

Rebecca A Caudle. International Students' Perception and Use of the Library at North Carolina State University. A Master's Paper for the M.S. in L.S degree. April, 2011. 57 pages. Advisor: Diane Kelly

International students are an ever growing population on university campuses, as these numbers continue to increase each year, it is important that academic libraries continue to study the evolving problems and needs international students face. Having a better understanding of the difficulties and problems international students face in U.S. academic libraries will provide a framework for academic librarians, outreach programs, and campus international organizations to develop solutions to these problems. This study hopes to identify perceptions and uses of the library by international students and discover strategies to better meet their needs while attending an American university.

Headings:

Foreign students

College and university libraries

Use studies

Services to minorities

INTERNATIONAL STUDENTS' PERCEPTION AND USE OF THE LIBRARY AT
NORTH CAROLINA STATE UNIVERSITY

by
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A Master's paper submitted to the faculty
of the School of Information and Library Science
of the University of North Carolina at Chapel Hill
in partial fulfillment of the requirements
for the degree of Master of Science in
Library Science.

Chapel Hill, North Carolina

April 2011

Approved by

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Introduction

The Institute of International Education (2009) announced in their annual Open Doors report that 671,616 international students attended a college or university in the U.S. in the 2008-2009 academic year. This reflects an 8 percent increase from the previous year, the largest increase in international student enrollment at universities since 1980. Research has been done showing that international students have greater difficulties adjusting to academic life, and experience more stress and anxiety than their American counterparts (Andrade, 2006; Sümer, Poyrazli & Grahame, 2008; Hechanova-Alampay, Beehr, Christiansen & Van Horn, 2002). With such an increasing number of international students, universities need to be sure they are able to provide appropriate support and meet the needs of this particular group, especially within the library.

Since the 1980s, when U.S. universities began to see a surge in international student enrollment, studies have been conducted addressing international students using American libraries, demonstrating that this has been an area of concern for decades. As the number of international students continues to increase, along with the evolving changes in libraries, it is important that studies continue to address the evolving needs and problems international students face in academic libraries. Several studies have found that international students use the library more actively and more often than American students while completing their studies (Liao, Finn & Yu, 2007; Martin, Maxey-Harris, Graybill & Rodacker-Borgens, 2009; Shaffer, Vardaman & Miller, 2010).

Having a better understanding of the difficulties and problems international students face in U.S. academic libraries will provide a framework for academic librarians, outreach programs, and campus international organizations to develop solutions to these problems, and provide more effective services and resources to this particular population of students.

Problem

Most of the research that has been conducted in the area of international students using American academic libraries has been concerned with the major barriers this unique group faces, particularly language or communication barriers, cultural barriers, and technology barriers (Ye, 2009; Zhang, 2006; DiMartino, & Zoe, 2000). Very few empirical studies have been done indicating international students' perceptions and expectations when interacting with a librarian and how helpful or unhelpful they find American academic library services.

Purpose

The purpose of this study will be to better understand the needs of international students in an academic library setting. The overall aim of the study is to discover international students' perceptions of librarians, the expectations they had regarding the library prior to their arrival, to identify what services international students find to be the most beneficial, which services they have difficulty using, and to identify what additional resources the library can offer to ensure international students are successful in their academic endeavors. Specifically this study will address the following questions:

- How do international students perceive librarians?
- What expectations did they have about libraries before arriving here?

- What library services have students found to be the most helpful?
- What library services have students found difficult to use or understand?
- What additional services would students like to see the library offer?

Migration of International Students to U.S.

In the early years of the United States, very few students came to the U.S. to study; instead American students studied internationally in England or Germany. However, sending students to Europe for higher education was considered unfavorable because it acknowledged that American institutions did not hold the same prestige as European institutions, and also because it reinforced European ties, which at the time the U.S. was trying to break (Bevis & Lucas, 2007).

When the American Revolution began in 1775 there were nine colleges in the U.S. (Rudolph, 1962). The war was hard on American colleges, buildings were damaged, and enrollments dropped, there were also smaller endowments, and weakened reputations (Bevis & Lucas, 2007). However, after the Revolutionary War there was a steady growth of higher education programs, as more and more colleges and universities were chartered. American higher education was brought to a respectable level and began to compete with European institutions. In 1784 Francisco de Miranda, who later became a revolutionist for independence in South America, traveled from Venezuela to the U.S. and became the first international student to attend Yale (Bevis & Lucas, 2007). He is often considered the first international student to enroll in an American college.

In the mid-1800s there was a movement towards more technology and science in education (Rudolph, 1962); this was also the same time that the U.S. began to see sizable

enrollments from students in India and China (Bevis & Lucas, 2007). This growth and progress was partly due to the Morrill Act, where every state received support for agriculture and mechanic arts. During this time there was a de-emphasis on the classical and traditional curriculum and a new emphasis on useful knowledge and employment (Westmeyer, 1985).

The progressive movement of the late nineteenth and early twentieth centuries promoted science, technology, and education; leading to the development of engineering departments at large research institutions. Nevertheless, international student populations in U.S. colleges remained modest in the early twentieth century. In 1904 there were about 2,673 international students enrolled in American institutions of higher education, whereas at the same time Germany reported having almost 9,000 international students (Bevis & Lucas, 2007). It is worth noting that accurate and formal records of international student enrollments in U.S. universities were not kept until the mid-twentieth century. Prior to that, international high school students would sometimes be included in the statistics, and numbers from women-only colleges would be excluded, creating imprecise data.

During the progressive movement of the early twentieth century there was an increased importance to develop international education exchanges in the U.S. Many government-led initiatives were formed during this time, in addition to more than 115 private organizations, all with the aim to bring more attention to recruiting foreign students to the U.S. and encouraging American students to study abroad; this led to a steady increase of international student enrollment in the U.S. from Latin America, Europe, and China between 1900 and 1930 (Bevis & Lucas, 2007). An important

organization established during this time was the Institute of International Education (IIE) in 1919. IIE was founded after World War I with the belief that lasting peace could not be achieved without a greater understanding between nations (IIE, 2011). The purpose of IIE is to promote a two-way exchange of students and scholars between the U.S. and other areas of the world (Bevis & Lucas, 2007). Today, after 90 years of existence, IIE is among the world's largest and most experienced organizations for international exchange in higher education. Each year IIE (2011) administers 250 programs serving 26,000 participants. Additionally, the Good Neighbor policy was also included among these programs, where the U.S government encouraged Latin American students to attend American schools to study in the late 1930's and early 1940's (Du Bois, 1956).

During World War II (1939-1945) many European universities were closed, and students who would normally have pursued higher education in Europe came to the U.S. instead (Du Bois, 1956). After World War II many universities were destroyed or severely damaged; however, American universities had been spared from the physical destruction that most of Europe suffered. In 1946, shortly after the end of World War II, the Fulbright Program was established by a young senator from Arkansas with hopes of hindering future conflicts by sharing knowledge and cultural understanding. The Fulbright Program is now a flagship international education exchange program sponsored by the U.S. government. Approximately 300,000 people have participated in the Fulbright Program, 114,000 from the U.S. and 188,000 from other countries (U.S. Dept. of State, n.d.).

In 1948 the National Association of Foreign Student Advisers (NAFSA) was founded to provide services and assistance to the thousands of foreign students who were coming to the U.S. to study after World War II. In 1990 NAFSA was renamed the Association of International Educators; however, the NAFSA acronym was kept to reflect their past and because of broad name recognition. Today NAFSA is the world's largest nonprofit professional association dedicated to international education (NAFSA, 2011).

