Better Understanding Teaching Faculty's Beliefs and Behaviour towards Information Literacy

The University of the South Pacific Perspective

by

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Final Report

The Researcher-Librarian Partnership

An IFLA Library Theory and Research Section
Research Mentoring Program for New Professionals

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Executive Summary

The concept of information literacy is gaining increasing recognition in higher education. While the concept is well known, documented and practised by librarians, the same cannot be said for academic staff, a core agent in the successful promotion and achievement of information literacy. Consequently the purpose of this research was to better understand information literacy from the perspective of faculty staff at the University of the South Pacific through their awareness of the concept and their tendency to incorporate such a concept into their teaching. The potential for partnerships between librarians and faculty staff to transform the learning and teaching of information literacy was also sought. The research is deemed important as it contributes to the limited knowledge about academic staff's point of view towards information literacy and how they involve information literacy skills in their pedagogical role. The findings reveal academic staff's thoughts and associated behaviour towards information literacy. The findings also suggest means of collaborative effort between librarians and teaching staff and areas requiring improvement are highlighted.

Introduction

In the twenty first century, remarkable for the information explosion, information literacy has become a vital skill that is necessary in every aspect of life. In higher education, information literacy is gaining increasing importance due to the fact that the complexity and volume of information necessitates skills to be displayed by three different subgroups – the student body, teaching faculty and library staff. Whilst such skills can generally be derived from the definition as outlined by Johnston and Webber (2003) in that information literacy is "the adoption of appropriate information behaviour to obtain, through whatever channel or medium, information well fitted to information needs, together with critical awareness of the importance of wise and ethical use of information in society", Bruce, Edwards and Lupton (2006) assert that different participative groups in the learning-teaching context may adopt different perspectives about the processes of information literacy education.

It is apparent that information literacy is important not only to librarians though the majority of literature written by them about this topic centres on the views, experiences and strategies of this subgroup themselves. Minimum attention has been given to the beliefs and behaviour of university academics towards this subject with the exception of a handful of studies, the most recent by Wu and Kendall (2006), Brooks, Irwin, Kriigel, Richards and Taylor (2007), and Boon, Johnston and Webber (2007). Of course, in a learner-centred approach, such educators who are directly and constantly at the front-line engaging with students are essential agents in the successful promotion and achievement of information literacy. Furthermore, a major theme that has dominated the literature with regards to the successful adoption of information literacy is that of collaboration between teaching faculty and librarians.

Minimum evidence of attention directed on teaching faculty's perspective of information literacy coupled by a recurring theme in the literature on the importance of collaborative effort between faculty and librarians for the success of information literacy in higher

education were two major motivations for this research into the beliefs and behaviour of university academics in the promotion of information literacy at the University of the South Pacific (USP).

Key research questions concerning information literacy addressed faculty's understanding of the concept, their tendency to incorporate such concepts in their teaching and their expectations of librarians.

Purpose and Aims of the Study

The objective of this research was to investigate educators' beliefs and associated behaviour towards the concept of information literacy.
The research explored:
1). faculty's understanding of the concept of information literacy,
2). faculty's contribution and expectation of their students' level of information literacy education through means such as the use of credit-bearing assignments, and
3). faculty's perception of the assistance librarians should be offering them and their students.

As such the purpose of this research was to better understand information literacy from the perspective of teaching faculty through their awareness of the concept, their tendency to incorporate information literacy concepts into their teaching and their expectation of librarians in realizing information literacy amongst themselves and their students. Relevant recommendations and resulting conclusions were then utilized to better realize the educative role of today's librarians in raising the level of information literacy in order that the teaching faculty and their students at USP become lifelong learners.

Significance

This research contributes to the limited knowledge available concerning academics' perspective of information literacy and is an attempt to balance the abundance of literature about librarians' views of collaborations with teaching faculty for the success of information literacy programs in higher education. The study emphasizes the notion that information literacy is no longer an issue just for librarians.

Within the USP context, the findings will assist practitioners of information literacy to better their services by allowing librarians to step outside typical perceptions of information literacy and be better positioned to play an active educative role.

Outcomes and Deliverables

The expected outcome of the researcher-librarian partnership was to document research findings that identified faculty's beliefs and resultant behaviour about information literacy at USP. As the existing literature points to collaboration between faculty and librarians as a key element in the success of an information literacy endeavour, the outcome of this research revealed issues that could guide practitioners in enhancing information literacy education within the university community.

Literature Review

Introduction

This literature review examines descriptive literature as well as scholarly research findings relevant to the concept of information literacy, particularly this concept within the context of higher education. The literature, both descriptive and professional, is first examined to set the scene in better understanding information literacy. Consequently collaborative efforts between librarians and faculty staff are then discussed before focusing attention on research findings concerned with collaborative efforts in the delivery of information literacy initiatives in higher education.

Information Literacy in Higher Education

The term *information literacy* has been defined in many ways with most having their origins from the American Library Association (ALA) (1989, ¶ 3) as "the ability to recognize when information is needed and be able to locate and use effectively the needed information". Rapid technological changes, proliferating information resources via different sources and medium, together with the uncertainty in the quality of information pose large challenges to society and add to the information literacy dilemma. In particular, Hepworth (2010) recognized that evolving technologies such as virtual learning environments and freely accessible learning and information retrieval tools impact on the learning and teaching environment since they are usually easy to use and are more user friendly with a functionality that directly addresses learners' needs. Consequently, expanding on the definition as articulated by ALA and taking into consideration aspects of society and daily life that is prevalent in the contemporary information environment, the Council of Australian University Librarians (2001) described information literacy as the ability to define, locate, access, evaluate and use information to help resolve academic, workplace, or broader social issues and problems as part of a lifelong learning strategy.

