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Integrating information literacy into academic curricula: A professional development programme for librarians at The University of Auckland

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Introduction

The integration (see Appendix for definitions) of information literacy (IL) into the academic curricula has become the gold standard of IL education in higher education. Numerous studies have been conducted emphasising the pedagogic justification of such an approach (Derakhshan, 2011; Dixon-Thomas, 2012; Harris, 2013; McAdoo, 2008; Secker & Coonan, 2013). Librarians have collaborated with academic staff to integrate IL into curricula and there are many examples of good practice in a number of institutions. (Floyd, Colvin & Bodur, 2008; Kobzina, 2010; Nerz & Bullard, 2006; Welker, Quintiliano & Green, 2005).

Studies have demonstrated that the role of librarians is evolving from that of being service providers to being educators who are active contributors in curricular design in higher education (Doskatsch, 2003; Elmborg, 2006; Peacock, 2001). This role shift requires librarians to be equipped with pedagogic knowledge and skills "to broaden and deepen their understanding of information literacy" (Secker, 2011, p.7)

A research project conducted at The University of Auckland in 2009 interviewed librarians and asked them if they felt they had the breadth and depth of IL understanding noted by Secker (2011). The answer was no or uncertain. This answer was the impetus for a small group of librarians interested in IL integration to come together and do something that would turn that answer to a yes.

This paper will explore the development of a programme for subject librarians which focuses on the practical aspects of how to integrate IL. The theoretical basis of the programme is largely based on the doctoral research of Dr Li Wang (2010) who developed a systematic model for integrating IL into an undergraduate programme in higher education.

The University of Auckland and its Library

"The University of Auckland is ranked internationally as New Zealand's leading university and among the top six to eight universities in Australasia." (University of Auckland, 2012, p.4). There are nearly 41,000 students studying the full range of disciplines at undergraduate and postgraduate levels. There are over 2,200 academic staff. The Library itself has a total of 245 FTE staff, of whom 90 are professionally qualified librarians.

In 2013 the Library changed its name to *Libraries and Learning Services* (LLS) to reflect the new merger between the Library, the Student Learning Centre and the English Language Enhancement Centre. The merger was designed to consolidate student learning support under one umbrella organisation.

Rationale for IL at the University of Auckland

In common with many other universities, the underlying driver for IL is found within the University's graduate profiles. The profiles reflect the increasing emphasis on student

academic independence while at the same time recognising the likely demands of employability and life-long learning.

The University of Auckland has profiles for both graduates (2003) and for postgraduates (2009a; 2009b; 2009c). While there are differences between the profiles which reflect the more advanced nature of the higher degrees, the principles guiding them all are the capacity for "critical, conceptual, and reflective thinking" and "an ability to recognise when information is needed and a capacity to locate, evaluate and use this information effectively." (University of Auckland, 2003, para. 2)

The other significant document underpinning IL within the University is *Information Literacy: Guidelines and Principles* (2011). There has been an institutional guideline on IL since 2006 and one of the key objectives of the guidelines has been "to ensure that information literacy is integrated into the academic curriculum of the University" (p.2). The document not only defines IL, but also outlines the roles and responsibilities of librarians, academic staff and other learning support units from within the University. It also emphasises the collaborative nature of IL integration: "academic staff are responsible for ensuring that information literacy capabilities have been integrated in the curricula, teaching, learning assessment and research processes. Academic staff, librarians and learning support providers are partners in providing opportunities for students to achieve the capabilities stated in the Graduate Profiles in the context of their disciplines" (University of Auckland, 2011, p.3). It should be noted that at the time of the study later described in this paper, the document guiding IL integration was called the University of Auckland Teaching and Learning: information literacy policy (2006). It was subsequently reviewed in 2011 but the substantive guidelines around integration remained unchanged, except for a change in terminology from "embedded" to "integrated." The graduate profiles and the IL guidelines and principles are underpinned by the University of Auckland Strategic Plan 2013-2020 (University of Auckland Strategic Plan, 2012). "We expect our graduates to be independent and critical thinkers, open to new ideas, possessing intellectual curiosity and integrity, and to have a mastery of a body of knowledge and professional skills. They should be able to use information discerningly, to show tolerance and an understanding of diverse value systems and views, and to have the potential and the wish to contribute in a leadership role to national and global intellectual, social scientific, economic and cultural development." (p.10)

