

Measuring the Importance of User Education in Academic Libraries from Students ' Perspective: A Comparative Study among the University of Tsukuba, Fudan University and the National Taiwan Normal University

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**Master's Thesis in Graduate School of Library,
Information and Media Studies**

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Chapter 1 – Introduction

1.1. Introduction

One of the primary roles of academic libraries is to support the teaching, learning, and research in the university. However, the ways and modes of learning amongst university students have undergone drastic changes in the last few decades, and inquiry-based learning has become increasingly important. At the same time, with the development of different communications technologies, enormous amounts of new information are being produced, disseminated, exchanged, and shared every day. The situation is further complicated by the recent evolution of different information and communications technologies (e.g., mobile devices, online social network applications, etc.), pedagogies, and the general academic environment that have all led to ever-increasing and rapidly expanding user requirements and behavior. In fact, “with the advent of online indices and full-text databases, as well as access to nearly every library and Internet site in the world, students and faculty are more often plagued with too much access, rather than not enough” (Stahley & Platt, 2002, p. 359). With this information overload, Posey (2009) pointed out that users need the skills to recognize the difference between good and bad information, but many users are lacking IL skills necessary to distinguish a biased Web page and refereed journal” (p. 39). For this reason, traditional library user education programs could be seen as vastly inadequate. Meanwhile, the Internet age has changed the ways academic libraries operate. In fact, the Internet is no longer a novelty to libraries, and the growth of home broadband access is tremendous. Nitecki (1996) noted, “A measure of library quality based solely on collections has become obsolete” (p. 181). As a result, the traditional measure of library quality has shifted from collection size to “availability and accessibility of adequate learning resources, such as library and information technology support service” (Kenny, 2002, p. 43). This shift in assessment has transformed academic libraries from a library-centric view that focuses on processes, functions, and services to a customer-centric view. Ultimately, academic librarians need to recognize that for library assessments to be valid, library users must be involved in evaluating the library services they are receiving.

User education in Asian academic libraries is influenced by the policy of America Library Association (ALA) - for example, *Guidelines for Bibliographic Instruction in Academic Libraries* (ACRL, 1977), *Model Statement of Objectives for Academic Bibliographic Instruction* (ACRL, 1987), *Information Literacy Competency Standards for Higher Education*¹ (ACRL, 2000), *Guidelines for Instruction Programs in Academic Libraries*² (ACRL, 2003) and so on. However,

¹ The Information Literacy Competency Standards for Higher Education
<http://www.ala.org/acrl/standards/informationliteracycompetency>

² Guidelines for Instruction Programs in Academic Libraries: <http://www.ala.org/acrl/standards/guidelinesinstruction>

there are two main problems in library user education. Firstly, services and the roles of the library itself are changing with increased digitization and computerization. Library user education on the use of e-journals and databases is just as important as the other services. On the other hand, in its current state, it is not fully developed. This point is common internationally as well as in Japan. Mohammadi *et al.* (2008) examined students' familiarity with reference resources as well as the necessity of providing user education based on students' viewpoints. In this study, a sample of 351 students were given a questionnaire of 22 questions. Findings showed that students found that library user education to be necessary and beneficial, and that students would like to see experts and professional librarians in the reference department. Secondly, contents of user education are decided by librarians, but they lack understanding users' perspectives and needs. According to Lubans (1974):

“Most library instruction is based on what we librarians think library users need to know. Thus it can be seen that differences in goals and objectives between librarians and users may well lead to emphasis on certain aspects of a subject which one of the groups concerned regards as not very important. This, in turn, can cause problems of motivation and result in a course, which is not particularly successful. Therefore, there is a gap between librarians and library users. This, in turn, can influence library use” (p.211).

In the end, the gap between librarians and library users would be a potential consequence of unsuccessful library user education programs. Based on these indications, it will be important to build more effective user education in the academic library.

Learning through inquiry and independent learning are what a university education about. Students at the post-secondary level should be taught and encouraged to ask “Why?” more often – that is, to not settle for simple answers and straight facts, but to explore further independently. In order to become an independent learner, students need to take full ownership, control, as well as responsibility for his or her own learning process. At the post-secondary level, one simply has to be a skillful and effective user of the library in order to become a true independent learner. Meanwhile, with the rapid development of technology and interpersonal communication tools, enormous amounts of new information are being produced every day – students are simply overwhelmed by the sheer amount of information that is freely and conveniently available on the Internet (Fleming-May & Yuro, 2009). As a university student, locating, using, managing, sharing and synthesizing information effectively is unquestionably a complex task in today's information-saturated digital environment (Jankowska, *et al.*, 2006). For this reason, in today's

electronic age, students must be able to exhibit a wide range of functional and critical thinking skills that are related to information, media, and communications technology.

A major problem faced by many academic libraries is how to organize user education more effectively to cater for the students' diverse learning needs and expectations. Furthermore, there have been very few systematic studies about the practice of inquiry-based learning and its relations to the library user education in the context of higher education in Asia. According to Zeithaml, Parasuraman & Berry (1990), "The only criteria that count in evaluating service quality are defined by customers" (p. 16). Having taken this situation into account, this study was designed with the aim of examining interrelations between the scope, extent and formats of library user education programs being carried out at the following universities, namely the University of Tsukuba (UT) located in Tsukuba, Japan, Fudan University (FDU) located in Shanghai, China, and the National Taiwan Normal University (NTNU) located in Taipei, Taiwan.

1.2. Statement of problem

In Japan, China and Taiwan, library user education follows ALA guidelines, which have been translated as the library user education guidelines. *Information Literacy Competency Standards for Higher Education* approved in 2000 by the Association of College and Research Libraries (ACRL), a division of ALA. In 2016, since the standards were rescinded by the ACRL, academic libraries are trying to adjust their current guidelines to deal with changes. This raises a few questions: are there any differences among these academic libraries' user education? Why do these academic libraries have differences despite all being influenced by ALA guidelines? How about the students' attitudes and perceptions towards the library user education—will there be any differences among these three universities? What are the reasons for these differences?

The reasons for choosing UT, FDU and NTNU for the current study are as follows:

(1) Firstly, there are few comparative studies about library user education among Asian universities.

(2) Secondly, the cultural backgrounds, teaching styles and the study habits among the 3 universities are similar in many respects.

(3) Thirdly, library user education practices amongst the three university libraries are influenced by the policy of the American Library Association (ALA) in Asia, including Japan, China and Taiwan.

Chapter 2 – Literature Review

This section looks at the literature related to user education. The first part of this review will look at the definitions of library user education and its implementation in Asian countries. The next part of this review will look at the literature related to user education in the context of academic libraries. Since this topic is rarely studied in East Asia, this study could bring new insights to their impacts on the university students' overall learning.

2.1. Definition of library user education

As there are many definitions available in the literature on user education (Osagie 2003; Ogunmodede & Emeahara 2010), it has become increasingly difficult to arrive at one single, comprehensive definition of library user education (Sewa, 1992, p. 66). Osagie (2003) summarized the need of library user education to include enabling users to know how to use the library catalog in any library; to understand the classification scheme in any library so as to be able to locate materials; to see the library catalog as index to the library holdings and use them for that purpose and to see the library as a repository of knowledge that determines the success of the students' academic program. Ogunmodede & Emeahara (2010) stated that the essence of library user education is to equip library users with enough knowledge and skills on the use of library resources effectively and efficiently. They also observed that the resources in the library are so complex that an average library user cannot comprehend them. Therefore, library users require knowledge of the organization of bibliographic instructions to access and utilize the resources maximally.

In Japan, the definition of library user education follows the ALA guidelines which was translated by the Japan Library Association (JLA) as the standard and guidelines for library use education. According to these guidelines (JLA, 1998), academic library user education is a systematic information education that provided for all members of the university community for the purpose of developing independent information user³. Furthermore, the Japan Society of Library and Information Science (JSLIS) published the *Dictionary of Library and Information Science Terminology* (図書館情報学用語辞典, p.183), 4th edition, in 2013, which explains that library user education is a systematic educational activity planned and carried out for the group of library users

³原文は “ 大学図書館における図書館利用教育とは、自立した情報利用者の育成を目的として大学コミュニティの全構成員を対象に体系的・組織的に行われる情報教育である ” 日本図書館協会利用教育委員会. 図書館利用教育ガイドライン_大学図書館版. (1998). <http://www.jla.or.jp/portals/0/html/cue/gl-u05.html> (Access on 24th, November, 2016)

and potential users⁴. Furthermore, the Library Use(r) Education Guidelines (JLA, 1998) defined the aim and purpose of library user education as following five areas: user awareness, service orientation (library orientation), information retrieval instruction (ex. database instruction, library instruction), and information organization and information representation (ex. research consultation).

In China and Taiwan, many scholars have also attempted to define library user education (Zhu, 2009; Li, 2013). However, there is still not a unified definition. The aim of library user education is to help users to understand library services, master literature retrieval and utilization methods, enhance the consciousness of information and the ability to express information needs, and to use various retrieval tools and channels to access literature and information (*Encyclopedia of China: Library, information and archival science*, 1993). Library user education is a universal practical and comprehensive education, which is an important work for library development and to realize its educational functions. Zhu (2009) views user education programs as a series of educational activities of the library and information organization, which is carried out intentionally and systematically to increase users' information awareness and retrieval skills. On the other hand, Li (2013) sees it as an education activity of library and other information institutions to develop and improve the ability of users (including potential users) to use the information of the literature. Specifically, library user education is through targeted planning, promotional and training activities in various forms, through the introduction of different types and carrier of information resource acquisition or retrieval strategy, as well as library services, training and improve users' information consciousness and the ability of using the library and so on. Moreover, actively cultivating users' interest is one of the tasks of the library user education. In short, library user education is an important part of library service. It can enable them to make full use of the library and information resources. The current publications defining library user education on the dictionary and the guidebook in Japan, China and Taiwan are different (see Table 1).

Table 1. The current publications defining library user education

	Dictionary	Guidebook	Book
Japan	Yes	Yes	Yes
China	Yes	Only for bibliographic instruction course	Yes
Taiwan	Yes	No	Yes

⁴図書館の利用者および潜在利用者の集団を対象に計画、実施される、組織的な教育活動である。日本図書館情報学会用語辞典編集委員会. 図書館情報学用語辞典. 第4版. 2013, 284p.

Library user education is a product of the increasing trend of the literature and the increasing demand for literature information in the modern society. Therefore, information literacy is becoming an increasingly essential part of library user education. (Chen & Lin, 2011). According to Rogers (1994), information literacy (IL) refers to a compound of library skills, study skills, cognitive skills and additional skills that are necessary for independent learning. The often-cited definition of IL skills is the ability “To recognize when information is needed, and to have the ability to locate, evaluate, and use effectively the needed information⁵” (ALA, 1989)--which clearly points to the academic libraries, unquestionably plays an indispensable role in students’ overall learning process. Meanwhile, “academic libraries have always ignored the Internet’s convenience and instead emphasized on providing high-quality information and instructing students on how to use the library” (Posey, 2009, p. 12). For this reason, an increasing amount of the user education programs are being designed and carried out by academic libraries worldwide with the aim of enabling students to masters the basic IL skills (Critz, et al., 2012).

In this study, according to the three university librarians, library user education is used to teach students the skills, concepts and habits of mind needed to find information, understand how it is produced and valued and use it ethically to create new knowledge by focusing on two areas: library instruction and research assistance.

2.2. The development of Library user education in Japan

In 1923, the new building of Tokyo Imperial University (now the University of Tokyo) library was established. At the same time, “Tokyo Imperial University Library User Guidance” was published. After that, the reference department for user guidance was set up in 1953. In 1941, the first library orientation was held in the University of Kyoto. The method of library use is changing with the proliferation of networks and the time shifted into the digital era. In 1989, the JLA user education committee was established. In 1998, the “Information Power: Building Partnerships for Learning” was carried out by the ALA. Under this influence, the “Library User Education Guidelines” were published by JLA user education committee. From here, library user education has been under construction with IL as the key concept (Nozue, 2003). In 2001, the library user education guideline collection was published in one volume, which became an important guideline in the practice of library user education.

The research about academic library user education in Japan began in 1960. Orientation video production, how to use the television, to library instruction by PC, video materials for library

⁵ American Library Association. Presidential Committee on Information Literacy. Final Report. (Chicago: American Library Association, 1989.)

instruction, library user education guideline, and a lot of practice cases were reported. In the 1980s, libraries began to acknowledge library instruction as a regular service. Hirota & Ueda (1996) did a questionnaire survey in 774 Japanese university libraries and showed the following points: 1) Use of electronic sources has rapidly increased in Japanese university libraries; 2) There was no established method for instruction for electronic resources, and the current resources are insufficient. It is considered that this caused from the uncertainty of the future electronic environment in libraries. Hashi (2000) reported that 100% of national and public universities; and 93.7% of private universities conducted library orientations for freshmen. On the other hand, the percentage of the universities which conducted subject-oriented information literacy education is 39.4% of the national universities, 14.2% of the public universities, 13.1% of the private universities, which was much lower in comparison. Moreover, according to Kanazawa (2016), the main issues in Japanese academic libraries need to have a variety of educational content, as well as execute more advanced library user education far beyond library orientations. Also, it is important for academic libraries to make use of Computer-Assisted Instruction for library user education in order for every library user to learn different content at their own pace.

Most studies on library user education tend to be primarily focused on America or Europe, and there are few studies about Asian academic libraries. This study, then, seeks to fill this research gap. However, development of academic libraries in China, Singapore, and Taiwan is quite advanced. At the same time, there is a great need for collaboration for these libraries. Ujigou (2008) pointed out that the Japanese library should not only learn from the libraries of developed countries but also should work with the libraries in other Asian countries to codevelop and cooperate with each other in the future.

2.3. The development of library user education in China

For libraries of the past, reference service, face-to-face tutoring and some other activities of pedagogical nature have been included as part of library user education contents. After the 1960s, some countries have carried out large-scale library user educational activities. Also, some countries provide these services not only for college students and postgraduate students, but also for students in middle and primary schools to cultivate the consciousness of information and IL, that is ability to locate, and use information in some developed countries.

According to Chu (2004), the development of library user education efforts in China can be divided into three developmental phases: the beginning phase (from 1933 and 1980), the developing phase (from 1980 to 1995), and the creating phase (from 1995 to the present). Each of these phases

has a unique development pattern and set of achievements. The beginning phase is in the period of time that the Chinese library community started to realize that the importance of the library user education through reading in the public libraries. They realized the future of library development lay in the development of digital libraries, and they started to pay close attention to the research and development of library service in the community. In the 1970s, a small number of colleges and universities set up some professional bibliography instruction courses according to the library reference experience from the Soviet Union. However, these courses were scattered and lacked systematic structure. In 1977, Deng Xiaoping made the decision of resuming the National Higher Education Entrance Examination (Gao Kao), having profound impact on Chinese higher education in history. From the 1980s on, Chinese higher education has undergone a series of reforms that have slowly brought improvement. In 1981, the ministry of education of the People's Republic of China (PRC) published the Management of Libraries Ordinance for higher education. This ordinance required universities to set up literature retrieval course as the information education courses of university library. Furthermore, in 1984, the Ministry of Education of the PRC published books named "Some Comments about the Library Retrieval Instruction Courses in Academic Library" to require some detail about literature retrieval and utilization courses, including the contents, purpose, teaching method, teaching material, curriculum and so on. In 1985, the Ministry of Education of the PRC pointed out that the literature retrieval instruction should be held as continuous education for different levels of competency. The National Library and Information Work Committee has done a great deal of work in the organization planning, teacher training, textbook compilation, experience exchange and academic research of this project. By June 1990, about 70% of the colleges and universities have created literature retrieval courses or lectures. In 1992, the Ministry of Education of the PRC published some files on more detail recommendations for library retrieval instruction. With the development of computer and Internet, the researchers began to combine library user education together with information literacy from 1995. In 1996, Information Literacy Education Academic Research Community was established. In 2002, the National Information Literacy Education Research Conference was held by the National Library and Information Work Committee. The conference not only discussed the information literacy education in the library user education level, but also combined with the university community and the society level. This shows that the literature retrieval course is no longer a traditional mode and category, but it stands on a higher level to adapt to the new information environment of the overall information literacy training and improvement (Chu, 2004).

In comparison to its Western counterparts, or even Taiwan and Hong Kong, library user education in Mainland China developed relatively late, owing to the fact that the Cultural Revolution (1966-

1976) literally brought the entire education system in China to a virtual halt for over a decade. Despite such unfortunate events in Chinese history, library services and end-user education progressed quickly, especially in the area of bibliographic instructions. Bibliographic instruction courses were prevalent in China in the early 1980s (Sun & Rader, 1999, p.69). Wang, *et al.* (2004) analyzed 90 university library websites in China and revealed that 22 libraries did not have any user education programs. This may be because a majority of the students in Mainland China regard the library as a physical place for reading and studying purposes only (Wang *et al.* 2004). On the contrary, in their study, no comparisons between universities inside and outside of China for verifying the features of library user education in China were given. Fang (2005) also pointed out that with the rapid developments of academic libraries in China, instead of spending too much manpower and resources developing collection and other hardware, librarians should place more emphasis on enhancing the efficiency of the facilities or equipment utilization, as well as the quality of the overall information services. In addition, Nzivo & Chen (2013) pointed out that further study is needed on perceptions of academic library services and information resources from lecturers and Chinese students' viewpoint in order to develop a better understanding of the user service in academic libraries. According to a study carried out by Xie & Sun (2015), reference services amongst academic libraries in China still seemed to be under-used. If the students had received adequate training in using the library, they would then have fully understood the important role of reference services and their service providers (librarians). Furthermore, if the library had effectively promoted the services and carried them out, the usage rates of reference services should have been higher, and the assistance to the students should have been considered more valuable.

2.4. The development of library user education in Taiwan

The progress of library user education in Taiwan is later than Japan, but earlier than China. In the 1980s, the University of Taiwan created the relevant courses of library use education. Wu (1983) made a survey of 27 colleges, of which there are 11 independent courses and two relevant courses. Fan (1991) surveyed a survey of 47 colleges, including 26 separate classes, with nine other related courses. The comparison of the two survey results showed that there has been progress in the development of library user education in Taiwan. However, due to the understanding of relevant aspects of a lack of coordination at that time, no co-ordination with schools, library user education remained at a more elementary level. On September 12th, 1991, in order to strive for the teaching status of library user education, the Academic Library Committee of Taiwan held a symposium on library user education courses in the Taiwan Jiaotong University Library. In addition to the exchange of educational experience and work experience, the seminar also discussed the significance and practice of library user education as a general course. Ding (1995) mentioned that nearly 60 related

courses have opened in Taiwanese colleges and universities. From the respondents (including education faculty and students), most of them felt that new information media, especially the use of internet resources is most urgently needed. Since 2001, the number of Internet users in Taiwan has grown rapidly, and under such circumstances, IL was included into library user education. According to Yu (2003), college and technical institution libraries in Taiwan have been going through a major reformation since the mid - 1990s. There are two drivers behind this library reformation: a policy change from the Ministry of Education (MOE) and the availability of advanced communications infrastructure, particularly the Internet. The most popular user education activity remains a facility orientation with content evolved from the physical paper “card catalogs and reference books” in 1983 to digitalized media “CD-ROM” in 1991 and further to an “Internet Web-based computer assisted system” in 1995. Liu (1991) surveyed 47 university and college libraries in Taiwan and proposed three suggestions to improve future user education: libraries, academic and non-academic, should all share the responsibility for promoting user education. Libraries should establish a nationwide user education information exchange and development catered for collecting information, providing teaching materials and offering continued training for librarians. Based on these findings, library user education became more user-oriented, resourceful and versatile from 1983 to 1995. Similarly, Yu (2003) also explored how Taiwanese college and technical institution libraries familiarize users with library facilities and information resources and revealed that there is a pool of active librarians with hands-on experience in planning and implementing user education programs. With the development of Internet, Zhu (2009) discussed the necessity of user education in libraries under the networked environment, describing the contents and formats of user education and put forward the problems that should be paid attention to during education. She suggested that user education is a long-term work with stability, and it should be conducted in a planned way to combine the groups and the individuals, contact closely with practice and grasp the characteristics of different users.

2.5. Library user education in the 1990s: user needs and satisfaction study

Many studies have attempted to discover library users’ needs, requirements and satisfaction levels with different parameters in academic library area from the late of 1990s (Hernon et al. 1999; Cook et al., 2003; Edgar, 2006; Beetham & White, 2013; Bem-Bura, 2015). Shrestha (2008) indicated that improper guidance and lack of professionals, inadequate collections, as well as insufficiently networked computers have been the main drawbacks for students exploring the library resources. Nejati *et al.* (2008) showed that although the library has conducted several programs for improving its services because of the lack of identifying the most important aspects of service quality in their customers’ ideas, the efforts for providing customer satisfaction has failed to a great extent. Restoum

& Wade (2013) indicated that students were satisfied with library services' quality in terms of accessibility of collections and information resources in the Arab International University. On the other hand, the most common difficulties facing students through the use of libraries were a lack of time and the ability to visit libraries whenever and wherever. Hsu, *et al.* (2014) conducted a questionnaire survey in a university located in the Midwest region of the US. They concluded that libraries can allocate their limited resources to be more relevant the current students' population, specifically in the areas of staff professionalism, customer services, modern equipment and facilities while strategically expending their on-campus and online holdings. As a result, service quality for students will improve in the end and students are more likely to utilize the library's services. Obasuyi & Idiodi (2015) indicated that students perceived the library to be of great value to their education, and it had an impact on their academic pursuits and studies, academic performances, productivity and career. Bem-Bura (2015) conducted a survey to find the students' perception of library orientation program in Benue State University Makurdi. Results of the study showed that considering the immense benefits of the orientation program, the university library and library users (students) cannot afford to ignore the importance of carrying out the program as the study believed that students benefited from the program to a very high extent. The study also showed that students have both positive perception of the orientation program. In contrast, some students saw the program as a time wasting which is an aspect of negativity. Based on this negative perception of students, the study suggested that time is a crucial tool to consider in everything we do, and, therefore, more time be given to library orientation program so that more awareness will be created by the library when the program is organized, group in different phases etc. Although the number of practice and case study on the library user education and IL education is increasing in recent years, the research about the students' needs and satisfaction in terms of library user education is not so many.

Library user education is, no doubt, an important part of an academic library's service, as it guides both students and faculties to become better-informed and more effective library users, and thereby allowing them to make the best use of library resources available. User education amongst academic libraries could be offered in a number of ways, such as library orientations, library tours, database instructions (with hands-on exercise), subject-specific library courses, etc.

Chapter 3 – Aims of the Study

3.1. Aims of the study

Through a comparative approach, this study aims at highlighting the similarities and differences in attitudes and perceptions amongst the students towards the series of user education programs carried out by these three academic libraries (UT, FDU and NTNU) in Asia. It also aims at finding out the relevance of user education programs in academic libraries to the students' overall learning process. The findings from this study will be useful for identifying various barriers that are currently preventing library user education programs to be fully integrated into students' overall learning, as well as to the university's core curriculum as a whole.

Furthermore, the library usage patterns and perceptions towards library services amongst university students in Chinese-speaking regions (e.g., Taiwan, Mainland China) and Japanese-speaking regions have rarely been examined explicitly or systematically. Their use of academic libraries in these regions and students' perceptions towards the library services providers are often described as an enigma. Studies on the impacts of academic libraries and their user education programs in students' learning needs and preferences will no doubt shed new insights into on youth behavior towards modern technologies and their implementation at universities worldwide. Investigating the extent of these Asian university students' views of the importance of library user education is likely to be of great benefit to the Library and Information Science (LIS) community.

3.2. Research questions and hypotheses

The main research questions of the study were to determine:

- (1) What are the similarities and differences in attitudes and perceptions of the students among the three universities (UT, FDU and NTNU) towards the series of user education programs carried out by their respective university libraries?
- (2) To what extent do these students value the user education programs carried out by these three university libraries?
- (3) To what extent are students at these three universities (UT, FDU and NTNU) are

incorporating the services and resources provided by their university libraries into their research and formal learning as a whole?

These questions were used to develop the study's hypotheses. The hypotheses were as follows:

- (1) There are differences in attitudes and perceptions towards the importance of library user education programs of students from the three universities because of multi-factors;
- (2) The students consider the library user education to be important and essential for their daily learning and research, however, the level is different;
- (3) There are service gaps between the students and the librarians in the library user education programs.

3.3. Significance of the literature

This thesis reports on an investigation into the university students' perceptions of the effectiveness of library user education programs at the three universities in order to improve the library services. A better understanding of this could no doubt help LIS professionals develop better reference and user education services by delivering more appropriate information literacy instructions to cater for students' information and learning needs. At the same time, the findings of this study are useful for identifying the various barriers that are currently preventing the library user education programs to be totally integrated into students' overall learning and the university's core curriculum as a whole.

Chapter 4 – Research Methodology

In this section, the research methodology and the research population will be introduced as well as the way of data collection. Technical limitations of the study will also be mentioned.

4.1. Introduction

According to the research questions, the research methodology is as follows:

- (1) To clarify the realities of user education in each university library, library website surveys and interviews surveys with librarians have been done;
- (2) To clarify the similarities and differences in attitudes and perceptions of the students among the three universities towards the series of user education programs carried out by their respective university libraries, questionnaire survey has been done with students in each university, together with an interviews with the librarians to reflect on the survey results;
- (3) Based on the results, reexamine the importance of the library user education as well as reconsider the style of the library user education in the future.

Many of the previous studies discussed have used a structured questionnaire (Yu, 2003; Xie & Sun 2015). According to Matthews (2007), “libraries are turning to customer surveys to determine the extent to which the library is or is not meeting the customer’s expectations” (p. 6) due to the rapid changes in technology and the emergence of the Internet. The questionnaire survey was chosen as the sole data collection method for the reason of reaching as many respondents as possible.

Since this research also aims to find out the service gap between students and librarians about library user education. The questionnaire design is based on the gap model of service quality. The service gap model developed by Parasuraman, Zeithaml & Berry (1985) identifies five different gaps: the customer gap, the knowledge gap, the policy gap, the delivery gap and the communication gap. The service gap model shows that these five gaps represent the service expectations and the service perceptions by consumers. Mukuvi (2014) also used the gap model to assess users’ perception of service quality levels in an academic library, and the study found that libraries need to work more on improving staff/user relations in their delivery of service. In particular, there is a need for serious

training of staff on issues of public relations and customer care. The difference between what users expect about the quality of the service and what librarians judge it to be when users actually use the service, represents a gap.