There are two interrelated subthemes of information literacy - the use of information in supporting study and the use of information as a citizen (Johnson & Hathaway, 1999). Clearly, the former is directly related to the aims and processes of higher education as a 'knowledge creation' activity whilst the element of lifelong learning adds a dimension to information literacy that extends beyond educational purposes. As public access to information becomes more sophisticated with advances in technology, information literacy skills are equally valuable for day-to-day decision making as well as formal learning. In this context and in addressing the six frames for information literacy education by Bruce et al. (2006), particularly the relational frame, Lloyd (2010) concluded that in information literacy education, an individual develops and demonstrates an awareness of information sources and information skills in the process of engaging with content.

An abundance of information has been written on integrating information literacy into academic curricula since the ability to use library and other necessary resources to locate,

select and evaluate information for answering research questions is an integral component of any university education. Developing lifelong learners as a graduate attribute is central to the mission of most higher education institutions. Harrison and Newton (2010) concluded from their research that a strong relationship existed between performance on the information literacy skills assessment and students' academic performance throughout their degree program.

Bruce, Chesterton and Grimison (2002) advised that information literacy as focal to the academic experience within the university community should be explored and developed. Supporting such a suggestion, relevant literature pinpoints the need of a pedagogic framework for delivering effective information literacy programs (Arnold, 1998; Carder, Williamham & Bibb, 2001; Cooney & Hiris, 2003; Dennis, 2001; Doherty, Hansen & Kaya 1999; Korobili, Malliari & Christodoulou 2008; MacDonald, Rathemacher & Burkhardt 2000). Further support is offered by Bruce and Candy (2000), Limberg (2000) and Lupton (2004) who believed that information literacy is strongly associated with learning. As Parker (2003) noted, information literacy is becoming an increasingly strategic issue for universities where the onus is placed on learning and teaching strategies that deliver the skills that students need to thrive in an increasingly competitive graduate employment market. Possessing information literacy skills extends learning beyond classroom settings as individuals take such learned skills with them as they graduate from university and take responsibilities in other facets of their life.

Yet, beyond the library profession, information literacy is a vague concept that is often and easily confused with information technology skills. According to Parang, Raine and Stevenson (2000), information literacy is the integration of several concepts – library literacy, computer literacy, media literacy, information ethics, critical thinking and communication skills. Information literacy is hence related to information technology skills but has broader implications for the individual and society as a whole. Whilst information literacy and information technology skills overlap, there is a distinct and broader area in the former. Kasowitz-Scheer and Pasqualoni (2002) suggested that teaching information literacy refers not merely to library instruction but also includes teaching critical and analytical thinking skills regarding the use of information. Hooks and Corbett (2005) summed it up appropriately by stating that it is computer together with critical thinking skills that provide information literacy its unique identity and differentiates it from traditional library orientation and bibliographic instruction.

Collaboration between Librarians and Faculty Staff

Several information science literature clearly demonstrate that collaborative efforts between librarians and academics lead to better results in acquiring information literacy skills (Boff & Johnson, 2002; Cunningham & Lanning, 2002; Korobili et al., 2008). Hooks and Corbett (2005) maintain this point and noted that it is collaboration between librarians, faculty and students which catalyses empowerment of these individuals in society. Additionally, Harrison and Newton (2010), and Robinson and Nelson (2002) asserted that collaboration is the key as librarians and instructors routinely work to meet the needs of students. Taking a step further, Andretta (2005) compared information

literacy frameworks developed by the Association of College and Research Libraries (ACRL), Australian and New Zealand Institute for Information Literacy (ANZIIL) and Society of College, National and University Libraries (SCONUL), and discovered that all three frameworks proposed full integration of information literacy practices within subject-specific curricula to fully benefit students.

From this perspective - with the student as the focus of learning and teaching - the modern academic librarian needs to become increasingly involved with faculty as they promote information literacy through shared ownership. Bennett and Gilbert (2009) stressed that partnering with faculty in new educational methodologies is one significant way in which librarians and faculty can work together to enhance student learning. Such an approach to learning and teaching is an educational technique which underscores involved learning and is ultimately student-centred and team-based. The pedagogical paradigm shift from an emphasis on content transmission to student-centred learning makes information literacy a holistic educational outcome based on transferable concepts and skills. To contextualise information literacy, Snavely (2001), Andretta (2005) and Walton (2010) proposed librarian-academic collaboration in order to generate assessment strategies that are performance-based, focussed on the research process and within subject-specific contexts.

As Doskatsch (2003) explained, the unbundling of traditional teaching activities means that an individual academic no longer has sole responsibility for the teaching and learning process. Unless librarians break away from their traditional roles, their teaching methods may not be adequate in transforming information literacy skills for lifelong learning purposes. Since information literacy is a concern for all sectors of society as highlighted in the Prague Declaration (UNESCO, 2003), it is a prerequisite for participating effectively in the information society and is thus part of the basic human right of lifelong learning.

The idea of lifelong learning and the centrality of information literacy to the lifelong learning agenda has made various inroads into the policies and programs of Australian universities (Bruce, 2001). Consequently, many such universities are attending to lifelong learning as a graduate attribute and in so doing paving the way for faculty-librarian partnerships. Similarly, collaboration is a key theme that the American Association of School Librarians, a division of ALA, emphasizes for building partnerships for learning. Schultz-Jones (2009) indicated that it is collaboration that will continue to be a prominent theme for advancing student learning and achievement, and Bruce (2001) further elaborated that such partnerships seem to be based on changing perspectives, both from the librarian as well as the faculty.

On the one hand, the librarian perspective stems from the concern of the eroding monopolistic position previously enjoyed by libraries with regards to information. This apprehension is due in part to advances in technology that has led to the library profession taking a broader understanding of the role of information literacy and the important role of the information professional in fostering student learning. On the other

hand, faculty perceive a scholarly approach and place information literacy as a prerequisite, or sometimes regrettably as remedial, to student learning.