IL initiatives

Providing opportunities for students to acquire the necessary graduate attributes in relation to IL has been a major part of LLS' teaching and learning responsibilities for nearly 10 years. There were (and still are) a number of successful initiatives in IL education prior to the introduction of the professional development programme. The Faculty of Law Library runs a stand-alone, credit-bearing course in legal research; the Faculty of Business and Economics librarians developed an online information skills course for first year business students (Gunn, Hearne & Sibthorpe, 2011), and the Faculty of Engineering Library has both online and face-to-face programmes running throughout the undergraduate engineering degree. However, while there was a high degree of IL activity there was little consistency of approach and no agreed understanding of IL or how it might be promoted or integrated into the curriculum.

Literature review

A review of the literature would not be complete without an examination of some of the guiding principles of IL integration which have been expounded by professional associations from around the world. In 1999 the Society of College, National and University Libraries (SCONUL) "proposed that the development of the idea of information literacy requires a collaborative and integrated approach to curriculum design and delivery based on close co-operation between academic, library and staff development colleagues" (SCONUL, 1999, p.1). A few years later the American Library Association IL Competency Standards for Higher Education defined IL as being "woven into the curriculum's content, structure and sequence" (ACRL, 2001, p.5). In Australasia we have long been guided by the Australian and New Zealand Information Literacy Framework developed by the Australian and New Zealand Institute for Information Literacy – ANZIIL (Bundy, 2004).

Changes to the theoretical perspectives of IL have facilitated the status of IL integration. It began with Christine Bruce's *Seven faces of information literacy* (1997). Bruce challenged the status quo by moving from a behavioural to relational model thus setting the stage for later thinking about the delivery of IL. The notion that IL is "more than a set of acquired skills" (Elmborg, 2006, p.196) has evolved since the early 2000s. The evolution from teachers of a set of skills to librarians as educators is almost complete. "Librarians are…facilitators of active, critically reflective learning, whether the focus is directly on developing students' information literacy or more broadly on designing and supporting information interactions and environments that will help catalyse students' engagement with their academic discipline" (Roberts & Levy, 2005, p.221).

A number of authors (Rockman 2004; Goodwin & Parker, 2012; Andretta, 2005; Curzon & Lampert, 2007; Secker & Coonan, 2013) have written extensively in monographs about the concept of IL curriculum integration. Recent research (Derakhshan, 2011; Dixon-Thomas, 2012; Harris, 2013; Martin, 2013; Secker 2011) substantiates the view that "embedding [integration] is the preferred method to incorporate IL into learning environments" (Martin, 2013, p.6). Much of this literature provides practical examples of how IL has been integrated, but very little of it has discussed how to prepare librarians to become active contributors to curricular design in higher education.

The history of literature in the area of IL education and professional development for librarians has focused largely on bibliographic instruction or teaching. This literature has often arisen in the context of the changing roles of librarians, particularly in the past 20 years. The changing roles of librarians are often attributed to the rise of new technology (Bell & Shank, 2004; Biddiscombe, 2002; Goetsch, 2008; Levy & Roberts, 2005; Rodwell & Fairburn, 2008). As the teaching role has become more predominant there has been a "subtle shift in emphasis from that of librarians who teach to librarians as teachers (and learning facilitators) [that] now requires a deeper understanding of the multiple facets of education and training" (Peacock, 2001, p.30).

Some of the literature has bemoaned the lack of adequate IL training for librarians in the pre-service environment (Andretta, 2008; Ishimura & Bartlett, 2009; Julien, 2005; Medaille, 2011; Sproles, Johnson, & Farison, 2008; Westbrock & Fabian, 2010); some of it has focused on what librarians in jobs do or don't know about teaching and how they feel about it (Bewick & Corrall, 2010; Julien & Genuis, 2011). There has been research on new initiatives in relation to interactive teaching (Atkins & Frerichs, 2002; Wang, 2007; Zdravkovic, 2010), student centred learning (Andretta, 2011; Litten, 2002), evaluation and self-evaluation (including reflection) and peer assessment (Botts & Emmons, 2002).