In this study, the researcher also tried to find out the gap of attitudes and perceptions between the students and the librarians towards library user education. The questionnaire survey intended to explore the students' perceptions regarding library user education programs among the three universities, at the same time, sought to determine the important factors that could contribute to better design and implementation of the library user education programs. The original questionnaire was in Chinese and Japanese, and it was developed by the researcher together with the user education librarians and native speakers among the three universities as a team effort. The questionnaires were created using an online survey tools--Google and Sojump (a Chinese online survey tool since Google cannot used in China), and they were made available to the respondents in mid-September 2015, for a total period of half year at each university through paper and website. In addition, all students passing through the university library during the data collection period were invited to complete the questionnaires on a voluntary basis (see the Appendix for a summary of the list of questions. The data was analyzed by SPSS (Statistical Package for Social Science). For details regarding the total number of questionnaire responses collected at each university, see Table 4). User education librarians from the three universities helped design the survey questionnaire, and they provided fundamental insights to interpret the survey results collected.

4.2. Technical limitations

There are many ways to examine the perceptions and attitudes of individuals towards the services provided by a library. On the other hand, this study was based solely on quantitative 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' views towards their university libraries and their services. The total surveyed populations were very small, and the average number of responses collected at each university was about 100. In this way, the results in this survey may not be fully representative of the views of all of the students on campus. Another limitation of this study was that all three participating universities (UT, FDU and NTNU) were chosen for pragmatic reasons because of the researcher's professional connections with the institutions. Furthermore, the questionnaires were distributed to students onsite by researcher at the three university libraries, hence, results were collected from respondents who were already library users. For this reason, students who did not visit the physical library building during their data collection period are not represented in the survey results. Finally, the other observational and

interview might have forced the respondents to give overly simplistic responses to complex issues, such as issues related to the overall process of creative thinking, learning and research needs. As pointed out by Powell (1995), it is difficult to trace the learning and research process because it is composed of ideas, abstractions, and their relations to one another. The questionnaire format used by the current study did not allow for a deeper understanding of such issues, which perhaps other observational and interview techniques would otherwise provide. Despite these limitations, the findings of this study are undoubtedly of interest to LIS professionals, and library user education service providers in particular.

4.3. Universities in this study

The participating universities for this study were University of Tsukuba (UT), Fudan University (FDU) and the National Taiwan Normal University (NTNU). These three universities were chosen for the pragmatic reason that the researcher had affiliations and connections with the institutions. This enabled a convenience sample, as the researcher were able to obtain the necessary permissions for data collection. Moreover, the user education librarians at the three universities also agreed to provide the information that was necessary for analyzing and interpreting the survey results collected, with the aim of achieving a more objective, triangular view of analysis, which could lead to a higher level of validity and reliability of the study.

4.3.1. The University of Tsukuba

The University of Tsukuba (UT), located in the Ibaraki Prefecture, has 18 college clusters and schools with a total of around 16,476 students (9,795 undergraduate students & 6,681 graduate students as of 2015, see Table 2). The UT library system is dedicated to be the core of academic information through cooperation with the local community, research laboratories and educational organizations in Japan and overseas⁶. It consists of the Central Library and four specialized libraries- the Medical Library, the Art and Physical Education Library, the Otsuka Library, and the Library on Library and Information Science. The libraries provide a variety of services, including well-developed reference services. They continue to strengthen their collections, resources and services in order to become even more attractive and reliable. The UT libraries hold about 2.6 million volumes of books. It offers more than 29,954 e-books (title), 28,970 electronic journals (title) arranged on open attack which users can freely access and many databases such as Web of Science, SciFinder and CiNii-Articles.

⁶ University of Tsukuba: <http://www.tsukuba.ac.jp/en/about-university/lib-hos-lab> (Accessed on 05th June, 2016)

4.3.2. Fudan University

Fudan University was established in 1905 as Fudan Public School. As one of the first participants in the project 211 and Project 985⁷, Fudan has developed into a comprehensive research university, with Departments of Philosophy, Economics, Law, Education, Literature, History, Science, Engineering, Medicine, and Management. Fudan is home to 14,100 undergraduates and associate degree candidates, 14,800 graduates including 3,000 overseas students, 2,700 full-time teaching faculty members⁸. Fudan University Library (FDUL), originally known as Wuwu Reading Room, was founded in 1922. It presently consists of five libraries, namely, Arts & Humanities Library, Science Library, Medical Science Library, Zhangjiang Library and Lee Shau Kee Library, with a building area of 55,933 m². At the end of 2015, the total collections of the library amounted to 5 million volumes (books and bound volumes of periodicals), including 400,000 thread bound ancient Chinese books (among which are 60,000 volumes of rare ancient books), and 100,000 volumes books of the Republic of China period. Other collections include 2,631,000 e-books, 67,000 kinds of full-text e-journals in Chinese and foreign languages, and 297 databases covering various areas.

4.3.3. The National Taiwan Normal University

The National Taiwan Normal University (NTNU) is a vibrant learning community that has long been recognized as one of Taiwan's elite institutions of higher education. Founded in 1946, NTNU was formerly an institute dedicated to teacher education, as suggested in the name "Normal," that later evolved into a comprehensive university. Established on the credo that education is the root of our nation, NTNU has been committed to the pursuit of academic excellence, characterized by the many influential educators and researchers it has nurtured over the years¹⁰. Bearing the hallmarks of tradition and innovation, NTNU has expanded to three campuses, offering a wide spectrum of courses and degrees under its nine colleges, including the arts and humanities, education, sociology, business management, athletics, to the sciences. The University Library is composed of a Main Library and two branch libraries on Gung-Guan Campus and Lin-Kou Campus respectively. For more detail information of the three universities, please check the table 2 below.

Table 2 shows that FDU library has largest collection, the largest number of students' and academic disciplines. Meanwhile, UT has the largest number of faculty members. Furthermore, the

⁷ Project 211 is the Chinese government's new endeavor aimed at strengthening about 100 institutions of higher education and key disciplinary areas as a national priority for the 21st century, Project 985 is a constructive project for founding world-class universities in the 21st century (China Education Center: <http://www.chinaeducenter.com/en/cedu/ceduproject211.php> Accessed on 05th June, 2016)

⁸ Fudan University: <http://www.fudan.edu.cn/en/> (Accessed on 05th June, 2016)

⁹ Fudan University Library: http://www.library.fudan.edu.cn/main_en/list/720-1-20.htm (Accessed on 05th June, 2016)

¹⁰ National Taiwan Normal University: <http://en.ntnu.edu.tw/> (Accessed on 05th June, 2016)

number of librarians in FDU library is three times larger than UT library. Interestingly, although the number of branch libraries and students in NTNU is less than UT, they have more librarians. The UT library lacks the manpower compared to other two universities.

Table 2 . Information for the three universities (Data as of 2015)

	University of Tsukuba (UT)	Fudan University (FDU)	National Taiwan Normal University (NTNU)
Establishment year	1973	1922	1946
Book Holdings (Volume)	2,643,346	5,287,000	1,571,854
Undergraduate students	9,795	14,100	6,651
Graduate students	6,681	14,800	4,242
Faculty members	3,984	2,700	1,334
Academic disciplines	11	33	11
Libraries (main & branches)	5	5	3
Librarian staffs	59	193	61
QS University Rankings: Asia 2016 ¹¹	34	11	58

¹¹ Published annually since 2009, the QS University Rankings Asia provides an overview of the top universities in Asia. Retrievable at: <http://www.topuniversities.com/university-rankings/asian-university-rankings/2016> (Accessed on 05th June, 2016)

Chapter 5 – Website Survey Result and Interview Result

In this section, the website survey results will be introduced as well as the interview results with librarians to show the realities of library user education in the three universities. Furthermore, this section will compare the similarities and differences in the contents of library user education programs carried out by these three universities.

5.1. Library user education in the University of Tsukuba

Since October of 1981, the UT Libraries have begun to make an Online Public Access Catalog (OPAC) system in the library. In May 1993, OPAC became accessible through the internet. On the website, students can access about 27,200 books and 25,700 journals on PCs in the library or research laboratories. On the homepage of the UT library, there are tabs for “collections,” “services,” “support,” “contact us,” “alumni & visitors” and “share.” Of these six contents menus, three of them are about the library user education: collections, services and support. “Collections” is the guide for materials of university library, “Services” is the library guide for service and “Support” is the guide for various supports and tips for using library materials and services. In the contents of the collections, there are options for searching. Librarians from UT mentioned that their strategic plan is that

“Until now, we have supported with searching for materials, how to use databases, how to summarize the documents, and preparing theses and presentations. These library instructions are given for freshmen to seniors, goal-specific, in a step-by-step manner, and continuously. It is important that the students themselves recognize what kind of skills they have to grasp from the beginning.”¹²

¹² 原文は“今までは、資料の探し方、データベースの使い方を中心にやってきたが、これからは探した資料をどうやってまとめていくのか、論文作成やプレゼンテーションとかを含めて支援していく方向です。一年生から四年生まで目的別、段階的に、継続的に行います。最初からどういうスキルを把握することを説明した上で、学生側からわかってもらうという学生自身の自覚が重要だ。”

According to the strategic plan, the UT Library established a learning and research assistance system under the National University Library Association support, according to the Information Literacy Competency Standards for Higher Education (the 2015 version). The mass support program is part of the library learning research support activities for students and researchers, which was classified and arranged by the level of an information utilization behavior process (see Table 3). The library mass support program category was divided by the contents and level. The table below shows the list of library mass support program category.

Table 3. Library mass support program category list¹³

内容 contents	レベル Level	形態 Teaching style	講師 Faculty
A 図書館を使う Use the library	1 初級 Elementary level	W (workshop)	F(Faculty)
B 情報・論文を探す/入手する Search for information	2 中級 Intermediate level	C (class)	V(database provider)
C 情報を分析・管理する Manage & analyze the information	3 上級 Advanced level	L (LA seminar)	
D 自分の考えを伝える Convey your thoughts		E (E-learning)	
E 知見を広げる Extend your knowledge			

The library provides workshops and seminars for using library resources and databases, which are helpful for writing reports and papers, mainly in spring and autumn. In more detail, the library instruction held periodically from April to June and October to November. In addition, there are tailor-made library instruction for individuals and classes to satisfied users' time schedules. On the webpage of library instruction detail, there are reasons of why library instruction workshops are needed for students, faculty and staff. For students, they can learn how to evaluate the literature properly for writing paper or reports. For faculty members and researchers, the sessions for teaching them how to use basic retrieval tools. In the instructions for staff, they learn how to check the literature which is useful to support excellent university research activities. Below is the website of library instruction detail in the UT library (see Figure 1). Unfortunately, there are no English translations for these workshops details. Further study needed to find out the reasons why there are

¹³ Retrievable at: <https://www.tulips.tsukuba.ac.jp/lib/ja/about/systemdiagram> (Accessed on 05th June, 2016)

not detailed instruction for library workshops in English.

The screenshot shows the Japanese website for library workshops. At the top, there is a breadcrumb trail: ホーム > 図書館活用術 > 講習会: Workshops > 講習会予定表 Schedule. Below this is a navigation menu with a '目次' (Table of Contents) button and several links: '相談する', '講習会: Workshops', '講習会予定表 schedule', '講習会の配布資料', '筑波地区: オーダーメイド講習会申し込み', '東京地区: オーダーメイド講習会申し込み', 'おすすめ図書館活用術', '探し方ガイド(資料)', '探し方ガイド(事実)', and '探し方ガイド(出版情報)'. The main content area is titled '講習会予定表 Schedule' and contains the following text: '附属図書館では、論文作成や研究に必要な文献情報を入手するのに役立つデータベースを各種ご用意しています。本学の学生や教職員の皆さんを対象として、これらのデータベースや図書館の利用法についての講習会を開催しています。講習会には毎年4月から6月、10月から11月にかけて定期的で開催する講習会と、ご希望に合わせたオーダーメイド講習会（筑波地区/東京地区）があります。どうぞお気軽にご参加ください。' Below this, there is a red notice: '現在、全館の全ての講習会を予約なしで受講して頂けます' and a section titled '文献情報データベースの講習会を受講すると...' with three bullet points: '学群生・大学院生の方はレポートや論文を書く前に必要な文献をきちんと調べたり、授業で得た知識についてより深く学ぶために文献を調べたりする方法がわかります', '教員・研究員等の方は基本的な検索ツールを使いこなす方法がわかります', and '事務職員の方は本学の優れた研究活動を把握したい時などに役立つ文献の調べ方がわかります'. At the bottom, there is a red notice: '2016年秋季の講習会日程を公開しました。皆さまふるってご参加ください。' and a link to '日程表 / Schedule'. The footer contains links to '中央図書館 / 留学生向け(for International Students)', '体育・芸術図書館', '医学図書館', '図情図書館', and '大塚図書館'.

Figure 1 : The webpage of library instruction detail in the University of Tsukuba library (In Japanese)¹⁴

5.2. Library user education at Fudan University

In comparison with the UT library's website, FDU's website has seven main menus ("Home," "Recourses," "Services," "Guides," "At FDU Libraries," "User Information" and "Friends & Donations"), and 'Resources' 'Services' and 'Guides' are the menus related with the library user education. FDUL offers a range of regular training sessions, retrieval courses and library orientations from the beginning of each semester to improve students' information skills throughout the whole semester. Furthermore, the purpose of each session for undergraduates and graduate students are described in detail to make students realize the necessity of library user education. For library orientation, the slides used for training can be found on the library's English website, which is targeted for incoming postgraduates, undergraduates and incoming students of the medical school. Freshmen are encouraged to view these materials and learn how to use library. Training sessions cover subject resources, retrieval and acquisition skills of various types of documents. Training information will be released in advance on the homepage of FDUL. Students can also find this information on the bulletin board system at the library hall, as well as from the discussion area "M-library" of FDU bulletin board online system. The library also offers special training sessions to meet the needs of different users. Students can check the special training courses timetable from the library website in each semester. The contents can be divided into two main parts. The first part has five courses, target for freshmen. The second part has six courses, and they mostly contain research guides and academic writing support. The contents of the special training courses contain "introduction to the library resources and services," "How to use library catalogue (OPAC)," "A

¹⁴ Retrieval at: <https://www.tulips.tsukuba.ac.jp/lib/ja/support/guidance> (Accessed on 05th June, 2016)

guide to using new oriental multi-media databases and SciFinder” by database trainer, “How to use MetaLib/SFX for academic information resource,” “How to use Web of Science to improve your research,” ”How to use Note Express,” “Finding and using e-books in Chinese and other foreign languages,” “Searching and Using dissertations & thesis database,” and “doing literature research for preparing thesis proposal,” which is for Arts & Humanities and Science subject librarians. There are also sessions for formatting theses and dissertations in Microsoft Word, how to make an impressive PowerPoints for your graduation thesis defense, accessing and using ancient documents, finding and obtaining statistical data, searching and getting data from patent databases. Also, they have courses for undergraduate students, called “a special session for undergraduates: getting started with Chinese information retrieval-tips for using CNKI and Wan Fang Database.” Part of the materials used in the courses are available online. Students also can schedule a training session by submitting a training booking form.

To become the center of teaching and research assistant is the goal of FDU library service. Furthermore, in order to develop a close relationship between the library and academic departments, to help faculty and students fully use the library resources and services, and to help the library understand what they need, FDUL has established the Subject Librarian System, by selecting and appointing subject librarians for some departments, who are responsible for collecting information from relevant departments so as to improve library service on specific subjects. By now there are twelve librarians with specialties for arts & humanities, science, mathematics and medical science. Services for the corresponding subject departments include: communications services; providing instruction and training sessions on the use of library resources; providing reference service; collecting, evaluating and selecting subject-related web resources; understanding the information needs of faculty and students; collecting opinions about the resources and services of the library, especially opinions on the subscriptions to subject-related journals, books and electronic resources.

On the other hand, the library webpage in Chinese and English is different. Firstly, the detailed English page has not been updated for a long time. As shown in Figure 2 below, the English webpage of orientation information of Fudan University was last updated on July 18th, 2012. In contrast, the Chinese page’s last update was on September 6th, 2016. Furthermore, there are more materials for the library orientation on the Chinese webpage. Each department and college can find the library orientation slides for themselves. Looking at the other pages, the update date of the retrieval course was on July 18th, 2012 for the English page and May 31th, 2016, for the Chinese page. The update of the training information was on March 4th, 2014 for English page and August 29th for Chinese page. Secondly, the contents of library user education are different. For the library user

education programs, there are four items (daily training, freshmen library orientation for each department, online training and tailor-made training) on the Chinese page but only three items (training, retrieval course and orientation of FDUL) on the English page. Further study is needed to find out the reason why the information of Chinese page and English page is different.



Figure 2: The webpage of orientation information of Fudan University Library (In English)¹⁵



Figure 3: The webpage of orientation information of Fudan University Library (In Chinese)¹⁶

5.3. Library user education at the Nation Taiwan Normal University

In comparison with the UT and FDU Libraries' website, NTNU's website has numerous menus. There are seven main menus: find us on, more NTNU websites, search tools, resources, using library, online services, what's new. 'Resources,' 'Using library' and 'Online Services' are related with the library user education. 'Institutional Repository' has resources divided for each institutional. Using

¹⁵ Retrieval at: http://www.library.fudan.edu.cn/main_en/info/1303.htm (Accessed on 05th June, 2016)

¹⁶ Retrieval at: <http://www.library.fudan.edu.cn/main/info/4908.htm> (Accessed on 05th June, 2016)

the search tools, one can find the materials from the catalog, google scholar and the library website. In the menu of services, there is a menu called “library instruction service” for tailor-made library instruction courses. Students and faculty are welcome to sign up for the library instruction classes (a minimum of five people), including general library orientations, library services, and the use of reference resources, theses, periodicals and electronic resources. Moreover, there are 16 subject librarians who serve the students and faculty members, and they come from ten different departments. The subject-specialist librarians serve academic departments and programs, which is very similar with the North American style. For the departments they serve, they are responsible for collecting library materials, providing instruction in the use of library materials, and serving as liaisons between NTNU Library and departments. In addition, the library offers enquiry services, which is a comprehensive facility for the NTNU community, providing research consultations, professional help, advice and information on any topic. For the strategic plan, the subject librarians try to cooperate with the teacher assistant to do more subject-oriented help.

The NTNU has three libraries: a main library and two branches. Furthermore, users can find the social networking service – Facebook accounts of the main library and each branch library. The contents of the Facebook page show that they promote the library as not just a study space or a place to check out books, but also as a place that is ready to serve assist them in their study and research anytime.

The degree of satisfaction is very high, and the library always receives praise from students. At NTNU, user education for freshman students are mostly focused in September. There are two alliances in NTNU, one is the 12 union schools in Taiwan and the other is the National Taiwan University and the National Taiwan University of Science and Technology. They also share library resources with each other. For example, the most popular one activity is the workshop of thesis writing held on October 24, 2014. There were 100 participants, and 20 students come from the union schools. Database instruction classes and thesis writing seminars are held in the morning and hands-on work is in the afternoon.

On the NTNU library homepage, there are online panorama tours and floor configuration guides for users to check (see Figure 4). In addition, there are descriptions for each area. This can help students to build a whole image of library even though they have not joined the library tour. Furthermore, librarians think that a good way to let students make full use of library resources is to make all the digital resources well managed online and easy to use. Therefore, librarians spend a lot of time to managing them. For example, the language learning databases and the subject-oriented

database targeted for each major (see Figure 5).



Figure 4: The online library tour page of NTNU library¹⁷



Figure 5: The contents of language learning databases and the subject-oriented database¹⁸

5.4. Interview results with librarians

As mentioned earlier, interviews were conducted with the librarians at the respective universities for clarifying the realities of user education in each university library. The results show that there are similarities and differences in the library user education among the three universities. See Table 4 for detailed results. Firstly, the prominent similarities are that the contents of library user education all use the ALA guidance as reference in the three universities. Secondly, all the three universities have mail service, social media promotion service and library website for reaching out to library users.

In terms of differences, firstly, the strategic plan of library user education in each university is

¹⁷ Retrieval at: <https://walkinto.in/tour/ZyGl-jpsFl-yeGxbsToYg> (Accessed on 05th June, 2016)

¹⁸ Retrieval at: <http://www.lib.ntnu.edu.tw/index.jsp> (Accessed on 05th June, 2016)

different. For UT library, to expand the range of the contents through combine instructions with practice. For the FDU library, more web-based tutorials programs with entertainment (like using games in library instruction online courses) is under construction. For the NTNU library, there are programs to cooperate with teacher assistants in every department to strengthen efforts to work with faculty to integrate library user education into the curriculum more systematically. Secondly, the number of reference librarians and subject librarians is different. The number of reference librarians is 5 in UT library, 15 in FDU library and 24 in NTNU library. The results show that the number of reference librarians is the largest in the NTNU library and almost five times than that of the UT library. There are 12 subject librarians at FDU library and 16 subject librarians at NTNU library (see Table 4). On the other hand, there are no subject librarians at UT and the reason for this will be explored in a later chapter (see Chapter 7.9). Instead of subject librarians, UT library hired graduate students as learning advisers from 2012 as the staff of Student Support Desk and provide learning support services for students. Furthermore, because there are no subject librarians, the library user education for each subject is only for the LIS majors and medicine majors, which are held in the branch libraries. On the contrary, for FDU and NTNU libraries, there are user education courses targeted for each major. In other words, UT library prefer to provide the general instruction rather than subject-orient, compared with FDU and NTNU. Thirdly, at the UT library, volunteers can join and play an important role in the library user education program. For example, volunteers take charge of the library tour - especially for international students and persons with physical disabilities. While, for other two universities, volunteers only work circulation or some basic office work. Lastly, only FDU has a website specially targeted for freshmen to introduce the library services and tell them how to use library.

When it comes to the difficulty about holding library user education, the UT librarians mentioned that presentation is a challenge for them, especially how to explain it more clearly and attractive to students. FDU librarians pointed out that cooperate with faculty members and other university libraries is challenging for them and the librarians from NTNU said that how to make the library user education programs more effective is kind of difficult, because students still cannot use the library smoothly and skillfully even though they joined these activities. Concerning the professional skill of librarians, the UT and FDU librarians stated that presentation skills and information retrieval skills are the most important for them. On the other hand, librarians from NTNU considered the communication skill as the most important skill. In terms of evaluation for each library user education programs, UT started to do the evaluation for the database instruction courses from 2015. FDU and NTNU has a regular evaluation target for the library instruction courses and the whole library service, including the satisfaction towards librarians.

Table 4 . The interview results with the librarians

	UT	FDU	NTNU
Reference	According to ALA guidance	According to ALA guidance	According to ALA guidance
The number of Reference librarians	5 (8.4% of the all librarians)	15 (7.7% of the all librarians)	24 (39.3% of the all librarians)
The number of Subject librarians	0	12	16
User education courses targeted each major	Part of them.	Yes	Yes
Customers	Students, faculty, students come from partner institutions	Students, faculty, students and librarians come from partner institutions or other universities	Students, faculty, students and librarians come from partner institutions or other universities
Volunteers work	Join the library user education	Only work on books borrowing and lending	Only work on books borrowing and lending
Promotion tools	Homepage, FB, Email	Homepage, WeChat, Email	Homepage, FB, Email
Fans of FB (Weibo)	521	23914	6201
Library website for freshmen	No	Yes	No
Mail service	Yes	Yes	Yes
Difficulties	Presentation (how to explain it more clearly and attractive)	Cooperation (cooperate with faculty members and other university libraries)	Effect (even join these activities the students still can't use the library smoothly)
Strategic plan	To expand the range of the contents through combine instruction with practice	More online training programs with entertainment	To cooperate with teacher assistants in every department to help subject librarian to hold library user education programs
Evaluation for each library user education programs	Started from 2015	Yes	Yes
Skill & knowledge	Presentation skill, information retrieval skill	Presentation skill, information retrieval skill	Communication skill

Chapter 6 - Questionnaire Data Collection and Results

In this section, the questionnaire survey results will be introduced. Furthermore, the section will show the similarities and differences in attitudes and perceptions of the students among the three universities towards the series of user education programs carried out by their respective university libraries.

6.1. Respondent profiles

The user demographics (for example, average age and educational backgrounds, etc.) could strongly influence the student respondents' information needs and perceptions towards the university library. A total number of 317 survey responses were collected from the three universities (see Table 5). Out of all 317 responses, 209 (66%) were female, while the remaining 108 (34%) were male (see Table 5). In regards to academic level, out of all responses, 175 (55%) were undergraduates and 142 (45%) were graduates. For each university, 27 (26%) were undergraduates and 78 (74%) were graduates in UT. On the other hand, graduate students made up only 21 (19%) of the total surveyed population at FDU and 88 (81%) were undergraduates. In NTNU, 60 (58%) were undergraduates and 43 (42%) were graduates. A full list of academic majors amongst the student respondents is shown in Table 5. It should be highlighted that out of all 105 respondents at UT, a large number (78 / 74%) of them were graduate students; meanwhile, 38 (36%) were LIS majors. All 38 respondents majoring in LIS at UT were at postgraduate level (i.e., Master's students). Also, we could find 22 (21%) LIS majors amongst the 103 NTNU respondents. Furthermore, out of all FDU respondents, 21 (19%) of them majored in foreign language (see Table 5), and they all were female students.

The results showed that most respondents majored in Library and Information Science, Social Sciences, Education and Foreign Languages. In addition, the majority of them were female. In terms of their academic level, UT has largest number of postgraduate respondents. In contrast, FDU and NTNU respondents were mostly undergraduates. These will be factors that influence the result of students' perceptions towards library user education.

Table 5 . Profile of Surveyed Respondents

	UT	FDU	NTNU	Total
Male	31	46	31	108(34%)
Female	74	63	72	209(66%)
Total	105	109	103	317
Undergraduate	27	88	60	175(55%)
Postgraduate	78	21	43	142(45%)
Total	105	109	103	317
Respondents' majors				
Library & info Science	38	5	22	65
Social sciences	26	7	20	53
Education	10	10	12	32
Business	3	18	5	26
Information technology	13	10	6	29
Language	4	21	14	39
Science	2	14	12	28
Medicine	1	10	5	16
Arts	6	5	6	17
Engineering	2	9	1	12
Total	105	109	103	317

6.2. Analysis of Survey Results

6.2.1. Range of library user education programs and their perceived importance

Quality of library services can be determined by whether the needs and expectations of the student as library users are met. The questionnaire survey was intended to explore this and, at the same time, sought to determine the various important factors that could contribute to better design of such user education programs. The first questionnaire item asked the students to rate their perceived importance of the range of library user education programs by using a 5-point Likert scale. The average score and standard deviation for each item in each university showed in the table 6. In addition, the T-test has been done. The survey results indicate that out of all nine user education programs, UT students considered (1) "Online Information literacy instruction" to be most important, followed by (2) "Subject-specific library courses," and (3) "Virtual reference services." FDU students considered (1) "Library Instruction cater for E-resources" to be most important, followed by

(2) “Library orientation,” and (3) “Database instruction.” On the other hand, students at NTNU thought that (1) “Library instruction cater for E-resources,” (2) “Database instruction,” and (3) “Research consultation” to be of higher importance by comparison (see Table 6). In addition, students from NTNU showed the highest perception towards the importance of library user education, compare to FDU and UT. Interestingly, both FDU and NTNU students consider library instruction catering for e-resources as the most important library user education activity on the whole. The first hypothesis has been confirmed in the sense that there are differences in perceptions of the students towards the importance of library user education programs.

