

# **Why Librarianship?**

## **A Comparative Study between University of Tsukuba, University of Hong Kong, University of British Columbia & Shanghai University**

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Keywords: Career motivation; Career preference; Social factors; Work environment; Graduate study;

Multiple-country study; Questionnaire survey

*The work was supported by the Faculty of Library, Information & Media Science, University of Tsukuba, Japan*

## **ABSTRACT**

Career decisions are motivated in part by our internal values, but also are influenced strongly by innumerable external forces perceived in the context of our lives. In the research reported here, we explore various social, cultural, economic, and educational factors, as well as personal and professional reasons that influence students in choosing library and information science (LIS) professions as a career. Master of Library and Information Science (MLIS) students from four universities located in four different countries were invited to take part in an online questionnaire survey. The universities were Shanghai University (SHU), the University of British Columbia (UBC), the University of Hong Kong (HKU) and the University of Tsukuba (UT). 175 self-completed questionnaires were collected in total. Survey results indicated that students enrolled in MLIS programmes were predominately female. Differences and similarities were encountered for the different sites. For example HKU and UBC had the largest number of students with graduate-level qualifications prior to entering the MLIS programme; and students at HKU and UBC tended to vary widely in terms of their educational and occupational backgrounds. For the majority of the HKU and UBC respondents, the decision to obtain a professional qualification in LIS was driven by the desire to maximize the benefits of a career change or for career advancement, while the majority of respondents at the UT and SHU did not already have a job or much work experience. While the total surveyed populations are small; the study will be of interest and value to LIS educators and administrators responsible for recruiting MLIS graduates and hiring LIS professions.

## INTRODUCTION

Occupational entry is a complex process. Motivations for choosing a particular career vary depending on many factors including cultural influences, economic status, family background, and previous knowledge of a profession. Ard *et al.* (2006, p. 236) point out that, “Hearing why the librarians of tomorrow chose the library profession is vital, because understanding their motivations provides librarians with a glimpse of the future as well as ways to improve that future for the profession.” According to Deeming and Chelin (2001), understanding why certain people select a career in Library and Information Science (LIS) may also uncover reasons why others do not. Shannon (2008) also noted that the employment situations in other fields always tend to affect the type of people who are entering into LIS. As a result, it would be highly desirable to investigate the reasons Master of Library and Information Science (MLIS) students chose LIS professions in different countries. Identifying reasons why people enter the LIS profession would enable the studied LIS schools to better understand the needs and expectations of their MLIS students. This information could be used in the future to better market MLIS programmes to potential applicants. Findings are likely to be transferable in similar contexts.

In addition, beyond North America and Great Britain, this subject has received little attention. Studies covering the topic in Asia will contribute to the literature of comparative studies in LIS. In conducting this research, the researchers have explored the various social, cultural, economic, and educational factors, as well as personal and professional reasons that influenced MLIS students at these four different universities to choose LIS as a profession. The research questions guiding this study are:

1. Why do MLIS students in general choose to study LIS?
  - 1.1. What are the differences in the career motivations of the MLIS students amongst the four different universities being surveyed?
  - 1.2. What are the MLIS students’ work preferences after graduation?
  - 1.3. What factors are important to the student participants’ choice of LIS work as a career?

2. How do social, study and work environment factors in these four different countries explain these differences?

### **Value & Significance of the Study**

This study provides a ‘snap-shot’ in time of the career inspirations, needs, preferences and aspirations of a wide variety of current MLIS students. Identifying the reasons why people come to the LIS profession enables LIS schools better understand the students’ needs and expectations, as well as to better market their MLIS programmes to potential applicants. In addition, the findings of this study may provide new insights into the effectiveness of current approaches to LIS professional education and recruitment. In addition, recruiters would be interested to hear the MLIS students’ reasons for entering the field, their preferences, perceptions of the LIS profession, and interests in various subfields. Findings will be transferable to similar contexts. This study contributes to a body of research literature that may help administrators, information agencies and LIS educators conduct workforce capability planning. Finally, this study provides future research directions regarding the motivations, education, careers and emerging job markets of LIS and related disciplines under the new twenty-first century globalized knowledge economy.

### **LITERATURE REVIEW**

Studies investigating why people choose a career in LIS or why they change their previous careers and move into LIS are essential to the LIS community, particularly educators, as they provide important information on various recruiting trends and other career issues related to the LIS profession. This short literature review focuses on studies carried out in different parts of the world, with particular emphasis on occupational entry amongst librarians, as well as MLIS students’ attitudes, demographics and career aspirations. Our search of the LIS-related literature did not find many similar contemporary studies, however those we found and several older studies are discussed below.

Regarding librarians’ motivation in choosing LIS, Houdyshell, Robles, and Hua (1999) found that the most influential factors included opportunity to serve others, intellectual challenges and the nature of the LIS work itself. Previous library experiences were another core motivating

factor for some of the respondents in choosing LIS. Interestingly, in this study only a small percentage of the respondents mentioned salary as a significant motivating factor in their choice of LIS. To the contrary, the research results indicated that librarians were dissatisfied with their professional status, salary and the repetitive duties. Still, most of the librarians stated that they would choose this profession again. When asked who influenced them to enter the LIS profession, the most-frequent replies were “public” and “academic librarians” they knew, and also their immediate family members.

In another study, Gordon and Nesbitt’s (1999) reported that interest in MLIS was influenced by the respondents’ previous working experiences as paraprofessionals in a library. Many respondents also mentioned that their interest for undertaking a MLIS programme was based on their ‘love’ for reading. Hallam and Partridge (2005) also found that love of books, love of research and employment opportunities were the highest motivating factors. Moniarou-Papaconstantinou, Tsatsaroni, Katsis and Koulaidis (2010) also reported that love of books and reading still remain an important factor for people choosing to work in the LIS profession, together with other factors such as working environment inside a library, and enjoyment of helping others via providing information services.

Simon and Taylor (2011) used focus groups to investigate students’ perceptions towards the LIS profession and their motivations for choosing or arriving at a career in this field. Their findings indicate that motivations for attaining a qualification are a complex mix of both personal and professional aspirations. Personal aspirations were identified as finding balance between work and life/family after major life changes, as well as love of books and sense of self-worth. While Further, previous library work experience, the value of a MLIS degree and its professional status, and career progress were identified as the professional aspirations amongst the student respondents. At the same time, many participants described their route into LIS work as ‘accidental’, and so the “decision made at this point may indicate that the ‘accident’ has transformed into a viable career path” (Simon and Taylor, 2011, p. 813). For many of the respondents, it was the library-related work experience, which drew them into the profession.