A number of institutions have outlined their efforts at providing professional development for their own staff in the area of teaching. Emerson College Library (Litten, 2002) and Hope College (Atkins & Frerichs, 2002) described in-house instructional sessions for their librarians. The major focus of the sessions was teaching skills and relationships with faculty. Litten described a one-off half day retreat and Atkins & Frerichs outlined a workshop with three half day sessions on pedagogy, microteaching and an open-ended session on IL which also involved the faculty development specialist.

The Queensland University of Technology (Peacock, 2001) described a version of the EduLib program taught at QUT which focused on increasing librarians' teaching and learning theory and practice. It consisted of eight modules each of three hours duration and attendance was mandatory for all teaching librarians.

The Open University, as part of its Learning Design Initiative, ran a programme of workshops for librarians which included an introduction to learning theory, introductions to assessment and learning design, including how to write learning outcomes as well as "something about digital literacy." (Reedy, 2012, para. 4)

The University of Arizona Library (Hook, Bracke, Greenfield & Mills, 2003) created workshops to help librarians increase their understanding and use of the IL Competency Standards for Higher Education and to "demonstrate how to work successfully with faculty to integrate IL into course curricula" (p.102). The workshops were centred on defining IL, analysing assignments for IL content, altering assignments to incorporate IL, assessing IL, understanding the assessment environment and working productively with faculty. The workshops were not mandatory but the conclusions of the authors indicated that this would have been an advantage as it would have moved "IL to a higher level of importance and consciousness within the library" (p.117). The training programme at the University of Auckland closely resembles this format and content.

An IL curricular integration model

One of the key pieces of research guiding the team at University of Auckland was Wang's doctoral thesis *Integrating information literacy into higher education curricula: An IL curricular integration model* (2010). Wang, Manager of the Libraries and Learning Services' Support Services team, investigated a "way to systematically integrate IL into an undergraduate academic programme" (p.1). The key findings of her study centred around four categories: the key characteristics of IL integration, the key stakeholders in IL integration, IL curricular design strategies and the process of IL curricular integration. Based on her findings she developed an IL curricular integration model. The model sought to represent the different aspects of IL integration in the curriculum by defining the *what*, *who* and *how.*

The *what* element included the IL guidelines which would be found in the intended curriculum (what an institution expects its students to be taught and to learn through its educational system). The IL guidelines could include graduate profiles, university teaching and learning policies, accrediting organisation requirements and IL frameworks standards and strategies. This part of the model acts "as a guideline to provide an IL curricular working group with a solid understanding of why IL education is important and a direction in planning and designing the curriculum" (Wang, 2010, p.21).

The *who* element defines the key stakeholders in IL integration and extends to all those who might have a role in providing IL integration – people such as librarians, academic

staff, student learning advisors, learning designers and IT support staff. The key notion of collaboration was identified in an S2J2 model:

- **S**hared understanding of the purpose of IL integration;
- **S**hared knowledge;
- **J**oint dialogue with respect and tolerance; and
- **J**oint efforts with trust and support.

The *how* element describes how IL integration must be contextualised within courses or programmes; it must offer students "ongoing opportunities to interact with information in single courses as well as across multiple courses" (p.22) and all of this must be applied through the curricular design process taking cognisance of learning theories, methods of delivery, Bloom's taxonomy, IL theories and frameworks and institutional IL curricula in a way that scaffolds students in their acquisition of IL learning.