Table 6 . Range of User Education Programs & Their Perceived Importance amongst Respondents

	UT	FDU	NTNU
Library instruction (catered for E-resources) (p< .01)	3.67 (SD ¹⁹ =1.009)	4.32 (SD=0.815)	4.43 (SD=0.749)
Library orientation (p> .01)	3.76 (SD=1.000)	4.03 (SD=0.815)	4.13 (SD=0.915)
Research (thesis/dissertation/final year project) consultation (p> .01)	3.77 (SD=1.036)	3.80 (SD=0.931)	4.32 (SD=0.831)
Database instruction (e.g., database retrieval through face-to-face with a hands-on practice) (p< .01)	3.62 (SD=0.958)	3.88 (SD=1.043)	4.35 (SD=0.860)
Course assignment consultation (p< .01)	3.68 (SD=1.007)	3.78 (SD=1.102)	4.20 (SD=0.821)
General library tour (p< .01)	3.45 (SD=1.173)	3.74 (SD=1.040)	4.17 (SD=0.822)
Subject-specific library courses (p< .01)	3.80 (SD=0.949)	3.87 (SD=1.037)	4.21 (SD=0.893)
Online Information literacy instruction (p< .01)	3.84 (SD=1.080)	3.72 (SD=0.934)	4.16 (SD=0.905)
Virtual reference services (Ask a librarian) (p> .01)	3.80 (SD=0.939)	3.72 (SD=1.104)	4.02 (SD=0.929)
Total average	3.71	3.87	4.22

(5-point Likert scale)

In summary, the average total score (4.22) of NTNU students’ perception towards the library user education services was highest than of the other two universities. Furthermore, the average of UT showed the lowest score (3.71). It is, therefore, concluded that students’ perceived importance towards the library user education programs offered at NTNU as a whole was highest in comparison to the other two universities (see Table 6).

6.2.2. Reasons why students did not participate in library user education programs

Questionnaire item number 3 asked the student participants why they did not take part in the

¹⁹ SD stands for standard deviation.

library user education programs carried out by their respective university libraries. Survey results indicated that there were very small differences among the three universities in this area. For the UT students, the top three reasons for not wanting to take part in user education were: (1) “Not being well informed by the details of the user education programs except library orientation,” (2) “I do not know when these user education programs are conducted,” and (3) “They always clash with my class time.” For the FDU students, the top three reasons for not wanting to take part in user education were: (1) “I can find information by myself,” (2) “Not being well informed by the details of the user education programs except library orientation,” and (3) “I do not know when these user education programs are conducted.” On the other hand, students at NTNU stated the following reasons for not taking part in the library programs: (1) “They always clash with my class time,” (2) “I do not know when these user education programs are conducted,” and (3) “Not being well informed except library orientation” (see Table 7). Besides, the FDU students do not agree with the idea that “They always clash with my class time” and the NTNU students do not agree that “the topic/format of the user education programs look boring” to be the reasons that they do not join the library user education programs.

Interestingly, the reasons why students do not take part in library user education programs is similar among the students in the three universities. The results show that (1) “Not being well informed by the details of the user education programs except library orientation,” (2) “I do not know when these user education programs are conducted,” and (3) “They always clash with my class time” are the main reasons. Furthermore, the students from the three universities do not agree that “I don’t think they are useful for me at all” is one of the reasons that they do not join the library user education programs.

Table 7 . Reasons Why Students Don’t Take Part in Library User Education Programs

	UT	FDU	NTNU
I am not well informed by the details of the user education programs that are provided by the University Library (except library orientation)	3.60 (SD=0.912)	3.24 (SD=1.164)	3.04 (SD=1.145)
I am interested in, but I do not know when these user education programs are conducted (p< .01)	3.50 (SD=1.076)	3.16 (SD=1.096)	3.26 (SD=0.994)
I can find information by myself (p>.01)	3.27 (SD=1.100)	3.37 (SD=1.121)	2.96 (SD=1.015)
I want to go, they always clash with my class schedule (p< .01)	3.41 (SD=1.001)	2.85 (SD=1.1.196)	3.27 (SD=1.007)
The topics/format of the user education programs look boring (p< .01)	3.04 (SD=0.951)	3.02 (SD=1.142)	2.86 (SD=1.142)
I don’t know why (p< .01)	3.09 (SD=1.188)	2.79 (SD=1.061)	2.51 (SD=1.075)
I don’t think they are useful for me at all (p> .01)	2.96 (SD=1.239)	2.58 (SD=1.206)	2.29 (SD=1.103)

Total average	3.26	3.00	2.88
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(5-point Likert scale)

6.2.3. Different marketing strategies for promoting library user education programs

Questionnaire item number 4 asked the respondents to rate the effectiveness of different outreach and marketing strategies for promoting the user education programs launched by FDU and NTNU. The survey results indicate that the UT students considered “Send[ing] messages via online social networking platforms/apps” to be the most effective ways for encouraging them to take part in the user education programs. On the other hand, “Ask[ing] professors to encourage the students to attend” were considered the most effective by FDU and NTNU student respondents (see Table 8). Interestingly, students at both FDU and NTNU indicated that involving their professors to ‘encourage’ them to attend the library user education programs could be one of the most effective ways for promoting/marketing their library user education services.

Table 8. Ways for Promoting Library User Education Services& Their Perceived Effectiveness

	UT	FDU	NTNU
Put up posters throughout the entire campus (p< .01)	3.59 (SD=1.048)	3.64 (SD=1.089)	4.02 (SD=0.874)
Ask professors to encourage the students to attend (p< .01)	3.71 (SD=0.972)	3.89 (SD=1.008)	4.08 (SD=1.016)
Make announcements on university library homepage (p< .01)	3.65 (SD=1.022)	3.50 (SD=1.028)	3.75 (SD=1.026)
Send batch emails to all students (p< .01)	3.75 (SD=0.973)	3.79 (SD=0.958)	3.87 (SD=0.987)
Send messages via online social networking platforms/Apps (p> .01)	3.76 (SD=1.010)	3.79 (SD=1.042)	3.89 (SD=0.989)
Total average	3.69	3.72	3.92

(5-point Likert scale)

6.2.4. Incentives for attracting students to attend library user education programs and their perceived effectiveness

Questionnaire item number 5 asked the students to identify which incentives would be considered to be more effective in terms of attracting them to attend the user education programs. The survey results reveal that students at UT preferred to be awarded by cash coupons after attending the library workshops and also for NTNU students. On the contrary, students at FDU preferred to earn (academic) credits instead (see Table 9). According to the NTNU librarians, the NTNU Library already has a tradition of awarding the students with small incentives (presenting with them with small souvenirs) for taking part in their library workshops. Similarly, the students from UT and FDU do not agree with the notion that professors should make it mandatory for the students to attend to the workshops.

Table 9. Incentives for Attracting Students to Attend Library User Education Programs & Their Perceived Effectiveness

	UT	FDU	NTNU
Students will be given cash coupons after attending the library workshops (p> .01)	3.58 (SD=1.133)	3.61 (SD=1.000)	4.29 (SD=0.812)
Students can earn credits (like other academic courses) after attending the workshops (p> .01)	3.41 (SD=1.232)	4.09 (SD=1.090)	4.21 (SD=0.893)
Professors invite the reference librarians to teach library workshops inside the classrooms in person instead of waiting for the students to join (p> .01)	3.46 (SD=1.046)	3.77 (SD=1.119)	4.03 (SD=0.923)
Students who get the highest scores will be awarded with gifts (p< .01)	3.21 (SD=1.006)	3.58 (SD=0.906)	3.56 (SD=1.016)
Professors make it mandatory for the students to attend to the workshops (p< .01)	2.76 (SD=1.167)	2.89 (SD=1.278)	3.51 (SD=1.251)
Total average	3.28	3.58	3.92

(5-point Likert scale)

6.2.5. Students' perceptions towards professional competence of reference librarians

Student respondents were asked to rate the professional competence of the reference or user education librarians. The survey results revealed that the NTNU librarians received relatively high scores in the following three areas: Service-orientation (score 4.21), Friendliness (score 4.20) and Helpfulness (score 4.19). The UT librarians were described by the student respondents as being: Helpful (3.85), Service-oriented (score 3.74) and Patient (score 3.77). On the other hand, the FDU librarians were described by the student respondents as being: Helpful (score 3.88), Service-oriented (score 3.75), and Friendly (score 3.81). In fact, Jacoby & O'Brien (2005) found that friendliness of the reference librarians was one of the best predictors of students' confidence in their ability to find information on their own. Interestingly, reference librarians at the three universities received comparatively low scores in the following three areas: (1) Engaging, (2) Interesting, and (3) Creative. The average total score of NTNU librarians is the highest amongst all three university libraries (see Table 10).

Table 10. Students Perceptions towards Reference Librarians

	UT	FDU	NTNU
Service-oriented (p< .01)	3.74 (SD=0.955)	3.80 (SD=1.039)	4.21 (SD=0.859)
Helpful (p< .01)	3.85 (SD=0.973)	3.86 (SD=1.032)	4.19 (SD=0.829)
Friendly (p< .01)	3.53 (SD=1.132)	3.89 (SD=0.994)	4.20 (SD=0.821)
Patient in listening to my needs giving supportive guidance (p< .01)	3.77 (SD=0.873)	3.64 (SD=0.990)	4.07 (SD=0.942)
Professional (p< .01)	3.66 (SD=0.832)	3.73 (SD=1.029)	4.07 (SD=0.843)
Intellectual (p< .01)	3.59 (SD=0.981)	3.62 (SD=0.934)	3.93 (SD=0.866)
Efficient at work (p< .01)	3.59 (SD=0.991)	3.60 (SD=0.985)	3.72 (SD=0.984)
Outgoing (p< .01)	3.40 (SD=0.971)	3.34 (SD=0.909)	3.56 (SD=0.967)
Interesting (p< .01)	3.04 (SD=1.123)	3.22 (SD=0.927)	3.50 (SD=0.928)
Engaging (p< .01)	3.30 (SD=1.069)	3.22 (SD=0.946)	3.37 (SD=0.950)
Creative (p< .01)	3.11 (SD=1.023)	3.22 (SD=1.003)	3.49 (SD=0.839)
Total average	3.50	3.55	3.84

(5-point Likert scale)

6.2.6. Satisfaction toward the overall scope and contents of library user education programs

Participants were asked to evaluate the overall scope and contents of the library user education programs via using a 5-point Likert scale. A majority of the UT students agreeing that the overall contents of the library education programs were clear and easy to follow (score 3.68). On the other hand, a large number of the NTNU and FDU respondents agreed that the library orientation is helpful in terms of building a positive image of their university library and its services amongst the students (score 4.08 for NTNU and score 3.67 for FDU). Here, the results indicated that there are differences in satisfaction of the students towards the library user education programs. Interestingly, many of them failed to see these programs to be very useful and relevant to their current research/assignments (see Table 11). In conclusion, the total average shows that the NTNU students

give highest score to the satisfaction towards the overall contents, which means the NTNU students' satisfaction towards library user education is the highest among the three universities.

Table 11. Level of Satisfaction towards Scope & Contents of Library User Education Programs

	UT	FDU	NTNU
Overall contents are very clear and easy to follow (p< .01)	3.68 (SD=0.895)	3.34 (SD=0.846)	3.70 (SD=0.802)
Library orientation is helpful in terms of building a positive image of about the University Library and its services amongst the students (p> .01)	3.40 (SD=0.830)	3.76 (SD=0.965)	4.08 (SD=0.825)
Overall quality of the user education programs provided by the University Library is satisfied (p< .01)	3.62 (SD=0.754)	3.52 (SD=0.990)	3.65 (SD=0.893)
Overall contents are very useful and relevant to my current research/assignments (p< .01)	3.48 (SD=1.005)	3.37 (SD=0.917)	3.66 (SD=0.823)
Total average	3.54	3.49	3.77

(5-point Likert scale)

6.2.7. How much students value the importance of library user education programs

Questionnaire item number 8 was designed to examine student respondents – to what extent they valued the importance of library user education programs. The UT and FDU students, in particular, thought that “Library user education is one of the important parts of students’ overall learning in the university.” Despite that, students at NTNU still thought that “All students should understand what library user education is before the graduation” (see Table 12). Survey results also indicate that students at the three universities did not agree with the idea that “User education workshops should be made mandatory for students to attend by the faculty staff.” The result shows that NTNU students gave highest average score than the other two universities, which means the NTNU students valued the importance of library user education programs most. From table 12, the result can be concluded that the students in the three universities consider the library user education to be important and essential for their daily learning and research, while the level is different (NTNU got the highest level), which means the second hypothesis has been confirmed.

Table 12. Perceptions towards Library User Education Programs

	UT	FDU	NTNU
Library user education is one of the important parts of students’ overall learning in the university (p< .01)	3.76 (SD=1.075)	4.03 (SD=0.932)	4.05 (SD=0.691)
Students can still make good use of the library resources, even they do NOT take part actively in the library user education programs actively	3.27 (SD=0.862)	3.47 (SD=0.917)	3.42 (SD=1.107)

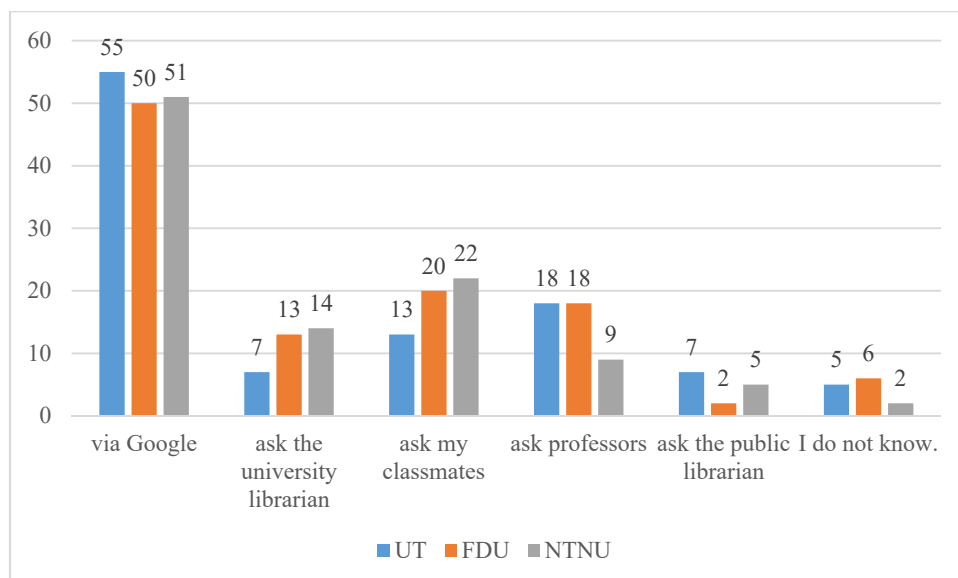
($p < .01$)			
All students should understand what library user education is before the graduation ($p < .01$)	3.67 (SD=0.897)	3.89 (SD=0.931)	4.06 (SD=0.814)
User education workshops should be made mandatory for students to attend by the faculty ($p < .01$)	2.77 (SD=1.072)	2.60 (SD=1.093)	2.89 (SD=1.128)
Total average	3.36	3.49	3.60

(5-point Likert scale)

6.2.8. Who students would consult during information seeking

Questionnaire item number 6 asked the student respondents about who they would consult if they were unable to find materials (e.g., a book or a research article) to finish their research/assignments. Survey results indicate that for UT students, the top three ways for them to find the information were: (1) “Via Google,” (2) “Ask professors,” and (3) “Ask classmates.” The top three ways for the FDU students to find the information were: (1) “Via Google,” (2) “Ask my classmates,” and (3) “Ask professors.” On the other hand, students at NTNU stated the following ways to find the information: (1) “Via Google,” (2) “Ask my classmates,” and (3) “Ask the university librarians” (see Graph 1). In short, search engines like Google (Baidu in mainland China) was reported to be most popular amongst the participants at the three universities. This trend has increased with more and more academic libraries adopting the internet-centered model for delivering information to users. At the same time, at FDU and UT, both groups of students preferred to ask professors and classmates rather than the university librarians. Meanwhile, the NTNU students indicated that they preferred asking the university librarians.

Graph 1. Who students would prefer to consult when they were unable to find materials for their research assignments



6.2.9. Students' comments on the library user education and library services

At the end of the questionnaire, we asked the respondents to fill in the comments about the library user education or library services. The students from UT said that “The schedules and places do not always match my schedule. However, I am afraid to go to the tailor-made library instruction by myself,” “I am hesitant to go to the tailor-made library instruction since it is kind of troublesome for the busy librarians.” Similarly, FDU students also mentioned that they are hesitant to ask librarians for help because librarians look busy.” Furthermore, students from UT also mention some claims about the library user education programs. One female Master’s student said, “The database instruction schedule is kind of rushed, and the time takes is too short.” Another one claimed that library user education should not only cater for Web of Science, but also be combined with RefWork and Web of Science together to teach students how to organize citations and write theses more easily. Similarly, an ACRL (2015) report²⁰ pointed out that multiple library instruction sessions or activities in connection with a course are more effective than one-shot instruction sessions. When the librarians are designing the library instruction, they should think about the process of how students write papers. That would be a better course for users, like a course specifically on a research project, since it is easier to explain how to approach the assignment rather than talk about general resources, and it would be more related with their learning process. That will be helpful for library contribute to students’ learning and research.

In all three universities, the students pointed out that more promotion was needed for library user education. Most of the time, the students do not join library user education because they do not know the information well. For attracting more students to attend the library user education, cooperation with faculty members and student committees are needed and updating information on the television screens outside of the library can be an effective way. Besides, library user education courses should be made more entertaining and interesting (ex, using games in library instruction) to enhance students’ learning. On the contrary, one male undergraduate student from NTNU said that library has many functions and services, and they are easy to use, so library instruction is not always necessary. The other comments are related to the library opening time, collection and the attitudes of the librarians. The comments list is below.

²⁰ Association of College and Research Libraries. (2015). Academic library contributions to student success: Documented practices from the field. Prepared by Karen Brown. Contributions by Kara J. Malenfant. Chicago, IL: Association of College and Research Libraries.

Table 13: Students' comments from the University of Tsukuba

	Respondents' information	Comments
1.	Female/Bachelor	If there are any rooms offered for eating and drinking will be better.
2.	Female/Bachelor	Cooperate with other university libraries or public libraries to promote the library service.
3.	Female/Bachelor	The schedules and places do not always match my schedule. However, I am afraid to go to the tailor-made library instruction by myself.
4.	Female/Master	It is kind of troublesome to put the book back to the bookshelf which you read.
5.	Female/Master	More subject-oriented library user instruction needed.
6.	Female/Master	The database instruction schedule is kind of rushed, and the time takes is too short.
7.	Female/Master	More languages are needed for the library instruction. The international freshman may have difficulties in Japanese and English, so the library can offer the library instruction in Chinese or Korean.
8.	Male/Master	A library instruction should not only cater for Web of Science, but also be combined with RefWork and Web of Science together to teach the users how to organize citations and write theses more easily. When the librarians are designing the library instruction, they should think about the process of how users write papers. That would be a good course for users.

Table 14: Students' comments from Fudan University

	Respondents' information	Comments
1.	Female/Bachelor	According to the characteristics of each College, the library should organize specific library instructions for the various College systematically.
2.	Female/Bachelor	Service attitude needs to be improved.
3.	Female/Bachelor	The library user education programs need to be more entertaining and interesting.
4.	Female/Bachelor	I am hesitant to go to the tailor-made library instruction since it is kind of troublesome for the busy librarians.
5.	Male/Bachelor	Make it fun, so users will become interested in the library instruction.
6.	Female/Master	Open more specific courses for different majors.
7.	Female/Master	More promotion needed about databases on the library homepage.
8.	Female/Master	Book updates are not enough
9.	Female/Master	More library user education programs for freshmen.

10.	Female/Master	Management model needs to be improved.
11.	Female/Master	More library promotion activities should be carried out to let students know.
12.	Female/Master	More information retrieval courses needed.
13.	Female/Master	More library instruction and more books collection.
14.	Female/Master	More activities like books talking meeting.
15.	Female/Master	Book classification hope to do better.
16.	Male/Master	More promotion needed.
17.	Male/Master	Library open time should be longer.

Table 15: Students' comments from the National Taiwan Normal University

	Respondents' information	Comments
1.	Female/ Bachelor	More library promotion should be need.
2.	Female/ Bachelor	Library is very good and has many resources, but more promotion would be better.
3.	Female/ Bachelor	The services of librarians and the part time students is not so good and lack of passion for services.
4.	Male/Bachelor	More promotion to let the users known
5.	Male/Bachelor	The library open time should be longer
6.	Female/Master	Promote the library services and resources to make the best use. Most of the time is that not the students have no interest but they don't well know about library.
7.	Male/Bachelor	Library has many functions and services and they are easy to use so instructions is not always necessary.
8.	Female/Master	It is highly advanced and modernized. A conducive environment for learning indeed.
9.	Female/Master	The library really buys a lot of electronic resources. That is really helpful. Proud of our library.
10.	Female/Master	It's quite here and I like study here.
11.	Female/Master	Update the information on screen outside library is effective way
12.	Female/Master	Their teaching added further value to the openly downloadable instruction notes.
13.	Female/Master	More space, more discussion rooms, better decoration and instruction of location is better for users. Especially the books should not be too far away from the facilities in order to increase the use of those materials of collections
14.	Male/Master	More promotion would be needed especially for the reference books

Chapter 7 – Discussion

To continuously improve services, library administrators must understand the priorities and preferences of the users they serve. The survey results revealed that student respondents at the three universities came from various backgrounds and possessed varied knowledge and skills. The diversity in learning needs and expectations exist amongst the students since they came from different academic disciplines, degrees of motivation, interests, as well as study levels. We will discuss them in details in the following sections, with a feedback from the librarians to reflect on the survey results.

7.1. Survey respondents - gender ratio, academic disciplines, and level of study

In terms of gender ratio, a predominant number of respondents from these universities were female (see Table 5). The results show that no significant difference was found between male and female students in terms of the perception towards library user education by conducting a t-test, with p-value > 0.05. Similarly, findings of others also indicated that no significant difference was found between male and female students in terms of their library usage (Funmilayo, 2013; Bassi & Camble, 2011). The gender breakdowns of the questionnaire respondents were broadly parallel to the ‘general’ phenomenon – that is, the students who tend to frequent the library are often female. Besides, a larger percentage of the three universities respondents were studying LIS at postgraduate level (see Table 5). Librarians have been a traditionally a female-concentrated occupation (Lupton, 2006) even as the LIS professions expand and become increasingly diverse, along with men’s increased participation in the profession; results indicated that students choosing to enroll these LIS programs were 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), men mostly choose to enter LIS as the last resort, for the reason of avoiding to be considered as “unqualified for a position in a traditionally male occupation” (p. 105). Survey results are similar to the findings of the relevant studies in the area. Social humanities sciences/ language majors tend to be female, and because of their majors,

they need to depend more on the library services and resources for their research and assignments.

For the UT students, since the respondents were mostly postgraduate students majoring in different academic disciplines and because of the nature, requirements and the academic/study level of their research and assignments, they needed more assistance from the librarians to teach them how to use databases (i.e., step-by-step instructions with hands-on exercises) in order to carry out proper “postgraduate-level” research (see Table 7). This also explains why the NTNU students gave research consultation (e.g., thesis/dissertation/final year project) and database instructions (e.g., database retrieval through face-to-face with hands-on exercises) a highly score of the importance. Similarly, for NTNU, most of the respondents majored in LIS, Social Sciences, Foreign Language and Education.

On the other hand, for FDU respondents, the library catalog (OPAC) was not always the first source they would consult for carrying out their research or assignments (see Graph 1). A majority of FDU responses were at undergraduate level (81%), 18 were business majors and 14 were science majors (see Table 5). Because of their academic disciplines and their different study levels (mostly undergraduates), they did not need to carry out in-depth research writing rather than graduates. The results show that the students’ majors and levels of study would be important factors influencing the students’ perceptions towards library user education. Besides, FDU students indicated that the biggest reason why they did not take apart the library user education was that they could always find the most up-to-date information and scholarly publications from Internet and/or OPAC by themselves. As Posey (2009) suggested earlier, library users’ information-seeking behaviors are becoming more based on “convenience over quality” (p. 12). In fact, since 1996, reference ‘face-to-face’ transactions have declined as Internet information gateways have become increasingly popular (Thompson, Kyriellidous & Cook, 2007, p. 456). According to the University of California Libraries, “Students expect simplicity and immediate reward and Amazon, Google, and iTunes are the standards against which libraries are being judged” (Kenny, 2006, p. 7). In order to survive the serious threat of the Internet, academic libraries have undergone a paradigmatic shift, improving the quality of services they offer in an attempt to compete with such Internet searching tools as Google.

Similar results are also found in the study by Collins & Stone (2014) that is a number of statistically significant differences on various dimensions of usage between both high-level disciplinary groupings and lower subject-level groupings. In addition, Nackerud *et al.* (2013) and Obasuyi & Idiodi (2015) investigated the value of library and its relation to students’ education and revealed that there is a significant difference in library value to students’ education based on their

faculty. Similar results could also be found in the study by Syria, Restoum & Wade (2013).

7.2. Library digital resources and relations to students' learning levels/needs/modes

The survey results indicate that the student participants from UT considered online information literacy instruction is the most important, FDU and NTNU considered workshops catered for e-resources (e-books and databases) to be most important amongst all library user education programs made available. It is an apparent sign that students at these three universities depended greatly on online resources provided by their respective university libraries, not only for the purposes of research (writing their assignments), but also to support their formal learning as a whole. Therefore, it is safe to assume that the student participants themselves already understood the importance of being able to identify, locate, evaluate and effectively use the information resources provided by their university libraries.

The user education librarians at these three universities were also aware of the needs and expectations amongst their student users. As a result, they have been investing a large amount of manpower and resources into organizing workshops focusing on the use of e-resources. For example, according to the NTNU librarians, 50% of the library workshops organized by the NTNU library are e-resource-oriented. For FDU, there are 60% of the library instruction cater for e-resource (information provided by the FDU librarians). Furthermore, the NTNU Library also offers online resources like language databases and subject-oriented reference resources for students to search and access via online (see Figure 4, p.25). The NTNU students' comments like "Library has many functions and services and they are easy to use" showed that they are very satisfied with these resources (see Table 15).