The terrorist attacks of 1993 and 2001 at the World Trade Center lead to a decrease in international student enrollment. Between 2002 and 2005 there was a 3.7 percent decrease in international student enrollments (IIE, 2010a). The U.S. Department of State began scrutinizing student-visa applications, leading to months of delays for incoming international students (Walfish, 2002). The frustration and hassle of visa delays and rejections lead to a decline in international student enrollment. Many students, especially those from the Middle East, perceived the U.S. as unfriendly and hostile to international students (Bain & Cummings, 2005).

Today, according to the IIE (2010b), most international students come to the U.S. from China, India, and South Korea, where they primarily study business, engineering, and physical and life sciences. Thirty-three percent study in the U.S. as undergraduates, whereas 47 percent study as graduate students. The majority of international students, over 60 percent, fund their education from personal and family resources. Since the late 1940s the U.S. has hosted more international students than any other country (see Table 1), and currently has well over half a million international students enrolled in colleges and universities (IIE, 2009). For the fourth consecutive year international student enrollment numbers have shown modest growth (IIE, 2010a). These trends show that

international student enrollment is likely to continue to grow, and that the U.S. will continue to see rising numbers of international students. In order to serve this population well we need to pay attention to their perceptions and experiences during their time at American institutions of higher education.

Year	Number of Students	Numerical Change	Percent Change
1911	4,856		
1921	8,357	+3,501	+72.1%
1930	9,643	+1,286	+15.4%
1940	6,154	-3,489	-36.2%
1950	26,433	+20,279	+329.5%
1960	48,486	+22,053	+83.4%
1970	134,959	+86,473	+178.3%
1980	286,343	+151,384	+112.2%
1990	386,851	+100,508	+35.1%
2000	524,723	+137,872	+35.6%
2010	690,923	+166,200	+31.7%

Table 1. U.S. International Student Enrollment (Source: Open Doors, Du Bois, Bevis & Lucas)

U.S. Benefits

The presence of international students on American campuses provides the United States with many advantages. In 1997 Harvard president Neil Rudenstine is quoted saying, “There is simply no substitute for direct contact with talented people from other countries and cultures. We benefit from international students; they drive research and teaching in new directions that are very fruitful” (Rudenstine, 1997). Not only do international students enrich our academic climate, but they also provide foreign policy and economic benefits.

International students serve as resources to local citizens and students to develop an international understanding of other cultures. International students add tremendous value to American students by creating a diverse and multicultural campus. For many

American students the college experience is their first opportunity for extensive time with foreigners, allowing Americans to learn about cultures, histories, and global issues from their international classmates. The contact between cultures often heightens cultural sensitivity and understanding among students. The international student presence on U.S. campuses helps broaden the horizons of American students and prepares them to be global citizens who will be able to view situations from the perspective of others and seek mutually beneficial resolutions (Hanassab, 2006).

When the United States hosts international students, the values and ideologies they experience contribute to their views and perceptions towards America. The United States has hosted former and current presidents or prime ministers from Afghanistan, Great Britain, Mexico, France, Israel, Argentina, South Korea, Germany, and South Africa when they studied in the U.S. as students. It is hoped that the international students who study in the U.S. and then later return to their native countries will carry with them a stronger commitment to American ideals and democratic values (Bevis & Lucas, 2007). When the international students who study in the U.S. return to their countries and obtain positions of power and leadership, they have a better understanding and appreciation for the U.S. and their people than they would otherwise have acquired. Oftentimes, the development of long-term international-American relationships provides the U.S. with a network of personal connections to foreign leaders and is a foreign policy asset. In 2002 (World View) former secretary of state Colin Powell is quoted as saying:

I see the benefits of international education and exchanges every day. In my daily activities I encounter world leaders-from Kofi Annan to Hamid Karzai-who participated in an exchange program or studied here or abroad. People-to-people diplomacy, created through international education and exchanges, is critical to our national interests.

Students who experience the United States first-hand are able to help break down stereotypes when they return home.

International students are also a good source of revenue for the U.S. economy. According to IIE's Open Doors Data (n.d.), international students contribute almost \$20 billion to the U.S. economy through tuition and living expenses. Open Doors (n.d.) also reports that more than 60 percent of all international students receive the majority of their funds from personal or family sources. Since international students typically pay full tuition and don't receive financial aid any decline in their enrollment can jeopardize budgets.

Additionally, international students make important contributions to teaching and research in the science and engineering fields. In 2007, international students earned one third of all U.S. doctorates awarded in the science or engineering field and 24 percent of international students earned a master's degree in the science or engineering field (NSF, 2010). International student enrollment and international teaching assistants for science courses enable universities to offer classes to American students that would otherwise be unavailable (NAFSA, 2003). Many schools would have to eliminate or drastically cut programs if it were not for the enrollment of international students (Bevis & Lucas, 2007). If the U.S. is to continue to recruit and enjoy the benefits of international students we must be sensitive to their perceptions and needs. This includes the role academic libraries have in helping international students succeed in higher education. Academic librarians should be especially cognizant to the perceptions and needs of international students while in American institutions of higher education.

Review of the Literature

A considerable amount of research has been done about international students and library use. This literature review begins with a discussion of the social and academic needs that are particular to international students, and then moves more specifically to empirical studies that have been done concerning international students and U.S. academic libraries, and concludes with a discussion of what library services have currently been implemented to serve the international population.

Cultural Shock of International Students

This section looks at the specific challenges international students face. In order for librarians to meet the information needs of international students, librarians need to be aware and understand the problems and difficulties international students face during their time in the U.S. After international students arrive to the U.S. they often deal with culture shock as they adjust to living in a new country. Ward, Bochner, & Furnham (2001) approach culture shock as someone's response to unfamiliar cultural environments, incorporating both a theoretical and applied perspective. The authors illustrate this process through a model of three components (the ABCs): affect, behavior, and cognitions.

The authors define the affective component of cultural shock as factors that facilitate or impede psychological adjustment, such as stress and coping. In the case of international students, affect could include feelings of anxiety or loneliness. Sümer, Poyrazli, & Grahame (2008) examined levels of depression and anxiety in international students as a result of their adjustment to living and studying in the U.S., and found that students with lower levels of social support were more likely to have higher levels of

anxiety. Robertson, Line, Jones, & Thomas (2000) asked international students what difficulties they experience, the most common answers referred to feelings of isolation, homesickness, and the need for social activities. Tompson & Tompson (1996) found similar findings, showing that international students' most difficult area of adjustment is social isolation, and that students reported that loneliness and fear of not fitting in kept them mentally preoccupied. Overall, international students appear to have more extreme emotional reactions to negative events (Ramsay, Barker, & Jones, 1999).

The authors view the behavior aspect of this model as verbal and nonverbal communication, and the culturally defined rules that govern social encounters. The behavior component of the culture shock model could be the interaction or friendships of international students, including family, friends, or some form of student services. While research indicates that international students who have little contact with Americans report more feelings of isolation and alienation than those students who foster relationships with U.S. students, many international students seek people from their own country as sources of support (Hechanova-Alampay, Beehr, Christiansen, & Van Horn, 2002; Zhai, 2002).

