhance creativity by making better use of intuitive understanding
- To foster reflective practice and creative interaction within a group.

It was acknowledged that there would be variations in terms of student response to the task of reflective practice. For some, it would be the first time they had engaged in the process of critical reflection or indeed thought about their own personal learning styles. Others would feel more comfortable about the activity. The overall expectations were therefore discussed by the class: students should aim to complete the independent learning module and they should highlight the approaches they had taken, eg Was it necessary to go beyond *Catskills* and the *Learn descriptive cataloguing* workbook? Did they utilise other resources to broaden and deepen their understanding? Did they relate the exercises to the recommended reading, or vice versa? Did they work collaboratively with other students?

As part of the learning activity, students were asked to critique the key resources, *Catskills* and the *Learn descriptive cataloguing*, as two educational tools which had been developed specifically for tertiary students in an LIS program. Students were asked to consider how effective these resources were for them personally, the respective strengths and weaknesses of each resource and the extent to which they supported their learning. They were invited to evaluate how well the two resources worked as complementary learning tools and to provide any other constructive criticism. As noted, teaching staff wanted to increase the students' awareness of the critical role of information literacy skills in the LIS context and to develop their professional ability to critique learning tools. They were also asked to consider their own personal learning outcomes, in terms of both the technical skills of cataloguing skills and the skills of reflective practice.

Beyond this, students were encouraged to think about the value of learning about cataloguing within the field of information organisation and about the development of cataloguing skills in general – whether they believed that these skills fitted into the domain of professional or paraprofessional work and whether they should be included as a core skill in an entry-level course or as a specialist skill which could be learnt after university, either through an employer program or through a professional CPD program.

The teaching staff had anticipated that the students' learning of the more technical tasks of understanding bibliographic description and the application of AACR2 to be the primary learning outcomes, so the richness of the reflections in the students' learning journals came as a surprise. The reflections have provided valuable

qualitative data about the pilot project and the perceived learning outcomes. A large number of students agreed to the anonymous inclusion of their comments, views and ideas in this article to present a critical review of the multi-faceted dimensions of the independent learning activity. These students are acknowledged for their openness and their willingness to participate in the dissemination of the preliminary findings from the pilot project.

### **Student learning outcomes**

The learning journals were submitted at the end of the semester. There were a number of immediate learning outcomes that were common to students:

- Recognition of the importance of bibliographic standards and conventions
- Clear understanding of the three aspects of cataloguing: description, subject indexing and classification
- Identification of the different parts of the bibliographic record (heading, description, tracing notes)
- Basic familiarity with the structure and content of AACR2, as well as the some of the strengths and weaknesses of these
- Awareness of the significance of authority control
- Realisation that effective information organisation is essential for effective information retrieval.

This last point, perhaps facilitated by the fact that the teaching staff coordinated both the *Information Organisation* and the *Information Sources* (reference) units, should help allay Gorman's concerns about the rift between cataloguers and reference

librarians and support the need for “mutual respect and mutual recognition of interdependence” (1995). Interestingly, recent discussions on bibliographic instruction reflect the dovetailing of information organisation and information retrieval courses in the curriculum (Madsen, 2001, McIlwaine, 2001).

As there were 45 students enrolled in the unit, with no prescriptive approach to the learning activities, it was not surprising that students developed a range of strategies, which could be primarily *CatSkill*, supported by the workbook, or primarily the workbook, supported by *CatSkill*. Some students found, however, that there was a high degree of overlap between the print and the electronic tools, so after a couple weeks decided to focus on one or other of the resources as “the option I found more enjoyable”. The ability to attain a certificate at the completion of the *CatSkill* program was considered to be a benefit to many students, as they saw this as a useful way to document their skills, above and beyond the generic statement of academic achievement for the unit as whole.

The software program *CatSkill* attracted high praise from most of the students. It was regarded as “dynamic and interesting in its presentation of ideas”, providing an enjoyable teaching framework as, “given the number of rules and complexities of AACR2 and cataloguing in general, there is potential for such a topic to be tedious and difficult to learn”. The *CatSkill* graphics were “brilliant, particularly for a visual learner like myself. The incorporation of the ‘cataloguer’s workroom’ was likewise brilliant. It simulated closely a real scenario and made the activity therefore seem less a contrived exercise.” Students felt that each module covered the topic thoroughly,

including additional elements such as MARC codes and links to a glossary for an “extensive explanation of terms”.

One criticism of the tool related to progression through the different modules. There were limited options to move forwards and backwards through the modules, for example to locate a specific fact that had been read at an earlier date. “The only way to find the information again was to start at the beginning of the module in question, and work through the module as though reading it for the first time. This was found to be frustrating when a quick review of the information was desired.”

