

Bedding down the embedding IL reality in a teacher education programme

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Embedding Information Literacy at QUT

Queensland University of Technology (QUT) is one of Australia's largest universities, enrolling 30,000 students. Our *Information Literacy Framework and Syllabus* was endorsed as university policy in Feb 2001. QUT Library uses the *Australian Information Literacy Standards* as the basis and entry point for our syllabus. The university wide information literacy programme promotes critical thinking and equips individuals for lifelong learning (Peacock, 2002a). Information literacy has developed as a premium agenda within the university community; as documented by Judith Peacock, the university's Information Literacy Coordinator (Peacock, 2002b).

The Faculties at QUT have for the last few years, started to work through how the information literacy syllabus will be enacted in their curricula, and within the orientations of their subject areas. Attitudinal change is happening alongside a realisation that discipline content must be taught within a broader framework. Curricula and pedagogical reforms are a characteristic of the teaching environment. Phrases such as *lifelong learning*, *generic skills*, *information revolution*, *learning outcomes* and *information literacy standards* are now commonplace in faculty discussion. Liaison librarians are strategically placed to see the “big picture” of curricula across large scale faculties in a large scale university. We work with faculty in collaborative and consultative partnerships, in order to implement reform.

QUT Librarians offer three levels of information literacy curriculum to the university. The generic programme is characterised by free classes, offered around the start of semesters. The next level is integrated teaching, developed to answer a specific needs for classes of students. The third level of information literacy is that of embedding throughout a programme. This involves liaison librarians working to ensure that information literacy is a developmental and assessed part of the curriculum, sequenced through a programme in a similar way to traditional discipline knowledge, and utilising the IL syllabus. This paper gives a glimpse of what is happening as we attempt the process of embedding information literacy into the Bachelor of Education programme.

A reconceptualised Bachelor of Education

The Faculty of Education at QUT comprises around 5000 students and 400 staff. It is recognised as the largest teacher education faculty in Australia. The Faculty provides a wide range of programmes referred to as courses, which are delivered in series of semester long units. The Bachelor of Education is in fact a series of nine interrelated courses, including undergraduate programmes for all sectors from early childhood students through to adult education. The programme also provides graduate pre-service programmes. The student cohort includes up to 1500 students who participate in a range of units. The programme collates into a total offering of some 151 semester long units.

In 2000, the Faculty was required to reconceptualise this huge course within a cost neutral framework. Organisations in other countries have been able to attract central

government grants for similar projects (Hall, 2002, p. 149), but funding of this sort was not available. The Faculty did however, commit \$70 000 to strategic initiatives related to the redesign; and a faculty Team has been successful in 2002 and 2003 in winning two University funded Teaching and Learning Grants that support the process of design and implementation.

The reconceptualisation of the existing Bachelor of Education course has been completed over a three-year period. The process began in 2000 when a team including Faculty staff and professional colleagues engaged in the writing of the Teacher Practitioner Attributes. This team consulted very widely internationally and nationally in designing the framework of attributes around which the course is structured.

Concurrently in 2000, the Faculty funded a team to interrogate the appropriate international and national literature in the field of teacher education and education across the domains of Early Childhood, Primary Secondary and Adult and Workplace Education. Further, a large empirical data base was built from a series of focus group interviews, surveys and semi-structured interviews with key stakeholders including practising professional teachers and trainers, unions, professional associations, employing authorities, current and past students.

During 2001 the Faculty supported the establishment of a representative Working Party to design the curriculum platform for the reconceptualised course. Once again this process consolidated consultations with key stakeholders. This process generated a statement of vision, a set of principles and standards for course design and implementation, the mapping of the Teacher Practitioner Attributes onto the course and a framework for moving the design forward.

In the first part of 2002, the course was written. The writing process included unit outlines for all the 151 units in the programme. By July 2002, the course was being taken through the university and teaching authority committee structures for approval.