According to another study carried out by Issa and Nwalo (2008), a total of 1,228 students from eight Nigerian LIS schools took part in a questionnaire survey. Their findings revealed that a majority (61.6%) of the student participants did not undertake the LIS programme as their first choice. Instead, they ended up in the library schools as a 'last resort'. In addition, 38.4% of the student respondents indicated that their choice in undertaking the LIS programme was influenced by the previous library-related work experience. This study concludes that despite of the increasing popularity of LIS programmes amongst the respondents, it remains largely unpopular amongst the prospective undergraduates in Nigeria, in comparison to other academic programmes such as accountancy, medicine and law (Issa & Nwalo, 2008).

Deeming and Chelin (2001) investigated why people change career to become second-career librarians. They found that while some career changes "drifted" into LIS, others made an active choice influenced by a number of factors including previous career, the influence of others, the nature of LIS work, and their stages of life and family circumstances. The findings of this study pointed to tensions in the field, as participants who entered the LIS from other professions were mostly happy with their change and generally enjoyed the LIS profession; but at the same time they were aware of the low social status and poor image that came with being a professional librarian.

Ard *et al.* (2006) conducted a survey of MLIS students at the University of Alabama to explore their motivations in choosing a career in LIS. They focused on students' views of the job market and their preferred areas of LIS work after graduation. The study concluded that, for these students, the opportunity to get a job that they considered interesting was far more important than financial compensations or professional and social prestige. Other reasons for choosing LIS career included poor job market in their originally-preferred professions, need for a change, previous working experience in a library, personal interests and providing services to others. About one third of the respondents claimed that recommendations from a mentor, professor, co-worker or friend also influenced their choice of LIS as a career. About five years later, Taylor, Perry, Barton, and Spencer (2010) conducted a follow-up study on MLIS students at the same university (University of Alabama) using the same questionnaire. In addition to confirming the findings from the Ard *et al.* (2006) study, the Taylor *et al.* (2010) results indicated a further diversity amongst the MLIS students' educational and career backgrounds, and highlighted that

the 'love' for library work was also the major motivating factor amongst the students in choosing LIS. In fact, a large number of the respondents had previously worked in libraries before starting their MLIS degrees.

Rathbun-Grubb and Marshall (2009) found that the main motivation to pursue a graduate degree in LIS was that the respondents were already employed in a library, and needed a master's degree in LIS for career-advancement purposes. The study also looked specifically into public librarianship, and found that most public librarians were generally satisfied with their careers as they considered their jobs to be interesting. They enjoyed working with people and helping users find information and resources. However, some of these librarians were also looking for other job opportunities, because of their dissatisfactions with the low salaries, poor opportunities for career advancements and the overly bureaucratic management style under the public library setting.

A study conducted by Alansari (2011) on academic, public and special librarianship, found almost half of the respondents reported that they just 'drifted into the profession', while other respondents chose the LIS profession because of their interest in books and reading and generally considered LIS work to be interesting and attractive. The study also observed librarians' job satisfaction and their perceptions of their own image as professionals. It turned out that the Kuwaiti librarians were only moderately satisfied with their careers. Recognitions of accomplishments, fair performance evaluations, and job security were much more important factors in the context of job satisfaction than the nature of LIS work itself. Poor benefits, lack of communication amongst colleagues, low salaries, poor working conditions, and limited opportunities for promotions were the major reasons behind job dissatisfaction amongst the librarians being studied.

Meanwhile, Bernstein (2011) showed that most academic librarians had an intrinsic enjoyment of their professional work, and the sense of fulfillment from being involved in the educational mission of their parent institutions was far more important than their faculty status, pay and other benefits related to their professional status. Hart (2010) also reported that slightly more than half of the respondents were generally satisfied with their work as academic librarians, although

slightly less than half were open to other job offers. This latter study found that the major reasons for librarians' job dissatisfaction included a sense of stagnation and poor pay.

In Asian countries, the relevance of LIS education for career choice has not been thoroughly studied. Miyahara (2009) examined the career expectations and perspectives on the job market in LIS and other related areas of the graduates from eight different LIS schools located in Malaysia, Singapore and the Philippines. The study showed that the subjects had widely diversified educational and occupational backgrounds. Future career opportunities were mentioned as the most important factor in undertaking an LIS programme. Although most respondents wished to find jobs in various types of libraries, quite a number of them believed that the job market for LIS graduates has been expanding, and that they could easily find employment in some other LIS-related areas, such as the IT industry, other service industries, teaching and working for research institutes.

As reported earlier, a number of studies show that the LIS profession is often a second-career choice, and these second-career librarians come from various occupational backgrounds. Typical qualifications for librarians included bachelor's degree in the arts and sciences and the master's degree in LIS. Librarians equipped with the mentioned degrees and other related skills could perform successfully in many different types of libraries and also in some library-related areas such as archives, records offices, media and publishing houses (de la Pena McCook, 2009). In Malaysia, Zainab and Edzan (2004) examined the contents of the MLIS programme at the University of Malaya and the relevance to career prospects amongst the MLIS graduates. Interestingly, it was reported that the employment situation for Malaysian MLIS graduates varied, and their occupations upon graduation included librarians, information officers, teachers, lecturers, and office managers. Only 26% of these MLIS graduates ended up working as librarians or information professionals. Meanwhile, for graduates who ended up working in other non-LIS professions, they indicated that the MLIS programme has trained them become more capable in finding and locating the needed information, useful in their other roles.

The second-career librarians often are former secondary school teachers. There are a number of studies examining the factors motivating teachers to leave their previous teaching profession and



enter the LIS profession. Poor working conditions, remuneration, being overloaded with teaching and administrative duties were found to be the major reasons causing job dissatisfaction amongst school teachers (de la Pena McCook, 2009; Galton & MacBeath, 2008; Lambert & Newman, 2012). These career changers imagine the MLIS degree will enable them to obtain stable employment in many academic, special, public or even school libraries. These experienced teachers found library work similar to classroom teaching, and felt they could easily transfer their teaching skills and professional knowledge from their former career. Still, the decision to enter the LIS profession was mostly the last resort for them, rather than an active choice (Lambert & Newman, 2012). De la Pena McCook (2009) also reported that teachers often felt entering the LIS profession would enable them not only to work in traditional library environment, but also to find jobs in some non-traditional library settings such as systems librarianship, information technology (IT) specialists, webmasters, and so on.

Looking specifically at the preferred areas of LIS work amongst the MLIS graduates, research findings indicate that most soon-to-be librarians prefer to work in academic and public libraries (Ard *et al.* 2006). Not surprisingly, a large number of respondents in the Ard *et al.* study indicated their preference for reference services. Similarly, the study by Taylor *et al.* (2010) showed a high interest in academic librarianship, also with particular preference in reference services amongst the respondents. Moreover, a large number of respondents expressed their interest in special librarianship, and other work areas outside 'traditional' librarianship, for example, military, medical, art, music, legal, federal, digital, metadata, and so on. Such findings indicate that that is a growing interest in special librarianship, as well as the rise of new technology-based subfields (like information organization and discovery) that have grown outside the scope of the traditional LIS subfields.