Background to the programme

In 2009 a research group of five (two faculty library managers, the manager of the Learning Support Services team, and two subject librarians) conducted intensive interviews to identify subject librarians' training and development needs for curriculum integration of information literacy. A total of 23 participants were interviewed: 18 subject librarians, 2 managers and 3 from the library systems and digital services teams. Participants were asked:
- about their understanding of IL and the university IL policy
- what approaches they took in terms of delivery i.e. one-shot, course-related or integrated
- whether they had approached academic staff about the possibility of integrating IL into the curriculum. If they had, what were the most challenging aspects of integration, and if they hadn't what were the barriers?
- if an academic staff member had asked them about IL integration, did they feel confident in being able to deliver what was being asked? If so what was it in their training or experience that made them confident? If they weren't confident what was it they felt they needed to be able to deliver such support?
- whether they used learning theories to plan IL sessions,
- how they used current IT technologies to support their teaching
- what resources they routinely used in IL sessions
- how they decided what IL competencies to teach at specific year levels
- how they assessed students' understanding
- how they evaluated their own teaching
- who they had collaborated with in delivering IL sessions.

Findings

Of the subject librarians who participated in the interviews 10 had less than five years' experience as subject librarians, and eight had more than five years. In fact, five subject librarians had more than 10 years' experience.

Apart from the newest subject librarians, almost all felt they had a good understanding of IL in their own context. Most of them knew of the University's IL policy. Beyond the tertiary environment, however, understanding of IL was limited – only one librarian mentioned the concept of life-long learning, for example.

Despite the fact that the University IL policy talked about the need to have IL capabilities integrated into the curriculum, many subject librarians saw both the policy and the need for integration as being idealistic. Few of them could think of practical ways that integration could be achieved, often citing academic work load, overcrowded curriculum, academics' lack of understanding of IL, and disciplinary differences as reasons why integration could not be easily achieved. There was consensus that a combination of approaches often best described their IL activities, although it was clear that many librarians did not understand the difference between course-related IL (add-on classes or activities developed to complement a specific subject area, course or assignment) and integration of IL.

When asked how integration might best be achieved, many librarians commented on the need for good professional relationships with academic staff which would enable collaboration. Several of them mentioned ways in which to initiate or improve such relationships, such as surveying staff about research interests or sitting in on departmental meetings. Subject librarians also noted that an understanding of the curriculum was important. At least one librarian commented that integration could be achieved through an assignment related approach.

Those librarians who approached academic staff in relation to IL integration found that both curriculum knowledge, subject knowledge and IL knowledge were essential when opening up conversations around greater library involvement in teaching programmes. During the study, librarians mentioned a number of barriers which they felt prevented them from approaching academics – some were related to lack of confidence, lack of knowledge of the curriculum and awareness that academics did not really know what subject librarians could do to help them. In addition, at least two librarians thought it was the role of the manager to initiate discussions about IL, especially newer librarians.

When asked what skills librarians felt they would need to be able to integrate IL into the curriculum it was clear that many of them felt in need of professional development in the areas of learning theories, course and lesson planning and formulation of relevant IL assessments. They were also unsure about the curriculum processes involved in approvals for new courses, how changes were made to existing courses and just what constituted an academic workload. Underlying these "on top" needs was a feeling that good communication, negotiation skills and time management were essential to kick start any discussions on IL. The fact that academic staff did not really understand the concept of IL was repeated a number of times by librarians in the course of the interviews.

When asked how they planned IL teaching sessions, many librarians had no formal teaching plan outlining learning outcomes and assessment tasks. This was particularly so in one-shot sessions. Confusion and lack of knowledge of the concepts of assessment and evaluation meant that these aspects of planning and follow-up tended to be avoided.

The range of online resources used by subject librarians in their teaching was restricted mainly to course pages, online tutorials, the learning management system (LMS), and websites that offered study and research help. Some of these were created in-house, but librarians made use of external web-based resources as well. When asked what they needed to support students in their teaching sessions, there was a range of specific suggestions such as online guides about referencing software, finding readings, how to access library resources from home, finding books and articles and avoiding plagiarism. Some librarians were aware of the online information skills tutorial designed by the

librarians at the Faculty of Business & Economics and were keen to use this for their own disciplines, but were unsure how.

To maximise the use of the online environment, subject librarians made it clear that there were areas in which they needed professional development. Some of the skills were as simple as more knowledge about basic MS Office products and how to use these effectively, but there was also a demand for training in image creation and management, web authoring skills and web design, as well as how to use tools such as Coursebuilder (a University of Auckland product used in the creation of online learning tutorials), BBFlash, and Dreamweaver.