Some students found the ‘exactness’ of *CatSkill* frustrating. One student referred to it as a ‘self-assessment tool,’ rather than a ‘self-instruction tool’. It was found that the end of chapter tests often did not allow the student, after making one mistake in the answer, to submit a fully correct answer, even though all aspects of their subsequent responses completely matched the responses required by the program. The exactness of the requirements for punctuation and spacing was highlighted as particularly challenging in the tests, as with just one error, the student failed the test. Students indicated that they had to go back and review the material in the module, then reattempt the test. Having to repeat the test three or four times because of one minor mistake each time was demotivating for students. On the other hand, some felt that “a lot more is remembered through these repetitive practical exercises rather than just answering questions in a workbook. The actual learning is enforced through the computer package which is trying to replace the teacher somehow and forces the user into more reading and more research”.

Although *Learning descriptive cataloguing* states that the workbook has been designed for use on its own, there was a feeling that it was superficial in the way it covered the theory. The explanation of terms and the instructions provided in the workbook were not felt to be clear enough. A good proportion of students drew on the recommended readings to develop a deeper understanding of some of the problems they encountered. One student suggested that the workbook specifically should have a section at the end of each chapter with references for further reading.

Some students criticised *CatSkill* for the way in which it failed to provide authentic experience in the practice of descriptive cataloguing, as students were generally asked to complete a section of a description already provided, or to identify fields within completed catalogue records, rather than creating a bibliographic record from scratch. The workbook answers, on the other hand, “took longer to complete and, therefore, longer to think about the answers; I found that this helped the information to stay in my head, and therefore made the information more familiar and easier to review at a later date”. Another student noted “I found that doing a complete record from the ground up is easier than doing bits and pieces”. This meant there was a preference amongst these students for “the more traditional nature of a written resource and the convenience of being able to refer to the book at any time or place” and to make written annotations in the workbook.

However, the workbook was found by other students to be “dry and boring”, although some indicated that it was “written in simple language and laid out clearly”. Some perceptive students found that “while *CatSkill* was very appealing at the beginning of the semester (seeming much more entertaining than a seemingly ‘dry’ workbook),

when I actually began working with both tools, I much preferred the workbook, as I felt it closely mirrored a real cataloguing situation”.

It was found that modules in *CatSkill* and chapters in the workbook did not correlate as closely as had been initially hoped, which meant that some students elected to concentrate on just one of the two tools. Others were happy with the way in which learning was consolidated if they used both tools, with additional dimensions provided by the lectures and tutorials: “I prefer this method of learning: print the lecture notes and skim through them, attend lecture, attend tutorial, do workbook and then do *CatSkill*. I found the constant reiteration over the week helped me remember the ideas and the information”. There were some who took a more strategic approach “due to time limitations” and used primarily the one resource, eg the workbook, and then used *CatSkill* to complete only the non-repeat chapters. Others found it easier to use *CatSkill* “to learn the unfamiliar cataloguing material” and then to practice and apply the knowledge using the workbook.

The teaching staff believe that having the choice of the workbook and *CatSkills* as key learning tools enabled students to develop a more critical perspective on their own learning. The positive and negative attributes of each resource were highlighted through their ability to appraise their experiences with each and to therefore avoid a sense of complacency that could accompany accepting a single learning tool at face value. One student noted, however, that he felt this metacognitive awareness was distracting: “I was focused upon aspects of the teaching tools and methods, rather than the subject content, techniques and processes that I was trying to incorporate into my personal state of knowledge”.

The exercises in both the workbook and *CatSkill* encouraged students to refer to AACR2, so they had the opportunity to become familiar with the structure and the content of the relevant chapters. Students who used *Cataloger's Desktop* online appreciated the way they could easily locate specific AACR2 rules. Some students found they could complete the *CatSkill* exercises, without actually using AACR2 at all, acknowledging, however, that this was “an approach which seems limited in utility”. Nevertheless, students indicated that “it was often difficult to know how to do the exercise. Therefore I would cheat and look at the answers in the back of the book” (although it took some students a couple of weeks to discover there were answers at the back of the book!) Some acknowledged that the ability to deconstruct a ‘correct’ answer and to relate the individual steps back to the individual rules in AACR2 could be a useful approach to learning.