In summary, LIS students and professionals have various motivations and expectations that vary according to different cultures and social environments. Such motivations and expectations also change over time, possibly due to rapid changes caused by a variety of social and environmental factors, such as information technology, curriculum, social advancements, and so on, particularly in the Asian region. Therefore we find a comparative investigation of the current situation, particularly for the Asian region useful.

## **RESEARCH METHODS**

Many of the previous studies discussed have used a structured questionnaire (Ard *et al.*, 2006; Bello, 1996). Similarly, for this study a structured, self-administered online questionnaire was considered appropriate as an effective tool for gaining access to geographically dispersed communities. The questionnaire survey was chosen as the sole data collection method for the reason of reaching as many respondents as possible.

The participating universities for this study were Shanghai University (SHU), University of British Columbia (UBC), University of Hong Kong (HKU) and University of Tsukuba (UT). These four universities were chosen for the pragmatic reason that the researchers' had affiliation with the institutions. This enabled a convenience sample, as the researchers were able to obtain the necessary permission for data collection. The original questionnaire was in English, and was developed by the researchers at all four universities as a team effort. The finalized English questionnaire was then translated into the other required languages, Chinese and Japanese. The questionnaires were created using SurveyMonkey.com, and were made available to respondents for five months from November 2013 to April 2014. All current MLIS students enrolled in academic year 2013/14 at the four universities were invited to complete the online questionnaires. The original English online questionnaire designed for HKU is available at: [https://www.surveymonkey.com/r/HKU\\_MLIS](https://www.surveymonkey.com/r/HKU_MLIS). Please see the Appendix for a summary of the list of 35 questions. For details regarding the total number of questionnaire responses collected at each university, see Table 1.

The survey was analysed using descriptive statistics in order to identify interesting issues and differences. We then discuss these issues and differences with reference to the literature and using the observation and experiences of the research team in terms of the social, study and work environment in these four different regions.

<Table 1 about here>

## **TECHNICAL LIMITATIONS**

There are many ways to discover the motivation of individuals to choose a career path. However, this study was based solely on questionnaire data. Quantitative measures, such as surveys, can only provide insights into this process on a larger scale, but will not indicate the underlying incentives for individual students to pursue a specific opportunity. The total surveyed populations were small. The average number of responses collected at each university was about 40, while the yearly enrollment of each program is about 50 to 70 (see Table 1). Another limitation of this study was that all four participating universities were chosen for pragmatic reasons, because of the researchers' affiliation with the institutions. In addition, there are multiple pathways to librarianship, and different countries often have different qualification requirements for professionals to practice in the LIS field, and this study only surveyed MLIS students. Although some countries only require a bachelor's degree, the MLIS degree is the basic entry-level requirement for most professional librarian positions in both Canada and Hong Kong. On the other hand, given the sheer number of bachelor's degree holders in LIS in China and Japan, an MLIS degree is preferred but not mandatory to be employed as an LIS profession. For the reason of comparability and consistency, only master's-level LIS students were invited to take part in this study. Despite of such limitations, the findings of this study are interesting in relation to the students' personal and professional journeys to an LIS career.

## **RESULTS & ANALYSIS**

The main research question was why students choose to enroll in a master's of library and information science (MLIS) degree programme. To investigate this rather broad query it was necessary to ask more specific questions relating to their own understanding of the function, role and purpose of the LIS profession; their career motivations and history and aspirations; image of the profession, and so on.

### **Demographics**

#### ***Gender and Age***

All students enrolled in the MLIS programme in academic year 2013-14 at all four universities took part in this study. A total number of 175 responses were collected for this survey. Regarding gender distributions, a vast majority of the respondents were females – a situation that was similar throughout all four universities being examined (see Table 1).

Regarding age distributions, the majority of the MLIS students surveyed tended to be under 30 years of age – a situation that is similar throughout all four universities being examined. However, both HKU and UBC tended to have slightly more ‘mature students’. For the HKU students, 31.9% of respondents reported to be between age 30 to 39; meanwhile, 19% of the UBC students were between age 40 to 49 (see Table 2). As they are older, findings also suggested that many students at HKU and UBC crossed over to LIS after working in other professions; or had experiences in working as library paraprofessionals (see Tables 1 and 4). It was apparent that via enrolling in the MLIS programmes, these ‘mature students’ at both HKU and UBC were looking for an opportunity for a possible career change or advancement.

<Table 2 about here>

### ***Education Background***

*Undergraduate-level education* – for many LIS professional positions, individuals are required to have a Master’s level degree, which necessitates that LIS students have a bachelor’s degree in any discipline prior to enrolment in their MLIS. However, there is no preferred undergraduate major. For the UBC students, findings were parallel to previous studies by Moen (1988), McClenney (1989) and O’Brien (2002), in that the majority (62%) of students at UBC had undergraduate degrees in the humanities and liberal arts, such as English, literature, history, linguistics and creative writing, and so on. By contrast, out of all 42 responses collected at SU, 45% had obtained their bachelor’s degrees in archival studies; while only 2.4% of them majored in LIS. With reference to the students at UT, of the 44 responses, 66% had already earned bachelor’s degrees in LIS (see Table 3).

<Table 3 about here>

*Graduate-level education* – the survey results indicated that both HKU and UBC had the largest number of MLIS students with previous graduate-level qualifications. At HKU, 17% of the respondents indicated that they had already achieved master’s degrees; meanwhile at UBC, 12%

of master's degrees and 3% had doctoral degrees upon entering the MLIS programme (see Table 3).

<Table 4, 5, 6 about here>

### ***Occupational status prior to commencing the MLIS programme***

The majority of respondents at both UT and SHU did not have a job or very much work experience prior to entering the MLIS programme. Such findings suggested that the majority of them enrolled the MLIS programme immediately after completing their bachelor's degrees (see Tables 4, 5 and 6). By contrast, HKU had the highest number of students (48.9%) who had previously worked full-time in a library, and many amongst them were working at academic libraries (see Tables 7). A large number of the HKU students were pursuing the MLIS degree for career-advancement reasons. For this reason, they chose to undertake the MLIS programme on a part-time basis, that is, without the need to leave their full-time employment while advancing their professional education. Interestingly, UBC had the highest number of students employed full-time in other non-LIS-related professions before entering the MLIS programme. As indicated in Table 6, the MLIS class at UBC came from a much wider range of occupational experiences and undergraduate degrees. The students moving from many other types of professional and paraprofessional work at UBC included oilfield welder, associate professor, circus performer, theatre box office staff, museum education personnel, and so on (see Table 6).

