Learning What They Want:
Chinese Students' Perceptions of Electronic Library Services

Russell Michalak and Monica D.T. Rysavy[*]

Many studies have explored why and how college students have utilized academic libraries' physical and electronic services. With increased enrollment of international students worldwide in the past 12 years, a greater number of studies have explored how and why international students have utilized academic libraries' physical and/or electronic services, but few studies analyzed their responses as one homogeneous group in regard to services provided to them as distance learners. The international Chinese business students (n=54) who responded to this study reported that the most important library service to them was Personal Study Area (4.41).

Introduction

Many studies have explored why and how college students have utilized academic libraries' physical and electronic services. With increased enrollment of international students worldwide in the past 12 years, a greater number of studies have explored how and why international students have utilized academic libraries' physical and/or electronic services, but few studies have analyzed their responses as one homogeneous group in regard to services provided to them as distance learners.[1] According to Open Doors, Goldey-Beacom College, the college where this study was deployed, ranked in the top ten of specialized institutions due to the number of international students enrolled.[2]

Most studies have grouped all international students as one homogenous group even though their experiences from their culture can be quite dissimilar.[3] At the institution where this study was conducted Chinese students are the largest international population enrolled at this institution, and, therefore the director of the library collaborated with the director of institutional research & training to determine how to better serve both of these user groups' physical and electronic academic library needs. Moreover, as all of the institution's international business students are technically classified as 'distance learners' per Jones and Moore's (1997) definition of students who do not live in the residence hall or at home more than ten miles away from campus.[4]

In a study conducted at the researchers' institution in 2016, the researchers explored how and why Chinese business students utilized their home country's academic library versus the academic library at this institution. The researchers deployed a survey that Song (2004) deployed twelve years earlier, but he reported results only on East Asian students, therefore his results cannot be compared to this study.[5]

Literature Review

Nataowitz (1995) studied culture shock and international students' information seeking behaviors and identified three barriers: language, cultural, and technological that they frequently encounter within academic libraries in the United States.[6] These barriers often prevented international students from engaging librarians at the

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* *Russell Michalak, MLIS (michalr@gbc.edu) and Monica D.T. Rysavy, Ph.D. (rysavym@gbc.edu)*

reference desk in-person and virtually and utilizing technology made available to them in academic libraries. Baron and Strout-Dapaz (2001) pointed out that international students who use academic libraries and its technologies may be unfamiliar with what opportunities librarians could potentially provide international students to improve their overall success in their host country.[7] None of these studies looked a specific culture or country but instead lumped all international students who attended an American university as a coherent group.

Effective marketing has been one of the key factors as to why international students have not been aware of physical and electronic services at an academic library. Nicholas and Tomeo (2005) stated that even though many academic libraries are providing a variety of resources and services such as online databases, virtual reference services, online tutorials, e-reserves, etc., to their distance students, the students are often not fully aware of what is available to them."[8] In 2004, Simmonds and Andaleeb (2001) posited library users (n=188) who were most familiar with academic libraries services were more likely to routinely use the services libraries offered.[9] Similarly, Michalak, & Rysavy (2018) reported virtual reference service was the least important (3.33 on a 1 to 5 Likert scale) physical or electronic service offered to international students (n=149) at the researchers' institution as indicated in the survey that was deployed to all international students (n=149) enrolled in 2016.[10] They concluded that virtual reference services had not been marketed to the international student population prior to the time the study was conducted, therefore all international students would not know how or when to use that electronic service.

The literature was limited regarding studies that compared international students and their chosen major to their perceptions and expectations of electronic services in academic libraries. Song's 2004 study was an exception. He surveyed international business students at UIUC on their perceptions and expectations of electronic services at their current institution and compared it to the institution from which they had previously graduated. According to Song's survey, "a significant portion (43 percent) of the international business students [East Asian] had no prior experience with electronic library resources in their home countries at all,"[11] but he did not examine why each specific culture did not use electronic library services.

Furthermore, Song (2004) pointed out that "the literature review on international students confirmed that most research dealt with international students as one coherent student body, as if they have similar backgrounds and thus similar information seeking behaviors."[12] Accordingly, Song surveyed the international business student population from East Asian countries including China (mainland), Taiwan, and South Korea who attended UIUC. He commented, "by comparing their information seeking behavior to that of domestic students"[13] he discovered domestic business students access electronic library resources from the library more often than international East Asian business students, however he lumped the entire East Asian population as one group instead of looking at each culture separately.