Many librarians had collaborated with colleagues outside the Library, such as those in the Centre of Academic Development (support for academic staff and postgraduates at the university) or the Student Learning Centre (student academic support). Not all of these collaborations were IL related, however.

Librarians keenly felt the changing nature of their responsibilities when it came to IL. There was often a sense of frustration and lack of confidence in being able to tackle IL integration effectively. Some of the frustration was fuelled by a lack of knowledge in areas such as teaching pedagogies, curriculum and curriculum integration of IL, but some of it related to the perceived lack of knowledge of academics about IL and how the Library could assist them.

Development of IL curriculum integration programme

From the analysis of the interview data and a review of the literature in the area of IL integration, the project team then developed a programme based on the Wang model. The project team included three faculty services managers from education, engineering and medical and health sciences, as well as the Learning Support Services manager. They developed a pilot programme which consisted of five modules which was delivered in a variety of ways – team-based, face-to-face and online.

The learning outcomes for the course, which was to be run across the entire year, were to:
- gain an understanding of information literacy and its importance to the University of Auckland, as well as understand the responsibilities of all stakeholders in providing information literacy education to students;
- identify approaches for establishing relationships with faculty or departments;
- analyse faculty/school/departmental curricula to identify potential courses for information literacy integration;
- understand and apply the Wang information literacy integration model in a course context;
- become familiar with assessment and evaluation tools used in information literacy teaching and evaluation

The Library senior management team decided that the programme would be compulsory for all new subject librarians to the University of Auckland Library, and it would be optional for librarians who were already working. The programme content was submitted to Dr. Jane Secker, London School of Economics and Judy Peacock, Queensland University of Technology, for external review. Both reviewers had valuable comments to make, some of which were acted upon before the pilot began but some of which gave a broader context to the undertaking. Judy Peacock's comments fitted this latter category:

> Teaching and learning librarians need to have a very wide understanding of the educational world around them. To be effective they cannot act or interact in a library/infolit vacuum, and they must engage with the complex set of internal and external educational factors that drive our universities. Information literacy is powerful, but even more so when it is framed as making a tangible contribution to improving transition, retention, success and the student experience (J. Peacock, personal communication, September 19, 2011)

It should be noted that the programme complements another in-house initiative – that of New Presenter Training (NPT). NPT is a requirement for all librarians involved in teaching and covers the teaching-related pedagogy which is seen as important when delivering material to students. NPT training is offered in four 3.5 hour sessions and covers learning theories, teaching styles, teaching skills such as lesson planning and presentation skills. The participants are required to present two 10 minute teaching sessions (one of which is recorded). The teaching sessions are critiqued by their peers and by a facilitator from the University's academic development unit. Over 70 library staff have completed this programme since 2007.

Pilot and evaluation in 2011

The programme was piloted with 10 new subject librarians in 2011. The end of the pilot marked an intensive phase of evaluation. The 10 participants in the programme were asked to evaluate the programme through individual session evaluations, a completion survey, and focus groups. In addition to this, they had been asked at the end of each module to provide verbal feedback. As one participant put it, "I have feedback fatigue." Despite this, a great deal of relevant information was obtained and substantive changes were made for the following year's programme.

Evaluation of the user experience of the pilot programme was positive. Feedback included the following:

- the participants found the programme was very useful and they felt greater confidence in working with faculty on the curriculum integration of IL,
- participants found that curriculum mapping and learning theories provided them with an IL integration framework on which to base their practice,
- most participants felt they had gained a broader understanding of IL
- participants recommended that the programme should be compulsory for all subject librarians, even experienced ones.
- there was strong approval for keeping the programme practise-based – seeing "theory in action" as one participant termed it. Librarians liked hearing from their colleagues about their experiences, the way they solved problems and their success stories.
- the participants enjoyed the opportunity to interact with other librarians on the programme and the frequent breaks for discussion that were given.
- most participants enjoyed the reflective journal in Module 5. It was noted that it could be used to support the professional revalidation requirements of LIANZA, New Zealand's professional library organisation.