<Table 7 about here>

### **Motivation and Preference**

#### ***Factors motivating students to choose LIS as a career***

As mentioned previously, in certain regions like Canada and Hong Kong, an MLIS degree is a necessary investment for advancing one's career in LIS. When asked why they decided to enter an LIS programme, most students at UT, HKU and UBC tied their decisions to "being interested in LIS". Meanwhile, "career advancement in [the] LIS field" was another major factor in choosing MLIS amongst the students at UT, HKU and SHU (see Table 8).

<Table 8, 9, 10 about here>

When asked to mark all of the significant reasons for choosing an LIS career, for the UT students, the pleasure in “helping people to gain access to information”, “room for intellectual development” and “[love of the] library environment / atmosphere” were the three most influential factors to these Japanese students (see Tables 9 and 10). Similar findings were also reported by Hallam and Partridge (2005) and Moniarou-Papaconstantinou *et al.* (2010). It is surprising that despite the information environment becoming increasingly digital and printed materials becoming less dominant, the love for the physical ‘book-based’ library environment, and helping others by providing information services still remain important factors for people choosing to work in the LIS profession.

On the other hand, a majority of the respondents from HKU and SHU students reported “job security” and “stable working environment” to be the most important factors for them in choosing a career in LIS. Similarly, students at UBC ranked “to earn a living” as the top factor for the choice of LIS (see Tables 9 and 10). Such findings are in line with the fact that a large number of the students at HKU and UBC started their careers as library assistants or employed in other non-LIS professions, and then decided to enter professional librarianship.

### ***Job preferences after graduation***

There is a wide range of libraries: for example public, academic, corporate, government, medical and law libraries. This study probed students for the types of libraries they would prefer to work in after graduation (see Table 11). Respondents could indicate more than one preference, and academic libraries received the highest number of votes throughout all four universities: HKU (14 votes), UT (21 votes), UBC (23 votes) and SHU (21 votes). Public libraries also had a high number of votes amongst respondents at all four universities. Archives received an unexpectedly large number of votes (16) amongst the SHU students; while art / museum libraries also received a surprisingly high number of votes (15) at UBC.

<Table 11 about here>

### *Preferred areas of LIS work after graduation*

Individual career decisions and job preferences are often based on social norms, the state of economy and job markets that shift over time. The survey results revealed that LIS students' interests lean towards "reference services". According to Ard *et al.* (2006), reference service offers a number of incentives that may entice LIS students, including the chance to work directly with end-users. The popularity of reference may also result from the visibility and perceived helpfulness of reference librarians (Ard *et al.* 2006). Following reference services, the second highest number of responses went to "administration / management". "Archival work and digitalization" also appealed to a large number of the respondents at UT, HKU and SHU (see Tables 12). Students, particularly at HKU and SHU expressed an extremely low level of interest (one vote from each university) towards "services to the disabled and elderly". It would be interesting to understand this further given the earlier responses about the desire to serve communities. "Circulation and inter-library loan services" also received relatively low responses amongst all four universities being examined, possibly because paraprofessionals increasingly perform these functions, except those in management roles (see Table 12).

<Table 12 about here>

## **DISCUSSION: SOCIAL, STUDY AND WORK ENVIRONMENT FACTORS**

In this section, we highlight key issues observed and discuss them based on the findings presented in the previous sections, as well as the experiences and observations of our research team members in their respective locations. These issues considered include: student gender and social issues, career advancement requirements, career change, doctoral degree, work preferences after graduation and personal motivation.

### *Student gender and social issues*

Librarianship has traditionally been a female-concentrated occupation (Lupton, 2006). Even as the LIS professions expand, become increasingly diverse, with men's increasing participation, our results indicate that students choosing to enroll these MLIS programmes are still predominately female. The gender breakdowns of the questionnaire respondents were broadly parallel to the 'general' perception of the LIS profession as "feminine" profession, or associated

with women. According to Dickson (2002, p. 105), men mostly choose to enter LIS as a last resort. In addition, the LIS profession as a whole is underpaid, when compared with other established professions (Adelman, 2004; Hart, 2010; Kalan, 2002; Rathbun-Grubb & Marshall, 2009). The researchers in Hong Kong believe that locally career aspirations amongst men are often based on financial concerns; whereas women in general appear to be more concerned with the balance between work and family responsibilities. Women who shoulder the burden of family caregiving responsibilities often require more stable working schedules. Meanwhile, Betz (1994) and Weitzman (1994) also noted that women did not mind choosing lower-paying careers because they are often perceived as complementary to raising a family, and in general place a stronger focus on achieving work-family balance than men. These might be the reasons many men find the LIS profession unappealing; while more women than men would identify it as a career goal. It would be useful to conduct further research to investigate whether this is currently the case, and whether it differs in different eras and cultural contexts.

### ***Career advancement requirements***

In Canada and Hong Kong, professional librarians are required to have a master's degree in LIS from a recognized university, regardless of their undergraduate degrees. According to our researchers in Hong Kong and Canada, this explains why a majority of respondents at HKU and UBC, already working as library paraprofessionals or assistants, were undertaking the MLIS programme for "career advancement" reasons (see Table 8). A lack of educational credentials would simply eliminate them from consideration, even for entry-level manager positions at both academic and public libraries. This is in accordance with Hussey (2006, p. 29), "it is possible for paraprofessionals or part-time library workers to discover LIS as a career through their jobs."

Out of all 47 respondents at HKU, 50% of them had previously worked full-time in a library before enrolment. In fact, a large number of them had previous working experience as paraprofessionals (library assistants) (see Tables 4 and 5). For this reason, obtaining the LIS professional status was identified as the most influencing factor. In short, for these HKU students, career advancement in LIS was strongly linked to the MLIS degree. Findings were also parallel to another study by Ard *et al.* (2006) in a similar context, that is prior library work had "strongly" shaped their decision to enroll in a LIS programme. The Hong Kong researchers also



pointed out that working in libraries would no doubt elevate the chances of entering LIS at the professional level. Their connections to, as well as experiences in libraries meant that the HKU students as a whole had a better understanding about, and practical knowledge and skills to work within, the LIS profession.

Entry to MLIS programmes often does not require prior related work experience. Results revealed that only a very small number of students at SHU and UT had previously worked in a library before starting the MLIS programme (see Tables 4 and 5). However, “already earned a BA in LIS” is most probably the core reason the UT students decided to pursue a master’s degree in the same academic field (see Table 8). Fresh MLIS graduates without prior work experience are often regarded to be at a distinct disadvantage in the professional community. According to the Ministry of Education, Culture, Sports and Technology, Japan (2009), only 35% of the public libraries were employing qualified librarians; and amongst these employers, they were hiring merely one librarian on an average per year. In addition, of those qualified librarians being employed, only 10% of them were offered permanent positions; while a majority of others were hired as temporary contract staff instead. The limited employment opportunities currently available in Japan might be the core reason why a large number of the Japanese students chose to pursue an MLIS degree immediately after completing their undergraduate studies, instead of directly seeking employment in the LIS field.