Mortimer points out that users of the text *Learn descriptive cataloguing* “may not always agree completely with the answers given... Despite the best endeavours of the creators of cataloguing rules to standardise all cataloguing procedures, there is often room for more than one approach or application of the rule” (Mortimer, 2002, p.6). One student highlights her own emerging realisation about these issues: “What one has to realise in cataloguing, is that there is often an absence of a ‘black or white’ rationale behind rules and sometimes there is the presence of a ‘grey area’, which requires the cataloguer to make decisions that will result in the best application of a rule so as to suit the particular users of the library. The cataloguer has a lot of complex decisions to make regarding cataloguing options... and has to be able to think laterally”.

The more enterprising students examined sample catalogue records from different sources, such as the National Bibliographic Database available via the Kinetica service, university library OPACs or public library catalogues. This comparative approach was found to be very valuable in highlighting the differences (and often inaccuracies) in catalogue records and in fact increased the students' own confidence in their abilities as cataloguers as they realised there was no one absolute and perfect solution.

Some students felt restricted in aspects of their learning as, although relatively up to date (publication dates 2002), neither the workbook nor *CatSkills* adequately addressed more current issues like the problem of electronic resources: "I think this is the future direction of cataloguing, and there is a definite need for cataloguers to be more innovative and open in their methodologies, particularly in the electronic environment where the distinction between surrogate records and the documents themselves blurs".

Beyond developing some basic skills and initial confidence in cataloguing, most students appreciated the opportunity to engage in reflective practice. The learning journal was acknowledged to be a positive and useful tool – "surprisingly useful" – even if the assessment angle meant that "being 'forced' to keep a journal was the best way to ensure that I would actually diligently do so". Some students found that initially the suggested format of reflecting before, during and after their work on the learning activities to be beneficial in terms of becoming aware of the way they were constructing new knowledge. "I felt that keeping a personalised learning log helped

me to make the learning deeper by having to think and re-think throughout the whole learning process. It was not a matter of ‘ticking off the modules’; it was a case of questioning the prior knowledge I had, identifying questions I wanted addressed and modifying all of this as I progressed”. Concept maps were found to be valuable as a graphical interpretation of their understanding: “I have attempted to draw the interrelated library system to show the connection between major areas. When I was drawing it, I realised how linked everything was and that I couldn’t truly show all the links on one piece of paper”. Yet, as the semester, and their learning, progressed, further dimensions were added to the concept maps.

Collaboration with other students also helped the reflective process, providing different perspectives on individual learning: “Discussing the program with my peers assisted me to understand the material contained in the self-study program. It was useful to listen to the opinions and ideas of other people, particularly in relation to difficult or confusing material.” This learning was especially powerful when aligned with the group work they were doing to construct their own bibliographic database using DB/TextWorks: “The process of cataloguing our own records stimulated discussion of AACR2 rules, as well as their relevance and use”. While the journal was primarily focussed on the independent learning activities, some students found that when lecture material was directly related to topics in the module, it was valuable to add notes in at the relevant place in the journal: “This combined reflection with content, and provided an easy way to view the content on which I wished to reflect”, thus becoming useful in both “an operational and reflective sense”.

The value of reflective practice extended beyond the immediate learning context of *Information Organisation*, flowing into the personal and work domains, as highlighted by one student: “I found that the experience highlighted some factors about which I was not previously aware, such as personality traits and weaknesses in my approach to certain situations and types of work task. It was a learning experience for me in multiple ways.” Another was exuberant: “Wow! This is really helpful (reflection, I mean). It really helps getting all the random ideas from my head into some sort of structure so I can understand the overall meaning of something and see its application to the bigger picture.”

One significant outcome from the learning activities was the stimulus to think about the “emphasis that should be placed on cataloguing skills in a postgraduate professional librarianship course”. Students responded positively to Gorman’s views that cataloguing skills are at the “heart of librarianship” (1995), and Thomas’ claim that cataloguing should indeed be regarded as the “cornerstone of the librarian’s craft (Thomas, 1997). They felt that graduates “absolutely do need quite a good knowledge of these skills”.

While students understood from their wider reading and discussions with industry professionals that not many librarians do original cataloguing any more, and that the ‘divisionalisation’ of library activities had led to reduced integration between cataloguers and non-cataloguing staff (Thomas, 1997), some of them were fearful of a library world with no cataloguing skills: the “loss of professionals with cataloguing skills would represent a serious deficiency in the discipline of librarianship and information management”. They therefore appreciated the “need for cataloguing

skills in at least a selection of the collective library staff's population". Some went further to query whether a librarian should "know (how to catalogue) just in case or learn it just in time". Students felt the learning activities had been successful in becoming familiar with the process, as opposed to developing a detailed skill set, something that they could potentially build on through their practicum. Beyond this, however, one student believed that "professionals need an historical understanding of how and why things developed and changed and how technological advances have and will continue to impact" and that her work in the independent learning module had helped her to explore this perspective in more detail.