On the other hand, the FDU library offers library collection and academic resource navigation websites for each college on the library homepage. On the navigation website, there are three webpage cater for the library collection search (including books collection and database), academic resource search (including academic resource of partner institutions or other universities, the newest published paper on Web of Science written by FDU scholars, related conference information) and information literacy courses (including information of related literature courses and academic writing, contacts of subject librarians, resource of library user education courses downloadable). UT Library classified a database list by discipline. Despite of all the efforts in making the resources easily available for users easy to access via online, the results indicated that that there is still work to be done to make students more comfortable with online library resources (e.g. high quality MOOCs, online courses, digital contents, etc.) and, thereby, increase students' self-accessed library skills.

Furthermore, the results also revealed that for the student participants at NTNU (43% of them were postgraduate students), and because of their study level, they saw the following as the most important parts of the user education programs: research (thesis/dissertation/final year project) consultations and database instructions (e.g., database retrieval through direct face-to-face with hands-on exercises). Rudner *et al.* (2002) also reported that graduate students to be among the heaviest users of electronic journals. Besides, Rudner's study revealed that graduate students tended to be binge users who consult electronic journals extensively when doing thesis or dissertation research (Rudner *et al.*, 2002). That is the reason why the graduate students at NTNU considered the research consultation and database instructions to be more important for them, while undergraduate students tended to depend less on the library for research. As Fleming-May & Yuro (2009) further explain, graduate students are more likely to use electronic journals and digital theses/dissertations than undergraduate students for the purpose of learning proper style of academic writing, identifying research gaps, understanding current state of research being done by others, as well as familiarizing oneself with different techniques for data collection and analysis, etc. Such findings are also supportive to another study by Washington-Hoagland & Clougherty (2002), who also reported that graduate students at the University of Iowa recognized the importance and the need in taking part in the e-resource-oriented workshops, and they were constantly seeking for more opportunities for library instructions catered especially at their level, since much of their research and assignments depend heavily on the latest scholarly publications and other resources available in online format.

Table 6 shows the similarities that FDU and the NTNU gave the relatively higher score to 'library instruction,' 'research consultation,' and 'database instruction' about their perceived importance. On the contrary, for UT students, 'online IL instruction,' 'subject-specific library courses,' and 'virtual reference services' are the higher score programs. Such results indicate that students from UT considered these programs to be most important and most sought-after by them. UT students hoped that their university library would offer more subject-orient courses and more online library training courses that flexible and convenient for them to enroll (see Table 13). It is therefore concluded that offering user education programs in greater flexibility and variety (content, format and level, etc.) could increase motivation amongst students to take part more actively in these programs.

On the other hand, student respondents at FDU gave much lower ratings than NTNU in regard to their perceived importance towards research consultations and database instructions provided by their respective university libraries. That is maybe because a majority of the FDU student respondents were business and science majors. Besides, a majority of them were undergraduate

students – for such reasons, their level of information needs, modes of learning, formats/methods of research, and assignment requirements are distinctively different from that of the liberal arts and humanities students (see Table 5). Meanwhile, UT students gave the lowest score towards the perceived importance of research consultations and database instructions than other two universities, which means that UT students have a low perception that they can consult with librarians if they have any problems in research – for the reason that the library prefers to provide the general instruction rather than provide more subject-specific ones.

Furthermore, UT Library usually holds campus-wide library orientations for graduates at the beginning of each new semester. However, the schedule seems to be very tight at the beginning of the new semester and there is not always enough time to explain everything for new students. When a lot of information is packed in a short time, it could have negative effects on the students, especially when they are freshmen. On the other hand, the FDU Library and the NTNU Library focus on library user education by academic subjects. Most of the library user education programs are conducted by the subject librarians tailor-made for individual academic disciplines. Campus-wide library orientations are tailor-made for different faculties or academic departments at different level. Under this setting, user education librarians are expected to serve as liaison librarians or subject specialists for each academic departments and programs. In addition to providing user education, and answering reference enquiries, they are also responsible for developing the library collections together with the departments they serve. NTNU students giving high rating towards user education programs – could be a direct and positive results of their high-quality user education activities carried out by their university library.

7.3. Respondents' ratings towards overall quality of library user education programs

According to the user education librarians, the three university libraries carry out user satisfaction surveys only for the whole library collections and services, but no surveys targeting towards their user education programs on a regular basis due to various administrative and manpower reasons. In order to find out the level of satisfaction amongst the students, student respondents were asked to evaluate the overall quality and contents of the library user education programs by using a 5-point Likert scale. Overall, students at the three universities were satisfied with the quality of library user education programs provided by their respective libraries as a whole. A large number of the UT students agreed that the overall contents of the user education programs were “very clear and easy to follow” (score 3.68). Meanwhile, many respondents at FDU and NTNU agreed that such programs were “helpful in terms of building a positive image of about the university library and its services amongst the students” (see Table 11). Library orientation is a type of library instruction program

introduced in libraries to enable users (students) to make the most and best use of the libraries and their resources. However, the results show that UT students gave the lowest score to “library orientation is helpful in terms of building a positive image of about the University Library and its services amongst the students,” compared to the other two universities. At FDU and NTNU, library orientation is held not only for on-campus level, but also on each discipline level, and the material is downloadable from the library website.

Despite that, a large number of students from the three universities gave a low score to the notion that the overall contents were useful and relevant to their current research and assignments, which means the purpose of the library user education have not been achieved and students’ needs and expectations have not yet been fully met in this regard (see Table 11). This tendency could also be due to a high expectations of the convenience among the library users. Since there were many LIS students within the UT and NTNU respondent groups, it is natural and logical that many of these LIS students already consider themselves as effective and independent library users. This could be the reason why they thought the library user education programs were good for building a positive image, but not useful. Therefore, more attractive incentives have to be given to bring more students to participate in user education programs. It would be interesting to conduct further research to examine LIS students’ perceptions towards library user education, since many of these LIS students are expected to be skilled users of library resources. However, at the same time, it defies expectations because they did not find them useful. Further discussion is needed on the students’ belief towards librarians’ profession.

7.4. Promotion and marketing strategies for library user education

When students were asked why they were not keen on taking part in the programs provided by their respective libraries, a large number of the UT students answered that “I am not well informed by the details of the user education programs that are provided by the university library, except the library orientation.” On the other hand, the NTNU respondents answered that, “I want to go, but they (library workshops) always clash with my class schedule” (see Table 7). On the other hand, Kiilu & Otiike (2016) found that the leading reasons for infrequent or non-use of library resources have been identified to include the lack of awareness, perceived lack of relevance, lack of time, long distance to go to the library, lack of skills in the use of electronic resources, access to the Internet from home as well as borrowing from other libraries. These findings are also similar to another study conducted by Hoffmann, *et al.* (2008), which revealed that students lack adequate time to participate in user education programs because of the heavy curriculum schedule. The authors, therefore, suggested that user education programs should be given during the class time and they should be tailor-made to the

course to meet the varied schedules of students. Duke & Tucker (2007), Critz, *et al.* (2012), and Yi (2016) all highlighted the importance of good marketing for library programs and the importance of tailor-making programs to cater to the needs of students from different academic disciplines at different levels.

About the ways for promoting library user education services and their perceived effectiveness, students of UT indicated that messages via online social networking platforms/apps could be one of the most effective ways for promoting/marketing their library user education services. On the contrary, librarians considered that sending batch emails to all students is the most effective way to promote library user education, because of its speed and convenience. In reality, however, a majority of students simply do not read batch emails sent out by their university's central system (Critz *et al.*, 2012). This can be seen as a communication gap between students and librarians which means the third hypothesis has been confirmed.

7.4.1. Social networking platforms used in UT and NTNU library

The result shows that students at UT considered online social networking platforms/apps could be as the most effective way to promote library user education. The UT library launched its own Twitter account in 2011 and a Facebook page in 2013 for connecting with the students. In spite of that, the number of 'Likes' is 1,595 on the Facebook page²¹. By contrast, the number of 'Likes' on the twitter page is 5,799 and followers is 5,655. Besides, the number is increasing every year.

On the other hand, the NTNU Library has launched its own Facebook page in 2009 and Twitter in 2009 for connecting with their students. The contents of the library's Facebook page is updated almost daily. As of 28th November, 2016, the number of 'Likes' is 8,423 on the homepage of NTNU library's Facebook page. However, there are only 40 followers on the Twitter page. Further study would be needed to find out the why the NTNU students preferred Facebook than Twitter. By using Facebook, the UT and NTNU librarians can improve their communications with the student community in a virtual fashion, despite Facebook being not as interactive and engaging when compared to other online network applications in the area (e.g., LINE, WeChat, Weibo, or Whatsapp, etc.). As a result, it is a proper way for libraries to use social media to promotion should awareness of the library and build academic community among university. At the same time, there are many studies indicate that using social networking sites as marketing and outreach tools of library and information services to build academic committee among students could be effective (Alkindi & Al-Suqri, 2013). On the other hand, few research focuses on the library promotion contents with the

²¹ All the SNS information was accessed on 28th November, 2016.

students' information behavior in terms of SNS usage. However, the promotion should also combine with the students' information behavior in terms of social networking tools usage. For example, the UT Library should more proactive and promote more on Twitter – for the reason that students prefer Twitter than Facebook.

The contents of the Facebook pages developed by NTNU are mostly catered for promoting their library activities and are updated almost every day. Compared with the UT Library, the NTNU Library prefers to use many emoji (emoji are ideograms and smileys used in electronic messages and Web pages²²) to make the information more colorful and with the picture of gifts that will be given to students who attend the library activities. In addition, there are more direct communication with students from the comments on the Facebook page than UT.

7.4.2. Social networking platforms used in FDU library

The FDU Library also uses social networking sites to promote library services. WeChat and Weibo are currently the most commonly-used online social network applications throughout Mainland China, especially amongst the younger generation. Having taken this into account, the FDU Library launched a Weibo Service in 2011 and a WeChat Service in 2014 with the aim of using such online apps for outreach to the student community as far, and as wide as possible. Facebook is blocked in Mainland China for various political reasons (since Facebook did not have the required licenses that websites required in China and did not adhere to government regulations regarding content filtering). Chen, *et al.* (2016) shows that the main library services provided through the WeChat platform include: (a) an active push of information, such as notices, news, training information, new book notifications, and reading rankings; (b) personal information query, including user information, borrowing records, renewals and reservations and due-date reminders; (c) library information query, providing the latest news, hour of operation, borrowing rules, advance exhibition notices and frequently asked questions; (d) bibliography and database consulting services, including automatic reply or manual consultation; (e) reader card services, including issuance and loss reporting; and (f) personalized services, such as book recommendation, suggestion feedback and reader investigation. In a way, WeChat is more interactive social media than Facebook or Twitter to promote library service due to these functions. Guo (2015) showed that, as of August 2014, of the 39 Project 985 universities, 25 libraries (64.1%) introduced the WeChat public platform service. It is no doubt that WeChat has created a new way of library promotion in China.

²² Emoji-Wikipedia: <https://en.wikipedia.org/wiki/Emoji>

7.4.3. Other methods of interactive library promotion

According to the comments given by the surveyed respondents (see Table 13, 14 & 15), more interactive library user education programs are needed to attract the interest of students, like database retrieval sessions with more interactive and hands-on practices, interactive library games and more colorful and attractive library bulletin board displays that is- to attract students' attention and to sustain their interests. Library instructional games have the potentials to engage students, enhance information literacy skills, and thereby enhance positive attitudes toward the library and its staff (ACRL, 2015). Taking FDU as an example, which made a digital book for users to learn how to use library service and facility (See Figure 6) and a webpage for freshmen specially (See Figure 7). All the background information and activity information are offered for freshmen hence students can learn the basic library information from the website if they missed the library orientation. Besides, there are two kinds of library tours in FDU, one is an online library tour to know how to use library service and another one called library in-depth tour, which explains how the library and librarians work, how to do book preservation and conservation and so on. Since all the basic information on how to use library services and resources are ready online, the librarians can take more time to provide specific instructions that are for course-related and assist with research. For the NTNU Library, there are online panorama tours and floor configuration guides for checking the descriptions for each area (see Figure 4). Furthermore, the NTNU library plans to make online tutorials programs for user education like FDU Library has done. On the other hand, the UT library produced videos to introduce how to use the library and created a short movie to attract more students to come to use library.



Figure 6: The eBook page of Fudan University Library²³

²³ Retrieval at: <http://202.120.227.59:85/book.html> (Accessed on 05th June, 2016)



Figure 7: The webpage of library user education for freshmen²⁴

In addition, libraries also use cartoon characters to create a popular user-friendly image for the library. The UT Library uses a Yuru-Chara (a Japanese term for a mascot characters--usually used for promoting a place or region, event, organization or business) to attract more students to come to the library. The official mascots of the library are Tulip-san and GAMA Jumper (see Figure 9). NTNU uses a plush lion toy as a character to represent the library (see Figure 10). However, the UT mascot is created more for university branding and marketing (though he does appear in promotional videos, etc., sometimes for the library). Although it is interesting to have a mascot character to represent the library, it does not seem to do much in bringing people to the library for making good use of the services and resources. On the other hand, NTNU also uses the mascot character as an image of librarian, and it always uses the character to attract more students come to attend library user education activities. As a result, they are very popular and well-known among students. On the other hand, there are no cartoon characters in FDU Library. It is said that the FDU Library prefers to give a professional image to students.

²⁴ Retrievable at: <http://202.120.227.59:8080/> (Accessed on 05th June, 2016)



Figure 8: The official mascots of the University of Tsukuba Library



Figure 9: The official mascots of the National Taiwan Normal University Library

7.5. Incentive strategies for encouraging students to attend user education programs

Quality service is defined as delivering services in a timely manner, as well as more than what the user requests (Nitecki, 1996, p. 181). In other words, service must provide the expected product at the expected time (Pritchard, 2001, p. 87). To deal with this problem, FDU Library set up some information literacy online courses. Students can download the course materials and work on the report and exams for these courses online. By doing so, students at FDU can take part in the library education programs online whenever they have time. That is the one reason why FDU students responded that they do not keen on attending the library user education since they can find information by themselves. The NTNU Library is also under the process of making an online user education program to achieve a similar purpose. Similarly, the UT Library also uploaded some videos on the library's Facebook page, but the contents simply acts as a guide for how to use the library basic services.

However, despite the FDU Library is investing a great deal of staff, time and effort in making their user education training available online, the survey results reveal that these programs were not well-known among the FDU students. As pointed out by Posey (2009), the digital trend has caused more and more academic libraries to adopt the Internet-centered model for delivering information, as well as IL to users. According to Yi (2016), in order to attract clients, generate non-user awareness,

and raise awareness of available services and resources, libraries need to find effective ways to promote services and resources to clients. Indeed, “academic libraries’ websites serve as a gateway supporting library’s research and educational needs” (Posey, 2009, p. 37). According to Yi (2016), under the current digitally-driven environment, online media techniques (e.g., library websites and online social media tools/platforms) were found to be the most effective for promoting library services and resources--that is, including user education. As a result, the university library should build as many channels as possible, and new approaches to advertising the library user education to make it more visible, engaging, and accessible to the students.

According to the three university librarians, they also tried different incentive strategies with the aim of attracting more students to attend library user education programs. The survey results revealed that presenting students with cash coupons was found to be the most attractive incentive for students at UT and NTNU. Meanwhile, FDU students indicated that their strong preference for earning academic credits after attending the library workshops (see Table 8).

Universities worldwide have employed a variety of approaches for marketing the user education programs. According to one NTNU Librarian, the library already has a long tradition of awarding the students with small incentives, presenting with them with small souvenirs, e.g., supermarket cash coupons, Starbucks’ cups, MUJI’s stationery, book coupons, or action figures from comic books or movies, etc. for taking part in their library workshops (see Figure 11). Furthermore, it would be good if the faculty members could give their class time to offer the orientation, some workshops, and also to design the courses in line with their needs, etc. -- so that they could see the relevance of what they have learnt and then apply their [library / information literacy] skills to their assignments and their studies. At FDU, students who get the highest scores or who answer the questions in the instruction courses will be rewarded with gifts, like iPad or iPadmini. That is the reason that FDU got the highest score in “students who get the highest scores will be rewarded with gifts” as an effective way to attract students compare to UT and NTNU (see Table 9). The UT Library has no custom for that presenting students with cash coupons or anything else since the library budget is very tight, and small gifts tend to be expensive in Japan, in comparison to Mainland China and Taiwan.

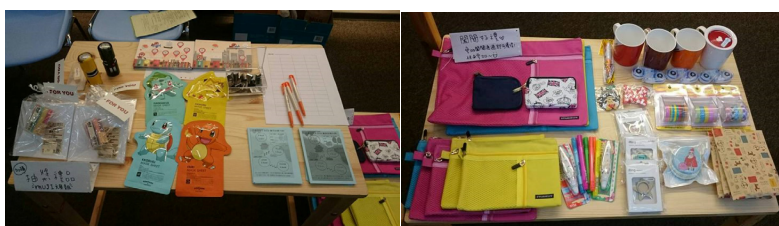


Figure 10. Gifts given to the students who joined the library user education programs²⁵

On the other hand, FDU launched information retrieval courses for students. In addition, there are four faculty members in charge of this course. They have a webpage to introduce these courses information and for e-learning. An elective course of credits for postgraduates. The course has three streams covering the sciences, the liberal arts and the medical sciences, respectively. For undergraduates, there is a document retrieval course of credits for medical science students. However, the NTNU Library has not launched library user education programs that give credits like other academic courses. It is said that Chinese students take credits seriously. In fact, many students in the average colleges just want to pass the exam and get the degree so that they can take more time to involve in various extra-curricular activities, for example the student committees and the student club activities, also the job internships. Further research would be needed to determine the reasons why FDU students preferred to receive credits after attending the library education programs.

In this study, interviews with the librarians emphasized that promoting the library services to all patrons is one very important challenge, because young people would have different library learning preferences and mode, compared to some ten years ago due to the rapid growth in information needs and in communication and digital technologies. Besides, students gave comparatively low scores to librarians in terms of being interesting, creative and engaging (See Table 10). According to Beetham & White (2013), students have a wide variety of digital and learning practices. They have indistinct ideas about how they will learn at the university and what constitutes legitimate learning practice – especially digital practice – in a university context. University libraries need to be proactive in managing students' ideas and expectations about their university experience, including expectations of the digital environment for study. Students want more guidance on academically credible sources and academically legitimate uses of online contents. Students place a high value on experience with workplace technologies and research-like digital practices because they are so used to digital environments and multimodal ways of learning (Jenkins, *et al.*, 2006), and they are familiar with communication practices in terms of the textual, aural, linguistic, spatial, and visual resources or modes, etc. However, the traditional library instructions are only one-dimensional and not interactive, and, hence, students find it neither interesting nor engaging. As a result, if students' interest and attention cannot be sustained, they simply will not return to undertake any more programs organized by the library. As highlighted by Hernon *et al.* (1999), "We [librarians] must create educational experiences that students want to participate in rather than merely endure" (p. 10). Edgar (2006, p. 448) explained that if the academic library does not deliver quality services such as convenient

²⁵ Retrieval from NTNU library Facebook:
https://www.facebook.com/176632698665/photos/?tab=album&album_id=10153392869868666

customer access, reference assistance or library instruction, students will often act on their own perceptions to abandon the services quickly, even if the services' essence is there. If their essential services are not provided, the students will gradually perceive this underlying reality and abandon the library.

In order to boost the library user education programs' attendance rate, the NTNU Library plans to make more changes about library user education, to combine with the currently popular culture in young generation, and to make the library promotion style more closely to students' daily life to attract students' interest. In addition, the NTNU librarians pointed out that positive word-of-mouth is always a good way to boost the attendance rate is – that is, to create a good reputation and positive image of the library amongst the student community. Students would listen to their friends about their experiences with the library, so “the current customers” are the best resource to generate more students to attend the library user education programs. The librarians from other two universities also highlighted the following:

- (1) Positive word-of-mouth is the most effective advertising;
- (2) Monitor our interactions with the students, and always think about what their needs first;
- (3) Provide library user education programs in different formats, modes and timeslots;

In short, be good at what they do as user education librarians.

In summary, the most effective ways to attract students to attend the library user education programs are summarized as follows: Firstly, as pointed out by Posey (2009), in the virtual library's emerging days, web presence, convenience, and timeliness are considered success drivers (p. 38). Libraries can use multiple factors to publicize their user education programs. Secondly, to collaborate with the faculties and student associations (at both the undergraduate and postgraduate level) to promote the library resources, services, as well as their wide range of user education programs – with the aim of supporting their learning and research needs.

7.6. Expected professional competence and attitudes of user education librarians under the digital age

Undoubtedly, students' perceptions towards the service attitudes of the reference/information services librarians could influence how much the students are willing to take part in the library user education. As Whitlatch (1990) stated, “Librarian courtesy, interest, and helpfulness are cortical in providing successful service. Libraries must elect and retain staff who have these service orientation towards users” (p. 205). Simmonds & Andaleeb (2001) identified several factors that influenced user satisfaction including responsiveness, competence and assurance, tangibles, and resources (p. 629).

According to Posey (2009), library users often judge their experiences not only on whether they received the information they sought, but also on the service attitudes, service quality and enthusiasm of library staff. Survey results indicated that the NTNU librarians received highest ratings on their service attitudes and professional competencies as a whole, when compared with their two universities counterparts (see Table 10). Similarly, when NTNU students were unable to find materials to finish their research/assignments, a large number of them would turn to the university librarians to ask for assistance or guidance while being less dependent on Google like most UT and FDU students (see Graph 1). It is, therefore, concluded that students' satisfactions towards the librarians were related directly to how much they depended on these librarians' services, as well as how often they used the libraries. In other words, the more the students depended on these librarians, the more they enjoyed using the library and its services (Posey, 2009). The NTNU librarians also have confidence in this result and believe that they can receive highly evaluation from students since they always get high ratings (especially for reference librarians) from students during the library satisfaction survey. Because they are pay attention to build good relationships and create a welcoming environment from daily work. Interestingly, the number of the UT students prefer to ask the university librarians for help is the same with the number of students prefer to ask the public librarians for help. Further study is needed to clarify this reason.

Since user education (information/reference services) librarians are working on the front lines, they need to have a very strong sense of customer-service, as well as excellent communications, and marketing skills – that is, skills and mindset that are similar to that of a business manager. As Brunsdale (2000) also noted, for academic libraries to succeed in the information age, which emphasizes consumer convenience and competition, academic libraries must develop successful marketing plans to reach customers. These libraries must implement a private-sector approach. Meanwhile, the role of the librarian has changed from information specialist to customer-service provided (Posey, 2009, p. 13). In other words, user education librarians cannot afford to be intimidated by the idea of having to actively market themselves and their services amongst students and faculties university-wide in order to draw them into the library, thereby optimizing the use of resources and services available.

Furthermore, librarians from all three universities also expressed that with ever-changing information needs and behaviors of the students, along with the information explosion and its impact on the publishing industry, it is important for the librarians to stay current and relevant with the rapid development in teaching technologies and research/learning trends of the university community as a whole. The librarians at the three universities also agreed that the skills and mindsets mentioned

above are absolutely vital for conducting successful library user education programs at their respective universities. According to a librarian at NTNU:

“We as [user education] librarians cannot no longer afford to just sit behind the reference desk, and wait for the students to come and ask questions. Nowadays, we have to spend a lot of our staff time on doing marketing strategies -- finding various ways to outreach to the students and teaching staff at all levels. In addition, we also have to be very flexible, and cannot assume that one style/mode of user education would fit all because users of different academic disciplines simply have drastically different learning preferences and research focuses. Moreover, the current digital environment and the rapidly-developing communications technologies have completely reshaped our end-users’ library usage patterns and modes of accessing our resources. Not to forget, we are constantly competing with Google (Baidu in the case of Mainland China).”

The Internet offers more viable, easier and more efficient alternatives to many of the traditional cornerstones of academic libraries. As highlighted by Posey (2009), “In an electronic age, information seekers are accustomed to instant access, increasing the need for quality library service. In these students’ minds, what is the point of coming to the library, if they think they could easily find everything they need from Google?” (p. 13). The Online Computer Library Center (OCLC, 2006) also reported that of college students’ electronic information searches, 89% of them began with a search engine (e.g., Google), while 2% began with the library website – for the reason that students considered search engines faster, more convenient, and easier to use by comparison. This was similar with the result in this study in that, students from the three universities prefer to consult Internet searching tools when they cannot find information (see Graph 1).

7.7. Close collaborations with faculty and staff

Many information literacy courses have to encourage collaboration between faculty (and their departments) and the library with the goal of helping students develop these skills to enable them to recognize various information sources and to use information in a right and suitable way (Agnes & Popescu, 2010). The librarian supports teachers’ roles by building up information skills and discovering methods to integrate them into the course (Wijayasundara, 2008). In this role, librarians work with faculty to increase integration of IL skills into the course materials, in order to ensure students would develop the abilities that will allow them to be effective life-long learners in this ever-changing and increasingly prevalent digital world.

As the survey results revealed that students at both FDU and NTNU indicated that involving their professors to encourage the students to attend library user education programs could be the most effective way to ensure high attendance rates, compared to UT students, who consider it as the third most effective way (see Table 8). Perhaps it is a cultural phenomenon that could be commonly found in many Chinese (Confucian) societies, where teachers/professors have the more formal authority and influential power in shaping students' learning, even when the outcome of such learning would not be reflected directly in their final academic results. Sit (2013) pointed out that Confucian traditions encourage the Chinese to respect hierarchical relationships in the society. Knowledgeable people like scholars and teachers are greatly respected as good role models. Having taken this into account, librarians should consider following the library user education model implemented by other academic libraries in North America, which is to take a more proactive step to collaborate with different faculty members on a regular basis, like cross-discipline workshops as Critz *et al.* (2012) mentioned. However, according to the librarians, close collaboration with faculty members would be the ideal, but in reality, not all faculty members are eager to collaborate with the librarians in this format. This is because the difference of awareness towards library and librarians is large among faculty members. Further study needed to find out the faculties' perceptions and awareness towards the library user education.

The FDU Library established an Advisory Committee, which aims at strengthening the management of the library, providing a channel for faculty to express their opinions and suggestions about collection development, so as to best meet the needs of readers. This Advisory Committee was approved by the leaders of the university, and 32 advisory members recommended by the respective departments and schools were divided into four sub-committees, namely, humanities, social sciences, sciences, medical sciences. Similarly, UT also has a library research and development office was made up of 12 faculty members from Humanities, Art and LIS discipline, which was established in 2005. However, the function of the team is to create library surveys for improvement of the library services rather than to enhance the cooperation between library and faculty.

In terms of collaboration between faculties and user education librarians - according to the NTNU librarians, the ultimate advantages of such collaboration is that librarians could create different learning packages and design the contents of their workshops according to the curricula. As pointed out by the NTNU librarians, as long as the students could see the relevance and direct benefits of these library workshops, then high attendance would therefore be guaranteed.