Based on the evaluation of the pilot group, the following changes were made:

- Module 1 had originally included a prior knowledge assessment whereby a library manager could attest to a librarian's experience and knowledge and recommend that only certain modules be undertaken. The prior knowledge assessment was

removed when it was decided by the Library's senior management team that all subject librarians would be required to do the programme.
- it was felt that more indication should be given about the time it would take to do the readings and the assessment. This was particularly so for Module 5.
- the number of readings was reviewed and reduced.
- participants suggested it would be useful to have a system of peer/mentor support.
- participants wanted a bank of online resources and to develop an online learning community.
- participants wanted feedback on assessment tasks – both from managers and from the organising panel.

Information literacy curriculum integration: Professional development for librarians at the University of Auckland

Based on changes made after the pilot, the programme in 2012 and 2013 ran as follows:

Module	Delivery method	Time
Module 1.Information literacy introduction – What is information literacy and why is it important to us?	Discussion with manager/team	2-3 hours reading & assignment + 1 hour team discussion
Module 2. Establishing relationships with faculty	Face-to-face	3-4hrs reading & assignment + 3hr class
Module 3.Understanding the faculty curriculum	Face-to-face	3-4hrs reading & assignment + 3hr class
Module 4. The integration of information literacy into curriculum and designing information literacy curricula	Face-to-face	4-5hrs reading & assignment + 3.5hr class
Module 5. Information literacy assessment and evaluation overview	Online	6-7hrs reading and assignments online

Module 1: IL introduction
Module 1 sets the scene for IL within the University of Auckland context. There are institutional documents as well as readings for librarians to complete. The programme participant reads the articles and then uses the assessment activity as the basis for a discussion with their team manager. A number of teams have extended the discussion to the whole subject team, as well as inviting library staff who are studying towards library qualifications, to be involved. Feedback on this module has generally been positive:

> I liked the way that the introductory module put everything in context. I found it very useful to be alerted to policies/documents that are already in place within the university i.e. Information Literacy policy, graduate profiles, library annual plan. I liked the fact that this module was done within our own teams. My manager ran the session as a group session since there were several of us doing the programme, and this was very valuable, again for reasons of contextualising. It was a non-threatening way to begin the programme.

Module 2: Understanding and working with faculty: the basics of information literacy integration
Module 2 is the first time participants meet together face-to-face so there is some reviewing of Module 1 and an opportunity for new subject librarians to meet with others from different disciplines.

This module has two parts. The first part is designed to give the participants some understanding of the work of an academic. It includes videos of academic staff talking about their workload requirements and the balance between teaching, research and service. Academics also comment on their current relationship with their subject librarian and how it was developed; they suggest how their subject librarian can best support them. This part of the session is facilitated by an academic from the University's Centre for Learning and Research in Higher Education (CLeaR), a service unit tasked with supporting staff and postgraduate students to succeed in their academic careers. The CLeaR academic was able to expand on the comments made by academic staff in the videos and to answer questions.

The second part of the module deals with techniques for building relationships with faculty. It asks participants to identify key faculty members in terms of curricular integration of information literacy in their faculty, and looks at practical ways librarians can involve themselves in the life of the faculty. The module finishes with a panel of experienced subject librarians discussing issues such as:

- how they established good working relationships in their faculty,
- how they started, and then followed up,
- what methods they found to be the most effective,
- examples of how they were able to get involved in courses,
- challenges presented when they tried to integrate information literacy into a course
- how they overcome those challenges.

The assessment task for Module 2 requires librarians to development an action plan, with specific goals and timeframes, of how they will either develop or enhance their relationship with their faculties.

Module 3: Understanding the faculty curriculum
This module covers an overview of curricula in higher education, different types of curricula at the University of Auckland, the curricular design process at the University, and how to analyse a programme curriculum to identify who is teaching what. A particular feature of this module is the information given by academics about when they would change the course content, assignments and assessment tasks, and the processes they follow to make the changes in their courses. They also describe the curricular approval process for a new course in a department or faculty.