### ***Career change to become a librarian***

Heim and Moren (1988) reported that many MLIS students had an undergraduate degree in English or education. A bachelor’s degree in arts with a subsequent master’s degree in LIS is still a typical qualification combination for today’s librarians (de la Pena McCook, 2009). LIS as a multidisciplinary profession has the ability to absorb graduates or professionals from other field (de la Pena McCook, 2009). The diverse academic and professional backgrounds amongst the UBC students would allow them to assume a variety of positions in academic, special, public, school libraries, and so on. This study also looked at the midlife decisions and the choices these students made to move from other non-LIS professions. Respondents were asked to specify their non-LIS professions prior to entering the MLIS programme, including work field, job type and job position.

For the HKU students, a large number of them were either teachers from local secondary schools or professionals practicing in IT-related fields (see Tables 6 and 7). According to our researchers in Hong Kong, teachers with experience have come to a certain dissatisfaction and reevaluation of work-life balance. For this reason, a career in LIS may appear to be an appropriate and feasible transition for school teachers in Hong Kong. Meanwhile, LIS work in the twenty-first century is often driven by new technologies, as well as the rapidly changing learning and information needs of the library end-users.. The HKU respondents with IT backgrounds would be able to bring a wide range of transferable IT skills from their previous careers to the LIS profession. Furthermore, the HKU programme has specialist strands in “information management” and “knowledge management”, attracting even students with no intention to switch to the librarianship profession to enroll (see Table 6).

The reasons behind UBC students considering a midlife move from other professions to LIS could be challenging, and are definitely worth exploring in detail in future research. According to our researcher in Canada, major career transitions are often the result of skill mismatches, conflicting work and family responsibilities. The former careers of these second-career librarians might have an impact on the type of library work they would later pursue. The variety of the specializations and backgrounds could also reflect the rich diversity of the future LIS profession. In fact, LIS is also an interdisciplinary field, and libraries are service-oriented organizations that serve a variety of populations. In short, the great diversity amongst the UBC students would allow for a much more diverse group of LIS professionals, in terms of skills, knowledge and experience.

In relations to findings by Miller (1990), we also noticed that people changing profession approached their LIS education with a variety of reasons such as their motivation, career aspirations, learning needs and expectations of the LIS programme. Similarly, it may also be the case that people changing careers into LIS have different needs and motivations from those studying LIS as a first profession. In summary general, a “possible future career opportunity” is the most attractive factor in their career decision amongst the HKU and UBC students (see Table 8).

### ***Doctoral degree holders & librarianship***

According to Gilman (2008), some young PhD holders are frustrated by the grim teaching market at tertiary level, and would consider taking up a career in academic librarianship. Cooper *et al.* (1987) also reported PhD holders would often turn to LIS owing to the frustration faced in their first-chosen profession. In short, for doctoral degree graduates who are facing a depressed job market in their own fields, a career in academic librarianship could certainly look inviting. Reasons why doctoral degree holders chose LIS as a career are further discussed in the subsequent sections. Out of all 42 UBC students being surveyed, 9 (21.4%) of them were ethnically Chinese (see Table 13). Survey results also indicated that out of these nine Chinese students at UBC, four of them already obtained master's degrees, while one other achieved a doctoral degree<sup>1</sup> prior to entering the MLIS programme.

<Table 13 about here>

According to our researcher in Canada, many of these Chinese were in fact recent immigrants from Mainland China, who had previously completed their postgraduate studies in their homeland before immigrating to Canada. Unfortunately, many academic, governmental and private institutions in Canada would only recognize academic credentials issued in USA, UK, selected former British colonies (e.g., Singapore) and other British Commonwealth countries, for example, Australia, New Zealand, and so on. For this reason, these Chinese new immigrants considered obtaining a professional degree in LIS would be the fastest and most practical way to secure stable employment at a governmental or academic institute. Moreover, a professional librarian job would allow them to transfer their previously-acquired knowledge and skills together with their native language, Chinese, to library work.

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<sup>1</sup> According to the survey results collected at UBC, this Chinese doctoral holder had never spent any time working in a library, but was working as associate professor (specializing in economics) before enrolling the MLIS programme at UBC. And factors which influenced this doctoral student in choosing a career in LIS are as follows:

- Active / personal choice and interest for career-change reason
- Job security
- Stable working environment

Librarianship is a practical profession. In Hong Kong and Canada, the terminal degree is a master's in LIS, and not a doctoral degree (though HKU is beginning to have PhD and Doctor of Education students researching in librarianship). As a result, the attainment of a doctorate is not a prerequisite of job performance as a professional librarian. On the other hand, many scholars argue that LIS could also be regarded as an academic profession. It has many things in common with the teaching profession. Miller (1976) highlighted that doctoral recipients who have entered academic librarianship could contribute to the profession. The ultimate advantage lies in the fact that they have better understanding of the academic research process, and could therefore foster better communications in research, teaching and other learning support activities between the university library and the faculties or schools it serves. For example, in addition to having the subject expertise to offer advanced subject-oriented reference services, doctoral recipients could also apply their expertise to facilitate collection management. In Canada and USA, librarians at some universities are accorded academic or faculty status in appointment and promotion. Because of their faculty status, academic librarians are therefore required to publish as a prerequisite for promotion, in the same way as their counterparts in the faculty. Until recently, a PhD was never a part of the requirements for librarian promotion. In fact, some advertisements in North America and Hong Kong revealed that possession of a doctoral degree is one of the requirements for the appointment of university librarians. Currently, some university librarians in Canada and USA are required to hold PhD degrees, before they can be promoted or even be offered appointment.

### ***Work preferences after graduation***

It is a matter of deep interest that a majority of respondents preferred to work at academic libraries once they graduate with their MLIS degrees. Researchers at all four universities agreed that along with road to stability, better salaries and career path, higher social and professional status (sometimes even with faculty status) could be the factors most influential on these respondents' common preference for academic librarianship. The comparable higher salaries paid by academic libraries and the faculty status (in the Hong Kong and North American systems) seemed to be the most inviting factors. Academic librarians generally experience high levels of job satisfactions and fulfillment, and this is supported by past research carried out by Hart (2010) and Bernstein (2011).

On the other hand, in Shanghai, according to our researcher there, public records archivists are government officials. With long-term experience and outstanding service, it is possible for an archivist to be promoted to the rank of the general director of a large central government department in Mainland China. In contrast to a career in academic librarianship, the top position might only be the director for a large academic library like the Peking University Library. Such a promising career path attracts a large number of SHU students to the job opportunities amongst government archives in Mainland China. Although the ubiquitous nature of technology has brought the work responsibilities of various types of LIS professionals closer together in recent decades, there remain key differences in job-related nature, duties, user needs, expectations and work environment.