On the other hand, students at UT and FDU disagreed with the idea that professors make it

mandatory for the students to attend to the library workshops would be an effective way to attract students to join the library user education, by integrating them into their core curriculum (see Table 9). This is maybe because the students do not consider the library user education is all that much important and worthwhile enough to ask professors make it mandatory for them.

Academic libraries are confronting escalating pressure to demonstrate quality and efficiency. As Cullen (2001) has stated, “Focusing more energy on meeting ... customers’ expectations is critical in the contemporary environment” (p. 663). Meanwhile, findings of this study also imply that improving university students’ information competency and library skills is an ongoing effort for many librarians. Despite such challenges, user education librarians should endeavor to act as information literacy specialists, user education leaders, as well as curriculum leaders--that is, to collaborate with faculties in different academic disciplines, to understand their expectations for students’ levels of research and study requirements in their respective fields. Through this, librarians will then be able to serve as effective partners with the said faculties on developing tailor-made user instructions, which will then further facilitate students’ interests and involvements. In other words, successful library user education is not just about teaching the students who to locate their desired information, it is also about effective communications and liaisons between the librarians and the students on an ongoing basis.

7.8. The teaching style and learning modes

This study began with the belief that inquiry-based learning is what university education is all about. The researcher believes that inquiry-based learning and library go hand-in-hand to arrange the library user education programs. UT has the largest group of LIS students as respondents in survey. Originally, it was expected the ratings for UT librarians would be higher and also that they would view user education to be more important. However, results proved otherwise. The results at UT are drastically different, as they received the lowest scores in almost all of the questionnaire than FDU and NTNU. One reason is maybe because assignment expectations for social sciences and LIS students are different at UT. For course assignments, students are prompted to do summaries or reports instead of expecting the students to go to the library to find their own articles to read and write academic papers to form deep and insightful scholarly discussions. Even at postgraduate level, they are given assigned readings by teachers. Students are expected to summarize the given assigned readings, and there is no real deep level of research involved. For this reason, UT students themselves do not see the value and the need of having direct contact with the librarians. Since they are not expected to go to library often, they have little contact with the librarians.

In addition, UT librarians follow protocols or procedures that were created years ago for doing user education. As Ingersoll & Culshaw (2004, cited by Chen & Lin, 2011) pointed out, “most people will not, on their own initiative, adopt new technologies without some effort and encouragement; they are comfortable accomplishing their work in the old familiar ways” (p. 127). Librarians are no different in this respect (Chen & Lin, 2011). Actually, library user education needs to be flexible as different academic disciplines have different needs and students tend to have different modes. There is no one set of rules or user education programs that fit all students or different academic disciplines. However, the UT librarians are lacking in creativity. They are reluctant to run any programs that are out of the routine and the user education programs seem one-dimensional. For example, database instruction only has a little bit of hands-on exercise workshops. Compared with NTNU or FDU, to be a successful user education librarian one needs freedom, exercise judgment and to come up with different programs in different formats. Besides, to arrange tailor-made user education programs to cater for the needs to different student groups and to be outgoing to convince the professors to go to their classrooms to teach is important instead just waiting for students to come. However, students gave low ratings towards librarians, and they would rather go to classmates or to go to their professors instead of asking the university librarians, as stated in survey results (see Graph 1), meaning that although many of the UT respondents are LIS students, they have no real idea of what a user education librarian should do since they are not encouraged to go interact and talk with the practicing user education librarians as part of the learning and curriculum. Besides, very rare that practicing librarians are invited to the LIS classrooms to talk about their job nature. For these reason, they do not know what to expect from the user education librarians based on a false or obsolete images. Furthermore, the image towards library is outdated in the sense that it is seen only as a place to stock books. This false image has roots in the Japanese traditional culture and, therefore, the library is not integrated into students real learning, even at university level. User education is not integrated in students' overall learning, even in the learning of students (see Table 11). Since students have few interactions and contacts with the true user education librarian at UT, they do not benefit directly and immediately from their services, it is logical that their ratings given by students are low.

7.9. Students' perceptions towards their libraries and their user education librarians

Comparing the student respondents' perceptions towards professionalism of the user education librarians practicing at these three different universities, although it is safe to say that the user-education-related activities of academic libraries are quite homogeneous in most contents, the roles (in particular the pedagogical role) of librarians and organizational structures of academic libraries that support the user-education-related services are not necessarily the same. For example,

the librarians in Japan are not quite seen as partners in teaching as in the FDU and NTNU Libraries. There did not really seem to be the same degree of professionalism in librarianship in Japan (at least looking at UT) in comparison with that of the ALA. Nagata, *et al.* (2006) pointed out that in some countries, librarians in colleges and universities are considered a professional group and ranked among the “academic staff,” and also have “faculty status,” while there are others who are regarded merely as “office staff” by their faculty counterparts. The latter holds true in most cases in Japan, also at UT, and however high a librarian is ranked within the library organization, he or she remains an office staff member – meaning that they are only expected to carry out traditional librarians’ role, e.g., collection development, cataloguing and classification, circulation, preservation, conservation and archiving– their duties come with such traditional roles might not be totally in line with the new ways of learning and doing research amongst young people during the digital era, especially when an increasing emphasis is placed on project-based or enquiry-based learning. In Japan, this situation has been affecting the learning and research at university level in various ways. Similarly, Hendricks (1991) also indicates that academic libraries in Japan do not play the same role as their North American counterparts. In Japan, libraries lack proper reference services and mainly serve as study halls for students. Thus, a “Japanese student finds to his surprise that he is expected not only to study but to do library research” (Hendricks, 1991, p. 224, cited by Zhang, 2006). The situation is very different from FDU and NTNU in that librarians are considered as “academic staff,” and they are expected to serve as teaching partners, especially for the subject librarians working on user outreach to supporting academic community’s overall leaning and research as the most important mission. That is one reason why UT librarians received the lowest score from students about their professional competence when compared against their FDU and NTNU counterparts.

As mentioned earlier, it is important for academic libraries to have a tailor-made user education programs that are centered on academic disciplines or subject courses at different levels. In other words, libraries should have a subject librarian, who is responsible for tailor-making user education programs or instruction sessions for specific academic discipline. According to Gregory, *et al.* (2014) the library should work with different faculties to give out course materials and encourage faculty to recommend student consultations with subject librarians as part of the research process for their students. However, as mentioned earlier, there are no subject librarian systems at the UT Library. Donkai (2004) indicates that it is hard to say that subject librarians are firmly-established as an institution in academic libraries in Japan in spite of stating their importance for years (only the Kanazawa Institute of Technology started a subject librarian system from 1982). The reason is that the selection, appraisal, reward and development of subject librarian is unsolved. Furthermore, there are strong tendencies that librarianship in Japan is more about being a generalist than a subject

specialist. As a result, it would be impossible to pursue subject research in terms of generalist training and employee movement (librarians have to move to another section every three or four years). According to the UT librarians, since the position, rank and qualification is different, it is difficult for them to take active action to cooperate with different faculties. In addition, they lack of skill training for providing subject-oriented instructions.

There are university library guidelines for academic library in Japan, which were published in 1982, and there are many detailed descriptions about the library management, including staff. According to this guideline, the senior staff should be someone who specialized in LIS. However, not many national universities met these standards. Even though national universities have accepted their necessity there still have not been any traces of a subject librarian system in Japan (Arikawa, 2003). Chiku (1999, cited by Donkai 2004) mentioned that the lack of subject librarian brought stagnation in the university library in two ways. In other words, firstly it create a feeling of powerlessness among the library staff. At the same time, the researchers and faculties considered library as a warehouse of books, totally indifferent about the functions of library as a useful research (education) tool. Furthermore, students are afraid to ask the librarians to arrange the tailor-made program for them (see Table 13), because they found it would be a troublesome for librarians. The reason may be because that professors or the librarians did not teach the students about the true functions and values of user education librarians. This created misconceptions of librarians' work, and it resulted in students being afraid to ask. It is part of the user education librarians' responsibility to provide services with aim at answering students' reference questions. In addition, user education librarians are expected to serve as teaching partners, with the aim to help students to meet their learning and research needs.

Similarly, there are also an obvious gap between students' image towards library and librarians in FDU and NTNU, since the inquiry-based learning among East Asian students is not so active and integrated deeply into curriculum like in North America. Like OCLC (2005) indicated, information consumers view libraries as places to borrow print books, but they are unaware of the rich electronic content they can access through libraries. However, the approach to education in China is changing, with "Suzhi Jiaoyu" reform starting in the 1990s. The phrase "Suzhi Jiaoyu" is frequently translated as "quality education" and generally refers to a more holistic style of education that, is usually discussed as the antidote to the excesses of exam-oriented education in China (Dello-Lacovo, 2008, p241, cited by Shao, *et.al.* 2013). In this aspect, library user education has an important effect on changing students' awareness. FDU and NTNU librarians (especially subject librarians) are trying to create a positive image, that is to be proactive to make students comfortable and welcome in the

library, through making library user education programs to be integrated into students' overall learning.

On the other hand, at the FDU library, there are 193 librarians, of which seven hold doctoral degrees, 47(24.3%) have Master' degrees and 50 (25.9%) have Bachelor's degrees. In the FDU medical library branch alone, there are even 30 librarians. In NTNU Library, there are 61 librarians compared with 59 in the UT Library. However, while capacity reduction and rationalization are developed, the human resources for doing user education are insufficient in Japanese academic libraries, such as the UT Library. Besides, owing to this four-year job rotation system for all national universities and training programs lacked consistency (Nagata, *et al.*, 2006). Furthermore, the JLA Committee on User Education (2003) surveyed 1,478 university libraries and reported that 68.5% of libraries did not hold library instruction and 70.2% of libraries did not provide subject-specific instruction. Furthermore, the survey showed that the main issue in library user education is the lack of cooperation with faculty and getting the recognition from the academic community (48%), the senior librarians (37.9%) and staffing expansion (30.5%). In UT Library, to develop an effective training program is urgently needed to improve the librarians' professional competence to satisfy the needs of its users and also to set up more discipline - oriented library user education programs.

7.10. Summary

Based on the issues addressed in the discussion, reasons covered the learning cultural and teaching mode, librarianship are very different. The result emphasizes the importance of subject librarians and recommends relevant subject specialization in recruitment in order to provide excellent services. The recommendations for librarians at these universities was given as following. Firstly, library user education should not only be held universally but rather depending on the needs of individual faculties and classes. Secondly, promote the library more closely to students' daily life to attract students' interest. Thirdly, cooperation between librarians and faculties, libraries and student committees are needed to make the library user education integrated into students' overall learning and the academic research activities for the university community.

Chapter 8 – Conclusion

This study was set up with the aim to differentiate between patrons' perceptions of how library

user education services should be delivered and how well those services have met the expectations of the students at UT, FDU and NTNU. Although the library user education programs all receive influence from ALA, students' attitudes and perceptions towards the importance of library user education are different.

The survey results indicate a majority of students at UT, NTNU and FDU thought that library user education to be important service. Especially for the respondents at NTNU and FDU, both student groups felt that user education to be slightly more important when compared with the UT counterparts. In addition, the student participants from both NTNU and FDU considered workshops catered for e-resources to be most important. Comparatively, UT students considered online information literacy instruction as the most important of all library user education programs. Furthermore, the reason why students were not keen on attending the library user education programs was because they [as students] were not being well informed – a notion that is common amongst the three universities. Students at both NTNU and FDU also indicated that involving their professors to encourage the students to attend library user education programs could be the most effective way to ensure high attendance rates. On the other hand, students at UT preferred for their libraries to send messages via online social networking tools for notifying the schedule and availability of library classes, and this would be the most effective way in this regard. Interestingly, for attracting students to take part in the library user education, UT and NTNU students indicated a strong preference for being rewarded cash coupons after attending the library workshops, while FDU students preferred to earn academic credits. Finally, the survey results also indicate that the NTNU librarians received highest ratings on their service attitudes and professional competencies as a whole when compared with their UT and FDU counterparts.

In summary, the results of the questionnaire survey study reveal the following key factors that played major role in shaping the student respondents' perceptions towards the user education programs provided by the library: (1) students' majors; (2) students' level of study; (3) students' satisfaction towards the librarians are directly related to the contents and quality of user education programs that they participated. The more these students depended on the library user education programs, the higher they would value the user education programs, and the higher ratings they gave to the library's services and their service providers (user education librarians). More importantly, it has become increasingly important for user education librarians to demonstrate that they are not only essential, but also effective. Findings of this study also revealed that there are service gaps between students and librarians in the effective ways of promoting library user education information. Although the librarians indicated agreement that email announcements are one of the most effective

way to attract students to attend the library programs, in reality, a majority of students simply do not read batch emails sent out by their university's central system--that is, continual need for library services marketing is indeed necessary.

The value of this study lies in the fact that it is unique due to the special population being studied, as few comparative studies have been conducted to examine the students' attitudes and perspective towards the library user education, and in particular, in East Asia. Undoubtedly, surveys of this kind could help library staff see areas of need and identify best practices in library user education while, at the same time, enabling libraries to identify areas of services needing improvements to better meet users' expectations. Furthermore, findings of this study could facilitate librarians building connections with the students. Such insights are useful for developing new approaches, and they can help strengthen arguments for changes and improvements to services. Findings of this study may also help library and information science (LIS) professionals to gain a better understanding of the unique and changing nature of the students' perception towards library user education and library service in these three countries and regions.

Similar to other studies, this study also has its own limitations. First of all, the survey data for this study were collected most through a questionnaire survey from three university libraries only. More direct observations and interviews with the student participants should be carried out to reflect on the survey results. Another limitation of this study was the limited population studied. As of September 2016, all the three universities have total student populations of 55,089 (i.e., 16,890 students at UT, 27,300 students at FDU & 10,893 students at NTNU). However, only 317 students from the three universities took part in this survey. Hence, the survey results may not reflect the students' experiences at other universities across the same region. Despite these limitations, this study provides a glimpse into how students at these three universities in Asia perceived the series of user education programs provided by their university libraries. More importantly, the findings have implications on how library instructions and research services should evolve to serve these student populations with different needs from conventional academic disciplines.

Further study would be needed to determine faculty members' perceptions towards library user education – to identify effective ways that would strengthen collaborations with different faculties in library user education – so that user education could be integrated into the core or formal university curriculum as a whole.

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1. Qianxiu Liu, Patrick Lo, Hiroshi Itsumura. (2016). Students' attitudes and perceptions towards the values and importance of library user education: a comparative study between the Fudan University and National Taiwan Normal University. *The Journal of Academic Librarianship*, 42 (6), 644-654. Retrieved from <http://www.sciencedirect.com/science/article/pii/S0099133316300994>
2. Qianxiu Liu, Hiroshi Itsumura. (2016). *Investigation of user expectations and user experience to identify students' perceptions towards library user education: a case study of the University of Tsukuba*. Paper presented at the 7th Asia-Pacific Conference on library & Information Education and Practice, November 3-4, 2016, Nanjing, China. Abstract retrieved from <http://aliiep2016.nju.edu.cn/files/A-LIEP%202016%20Proceedings.pdf>
3. Qianxiu Liu. (2016). *A survey of students' perception towards academic library user education: a comparative study between the University of Tsukuba and the National Taiwan Normal University*. Paper presented at the Mita Library Information Conference, October 29th, 2016, Tokyo, Japan. (大学図書館における利用者教育の重要性に関する意識調査: 筑波大学と国立台湾師範大学を対象に 三田図書館・情報学会 2016 年度研究大会東京 2016 年度三田図書館・情報学会研究大会発表論文集. 2016, p.45-48. Retrieved from http://www.msllis.jp/am2016yoko/12_ryu_rev.pdf (Article in Japanese)
4. Qianxiu Liu, Hiroshi Itsumura, Patrick Lo. (2016). *Students' attitudes and perceptions towards the values and importance of library user education: a comparative study between the Fudan University and National Taiwan Normal University*. Paper presented at the 8th Qualitative and Quantitative Methods in Libraries International Conference, May 24-27, 2016, London, UK. Abstract retrieved from http://www.isast.org/images/e-Book_of_Abstracts_final_2016_v9.pdf
5. Chiranthi Wijesundara, Patrick Lo, Qianxiu Liu. (2015). *University students' awareness towards online access tools: a case study of the University of Tsukuba*. Paper presented at the 5th Asian Conference on Literature & Librarianship, April 2-5, 2015, Osaka, Japan. Retrieved from https://tsukuba.repo.nii.ac.jp/?action=repository_uri&item_id=36120&file_id=17&file_no=1

Appendices

Appendix 1: Library Homepage and SNS homepage of the three university libraries

Appendix 2: Interview questions

Appendix 3: Questionnaire survey data presentation

Appendix 4: Questionnaire (in Japanese)

Appendix 5: Questionnaire (in Traditional Chinese)

Appendix 6: Questionnaire (in Simplified Chinese)

Appendix 7: Questionnaire (in English)

Appendix 1: Website of the three universities

The screenshot displays the homepage of the University of Tsukuba Library (Tulips). At the top, there is a dark blue header with the library's name in Japanese and English, along with navigation links for Collections, Services, Support, Contact Us, Alumni & Visitors, and Share. A clock icon indicates the current time and date: Central : Wed. 8:30-24:00. There are also links for Calendar and Access.

The main content area features a large, colorful ball made of rubber bands on the left. To its right is the 'Tulips Search' section, which includes a search bar and radio buttons for 'Tulips Search', 'OPAC Search', and 'Site Search'. Below the search bar are links for Database, Electronic Journals, and Tsukuba Repository.

Below the search section is a 'Login' area with a 'Login' button and links for 'My Library' and 'About Login'. To the right of the login area is a 'Topics' section with several featured items: 'Now Open! Special Exhibition 2016', 'Seminar of Extensive Reading', 'Library Workshops', 'Writing Support Seminar', and 'Journals binding'.

On the left side, there is a 'News & Events' section listing recent events:

- 2016/10/24 [Central] [Event] Writing Support Seminar (2 Nov. -7 Dec.)
- 2016/10/17 [Common] [Event] 英語多読入門セミナーを開催します
- 2016/09/06 [Central] [Event] Special Exhibition 2016 "The Historian Hirouki Ninomiva's

At the bottom of the page, there are links for 'About Library', 'Site Policy', 'Sitemap', and 'Knowledge Dissemination'. The footer includes the University of Tsukuba Library address (1-1-1 Tennodai, Tsukuba, Ibaraki 305-8577) and a copyright notice: (c) University of Tsukuba Library. All Rights Reserved. The University of Tsukuba logo is also present.

University of Tsukuba Library

<http://www.tulips.tsukuba.ac.jp/lib/en> (Accessed on 05th December, 2016)



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FUDAN UNIVERSITY LIBRARY

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Note: Search printed books and periodicals, also part of the electronic books.



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Online Catalog	Academic Resourc Portal
E-Journal Navigation	E-Books
Special Collection	Finding Information

Services

Guides

Fudan University Library

http://www.library.fudan.edu.cn/main_en/index.htm (Accessed on 05th December, 2016)

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 論 研究生不死,只是生不如死 空中英語教室 新能源概
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Opening Hours	Library card application form for MTC students
Facilities	About Us
Services	

Online Services

Set up E-mail and SMS Notices	Request Nationwide Document Delivery
Renew Books	Document Delivery of English Journal Articles
Check out Fines	E-journal Article Delivery Service
Request Book Search Service	Book a Study Room
Request an Interlibrary Card	Rapid Cataloging

National Taiwan Normal University Library

<http://www.lib.ntnu.edu.tw/english/> (Accessed on 05th December, 2016)



The Facebook page of the University of Tsukuba Library

https://www.facebook.com/pg/tsukubauniv.lib/videos/?ref=page_internal (Accessed on 05th December, 2016)



The Twitter page of the University of Tsukuba Library

https://twitter.com/tsukubauniv_lib?lang=ja (Accessed on 05th December, 2016)



The WeChat (left) and Weibo (right) page of Fudan University Library

(Accessed on 05th December, 2016)



The Facebook page of National Taiwan Normal University Library (Central library) (Accessed on 05th December, 2016)



The Facebook page of National Taiwan Normal University Library (Gongguan) (Accessed on 05th December, 2016)



The Facebook page of National Taiwan Normal University Library (Linkou)

(Accessed on 05th December, 2016)



The library user education online courses of NTNU library

<http://ocw.lib.ntnu.edu.tw/course/category.php?id=6> (Accessed on 05th December, 2016)

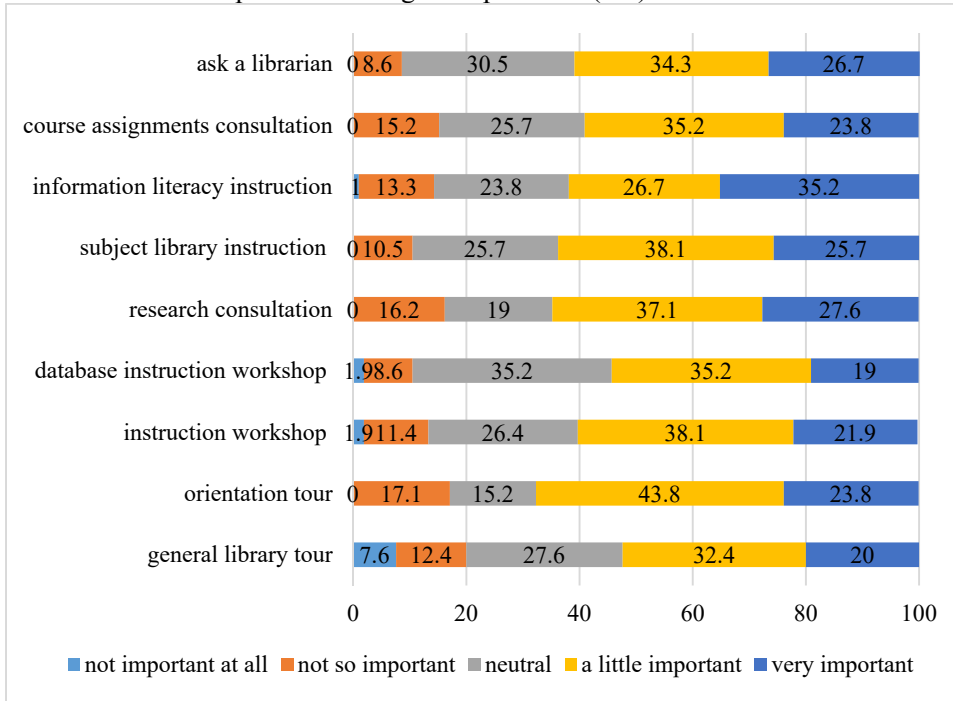
Appendix 2: Interview questions

- ① What is the university library's definition of Library User Education?
- ② What are the main aims & objectives of User Education Services at your Library?
- ③ What are the core job scope and responsibilities for a User Education Librarian at your university?
- ④ About the scope and formats of User Education activities carried out by the university Library – please give a summary of highlights?
- ⑤ How do you evaluate the success and effectiveness of User Education activities carried out by the university library?
- ⑥ What are your strategic plans for User Education activities at your university library for the next three to five years?
- ⑦ Given the convenience brought by Internet connectivity, how have such IT technologies changed the ways, formats, contents, communication channels of user education activities carried out by your university Library?
- ⑧ How have the end-users' information needs, demands, and expectations changed in the past five to ten years?
- ⑨ What is the most effective way to attract both students and faculty members to take part in the library orientation or user education activities?
- ⑩ What are the main difficulties and challenges faced by the User Education librarians at your university library?
- ⑪ What are your strategies for attracting students and staff who are not yet active users of the university libraries - to make them become frequent users?
- ⑫ Do you also involve part-time library volunteers to work in the User Education services at your university library?
- ⑬ What the important character traits, professional skills, language skills and knowledge that are considered necessary for working as a User Education Librarian at your university?

