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Great Expectations? Developing a profile of the 21st century library and information student: a Queensland University of Technology case study

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Introduction

The library and information profession in Australia, and indeed throughout the world, is rapidly aging. In the United States it was recently predicted that, by 2017, some 68 percent of today's librarians will have retired (Lynch, 2002). The demographics of library and information professionals in Australia mirrors this situation, where 52 percent of qualified librarians are over the age of 45, compared with 34 percent across all other occupations. Only 19 percent of librarians are under the age of 35, compared with 42 percent across all occupations (ABS, 2003). The issues associated with an aging workforce include the need for effective succession planning and the development of new leaders.

A recent Australian study highlighted the challenges facing the profession:

> While it may be apparent that a large number of retirements are looming, there is a great deal of uncertainty among the profession about the skills and positions that will be required to replace those who are leaving. All evidence, however, points to the need for adaptability and flexibility in staff, with less focus on one particular job or set of skills. Hiring practices, however, still remain focused on hiring individuals based on their expertise in a particular area, such as cataloguing or reference, rather than on their learning abilities and characteristics such as risk-taking, flexibility and ability to manage change.
>
> (Whitmell, 2004, p.5).

In Australia, there is a keen awareness of the important role to be played by the new generation of information professionals. The Australian Library and Information Association (ALIA) has a New Generation Policy and Advisory Group (NGPAG) which aims to strengthen the participation of new members of the profession and to ensure the association is relevant to its younger members. In addition there is a very active ALIA New Graduates Group[1] to offer new professionals a forum to communicate and socialise with colleagues and to build relationships and networks within the profession. The New Grads have established a very successful biennial conference program, the New Librarians' Symposium.

Over the past decade or so, there is an increasing awareness amongst library and information practitioners and academics that the future of the profession itself is closely aligned with the quality of the students graduating from the library and information science (LIS) courses. It is essential that there is open dialogue and effective discourse between all members of the library community and its associations with library educators "if the curriculum taught and the types of individuals chosen by the schools are to match what is needed by library employers" (Whitmell, 2004, p.15). The challenge for LIS education is to attract students to the LIS schools with the desire to work in a dynamic profession, and to then ensure their expectations are met by offering a stimulating and cutting edge course. Interestingly, to date very little information has been obtained about the type of students currently entering into LIS education, about their expectations for the LIS curriculum or about their future profession.

The Queensland University of Technology (QUT) is committed to ensuring that its Graduate Diploma in Library and Information Studies (GDLIS) is relevant to both students and the profession alike. In particular, QUT endeavours to ensure that the course is continually being developed to meet the ever changing recruitment needs of the LIS industry it serves. Members of the GDLIS teaching team felt it was important to know more about the 21st century LIS student and what their expectations might be for now and the future. With this goal in mind they embarked upon a study to explore the attributes, capabilities and expectations of the students the LIS course had attracted.

Participants in the study were the students enrolled in the GDLIS course from 2002 to 2004. On entering the course, the students were surveyed to gather data on demographics, academic history and previous employment. The survey also obtained the students' perceptions on the types of skills required by LIS professionals and the functions they perform in the workplace. Students were also asked to indicate their reasons for entering the GDLIS, their expectations of the course, and their future career aspirations. In addition, the students completed the Myers Briggs Personality Inventory in order to develop a better understanding of the personality types of this new generation of information professionals. Students were also asked to complete an exit survey, so that any changes in their perceptions about the skills and activities of LIS professionals could be captured.

Context for the study

The Graduate Diploma in Library and Information Studies (GDLIS) is a postgraduate course offered by the School of Information Systems in the Faculty of Information Technology at QUT. While the GDLIS is an example of a tertiary education course that aims to prepare graduates for employment, the academic staff are mindful of the enormous range of employment opportunities available to 'information professionals'. The landscape is extensive, from the broad levels of academic libraries, public libraries, State and National libraries, through to the narrower levels of special libraries and information centres, such as law libraries, health and medical centres, music libraries etc. Opportunities also exist beyond this more traditional library context, with career avenues available within knowledge management, records management, Internet and intranet development and so on.

The course was offered as a one-year full-time, two year part-time study program, in a face-to-face teaching and learning mode, with seven core units and one elective unit to be completed. As the

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[1] The ALIA New Graduates Group website can be accessed at http://www.alia.org.au/groups/newgrad [2 May 2005].

course itself is recognised by the Australian Library and Information Association (ALIA), students are eligible for professional membership of ALIA upon graduation. On average, enrolments sit around 60 FTE, with a fairly even split between full-time and part-time students. As with many postgraduate LIS courses, the student cohort is always an interesting one, with a wide diversity in academic background, employment history, personal interests and life experiences.

Students are accepted into the QUT study program with on the basis of having completed an undergraduate degree in any discipline, with a minimum Grade Point Average (GPA) of 4.5 on a 7 point scale, and with evidence of satisfactory skills in computer literacy. It should be noted that there is no mechanism in place to formally interview students, although, if potential students make contact with the course coordinator to enquire about the course and/or the career prospects, she has the opportunity to discuss perceptions and expectations about the LIS profession. This situation contrasts significantly with the situation in Sweden, for example, where prospective students undertake a written aptitude test, and if successful, a personal interview (Olander, 2002). The aptitude test covers four key areas: LIS work, to assess the student's motivation for and awareness of the range of tasks carried out in the work place; text analysis, to determine the student's understanding of broader information contexts; organisation of information, to complete a test to conceptually arrange disparate elements of information; and ethics of service, to respond to a case study involving a conflict between a library user and a professional librarian. About half of the applicants pass the aptitude test to then move to the interview stage which aims to assess the candidates' communication skills, career and study motivations and ability to work under pressure. The interview also provides candidates with the opportunity to gain a deeper understanding of the program of study. The interview process further reduces the number of candidates, with a final cohort of 42 students accepted.

The motivation for library and information studies

The academic and professional literature reports widely on the issues of the aging profession, the need for a new type of LIS professional and the shifting dynamics of the workplace; and much has been written about the challenges facing LIS education. Very little has been written, however, on people's motivations to embark on a career as a library and information professional. Farley-Lamour (2000) reports that an interest in the choice of librarianship as an occupation began to emerge in the 1960s, with most of the studies focusing on librarians' motivations for their career choice once they were in the workforce. With the subsequent growth of university-based professional courses for librarianship, interest also grew in the motivations for the choice of career, the choice of institution for study and the choice of course. In a number of studies conducted in the 1980s, the principal motivations to become librarians were apparently the love of books and reading (Bourne, Hill and Mitcheson, 1982; Moore, 1986) and the desire to work with people (Reardon and Rowley, 1981; Moore and Kempson, 1985; White 1986).

There is significant evidence that a move into the library profession often followed a career in another field (Conant, 1980; Bourne, Hill and Mitcheson, 1982, Alemna, 1991). Genoni and Greeve (1997) found that high-school leavers were not attracted to the LIS profession as they did not consider it an interesting or creative career and also believed the career prospects, earning capacity and community status of library and information professionals to be low. On the other hand, in his study of the ambitions, aspirations and motives of postgraduate LIS students in Nigeria, Bello (1992) found 26% of the respondents were in fact motivated by the opportunity to be original and creative. Bello also aimed to test the idea that librarianship was viewed as a low status and undemanding profession: he found that 1.45% of the respondents admitted that they had entered librarianship "as a last resort" (p.17).

In positive contrast, a number of researchers have found that previous exposure or experience with the library profession and interaction with practitioners often led to an interest in the career (Reagan, 1959; Stone, 1974; Harthway, 1977; Dewey, 1985). Heim and Moen (1989) also indicated that the influence of family, friends and teachers, and personally knowing a librarian were strong motivators for students to enrol in a LIS course. Their 1988 study found the intellectual opportunities and the field's perceived service orientation were the primary factors, with specific reasons for the choice of study including the opportunity to use personal skills, access to the

world's information and the importance of information, the need to earn a living and the desire to serve others or the community (Moen and Heim, 1988). Alemna (1991) found that the opportunity for intellectual development and continuing formal education were strong reasons for commencing a LIS course.