Ferrer-Vinent (2010) pointed out that 83% of the international students (n=88), who are non-native English speakers, preferred to speak English initially with the librarian at the reference desk.[14] Chen and Brown's (2012) study of Chinese graduate students (n=32) confirmed Ferrer-Vinent's results. Though the Chinese students in Chen and Brown's study already felt comfortable speaking English with librarians they were unaware of the services the library offered because English was their second language. They suggested librarians better publicize the authoritative online content libraries provide so Chinese students can see how academic libraries can streamline writing academic papers.[15]

International students', who originated from Asian countries, become more comfortable with library services the more they are exposed to them. Liao, Finn & Lu (2007) reported that students', in elementary school and middle school, who grow up in Asian countries, familiarity with library services improve, due to the fact that Asian governments spend more resources to familiarize their students with the English language and li-

brary services[16] so that these students are better prepared to succeed at American universities and colleges. They found international Asian students were unfamiliar with the services the library offered at their host institution compared to their American peers. Similarly, in 2005, Jackson reported that international students, principally Asian students, "have lessened the gap in their technical computer skills, and that their exposure to libraries far exceeds what was once evident in the library literature".[17]

Similarly, Duan (2016) stated, "the open learning styles in the United States, which are completely different from the traditional education methods in China, are recognized and accepted by more and more Chinese families and students, and the U.S. university degrees of Chinese students are being gradually recognized by them too".[18] The researcher surveyed Chinese students (n=177) who were attending American universities; he discovered Chinese students "are willing to seek help from librarians when encountering problems, and they think highly of librarians and library reference services",[19] but have just a basic understanding of the library's facilities and the online resources a library offers.

Many academic librarians have sought new ways to serve "emerging remote library users"[20] such as international students via online virtual reference services since this service is new to many cultures. Liu and Winn (2009) reported "that reference services in China are much more limited and do not exist in as many different formats (desk, phone, chat, and email reference)."[21] Shachaf, Meho, and Hara (2007) reported on a cross-cultural analysis of reference services via email in academic libraries worldwide. In this study, they analyzed the consortia model of virtual reference services. They found that to best serve remote users with a foreign language via email "it will be necessary to incorporate culturally specific attributes."[22] in the request form as it is difficult to determine how to overcome language, cultural, or technological barriers so that librarians may effectively assist non-native speaking patrons who use academic libraries. Moreover, Hendricks (1991) stated East Asian students are unfamiliar with reference services in their home country so do not seek out assistance with their research whether it is in-person or through a virtual reference service.[23] In 2005, Jackson pointed out that international students felt overall "reference-by-appointment, and live online reference are new concepts."[24] Martin, Maxey-Harris, Graybill, and Rodacker-Borgens (2009) reported in their study the use of "virtual reference services [by international students] will reduce their frustrations when items cannot be found in the library."[25] However, Knight et al. (2010) pointed that international students "prefer in person communication to electronic methods."[26]

Methods

In 2016, the authors of this study contacted Song, who was still working at UIUC where his 2004 work was conducted, to ask permission from him to deploy his survey at the researchers' institution. According to Song, his 2004 survey "was designed to identify what library services are important to international business students and to assess their use of electronic resources".[27]

After receiving IRB approval from the Office of Institutional Research and Training, the authors of this study deployed this survey to 775 international undergraduate and graduate students enrolled in the Fall 2016 semester using the online survey tool, Qualtrics. Ten questions were allocated to demographics, population, program of study, and number of years spent in the USA. The remaining 25 questions were allocated to the respondents' previous library experiences in their home countries and the USA. Demographic data that was provided by students via the self-report questions of gender and citizenship status was matched against data from the institution's student registration system, Jenzabar EX (EX) for verification. Additional demographic details of ethnicity, age, degree, and major were pulled from EX as well to provide opportunities for enhanced analysis and comparison. The survey was deployed on September 9, 2016, and the last response was collected on October 4, 2016. A

total of four reminders were sent to the invited students.

The 149 students who responded (19.2% response rate) held citizenship from a diverse range of 36 countries. Most of the students were from two countries – China (Mainland), 36.24% and India, 24.16%. Slightly more female students (n=88, 59.1%) responded to this survey than male students (n=61; 40.9%). Of the Chinese students who responded to this survey (n=54), as illustrated in Table 2, more female (n=41, 75.93%) than male (n=13, 24.07%) students responded.

Of all the international business students who responded to the survey, most of the students were enrolled in the graduate division (n=112, 75.17%). The majority of both the Chinese students who responded to the survey were enrolled in the graduate division, with 51 Chinese graduate students participating and 3 Chinese undergraduate students participating. More than 50% of all the international business students who responded to the survey indicated that they were in the 25-34 age range (n=94; 63.09%). Similarly, of the Chinese students who responded to the survey, the vast majority (n=45, 83.33%) indicated that they were in the 25-34 age range, as illustrated by Table 1.

Furthermore, the amount of time students indicated they had spent in the USA for their academic programs at the time of the study varied. Overall, students time in the USA ranged from one to two years (n=5; 9.26%) to more than five years (n=9, 16.67%). Table 2 illustrates Chinese students time spent in the USA.