Ward, Bochner, & Furnham use the term cognitions to encompass both inward cognitions, such as how one views oneself in terms of social and cultural identity, and also outward perceptions, such as how an individual perceives or makes judgments about an individual from a cultural group. Cognitive aspects of the model could include perceived stereotypes, prejudices or discrimination. The Robertson, Line, Jones, & Thomas (2000) study found that students reported 46 racial incidents that occurred on campus (not including incidents in the wider community). The comments included:

students being laughed at during class and overt annoyance expressed by domestic students toward international students' English. Hanassab (2006) conducted a study focusing on the discrimination experienced by international students in higher education, and found that international students experience discrimination in their interactions with faculty, staff, other students, and in the community. Students from the Middle East and Africa experienced more discrimination than students from other regions. The results also indicated that discrimination is more likely to occur off campus rather than on campus. The Shachaf and Horowitz (2006) study investigated whether academic librarians provide unbiased and equal virtual reference to diverse users. The study found that the quality of service provided to African Americans and Arabs is of a lower quality than that provided to Caucasian, Hispanic, Asian, and Jewish students. This study further supports the idea that diverse and international populations face discrimination in higher education.

Academic Needs of International Students

There is rarely a study regarding international students that does not mention language as a major problem. Although international students may have been exposed to spoken English and be experts in grammar, the language skills they have developed are often much more formal than one typically experiences in everyday encounters; and once they arrive in the U.S. they face the great task of learning to speak, read, write, and think in English (Sarkodie-Mensah, 2000). There is a frequently cited quote of a student saying, "I think in Thai, I am fluent in Japanese, I read French, and I cry in English" (Cable, 1974, p. 40).

A lack of confidence in language can lead students to be reluctant to speak up in class or participate in discussions (Robertson, Line, Jones, & Thomas, 2000). In one study a student described language as a major difficulty by saying, that he/she felt that his/her English was not as good as other students and was afraid to speak because others may not understand (Robertson, Line, Jones, & Thomas, 2000). This sensitivity of language inadequacies can lead to a negative effect of the student's overall class participation. In the Tompson & Tompson (1996) study, faculty made comments that when international students do not verbally debate or challenge issues in class that it negatively affects the student's grade. In this same study international students said that showing disagreement in the classroom would be unacceptable in their home countries, and that it is very difficult for them to violate these ingrained beliefs and participate fully in classroom discussions. This suggests that the lack of classroom participation may not always be the result of a student's inadequacy in English, but rather a cultural difference. The language problem can become even further complicated when vocabulary impedes effective searching. This is not surprising, considering that strong language skills are needed to properly construct an effective search (DiMartino & Zoe, 2000). The results of a study that compared how U.S. and international students find and interpret library materials showed that international students struggle more with library terminology when deciphering an online journal record (Martin, Maxey-Harris, Graybill, & Rodacker-Borgens, 2009). Overall, research shows that students with English as their primary language usually have more academic success (Stoynoff, 1997; Lui & Redfern, 1997; Chen, 1997; Zhai, 2004).

In a study that asked university faculty what problems they thought international students face, a general response was international students not understanding the concept of plagiarism (Robertson, Line, Jones, & Thomas, 2000). International students often think of published materials as community property that can be used and adapted as needed without attribution to the author (Brown, 2000). In a study (Tompson & Tompson, 1996) that asked faculty to identify observed behavior in international students, 24 percent of the faculty believed that their international students had violated academic integrity and that this behavior had a negative impact on their performance. Amsberry (2010) lists several factors that help explain why international students struggle with plagiarism, including: a collectivist attitude of text ownership where information is not owned but shared by society, differing views of what constitutes common knowledge, copying as a form of respect and admiration of the author, and copying because students feel they can not adequately express themselves in English and therefore believe that copying the author is the best way to convey the message.

Studies of International Students in the Library

This section of the literature review looks at three empirical studies of international students' use of the library. These studies show that international students are far more dependent on the library than domestic students and have different views and preferences of the library.

Jackson (2004) assessed incoming international students' self-perceived views and needs of the library before using library services, receiving library instruction, or being exposed to technical library language. A survey was distributed during orientation, and had four parts: demographic data, the student's library and computer use in their

home country before coming to the U.S., library concepts and services that they have used or are new to them, and an open-ended question section that gave students the opportunity to state what they like/dislike about the library and how the library can best serve international students. The results revealed that 94 percent of the students had used a library in their native country, and 80 percent of the students had conducted some form of computerized library research before coming to the U.S.; however, only half the students surveyed had ever used a chat room or instant messenger. Concepts unfamiliar to students included: interlibrary loan, librarian reference-by-appointment, and live online reference. For the open-ended questions students commented on the beauty and cleanliness of the library, the availability of group study rooms, easy access to the Internet, and friendly and helpful library staff. Some of the dislikes about the library included short hours and noise level. Suggestions students made about services specifically for international students include: friendly and patient staff, more resources in their native language, library orientation materials, and more computer access. This research provides an interesting foundation for the initial perceptions international students have of the library, and provides insight for what they want and need from the library.

An article by Shaffer, Vardaman, and Miller (2010) investigated how international students and American students view the library. The purpose of the study was to discover the perceptions international students have towards the library, and thereby provide librarians with a framework to better serve international students. A survey was given to both international students and also to more traditional American students in order to compare the differences. Both groups were given a survey that asked

about their satisfaction regarding: hours, noise, furnishings (including copiers, computers, books, and periodicals), assistance from student workers, assistance from librarians, and their overall rating of library service. A Likert scale was used to measure their responses. One distinct finding of the survey was that international students wanted longer hours, indicating that they are more dependent on the library than American students. Results also showed that while American students were content with the number of computers in the library, international students were not satisfied, one possibility for this is that international students are more reliant on the computers to maintain contact with friends and family in their native country. Another interesting find of the study is that American students ranked overall library service at 4.351, while international students ranked overall service at 3.784. Overall, the study revealed that international students and American students have different preferences and perceptions toward the library, especially concerning overall use of the library and overall satisfaction with library services.

Wales and Harmon (1998) conducted a mail survey of international students and U.S. students. A mail survey was used in order to reach both library users and non-users. The thirty-five question survey contained sections that measured: use patterns, perceptions of the library and its services, and willingness to seek help. The purpose of the study was to compare the responses of the two populations. Overall the survey results showed a similarity between the two groups, suggesting that what serves the U.S. students well also serves the international students well; however, one dramatic difference between the two groups was the rate of library use. The study revealed that international students utilize the library more frequently than domestic students for a

variety for purposes, including: research, assignments, reading for fun, studying, computer use, and as a place to meet friends. This finding, that international students use the library more frequently than U.S. students, strengthens to the importance of identifying and remaining mindful of the unique needs of international students. An interesting issue the authors raise at the end of the study is the correlation between international students frequent use of the library and a low perception of helpfulness and politeness of the staff, whereas with domestic students the more they use the library, the more helpful and polite they perceive the staff to be. The authors speculate whether this could be attributed to better service elsewhere, or perhaps unrealistic expectations. The findings certainly merit further investigation.

Library Initiatives with Respect to International Students

The above literature indicates that international students have specific characteristics and difficulties; this section of the literature review examines what services academic libraries have designed to enhance international students' achievement and to ensure that the library is a welcoming space for them.

Switzer (2008) suggests that universities show their commitment to multiculturalism and ethnic diversity by diversifying their personnel, and to actively recruit minorities for librarian, staff, and student worker positions. This is suggested in hopes of fostering a workforce that is representative of a diverse university community. Zhang (2006) claims that international students' academic success depends on their communication between faculty and staff, and that a librarian's improved ability to communicate cross-culturally will lead to better information services for international

students. Zhang suggests providing a type of cross-cultural training to improve the skills of librarians.