Tiamiyu, Akussah and Tackie (1999) report on the extent to which the perceptions and motivation of students entering the library and archives programs at the University of Ghana changed during the course of their studies. This research project found that the students' perceptions of the information profession, presented as the two distinct areas of archives and libraries, improved and converged over the year of study. Of interest was the finding that some students wished to change their field of specialisation from archives to libraries, or vice versa, as a result of the exposure they were offered to alternative career opportunities through the curriculum.

An Australian study explored the reasons for students' choice of university, with the field of study proving to be the primary motivator, with other factors such as proximity to or accessibility from home impacting on the decisions made (James, Baldwin and McInnes, 1999). Farley-Larmour (2000) undertook a research project involving first-year undergraduate students at three Australian universities to identify the motivations for the choice of LIS study and to consider whether they were "aware of the realities of the occupation" they would be entering (p.8). Interviews were conducted with 39 willing respondents. The research findings indicated that 'books and reading' and a strong interest in helping people remained important factors for almost half of the interviewees. The desire to get a job with reasonable career prospects was also given as a major factor for many students, with a strong link to personal experience through library work or use of libraries through their earlier studies. The research further found that there was a significant discrepancy between the students' initial perceptions and understanding of LIS work and the reality of professional practice, often with general confusion about the distinction between librarians, library technicians and library assistants. These findings resonate with earlier studies undertaken by Genoni and Greeve (1997) and Steig (1992) which highlight the level of confusion about different levels of library workers. Farley-Larmour further found that students held very traditional views about their preferred destination after graduation, with the vast majority aiming to seek employment in a library, rather than in a broader information management context.

The personality of library and information professionals

"Recruitment of persons with high potential has always been a concern of librarians and library schools" (Dewey, 1985, p.16). One major study undertaken in 1999 in the United Kingdom, entitled *Likely to Succeed*, set out to investigate the extent to which LIS students met employers' expectations in terms of personal qualities and attributes (Goulding et al, 2000). The personality of library and information professionals has been presented as a topic of interest in the literature over the past fifty years. Initial studies tended to provide support for the image of the quiet and introverted librarian: "who exhibited extreme deference, submissiveness, respect for authority, conscientiousness, orderliness, conservatism, lack of confidence and feelings of inferiority" (Goulding et al, 2000, p.9). However, almost 40 years ago there was clearly a need to recruit students who would show initiative and "possess dynamic qualities commonly associated with being more progressive, mature, intelligent, forceful and articulate" (Clayton, 1968).

Goulding et al (2000) present a synopsis of a number of studies into the personality of library students: Lee and Hall (1973) used the Ghiselli Self-Perception Inventory and found that the LIS students had high levels of intelligence and self-sufficiency. Catell's Sixteen Personality Factor questionnaire (16PF) was utilised by Goodwin (1972) to compare LIS students with their teachers. The students were shown to be more "imaginative, creative, intelligent, independent, suspicious, critical and anxious" (Goulding et al, 2000, p.10). Holland's Six Personality Types inventory was used by Por (1992) and Afolabi (1996). Holland theorised that the personality of most people can be categorised as one of six types: realistic, investigative, artistic, social, enterprising or conventional. The environmental contexts can also be described using the same attributes. When "personality characteristics are congruent with their vocations or environments, [people] are likely to experience a more stable vocational choice, high vocational achievement, better maintenance of personal stability and greater satisfaction" (Afolabi, 1996, p.19). Por found his respondents at

Loughborough University were primarily investigative types: "they were able to assess and evaluate ideas and spot inconsistencies… they were also confident in their ability to handle data, were understanding and caring with good social skills… they did not score well on logic and reasoning ability… they had poor leadership and negotiating skills" (Goulding et al, 200, p.10). Afolabi concluded that the students at the Ahmadu Bello University in Nigeria were primarily ranked as social types, followed by the investigative types. The library environment itself was determined to be an investigative environment. Afolabi argued that the reason that many Nigerian librarians found themselves unsuited for the work they did, was closely linked to the perceived incongruency between the librarian as social type and the library as investigative environment.

Black (1981), Agada (1984) and Fisher (1988) present reviews of the studies which commenced with Alice Bryan's 1948 inquiry into the possible relationship between personality and the choice of librarianship as a career. 1700 librarians working in 60 public libraries across the United States were tested using the Guildford-Martin Inventory of Factors (GAMIN). Bryan found the typical librarian fitted the following profile (described here as male, but apparently equally applicable to female):

> As compared to the average male university students, the typical male librarian is rather submissive in social situations and less likely to show qualities of leadership. He is within the normal range of masculinity in his attitudes and interests, but he tends to lack confidence in himself and to feel somewhat inferior… He shows no great drive for overt activity but is normally sedentary for his age.
> (Bryan, 1952, p.48)

Bryan's study was followed by a series of other research projects which utilised a range of personality inventories in various countries including the United States, Canada, the United Kingdom and Australia, with different populations, eg public librarians, academic librarians, school librarians, library students etc (McKinley, 1953; Douglass, 1957; Wheeler, 1960; Baillie, 1961; Rainwater, 1962; McMahon, 1967; Clayton, 1968; Morrison, 1969; Denis, 1970; Lee and Hall, 1973; Clift, 1976 and Gibbons, 1977).

A succinct introduction to the issues of personality, psychometrics and personality inventories is presented by Sabatier and Oppenheim (2001). Personality inventories are generally based on Jung's typology or trait theories, with one of the most commonly used inventory being the Myers-Briggs Type Indicator (MBTI). Jung made the assumption that people have innate preferences that lead to specific personal traits and behaviours. He theorised that there were two basic orientations for an individual's relationship to the outside world: Extroversion and Introversion: "Extroversion describes someone who is sociable, outgoing and interested in people and their surroundings. Introverts tend to be more reserved and quiet, living in their own world and more interested in ideas than other people" (Sabatier and Oppenheim, 2001, p.145). Jung further presented four functions of thought: Sensing (S), Intuition (N), Thinking (T) and Feeling (F). Sensing and Intuition are the two *perceiving activities* by which a person becomes "aware of things, people, event or ideas" (Myers, McCaulley, Quenk, & Hammer, 1998, p. 24). Sensing refers to "perceptions observable by way of the senses" (Myers et al, 1998, p. 24) and Intuition refers to perception of possibilities meaning and relationship by way of insight" (p. 24). Thinking and Feeling are the rational *judging functions* that are used to appraise or evaluate perception. Thinking is the "function that comes to a decision by linking ideas together through logical connections" (Myers et al, 1998, p. 24) and Feeling is the function by which "one comes to decisions by weighting relative values and merits of the issues" (Myers, et al, 1998, p. 24). Whilst Jung does not provide any mention of a Judging or Perceiving attitude or orientation to the outer world it has been included in the MBTI. According to Katherine Briggs some people "habitually use judgement in interacting with the outer, extraverted world, being likely to come to conclusions and achieve closure quickly" (Myers et al, 1998, p. 26) whilst others habitually interacted with "the outer world using perceiving" (Myers et al, 1998, p. 26). These people would continue to gather information "as long as possible before comfortably coming to closure" (Myers et al, 1998, p. 26). The former group of people were identified as having a Judging (J) Attitude and the latter group a Perceiving (P) Attitude.