Participants undertake a practical exercise whereby they analyse the curriculum of a programme/subject within their own faculty. As part of their assessment task they are required to:
- identify course coordinators and lecturers for each course,
- list all courses by year and semesters with lecturer's name(s) for each course,
- identify a potential course for IL integration.

The participants use the University Calendar, programme handbooks and the student online enrolment system to help them identify what might be key courses.

Module 4: Information literacy integration and curriculum design
Module 4 applies the curriculum knowledge gained in Module 3. Participants are required to understand and apply the Wang model of IL curricular integration (Wang, 2010). The Wang model identifies three aspects of IL integration – collaboration and negotiation,

contextualisation, and on-going IL interactions with information. Leading on from the theory, the participants work through one common way of integrating IL by modifying an existing assignment. They are given an opportunity to see how other librarians have modified assignments, and get to practise this in groups.

An aspect to this module is the highly popular "speed-dating" segment. Librarians are introduced to people who have either experience or skills which are needed to bring about IL curriculum integration. They are a diverse range of people from experienced subject librarians, through to media librarians, learning advisors, learning services librarians, the University's learning management system team and e-learning experts. The participants have a five minute segment with each person to give them an idea of who is able to support them in their IL integration and what they can do.

Once again the academic from CLeaR attends the session to talk about the use of learning outcomes and how Bloom's taxonomy can be used to scaffold IL learning outcomes from a lower level to a higher level. Knowledge of Blooms also helps librarians critique existing assessment questions; was an assessment task asking a new year one student to work in one of the higher level cognitive domains, for example.

Finally, in the module assessment the participants are asked to map the intended curriculum (University graduate Profile, professional requirements if there are any, IL standards), against the potential academic courses identified from Module 3 and develop one IL learning outcome for one course in each year by applying Bloom's taxonomy.

Module 5: Information literacy assessment and evaluation: an overview
Module 5 is self-paced and online and involves at least 8 hours coursework. Participants are given 6 weeks to complete the module. It consists of readings, videos and activities which students must complete in an online journal.

Part One of the module is an overview of assessment discussing the principles of constructive alignment. The other aspects of assessment which are covered are types of assessment, writing learning outcomes using the ANZIIL standards and Bloom's taxonomy, resources for learning activities and assessment tools and examples. Examples of assessment activities in this module:

- Activity 1 students are asked to read the UoA Assessment of Student Learning Policy (2011) and align that with statements in a chapter by John Hattie (2009).
- Activity 2 asks participants to compare the IFLA Guidelines for IL Assessment and an article by Oakleaf which represent the spectrum in IL assessment.
- Students develop a lesson plan for a 50 minute session they will teach showing the learning outcomes, the instructional method and the learning activities as the same time designing the course in such a way that ensures student participation.

Part Two of the module discusses evidence-based information practice and its use in evaluation. Participants are asked to critique the current library session evaluation form on the basis of their reading. They are then introduced to concepts of reflective practice. The final part of Module 5 looks at some techniques for IL programme evaluation. Examples of assessment activities:

- Reading an article on reflective practice and recording two questions
- Arranging for a peer to observe their teaching. Discussing the peer observation criteria with their observer and deciding what went well and what could be improved on.

Completion of the programme

Once all five modules have been concluded, the participants are awarded a completion certificate at the annual Libraries and Learning Services forum.

The outcomes

While those that have done the programme have been enthusiastic, there is always the "so what" test. In all, 12 librarians have now been through the course (with five more in 2013) and we have been looking for evidence of increased activity or potential activity of IL integration. While this has not yet been formally assessed there is anecdotal evidence collected by the Learning Support Services team, with whom subject librarians work on IL integration, that there has been increasing activity, especially in areas where there was little happening previously. One example of this has been within the Psychology Department, where the librarian began the conversations with academic staff soon after completing the programme. This has developed into IL curriculum integration being adopted into a series of academic courses in that discipline.

Some of the effects that have been noted have been increased confidence in engaging with academic staff, and subject librarians feeling equipped to talk knowledgeably about curriculum issues. The exercise of deconstructing and reconstructing an assignment task to include IL competencies has given librarians an entree when approaching academic staff.