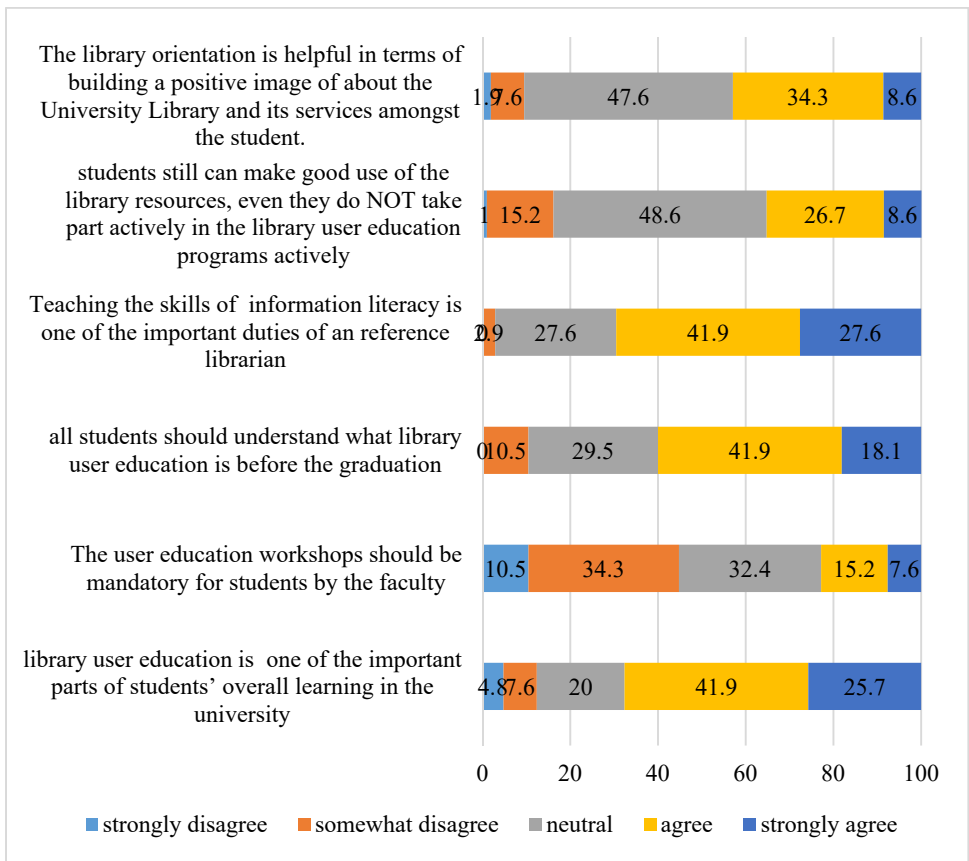
Appendix 3: Questionnaire survey data presentation

3.1. Survey results of University of Tsukuba

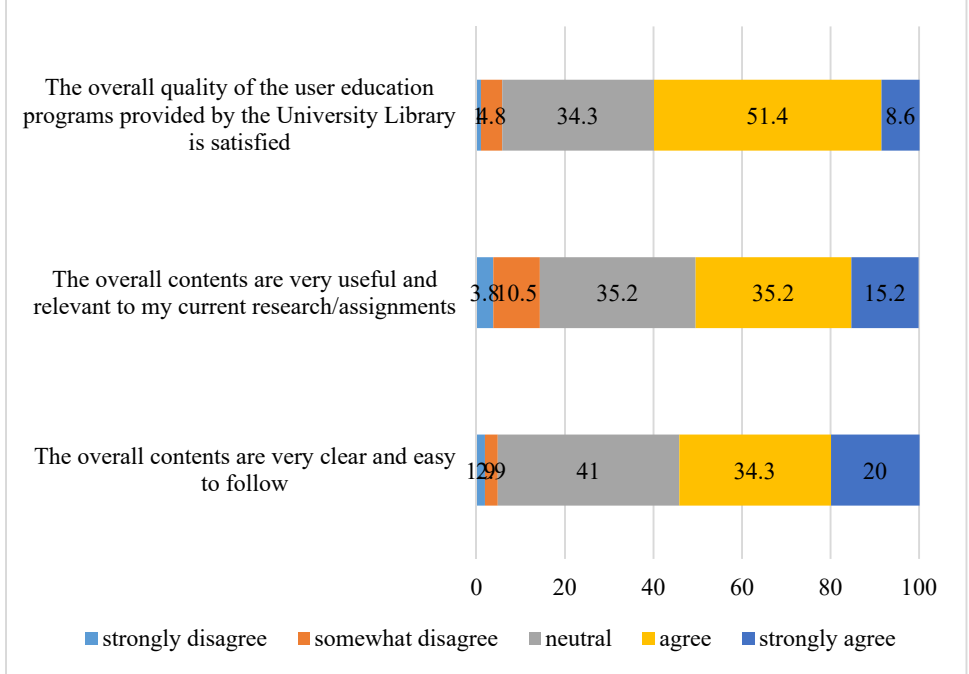
3.1.1. Their Perceived Importance amongst Respondents (UT)



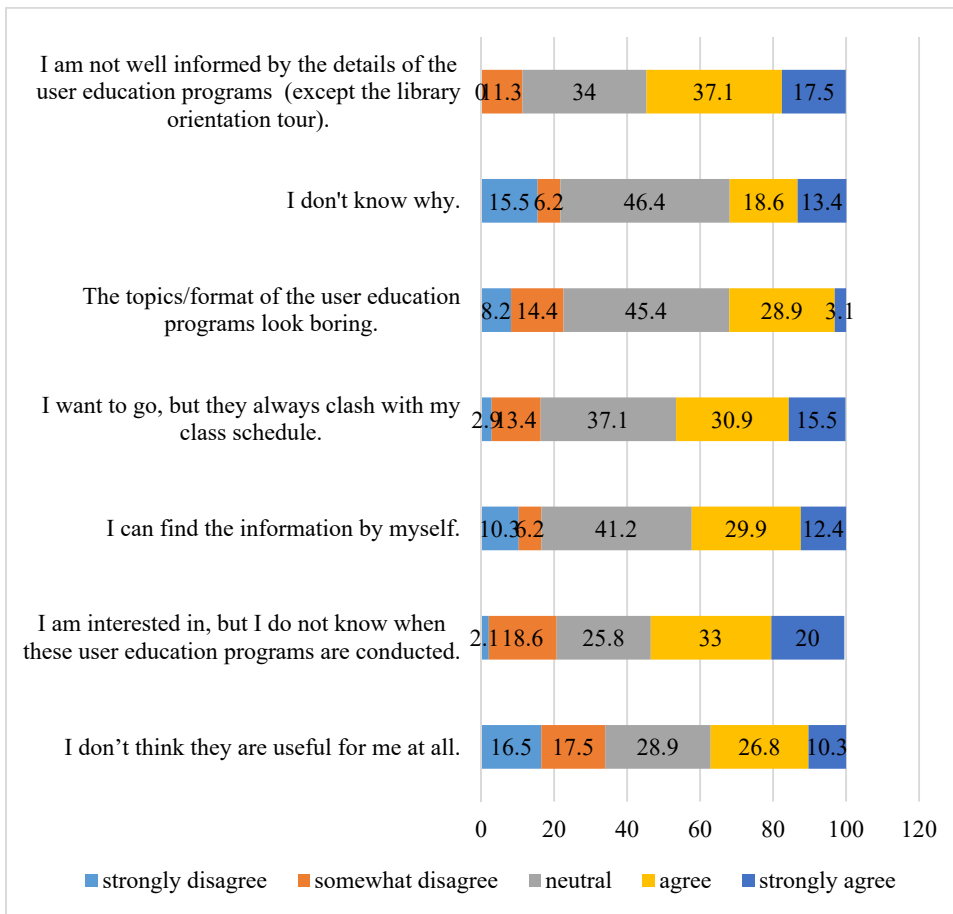
3.1.2. Level of Perception towards Overall Contents of Library User Education Programs (UT)



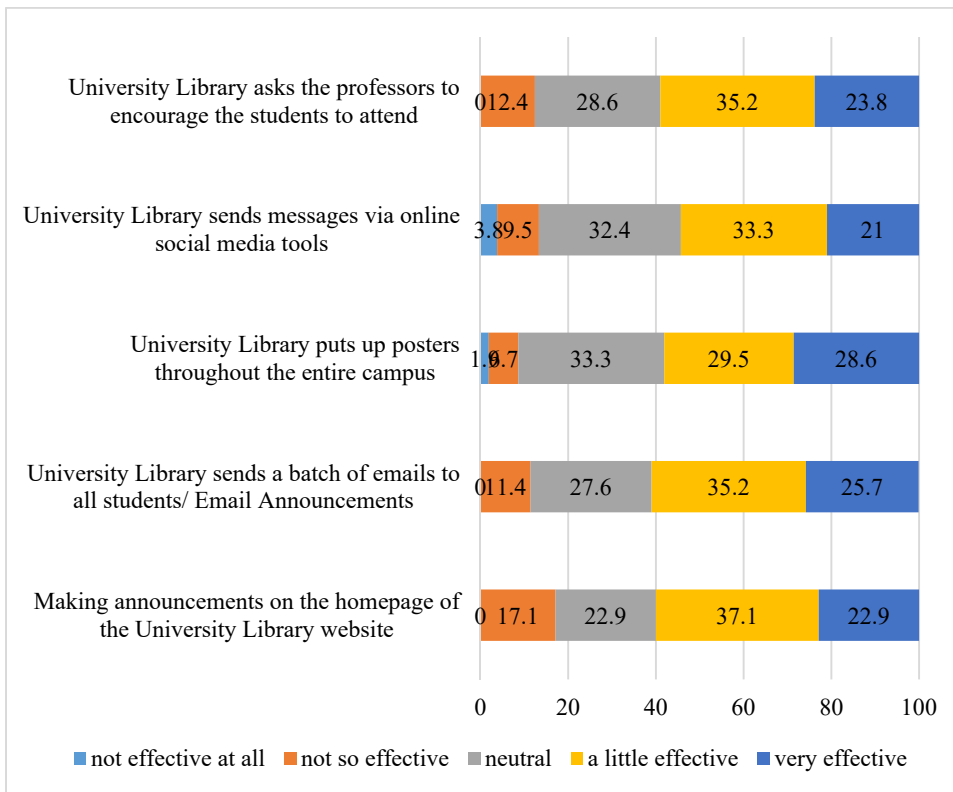
3.1.3. Level of Satisfaction towards Overall Contents of Library User Education Programs (UT)



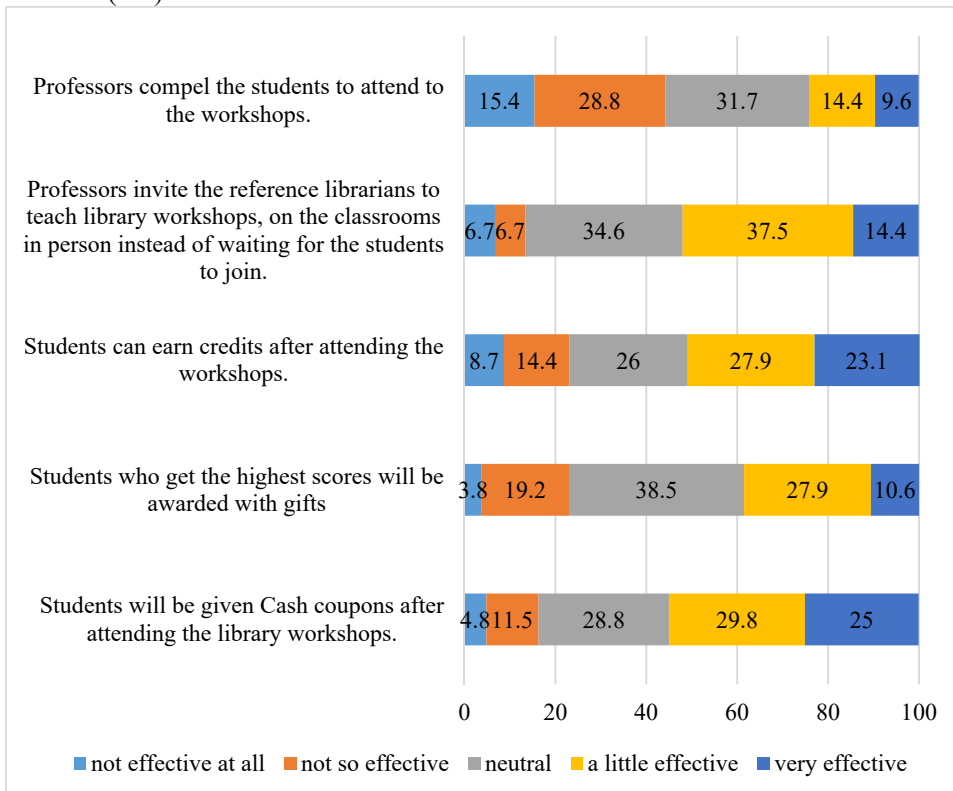
3.1.4. Reasons Why Students Don't Take Part in Library User Education Programs (UT)



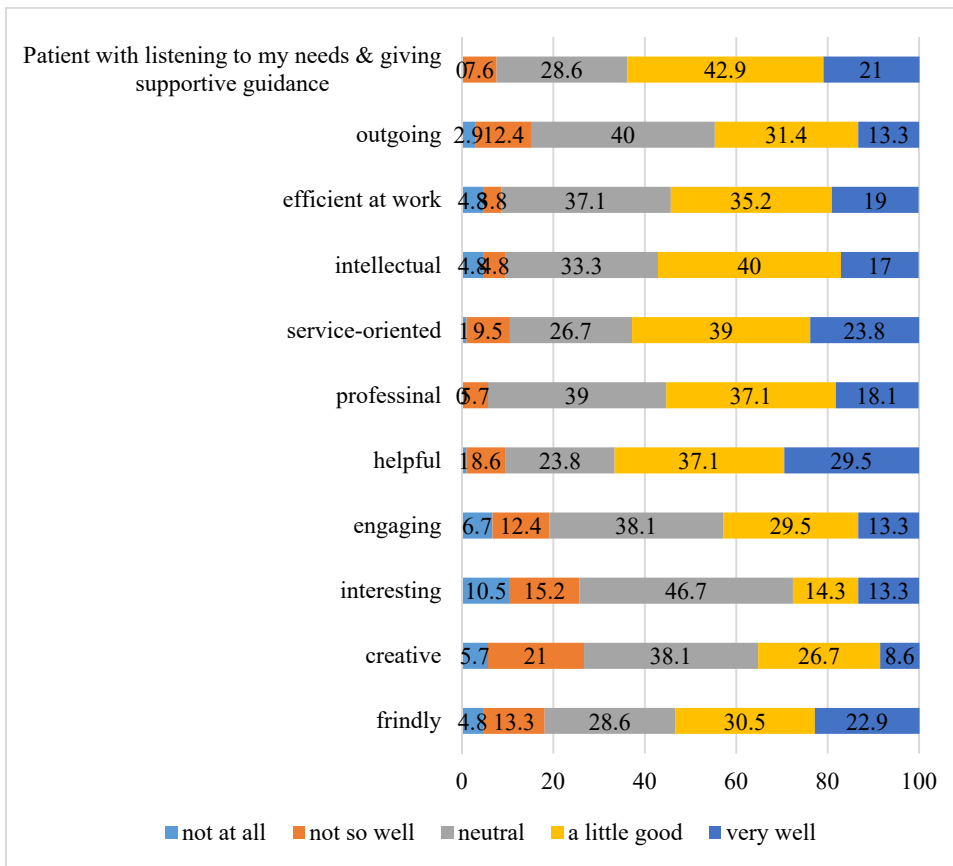
3.1.5. Ways for Promoting Library User Education Services & Their Perceived Effectiveness (UT)



3.1.6. Ways of Attracting Students to Attend Library User Education Programs & Their Perceived Effectiveness (UT)

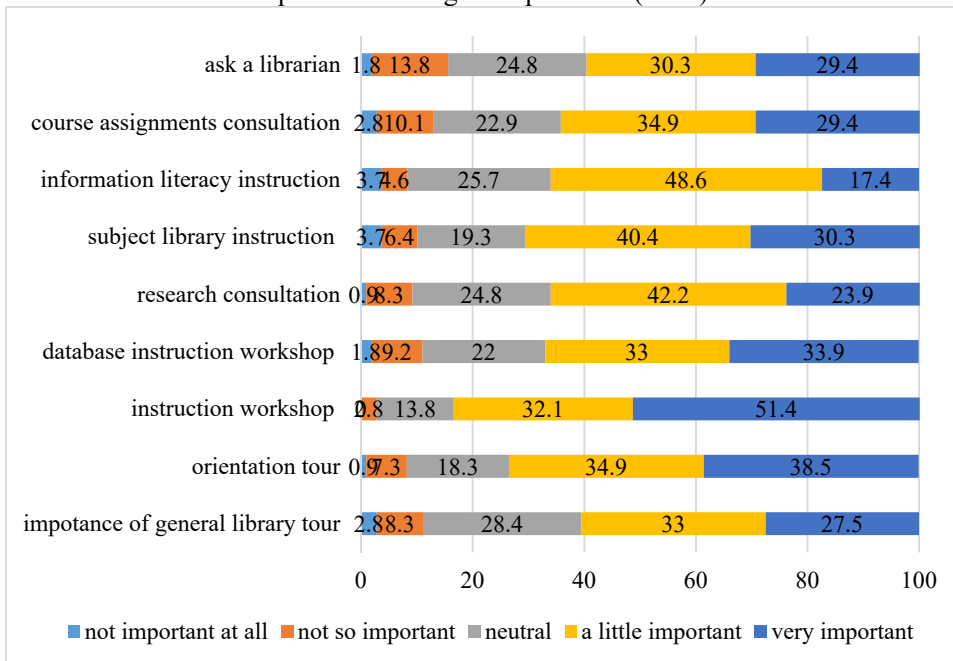


3.1.7. Students Perceptions towards Reference Librarians (UT)

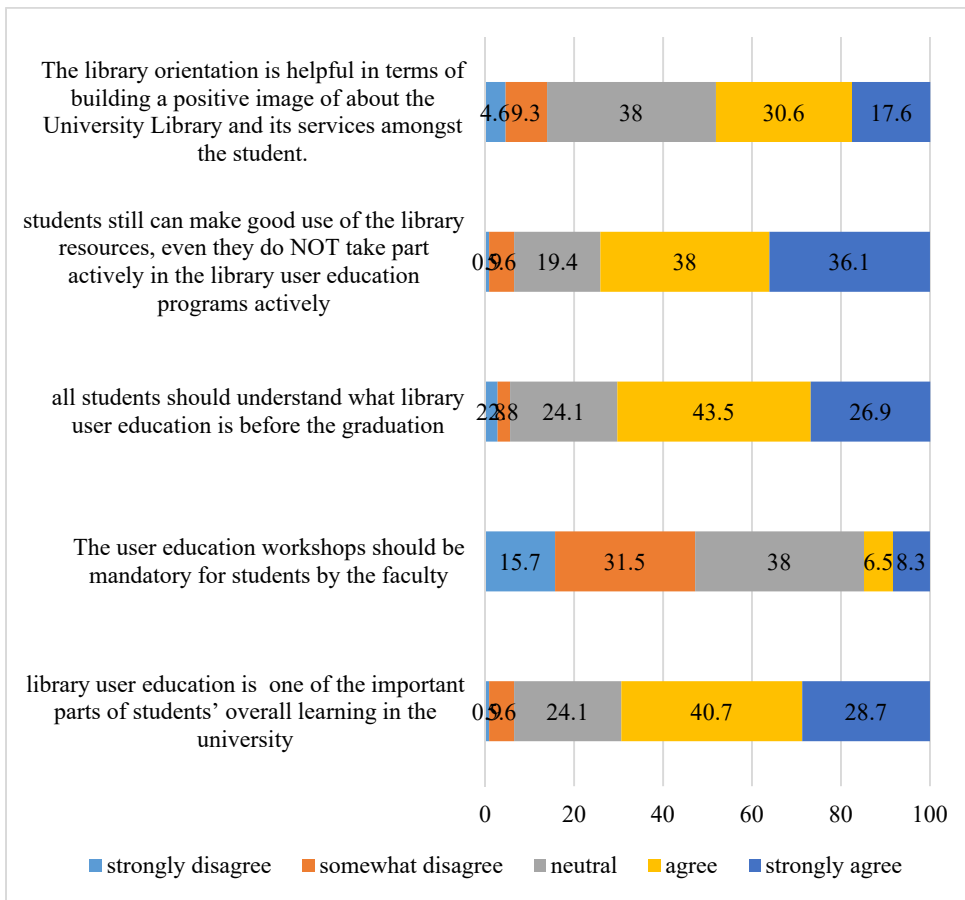


3.2. Survey results of Fudan University

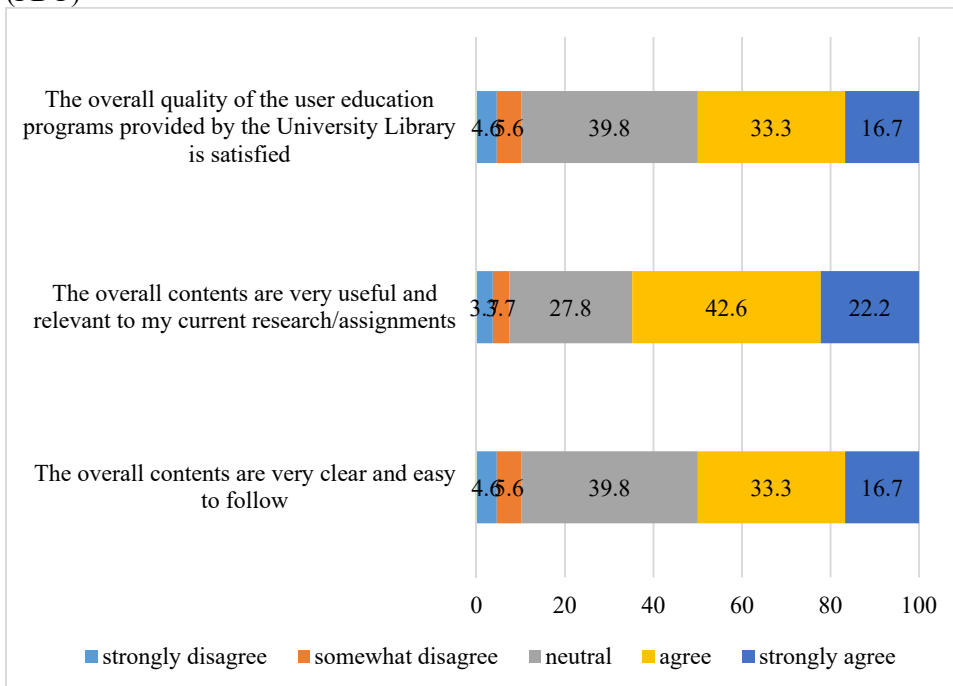
3.2.1. Their Perceived Importance amongst Respondents (FDU)



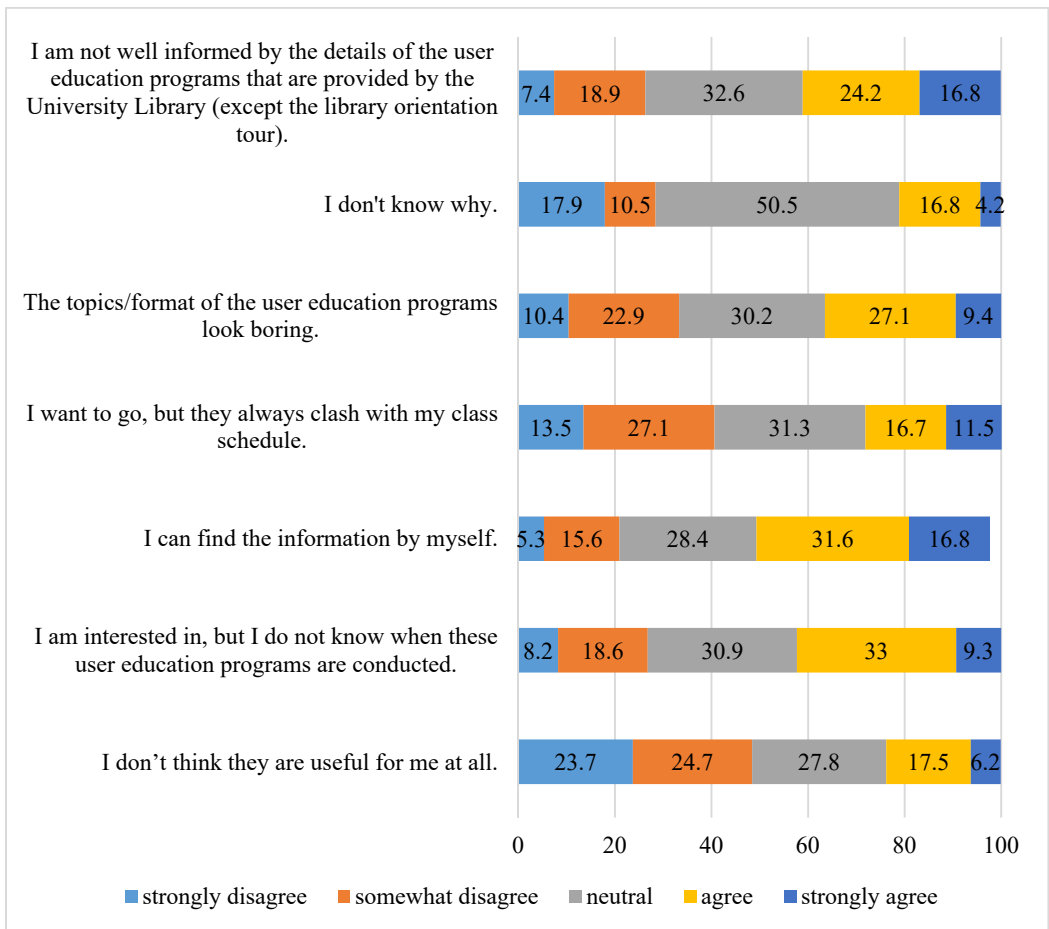
3.2.2. Level of Perception towards Overall Contents of Library User Education Programs (FDU)



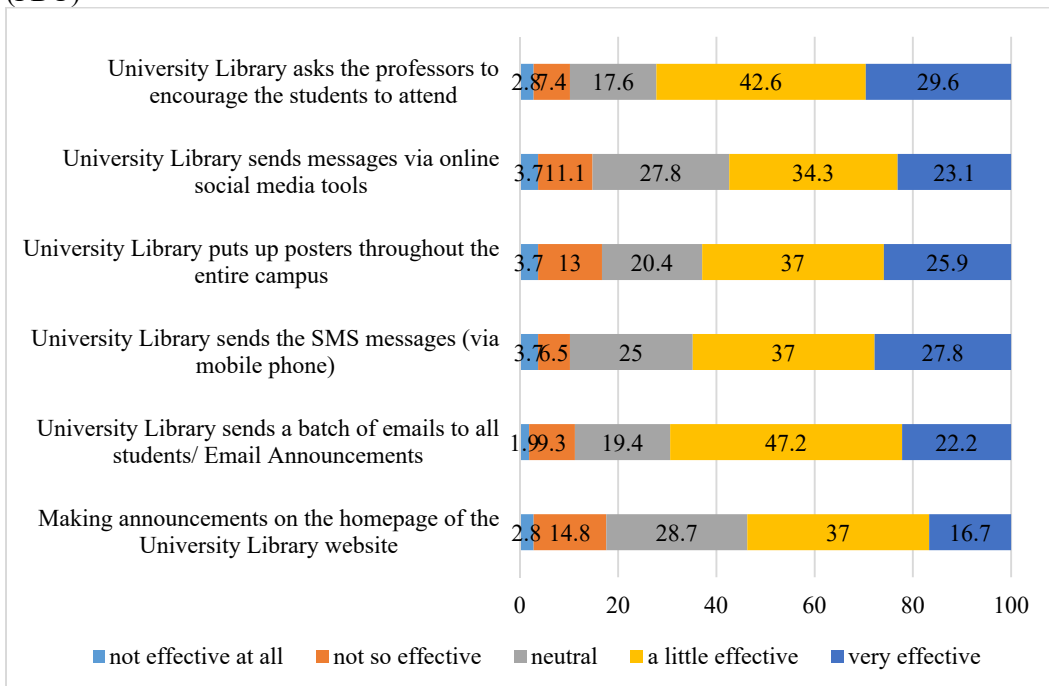
3.2.3. Level of Satisfaction towards Overall Contents of Library User Education Programs (FDU)