The MBTI questionnaire, developed by Katherine C Briggs and Isabel Briggs Myer, is now widely used as a tool to measure individual preferences in collecting or receiving information, interacting with other people, making decisions and lifestyle orientation. The MBTI enables personality to be

represented in sixteen types, each type determined by the four dichotomous scales (Figure 1), eg ENTP, ISFJ, ESTJ etc.
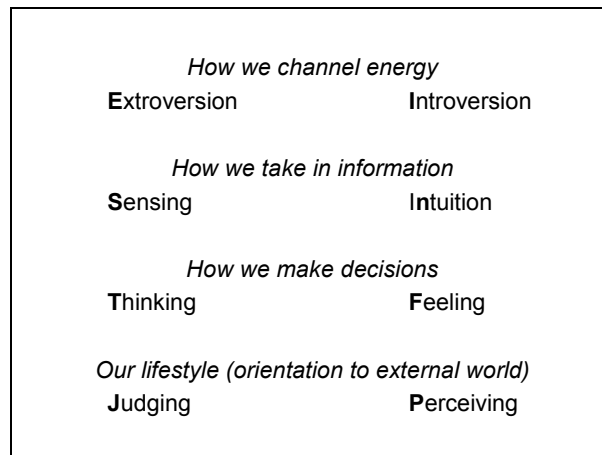

How we channel energy

Extroversion **I**ntroversion

How we take in information

Sensing I**n**tuition

How we make decisions

Thinking **F**eeling

Our lifestyle (orientation to external world)

Judging **P**erceiving

Figure 1: The 4 scales of the MBTI (Solomons, 2002)

> ➢ The I/E scale describes whether a person focuses on and gains energy from external or internal stimuli;
> ➢ The S/N scale indicates an individual's preference for ways of gathering information;
> ➢ The T/F scale describes ways of coming to conclusions and making decisions;
> ➢ The J/P scale shows how much structure someone desires from his/her environment (Scherdin and Beaubien, 1992).

The MBTI was introduced as a testing instrument by Brimsek and Leach (1990), when they randomly tested 25% of members of the Special Libraries Association (SLA). The findings of this study indicated that the majority of the respondents were introverts. The authors contrast the personality representations with the general population, highlighting the strong tendency towards the dimensions of Introverts, Intuiting, Thinking and Judging.

	I/E	S/N	T/F	J/P
General population	35/65	68/32	48/52	55/45
SLA	65/35	43/57	65/35	68/32

Table 1: Representation in percentages of the preferences of the four dimensions: comparison between general population and the SLA (Brimsek and Leach, 1990)

Brimsek and Leach found that the most common profile in their study was ISTJ (17%), INTJ (14%), ENTJ (9%) and INTP (8%) (1990, p.331[figures rounded]). A subsequent study conducted by Scherdin and Beaubien (1992) focused on a random sample of librarians who were members of the American Library Association (ALA) or the Special Library Association (SLA).

	I/E	S/N	T/F	J/P
General population	35/65	68/32	48/52	55/45
Librarians	63/37	41/59	64/36	68/32

Table 2: Representation in percentages of the preferences of the four dimensions: comparison between general population and librarians (Scherdin and Beaubien, 1992)

The most frequent types in Scherdin and Beaubien's study were ISTJ (17%) and INTJ (12%), echoing the findings of Brimsek and Leach (1990). From their data, Scherdin and Beaubien were able to extrapolate personality differences evident in different types of libraries and in different speciality areas of work (technical services, adult public services, children's public services, administration and automation). It was found that technical services staff and automation staff had

the highest number of Introverts (75% and 73% respectively) while administrators were the lowest (57%). Children's librarians had an inversion in the figures for Thinking/Feeling, with 56% of the respondents recording a Feeling preference, contrasting strongly with the Thinking preference clearly evident for automation and administration staff.

	I/E	S/N	T/F	J/P
Technical services	75/25	47/53	59/41	73/27
Automation	73/27	67/33	66/34	59/41
Administration	57/43	63/37	67/33	63/37
Children's public services	62/38	59/41	44/56	70/30
Adult public services	64/36	58/42	58/42	66/34

Table 3: Representation in percentages of the preferences of the four dimensions: comparison between different types of library job (Scherdin and Beaubien, 1992)

Agada's study (1998) was more longitudinal in nature, spanning 1992-1994, in order to compare the personality of types of students of a Midwestern university (USA) as profiled on entry into the course with that on exit from the course.

	I/E	S/N	T/F	J/P
LIS students - 1992	77/23	54/46	77/23	85/15
LIS students - 1994	83/17	50/50	83/17	92/8

Table 4: Representation in percentages of the preferences of the four dimensions: comparison between LIS students entering and exiting the course (Agada, 1998)

On entry into the course, the dominant types of LIS students were ISTJ (30%) and INTJ (23%), with a minor adjustment found on exit from the course, ISTJ (33%) and INTJ (16%). However, the reliability and generalisability of this study are limited by its small sample size (n=13 for pre test and n=12 for post test). Unpublished research work undertaken by Tyson (1988) to study academic library directors in the Commonwealth of Virginia, again highlighted the common profiles of ISTJ (21%) and INTJ (15%). The most consistent characteristics were clearly introversion, thinking and judging. Scherdin and Beaubien (1995) believe INTJs, with strong intuitive characteristics, are more visionary and innovative, valuing inspiration and autonomy, while ISTJs, as sensing types, are practical and thorough. They tend to draw on prior knowledge and experience to systematically investigate a situation before making a decision.

It should be noted that data collected by the Center for the Application of Psychological Type between 1971 and 1984 was published by Briggs Myers and McCaulley (1989) to indicate that the majority of the 267 librarians who completed the MBTI were identified as ISFJ (19%). Scherdin and Beaubien (1995) claimed that the librarian stereotype was "shattered" by the findings of their study, with the evidence that the Feeling dimension has been replaced by the Thinking dimension. It has, however, been observed that ISFJ is seen to be the most prevalent type for support staff in libraries, leading to the view that "perhaps the support staff are taking over many of the orderly, practical tasks formerly performed by MLS holders (Scherdin and Beaubien, 1995, p.36). A study of interlibrary loan staff in Alabama (Jenkins Wright, 2002) found that 37% of librarians exhibited the ISFJ type: these are "people who expend their efforts willingly to serve others; who use personal influence behind the scenes; who use strong follow-through skills in carrying out organisational goals; and who follow procedures and roles conscientiously" (Hirsch and Kummerow, 1990, 20, cited in Jenkins Wright, 2002, p.81). An interesting angle to the debate has been taken by Williamson (2002) in her article in which she endeavours to present the personality types of librarians portrayed in films, finding that the majority of characterisations are indeed ISFJ,[2]. Williamson quotes Briggs Myers' description of this type:

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[2] ISFJ librarian characters include Nan Perry in *The spy who came in from the cold*; Marian in *The music man*; Gloria Mundy in *Foul play*; Sara/Laura Burney in *Sleeping with the enemy*. ISTJ librarian characters include the unnamed librarians in *Big sleep*, *With honours* and *Somewhere in time;* Judy Lindendorf in *Party girl;* Bunny Watson in *Desk set* (Williamson, 2002, p.58f.).

> Quiet, friendly, responsible and conscientious. Committed and steady in meeting their obligations. Thorough and painstaking, and accurate. Loyal, considerate, notice and remember specifics about people who are important to them, concerned with how others feel. Strive to create an orderly and harmonious environment at work and at home.
> (Briggs Myers, 1998[3]).

ISTJ library characters were ranked second in Williamson's analysis:

> Quiet, serious, earn success by thoroughness and dependability. Practical, matter of fact, realistic and responsible. Decide logically what should be done and work towards it steadily, regardless of distractions. Take pleasure in making everything orderly and organized – their work, their home, their life. Value traditions and loyalty.
> (Briggs Myers, 1998[3]).

The MBTI has value in helping individuals become more aware of particular preferences and character types – and by extension, to become more self-aware. "Each of us has a preferred pathway to excellence." MBTI can help people "accept who we are, and be all that we can be" (Briggs Myers, 1989). Self-knowledge is an important first step in developing effective interpersonal skills in the workplace and to better understand one's own management stye and the impact this may have on colleagues' own decision styles and behaviours. Self-awareness is also important in assessing one's own strengths and weaknesses to determine an appropriate approach and strategy for career and personal development.