However, Nimon (2000) described a gap between library-centred and academic ways of thinking about information literacy, a gap necessary to be bridged for student learning to be supported and transformed. Furthermore, Cunningham and Lanning (2002) cautioned that establishing a true collaborative effort is perhaps the greatest challenge in promoting information literacy. Such a challenge stems from issues surrounding negotiation, commitment, merging of agendas, and limited time and resources that are faced by parties wishing to strike a collaborative partnership.

Ultimately though, the aim of academic librarians and faculty should be to assist students learn content through the processes of information use, and thereby transforming the information literacy agenda from a library-centred issue to a mainstream educational issue. Information literacy, viewed as an important graduate attribute, is accelerating curricular and pedagogical change in progressive universities. Bundy (2004) proposed that academic librarians need to partner with their teaching colleagues in that change and should be willing to be held accountable for graduates who are not able to function effectively in the complex information environment of the twenty-first century. He further explained that the mission of the university library must be described and asserted in educational, and not informational, terms.

Faculty Staff's Beliefs and Behaviour Regarding Information Literacy

To better understand the perspectives of discipline-based academics, Bruce, Edwards and Lupton (2006) aptly warned that there are different ways in which teaching, learning and information literacy may be approached. Whether a student, academic or librarian, it is not uncommon for such individuals to adopt different views in different contexts about learning and teaching.

Generally academic communities value the services offered by librarians although a deep appreciation by all for the full involvement that librarians make to the educative mission of universities is not always apparent. Several dated research claimed that the attitudes of academics towards librarians are negative and subordinative in nature (Cook, 1981; Divay, Duncas & Michaud-Oystryk 1987; Haynes, 1996; Oberg, Schleiter & Van Houten, 1989). As noted in the previous section, with the turn of the century, an increase in published reports detailing collaborative efforts between academics and librarians in the delivery of information literacy sessions have been observed. Interestingly though, such reports are mainly written by library professionals and are mostly published in librarianship journals. Doskatsch (2003) observed that there is very little evidence of acknowledgement of the role of librarians in the educational process in discipline specific pedagogical journals. On a similar sentiment, Harrison and Newton (2010) noted that academic staff have remained rather quiet on the topic of information literacy and joint publication with librarians have remained a relative rarity.

Boon, Johnston and Webber (2007) noted in part of their work, which derived from the experiences of library and information science practitioners, that information literacy frameworks reflect the conceptions of those practitioners but do little to illuminate the conceptions and experiences of other groups involved in information literacy education. It has been acknowledged by the SCONUL Task Force on Information Skills (2003) and the ACRL IS Research and Scholarship Committee (2003) that academics play a key role in producing information literate students. As vital agents for the success of information literacy, the perceptions of academics as front-line educators are fundamental to better understanding and further implementing information literacy.

Academics' perception of information literacy has been given limited attention in the research literature. McGuiness (2003) discovered that academics do not necessarily value the contribution of librarians to teaching and learning. She further noted that much of the literature about information literacy education was written by librarians for librarians as it was assumed that librarians play the key educational role. Apart from McGuiness' study of Irish academics, Bruce (1999) conducted a phenomenographic study of Australian university educators. In Canada, Leckie and Fullerton (1999) surveyed science and engineering faculty. In America, Wu and Kendall (2006) studied San Jose State University while Brooks, Irwin, Kriigel, Richards and Taylor (2007) focused on the University of Michigan - Dearborn. Similarly Boon, Johnston and Webber (2007) investigated United Kingdom English academics conceptions of information literacy.

In paying attention to the three most recent findings, Boon, Johnston and Webber (2007) discovered that information literacy plays an integral role to academic research in the English discipline and that its significance informs teaching and learning processes as well. The elements that make up information literacy were highly valued by the English academics that were interviewed and the development of information literacy skills was seen as a necessary learning outcome for the discipline.

In the second most recent research, the findings of Wu & Kendall's (2006) research into teaching faculty's perspectives on business information literacy revealed that all faculty staff who were surveyed expected their students to use library research for their assignments. It was also determined that the teaching of aspects of information literacy by librarians was essentially an expectation by teaching faculty. With a very high response rate, the results were positive in terms of collaborating with librarians, referring students to them for assistance in term projects and requesting library instruction/lecture.

In the other most recent study, at the University of Michigan – Dearborn, results from telephone interviews about research education classes discovered that faculty satisfaction with instructional sessions was mixed, and that 86% of faculty who did not ask librarians to provide instructional sessions did nonetheless incorporate activities into their classes to help their students learn to use library resources.

Moreover, though written anonymously (2010) but arguably one of the most recent information to date, the Primary Research Group in a study revealed that nearly three-quarters of faculty members at American colleges and universities have incorporated

some form of information literacy instruction in their teaching to assist students familiarize themselves with library resources in their field. In the same study, more than half of faculty members at Canadian institutions have similarly included information literacy instruction. Amongst faculty who have incorporated information literacy instruction into their courses, those teaching in small colleges were more likely to do so than those who taught at large colleges, while those at research universities were least likely to do the same.

Project Design

Sample

USP is comprised of fourteen campuses located in twelve member countries. Sixty-seven percent of the total student population of 20,437 students is located at Laucala campus which makes it the main and largest campus, followed by Solomon Islands (8%) (USP, 2010).

USP is organized into three faculties – Faculty of Arts and Law (FAL), Faculty of Business and Economics (FBE), and Faculty of Science, Technology and Environment (FSTE) – which comprises academic staff who conduct research as well as teach a range of programs at the undergraduate and postgraduate levels. Each faculty, led by a Dean, is made up of various schools, institutes and centres.