Information Literacy in the new BEd

The pedagogical approaches of the new course had obvious congruence with the goals of the library to embed Information Literacy (IL) throughout the programme. Implicit in such pedagogies was a move to centre the control for learning with the student, not the academic (Kenworthy, 2003, p59), due to the adoption of an outcomes based approach to teacher education. The connection between outcomes based education at the tertiary level, and the need to strengthen lifelong learning competencies (Gordon & Stewart, 2002, para 24), were central to the new programme. This approach was emphasised by the adoption of the Teaching Practitioner Attributes (TPAs) as the planning framework. In fact the approach can be summarised as follows:

The reconceptualised course:

- Adopts a principled approach to an outcomes-based curriculum.
- Is built upon a framework of Teacher Practitioner Attributes (inclusive of the University's graduate capabilities).
- Advocates an investigative orientation to student learning.

Has embedded across the strands a commitment to Indigenous Education, equity and diversity, technology and multiliteracies.

Identifies professional practice and field studies as central to the course and the construction of a professional portfolio as a major outcome.

Adopts Applied Curriculum Tasks as integrating devices in selected semesters across the course.

Requires a strong commitment to professional partnerships at the level of course implementation.

Thus it could be argued that each item of this approach requires the embedding of information literacy and the processes that dictate how information resources may be navigated, accessed and utilised.

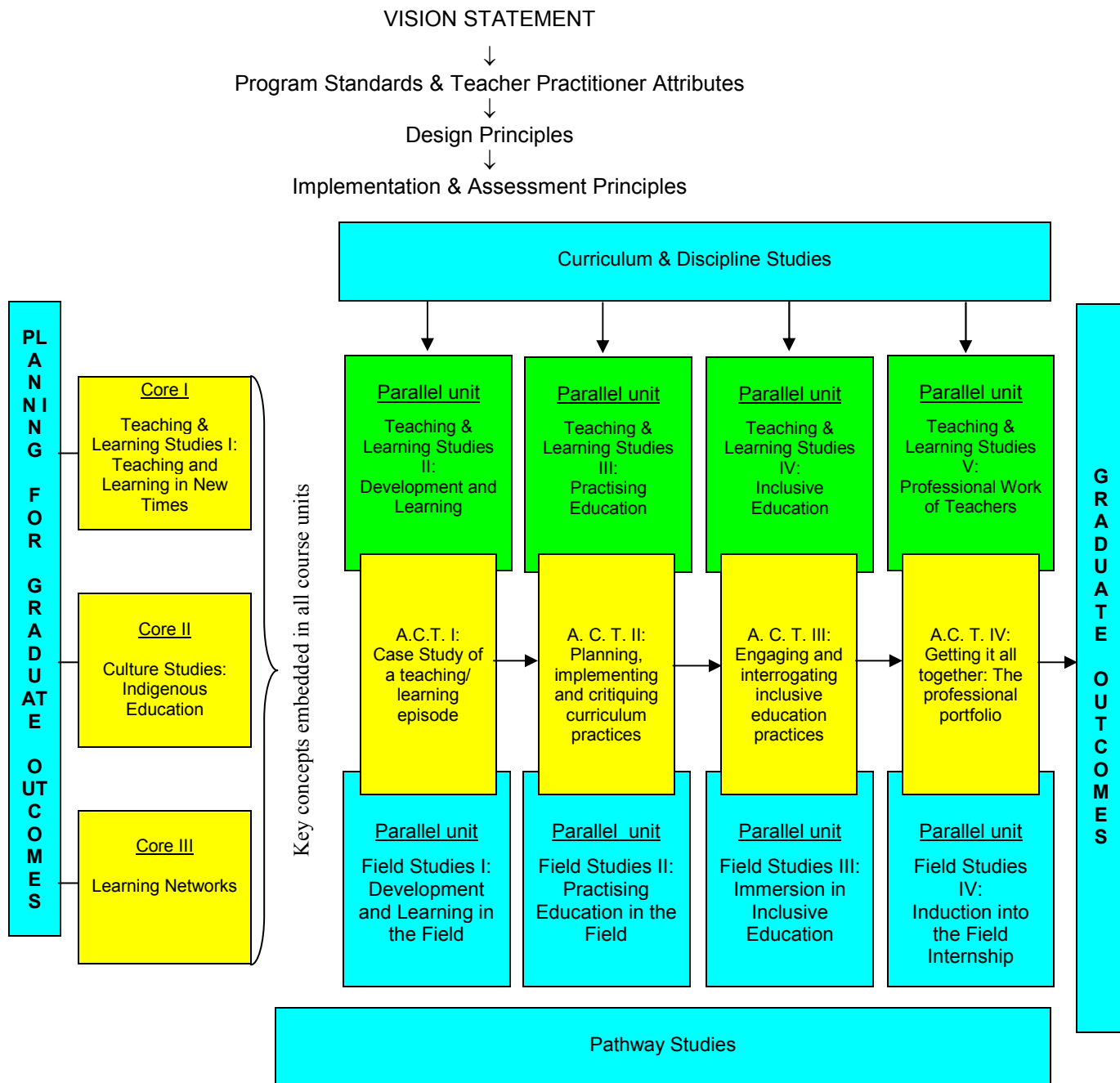
This Teacher Education initiative is informed by four course standards and associated Teacher Practitioner Attributes (TPAs). The first of these standards and associated TPAs is seen in Figure 1. The student learning outcomes have been articulated through the TPAs that will form a platform for planning, teaching, learning and assessment within and across the sub-programmes of the course.