For managers, MBTI helps with the ability to gain insight into work interactions, both between colleagues and between library staff and the public. Specifically MBTI "can indicate strengths and blind spots in work teams" (Rome, 1990), so that it becomes easier to recognise the differences in individual staff and to use their strengths to build good working groups. In their description of the use of MBTI as a tool to support change management at the University of Wollongong, McGregor and McGregor (1992) discuss how personality theories facilitated a better understanding of the strengths and preferences of staff to enable the more effective allocation of responsibilities during a period of significant change. MBTI was used to map the organisational culture, to identify the predominant norms and mores that contributed to the culture itself, to determine personal leadership styles and to consider the role of personality in the management of conflict. Through the application of MBTI, senior management were able to identify staff members with managerial potential: "The identification and placement of such individuals will ensure the development and enhancement of an organisational culture which supports the achievement of the goals outlined in the Library's vision document" (McGregor and McGregor, 1992, 205).

Goulding et al (2000) argue that the changing paradigms of the workplace means that a different range of attributes will be required by the new information professionals, compared with the traditional attributes revealed in past studies. The research project undertaken at QUT sought to learn more about the students enrolling in the LIS course, to establish a clearer picture of these people who would be embarking on a career in a rapidly changing and evolving profession.

The Research Project

The research project commenced in 2002 and continued through 2003 and 2004. The researchers sought answers to a number of questions: Who are our students? What are their expectations from the course? What was the motivation to enrol in the course? What were their perceptions of LIS professionals? Were there any significant changes in student perceptions as a result of their studies?   Specifically researchers wished to determine whether or not the GDLIS was meeting the expectations of its current students and to determine whether these students' expectations and capabilities are in fact aligned with the current and future recruitment needs of the LIS industry.

The Research Approach

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[3] Characteristics frequently associated with each type are reproduced with permission on the MBTI Type Today website: http://www.mbtitoday.org/typechars.html . Accessed April 30, 2005.

There were three components to the research:

1. A survey of students entering the course
2. A survey of students exiting the course
3. A measurement of personality using the Myer Briggs Type Indicator (MBTI).

Ethical clearance was obtained for the research activities through the university Human Research Ethics Committee and the administration of both surveys and the MBTI test ensured the anonymity and privacy of the respondents. While some students expressed disappointment that, as a result, they would not obtain individual feedback on their own personality type, they were offered the opportunity to complete the MBTI test at a later stage on a one-to-one basis with the researchers.

The survey questionnaires comprised five sections which sought to develop a statistical snapshot of the LIS students at QUT. Data was captured on the general demographics of the student cohort, such as gender, age, marital status and enrolment mode. Students also provided details of their educational background and their employment, specifically in terms of experience within the LIS profession. As the first survey was completed by students entering the course, they were asked about how long they had been considering LIS studies, to select the three primary motivations from a list of thirteen to indicate the main reasons for enrolling in the course and to describe their own image of a library and information professional. They were further asked to rank in order of importance a list of ten key functions of an LIS professional. The following section of the questionnaire asked students to review a list of seventeen transferable skills or generic attributes, using a seven point Likert scale to consider firstly the importance of each capability for LIS professionals, and secondly how good they felt they were in terms of each capability. Respondents were asked whether they planned to seek employment as an LIS professional, and if so, in which sector of the industry they hoped to work (eg public, academic, government, corporate library sectors) etc; and if not, to indicate the area of work or study they thought might choose. Finally students were asked to give the reasons why they chose to enrol at QUT and to provide details of what they expected to learn or achieve through the course.

The same sequence of questions were presented in the second survey of students, ie those completing the course, so that the responses could be correlated in order to capture data about the students' changing perceptions about the LIS profession. Additionally information is sought to capture the students' experiences while studying at QUT. Using a five point Likert scale, students were asked to indicate the overall relevance of the content of the course to their future careers, the development of generic capabilities and some of the approaches to teaching and learning. They were asked to outline which aspects of the course they found valuable and should be continued, as well as to identify aspects of the course they believed needed improvement.

The third aspect of the research focused on the Myer Briggs Type Indicator (MBTI) test. Students entering the course were invited to complete the 93 item Form M of the MBTI. As noted, all data collected was given on a voluntary basis and was completely anonymous and confidential.

The Research Findings

The incoming survey was distributed early in the first semester of study, while the outgoing survey was distributed in the last week of the final semester of study. A total of 110 respondents completed the incoming survey and 49 completed the outgoing survey.

Who are our students?

The profile of the students is presented in Table 5.

	M	F	No of students
2002	13	30	43
2003	7	29	36
2004	9	22	31
Total	29	81	110

Incoming survey

	M	F	No of students
2002	7	23	30
2003	0	5	5
2004	5	9	14
Total	12	37	49

Outgoing survey

Table 5: Gender breakdown for respondents

Over the three year period the gender breakdown for respondents was recorded as 26% male and 74% female respondents for the incoming students, 25% male and 75% female for the exiting students. The ratio of male to female students responding to the surveys closely reflects the ratio in the student cohort, which has been recorded as 27% male and 73% female for the same 2002-2004 period.   The gender breakdown for librarians in employment in Australia in 2003 was 16.4% male and 83.6% female.

The age groupings of the respondents are presented as percentages in Table 6.

	19-25	26-30	31-35	36-40	41+
Overall	38%	20%	13%	7%	20%
2002	37%	21%	12%	7%	23%
2003	31%	22%	14%	11%	22%
2004	48%	19%	13%	3%	16%

Table 6: Breakdown of ages of respondents

As the GDLIS is a postgraduate course, students fall into a wide range of ages. It is noticeable that a younger demographic has emerged in 2004: the grouping of 30 years and under has increased from 58% to 68% in 2004, with a similar fall in the over 40 grouping from 23% in 2002 to 16% in 2004. The marital status of the respondents has also shifted accordingly, with 37% single in 2002 increasing to 70% in 2004.   The number of respondents with children changed from 26% in 2002 to 16% in 2004.

In the incoming survey, the enrolment status was recorded as 62% full time, yet with a high noted in 2004 with 81% of the respondents enrolled full time. There is anecdotal evidence that a number of students change from full time to part time after a few weeks, but this was not captured by the survey. The outgoing survey indicated little change, with an overall full time student figure of 58%, with a high of 78% in 2004.

In terms of previous education, 81% of respondents overall had entered the course as their first postgraduate course. Those respondents who had postgraduate qualifications included Honours (5.5%), Masters (4.5%) or postgraduate certificate or diploma (8%). There was one student who had a PhD.

The majority of students had an Arts degree (53%), with education graduates being the next most significant grouping (13%). Respondents with a degree in information technology were recorded as 10% overall, but increasing from 5% in 2002 to 16% in 2004.

17% of respondents had completed a vocational course in addition to their university studies, with 26% having multiple university qualifications, eg more than one bachelor degree or postgraduate qualifications such as a postgraduate diploma, honours or masters degree. The main foci of the additional qualifications were education, business and information technology, although there was an eclectic range of fields recorded, including retail, tourism, horticulture and community services.

On entering the course, 45% of students were unemployed, with 12% in full time employment and 35% having part time or casual work. 6% indicated that they were self-employed. 24% of students who had employment (full time, part time or casual) were working in the library and information sector. At the end of the course, with 49 respondents, 39% remained unemployed, while 51% were in some form of paid employment, 16% in full time work and 35% in part time or casual work, with a few students having more than one job. A couple of students did not responded to the question. Of those who were working at the end of the course, 58% were employed in the LIS sector, a considerable increase from the initial 24%. The focus of employment had shifted away from retail, health and education into the library sector.