There is a consistent recommendation for librarians to work with the international student affairs office and the campus ESL program (DiMartino & Zoe, 2000). Conteh-Morgan (2003) extends on this idea by saying that while there are many examples of librarian-ESL faculty collaboration, the application of ESL theories to library instruction are less frequent. Conteh-Morgan (2003) contends that there are practical ways that knowledge of second language learning and teaching can help structure information literacy instruction, and goes on to say that an awareness of second language learning theories and approaches to teaching this population are vital if librarians are to provide meaningful instruction to ESL students. This indicates that while applying second language teaching theories is not a common practice of librarians, it is an effective method for helping non-native English speakers.

Oakland University has created an outreach librarian position to address growing multicultural and diversity issues (Switzer, 2008). The outreach librarian is involved in campus events and committees, and also has contact with the International Students and Scholar Office (ISSO) to offer support to international students. The librarian is available to provide academic and research assistance through consultation and one-to-one instructional sessions.

The Libraries' Diversity Committee at the University of Tennessee has created a Culture Corner near their reference room. A new theme is chosen each semester and many themes reflect international issues. According to Mundava & Gray (2008) the

corner has increased interest in diverse materials and has been popular among the university community.

Oregon State University has partnered with the International Cultural Services Program (ICSP) to develop a project called Helping Hands. The project translates a two-page handout that describes library services into different languages. The purpose of the project is to introduce non-English speaking users to the library in a language they can understand. Chau (2002) states that having the resources translated into multiple languages conveys a sense of inclusiveness to many ethnic minority groups.

The literature above provided insights into the challenges and needs of international students. As this population continues to enroll in U.S. universities, it is likely that the challenge to develop effective library programs for international students will persist, meaning that librarians need to continue to investigate effective methods for serving this population.

Method

This study involved two components, an online survey and face-to-face interviews. These methods were chosen because previous research indicates that international students often lack confidence and are very conscientious of their English language skills (Sarkodie-Mensah, 2000; Robertson, Line, Jones, & Thomas, 2000; Mundava & Gray, 2008). Based on this, it was decided that international students would most likely prefer an online form of communication to a verbal form. Other advantages of administering an online survey included: respondents' flexibility in deciding when, where, and at what pace to complete the survey, the automatic capturing of survey

responses and avoidance of data entry cost, and time efficiency. The online survey was designed and delivered using Qualtrics software. With Qualtrics' ability to handle sophisticated questions, respondents can be re-routed throughout the survey depending on their answers to previous questions. For example, if a respondent answers that they have never been to the library, then they will be redirected to answer a question about why they have never been to the library, and other questions that do not pertain to them are eliminated. Qualtrics also uses many layers of encryption and security measures to ensure that all data is kept confidential.

The structure of the online survey was arranged in three sections: introduction, substantive, and classification (Wildemuth, 2009). The introduction was designed to engage and build a rapport with the participant, and included fairly easy questions to answer. The next section, the substantive questions, included the questions considered most essential to the research. This section included questions about what was most surprising when the student first came to the library, what is most difficult to understand about the library, unmet expectations, helpful services, and interest in a library workshop for international students. The last section was classification questions related to demographic information. These questions were positioned at the end of the survey because this information was not considered essential to the research investigation (Wildemuth, 2009). It took students approximately 5-10 minutes to complete the survey.

At the end of the survey students had the option to provide their email address if they were willing to participate in a follow-up interview. This allowed international students who were comfortable with verbal communication to provide more details about the studied topics, and also gave the researcher the opportunity to probe and ask students

follow-up questions. The interviews were semi-structured with prepared questions, but the questions could diverge according to the participants' responses. To ensure the privacy of the participants, the interviews took place in a group study room, which is a closed off space within the main library at NC State. For the students who elected to be interviewed, they were contacted via email to set up a time. As previously mentioned, the interviews followed a semi-structure. This format allowed a specific purpose for the interviews, but also freedom to adjust the questions and probe answers based on the respondent's answers (Wildemuth, 2009). The interview lasted 10-20 minutes. The interview involved four types of questions: essential, extra, throw-away, and probing questions (Wildemuth, 2009). The interview began with throw-away questions to build rapport and make the participant feel comfortable. Then the essential or main research questions were asked. Extra questions were used as needed to provide alternate wording or to clarify meaning. Probing questions were also used as necessary to encourage participants to elaborate on their responses.

Before any data was collected from participants, the Institutional Review Board (IRB) approved the research plans. Approval from the IRB ensured that the studied population was properly informed about the study and was protected against any possible risks. Also, prior to the study an international student at NC State read over a paper version of the survey questions and made comments about alternate wording and the order of the questions. About two weeks before the survey was active to the international students, an online pilot survey was sent out to 8 people to catch any glitches or potential confusion points. The evaluation of a survey instrument prior to administering it to the

target population helps to ensure that the survey is both reliable and valid (Wildemuth, 2009).

Setting

North Carolina State University is a public, land-grant institution founded in 1887. There are currently over 34,000 students and close to 8,000 faculty and staff. The university is ranked third among all public non-medical universities for industry sponsored research (NCSU, n.d.). The NCSU libraries define their mission as, “the gateway to knowledge for the NC State University community and partners. We define the leading edge of information services and collections to support the university’s mission and to further knowledge in the world” (NCSU, 1999). The libraries have over 4.3 million volumes and approximately 62,000 journals (NCSU Libraries, 2010). The D. H. Hill Library at NC State is the main library on campus; there are also 4 other branch libraries on campus. The D. H. Hill Library recently renovated the Learning Commons area on the first floor in 2007. The NCSU libraries have received many accolades for their adventurous spirit, including: ACRL Excellence in Academic Libraries Award in 2000, Library of the Future award in 2003, the director of libraries was named librarian of the year in 2005 by *Library Journal*, 2010 winner of Cutting-Edge Library Service Award for the Library Tools service, 2011 winner of Cutting-Edge Library Service Award for their user-centered web design (NCSU Libraries, 2010). The NCSU libraries’ commitment to technology and support for pioneering learning spaces has distinguished them from most academic libraries in the nation.

Population

The population sample consisted of the international students at North Carolina State University. The NC State Office of International Services defines an international student as: enrolled in credit-bearing courses, physically present on campus, and attending the university in a lawful nonimmigrant status (excluding students that have a green-card or undocumented status, are refugees or political asylees, and that are only enrolled in the distance education program). North Carolina State University currently has 2434 international students enrolled, the largest international student enrollment of any university in the state of North Carolina (OIS, 2010). Of this population 2040 are graduate students, 213 are undergraduate students, and 181 are non-degree students. Over half of the international students are in the College of Engineering (OIS, 2010). Forty-one percent of the international students are from East Asia and 33 percent are from India.

Thanks to the gracious cooperation of the Assistant Director at the Office of International Services (OIS), the international students were contacted via a mailing list that includes all active international students at NC State. This is a closed mailing list; students are not able to join on their own, OIS updates the list as students come and go at NC State. The researcher did not have direct access to the mailing list or a complete list of the international students' email addresses. International students who were not at least 18 years of age were excluded from this study to ensure only adult participation. The students received an email inviting them to complete an online survey through Qualtrics. Participation in the survey was optional. The researcher was unable to provide

any form of compensation to the international students who volunteered to participate in the study because of visa and Homeland Security restrictions.