### ***Personal motivations***

In addition to the above issues relating to the social environment, another significant facet of motivation is personal interests. According to our researchers at UT, a majority of respondents were library users at early age, which is a common characteristic amongst these UT students. They recognized that undertaking the MLIS programme was a way to combine their love of the library with their career focus. In this context, the library served as both a venue of intellectual hegemony, as well as an escape from the competitive business world. Amongst these Japanese students, libraries were seen as safe havens, a source of tools for learning and comfortable locations. According to our researchers at UT, libraries provide a dependable environment devoted primarily to knowledge and intellectual pursuits. It is a place where the participants could envision working, because they enjoy spending time in the library. In other words, it was the interesting job nature and the working environment inside a library that attracted these Japanese students into LIS, rather than the salary, compensations, or job security, and so on. As highlighted by Ard *et al.* (2006, p. 241), “the profession will benefit from the inflow of intrinsically motivated people who enjoy the nature of the work, and will likely stick with the profession even, if the salaries and the public image of librarians do not improve dramatically in the next few years.”

Our discussion here is based on our interpretation of our survey findings, influenced by the literature and informed by our own thoughts derived from working within our own cultural contexts. Future research on motivation and background to confirm, or otherwise these interpretations would be useful to those teaching in MLIS courses, such as ourselves.

## **SUMMARY AND CONCLUSION**

The purpose of this research was to gain insights into the motivations of MLIS students in choosing LIS as a career, as well as their expectations by analysing the survey results collected at universities located in four different regions.

This survey has identified the top six most important factors that influenced the students at all four universities in choosing LIS as a career: (1) “Being able to help library users”, (2) “job security”, (3) “stable working environment”, (4) “room for intellectual development”, (5) “career advancement” and (6) “career change”. Participants described nonlinear career patterns, which were reflected in the responses from the student groups at HKU and UBC in particular. The researchers have a general impression that balancing between family life and work was vital amongst these ‘mature’ students, in terms of making feasible career-change decisions. For these midlife-career changers who are looking for new career choices, this study may shed light on the possibilities of career in LIS.

At the same time, the respondents of all four groups indicated similar and yet distinctive reasons for choosing LIS as a profession. The survey results revealed that many students at HKU and UBC planned to migrate to the field of LIS after earning graduates degrees in other disciplines, while the majority of UT and SHU students have little or no previous work experience. Also because of their varying educational and occupational backgrounds, we could expect these students at HKU and UBC to bring a much more diverse set of occupational skills and knowledge to the LIS profession. Together with their diverse educational backgrounds, the HKU and UBC MLIS graduates would not be limited to just work for libraries or information centres, but also for other organizations that are complementary to LIS or require LIS skills. The ability to navigate and manage information is indeed a very useful skill, and there are many non-library jobs which the degree qualifies graduates for. According to Gordon (2008), an increasing

number of LIS graduates are working for corporations and organizations outside the traditional library and archival environments, or are starting their own businesses: for example by building or supporting technology infrastructure, conducting research, creating and maintaining a web presence or intranet, designing databases, assessing consumer information needs, or training users on software or other products, and so on. These career changers might put more emphasis on applying or transferring their existing skills to the future LIS profession.

LIS schools always expect to get input from the consumers, that is, students. LIS education programmes as well as administrators, who employ MLIS graduates will also require research data (like the current study) to understand the backgrounds and needs of MLIS students to help ensure that the supply of LIS professionals would be adequate to meet the demands in the job market. The findings of this study would also enable inferences to be drawn about the educational needs of those changing careers into LIS.

The MLIS programme is the first step in preparing professionals for entering the field of LIS. Although this research is not comprehensive, it provides a snapshot of particular groups of soon-to-be LIS professionals. Libraries and the LIS profession have evolved over time, and LIS does not exist outside the general social framework. Employers of LIS graduates are highly diversified and could also vary substantially in both size and nature.

Designing an LIS educational programme for the diverse needs and expectations of employers could be difficult. LIS programmes also have to compete with other programmes (for example, archival science, information systems, IT management) to attract applicants, and have been forced to change its nature and scope of curriculum dynamically. The approach of the HKU programme, which offers different specialist strands is probably a viable solution. To meet the demands of prospective students and the industry, LIS programmes should be constantly reviewed and updated according to the developments in society, the workforce and information technologies. Furthermore, there has been a trend in LIS research to investigate LIS workforce issues to enable better planning for recruitment and retention in the light of changing age demographics, pending recruitments and employee turnover. For these reasons, LIS administrators and others responsible for hiring LIS professionals will find MLIS students'

reasons for entering the field, their preferences, perceptions of the LIS profession, and interests in various subfields of interest in workforce planning.

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## APPENDIX

The following questionnaire is modeled & modified after the questionnaire used for the American Library Association's Office for Library Personnel Resources national survey in 1988.

1. Gender
  2. Age
  3. What is your ethnic background?
  4. What was the highest degree(s) you obtained before undertaking the MLIS programme?
  5. Please specify area of study (your highest degree).
  6. Did you move from another university to continue studying MLIS at your current university?
  7. Which of the following were helpful to you in choosing a university for undertaking your MLIS?
  8. Please indicate how important the following were to your selection of the MLIS school / university you chose.
  9. You are enrolled in a MLIS programme: part-time or full-time.
  10. Approximately, how much of the MLIS programme have you completed by now?
  11. What was your occupational status prior to starting the MLIS programme?
- IF YOU DO NOT, OR NEVER WORK(ED) IN A LIBRARY, PLEASE GO TO DIRECTLY TO QUESTION No. 15!
12. Your decision to go into the library & information profession was: Active personal choice & interest, Drift - by chance & circumstance, Don't know, or Other (please specify)
  13. What type of library or information center did you work for prior to undertaking your MLIS programme?
  14. Did your previous library work experience contribute to your decision to pursue your MLIS?
  15. Your decision to undertake the MLIS programme was based on your: First career choice, Active/personal choice, Compromised decision, The only option available / last resort, Never thought about it, or Other (please specify)
  16. When did you make a decision to pursue a MLIS degree?
  17. Please indicate your main reasons for undertaking the MLIS programme.