31% of all respondents had worked in a library already, meaning that 69% of students entering the course had no direct experience of library and information work prior to commencing the course. Of those who did have experience in libraries, 17% had worked in a full-time capacity, 47% as part-time, casual or on contract and 35% had undertaken voluntary work. Two thirds of those who had worked in a library had done so for under two years, and one third had less than six months experience. One respondent, however, had worked in libraries for more than 20 years. The roles they had played were mainly as library assistant (67%), with a small number having been employed in the position of librarian or library technician, evidently without formal LIS qualifications. Two students had worked as shelvers during their earlier studies.

Why are they here?

Respondents were asked whether they considered themselves aiming towards their first career, returning to the workforce after a break (eg after raising a family or travelling), or making a career change. Overall, the responses indicated that 35% were aiming for their first career, while 52% were making a career change. It should be noted however, that the changing demographics had an impact on this issue: the first career option increased from 26% in 2002 to 52% in 2004, while the career change option reduced from 53% in 2002 to 31% in 2004. A couple of students indicated that they were 'future-proofing' themselves, ie proactively undertaking studies to support a career change when they felt it was opportune to do so.

30% of respondents had made the decision to undertake a library and information studies course within the last six months. Nevertheless, 44% of students had considered the course for around one to two years, indicated a level of commitment to the idea of a career as a library and information professional. Almost 10% had in fact been considering studying LIS for longer than five years.

Of those who indicated it was a first career choice (39 students), 33% reported that they had considered LIS as a career for less than six months; 21% had thought about it for between 6 and 12 months, and 26% had thought about it for 1-2 years. 18% had been planning their studies, as a first career option, for more than 2 years, but only one mature age student indicated this had been a long term decision (more than 5 years).

For those students who were undertaking studies as a career change, 26% had made the choice of career in less than six months, 14% over a period of 6-12 months and 19% over a period of 1-2 years. A further 25% had considered the course of study for more than 5 years. One area for concern to the researchers was the nexus between the 'speedy' (in less than six months) decision to embark on a first career as an LIS professional or to make a career change (25% of all respondents), and the large number students who had no direct employment experience in libraries. There are clear dangers that in accurate expectations of LIS as a career could result the potential for discrepancies between their perceptions and understanding of LIS work on entering

the course, and the realities of professional practice. Given there is always a certain level of attrition from the course, there is scope to explore the relationship between this identified group of students and those who do discontinue the course.

Respondents were asked to provide the three primary motivations for enrolling in the course, selecting from a list of thirteen potential reasons. Interestingly, 23 students (21%) did not provide any reasons. The principal reason given by those who did reply, was the positive employment opportunities (25%), followed by a love of books (22%) and a love of research (14%). Employment opportunities was also the main secondary reason for the choice of study (17%), followed by an interest in information technology (14%), although only 2 students had given IT as their principal reason for study. A love of books was the third most important secondary reason given (13%). A love of research was ranked as the fourth reason (10%). Moving to the third level of motivation, again an interest in IT came to the fore (16%), followed by a love of research (14%) and the desire for valuable personal learning experiences (9%). Family or friends working in the industry, job security and the enjoyment of working with people and customer service came into focus as supporting reasons, rather than principal reasons for choosing the LIS course. Professional status was a low priority, as were the salaries for LIS graduates.

	Reason 1	Reason 2	Reason 3
Employment opportunities	22	15	4
Love of books	19	11	7
Love of research	12	9	12
Interest in IT	2	12	14
Enjoy working with people	7	9	6
Personal learning experience	5	4	8
Customer service	5	3	7
Family/friends in LIS	0	1	7
Job security	2	5	7
Professional status	3	2	4
Conducting training sessions	2	5	4
Graduate salaries	1	5	2
Indecision re career path	2	1	0

Table 7: Reasons for selecting LIS course (no of students)

54% of respondents gave the primary motivation for choosing the QUT was the dact that it was the closest university offering an LIS course – indeed the only course offered in the State of Queensland. A significant number of students also added that they only wanted a course offered as an internal mode of study. Other factors influencing the decision to come to QUT ranged from recommendations from family or friends in the LIS profession, recommendations from ALIA, the professional association, and the balmy Queensland climate.

What are they like?

A total of 107 students completed the MBTI instrument, with 14 declared invalid. Accordingly the results of 93 valid instruments were considered for the study. As noted earlier, past studies have presented the modal type for LIS professionals as ISTJ (Brimsek and Leach, 1990; Scherdin and Beaubine, 1995; Agada, 1994). The CAPT report presented ISFJ as the modal type. Students at QUT, however, were reported as INFP (16%), INTJ (13%) and INFJ (12%). ISTJ was ranked at position 7 (7%) and ISFJ at position 8 (6%).

INFP's "love to learn, grow, excel and please others" (Kroeger and Thuesen, 1988, p. 242). At their best the INFPs "have an inner core of values that guides their interactions and decisions. They want to be involved in work that contributes to both their own growth and inner development and those of others – to have a purpose beyond their pay check" (Myers, 1998, p. 27). Kroeger and Thuesen (1988) suggest that the "values that shape INFP's family life and personal growth patterns highlight their career choices: integrity, hard work, idealism, sensitivity, and concern for other people" (p. 242) but that the INFPs also "bring their self criticism and perfectionism to the

workplace" (p. 242).   Overall, INFP's value "creativity" and "originality" in whatever career they undertake (Hammer, 1996). They also require a "variety of tasks" and "clear structure" in what they are doing (Myer et al, 1998, p. 290).   An INFP may be an "excellent musician or a superb teacher…Their high learning abilities may lead them to careers in which they excel academically…the careers that involve human service are the ultimate home of the INFP: psychology, teaching, family medicine and church work for example.   In the long haul, what INFP's choose as a career must serve their own idealism". (Kroeger and Thuesen, 1988, p. 242-243). Hammer (1993) agrees with this view of the INFP by suggesting that the "occupations attractive to INFP's involve a concern with human development, particularly through one-to-one relationships with others" (p. 25).   He proposes possible careers as psychiatrist, counsellor, research assistant, education consultant or writer. Noting that the strengths of an INFP are their "sense of purpose, creativity, people skills, adaptability and gentle persuasion" (p. 25).

Whilst these is a difference in the MBTI modal type between the QUT study and previous studies, a closer inspection of the preferences on each of the four dimensions reveals many similarities. Table 8 provides a comparison (in percentages) of the four dimensions as recorded in the three previous studies of librarians, the general population and the current QUT study.

	I/E	S/N	T/F	J/P
General population	35/65	68/32	48/52	55/45
QUT LIS students	**66/34**	**23/77**	**43/57**	**56/44**
Brimsek & Leach	65/35	43/57	65/35	68/32
Scherdin & Beaubien	63/37	41/59	64/36	68/32

Table 8: Representation in percentages of the preferences of the four dimensions:
comparison between the different research studies
(Brimsek and Leach, 1990; Scherdin and Beaubien, 1995)

All three reported studies exploring the personality of the librarian indicate a preference for Introversion by their participants. Jung suggests that the division between Extravert and Introvert is the most important distinction between people as it describes the source, direction and focus for one's energy. For the Introvert, energy is drawn from the environment towards inner experience and reflection. Myers (1998) suggests that people who prefer introversion "like to focus on their own inner world of ideas and experiences. They direct their energy and attention inward and receive energy from reflecting on their thoughts, memories and feelings" (p. 9). As such people who prefer introversion tend to:

- Be drawn to the inner world
- Prefer to communicate in writing
- Work out ideas by reflecting on them
- Learn best by reflection, mental practice
- Focus in depth on their interests
- Private and contained
- Take initiative when the situation or issue is very important to them (Myers, 1998, p. 9)

Myers (1998) proposes that in the workplace people who prefer introversion like quiet for concentration; enjoy focusing on a project or task; develop their ideas internally, learn new tasks by reading, being reflective and enjoy working alone with no interruptions (p. 31).