Survey Instrument

The survey began with asking students if they have ever been to the library, and if so which library. The students that had never been to the library were asked why, and then redirected to the end of the survey where they were asked about their interest in library workshops, the convenience of the new library opening in 2012, and demographic data. The students that had been to the library were asked to mark all campus libraries they had visited. Next, students were asked to mark all library services they have utilized, the options included: ILL, contact with their subject specialist librarian, instant messaging, orientation/workshop, items on reserve, technology lending, specialized software, and other. Students were then asked how they first found out about library services. While this does not specifically address any of the proposed research questions, the answers to this question could provide insights into what marketing strategies are effectively reaching international students. The next questions address surprises, difficulties, and unmet expectations regarding the library. These questions will help determine what difficulties international students face and if their expectations are being met. And in order to understand what works well for international students and where improvements could be made, students are asked to explain what they find difficult and helpful about the library. The next question asks students to rate (from strongly disagree to strongly agree) on comfort, convenient location, quiet places, knowledgeable staff, and the resemblance of this library to libraries in their native country. The responses to this question provide insight into what international students perceive as strengths and

weaknesses of the library. The following question on the survey was to gauge student interest of having workshops for international students in the library. If students answered yes to this question, they were then asked what topics would be helpful to them. Students were then asked if the new library that plans to open in 2012 will be in a more convenient location than the current libraries, and if they use other non-NCSU library facilities. Next students were asked to share any additional comments or ideas they have related to the library. Then there was a short demographic section, asking for student status, gender, major, number of semesters in a university in the United States, and area of origin. Respondants were asked to select an area of origin rather than type in their country of origin because students from some smaller countries could consider this information too revealing or indentifying. Graduate students were also asked for the country they completed their undergraduate degree. The final section of the survey asked that if students were interested in discussing the library further, that they please provide an email address (please see the appendices for the full survey instrument).

Interview Instrument

Before each interview the participant signed a consent form that explained the purpose of the study and that the interview would be recorded. Participants received a copy of the consent form to read over as an email attachment prior to the interview. Basic demographic data was also gathered from the participant prior to the interview. The interview then progressed into the essential questions where the participant was asked if they visited any of the libraries in their native country and if so what their experience was like there. This question is important because it will provide a baseline of their previous library experiences and the expectations they likely bring with them to the

United States. The next question focuses on the interaction the student had with librarians in their native country and if it is different than what they have experienced at NCSU. This question also helps to better understand the perceptions and expectations students bring to libraries in the U.S. based on the experiences in their native country. At this point the interview moved from library experiences in their native country to what the participant has experienced at NCSU. Next the participant is asked to describe what their first experience was like at the library at NCSU. This question will provide information about their initial reaction to the library. The participant was then asked what the librarians at NC State are able to help them with. Next the participant was asked about what features they have used at the library. The responses here will not only show frequently used features of the library, but also what library features students are aware of. Then the participant was asked about what they value the most about the library. Answers to this question will provide insights about what international students perceive to be important about the library. The next two questions will ask the participant about the most challenging experience they've had in the library and also about a time they felt unsuccessful or frustrated in the library. The responses to these questions will show what international students find difficult to use or understand about the library. The last interview question will ask the participant what improvements or additional features the library could provide. This will give the student the opportunity to make suggestions on what the library can offer to provide them with better service (please see the appendices for the full interview instrument).

Data Analysis

The data from this study was organized and refined as results were gathered, allowing data collection and data analysis to occur simultaneously (Merriam, 2009). Results from the Qualtrics survey was exported into an Excel file for analysis. The count if function in excel was used to tally totals for questions with closed-ended answers. Basic coding was used for open-ended questions to place answers into categories and to identify overall themes. Only one researcher worked with the data from this study ensuring the reliability and consistency of methods. The interviews were recorded, but based on the time restrictions of this study interviews were not fully transcribed; instead note taking, and partial transcription were done. To recognize recurring themes in the interview dialogue key words were marked in different colors and then counted to determine their frequency. According to Merriam (2009) recording interviews ensures that everything is preserved for analysis and also allows the interviewer to listen for ways to improve his or her questioning technique.

The methods used in this study are a mix of quantitative and qualitative techniques. As is typically done with quantitative research, the results of the survey provide the researcher with numeric data about the studied population, and the information gathered from the sample population will then be generalized to make inferences about characteristics and behaviors of the international population as a whole at NCSU (Creswell, 2009). This study is also characteristic of qualitative research because multiple sources of data will be collected from participants in their natural setting, the data will then be interpreted and analyzed to find themes; the focus of the

study will be kept on the participants' meaning, and the research has an emergent design that will allow for changes and shifts as data is collected (Creswell, 2009).

The mixed methods in this research produced quantitative and qualitative results to address the research questions. The surveys and interviews provided an understanding of the expectations and challenges faced by the international student population. The results of this research will help librarians be cognizant of the difficulties international students face and make concerted efforts to lessen their difficulties, and ultimately improve library services and the international student-librarian relationship.

Results

Respondents

Of the 2434 international students at NC State who are on the mailing list 68 students started the survey in Qualtrics, and 54 students completed the survey. The results described here only include the 54 students who completed the survey (see Table 2). And 8 of 2434 international students participated in the follow-up interview. Based on the international student population at NC State (OIS, 2010) a considerably high number of students from India responded to the survey.

World Region of Origin	International Student Population at NC State	Percent of International Students at NC State	Survey Respondents	Percent of Survey Respondents
Africa	32	1.3%	0	0%
Australia/New Zealand/Pacific	14	0.6%	0	0%
East Asia	993	40.8%	3	5.6%
Europe	145	6.0%	1	1.9%
Indian Subcontinent	806	33.1%	43	80.0%

Latin America	106	4.4%	1	1.9%
Mid-East	220	9.0%	3	5.6%
North America/Caribbean	48	2.0%	1	1.9%
Southeast Asia	70	2.9%	1	1.9%
Other	0	0%	1	1.9%
Total	2434		54	

Table 2. Enrollment & Number of Respondents at NC State (Source: OIS 2010)

Survey Results

All but one student indicated they had been to the library at NC State. Later in the survey the one student who said they had not been to the library later said, “I usually pick up my required books from Textile library and download my needed papers from library website.” This indicates that the student does in fact go to one of the libraries on the NC State campus, just not the main library. All students, except for the one mentioned earlier who went to the Textiles Library, had been to the main library (D. H. Hill). Two students had been to the Veterinary Medicine Library, 4 to the Design Library, 3 to the Natural Resources Library, and 27 students had been to the Textiles Library.

When students were asked about library services they had utilized 48 students, almost 90 percent, had used items on reserve (such as textbooks), 35 students had requested materials through interlibrary loan, 30 students had instant messaged with a librarian, 25 students had checked out devices from technology lending, only 8 students had contacted their librarian subject specialist, 7 students had attended a library workshop or orientation, and 4 students indicated they used the library for special software not available on their own computer. Additionally, students commented on using the Zeuschel scanner to scan pages for teaching, the digital media lab, playing games on the consoles, and using the graduate/research study rooms.

The majority of students, 41 percent or 22 students, said they found out about the library through friends, 13 learned about the library through the website, 7 students found out through classes or instructors, 5 students indicated the International Services Office as the source, 3 students found out about the library through orientation, and 2 students discovered library services through international student organizations.