Given that Laucala campus is the largest USP campus and in an attempt to achieve better representation, the academic staff that comprise the three faculties located on this campus hence constituted the sample for this research project. According to Katafono (personal communication, December 6, 2010), the current total number of academic staff at USP Laucala campus is approximately 205 and each staff member was invited to take part in the survey. Within the broad category of academic staff are Assistant Lecturers, Lecturers, Senior Lecturers, Associate Professors and Professors.

Research Methodology

This research project used a cross-sectional survey instrument, in the form of a self-administered questionnaire to a purposive sample. The participants were electronically invited to take part in the survey and submitted their responses via Survey Monkey, a web-based survey software program. This methodology was chosen, due to the:

- ability to obtain an accurate and complete list of names and email addresses for academic staff at USP's Laucala campus;
- capacity for respondents to remain anonymous and complete the questionnaire in their own time thereby encouraging thoughtful and accurate answers;
- semi-structured question format, which would have encouraged respondents to focus on and describe their beliefs and behaviour towards information literacy. The non-demographic, questions used were "as open-ended as possible in order to let the respondents choose the dimensions of the questions which they thought

were important as it would reveal aspects of the respondents' relevance structure" (Marton, 1986, p. 42).

Although the phenomenographic research methodology has established itself as a popular methodology for qualitative research into learning and teaching, limited time and human capacity in this case were deemed deterrents in not choosing such a method.

As this study is preliminary in nature, use of a survey targeted at a larger pool of participants was deemed more appropriate, as it would give a more generalised and better representation of the beliefs and behaviour of academic staff towards information literacy. Once a rigorous analysis has been gleaned from the survey findings, then more in-depth qualitative information may be gathered from a core group of participants by employing the phenomenographic research methodology.

Pilot Study

The online survey was pre-tested on a few academic staff from the larger regional campuses, namely Solomon Islands, Vanuatu and Samoa campuses. Of the fourteen USP campuses, these three campuses are the only campuses apart from Laucala campus that employ qualified librarians and their assistance was sought in this research endeavour. The pilot study allowed feedback on the structure, content and technicalities of the online survey.

Data Analysis

The initial analysis took place immediately upon receipt of responses whereby the researcher read the responses and reflected on the answers. Once all the responses were received by the cut-off date, demographic information was compiled and emerging themes from the responses were explored and concept maps utilised in an attempt to better understand participant responses. Key quotations, central themes and potential categories of description were then highlighted. Following this, responses were grouped and ranked accordingly.

Theoretical Framework

Information literacy is gaining increasing importance in higher education. In spite of this, minimum evidence of attention has been directed on teaching faculty's beliefs and behaviour towards this topic. Coupled by this is a recurring theme in the literature on the importance of collaborative effort between faculty and librarians for the success of information literacy. This research then aims to fill the gap in the literature by focusing on teaching faculty's beliefs and behaviour towards the concept of information literacy, and is an attempt to compensate for the vast amount of information already written from the perspective of librarians.

Delimitations

Issues that may have affected the research results include:

- the willingness of individuals to participate in the survey;
- the accuracy with which respondents interpreted the questions and consequently completed the questionnaire;
- the research been limited to faculty respondents from Laucala campus only, although the results may have implications for other campuses

Ethical Considerations

In conducting this research, ethical considerations included:

- placing value on intellectual honesty by adequately acknowledging earlier research by people whose works were useful in the conduct of the present research;
- fully disclosing intent of research to subjects and consequently requiring all participants to provide their informed consent;
- protecting human subjects by taking all possible measures to respect privacy, confidentiality, anonymity and security of personalized research data;
- reporting procedures and findings as accurately as possible;
- debriefing of the research results to interested participants;
- acknowledging the facilitative assistance of the researcher-librarian partnership and where necessary the contributions of the mentor

Risk Assessment

Potential risks included:

1) Low response rate
   Academic staff are busy individuals who teach, mark assignments and examination scripts and at the same time conduct research. Hence their busy schedules may have negatively impacted on this research's response rate. In an attempt to counteract this, the survey was held during March and April. Mid-semester break for Semester One was within this period and it was assumed that academic staff would possibly have a brief respite from teaching and marking assignment scripts. Additionally reminder notices were sent out.

2) Researcher-mentor dynamics
   Both the researcher and mentor hold full time work positions and activities associated with this research were done in their own spare time. Consequently good time management consisting of adequate planning and scheduling, together with open and constant communication between the mentor and researcher was necessary to ensure that deadlines were met and that the researcher-mentor relationship was a win-win scenario. Follow-up sessions and scheduling of timely meetings was a necessity.

3) Technical issues
Technical problems may have arisen from the internet service provided. Another technical issue was that respondents may have lacked the ability to use the new technology and thus be unwilling to participate in the online computer survey. Furthermore, email messages announcing the survey may be regarded as junk and thus be deleted from the mailbox or automatically diverted into the trash by screening programs. In an attempt to minimize such issues, the survey was run over two months thereby giving respondents ample time to overcome software and hardware issues, and reminder notices were also sent out.

Quality Assurance and Evaluation

To ensure the quality of the research project, the following measures were taken:

- drawing up a project time-line and committing to it;
- revising the project constantly and continuously;
- inviting professional colleagues to check the project and make recommendations for improvement accordingly;
- incorporating suggestions and comments made by the Mentor;
- taking into consideration ethical issues as outlined in an earlier section.

In evaluating the project outcomes against the initial objectives, a high response rate was ideally sought to achieve better representation in identifying teaching faculty's perceptions and behaviour towards the concept of information literacy at USP. The responses from the online survey would ultimately assist librarians in enhancing the level of information literacy at USP.