The programme represents a significant time factor for staff that are already busy, so it is important to make sure it is relevant. It became very obvious, for example, that parts of Module 2 (on faculty relationships) needed some modification for experienced subject librarians. That presented a dilemma as there were both experienced and new librarians in the group. This was really only resolved by taking a problem solving approach and allowing more experienced librarians take a leadership role in guiding and mentoring less experienced librarians.

One of the exciting outcomes has been a re-engagement with IL. Many participants have commented that the course gave them the time and opportunity to really reflect on the meaning of IL in our context. There was an opportunity to sit with their manager, or team (or both) and discuss some quite thorny theoretical and practical problems. There has been an assumption that all subject librarians are familiar with the concepts of IL or hold a shared view of it. Feedback has shown that this is definitely not the case and that many librarians actually enjoyed having the chance to closely look at some of the literature and critique it.

Running the programme on an on-going basis means that there is significant challenge for the organisers. Each module of the programme needs to be evaluated soon after it is taught. Documentation and teaching materials need to be kept updated and assessments marked. There was an expectation that by the third year that things would have eased themselves into a pattern. This has proved not to be the case, as the parameters of the course keep shifting slightly; last year it was the inclusion of all subject librarians, next year it will be the expansion of the programme to include academic literacies, in line with the merger of the Library with Student Learning. This event alone will require a major re-write and re-think of the concepts guiding the programme. A research project is under the way to understand the similarity and the

differences between information literacy and academic literacy in order to incorporate both academic and information literacy into the programme.

Aside from the ostensible outcomes of the programme, there have been other advantages; participants have been able to record some their learning and experiences in their LIANZA (Library and Information Association of New Zealand Aotearoa) revalidation journal. LIANZA is the professional body in New Zealand responsible for maintaining the professional registration system for its members. Library managers have also been able to use completion of the programme as part of the professional development goals for librarians in the University's professional staff development and performance process.

Conclusion

The IL integration programme at the University of Auckland was developed because the findings of the interviews with subject librarians indicated that their conceptions of IL were limited to the local context; many of them also regarded IL integration as an ideal and had no framework on which to pin their IL activities. The views of the subject librarians were not unexpected as the international literature indicated a lack of adequate IL training for librarians in the pre-service environment (Andretta, 2008; Ishimura & Bartlett, 2009; Julien, 2005; Medaille, 2011; Sproles, Johnson, & Farison, 2008; Westbrock & Fabian, 2010). Within libraries themselves only a few institutions have tried to cater for the professional development of their librarians in terms of teaching and other IL activities (Hook, Bracke, Greenfield & Mills, 2003; Litten, 2002; Peacock, 2001; Reedy, 2012).

The methodology behind the programme at UoA would be highly applicable to other institutions thinking of running a similar programme, although some of the content would need to be contextualised to cater for local practices and environments. Module One, in particular, is geared towards local policies and documentation. The modules themselves are interlinked and have been constructed to build on the knowledge taught in the previous module. Despite that, someone else attempting to use the programme might choose to make the modules independent of each other, or to dip their toes into the water by starting with a single module. For example, Module One, which was undertaken within the librarian's own team, alerted subject librarians to policies in the institution and gave them a means of viewing IL as not just a "library" issue. Module Two, a face to face module, provided librarians with practical ways to establish relationships with their faculties and begin the conversations necessary to integrating IL into the curriculum.

The programme at Auckland is a "primer." It doesn't cover everything; it's a jumping off point. Judy Peacock's (2005) vision is that "librarians, as educators, must demonstrate that the design and delivery of information-rich curricula, rooted in rigorous pedagogical principles and blended with the astute use of ICT, will result in profound learning. In order to lead a shift in practice, we must prove that such an approach is not only viable, but vital" (p.154). It is to be hoped that this programme contributes to that vision in some way.

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Appendix

Terminology

Generic – voluntary, extra-curricular classes or activities. No connection to a student's course of study

Integrated (or embedded) – classes and activities that have been developed jointly by faculty and librarians to achieve course objectives and outcomes. These activities are seamlessly incorporated into subject based assignments and form part of the course assessment.
(Adapted from the Australian & NZ IL Framework, 2004, p.6)