When students were asked what was most surprising when they first came to the library most students commented on the facilities in Learning Commons area. Comments ranged from the “busy-ness,” to the “new and comfy” look. One student said, “the furniture - you could read in any posture, view and lighting you like.” Eight students made comments regarding the use of technology, specifically borrowing laptops and ipods, the Microsoft Surface, and the digital library. Seven students expressed surprise by the presence of gaming consoles in the Learning Commons. One student wrote, “Seeing Xbox, PS3. It was cool!!” Seven students commented on the size of the library. Three different students used the word “huge” to describe their surprise. One student wrote, “The number of books. Gulp!!”

Students indicated that the two most difficult things to understand about the library are navigating the physical layout of the library and finding full-text articles online. Fourteen students answered that finding books in the library is the most difficult thing to understand. And 9 students responded that knowing who to ask when you have a question is the most difficult thing to understand. Additional comments made on this question included: how students are selected for a part time job, searching for journals, and locating certain areas on a floor. One student wrote, “Finding specific areas like HD47.5 section on a floor.”

When students were asked if they had any unmet expectations regarding the library 56 percent said no. The remaining students who did have unmet expectations expressed a variety of concerns. Comments ranged from the printing system, the automated checkout of books, a misunderstanding about Friends of the Library, not enough seating on crowded days, and a weak security system. Two comments were made about hours; specifically that the library should be available 24 hours on weekends and that there should be a 24 hours food court. The following comments were made about the layout and location of books: “physical layout of books is confusing”, and “need a note somewhere to explain the meaning of call number of books.” Additionally, there were many comments about the availability of resources at the library including: “more journals for articles should be available online”, “library should have prescribed textbooks”, “course pre-requisites should be put on course reserve as well”, “renting movie and games dvds/blu-rays”, and another student made the following comment regarding technology lending:

I think for some equipment we should be able to loan it longer than 8 hours maximum, for example laptop. Sometimes my computer broke down and I need substitute laptop that I can use for like a day or maximum a week to prepare my work but there's no option here. Only GPS that we can only for longer period of time.

Twenty-eight students responded to the following question about services they have found especially helpful at the library. The two most popular responses to this question were interlibrary loan (mentioned 7 times) and the online chat feature (mentioned 6 times). Another popular response was technology lending, especially for laptops and ipads, one student made the following comment: “Renting a laptop/ipad for personal use. This saves us from having to bring our own laptop when we would like to work while sitting in the reclining chairs or the book shelves upstairs.” Five other

students mentioned the variety of resources available at the library. Other comments included: the scanning machine, the coffee shop, the digital media lab, the website, and poster printing.

When students were asked if the library is comfortable the majority of students, 94 percent, either agreed or strongly agreed. Most students, 49 percent, also agreed that the library is in a convenient location. Eighty-four percent of students either agreed or strongly agreed that there are quiet places to work and study at the library. Fifty-five percent agreed that the library is staff knowledgeable. When students were asked if this library resembled the library in their native country 32 percent of the respondents neither agreed nor disagreed, and 47 percent disagreed or strongly disagreed.

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
The library is comfortable	2	0	1	28	22
The library is in a convenient location	1	0	10	26	16
There are quiet places to work & study	2	1	5	23	22
The library staff is knowledgeable	1	1	5	29	16
This library resembles the library in my native country	11	14	17	9	1

Table 3. Rating of Library

Sixty-three percent of the international students would attend a library workshop if it were offered. When asked what topics would be most helpful in the workshop 4 of the suggested topics were equally represented as the most popular, each receiving 19 responses which include: searching for and finding books, including materials that NC State doesn't own; using effective search terms to find articles; knowing when and how to cite sources in a paper; and speaking skills for presentations. Fourteen students

indicated that an explanation of common library services and terms, similar to an orientation, would be helpful. Additional suggestions for workshop topics included writing academic papers and proposals and the fastest mode of using library services. One student made the comment that, “Although some workshops on different topics are being conducted at the library currently, they should be done on a large scale at more convenient times.”

Eighty-seven percent of the international students responded that the new Hunt Library that plans to open in 2012 on Avant Ferry Rd. would be more convenient than the current library locations. Fifteen percent of the students indicated that they use other non-NCSU facilities. Other facilities included Wake County Public Library for fiction and Duke for rare books because the locations are more convenient.

When international students were asked if they had additional ideas or experiences about the library they would like to share 6 students left comments. Several comments were made about having more quiet areas in the library. One student wrote, “Graduate student "floor" - Learning Commons too noisy. Grad student floor would have a quiet room we can book to take our comps exams.” Another student suggested, “It will be a good suggestion to move all the "GAMES" to one specific area to "WEST WONG" so in that case the EAST WING will be more QUIET!” Another student commented:

It would be better if the university can provide the area like 2nd floor in D.H. library but with silent environment. It likes I need to compensate for now, I love the chair the size of the table, the environment of 2nd floor but I need to bare with the loud noises of undergrads students. But if I want to study in the silent area, I need to be in the small desk, small chair, uncomfortable table arrangement on the upper floor which is not good at all if I want to study for a long period of time.

Other students made comments about the availability of technology, space and hours in the library. One student suggested, “Points for laptops near all the desks in book stacks.”

Another student commented, “Increase the availability of meeting rooms/group study rooms and presentation rooms.” An additional student made the following comment:

I found that the number of laptops are not sufficient, and there are times when I was not able to get the laptop of my choice at the service desk. The coffee shop should be made 24 hrs so that people who are working late can get a bite to eat or drink late in the night without having to go out of the library.

All but one of the students who responded to the survey was a graduate student.

Seventy-seven percent of the graduate students who responded completed their undergraduate degree in India. Other countries where graduate students completed their undergraduate studies include: Thailand, United States, Turkey, Iran, Egypt, Canada, and China. Eighty-one percent of the respondents were male and 76 percent were studying engineering. The time spent at an U.S. university varied greatly among the respondents: 9 of them had been here for 1 semester, 10 of them had been here for 2 semesters, 10 of international students had been here for 3 semesters, 12 of them for 4 semesters, 1 of them for 5 semesters, and 12 international students had been here for more than 6 semesters. Eighty percent of the respondents were from India. Other areas represented in the study include: East Asia, Europe, Latin America, Mid-East, and Southeast Asia. Please refer to Table 2 for the specific number of students represented from each world region.

Interview Results

Fifteen students left an email address to be contacted for a follow-up interview. When contacted, 8 of the 15 students responded and coordinated a time to meet for an interview. All but one of the participants were current graduate students at NC State. The one other student was getting a second bachelor’s degree. Of the 8 participants 2

were female, and represented 6 different countries, including: Egypt, Iran, India, Thailand, China, and Taiwan.

When participants were asked if they went to the libraries in their native country all participants answered yes, but many of them only went occasionally. One made this comment when asked about how frequently they visited the library, “Very rarely, it was only to pick up books for my classes, apart from that nothing else.” Several students commented on the minimal amount of materials available. One student said, “The access to books were limited, especially textbooks.” Most of the students didn’t talk or interact with the librarians very much when they did visit the library. One student said, “They are not really my major. So sometimes the help is not that specific.” Students also commented on having to be on one of the computers in the library before they could have access to online resources. If students weren’t on one of the library’s computers they were unable to access content.

When participants were asked about their first experience with the library at NC State most of them expressed amazement, especially regarding the size of the library and availability of resources. One student said, “It’s pretty huge. The library we had I think was about, I’d say one fourth the size of this.” Another student was especially impressed with how well the library has kept track of materials and how far back the coverage of periodicals goes by saying, “Wow. 9 stories. They’ve got everything, especially like periodicals from 1940. You won’t find it online.” The overall atmosphere in the Learning Commons initially surprised other students. One student said:

I was totally surprised because the lobby is so bright and everybody was talking and chatting with friends. And we got huge TVs. And brand new computers apples macs. That was the first thing I saw. I was totally surprised because right here everyone is talking not just reading.