Budget

No expenses were anticipated nor experienced as free open source packages for online collection of data were explored and employed. Unexpected miscellaneous expenses did not arise during the course of this project.

Data Analysis

Characteristics of the Sample

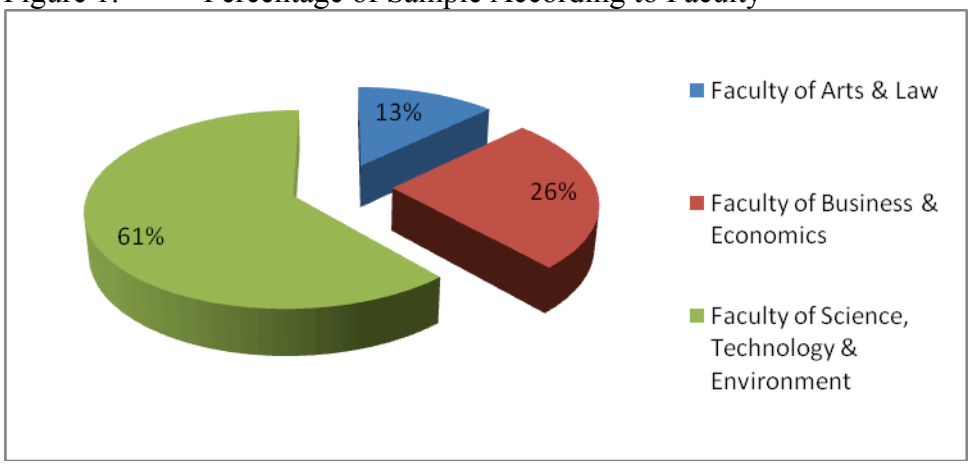
Of the two hundred and five academic staff who were invited to take part in the online survey, 39 responses were received. The response rate was calculated as follows:

$$\frac{39 \text{ (number of respondents)}}{205 \text{ (number of invitees)}} \times 100$$

This resulted in a response rate of 19%.

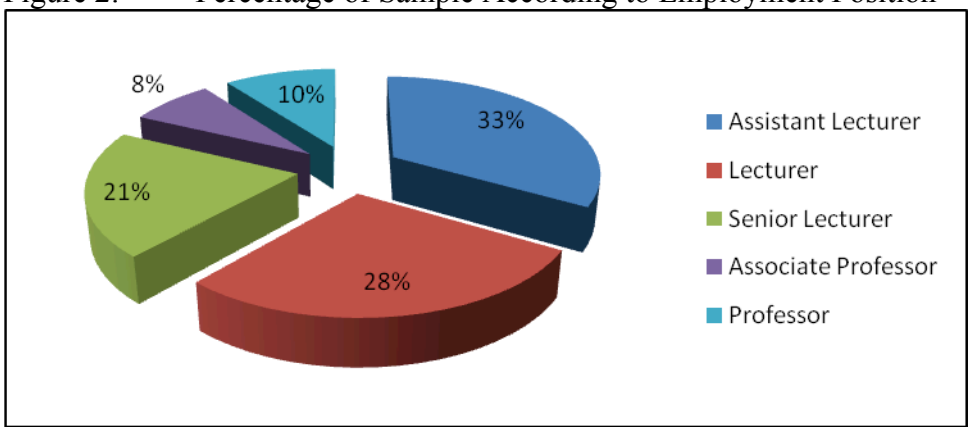
Among the respondents, 12.8% (representing 5 respondents) were from FAL, 25.7% (10 respondents) were FBE staff while the remaining majority of 24 respondents (61.5%) were from FSTE.

Figure 1: Percentage of Sample According to Faculty



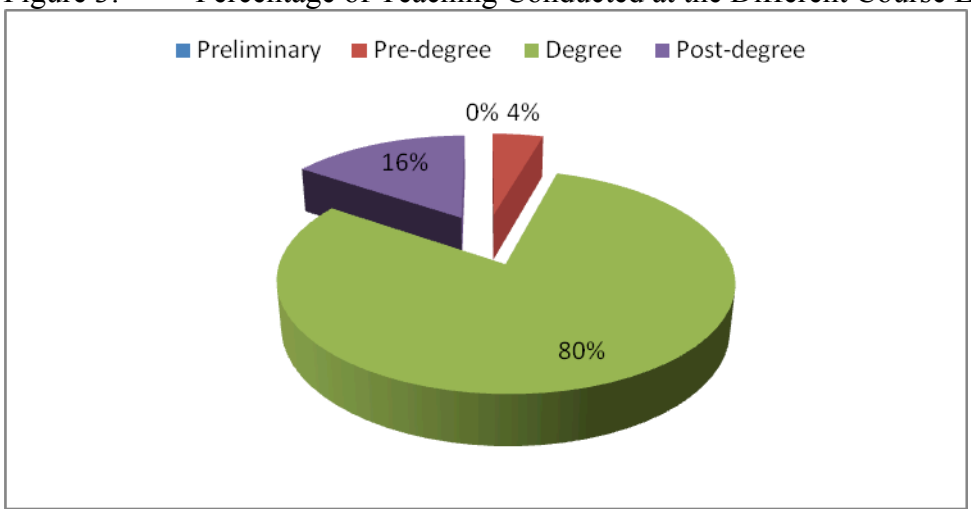
With regards to the employment position of the faculty staff who responded, 13 (33.3%) of the respondents were Assistant Lecturers, 11 (28.2%) respondents were Lecturers, 8 (20.5%) respondents were at the Senior Lecturer ranking, 3 respondents (7.7%) were Assistant Professors while the remaining 4 (10.3%) respondents were at the Professor level.