18. After earning your MLIS degree, which type(s) of library or institution you wish to work for most?
19. Please indicate to what extent the following were important to your choice of library & information science work as a career.
20. What best describes the library & information profession for you?
21. Have any of the following factors influenced your decision to pursue library & information work?
22. Indicate what characteristics describe best library & information work?
23. In addition to your existing knowledge in LIS, do you have any special skills / knowledge, which you think that they might contribute to your work as a librarian?
24. How many languages are you capable of working with and you think that they might contribute to your future library work?
25. Which of the following academic disciplines should play more important roles in the whole context of library & information education?
26. What would be your preferred areas of work after graduating from MLIS?
27. After completing your MLIS do you plan to pursue any other degree?
28. Please indicate what salary you expect to receive in your first job after graduating with a MLIS?
29. Please indicate to what extent the following reasons are important to your choice of the MLIS programme.
30. Do you agree with the statement that our society in Hong Kong has an accurate & informed perception of the library and information profession.
31. What do you think the image & the nature of the library & information profession in these days are?
32. According to your opinion, how important is the library & information profession to our society in future?
33. How important do you think are the following aspects in librarians' professional practices in the future?
34. Please write your feelings & thoughts to the following 3 questions on this page. This information will give more qualitative meaning to the quantitative answers listed in the previous sections.

35. Do you have any comments on this survey? Or do you have any other thoughts or comments which you would like to share about choosing LIS as your career?

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<b>Table 1. Total Number of Survey Responses Collected &amp; Gender Distributions</b>				
	<b>UT</b>	<b>HKU</b>	<b>UBC</b>	<b>SHU</b>
Male	16 (36.4%)	18 (38.30%)	6 (14.3%)	13 (31.0%)
Female	28 (63.6%)	29 (61.70%)	36 (85.7%)	29 (69.0%)
Total responses / approximate yearly enrollment	44 / 55	47 / 60	42 / 70	42 / 50

<b>Table 2. Age Distributions</b>				
	<b>UT</b>	<b>HKU</b>	<b>UBC</b>	<b>SHU</b>
Under 30	38 (86.4%)	29 (61.7%)	27 (64.3%)	40 (95.2%)
30 – 39	5 (11.4%)	15 (31.9%)	7 (16.7%)	2 (4.8%)
40 – 49	1 (2.3%)	3 (6.4%)	8 (19.0%)	0 (0.0%)
50 or above	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Total responses	44	47	42	42

<b>Table 3. Highest degree(s) obtained before undertaking the MLIS programme</b>				
	<b>UT</b>	<b>HKU</b>	<b>UBC</b>	<b>SHU</b>
Bachelor's degree	37 (84.1%)	28 (59.6%)	25 (59.5%)	30 (71.4%)
Postgraduate certificate	0 (0.0%)	0 (0.0%)	1 (2.4%)	7 (16.7%)
Postgraduate diploma	0 (0.0%)	2 (4.3%)	1 (2.4%)	0 (0.0%)
Master's degree	7 (15.9%)	17 (36.2%)	12 (28.6%)	5 (11.9%)
Doctoral degree (e.g., PhD, EdD, DBA, etc.)	0 (0.0%)	0 (0.0%)	3 (7.1%)	0 (0.0%)
Others	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Total responses	44	47	42	42



<b>Table 4. Occupational Status Prior to Starting the MLIS Programme</b> <i>(multiple answers accepted)</i>				
	<b>UT</b>	<b>HKU</b>	<b>UBC</b>	<b>SHU</b>
Employed full-time in a library	1 (2.3%)	22 (48.9%)	2 (4.9%)	1 (2.6%)
Employed part-time in a library	5 (11.4%)	2 (4.4%)	6 (14.6%)	1 (2.6%)
Student	36 (81.8%)	3 (6.7%)	12 (29.3%)	34 (87.2%)
Full-time housewife / stay-at-home father	1 (2.3%)	0 (0.0%)	3 (7.3%)	1 (2.6%)
Volunteer in a library	2 (4.5%)	1 (2.2%)	3 (7.3%)	0 (0.0%)
Unemployed	1 (2.3%)	0 (0.0%)	2 (4.9%)	1 (2.6%)
Employed full-time in other profession(s)	2 (4.5%)	19 (42.2%)	17 (41.5%)	5 (12.8%)
Employed part-time in other profession(s)	1 (2.3%)	2 (4.4%)	7 (17.1%)	2 (5.1%)
<b>Total Responses</b>	<b>44</b>	<b>45</b>	<b>41</b>	<b>39</b>

<b>Table 5. Occupational Status Prior to Starting the MLIS Programme</b>	
UT	<ul style="list-style-type: none"> <li>• Student</li> </ul>
HKU	<ul style="list-style-type: none"> <li>• Employed full-time in a library</li> <li>• Employed full-time in other professions</li> </ul>
UBC	<ul style="list-style-type: none"> <li>• Employed full-time in other profession(s)</li> <li>• Student</li> </ul>
SHU	<ul style="list-style-type: none"> <li>• Student</li> </ul>

<b>Table 6. Employment in Other Non-LIS Professions Prior to Taking the MLIS Programme</b>			
<b>UT</b>	<b>HKU</b>	<b>UBC</b>	<b>SHU</b>
Civil servants (manager)	Construction management	Manufacturing; Machinist	Headhunter for private companies
Software development	Education, Secondary School Teacher	Administrative professional / Project coordinator	Hospital nurse
Bookstore contract staff	Education, Teacher	Oilfield- welder's helper	
	English teacher	Theatre Company - Box Office	
	Full-time English Teacher	Teacher	
	Teacher	Customer service	
	Information management	Executive Director, non-profit health care sector	
	IT management	Stay-at-home mother not "housewife"	
	Knowledge management	Heritage Interpretation / Museum Education	
	Administrative work in education field	Retail, Sales Associate	
		Management for small business	
		Housekeeper	
		College instructor	
		Assistant retail sales manager	
		Research assistant	
		Software support	
	University; teaching; Associate professor		
	Private Investigation, Office Manager		
	Production Technician		
	Circus performer		

<b>Table 7. Types of Library / Information Center Worked for Prior to Undertaking the MLIS Programme (multiple answers accepted)</b>				
	<b>UT</b>	<b>HKU</b>	<b>UBC</b>	<b>SHU</b>
Public libraries	1 (14.3%)	8 (26.7%)	6 (37.5%)	0 (0.0%)
Archives	0 (0.0%)	3 (10%)	4 (25.0%)	1 (33.3%)
Academic libraries	4 (57.1%)	16 (53.3%)	10 (62.5%)	0 (0.0%)
Community college libraries	0 (0.0%)	4 (13.3%)	1 (6.3%)	1 (33.3%)
School libraries	1 (14.3%)	9 (30%)	2 (12.5%)	0 (0.0%)
National libraries	0 (0.0%)	2 (6.7%)	0 (0.0%)	0 (0.0%)
Medical / hospital libraries	0 (0.0%)	2 (6.7%)	0 (0.0%)	0 (0.0%)
Corporate / business libraries	1 (14.3%)	7 (23.3%)	2 (12.5%)	0 (0.0%)
Other types of library	1 (14.3%)	1 (3.3%)	1 (6.3%)	1 (33.3%)
Total responses	7	30	16	3