Another student made the following comment about the Learning Commons:

I was surprised. I like this area so much. It's so like modern and are the equipment are new because most of the libraries in my country are old, old fashioned style like you have only desks and a place to read, but not many computers, TVs games. Nothing like this. So it seems more fun here.

When students were asked what the librarians at NC State are able to help them with the immediate answer from almost all the participants was the online chat feature. Participants commented that the chat with a librarian feature is very convenient and has helped them a lot. A student commented, "Mainly getting books and finding the right articles and they are always responsive to my emails and IM chats. That's pretty helpful. To get information when you need it is what helps me a lot." Participants also mentioned that the librarians are able to help them find the right database, locate specific journal, how to use interlibrary loan. One student commented:

The librarians help me understand my course better. I'm getting more resources like internet books, links to databases...more often getting a huge amount of books. That was something new to me. I use to have one text and that was all I would consult. But right now I have two or three books that I usually read from and the access to databases, journals, and how to do online research that was something I learned from here.

There was one student who had a different response when asked what the librarians are able to help with, saying:

Nothing much. The website itself helps you a lot. You know where to look so you don't really ask the librarian for anything. The only thing I asked them was when they moved the Digital Media Lab, where did it go? If I want to print a poster. Just locations.

When participants were asked about what features they have used at the library many of them commented on the technology lending of headphones, ipads, laptops and e-readers; the digital media lab; textbooks that are on reserve; and the Zeutschel scanning machines. Many students also mentioned using the website to find books and articles.

One student mentioned using the find@ncsu link on Amazon. He is able to search for books and read reviews on the Amazon site and then click on the find@ncsu link and is instantly linked to the library catalog to see if the book is available at the library, instead of having to go to the library website and typing in the name of the book.

When students were asked what they value the most about the library the majority of students said the resources that are available, particularly the book collection.

Students also commented on the value of access to online journals. One student said the digital media lab is what he values the most because the large 30-inch screens help him view graph data in excel. One student commented on the hours on the library saying, “That they are open 24 hours. Sometimes when I study at home I just sleep. Sometimes it helps when there are people around.” One student commented on the convenience of the bus stop in front of the library. Another student commented on the environment and how the library has different spaces depending on the kind of work you need to do. He explained by saying:

Different places have different ways of studying for me. Going up to the stacks is for quiet reading, really quiet reading, where I just want to focus and sit. If I’m just meeting up with someone for a coffee and doing a project or homework I prefer sitting down in the coffee place. I like the area before the Special Collections. I love sitting there in the morning and working. I like the sunlight when I work.

Regarding challenging and frustrating situations in the library students reported a variety of issues. Most popular among these included how books are placed in the library and the difficulty of finding them. One student explained by saying:

Finding the books and the way these books are indexed and how to find them in the library it’s kind of, it’s a bit challenging. It’s not spread out evenly, I mean they have numbers and it keeps extending QS76 dot 5T dot and it keeps going on that way so it’s a bit hard to find the books.

One student mentioned what to do when a book you need is already checked out, “Sometimes lets say if a book is, you need the book and the book is already checked out by another student or faculty so that’s kind of challenging.” One student expressed frustration about getting the technology to work, specifically the printing and the desktops being slow to load after logging in. Another student commented on there not being a microwave available in the library.

The international students had many ideas on how to improve the library and additional services they could be added. One student suggested moving all the games to one side of the library so that there would be one wing for relaxation time and another wing for getting your work done. Another student mentioned having a newsletter each month so students could stay informed about new services and technology available at the library, she explained, “I know there is a lot of fancy update recently in the library. If if they can sort of keep us updated, what the new service available for this month.” Another student expressed a similar idea when he said he would like the library to send out mass emails about when library tours and classes are being offered. One student mentioned that there are often not enough textbooks on reserve and that the library should add more copies. Another student extended on this idea by saying:

I think they also need to buy more books that are popular because they have very few copies of them. I mean if there is there a way to measure the popularity of a books and how frequently people check them out. And how many people are trying to reserve the book.

An additional student commented that the technology lending of laptops should be longer than 4 hours inside the library, she explained by saying:

I just hope that laptops can be borrowed longer than that longer than 4 hours because sometimes I have a problem with my laptop and I want to borrow it for two or three days to finish the presentation or the work. I cannot take it home and then

work on it...I had one week where I had my laptop broken and I have to send it back to be fixed. I could not do anything much.

Another student commented that an introduction to the library would be great, but an ideal library workshop would be mid-semester and involve a small, 10 to 15 group of students in an intimate room where it is easy to hear. She offered more details by saying:

I don't think it would be very helpful at the very beginning because when we got here everything is overwhelmed anyway. So we have 500 million things needs to know at that point, and I need to know where is my classroom first. And I need to know how to register. Those kind of things will be the priority... After midterms first time. First semester after midterms, but before final...Also, I'd rather have a small group introduction so at that time my English was not good enough, I mean probably to ask, but I'm not that brave. So when there is 500 million people and even I have questions I will probably hold it. And I could probably not speak fast enough. Or the answers I don't quite understand. I mean I asked, but the answers, if they keep mentioning what is a call number and suppose everybody knows what call number is and then I'm not quite sure even I understand that it is really pronounced as call number, or is it cot number, or some kind of number... the size of the room, I don't have to shout out my questions and got answers so that I don't have to use both of my ears.

Discussion

The goal of this study was to examine international students' perception and use of the library, specifically: their perception of librarians, their expectations about the library before arriving to the U.S., what they perceive to be helpful services, services they find difficult to use or understand, and additional services they would like the library to offer. This section discusses the results of the study in terms of how they relate back to the goals of the study.

All of the survey respondents indicated international students are reliant on the library and use at least one form of library services. This confirms the research by Jackson (2004); Shaffer, Vardaman, & Miller (2010); and Wales & Harmon (1998) that international students are dependent on the library. Eighty-seven percent of the

international students who responded to the survey either agree or strongly agree that the library staff is knowledgeable. Students immediately associate the librarians with the online chat feature where they can chat with a librarian. The international students also seem to be heavily reliant on the website to find their materials, and will often consult the website before asking a question to a librarian. The international students' strong preference for non-verbal library services is in agreement with studies by Sarkodie-Mensah (2000); Robertson, Line, Jone, & Thomas (2000); and Mundava & Gray (2008) that language insecurity impacts the behavior of international students.

Based on international students' previous library experience in their native country, they have a very traditional image of the library, and are often surprised by the size of the library, the number of books, and the available technology. Students also seem to expect very general help from librarians; the idea of having a subject specialist librarian is unfamiliar because most students did not have this in their native country. Only 8 of the students surveyed had contacted their librarian subject specialist. This is a service the library should advertise and promote.

International students have found the interlibrary loan service to be very helpful and valuable. Students also find the wide variety of resources and technology that is available to be helpful. Ninety percent of the students surveyed use items on reserve. They also value and appreciate the motivating environment of the library, and the ability to go to different spaces depending on the type of work they need to do.

International students said both navigating the physical layout of the library and finding full-text articles online to be the most difficult things to understand about the library. Many students also expressed that the Library of Congress organization of books

to be very confusing and difficult to understand. Considering that almost 50 percent of the international students who responded to the survey disagreed or strongly disagreed that this resembles the library in their native country, it is easy to understand that they are confused. For most international students the materials available in their native library were limited, so they are unfamiliar with sorting through a large number of materials in order to find the one resource they need. Librarians should spend extra time at the desk and during classes to explain how the library is organized, specifically how books are arranged in the library and how to find a book using a call number.