Figure 2: Percentage of Sample According to Employment Position



Amongst those academic staff who responded to the survey, teaching is predominately at the degree level (36; 80%), with none teaching at the preliminary level. Two (4%) responses taught pre-degree level courses whilst 7 (16%) taught post-graduate level courses. It is apparent from the total count that respondents are not limited to teaching at only one level of course, as is the case with academic staff teaching a combination of degree and post-degree level courses.

Figure 3: Percentage of Teaching Conducted at the Different Course Levels



Information Literacy within the Context of Learning and Teaching

Question 4

In this question, respondents were asked to describe their understanding of the concept of information literacy. In addition to information literacy been the central theme for this research, Question 4 was also derived from the USP Strategic Plan 2010 – 2012, particularly Priority Area 1, which is concerned with learning and teaching. The strategic goal states that the university will deliver relevant and high-quality programmes leading to improved levels of student success and graduates who are well-grounded in Pacific issues and who are amongst seven other attributes, ICT and information literate.

Of the 39 responses, 24 (62%) respondents answered this question, while 15 (38%) participants skipped this question. Unlike other questions posed in the survey, instructions for this particular question clearly stated that participants should go to Question 7 if they were unable to answer this question about what is their understanding of the term information literacy.

In analysing the answers to Question 4, four main categories arose which captured the respondents various ways of what they understood of the concept of information literacy.

Category 1: information literacy is viewed as possessing an ICT component

Academic staff possess the view that information and communication technologies assist and enhance the skills required to be information literate and graduates who are information literate are also competent in communication skills. Individuals who are information literate are comfortable with using software tools for accessing and processing information from a variety of resources, including electronic sources.

Category 2: information literacy is viewed as the ability to use information to broaden one's knowledge

Respondents understood the concept of information literacy as the ability to access, analyze and make appropriate meaning out of information so that knowledge is created from information. The important distinction is that been information literate allows a

person the ability to turn information into knowledge for purposes such as decision making, making informed decisions and finding solutions to problems.

Category 3: information literacy is viewed as the ability to correctly interpret information
Respondents were of the view that not only are graduates expected to identify what information is needed, where to look for such information, how to identify its validity but must also have the ability to correctly interpret information. As information carries various forms of meaning and may be subjected to different interpretations according to the sender as well as the receiver of such information, been able to correctly interpret the information message as designed by the sender of such information becomes fundamental in correctly understanding the meaning behind such information.

Category 4: information literacy is viewed as applying information to real life situations
Academic staff who participated in the survey understood information literacy as extending beyond the context of learning and teaching at the academic level. Whilst information literacy is seen as necessary for success in one's studies, it is equally applicable to real life situations. Information literacy is seen as useful in life not only in academia but is equally important at home, work and in the community.

Question 5
For this question, participants were asked to list at least three information literacy skills that they thought student should master. Similar to the response rate of the previous question, 62% of the respondents answered this question, whilst the rest skipped this question.

After reading all the responses for this question and then analyzing them, four categories were developed in an attempt to clearly define each group's thoughts on what skills they thought students should master in their class. In categorising the responses, all responses were carefully considered by searching for any similarities and differences. Hence a framework consisting of five categories emerged which captured the variation in expectation of academic staff at USP towards the acquisition of information literacy skills by their students.

Category 1: students should be able to critically evaluate information
The vast majority of respondents for this question cited that their students should possess the ability to analyse information critically so that they are able to discern and choose accurate, quality and reliable information to incorporate into their assignments and studies alike. Respondents made mention that whilst it was vital to critically analyse information from print and online materials, students should also similarly scrutinise the views and opinions of their fellow students. In measuring the value of information found, therefore, requires more effort from the reader since each document needs to be analyzed according to appropriate criteria, one been the START criteria. Devised by Patricia Iannuzzi, the START criteria is an acronym that considers the scope, treatment, authority, relevance and timeliness of information sources.

Category 2: students should be able to correctly cite and reference resources
Academic staff see the importance of their students learning about bibliographic instruction and expect students to correctly cite and develop lists of references or bibliographies that are within copyright regulations. In-text citation and references using a particular citation style is necessary for students to master at the academically level as plagiarism is a serious offence in academia.

Category 3: students should be able to apply knowledge gained for practical use
In being able to locate, access and critically analyze information, students must then be able to utilize the resulting knowledge by knowing how to apply such knowledge gained or skill developed for practical purposes and novel situations. Application of theories learnt to scenarios, case studies and for practical use in the real world is viewed by academic staff as a necessary skill, that advances from those information literacy skills, that their students should possess.

Category 4: students should have the ability to access online resources and use various software applications
The focus here is that students in this modern era of the digital age, an age defined by its seamless migration from the information age, are expected by their lecturers to be able to stay abreast and use a variety of information sources and computer technology. As computers become more and more a part of everyday life, information access and the necessity of information literacy and technology proficiency have expanded drastically. Hence emphasis is often given to the growing importance of information technology and electronic resources:

> [Students should be able to] search for academically-related information using search engines such as Google Scholar and Google Earth, and the library's various electronic databases.
>
> Knowledge of and ability to access and download information from appropriate international websites, for free or for a fee; using specialist computer software such as *People* (for population projections).

Question 6
After participants were instructed to list at least three information literacy skills that their students should grasp, the next question asked them to detail how they incorporated such skills into their pedagogical role. Yet again, approximately 62% of the respondents answered this question, whilst the rest skipped this question. Through the use of three categories, this section thus reports the variation in academics' ways of incorporating the learning of information literacy skills expected of their students:

Category 1: research, assignments and projects
Academics expect their students to experience information literacy by conducting research, through the use of literature held in the library as well as online resources whether they be from the library's online databases or the internet. Students are expected

to read widely, through successful searching and locating of information, critically evaluate and summarise information, as well as reference accordingly.