It is interesting to note the library profession's preference on the Extroversion-Introversion dimension is opposite to that of the general public. This is an issue that perhaps all librarians need to be aware of when developing their information services, establishing user education programmes and communicating with clients.

Kroeger and Thuesen (1988) contend that the "difference between Ss and Ns is very crucial because the way we gather information is the starting point for most human interactions" (p. 28). The participants in the QUT study have a preference for Intuition (N). It is significant to note that whilst previous studies modal types would suggest their participants have a preference for Sensing

(i.e. ISFJ and ISTJ), a closer inspection of the results on each of the four dimensions suggests a preference overall for Intuition (see Table 8). According to Myers (1998) people who prefer Intuition "like to take in information by seeing the big picture, focusing on the relationships and connections between facts. They want to grasp patterns and are especially attuned to seeing new possibilities" (p. 9). People who prefer Intuition are frequently associated with the following characteristics:

- Oriented to future possibilities
- Imaginative and verbally creative
- Focus on the patterns and meanings in data
- Remember specifics when they relate to a pattern
- Move quickly to conclusions, follow hunches
- Want to clarify ideas and theories before putting them into practice
- Trust inspiration (Myers, 1998, p. 9)

Myers (1998) suggests that in the workplace those people who prefer Intuition, follow their inspirations; provide connections and meanings; like solving new complex problems; and prefer change, new ways of doing things (p. 31).

Once again it is interesting to note that the library profession's preference on the Sensing – Intuition dimension is the opposite to that of the general public. Given the dimension's focus on how a person gathers information, this is a vital distinction for information professional to be aware of. If information professionals have a completely different preference about how to obtain information as compared to their clients, this will have significant implications for every facet of the library work, from reference support, information organisation and user education programmes.

Understanding the Thinking – Feeling dimension may have profound effect on how a person functions within their family, workplace or classroom in any given situation (Kroeger & Thuesen, 1988, p. 32). The preference for Thinking – Feeling dimension in the QUT study is in contradiction with the preference noted in the previous research. QUT students indicated a preference for Feeling over Thinking. People who prefer to use feeling in decision making "like to consider what is important to them and to others involved. They mentally place themselves into the situation to identify with everyone so they can make decision based on their values about honoring people. They are energised by appreciating and supporting others and look for qualities to praise. Their goal is to create harmony and treat each person as a unique individual" (Myers, 1998, p. 10). Characteristics associated with people who prefer feeling include:

- Empathetic
- Guided by personal values
- Assess impacts of decisions on people
- Strive for harmony and positive interactions
- Compassionate
- May appear "tender-hearted"
- Fair – want everyone treated as an individual (Myers, 1998, p. 10)

Myers (1998) suggests that in the workplace the person who prefers Feeling focuses on people's interactions; uses values to understand and decide; wants harmony and support among colleagues; are empathetic, prefer to accommodate and reach consensus; and apply values consistently. The preference for Feeling by the QUT study participants corresponds to the preference by the general public. The difference in findings between the QUT study and the previous studies are worth further exploration.

Kroeger and Thuesen (1988) suggest that the Judging – Perceiving preference is the one that most affects how a person interacts with others as such the J-P preference can be the source of the greatest amount of interpersonal tension. Whilst the modal type in the QUT study indicates a preference for Perceiving, a closer inspection of the results on each of the four dimensions suggests a preference overall for Judging (see Table 8) which corresponds to the results of the previous studies. People who prefer Judging like to "live in a planned, orderly way, seeking to

regulate and manage their lives. They want to make decisions, come to closure and move on. Their lives tend to be structured and organized, and they like to have things settled. Sticking to a plan and schedule is very important to them, and they are energized by getting things done" (Myers, 1998, p. 10).   In contrast is the person who prefers to use their perceiving process in the outer world. They want to "live in a flexible, spontaneous way, seeking to experience and understand life, rather than control it. Detailed plans and final decisions feel confining to them; they prefer to stay open to new information and last minute options. They are energized by their resourcefulness in adapting to the demands of the moment." (Myers, 1998, p. 10).

Myers (1998) suggests that in the work place those who prefer Judging want to plan their work and follow the plan; like to get things settled and finished; feel supported by structure and schedules; reach closure by deciding quickly and focus on timely completion of a project. In contrast are the people who prefer perceiving. They want to have flexible in their work; like to be spontaneous; feel restricted by structure and schedules; leave things open as long as possible and focus on enjoying the process. (Myers, 1998, p. 31).

In addition to considering the individual preference on each of the 4 dimensions, the MBTI results can be considered from the perspective of temperament. According to many researchers who explore the field of personality there are four fundamental temperaments people can possess: sanguine, choleric, phlegmatic and melancholic. These temperaments were originally described by the Greek philosopher Hippocrates (460-377 BC). In more recent times, David Keirsey and Marilyn Bates (1978) developed and described these temperaments as Guardian, Artisan, Idealist and Rationalist. According to Kiersey (1998) "there are two sides to personality, one of which is temperament and the other character" (p. 20).   He concludes that "temperament is a configuration of inclinations, while character is a configuration of habits. Character is disposition and temperament is predisposition" (Kiersey, 1998, p. 20).   Kiersey asks us to consider temperament as "inborn, innate, inherent and of character as exactly configured, as precisely patterned, as definitively systematic" (1998, p. 22).   The four temperaments described by Kiersey and Bates (1978) can be identified using the four dimension of the MBTI with SJ, SP, NF and NT representing the 4 temperaments Guardian, Artisan, Idealist and Rationalist, respectively .

Unlike previous studies which revealed a strong preference for the SJ temperament the current study indicates a preference for the NF temperament. The NF, or the Idealist, is someone who focuses on the possibilities. Myers suggests that their core needs are "for the meaning and significance that comes from having a sense of purpose and working toward some greater good" (Myers et al, 1998, p. 61). The Idealists needs to

> have a unique identify. They value unity, self actualization and authenticity. Idealists prefer cooperative interactions with a focus on ethics and morality. They tend to trust their intuitions and impression first ane then seek to find the logic and the data to support them…They build bridges between people through empathy and clarification of deeper issues. They use these same skills to help people work through difficulties. Thus they can make excellent mediators, helping pole and comparison solve conflicts through mutual cooperation. If working on a global level, Idealists will be championing a cause. If working on an individual level, they focus on growth and development of the person (Myers et al, 1998, p. 61).

In contrast is the SJ of previous studies. The SJ, or the Guardian's core need, is for group membership and responsibility. They value

> stability, security and a sense of community. They trust hierarchy and authority and may be surprised when others go against these social structures….Guardians are usually talented at logistics and at maintaining useful traditions. They masterfully get the right things, in the right place, at the right time, and not to the wrong people. Guardians know how things have always been done, and so they anticipate where things can go wrong. They have a knack for attending to rules, procedures, and protocol. They make sure the correct information is assembled and presented to the right people. (Myers, et al, 1998, p 59)

Given the importance of temperament in career choice and the difference noted between the QUT study and the previous studies further research into this area would be beneficial.

So, why does the QUT modal type differ to the modal type observed in the previous studies? Whilst it is not entirely possible to answer this question at the current moment (i.e. more research is warranted) several interesting points can be considered. The MBTI is a self reported measure. Whilst self reported measures provide a useful opportunity to collect data otherwise not readily available, they are limited by what "individuals know about their attitudes and are willing to relate" (Nunnally, 1967: 590). Unlike the earlier studies the participants in the QUT study were library students not practicing library professionals. Whilst the study by Ragan (1994) included library students the small sample six (n-13) limits the extent to which any real conclusions can be drawn. One explanation, therefore, for the difference in the modal type between the studies, could be that the "younger or more inexperienced" student participants in the QUT study, unlike the "older or more experienced" professionals in the earlier studies, have not yet had the life experiences to fully understand their own personality type and thereby be able report it accurately via the MBTI. Given the difference between the participants in the QUT study and the previous studies several other hypotheses may be offered in explanation of the difference in modal type. Firstly, not all library students enter the library profession or ultimately obtain employment as a librarian. Whether from personal choice or other circumstances (i.e. the individual's personality does not fit in with that of the profession and as such cannot find employment) the assumption that *all* library students move on to become library practitioners may be inaccurate and as such there would be a difference in the personality of the library practitioner versus the library student. The issue of attracting the 'right' person to library school has been a topic of professional discussion for many years.