Figure 1: Course standards and associated teacher practitioner attributes

Course Standards	Teacher Practitioner Attributes
Preservice graduates will be:	Preservice graduates will be able to:
<p>1.0 Lifelong learners and effective communicators who possess a strong <i>knowledge</i> of the content and discourses of the disciplines from which their projected teaching areas are derived, and who will be able to contribute to the framing of <i>new knowledge communities</i> and areas of inquiry</p>	<p>1.1 gather, form and <i>critique knowledge</i> (or new configurations of knowledge) from a variety of sources.</p> <p>1.2 seek <i>knowledge through the practices and inquiry modes of a scholar-teacher-researcher</i>.</p> <p>1.3 retrieve, evaluate and present information <i>using appropriate technologies</i>.</p> <p>1.4 participate in a range of <i>traditional</i> (e.g. print) and <i>new</i> (e.g. multimedia, web) <i>literacies</i>.</p> <p>1.5 listen and <i>communicate</i> effectively using <i>various media and forms of communication</i>.</p> <p>1.6 adopt a <i>problem-solving</i> and <i>inquiry-based approach</i> to their own learning and that of others.</p> <p>1.7 <i>critically reflect</i> on their own learning and <i>generate new information and ideas</i>.</p> <p>1.8 <i>manage</i> their own learning and that of others in <i>purposeful, goal-oriented ways</i>. use <i>self-evaluation</i> to understand and improve the strengths and weaknesses of their own learning style.</p>

Student learning outcomes determine the parameters of what graduating students will know, understand and be able to do. Students are encouraged to monitor their own growth and development towards the achievement of the TPA's through a teaching portfolio, which they develop throughout their programme. At specific points within each programme, strategically designed tasks, referred to as Applied Curriculum Tasks (ACTs), are implemented to assess student development towards the outcomes (see Figure 2). The applied curriculum tasks are transdisciplinary in focus and designed to enhance the cohesiveness and meaningfulness of the course by providing links across units, between university studies and field studies.

Figure 2: Applied Curriculum Tasks



The reconceptualisation of the BEd provided an opportunity for the library to embed information literacy during the design process. Liaison librarians worked closely with the Faculty of Education to “personalise” the university Information Literacy syllabus to fit the specific requirements of pre-service teacher educators, through the generation of the Education proficiencies map. Figure 3 shows a section of the proficiencies map. Academics and librarians can use the map as a guide when developing units within the BEd programme.

Figure 3. Extract from: IL proficiencies map –Education

Outcomes		For example, the information literate person				KEY	
No	Title	No	Year 1	Year 2	Year 3	Year 4	
1.1	The information literate person defines and articulates the need for information	1.1.1	Confers with others including peers and experts, and participates in face to face and electronic discussions with peers to identify a research topic, or other information need				Elementary
						Proficient	
		1.1.2	Explores general information sources to increase familiarity with the topic.				Advanced
						Elementary	
		1.1.3	Identifies key concepts and terms by mapping the information need and from that formulates and focuses questions				Proficient
						Advanced	
		1.1.4	Defines or modifies the information need to achieve a manageable focus				Elementary
						Proficient	
		1.1.5	Recognises that information can be combined with original thought, experimentation, and/or analysis to produce new information				Advanced
						Elementary	
		1.1.6	Identifies their existing knowledge framework				Proficient
						Advanced	

The level of detail in the proficiency map is welcomed when developing units of study. However, it was an unwieldy document to check 151 units for appropriate sequencing and development of IL learning events. A shorter table was developed which extracted the key IL proficiencies that would need to be embedded within the BEd, and made explicit the congruence with the TPAs. Figure 4 shows an extract from the table.