Category 2: hands-on exercises and case studies
Academic staff expect their students to experience information literacy through problem solving exercises during tutorials, lectures or whilst completing assignments. The exercises and case studies required students to utilise the information they have found, turn it into knowledge and then apply this knowledge for practical purposes. In this category, the academic staff who responded to the survey were interested in their students applying their learning to solve real life problems that were enacted in case studies and hands-on exercises. This category is synonymous with the third category formulated from the responses to Question 5 - students should be able to apply knowledge gained for practical use.

> The assignments provided in the course are case study-based for which students need not only understand the concepts but also apply the appropriate concepts to solve the problem.
>
> Student assignments that involve real life issues.

Category 3: information literacy presentations
Academic staff expect their students to experience information literacy through information literacy presentations conducted by librarians liaised through their faculty, section or discipline. This form of library instruction informs students on how to correctly use library resources, both print and online, for academic purposes. Such instruction ranges from how to use the online catalogue, access the various online databases, critically evaluate information and correctly cite sources.

> Students are given lectures on information literacy. Students then practise going online and actually searching and retrieving articles. Extra tutorials are conducted where students do summary exercises and practise in-text referencing.

<u>Faculty – Librarian Collaboration</u>
<u>Question 7</u>
The focus of this question was to find out from the opinion of academic staff what assistance librarians should offer them and their students for the purposes of work and study. This question elicited 26 responses whilst 13 respondents chose not to note their opinion about working in partnership with librarians from the USP Library. In reading, analysing and interpreting the responses, three major themes emerged and the responses were consequently categorised according to these themes.

Category 1: librarians can assist by providing high quality professional service
Faculty staff noted that a core feature of USP Library, any library for that matter, is its service delivery by its staff. Service must be professional, timely, accurate, reliable and above all of a high standard. It was noted that academic staff expected librarians to be more approachable to its users and its products needed to be accessible when required. As

users justify the existence of any service enterprise, libraries inclusive, library staff both paraprofessional and professional need to assist and encourage its students and faculty staff to fully and correctly utilise the mirage of products and services on offer. Additionally, in terms of infrastructure, faculty staff noted that libraries provide a space that allows their students to reflect, study and access print and electronic reading material of relevance to their courses. As such, librarians hold the key in marketing and directing users to relevant resources.

Category 2: librarians can assist through faculty liaison

The responses that were allocated to this category were focused on liaison work conducted by librarians for staff of the various schools, departments and divisions of the university. Faculty staff sought improvement and continuation of liaison tasks offered by librarians. One of the tasks mentioned was to periodically and regularly disseminate information via electronic means about the latest texts and journals concerning the various subject disciplines. Additionally, other respondents suggested that librarians should work together and more closely with lecturers to identify useful resources for their subject discipline. Still other staff highlighted that in their opinion "librarians are currently doing the right thing" and faculty staff are adequately made aware of which librarian to contact for assistance as per their respective schools, departments and divisions.

> Alerting staff to new relevant acquisitions (already been done).

Category 3: librarians can assist through the provision of information literacy workshops

For this category, the focus was on librarians facilitating access to library resources, both physical and online, through pedagogical means. Mention was made on running regular workshops, seminars and lectures on library catalogue and database searching, correctly citing sources of information as per the various citation styles and refining search terminology. Library tours offered by the library were also notably mentioned. The overarching expectation in this category is that librarians have the ability and therefore should make information user friendly for students in order to successfully complete their projects and assignments.

> Librarians should indulge actively and promptly to support students and staff in their research efforts.

> Create tutorial videos about information literacy.

Question 8

For this question, participants were asked if they had had the opportunity to work with a librarian from USP Library. Seventy percent responded in the affirmative, while the remaining 30% responded in the negative.

Question 9

This question asked those respondents who answered Question 8 to elaborate on their choice. Interestingly, only those who responded "yes" to Question 8 went on to answer

Question 9. Hence there were no responses that elaborated on why faculty staff have yet to work with a librarian from USP Library.

Having analysed all responses for this question, two categories were developed as a means to clearly define each group's answers regarding the type of work the librarian has conducted to support faculty staff and their students. These two categories are similarly related to Categories 2 and 3 of Question 7.

Category 1: Librarian support through faculty liaison
Academic staff who participated in the survey noted that liaison efforts between themselves and librarians have assisted them and their students in their work and study purposes. Liaison work mentioned included providing resource lists for students, holding a reserve collection of textbooks and class notes and ordering new recommended books and duly been notified upon their availability.

Category 2: Librarian support through information literacy workshops
The vast majority of responses fell into this category and they centred on librarians providing information literacy workshops, seminars and sessions. The focus of such classes included literature searching in general, proper usage of library and internet resources including online database searching, devising correct bibliographic citations and using Chemical Abstracts. In addition to librarians organising these hands-on sessions, library tours are also offered to introduce students to the physical layout of the library.

Discussion

As outlined in an earlier section, the purpose of this research was to explore:
1). faculty's understanding of the concept of information literacy,
2). faculty's tendency to incorporate information literacy concepts into their teaching, and
3). faculty's expectation of assistance from librarians.

Hence this section will provide a detailed commentary in terms of the purposes stated above.

The results clearly showed that over one third of the faculty staff who took part in this survey were not able to answer Question 4 resulting in that they had little to no understanding of this important concept. Since these staff are in the teaching profession and producing USP graduates who are information literate is an important outcome, so much so that it is specifically mentioned in the university's strategic plan demonstrates that the concept of information literacy deserves more attention and promotion, however the reasons for the lack of knowledge of this important area was not investigated in this research.

