

Information Literacy and Global Readiness: Library Involvement Can Make a World of Difference

Angela Whitehurst

East Carolina University, Greenville, NC

Abstract: Information literacy has evolved to encompass a variety of skills as technology and the availability of information has increased. It is a fundamental concept of academic librarianship and the need for students to obtain these skills has increased as colleges and universities begin to globalize their curricula and include global readiness in institutional missions. This article reports survey data collected during a librarian-faculty collaboration to determine the effect of information literacy instruction on students participating in Anthropology: Global Understanding classes. Changes in the students' information literacy skills, successful teaching strategies, and their connection to global readiness are discussed.

KEYWORDS: information literacy, instruction, globalization, global readiness, collaboration

INTRODUCTION

During the last ten years, many countries have increasingly become more interconnected and interdependent as a result of growing commercial enterprises, increased migration, and rapid changes in technology and communication (Reimers 2009). Global community development has created new challenges requiring people to gain a better understanding of cultures worldwide. Currently, students attending institutions of higher learning find themselves in a vastly different world than their predecessors. They must develop a thorough understanding of the challenges facing the global community and its effects upon them. Learning how to properly seek and evaluate information about other cultures can help students avoid stereotyping individuals and improve decision making skills in their own lives. To accomplish this goal, the acquisition of information literacy skills and increased interaction with people from other cultures is essential.

Over the last few years, a number of colleges and universities have developed initiatives to globalize their curricula in an effort to increase students' knowledge of the world around them

and to become competitive and productive citizens. The University of North Carolina system and its constituent universities are among those engaged in this process. The University of North Carolina Tomorrow Commission, directed each university to “prepare its students for successful professional and personal lives in the 21st century, equipping them with the tools they will need to adapt to an ever-changing world.” The Commission also charged each institution to increase partnerships with foreign universities to promote global awareness and interaction among students (University of North Carolina Tomorrow Commission 2007). As a result of the Commission’s recommendations, East Carolina University’s Joyner Library embarked upon a collaborative effort with campus faculty and administrators to devise strategies for educating students to become globally prepared citizens.

For many colleges and universities, study abroad programs are the key element in providing students the opportunity to develop insights and understanding of countries, cultures, ethnic groups, and languages; however, only two percent of the nation’s college students study abroad (OECD 2009). Finances, fear, and relevancy issues prevent many students from going abroad, so institutions of higher education must develop new alternatives to bring these experiences to campus.

East Carolina University (ECU) located in Greenville, North Carolina, is the third largest university within the University of North Carolina system having an enrollment of 27,677 students (Office of Institutional Planning, Assessment, and Research, East Carolina University, 2008-2009). ECU developed its Global Academic Initiatives program to provide students global experiences without the extra requirements of travel, money and immersion. Partnering with twenty-five institutions in seventeen countries, the program uses low-bandwidth

videoconferencing and chat to enable students to communicate with their overseas counterparts (Fischer 2009).

Students may enroll in courses using one of two program options. The first option is a lecture exchange between an ECU faculty member and a foreign counterpart located at an international partner university. During a semester, each participating faculty member provides a one hour lecture via videoconference to their counterpart's class, giving them a taste of each other's culture and its relationship to the subject matter being studied. The second option, the Global Understanding course, emphasizes ongoing interaction between classes at ECU and foreign partners in a wide variety of disciplines. This teaching method requires participating classes to communicate with up to three international partner institutions per semester. Some class days are devoted to discussing issues such as college life, cultural and family traditions, religion and spirituality, stereotypes and prejudices, and at least one topic chosen by the students. Discussions are held between peers through videoconferencing and chat. After several sessions, concepts from each individual discipline are taught in conjunction with the previously mentioned topics. The students at ECU have a few local class days where they discuss their experiences with their U.S. classmates and engage in research assignments. The Global Understanding program is expanding into more disciplines each semester as interest and funding increases. Currently, courses are taught in anthropology, psychology, education, theatre, foreign languages, health education and promotion, nursing, and business (R. Chia pers. comm).

When the Global Academic Initiatives program expanded into divisions of Academic Affairs and Health Sciences on ECU's campus in 2008, Joyner Library became involved as well. The author attended a workshop with other faculty members to learn the course implementation process and to determine ways to provide appropriate library materials for participating courses.