This table was used as a checking mechanism as the new BEd course was developed, allowing us to ensure that information literacy skills were introduced sequentially. We looked at the learning approaches and assessment of key units, checking where information proficiencies were required, and introducing new learning where necessary. We then checked all other units at each year level, to ensure that the learning events and assessments fitted with the overall development of IL within the programme.

The table now guides librarians and academics as we develop and implement each unit of study. In particular, we ensure that assessment tasks are appropriate to the framework of the table. This allows us to know where IL proficiencies have been previously introduced, and where we will need to provide interventions, and where IL proficiencies should be assessed.

Figure 4. Extract from: Key information literacy proficiencies to be embedded throughout the new BEd course - May 2002

Year 1	IL skills	TPAs	Year 2	IL skills	TPAs	Year 3	IL skills	TPAs	Year 4	IL skills	TPAs
I locate and use physical items in the library, including monographs, periodicals and multimedia items.	1.1.2 2.3 4.2	1.1 1.3	I modify and define my information need to achieve a manageable focus	1.1 1.2.6 1.3.1 1.3.3 1.4.1 2.1 5.1.3	1.8	I use controlled vocabulary, classification schemes and thesauri of subject headings	2.1	1.4	I have a good understanding of currently used information software.	4.11 4.2 5.2 5.5 6.2 6.2 7.1	1.3 1.5
I can locate digital or web based items through the library catalogue	2.3	1.1 1.3 1.4	I use indexing services (databases) to find journal articles, papers, and grey literature.	1.2 2.1	1.1 1.3 1.4	I evaluate and assess information sources	1.2 3.1 3.3 3.4	1.3	I have an advanced understanding of evaluating information, including the context in which information has been made.	3.1 3.3 3.4 5.3	1.1 1.2 1.3 1.5 1.6 1.7
I use the library catalogue to locate items relating to unit assessment.	2.2 3.5 5.4	1.1 1.3	I construct search strategies that include Boolean operators, nesting and truncation. I use indexes in books.	2.2	1.3	Develop an understanding of different citation systems, and how to get detailed information on them	4.1 4.3	1.8	I understand copyright issues for practitioners and researchers	6.1 6.2 6.3	1.4 3.11 3.12

We now have a course that has a set of IL proficiencies mapped through the progression of the programme. The IL proficiencies are embedded in a developmental manner within the learning and assessment tasks of the units. This has resulted in an IL curriculum which is developmental and recursive.

Reality hits when the new course starts

2003 has seen the first semester of new units being taught to students. Reality has hit, as lecturers and librarians race to implement eight new units in each of the early childhood, primary and secondary programmes. At the same time university staff are teaching units in the existing course, which will continue for another 3 years. The staff are challenged by large classes, teaching across two courses (an old and a new), while at the same time, trying to develop next semester's new units ahead of time in a range of modes (face-to-face, online and in print form). The phrase "time poor" is inadequate to describe our situation.

In the library we were sidetracked from issues of curriculum by our traditional roles: the rush to get textbooks available, and teaching into the university-wide orientation programme. The 2.5 liaison librarians responsible for the faculty of Education were also working with changes in liaison areas, and part-time study. Clearly this first semester has been a period of intense teaching and learning activity, with high levels of stress pushing all staff into survival mode. This has not been an environment conducive to innovation and change. The focus on key tasks, such as the

embedding of IL and review of the outcomes of core units, has been forced to be a low priority.

As has been documented elsewhere university academics are working in demoralising conditions, with under-funding, over enrolment and political turmoil reshaping university work in ways that are not conducive to commitment and motivation. Resistance to change is, of course, normal. Staff have reacted differently to the changes, despite enormous efforts to implement the change process in a collaborative and supportive manner during the past two years. Some staff are working proactively and enthusiastically towards the implementation of the ideals articulated above. Teams of lecturers, tutors and support staff who are involved in core units are highly committed to the course vision and principles and are working to overcome the challenges. Others are continuing with a “business as usual” approach, ignoring the shift in ideology and maintaining their traditional practices in teacher education. Of a more worrisome nature are the staff who are at this stage actively resisting the reconstructed vision and course design.