Secondly, the profession is changing. The social, culture, political and technological changes and developments of the twenty-first century are having a significant impact on the evolution of the library profession, and as such, the profession may be attracting a whole new type of person. The different modal type in the 2002-2004 study with students as compared to the studies in the early 1990's with library professionals may represent this change. Thirdly, the QUT LIS programme attracts a "certain type of student". QUT has over the last several years built up a reputation for a focus on holistic learning that encompasses both discipline knowledge and generic capabilities with reflective practice being a central part of the learning process. It is possible that the sample in the current study may therefore not be representative of the Australian library student in general. Finally, the QUT study is the first Australian study undertaken exploring personality in the profession – for either library practitioners of students. Are there possibly inherent cultural differences in the personality of Australians and Americans which need to be considered when comparing study findings? This cultural dimension is also relevant for comparisons to the general public (the findings used here for comparison are based on US data).

What are their perceptions and expectations?

Students were invited to describe their own image of a librarian or information professional. The study aimed to capture the students' preconceptions about the information profession and to subsequently determine whether there was any significant shift in views or opinions during the course of study. However, as the survey questionnaire was distributed two or three weeks after the commencement of the semester, the researchers believe that they were too late to capture the true initial perceptions, as some respondents noted that their perceptions were already beginning to change through their introduction to the discipline and their interaction with academic staff:

> *My image of a librarian or information professional has changed since I began this course.*

> *My image of librarians (or rather the scope) has expanded (in a positive and exciting way) since I started the course (2 weeks ago).*

Only a small number of students presented an image that could be associated with the more traditional views of an information professional:

> *Someone who checks in/out books at the circulations desk and assists with reference queries from clients.*

> *Fairly conservative person who loves research and enjoys helping others find information.*

While a few students referred to the traditional librarian stereotype "*Hair in bun, glasses, bad teeth, sensible shoes, angry*", they also indicated that they were rejecting this image of the librarian and provided their own description in counterpoint:

> *It used to be (last year) of a quiet passive female in a long skirt with glasses, but now I see a librarian as a professional friendly helpful confident person who helps people find what they're looking for.*

> *Before starting - little old lady no connection to real world; now - IT confident and proficient, huge knowledge base, varying backgrounds. A person who through their knowledge and expertise helps others to find the information they seek.*

> *Two major [images] present. Firstly, the older person at the local library and the horrible narrow-minded teacher librarian of my childhood. But the stronger emerging vision is that of a vibrant, interested person, imparting skills on how best to collect and synthesise information.*

Other students saw the information professional as the victim of a time of transition, which presented its own challenges:

> *At the moment - dynamic! Busy professional in area often compromised by budget and needs to rejustify role in changing environment. A professional with a rapidly changing role - maybe still misunderstood. Need for constant training. People with a real interest in helping people and managing information. Contemporary role but historical background of collecting/nurturing information.*

It was found that the images presented by the students focused primarily on the tasks and activities undertaken by library and information professionals, and only marginally on the qualities and attributes they felt were integral to the successful LIS worker. While they had a fairly concrete view of the profession, they were sensitive to the idea that the library environment was fluid and elastic, with an immense range of contexts stretching from the immediate community to information intensive organisations in the corporate sector. The common denominators in the descriptions were *information, knowledge, technology, people* and *learning*, with the transactional activities that linked these:

> *Librarians are vital professionals in terms of the cultural need to 'keep track of' our society's records. I suppose my image of librarians/information professionals is that they have heavy responsibility of performing this task and ensuring that people have access to those records.*

> *Also manages the intellectual property of an organisation and maintains so it can be retrieved.*

The LIS professional was seen to be involved in the organisation and management of information resources. The effective organisation of information was seen as essential component of information access, with an end user in mind:

> *A person interested in managing information - organising, cataloguing and disseminating information from a variety of resources and areas to a variety of people with a variety of needs.*

> *Someone who catalogues/classifies information to assist others in finding it.*

> *Someone who has a good grasp of knowledge management and has the ability to both organise knowledge into a form that is accessible and then provide an access to that knowledge for people seeking it.*

A large number of students presented the idea of the library and information professional facilitating access to information. There was a clear picture of the librarian's ability to navigate the information landscape, to locate information regardless of the media itself:

> *Someone at the cutting edge of information technology who can help navigate others for the ultimate goal of satisfying their professional academic or personal needs.*

> *Someone who is thorough and takes the process of providing information seriously. They realise the value of information and knowledge and importance of access to it. They also enjoy assisting other people in their search for the right piece of information at the right time.*

Technology was recognised as a tool that was an integral aspect of the 21st century information world, so that the LIS professional was the expert who understood the technology to establish the desirable links between people and information. The image was consequently of a professional who was equally comfortable with technology as with people, whether the public or professional colleagues:

> *A competent talented individual who is responsible for managing an information service. They are involved in the planning and implementation of various programs and systems. They also have to have a very professional open and friendly disposition in dealing with clients on a regular basis.*

> *Someone who is a very computer literate and able to find information quickly and efficiently and good at dealing with the general public. Also has good managerial skills.*

> *Up-to-date with information technology, access and retrieval. Trained manager and staff co-ordinator. Innovative in presenting all modes of learning. Organised - good with systems and procedures. Good networker - has access to a variety of people and informal resources. Expert in at least one field of information.*

The people dimension was clearly articulated:

> *A team leader with excellent communication, and an outlook to contribute professional and personal experience to benefit both staff and clients alike.*

The teaching role was also stressed, with the LIS professional eager to share their own love of knowledge and learning:

> *Rather than a generic image of a librarian I have an image of a 'cybrarian' - a librarian involved in the provision of information through a combination of printed matter and technology. An intermediary or educator, customer-focused a partner in learning.*

> *I see it as a role which facilitates others in reaching their learning potential by offering assistance and support to library users.*

To a lesser degree, some students considered the more abstract qualities or attributes of the LIS professional. A few presented their views which were relatively passive and, indeed, traditional:

> *Quiet, serious, studious, well read, generalist, organised, helpful.*

> *Quiet, intellectual, happy to help people, likes order and specific tasks (rather than the 'big picture'), likes books, reading and learning.*

> *Someone who likes to work in a quiet environment who wants to pass on their love of learning to others.*

For most students who drew on adjectives in their images, the LIS professional was viewed as highly intelligent, wise, knowledgeable, smart, and informed. These qualities presupposed a love

of books and reading to have a broad view of the world, to be open minded and without prejudice. Library and information professionals were seen to be helpful, friendly, approachable, patient and polite. They have a good eye for detail and ensure thoroughness and accuracy is achieved in their work. While this description may sound fairly traditional, there were also some images of the LIS professional being confident, dynamic, adaptable and flexible.