There was a general feeling that it was important for "the basics of cataloguing to be taught at the tertiary level, to provide students of librarianship with a fundamental understanding on which they can build through future courses and practical experience". They noted that limited role of cataloguing activities in libraries and information agencies meant that there was little scope to teach advanced cataloguing skills in an entry-level course. Students suggested that "these would be better and more meaningfully learnt through workplace instruction, or through professional development courses. One student recommended that the latter option, suggesting that "if run through the national association, it would hopefully provide a more consistent skill level than workplace training alone".

Students were aware of the "dangerous baloney" (Gorman, 1995) inherent in the idea that computerisation could, in itself, solve bibliographic questions, commenting that: "While a computer program can achieve routine, automated tasks with supreme efficiency, it cannot inject the essential thought processes needed to design a system

that serves all intended users. It takes human intellect to produce a human, workable, appealing system. It also takes that intellect to modify the systems when necessary, and improve on them as new understanding comes to light. Information management should be a dynamic field, and the specific area of cataloguing is no exception.”

Quality and consistency were seen to be key issues in information organisation.

Some students found that one major aspect of their learning focused not on cataloguing skills per se, but on the broader professional and philosophical issues: “I must say now, that even though I was sceptical of the learning journal at the onset, I have enjoyed the moments of reflection. Not only have I developed the technical aspects of cataloguing such as a good knowledge of AACR2 and MARC, but I have also developed a broader ‘big picture’ perspective of the issues and concerns that surround cataloguing”. One student expanded on this: “In constructivist terms, I was making more and more connections with all the concepts, the more I reflected on and explored my questions and feelings about the subject matter. For example, I found the whole issue of whether cataloguing should be taught at all in professional level courses, led me not only to explore the broader issues of the professional/paraprofessional debate, but the very values upon which librarianship is based.”

## **Conclusion**

The student reflections which were presented in the learning journals indicated their satisfaction with both the content and the pedagogic approach of the independent learning activities. Teaching staff felt it would be important to broaden the stated

learning objectives to include the “big picture” perspectives of the issues associated with cataloguing, both in Australia and internationally, to capture the valid views and responses of students, and to encourage further critical, analytical and creative thinking. It was felt that the activities should be augmented to include a greater emphasis on cataloguing electronic resources and other non-print media, which were not covered in either *Learning descriptive cataloguing* or *CatSkill*.

Improvements to the unit could also ensure more effective consolidation between the formal and informal learning activities, for example by allocating more tutorial time to discuss the independent study activities: “My recommendation is to insist that the first hour of the tutorials cover these exercises only and that answers are discussed as part of the tutorial process. This structure would enhance student learning outcomes in this area.” One student was more ambitious about the potential: “Ideally it would be fantastic if QUT could develop an online version that could be done over the OLT (online teaching site), customised for the Australian context and customised for the QUT course; perhaps even integrated into the SCP (tool to monitor the development of generic capabilities). If there was enough time and money, it could almost happen...”

Students felt they had achieved a great deal during the semester: “I feel pleased with my learning progress in both the field of cataloguing and the skill of reflective practice.” One student noted, however, that while he was aware that he “had developed so many skills” and was “incredibly appreciative” of what he had learnt, he didn’t think he really enjoyed the process. He found it beneficial, however, to see how these learning activities invited him to think more deeply about how people do

learn, and consequently to consider the challenges of developing interesting and challenging teaching and learning activities that are 'enjoyable'. Another student found the project rewarding: "By way of a conclusion to the reflection, I will say that I have enjoyed this independent learning program, and have gained a great deal of satisfaction from it... I have enjoyed being able to direct my own learning to a degree, and I have also enjoyed the content, as cataloguing and classification are areas I am enthusiastic about".

In conclusion, it was found that the independent learning module was successful in developing a "strong functional knowledge" of cataloguing. It was positive to learn that students viewed their time not as 'spent on' but 'invested in' the learning activities and that consequently the groundwork had been laid for further learning through continuing professional development. "The module revealed the basics of cataloguing, classification and subject indexing, but also served to show how much is left to read, process and discover!"

The outcomes from pilot project extend beyond the original expectations of both the students and the teaching staff. While the immediate objectives were to help students develop an understanding of the principles of cataloguing, through reflective practice the students have been able to relate their learning in this one unit to their learning in other units, to their learning in other disciplines, and to their values and ethos. They have begun to understand their own learning styles and how different approaches to teaching and learning can influence personal learning outcomes. The positive multidimensional outcomes from this one innovative activity clearly indicate that

learning about descriptive cataloging is highly relevant for future information professionals.

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