The survey results revealed that conceptions of information literacy held by the respondents include making meaningful use of information as well as its application to real life situations. Additionally information literacy was viewed as having an ICT

component. Whilst faculty are aware of the textbook definition of information literacy - in general terms as accessing, retrieving, analysing and using information – they were able to address the definition beyond its mere description and classroom setting. Faculty staff were capable of seeing information literacy as not only applicable in academia for successful completion of assignments and projects but useful in the wider world by broadening one's knowledge through correctly interpreting information and applying this newly acquired knowledge to real life situations. Interestingly, with regards to the conception of information literacy as possessing an ICT component, academic staff demonstrated that they did not erroneously perceive information literacy as the same as ICT but that ICT is an important element in becoming information literate, that individuals are able to utilise ICT tools in their quest to become information literate.

Faculty staff's conceptions of information literacy were further examined in the next question which asked them to describe those information literacy skills they expected their students to master. Their expectations were grouped into four categories. Academic staff not only expected their students to identify, locate and use needed information but importantly to possess the ability to critically analyse the found information and measure its accuracy, quality and reliability. Students were also expected to be able to correctly cite and put together bibliographic references according to a standard citation style. Emphasis was placed on the need for students to possess the ability to turn information into knowledge and apply this acquired knowledge for practical purposes beyond the classroom in the real world. Academics also acknowledged that information is now not only available in print form but also electronically and they thus expected their students to be able to know how to access such resources and in the process be able to use a multitude of software applications.

Having ascertained faculty staff's conceptions of information literacy, Question 6 examined their associate behaviour towards the notion of information literacy by examining their tendency to incorporate information literacy skills in their pedagogical role. The purpose of this question was to find out whether academic staff merely had knowledge of information literacy but did little to actually include its associated skills into their teaching or whether they viewed information literacy as important and thus expected their students to master skills associated in becoming an information literate individual. For this question, three categories were devised to capture respondents' variation in including information literacy skills in their teaching role. These categories were (1) research and assignment purposes, (2) hands-on exercises and case studies, and (3) inclusion of information literacy presentations within the curriculum. Whilst the third category may be seen as a discrete activity to teach specific information literacy skills, the first two categories may be viewed as integrated information literacy education, whereby information literacy is integrated into the curriculum by using problem-based learning, reflection and synthesis. The results to this question suggest that information literacy is included in the actual practices of teaching, learning and assessment.

In general, results thus far for Questions 4 – 6 suggest that information literacy plays an important role in academic success by sharpening critical thinking and reflective practice.

Question 7 was employed to find out what assistance academic staff expected librarians to be offering them and their students. This question was included in the survey to discover areas for improvement in the library from the perspective of faculty staff, in essence to find out what was been done right or wrong. Academic staff had high expectations regarding service delivery from academic staff and anticipated them to improve on their approachability to users as library staff are viewed as ultimately, the best people to guide users in realising their potential to become information literate. Additionally, faculty liaison between librarians and faculty staff was mentioned as an area of continuous improvement and faculty staff expressed appreciation for the provision of information literacy workshops conducted by liaison librarians.

For the remaining questions, when asked whether they had worked with a librarian, over two third said they had while the remaining respondents have yet to do so. Of interest, only responses for the last question were received from those staff who have had the opportunity to collaborate with a librarian. Those that have yet to work in collaboration with library staff thus opted not to express their reasons in Question 9. Since the two categories for Question 9 relate similarly to those in Question 7, namely librarian support through faculty liaison and information literacy workshops, this suggests that the expectations of academic staff have somewhat been met and there is some collaborative effort between the two groups of professionals.

Recommendations and Future Directions

With the relatively low response rate coupled by a moderate percentage of respondents who skipped Question 4 demonstrates that there is a need for more attention and promotion of information literacy by librarians to the university community at USP. More academic staff need to be convinced of the necessity of being information literate in themselves as well as their students as they tackle the changing world of information, knowledge and wisdom.

The mention of information literacy in USP's 2010 - 2012 Strategic Plan requires all members of the university community to make a concerted effort in realising themselves as information literate individuals. There is much potential for collaborative partnerships between librarians and faculty staff, and librarians should probe the potential to influence the curriculum for further infusion of information literacy in pedagogy.

Since this study is explorative in nature, a revised version of the research should be carried out with the aim of increasing the response rate so that results and accompanying interpretation may be established with confidence. Additionally, in-depth qualitative information may be gathered from a core group of participants by employing the phenomenographic research methodology, as such a research methodology has established itself as a popular methodology for qualitative research in the realm of learning and teaching. Respondents will then be allowed to validate, explain or qualify their answers and thus provide more insightful information.

Conclusion

Within higher education, information literacy continuously gains increasing recognition as a lifelong learning skill not merely for educative purposes alone. Despite this, mention of educators' perspectives of information literacy in the literature is minimum. Furthermore, within the broad context of information literacy, opportunities arise for collaborative partnerships between librarians and faculty in transforming the learning and teaching experience.

With this as the impetus, the findings of this research reveal that academic staff possess a fairly good understanding of the concept of information literacy. Adopting terminology mentioned by Bruce and Boon – lower and higher order – aptly describes USP's academic staff's conceptions of information literacy. Their descriptions ranged from lower order, such as locating, retrieving, accessing and citing information, to higher order, particularly critical thinking, and broadening and applying one's knowledge. The findings also suggest integral involvement of information literacy skills in the curriculum, as is evident in the various methods academic staff have employed in the learning and teaching of such skills at a deeper level, in which students are able to make sense of the content, apply and transform such content to new contexts.

In terms of faculty – librarian partnerships, the findings suggest that librarians need to rethink their role as the information professional in fostering student learning and academic support, thus moving away from the archaic view of mere information retrieval purposes.

As the awareness of the importance of information literacy continues to grow, librarians are ideally positioned to transform their profession and skill set by furthering the role of information literacy in pedagogy.

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