TABLE 1 Chinese Survey Respondents by Age Range		
Age Ranges	**CH**	**%**
18–24 years old	9	16.67%
25–34 years old	45	83.33%
35–44 years old	0	0.00%
Total	54	100.00%

TABLE 2 Chinese Survey Respondents by Years in the United States		
Time in USA	**CH n**	**CH %**
Less than 6 months	0	0.00%
1 year–2 years	5	9.26%
2 years–3 years	8	14.81%
3 years–4 years	24	44.44%
4 years–5 years	8	14.81%
More than 5 years	9	16.67%
Total	54	100.00%

Findings
Importance of Library Services
Research Question: Does a students' cultural background influence how they utilized electronic and physical library services?

The international business students who responded to this study reported that the most important library service to them was *Personal Study Area* (4.34). The researchers performed correlation analysis to find out if the length of time spent in the USA was significantly related to students' preference for personal study area. The length of time spent in the USA was very weakly correlated ($r=0.1$). *Personal Study Area* was also indicated to be the most important library service for the Chinese students who responded to the survey (4.41), as illustrated in Table 3.

TABLE 3 Importance of library services in the USA All International Business Students vs. Chinese Students		
	All AVG	**Chinese AVG**
1. Personal study area	4.34	4.41
2. Public computers	4.27	4.19
3. Electronic Resources	4.21	4.24
4. Virtual Reference	3.33	3.67
5. Group Meeting Space	3.79	4.00

Access to Electronic Library Resources via the Internet
Most of the international business students who responded to this study indicated that they had access to electronic library resources via the internet in their home countries (n=105, 70.47%), as indicated in Table 5. Similar results were reported by the Chinese students who responded to the survey, with 94.44% (n=51) reporting the same as illustrated in Table 4.

TABLE 4
Access to electronic library resources via internet in students' home countries
All International Business Students compared to Chinese Students

	All Students		Chinese Students	
	#	%	n	%
Yes	105	70.47%	51	94.44%
No	44	29.53%	3	5.56%
Total	149	100%	54	100.00%

Accessing the Internet

Of all the international business students who responded to the survey, the majority reported that their primary mode of access to the internet from off-campus in the USA was via broadband (high speed) internet (97.32%, n=145). Similar results were reported by these students in regards to their primary mode of internet access from off-campus in their home countries (Broadband access = 96,64%; n=144), as illustrated in Table 6. Chinese students also reported that their primary mode of access to the internet from off-campus in both the USA and in their home countries was via Broadband connections with 95.15% and 96.30% reporting this access, respectively, as illustrated in Table 5.

Primary Location for Accessing Electronic Library Services

The international business students who responded to the survey were nearly evenly divided as to where they primarily accessed electronic library sources – between on-campus and off-campus, with 50.3% (n=75) indicating they did so mainly from on-campus areas and 49.7% indicating that they mainly accessed these resources from off-campus locations (n=74). A slightly higher percentage of Chinese students reported that they primarily accessed electronic library services from off-campus locations (53.70%; n=29) as compared to all students who responded, as illustrated in Table 6.

TABLE 5
Primary mode of access to the internet from off-campus
All international business students

		Dial-up (56K or less)		Broadband (high speed)	
All Students	n	#	%	#	%
In the USA	149	4	2.68%	145	97.32%
In home country	149	5	3.36%	144	96.64%
Chinese Students					
In the USA	54	1	1.85%	53	98.15%
In home country	54	2	3.70%	52	96.30%

TABLE 6
Primary location for access electronic library resources — All International Business Students as compared to Chinese students

	All Students		Chinese Students	
Access Location	n	%	n	%
On-Campus	75	50.30%	25	46.30%
Off-campus	74	49.70%	29	53.70%
Total	149	100.00%	54	100.00%

Discussion
Importance of Library Services

Personal study area was reported to be the most important library service overall for all international business students and for the Chinese business students. On average, the second most important service for all international business students was *Public Computers* (4.27), however, the second most important service for the Chinese business students was *Electronic Resources* (4.24). *Group Meeting Space* (3.79) was identified as the least important library service on average for all international business students, while Chinese business students identified *Virtual Reference* as the least important library service for them (3.67). This disparity in opinions regarding importance of library services led the researchers to believe that marketing library services, and training on these services, to Chinese business students in different ways may potentially be beneficial.

Access to Electronic Resources via the Internet

As the Chinese students were fairly evenly divided between the location where they primarily accessed electronic library resources (on-campus=46.3% and off-campus=53.7%), the researchers felt that services designed for on campus and off-campus access should continue to be marketed and supported at equal rates. Since use was nearly equal, training regarding accessing these resources from both locations should continue to be marketed.

Conclusion

The international student enrollment at this institution continues to increase, particularly in this institution's MBA program, where the program is currently at enrollment capacity with a waiting list. Furthermore, the institution will soon be launching their first doctorate program, and international students have expressed significant interest in attending a doctorate program with this institution in the past. In order to fulfill the expanding research needs of the international student population, the library should continue to consider the unique perspectives and expectations that these students have regarding electronic library services. In particular, the library will focus on particular populations with the greatest enrollment, such as Chinese students who were strongly represented in this study.

Endnotes

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