3.2.4. Reasons Why Students Don't Take Part in Library User Education Programs (FDU)

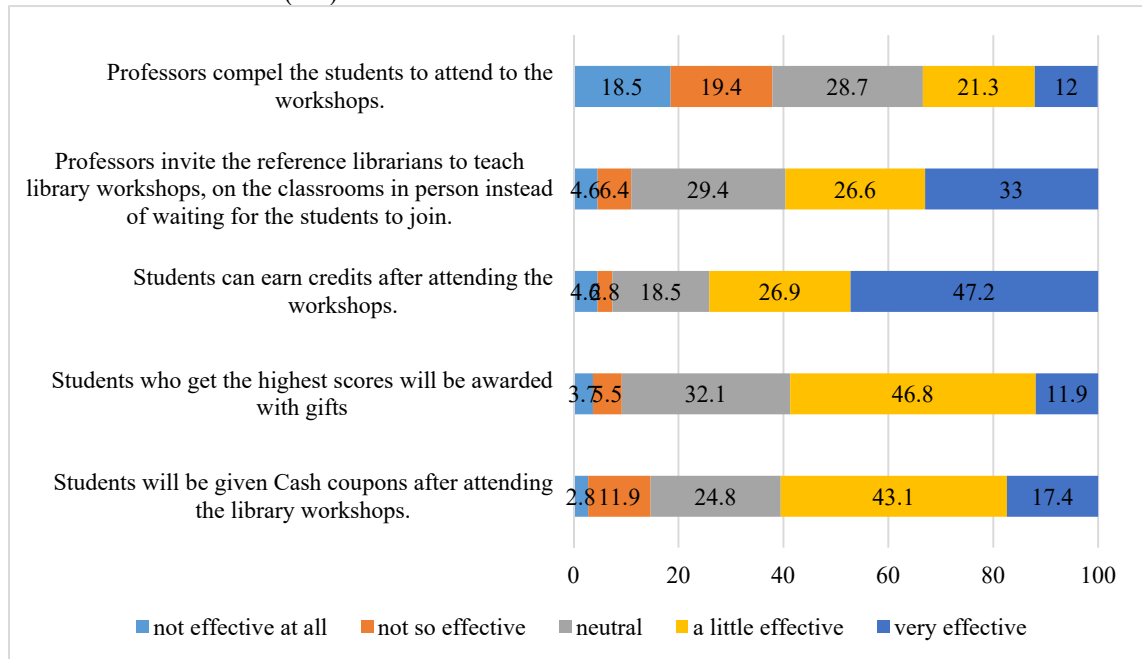


3.2.5. Ways for Promoting Library User Education Services & Their Perceived Effectiveness (FDU)

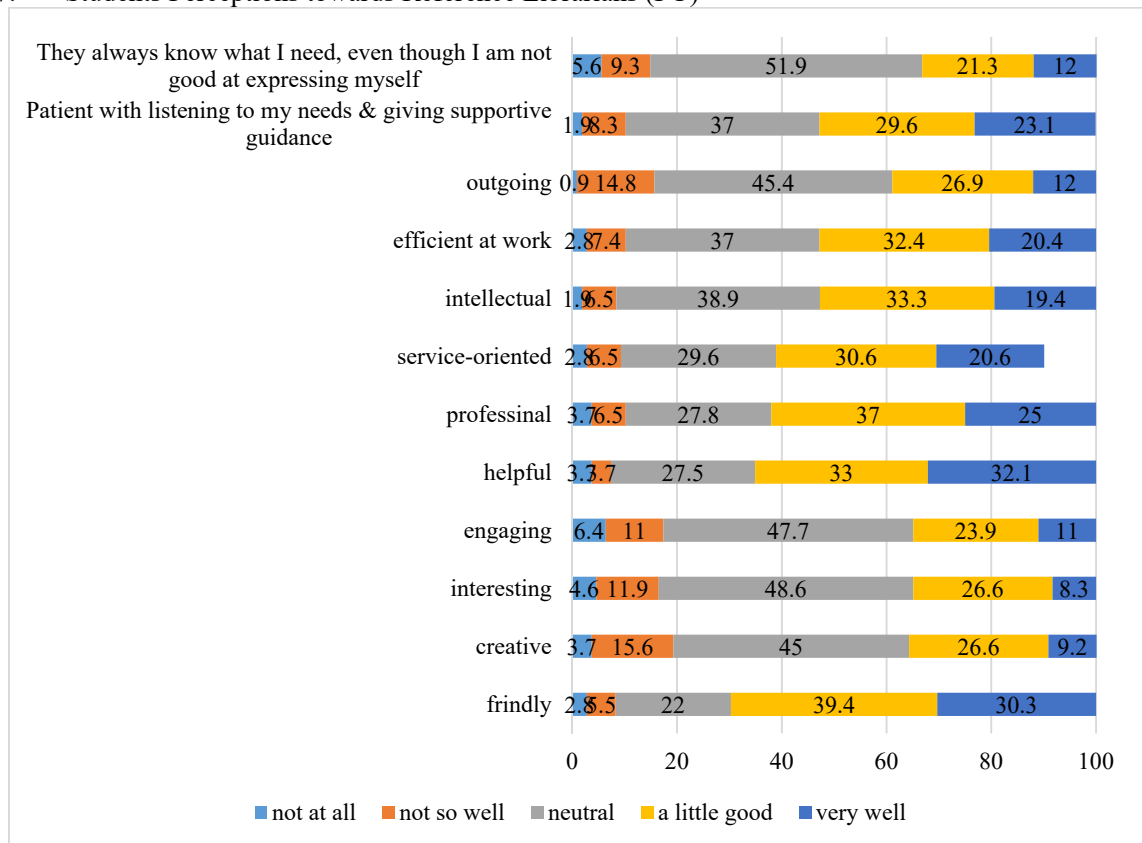


3.2.6. Ways of Attracting Students to Attend Library User Education Programs & Their

Perceived Effectiveness (FU)

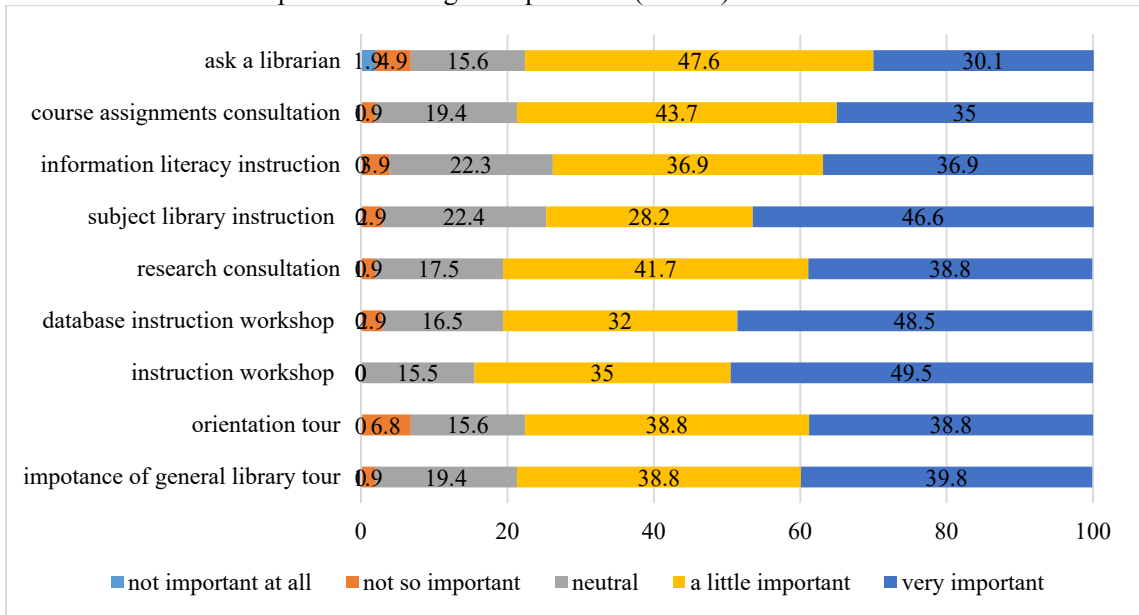


3.2.7. Students Perceptions towards Reference Librarians (FU)

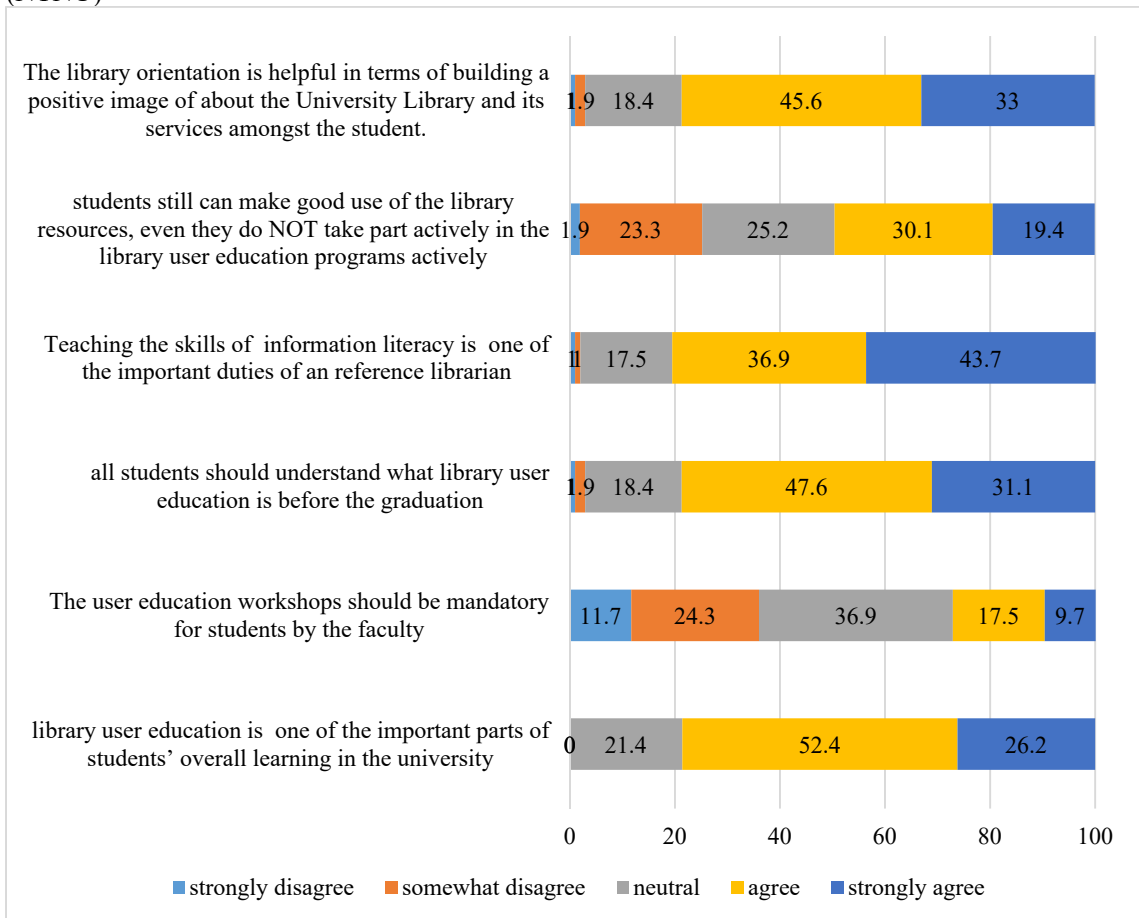


3.3. Survey results of National Taiwan Normal University

3.3.1. Their Perceived Importance amongst Respondents (NTNU)

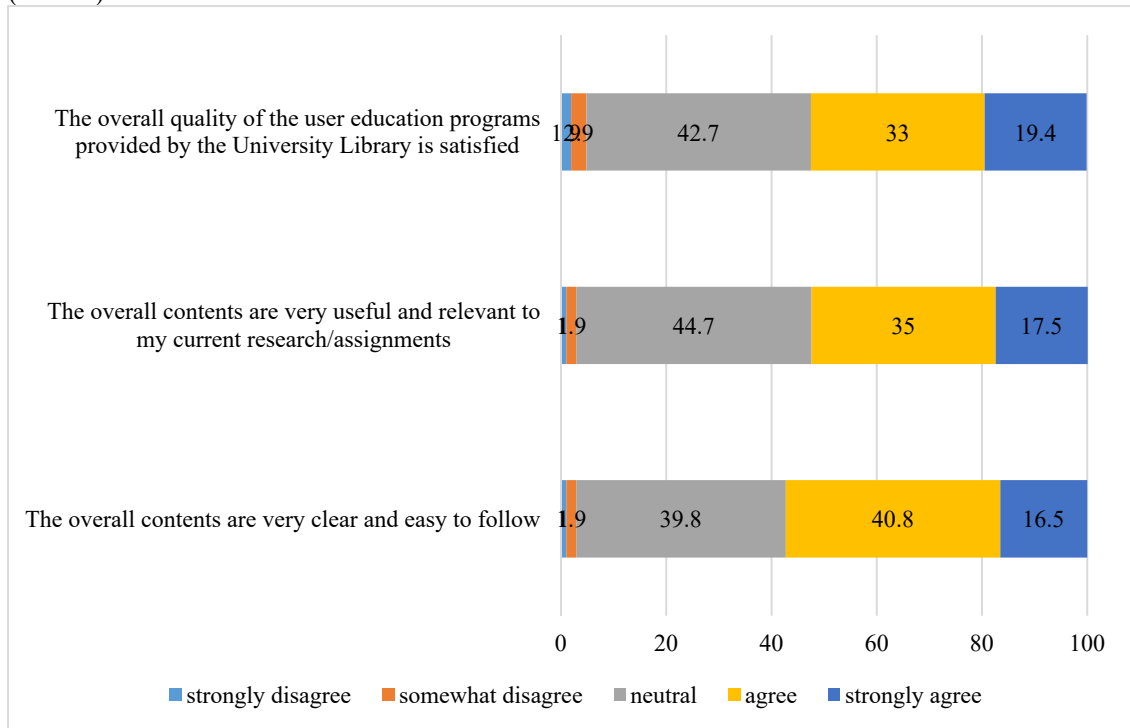


3.3.2. Level of Satisfaction towards Overall Contents of Library User Education Programs (NTNU)

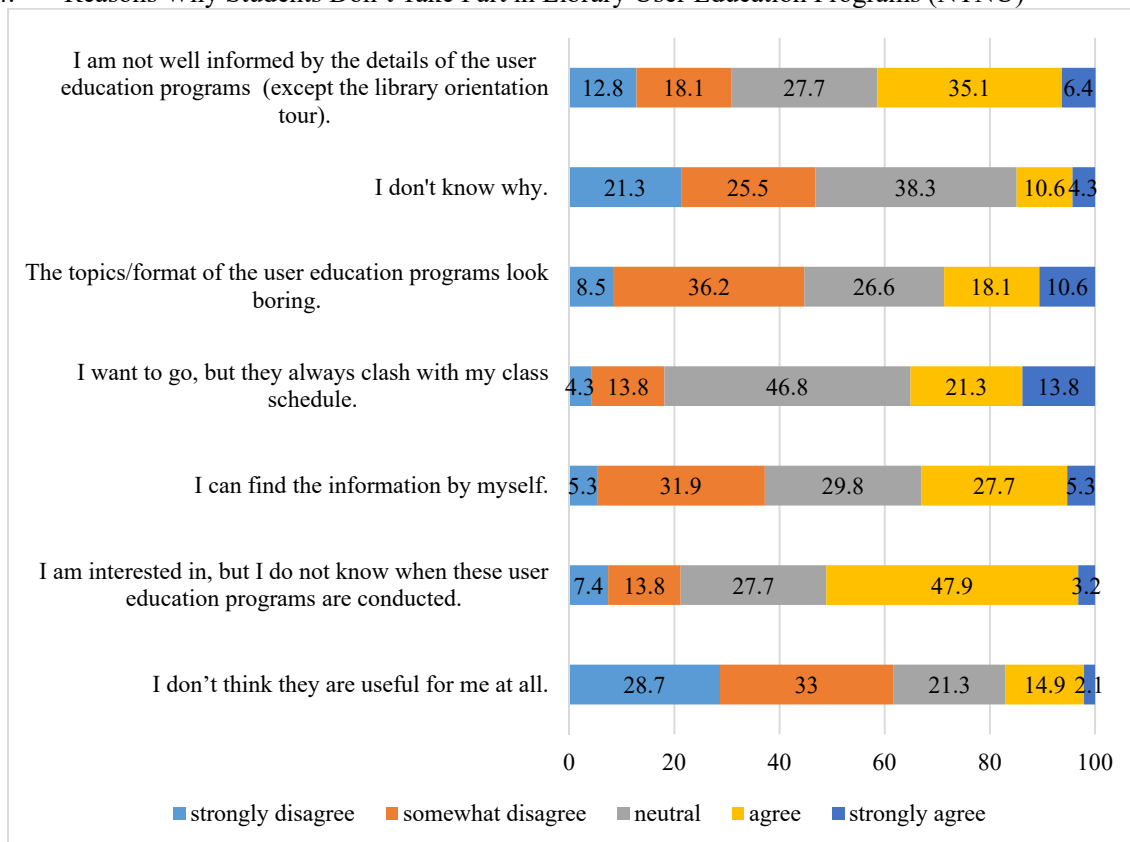


3.3.3. Level of Satisfaction towards Overall Contents of Library User Education Programs

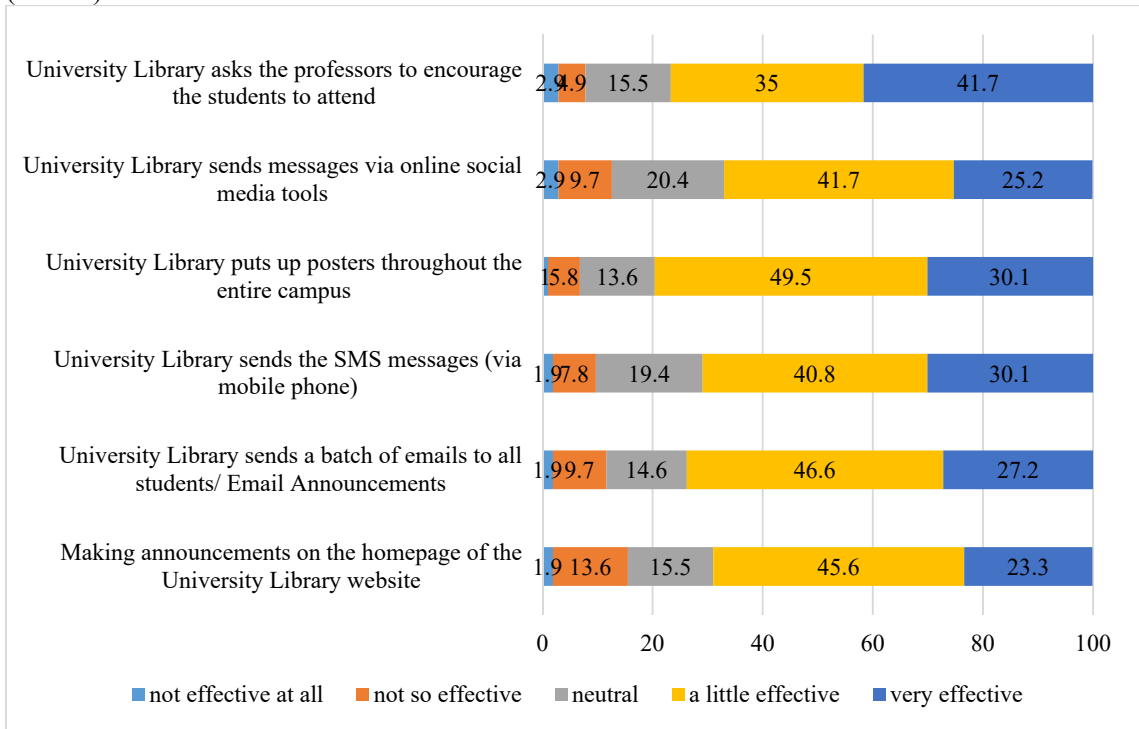
(NTNU)



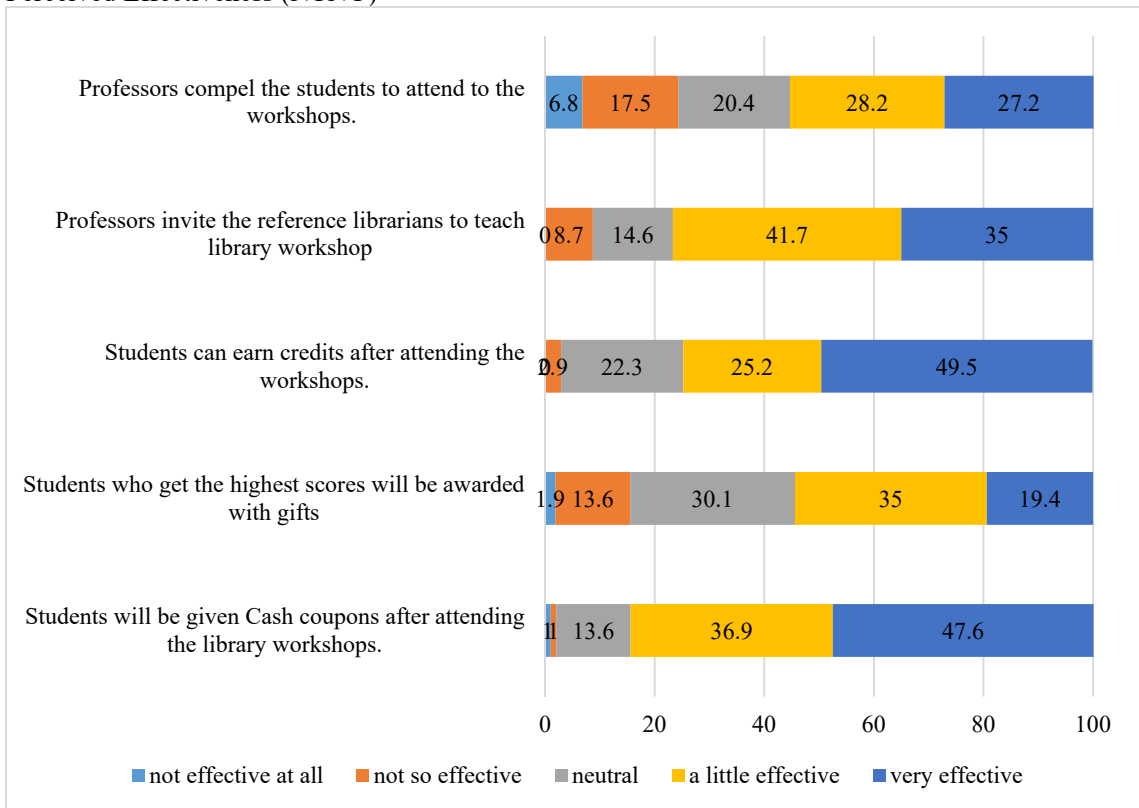
3.3.4. Reasons Why Students Don't Take Part in Library User Education Programs (NTNU)



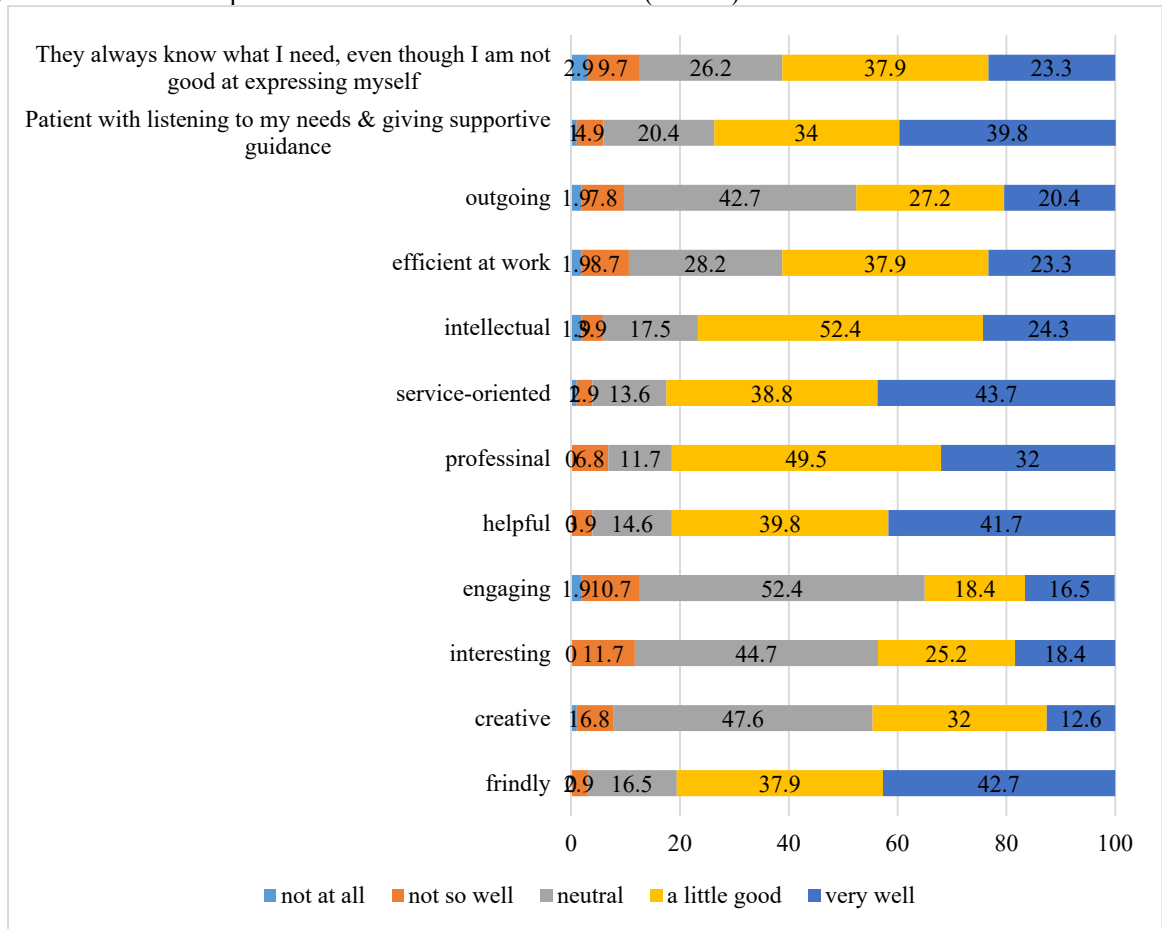
3.3.5. Ways for Promoting Library User Education Services & Their Perceived Effectiveness (NTNU)



3.3.6. Ways of Attracting Students to Attend Library User Education Programs & Their Perceived Effectiveness (NTNU)



3.3.7. Students Perceptions towards Reference Librarians (NTNU)



大学生の図書館における利用者教育に対する意識調査

本調査は、大学生の図書館における利用者教育への参加意識についての調査です。本調査を通し、大学生が大学図書館における利用者教育に対し、どのような意識を持っているかを理解し、大学図書館における利用者教育を改善することを目的とします。

質問紙は 14 問からなり、回答時間は 5-10 分程度です。

以下の注意事項をよくお読みになってください。

- 回答を途中でやめた場合でも、回答者にはいかなる不利益も生じません。
- 回答の処理及びデータの保管と処分まで、回答は厳重に保管されます。
- 結果の公表につきましては、研究及び図書館からの発表のみに使用し、他に使用することはありません。

上記内容を十分に理解した上で、ご協力頂ける場合は次の頁の回答用紙か下記の URL から Web アンケートにお答えください。

URL: <http://goo.gl/forms/rhIA7qLQJy>

<お問い合わせ先>

筑波大学大学院 図書館情報メディア研究科

博士前期課程 1 年 逸村研究室

劉 倩秀

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図書館利用教育とは図書館の利用者を対象に、図書館サービス、施設、設備、資料などの活用に関わる知識や技能の習得を目的とした図書館の活動のことを指します。

例：

図書館ツアー：利用者には図書館のことをより知っていただくために、見学を行う。

図書館オリエンテーション：利用者には図書館におけるサービスの種類や概要、開館日と時間、文献探索や貸出の方法、利用規則などの案内ならびに説明を行う。

文献探索講習会：利用者には情報をより効果的に入手し利用する方法を修得させることを意図した計画的活動。

科目関連の情報利用指導：特定の教科目や主題領域の教育目標達成のために、図書館員が授業に参加し、学習過程において必要となる図書館利用や情報利用にかかわる知識や技能を指導するものである。