<b>Table 8. Top 3 Reasons for Choosing LIS as a Career</b>			
	<b>Top-Most Selected Reason</b>	<b>2<sup>nd</sup>-Most Selected Reason</b>	<b>3<sup>rd</sup>-Most Selected Reason</b>
UT	Being interested in LIS (35 votes)	Already earned a BA in LIS, hence, it is only natural that I get my MA in same field too (16 votes)	Career advancement in LIS field (15 votes)
HKU	Career advancement in LIS field (27 votes)	Career change (active decision ; personal choice or decision) (22 votes)	Being interested in LIS (21 votes)
UBC	Being interested in LIS (26 votes)	Allows opportunities to transfer my skills & knowledge to LIS work (25 votes)	Career change (active decision ; personal choice or decision) (22 votes)
SHU	Want to change into a profession that gives more job security (14 votes)	Career advancement in LIS field (12 votes)	Wanted to earn an MA related to education & information immediately after completing my BA (11 votes)

<b>Table 9. The extent the following factors were important to students choosing LIS as a career</b> (Average rating based on a 5-point Likert scale)				
	<b>UT</b>	<b>HKU</b>	<b>UBC</b>	<b>SHU</b>
Job security	3.79	3.88	3.74	4.00
Benefits (e.g., medical & dental insurance, & retirement plans, etc.)	3.50	3.43	3.37	3.89
Routine work	1.95	3.05	2.47	3.39
Being able to read all the time	2.53	2.68	2.42	3.66
Being close to books & knowledge	3.87	3.13	3.37	3.66
Satisfactory salary	3.47	3.73	3.74	3.74
Being able to help other people in search of information	4.08	3.53	3.97	3.55
Stable working environment	N/A	3.85	3.61	3.82
Professional & social status	3.32	3.33	2.89	3.50
Opportunities to serve others & the community	3.84	3.43	3.92	3.47
To earn a living	3.53	3.83	4.00	3.58
Free from competitive business world	3.00	3.65	2.74	3.13
Room for intellectual development	4.26	3.63	3.87	3.63
Library environment / atmosphere	4.00	3.68	3.63	3.74
Total response	38	40	38	38

<b>Table 10. Top 3 Factors Important to Students Choosing LIS as a Career</b> (Average rating based on a 5-point Likert scale: from)			
UT	Being able to help other people in search of information (4.08)	Room for intellectual development (4.26)	Library environment / atmosphere (4.00)
HKU	Job security (3.85)	Stable working environment (3.85)	To earn a living (3.83)
UBC	To earn a living (4.00)	Being able to help other people in search of information (3.97)	Opportunities to serve others & the community (3.92)
SHU	Job security (4.00)	Benefits (e.g., medical/dental insurance, & retirement plans, etc.) (3.89)	Stable working environment (3.82)

	<b>Top-Most Selected Library Type</b>	<b>2<sup>nd</sup>-Most Selected Library Type</b>	<b>3<sup>rd</sup> -Most Selected Library Type</b>
UT	Academic library (21 votes)	Public library (16 votes)	Research institution library (10 votes)  Publisher (10 votes)
HKU	Academic library (14 votes)	Government library (11 votes)	Public library (8 votes)
UBC	Academic library (23 votes)	Public library (16 votes)	Art / museum library (15 votes)
SHU	Academic library (21 votes)	Public library (20 votes)	Archive institute (16 votes)

	<b>UT</b>	<b>HKU</b>	<b>UBC</b>	<b>SHU</b>
Administration / management	<b>13</b> <b>(34.2%)</b>	<b>19</b> <b>(47.5%)</b>	8 (21.1%)	<b>21</b> <b>(55.3%)</b>
Archival work & digitization	<b>10</b> <b>(26.3%)</b>	<b>17</b> <b>(42.5%)</b>	12 (31.6%)	<b>21</b> <b>(55.3%)</b>
Reference & library instruction services	8 (21.1%)	<b>17</b> <b>(42.5%)</b>	<b>23</b> <b>(60.5%)</b>	<b>7</b> <b>(18.4%)</b>
Cataloging, indexing & abstracting	6 (15.8%)	13 (32.5%)	<b>14</b> <b>(36.8%)</b>	3 (7.9%)
Acquisitions / collection development	6 (15.8%)	11 (27.5%)	<b>19</b> <b>(50.0%)</b>	<b>6</b> <b>(15.8%)</b>
Digital library development	8 (21.1%)	<b>18</b> <b>(45%)</b>	<b>14</b> <b>(36.8%)</b>	5 (13.2%)
Circulation services & inter-library loan services	4 (10.5%)	6 (15%)	7 (18.4%)	1 (2.6%)
Computer systems / automation	7 (18.4%)	9 (22.5%)	4 (10.5%)	3 (7.9%)
IT Service / multimedia support	<b>10</b> <b>(26.3%)</b>	9 (22.5%)	6 (15.8%)	4 (10.5%)
Library publicity / marketing / public relations	<b>13</b> <b>(34.2%)</b>	9 (22.5%)	6 (15.8%)	<b>6</b> <b>(15.8%)</b>
Scientific research in LIS	<b>16</b> <b>(42.1%)</b>	14 (35%)	10 (26.3%)	4 (10.5%)
Youth & children services	9 (23.7%)	11 (27.5%)	11 (28.9%)	4 (10.5%)
Services to minority communities	3 (7.9%)	5 (12.5%)	11 (28.9%)	3 (7.9%)
Services to the disabled	1 (2.6%)	1 (2.5%)	7 (18.4%)	1 (2.6%)
Services to the elderly	2 (5.3%)	2 (5%)	8 (21.1%)	1 (2.6%)
Other area(s)	2 (5.3%)	2 (5%)	5 (13.2%)	0 (0.0%)
Total responses	38	40	38	38

(Table 13)

**MLIS Students & their Ethnic Backgrounds**

	<b>UT</b>	<b>HKU</b>	<b>UBC</b>	<b>SHU</b>
Chinese	10 (23.0%)	46 (98.0%)	9 <sup>2</sup> (21.4%)	42 (100%)
Japanese	33 (75.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Korean	1 (2.0%)	0 (0.0%)	1 (2.4%)	0 (0.0%)
Caucasian	0 (0.0%)	1 (2.0%)	29 (69.0%)	0 (0.0%)
African American	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Hispanic	0 (0.0%)	0 (0.0%)	1 (2.4%)	0 (0.0%)
Others	0 (0.0%)	0 (0.0%)	2 <sup>3</sup> (4.8%)	0 (0.0%)
Total	44	47	42	42

<sup>2</sup> Amongst these 9 Chinese MLIS students at UBC, 4 of them already a master's degree, while one of them held a doctoral degree prior to entering the MLIS programme at UBC.

<sup>3</sup> One French Canadian and one Eastern European