Akmal and Miller have identified four phenomena that both facilitate and work against change in contexts such as this. These include “governance and organisational structures; psychological challenges; role definitions, and institutional history” (Akmal & Miller, 2003). In our case, “big is not beautiful”. The difficulties inherent in the scale of the project have included communication to all staff, the challenge of achieving consensus, the lack of opportunity to fully debate issues. The institutional history of this university has experienced several restructures and staff have been repositioned differently as academics a number of times since the 1980s. Some academics are somewhat demoralised and disengaged from their institutional identities. “The critical level of strategy implementation is that of the lecturers and their self-definitions.” (Barnett & Hallam, 1999, p. 150). Some are threatened by new role definitions that require new ways of working, that require them to teach differently and demand that they relinquish some of the control for learning back to the students.

The Faculty of Education, not surprisingly, has many excellent teachers in it. However, not all academics have been able to keep up with current higher education teaching approaches. Admitting that you may need to revisit pedagogical debate can be particularly awkward. If the academic staff do not see themselves as requiring pedagogic review, then it is hard to include them in the wider process of reconceptualising a course. On reshaping the faculty approach to pedagogy it has been desirable that “the process must be authentic, the learning environment open, there must be an alignment of the learning process with educational goals and assessment criteria must encourage the highest levels of intellectual functioning” (Barnett & Hallam, 1999, p. 151). While this has been the aspiration of the course development team, on hindsight, many variables have emerged that have thwarted this process of openness.

Librarians have also been working through change processes due to the shifting of roles and expectations. Liaison Librarians at QUT maintain traditional roles. Concurrently, our role as teaching librarians and curriculum advisors to academics is growing. Library management are hard pressed to assist with human resources, as library budgets have remained static against a background of escalating journal costs, coupled with a nightmare in foreign exchange rates. Librarians have been given some monetary assistance to complete Graduate Certificates in Higher Education. These courses are empowering, and ensure that we are acutely aware of how we can work effectively at course level to embed IL, and also how we can improve teaching across the IL curricula. Thus, our roles expand further, and the strain on workload increases.

QUT librarians have followed international debate on our status as general staff. Opinions of QUT librarians vary on whether or not we should have academic staff status. During this period of intense role change, there has been diversity in individual librarian's readiness to take a role of IL curriculum advisors to faculty. Early in 2002, when invited to participate in writing unit outlines for the new BEd, some librarians were not comfortable, at that time, to do so. Unfortunately, this response tended to reinforce some academics' traditional view of the role of the library.

How embedded is the embedding?

The embedding of IL into units and across the BEd courses was well received by course development teams, acknowledged as highly appropriate with university policy and congruent with the desire to generate an outcomes based programme. The mapping of the IL across the course has been developed, documented and approved for implementation. At the level of implementation, at this early stage, the project is progressing well.

The embedding of information literacy into a course suggests that the focus will shift from librarian-controlled transmission of generic skills, to the development of learner-centred activities, contextualised to the objectives of the key units. There is a temptation for some academics to request a full suite of IL teaching events early in a course, so that the students have "got" IL. This approach suggests that IL is only *integrated* into a course, without a planned, developmental approach. We believe that it is only when IL is *embedded* through a course, that the students will have opportunities to apply IL as teaching professionals. How well IL is embedded is highly dependent upon assessment tasks set. Librarians are currently engaging academics in discussion about appropriate assessment tasks and marking criteria. These learning tasks promote IL proficiency within a teacher education context.

The ways in which librarians are to be involved in learner-centred activities for IL is developing along with the BEd course. With 151 separate units across 9 courses, and 2.5 liaison librarians, the challenge is immense. One strategy is for librarians to teach tutors. This idea has yet to be implemented successfully. Issues include the reluctance of tutors to take on what is for them new knowledges. Most tutors are casual staff, and gathering up to 30 together for a learning event can be difficult. Further, the casual status and high turnover of tutors means that they tend not to be knowledgeable about the reconceptualised BEd, the role of the TPAs, and of IL within the programme.

Library management is quite correctly keen that we develop online modules to assist with the task of integrating information literacy modules into units. The hope is that ongoing work may be more maintenance than creation, allowing small alterations to modules so that they may be applied to more than one context. Such modules work well, where they support the development of IL proficiencies that will be assessed within a unit.