1. 以下の筑波大学附属図書館活動のうち、図書館利用教育プログラムに対する重要性を 1 から 5 で評価し、 をつけてください。[5 非常に重要 4 重要 3 どちらとも言えない 2

重要ではない 1 全く重要ではない]

	全く重要ではない 非常に重要				
	1	2	3	4	5
図書館ツアー	1	2	3	4	5
図書館オリエンテーション	1	2	3	4	5
文献探索講習会（電子資料を中心）	1	2	3	4	5
データベース講習会（Refwork など）	1	2	3	4	5
論文に関する講習会	1	2	3	4	5
科目関連の情報利用指導	1	2	3	4	5
図書館ホームページ上の利用案内	1	2	3	4	5
プレゼンテーションに関する講習会	1	2	3	4	5
レファレンスサービス（メールお問い合わせを含む）	1	2	3	4	5
その他（具体的に）[]	1	2	3	4	5

2. あなたが最後に図書館利用教育に参加したのはいつですか？ をつけてください。

1. 1週間前
2. 1ヶ月前
3. 半年前
4. 去年
5. 2年前
6. 3年前
7. 3年以上前
8. 参加したことがない
9. 覚えていない

3. 図書館利用者教育プログラムに参加したことのない方は、その理由について以下の項目を1から5で評価し、をつけてください。当てはまるものがない場合は、その他に記入してください。[5 当てはまる 4 やや当てはまる 3 どちらとも言えない 2 あまり当てはまらない 1 当てはまらない]

	当てはまらない 当てはまる				
	1	2	3	4	5
自分に役に立つと思わない	1	2	3	4	5
興味があるが、具体的な開催時間などの情報を知らない	1	2	3	4	5
開催時間が自分の予定と重なり、参加したくても参加できない	1	2	3	4	5
プログラムのテーマがつまらなさそう	1	2	3	4	5
特に理由はない	1	2	3	4	5
図書館オリエンテーション以外に、他の図書館利用教育プログラムを知らない	1	2	3	4	5
図書館員の助けがなくても、ほしい情報は自分でなんとか探し出せる	1	2	3	4	5

その他（具体的に）[]	1	2	3	4	5
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4. 図書館利用者教育を宣伝するための方法について、以下の項目の有効性を1から5で評価し、○をつけてください。[5 非常に良い 4 良い 3 どちらとも言えない 2 良くない 1 全く良くない]

	良くない 非常に良い				
図書館のホームページでお知らせする	1	2	3	4	5
図書館のメールサービスでお知らせする	1	2	3	4	5
学校の各掲示板にポスターなどでお知らせする	1	2	3	4	5
図書館の SNS アカウント (Facebook, Twitter など) でお知らせする	1	2	3	4	5
指導教員から学生に声をかける	1	2	3	4	5
その他: ()	1	2	3	4	5

5. 学生の図書館利用者教育への積極的な参加を促す試みとして、以下の項目の有効性を1から5で評価し、○をつけてください。[5 非常に良い 4 良い 3 どちらとも言えない 2 良くない 1 全く良くない]

	良くない 非常に良い				
プログラムに参加すると校内のショップのクーポンがもらえる	1	2	3	4	5
プログラムの後の小テストでの成績が3位以内の人は賞品がもらえる	1	2	3	4	5
プログラムに参加する人は単位がもらえる	1	2	3	4	5
担任の先生が図書館員を授業に招き、授業でデータベースの利用方法を説明する	1	2	3	4	5
授業の担任の先生が、プログラムに学生を強制的に参加させる	1	2	3	4	5
その他: ()	1	2	3	4	5

6. 課題や研究のための資料（本や研究論文など）が見つからない場合、最初に思いつく解決方法は以下のどれですか？ 一つ選んで、○をつけてください。

1. 同級生に助けを求める
2. 指導教員に助けを求める
3. 大学図書館員に助けを求める
4. 近くの公共図書館館員に助けを求める
5. Google や Google Scholar を使って自分で探す
6. あきらめて他の資料を探す
7. 分からない
8. その他

7. レファレンス図書館員について、以下の選択肢を1から5で評価し、○をつけてください。[5 あてはまる 4 ややあてはまる 3 どちらとも言えない 2 あまり当てはまらない 1 あてはまらない]

	良くない 非常に良い				
フレンドリー	1	2	3	4	5
クリエイティブ(創造的)	1	2	3	4	5
面白い	1	2	3	4	5
魅力的	1	2	3	4	5
役に立つ	1	2	3	4	5
非常に専門的	1	2	3	4	5
サービス精神がある	1	2	3	4	5
知性的	1	2	3	4	5
効率的	1	2	3	4	5
外向的	1	2	3	4	5
丁寧に要望を聞く	1	2	3	4	5

8. 筑波大学附属図書館における利用教育に対し、最もあてはまる数字に をつけてください。

	強く反対	やや反対	どちらとも言えない	やや賛成	強く賛成
内容がわかりやすい	1	2	3	4	5
内容が研究・学習に関わりがあり、役に立つ	1	2	3	4	5

9. 以下の意見について、最もあてはまる数字に をつけてください。

	強く反対	やや反対	どちらとも言えない	やや賛成	強く賛成
図書館利用教育への参加は学生にとって重要である	1	2	3	4	5
教員が学生に図書館利用教育の参加を強制すべきである	1	2	3	4	5
学生は図書館利用教育に対する理解を深めるべきである	1	2	3	4	5
学生は図書館利用教育に参加しなくても図書館を十分に利用できる	1	2	3	4	5
附属図書館の図書館利用者教育にとっても満足である	1	2	3	4	5
図書館オリエンテーションは学生の中で図書館のイメージを持たせながら、サービスの宣伝にもなる	1	2	3	4	5

10. 筑波大学附属図書館についてご意見やコメントがあれば、ご自由にお書きください。

11. 性別

1. 男
2. 女

12. 出身国・地域

1. 日本
2. 中国
3. 台湾
4. その他： _____

13. 身分

1. 学部生
2. 修士
3. 博士
4. その他： _____

14. 研究分野/専攻： _____

以上となります。ご協力ありがとうございました。

Appendix 5: Questionnaire (in Traditional Chinese)

關於大學生對大學圖書館讀者利用教育的意識調查

親愛的同學：

您好！您現在正在參與的是一個國際共同研究項目，關於大學生對大學圖書館讀者利用教育的意識調查，您的參與有助於推動亞洲大學圖書館的發展。本次問卷共有 14 個問題，需佔用您約 5 分鐘的時間。此次調查問卷完全匿名，數據僅供研究參考。

非常感謝您的參與！

*如有任何問題請諮詢：

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圖書館信息多媒體研究科

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《讀者服務工作指南》麥群忠主編中，讀者利用教育被定義為：

由圖書館進行的有目的，有計劃地幫助讀者樹立情報意識，最佳地利用圖書館，以獲取對文獻信息情報的尋找，選擇，吸收和綜合能力的基礎教育。

1. 請用數字 1-5 評價下列大學圖書館讀者利用教育活動的重要性，畫○表示。

(1=非常不重要 2=有點不重要 3=中立 4=有點重要 5=非常重要)

	不important 重要				
	1	2	3	4	5
圖書館導覽	1	2	3	4	5
圖書館新生之旅	1	2	3	4	5
電子資源教育訓練	1	2	3	4	5
資料庫培訓講習（上機操作）	1	2	3	4	5
科研諮詢服務（畢業論文）	1	2	3	4	5
學科主題講座（論文寫作 文獻管理相關）	1	2	3	4	5
線上資訊素養講習	1	2	3	4	5
配合課程教育訓練	1	2	3	4	5
參考諮詢服務	1	2	3	4	5
其他(請詳述)：	1	2	3	4	5

2. 您上次參加貴校圖書館的讀者利用教育活動是什麼時候？

- A) 上週
- B) 上個月
- C) 半年前
- D) 去年
- E) 兩年前
- F) 三年前
- G) 三年以上
- H) 從未參加過
- I) 記不清了

3. 如果您從未參加過貴校的圖書館讀者教育活動，請將以下理由用數字 1-5 評價符合您的意見，畫○表示。

(1 非常不符合 2 有點不符合 3 中立 4 有點符合 5 非常符合)

	不符合 符合				
我覺得它對我沒有幫助	1	2	3	4	5
我很感興趣但是我不知道讀者利用教育活動開始的具體時間	1	2	3	4	5
我想參加，但是它和我的課程安排衝突了	1	2	3	4	5
讀者利用教育活動的主題看起來很無趣	1	2	3	4	5
我不知道為什麼	1	2	3	4	5
除了圖書館說明會之外，我不知道還有其他讀者利用教育活動	1	2	3	4	5
我可以找到所有我想要的資訊，不需要圖書館員的幫助	1	2	3	4	5
其他（請詳述）	1	2	3	4	5

4. 請用數字 1-5 評價下列活動對推廣圖書館讀者教育活動的效果，畫○表示。

(1 完全無效 2 無效 3 中立 4 有效 5 非常有效)

	無效 有效				
圖書館網頁上發佈公告通知宣傳	1	2	3	4	5
圖書館由系統發送群組郵件通知宣傳	1	2	3	4	5
在學校各公告欄張貼宣傳海報	1	2	3	4	5
圖書館發 SNS 信息通知宣傳（Facebook 等）	1	2	3	4	5
任課老師宣傳鼓勵學生參加	1	2	3	4	5
其他（請詳述）	1	2	3	4	5

5. 請用數字 1-5 評價下列方式對吸引學生參與圖書館讀者利用教育的效果，畫○表示。(1 完全無效 2 無效 3 中立 4 有效 5 非常有效)

	無效 有效				
參與活動的學生可以獲得校內外商店的優惠券	1	2	3	4	5
參與活動的學生自願參與活動後的小測試，最高分前三名給予獎品	1	2	3	4	5
參與活動的學生可得到課程學分	1	2	3	4	5
任課老師邀請圖書館員在課堂上講解資料庫的利用方法等，而不僅僅在圖書館等待學生的前來	1	2	3	4	5
任課老師強制要求學生參與讀者利用教育活動	1	2	3	4	5
其他（請詳述）	1	2	3	4	5

6. 當您在做研究或寫課題報告，找不到您想要的資料（論文或書）時，您首先想到的是以下哪種情況？（只選其一，畫○表示）

- A) 找同學尋求幫助
- B) 找老師尋求幫助
- C) 找大學圖書館員尋求幫助
- D) 找鄰近的公共圖書館館員尋求幫助

- E) 繼續努力在各學術網尋找
- F) 我會放棄，轉而尋找其他資料
- G) 我也不懂，因為這類情況還未發生過
- H) 其他 (請詳述): _____

7. 請用數字 1-5 評價貴校圖書館的參考服務部的圖書館員，畫○表示。
(1 完全不符 2 不符 3 中立 4 符合 5 非常符合)

圖書館員是	不符合 符合				
	1	2	3	4	5
友善的	1	2	3	4	5
有創新能力的	1	2	3	4	5
有趣的	1	2	3	4	5
有個人魅力的	1	2	3	4	5
有幫助的	1	2	3	4	5
專業的	1	2	3	4	5
有服務精神的	1	2	3	4	5
理解能力強的	1	2	3	4	5
高效率的	1	2	3	4	5
外向的	1	2	3	4	5
耐心聽我的需求並給我建議	1	2	3	4	5

8. 您如何評價貴校圖書館的讀者利用教育活動?

您是否同意	完全不同意	不同意	中立	同意	完全同意
內容清晰易懂	1	2	3	4	5
內容很有幫助且與我的學習研究息息相關	1	2	3	4	5

9. 您是否同意以下意見，請選擇最能代表您意見的數字，畫○表示。

您是否同意	完全不同意	不同意	中立	同意	完全同意
參與圖書館讀者利用教育活動對學生很重要	1	2	3	4	5
老師應強制學生參加圖書館讀者教育活動	1	2	3	4	5
學生在畢業之前應對圖書館讀者利用教育活動有一個理解	1	2	3	4	5
學生可以很好的利用圖書館資源即使他們不參加任何讀者利用教育活動	1	2	3	4	5
整體對貴校圖書館的讀者利用教育活動很滿意	1	2	3	4	5

圖書館講習或教育訓練能為圖書館在學生中建立一個積極形象,並對宣傳圖書館的服務很有幫助	1	2	3	4	5
--	---	---	---	---	---

10. 對貴校圖書館讀者教育的意見或建議

个人信息

1. 性別

- A) 男
- B) 女

2. 國籍或地區

- A) 中國
- B) 日本
- C) 台灣
- D) 其他 (請詳述) _____

3. 您現在是:

- A) 大學本科生
- B) 碩士
- C) 博士
- D) 其他 (請詳述) _____

4. 系所: _____

問卷到此結束! 再次感謝您的參與!

Appendix 6: Questionnaire (in Simplified Chinese)

关于大学生对大学图书馆读者利用教育的意识调查

亲爱的同学：

您好！您现在正在参与的是一个国际共同研究项目，关于大学生对大学图书馆读者利用教育的意识调查，您的参与将有助于推动亚洲大学图书馆的发展。本次问卷一共有 14 个问题，占用您约 5 分钟的时间。此次调查问卷完全匿名，数据仅供研究参考。

非常感谢您的参与！

*如有任何问题请咨询：
刘倩秀
日本筑波大学大学院
图书馆信息多媒体研究科
邮件: s1521661@u.tsukuba.ac.jp.

《读者服务工作指南》麦群忠主编中，读者利用教育被定义为：
由图书馆进行的有目的，有计划地帮助读者树立情报意识，最佳地利用图书馆，以获取对文献信息情报的寻找，选择，吸收和综合能力的基础教育。

1. 请用数字 1-5 评价下列大学图书馆读者利用教育活动的重要性，画○表示。
(1=非常不满意 2=有点不满意 3=中立 4=有点满意 5=非常满意)

	不重要		重要		
	1	2	3	4	5
参观图书馆	1	2	3	4	5
新生图书馆说明会	1	2	3	4	5
文献检索讲座 (有关电子资源)	1	2	3	4	5
数据库培训讲座 (上机实践培训)	1	2	3	4	5
科研咨询 (毕业论文)	1	2	3	4	5
学科主题讲座(写作技巧, 文献管理)	1	2	3	4	5
线上资讯素养培训讲座	1	2	3	4	5
配合课程的教育训练	1	2	3	4	5
参考咨询	1	2	3	4	5
其他 (请详述)	1	2	3	4	5

2. 您上次参加贵校图书馆读者利用教育活动是什么时候？

- A) 上周
- B) 上个月
- C) 四个月之前
- D) 去年
- E) 两年前
- F) 三年前
- G) 三年以上

- H) 从未参加过
I) 记不清了

3. 如果您从未参加过贵校的图书馆读者利用教育, 请将以下理由用数字 1-5 评价符合您的意见, 画○表示。(1 非常不符合 2 有点不符合 3 中立 4 有点符合 5 非常符合)

	不符合		符合		
我觉得它对我没有帮助	1	2	3	4	5
我很感兴趣但我不知道读者教育活动开展的具体时间	1	2	3	4	5
我想参加, 但是它和我的课程安排冲突了	1	2	3	4	5
读者利用教育活动的主题看起来很有趣	1	2	3	4	5
我不知道为什么	1	2	3	4	5
除了图书馆说明会以外, 我不知道还有其他读者利用教育活动	1	2	3	4	5
我可以找到所有我想要的资讯, 不需要图书馆员的帮助	1	2	3	4	5
其他(请详述)	1	2	3	4	5

4. 请用数字 1-5 评价下列活动对推广图书馆读者利用教育活动的有效性, 画○表示。(1 完全无效 2 无效 3 中立 4 有效 5 非常有效)

	无效		有效		
图书馆主页上发布通知公告	1	2	3	4	5
图书馆群发系统邮件通知宣传	1	2	3	4	5
在学校各布告栏张贴海报					
图书馆发 SNS 信息(微博, 微信, BBS 等)	1	2	3	4	5
任课老师鼓励学生参加	1	2	3	4	5
其他(请详述)	1	2	3	4	5

5. 请用数字 1-5 评价下列方式对吸引学生参加图书馆读者利用教育的有效性, 画○表示。(1 完全无效 2 无效 3 中立 4 有效 5 非常有效)

	无效		有效		
参与活动的学生可以获得校外商店的优惠券	1	2	3	4	5
参与活动的学生自愿参与活动后的小测试, 最高分者给予奖品	1	2	3	4	5
参与活动的学生可得到课程学分	1	2	3	4	5
任课老师邀请图书馆员在课堂上讲解数据库的利用方法等, 而不仅仅是在图书馆等待学生的前来	1	2	3	4	5
任课老师强制要求学生参与读者教育活动	1	2	3	4	5
其他(请详述)	1	2	3	4	5

6. 当您在做研究或写课题报告, 找不到您想要的资料(例如书或论文)时, 您首先想到的是以下哪种情况?(只选其一, 画○表示)

- A) 找同学寻求帮助
B) 找老师寻求帮助
C) 找大学的图书馆员寻求帮助
D) 找邻近的公共图书馆馆员寻求帮助

- E) 继续努力在各学术网寻找
- F) 我会放弃, 转而寻找其他资料
- G) 我也不懂, 因为这类情况还未发生过
- H) 其他 (请详述): _____

7. 请用数字 1-5 评价贵校图书馆的参考服务部的图书馆员, 画○表示。
(1 完全不符 2 不符 3 中立 4 符合 5 非常符合)

	不符合		符合		
友善的	1	2	3	4	5
有创新能力的	1	2	3	4	5
有趣的	1	2	3	4	5
有个人魅力的	1	2	3	4	5
有帮助的	1	2	3	4	5
专业的	1	2	3	4	5
有服务精神的	1	2	3	4	5
理解能力强的	1	2	3	4	5
高效率的	1	2	3	4	5
外向的	1	2	3	4	5
耐心听我的需求并给我建议	1	2	3	4	5

8. 您如何评价贵校图书馆的读者利用教育活动?

读者利用教育活动	完全不符合	不符合	中立	符合	完全符合
内容清晰易懂	1	2	3	4	5
内容很有帮助且和我的学习研究息息相关	1	2	3	4	5

9. 您是否同意以下意见, 请选择最能代表您意见的数字, 画○表示。

您是否同意	完全不同意	不同意	中立	同意	完全同意
参与图书馆读者利用教育对学生很重要	1	2	3	4	5
老师应该强制学生参加图书馆读者利用教育活动	1	2	3	4	5
学生在毕业之前应该对图书馆读者利用教育有一个很好的理解	1	2	3	4	5
学生可以很好地利用图书馆资源即使他们不参加任何读者利用教育活动	1	2	3	4	5
整体对贵校图书馆的读者利用教育活动很满意	1	2	3	4	5
图书馆说明会能为图书馆在学生中建立一个积极形象, 并对宣传图书馆的服务很有帮助	1	2	3	4	5

10. 对贵校图书馆读者利用教育的意见或建议

--

个人信息

11. 性别

- A) 男
- B) 女

12. 国籍或地区

- A) 中国
- B) 日本
- C) 台湾
- D) 其他（请详述）

13. 您现在是:

- A) 大学本科生
- B) 硕士
- C) 博士
- D) 其他（请详述）

14. 专业: _____

问卷到此结束，再次感谢您的参与！

Appendix 7: Questionnaire (in English)

Questionnaire on students' perceptions towards to the academic library user education programs

Dear Participant,

This is an international joint research about the university students' perceptions towards to the library user education programs.

Your participation is extremely valuable for completing the research and facilitating the overall development of the library user education programs in Asia. The questionnaire is to be answered anonymously. The data is collected and analyzed for the research only.

Thank you for your participation.

*For enquiries: Kelly LIU
 Graduate School of Library, Information & Media Science
 University of Tsukuba, Japan
 Email: s1521661@u.tsukuba.ac.jp

Q1. In your opinion, how IMPORTANT do you consider the following activities part of library user education provided by the University Library?
 (1 =not important at all, 2 =not so important, 3 =neutral, 4 =a little important, 5 =very important)

Library Activities	Not at all					Very important				
General library tour	1	2	3	4	5	1	2	3	4	5
Library orientation tour (for freshmen)	1	2	3	4	5	1	2	3	4	5
Library instruction workshop (catered for E-books & E-learning)	1	2	3	4	5	1	2	3	4	5
Database instruction workshop (e.g., database retrieval through face-to-face with a hands-on practice)	1	2	3	4	5	1	2	3	4	5
Research (thesis/dissertation/final year project) consultation	1	2	3	4	5	1	2	3	4	5
Subject-specific library courses (e.g., writing skills)	1	2	3	4	5	1	2	3	4	5
Online Information literacy instruction	1	2	3	4	5	1	2	3	4	5
Course assignments consultation	1	2	3	4	5	1	2	3	4	5
Virtual reference services (Ask a Librarian)	1	2	3	4	5	1	2	3	4	5
Others (please specify):	1	2	3	4	5	1	2	3	4	5

Q2. When was the last time that you took part in the library user education program provided by the University Library?

- A) Last week
- B) Last month
- C) Over 6 months ago
- D) Last year
- E) Two years ago
- F) Three years ago

- G) More than three years ago
- H) Never
- I) Cannot remember

Q3. If you have never taken part in any of the user education programs provided by the University Library, please rate the following reasons that are applicable to you. (1=strongly disagree, 2=somewhat disagree, 3=neutral, 4 = agree, 5 strongly agree)

Reasons	Disagree					Agree				
	1	2	3	4	5	1	2	3	4	5
I don't think they are useful for me at all.	1	2	3	4	5	1	2	3	4	5
I am interested in, but I don't know when these user education programs are conducted.	1	2	3	4	5	1	2	3	4	5
I want to go, but they always clash with my class schedule.	1	2	3	4	5	1	2	3	4	5
The topics/format of the user education programs look boring.	1	2	3	4	5	1	2	3	4	5
I don't know why.	1	2	3	4	5	1	2	3	4	5
I am not well informed by the details of the user education programs that are provided by the University Library (except the library orientation tour).	1	2	3	4	5	1	2	3	4	5
I can find information by myself										
Others (please specify):	1	2	3	4	5	1	2	3	4	5

Q4. Please rate the following questions about the effectiveness of library promotion of the user education services to the university students.

(1= not effective at all, 2= not so effective, 3= neutral, 4= a little effective, 5= very effective)

Library Promotion	Not at all					Very well				
	1	2	3	4	5	1	2	3	4	5
Making announcements on the homepage of the University Library website	1	2	3	4	5	1	2	3	4	5
University Library sends a batch of emails to all students/ Email Announcements	1	2	3	4	5	1	2	3	4	5
University Library puts up posters throughout the entire campus	1	2	3	4	5	1	2	3	4	5
University Library sends messages via online social media tools (e.g., LINE, Wechat, WhatsApps, etc.) to notify the students	1	2	3	4	5	1	2	3	4	5
University Library asks the professors to encourage the students to attend	1	2	3	4	5	1	2	3	4	5
Others (please specify):	1	2	3	4	5	1	2	3	4	5

Q5. Please rate the effectiveness of the following ways for attracting more students to attend the user education programs provided by the University Library. (1= not effective at all, 2= not so effective, 3= neutral, 4= a little effective, 5= very effective)

	Not at all					Very well				
	1	2	3	4	5	1	2	3	4	5
Students will be given Cash coupons after attending the library workshops.	1	2	3	4	5	1	2	3	4	5
Students can take voluntary tests after attending the library workshops. Students who get the highest scores will be awarded with gifts (e.g., iPod or iPad).	1	2	3	4	5	1	2	3	4	5
Students can earn credits (like other academic courses) after	1	2	3	4	5	1	2	3	4	5

attending the workshops.					
Professors invite the reference librarians to teach library workshops, on the classrooms in person instead of waiting for the students to join.	1	2	3	4	5
Professors compel the students to attend to the workshops.	1	2	3	4	5
Others (please specify):	1	2	3	4	5

Q6. If you are unable to find materials (e.g., a book or a research article) to finish your research/assignments, what is the first thing that comes to your mind?

1. I will ask my classmates for help
2. I will ask my tutors for help
3. I will ask my professors for help
4. I will go to the University Library and ask the Reference Librarian for help
5. I will go to the nearby public library and ask for help
6. I will try to find it via Google or Google Scholar
7. I will give up completely, and try to find other materials instead
8. I don't know. I have not met it before.
9. Others (please specify): _____

Q7. Please rate the reference / user education librarians at your University Library. (1= not at all, 2= not so well, 3= neutral, 4= a little good, 5= very well)

Librarians are	Not at all					Very well				
Friendly	1	2	3	4	5	1	2	3	4	5
Creative	1	2	3	4	5	1	2	3	4	5
Interesting	1	2	3	4	5	1	2	3	4	5
Engaging	1	2	3	4	5	1	2	3	4	5
Helpful	1	2	3	4	5	1	2	3	4	5
Professional	1	2	3	4	5	1	2	3	4	5
Service-oriented	1	2	3	4	5	1	2	3	4	5
Intellectual	1	2	3	4	5	1	2	3	4	5
Efficient at work	1	2	3	4	5	1	2	3	4	5
Outgoing	1	2	3	4	5	1	2	3	4	5
Patient with listening to my needs & giving supportive guidance	1	2	3	4	5	1	2	3	4	5

Q8. How would you describe the overall contents of the library user education programs? (1=strongly disagree, 2= strongly disagree, 3=Neutral, 4= Agree, 5=strongly agree)

I personally think that	Strongly disagree	Somewhat disagree	Neutral	Agree	Strongly agree
The overall contents are very clear and easy to follow	1	2	3	4	5
The overall contents are very useful and relevant to my current research/assignments	1	2	3	4	5
library user education is one of the important parts of students' overall learning in the university	1	2	3	4	5
The user education workshops should be mandatory for students	1	2	3	4	5

by the faculty					
all students should understand what library user education is before the graduation	1	2	3	4	5
students still can make good use of the library collection and other resources, even they do NOT take part actively in the library user education programs actively	1	2	3	4	5

I personally think that	Strongly disagree	Somewhat disagree	Neutral	Agree	Strongly agree
The overall quality of the user education programs provided by the University Library is satisfied	1	2	3	4	5
The library orientation is helpful in terms of building a positive image of about the University Library and its services amongst the student.	1	2	3	4	5

Q10. Any other comments about your University Library

Q11. Gender

- A) Male
- B) Female

Q12. Country of origin:

- A) China
- B) Japan
- C) Taiwan
- D) Others (please specify):

Q13. Academic qualification:

- A) Bachelor's degree student
- B) Master's degree student
- C) Doctoral/PhD student
- D) Others (please specify): _____

Q14. Field of Study/Major: _____

The End! Thank you very much!