It was not found that the student perceptions altered significantly over the period of study. A small number of students indicated in the exit survey that they now knew their image of a librarian prior to entry into the course was inaccurate, but that their interaction with the academic staff, guest lecturers and the content of the course very quickly enabled them to develop a clearer and more accurate picture of the LIS professional:

> *My image of a librarian/information professional has changed since undertaking the LIS course. I no longer envisage librarians as middle aged spinsters but very happening and getting with the times and coming in all shapes, forms and guises and still highly skilled and intelligent.*

> *My image of a librarian is changing because my conception of what the profession is has changed. Librarians who embodied the old stereotype still exist but I'd like to think that the new generation of librarians - and me as one of them - is expanding the sphere of what we are seen as.*

It was interesting to note that in the exit survey, there was greater focus on the qualities and attributes of the librarian, rather than on the tasks or activities they might play. The majority of students had a sophisticated view of the information professional in the 21st century:

> *Well educated, highly literate, IT savvy, net literate, personable, helpful, modern, forward thinking.*

> *Inquisitive, tenacious, has a lively imagination, enjoys problem solving, excited by the new, copes with change, multiskilled.*

> *A dynamo! It seems that being energised by people with questions and by giving them answers is important. Librarians are fun and they demystify research and information resources; librarians find and use the latest formats and materials in their work; librarians change themselves and their work to stay on the cutting edge of service and services; librarians know how to find out what you need and then help you to select it, and learn to research on your own.*

The image has become kinetic and exciting: there is a strong feeling of intellectual activity and movement:

> *An information professional puts customer service as the forefront of their mind. They can balance the needs of the client whether it is from an external, internal and colleagues all at once! The information professional has an inherent instinct for customising the information and a thirst for acquiring new knowledge.*

> *My perception of a librarian is an information professional working in an industry on the cutting edge of the information revolution. The 21st century has been recognised as the age of information and the librarian can play a central role in how this age unfolds. It is an exciting time in the library and information industry and I look forward to being part of it.*

> *Someone who is a proactive problem solver, questioning and able to take risks; they don't know everything but are highly motivated to find out. They constantly refresh skills and knowledge and build on them.*

It is important to note that these are the images that the graduating information professionals are building for themselves, that they can identify themselves with, and that becomes their own self-

image. One of the greatest challenges is for employers to provide employment opportunities that really do allow LIS graduates to fulfil the aspirational roles they have created for themselves.

The 21st century is a really exciting time for library and information professionals, with many rich and varied opportunities. Change is a key feature in this landscape: technological change, social change, industrial change, generational change, all of which impact on both staffing and the delivery of services to users. The ability to respond to change, to be flexible and adaptable are critical attributes for the workforce. There has been a shift in focus in many universities to build generic capabilities (or transferable skills) into the desired graduate outcomes, so that the student enters the workforce with skills that go beyond the disciplinary knowledge or technical expertise, skills that demonstrate the range of social and personal skills that contribute to organisational success, such as oral and written communication, teamwork, business acumen and a commitment to lifelong learning. The challenge for educators is to effectively incorporate generic capabilities into the curriculum, to introduce learning and teaching strategies that encourage the development, monitoring and assessment of these attributes.

It is ironic that one of the points of discussion has been that there can be a discrepancy between student perceptions of a career in LIS and the realities of professional practice. The literature review indicated that many students anticipated a workplace reality that was more stable and passive than it actually was. However, one of the greatest concerns for the researchers is that, by developing and delivering a course of study that encourages students to become thirsty for knowledge, ready to proactively solve all manner of information problems and to working at the cutting edge of the information industry, the discrepancy between perception and reality is reversed: the job opportunities for entry level professionals are often uninspiring and mundane. While employers may claim to demand new staff with the important skills of "problem solving, learning and communication" (Goulding et al, 1999, p. 72), the new graduates are frequently offered jobs that do not often require these critical skills.

Many of the recent graduates from the QUT course are indeed active and engaged young LIS professionals. Brisbane was the venue for the first New Librarians' Symposium (NLS1) in 2002, organised by a talented team of new professionals who wished to be and to engage with other 'bright and funky librarians'. The energy of NLS1 was sustained with NLS1.5 one year later, and the symposium has since become a key event on the Australian conference scene, with NLS2 held in Adelaide in 2004 and NLS3 planned for Sydney in 2006. They are actively promoting the images that new information professionals are building for themselves and that they can identify with. They are working in a range of roles in diverse information agencies, but not without some degree of frustration, which they are keen to discuss in the public arena.

In a plenary session run by the new professionals, Bernadette Rosbrook challenged the ALIA Biennial 2004 Conference to wake up to 'lights on' and 'lights off' librarians (Rosbrook, 2004). Many LIS professionals no longer have any passion for their work and need to be reenergised. In contrast, Kim Moody described in the ALIA national newsletter *InCite* how university had made her an 'achievement junkie': "constant high-level intellectual stimulation, pressing deadlines and the short-term goals of assignments and 14-week semesters cannot be effectively replicated by entry-level jobs" (Moody, 2004). Conditioned to receiving constant feedback in the form of assignment grades every few weeks resulted in another habit – "an insatiable need for constant recognition of her work, something which does not always happen in the workplace". There is a clear need to ease the transition from university to the workplace in ways that are not anticipated by many employers.   Another graduate, Kate Davis, who won a coveted spot in the graduate program at the National Library of Australia, declares "it is unrealistic to demand postgraduate qualifications for entry level librarian positions, and then to expect these librarians to be satisfied with accessioning new materials and bib-checking all day. We want our work to be rewarding, we want there to be enough of it to keep us going throughout the day, and we want to be challenged" (Davis, in press). In turn, these new graduates offer a challenge to employers:

> Be high-noticing in relation to your staff. There are new graduates coming through
> every year and they are passionate about what they do. Be committed to helping
> them preserve their energy and curiosity (Rosbrook, 2004).

Employers must also recognise that it is not enough to merely attract 'the best and brightest'. They also need to provide adequate opportunities for training and development in order to keep the bright spark that was so attractive in the first place well and truly alight (Davis, in press).

Job satisfaction and professional growth are essential for "lights on librarians", but are not just the responsibility of the individual LIS professional, nor does the employer hold all the cards. The Education Reference Group of ALIA is currently working with the LIS sector in Australia to develop a shared understanding of the Association's embryonic Education Framework. The different roles and responsibilities of the different stakeholders are a key component of the framework, to underscore the fact that collaboratively, the individual LIS professional, the educators and training providers and the employers can make a difference. The professional association has a key role to play as the link between the other stakeholders, to maximise the opportunities to encourage, enable and reward the learning and professional development necessary for acquiring and maintaining professional excellence. If our profession is to thrive and progress, there needs to be strong interaction and interplay between educators and employers, between research and practice, between individual professionals and the professional association.

Conclusion

The project has been valuable in providing a snapshot of students enrolled at one Australian university over a three year period, who will become our future information professionals. The data collected offers insights into the personality traits of this new generation and highlights their perceptions of and expectations for their careers. While there is some debate in Australia about how to attract the 'right' students to the profession, it is essential that any mismatch between the expectations and perceptions of the different players – students, educators and employers - is minimised.

Rather than trying to find definitive answers, this project has been an exploratory exercise, to ask some questions that might stimulate discussion about the future of the LIS profession. It is hoped that employers of our graduates will take time to listen to their thoughts and aspirations, and that the dialogue can continue as they work together. One of the most frustrating aspects of entering the profession is, for graduates, the need to respond to selection criteria to demonstrate success in a specific area – a task driven approach. Graduates wish to convince employers that they have their own abilities, not to just 'fit in', but to be creative and adaptable, to add value to and to transform current services for users, to stretch and to be stretched. This is more about the attitudes and aptitudes required "to face the challenges of the 21st century in a confident and dynamic manner" (Goulding et al, 1999, 79).

More than a decade ago, Scherdin stated that "the survival of the library profession depends on diversity" (1994, 149). This applies to the range of people who work in the profession as well as the different roles they have the opportunity to play within the profession. An awareness of the MBTI personality types assists with a clearer understanding of the diversity that does exist, and how the actual differences can be used to avoid any potential mismatch in workforce planning or to encourage staff to perform roles to which they are best suited. This understanding may also be valuable for issues such as team relationships, balancing personal strengths in hybrid work contexts and identifying the capacity for leadership.

Importantly, the project has been valuable to help the researchers, as LIS educators, refine the curriculum and the approaches to learning and teaching to better meet the students' own interests and ideas and to address areas where there does seem to be a mismatch between student and employer perceptions and expectations.

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