International students are receptive to the idea of having a library workshop especially for them. They would prefer that it not be offered at the very beginning of the semester but rather midway through once they've had a chance to become acclimated to the university and their surroundings. Ideally the workshop would be in a small, intimate setting where it is easy to hear one another, with 10-15 other students. Topics the international students would like the workshop to cover include: searching for and finding books, using effective search terms to find articles, knowing when and how to cite sources in a paper, and speaking skills for presentations. Students' interest in knowing how to cite sources confirms the research of Robertson, Line, Jones, & Thomas (2000); Brown (2000); Tompson & Tompson (1996); and Amsberry (2010) that plagiarism is not well understood among international students. The international students' interest in the topic of speaking skills further confirms the language and communication difficulties these students face. International students would also like to see more copies of popular books that are often unavailable because they are checked out. The library should continue to think about how space is managed. A reoccurring

comment among the international students is to have an area similar to the Learning Commons with comfortable, modern furniture, but as a quiet area. Students pointed out that if they want to be in a silent area they have to settle for small, uncomfortable furniture.

Limitations

One of the biggest limitations of this study was the sample size; as previously mentioned, 54 of 2434 international students completed the survey, and 8 of 2434 participated in the follow-up interview. This is a 2.2 percent response rate for the survey. However, this is considered adequate for the study because a point of saturation and redundancy was reached in the responses. Also, based on the international student population at NC State (OIS, 2010) a considerably high number of students from India responded to the survey, indicating that the survey responses are not representative of the overall international student population at NC State (see Table 2).

Only international students were surveyed and interviewed for this study. There was no control group of U.S. students to compare responses. Therefore there is no way to know if the results here are particular to the international students at NC State, or if other non-international students would have had similar responses.

The online survey prevented any personal interaction between the researcher and respondents, which could have motivated more participation. Online surveys also prevent the ability to capture nonverbal or body language cues (Wildemuth, 2009). Considering that not all people are equally articulate and perceptive, the validity of the study will be questionable because the responses may not accurately reflect the participants' true feelings (Creswell, 2009). This issue is especially important in this

study, because while international students are expected to be proficient in English before they are accepted to U.S. universities the levels of English proficiency often vary from student to student. It is possible that some students may have misinterpreted questions. Also, the researcher's presence could have caused bias in the participants' responses. The time constraints of this research prevented a full transcription of all interviews, which could negatively affect the validity, and accuracy of the study; however, the triangulation of the surveys and interviews should strengthen the overall validity of the study.

Since the researcher was unable to gain access to individual email addresses there was one link sent out on the international student mailing list, as opposed to a customized link for each participant. When individual participants are contacted directly through email they are each given an individual Qualtrics link, and once the survey has been completed Qualtrics does not allow the link to be used again. This means that through the mailing list there was no way to prohibit participants from completing the survey multiple times. The researcher has no reason to believe that the same participant completed the survey multiple times, but it is a possibility and a drawback of this study.

Conclusion

International students make significant academic, political, and economic contributions to the U.S.; therefore, university libraries should continually evaluate and enhance services to the international student population to ensure their success in higher education. This study confirmed that international students are reliant on the library in some capacity, whether it is just to pick up books or to study in a motivating

environment; international students are dependent on the library. Overall, the international students seem very happy and pleased with the library; however, there are additional services the library could provide to further improve their library experience. The challenging and confusing situations mentioned by the students indicate what librarians should place more emphasis on during instruction sessions. There is still much room for growth to develop library programs and services that meet the needs of international students.

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Appendices

Survey Instrument

Have you ever been to the library at NC State?

- Yes
- No

Why have you never been to the libraries at NC State?

- The location is not convenient to me
- The libraries offer nothing that I need
- Other (please explain)

Which library locations have you been to? (please mark all that apply)

- D. H. Hill Library
- Veterinary Medicine Library
- Design Library
- Natural Resources Library
- Textiles Library

Please mark all library services you have utilized:

- Requested material through interlibrary loan or tripsaver
- Contacted your subject specialist (in person or via email)
- Chatted with a librarian through instant messaging or texting
- Attended a library orientation or workshop
- Used items on reserve (such as textbooks)
- Checked out devices from technology lending (laptops, cameras, ipods...)
- Used specialized software that is not available on your home computer (Photoshop, SPSS)
- Other (please explain)

How did you first find out about library services at NC State?

- International Services Office
- International Student Organizations
- Friends
- Class/Instructors
- Website
- Other (please explain)

When you first came to the library, what was most surprising, if anything?

What is the most difficult thing to understand about the library?

- Navigating the physical layout of the library
- Finding books
- Finding full-text articles online

- Knowing who to ask if you have a question
- Other (please explain)

Do you have any expectations about the library that have not been met?

- Yes (please explain)
- No

What (if any) services have you found especially helpful at the library?

Please rate the library on the following:

- The library is comfortable
- The library is in a convenient location
- There are quiet places to work and study
- The library staff is knowledgeable
- This library resembles the library in my native country

If the library offered a workshop for international students would you attend?

- Yes
- No

If so, what workshop topics would be most helpful to you?

- Explanation of common library services & terms (like an orientation)
- Searching for and finding books (including materials NC State doesn't own)
- Using effective search terms to find articles
- Knowing when and how to cite sources in a paper
- Speaking skills for presentations
- Other (please explain)

The Hunt Library plans to open in the Fall of 2012 on Avant Ferry Rd., will this location be more convenient to you than the current library locations?

- Yes
- No

Do you use other (non-NCSU) library facilities? If so what and why?

- Yes (please explain)
- No

If you have any other ideas or experiences about the library that you would like to share please do so here, otherwise please continue to the last section of the survey.

Please define your current status at NC State

- Undergraduate
- Graduate
- Non-degree seeking

In what country did you complete your undergraduate degree?

Please select your gender

- Male
- Female

If graduate student, in what country did you complete your undergraduate degree?

What is your major or area of study?

- Agricultural & Life Sciences
- Design
- Engineering
- Education
- Humanities & Social Sciences (CHASS)
- Management
- Natural Resources
- Physical & Mathematical Sciences (PAMS)
- Textiles
- Veterinary Medicine
- Undecided
- Other

How many semesters have you attended a university in the United States?

- 1 semester
- 2 semesters
- 3 semesters
- 4 semesters
- 5 semesters
- More than 6 semesters

Please select your region of origin.

- Africa
- Australia/New Zealand/Pacific
- Central America
- East Asia
- Europe
- Indian Subcontinent
- Mid-East
- North America/Caribbean
- South America
- Southeast Asia (Indonesia, Malaysia, Philippines, Singapore, Thailand, Brunei, Myanmar, Cambodia, Laos, Vietnam)
- Other

Interview Instrument

Did you go to any libraries in your native country? What was your experience like there? (What did you need help with? How did the librarians help you?)

What kind of interaction did you have with the librarians in your native country? How are the interactions you had with librarians in your native country different from the interactions you have with librarians here at NCSU?

What was your first experience like with the library at NC State?

What are the librarians able to help you with?

What features have you used at this library?

What do you value the most about the library?

What's the most challenging situation you have experienced in the library?

Is there a time you tried to do something in the library and were unsuccessful or felt frustrated?

What improvements or additional services could the library provide that would serve you better?