However, the hope that online modules will reduce workload over time may not be born out. The learning activities of online modules need to be aligned with the design blueprint of the BEd course (Biggs, 1999). The librarians who have studied for a Graduate Certificate in Higher Education are committed to a social constructionist view of learning, which is congruent with the ideals of the BEd, but which is difficult to implement in an online module. The modules developed thus far will require input

from either librarians or academics in activities such as online discussion forums or summer school workshops.

The size of the Faculty makes communication difficult. Experience already shows that it is easy for staff to lose sight of the concept of embedding in a sequential, developmental curriculum. For example: A core first year unit was identified to carry some introductory understanding about information literacy. Unfortunately, this translated, through a process involving time and “Chinese whispers”, into a perception that the students were quite properly “doing all the info lit stuff” in that one unit. Thus problems with embedding have been exacerbated as the “lived curriculum” becomes further removed from the design blueprint. In just one semester there is a feeling that as a result of non-alignment of curriculum from the designed to enacted, written unit outlines do not reflect the commitment to TPAs and IL competencies as required.

The leadership role in this project for both librarians and academics is largely unaddressed, and has been exacerbated by the changed duties of key players. An ad hoc approach had started to evolve. What could be a promising and enriching experience for library-academic partnerships, now is experiencing a degree of slippage that is causing anxiety for those who are proactive in this field. The place of new thinking and teaching around more generic proficiencies and transferable competencies is at risk.

It is clear, that if we wish to continue the force of innovation, Librarians and Course Coordinators need the tenacity to match their commitment. Librarian representation on, for example, the Course Coordination Committee has already proved fundamental to picking up changes in unit outlines, where the developmental implementation of IL has been forgotten. Continued proactive membership of this committee will be central to the continued implementation of the course.

Bedding down the embedding – a continuous improvement project

The library staff, in conjunction with the university academics and Course Coordinators, need to liaise more closely and heighten the importance of this challenge. Continued action in a variety of forums is important. Currently, discussion of strategies developed by the librarians to ensure the continued success and development of this work are taking place. While many librarians are undertaking a Graduate Certificate in Higher Education, such studies must become more centrally embedded in the strategic plans for the university, if librarians are to be effective curriculum advisors. This will provide librarians with access to a knowledge base that will position them more favorably with course design teams. However payment of fees is not comprehensive, and there is no paid leave to assist with study load.

Reflecting and renewing our work within the BEd is central to our philosophy. In the spirit of action learning, we continuously learn, discuss, collaborate and review. The proficiencies table will need to be adjusted to the developing needs of the course. Renewed interest in the table occurs when individual academics need to engage with it, and the experience of these colleagues informs our deliberations.

The university’s thirst for Quality Assurance data may give us funding opportunities to conduct a review at the end of the first year of implementation. We are considering surveying the information literacy knowledges of students at the end of their first year, to test the effectiveness of the project. This may give data to the QA process, as well as a basis for reflection and renewal.

Liaison librarians are privileged to be able to see the “big picture” of IL across a large faculty. We need to take every opportunity to remind, revisit and review the significance of embedding the IL competencies within the daily work of all students and staff. We need to do so collaboratively, professionally and strategically and be recognised and valued for this initiative. The IL agenda for the BEd needs to be put foremost of the minds of academics regularly in a variety of forums, the links between IL and course assessment need to be part of an ongoing debate, the process of review and reconstruct central to discussions of this type. We will need to constantly examine the effects of the reconceptualised Bachelor of Education on stakeholders, and leave space for revisions when needed (Akmal & Miller, 2003, p416). As time moves on and Quality Assurance takes hold of Australian university agendas, multiple spaces for these aspirations open up. As academic work comes under the microscope, the platform that we have put in place provides a framework for critique and renewal. QA may provide opportunities (and hopefully resources) to enable our work with IL to continue.

For now, the struggle continues. Against the forces of limited time, low level resourcing, lack of professional development, a demoralised work force and challenging political interventions, great optimism remains. We have a new course that is conducive to our goals, we have potentially great teams, we are positioned well within those teams as library staff, our voices have been heard and continue to be, and we work in an environment where some support is granted towards innovative practices. In time, IL competencies will live as central to a problem based, outcomes oriented, investigative course in Teacher Education.

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