During this process, the author recognized the need for students to acquire information literacy skills to locate access, evaluate, and use library resources in general, but foresaw the need to educate students in the Global Understanding classes specifically in the use of resources related to foreign countries and their cultures.

To further investigate the need for information literacy instruction in classes structured with a global focus, the author proposed a collaborative project with faculty members teaching introductory anthropology classes using the Global Understanding model as the teaching methodology. Faculty members reported that students who initially enrolled in their classes typically had a low level of knowledge about foreign countries and their cultures. The author seized this opportunity to reach out to the faculty and discuss ways information literacy instruction using reference resources and other appropriate scholarly resources could enhance the students' knowledge of their current foreign partners and provide them with better information literacy skills. A thorough understanding of the research process would assist the students in the future when learning about other countries and cultures as a part of their professional or personal lives; thus, serving to fulfill the university's goal to educate students for global preparedness. The author believes this study will benefit academic libraries participating in the globalization of their curricula. The results suggest emphasis on teaching specific skills can produce an increase in students' information literacy levels without investing an inordinate amount of instructional time. Also, emerging global curricula may provide an additional avenue for librarians to pursue the promotion information literacy and integration of pertinent library resources.

LITERATURE REVIEW

Over the last thirty years the definition of the term “information literacy” has been interpreted in many different ways by librarians and scholars; there is still no agreement on one definition of the term. Paul G. Murkowski coined the phrase in 1974 and defined it as “anyone who has learned to use a wide range of information sources in order to solve problems at work and in his or her daily life” (Grassian and Kaplowitz 2001). Other definitions contain elements of the existence of information needs, the necessity of engaging in the information seeking process, the use of tools to locate and access information, the synthesis and evaluation of information, and the realization that research takes time, practice, and attention to detail. As new definitions have emerged one finds the addition of ideas such as problem solving, critical thinking, lifelong learning, decision making, and social capital (Grassian and Kaplowitz 2001). Each definition expands the use of information literacy into a broader realm of people’s lives; they must be able to identify, locate, and evaluate information but they must also put it into practice in their own lives. As people are affected by globalization, they must apply these skills to all aspects of their lives. Common themes from these definitions can be found in the global readiness recommendations set forth by the UNC Tomorrow Commission which must be integrated in the curriculum at ECU and other universities in North Carolina.

Recently, scholars, educators, librarians, and information managers worldwide have begun to advocate the need for institutions of higher learning and other organizations to emphasize globally-focused curricula and information literacy. Reamers argues “schools and colleges around the world are not adequately preparing their students and other citizens to understand the nature of shared planetary challenges like international terrorism, regional and global conflicts and global warming.” He proposes that colleges and universities must teach their students “global competency” which he defines as the ability to understand the

interdisciplinary nature of global events and react to them in appropriate manner. Curricula should include the teaching of several foreign languages, globally focused courses in health, physical sciences, and numerous social sciences, and the value of a positive attitude toward cultural differences (Reimers 2009).

The United Nations Educational, Scientific, and Cultural Organization (UNESCO) and several other educational and library associations formed collaborative partnerships to promote information literacy in the areas of business and economics, education, healthcare, government and citizenship in more than 20 countries. In 2003, UNESCO hosted the International Colloquium on Information Literacy where participants penned the declaration “Towards an Information Literate Society,” to promote the teaching of information literacy and the benefits of an information literate society. Several principles contained in the document illustrate the burgeoning movement of information literacy education worldwide. The document stated information literacy is important in all segments of society and should be a fundamental component of every educational system. It is a key element of social, cultural, and economic development, and is crucial for political participation and lifelong learning. Furthermore, the authors of the document contend information literacy, access to information resources, and proper use of technology “plays [sic] a leading role in reducing the inequities within and among countries and peoples, and in promoting tolerance and mutual understanding” (Horton and Keiser 2008).

Christy Stevens, an academic librarian, and Patricia Campbell, a political science professor, used the concepts of global competency, global citizenship, and information literacy in a case study they conducted with students in a Global Studies course at the University of West Georgia. The librarian’s ultimate goal was to show students how using information literacy skills

could help them gather information, make better decisions, and understand how their lives fit into the world at large. During the course of their study, the authors wanted to show the students that research was a process which took time and practice to complete. As their skills improved, students would see other ways they could apply the skills to all aspects of their lives.

Information Literacy skills can be used to engage the students in campus and community organizations or national and international causes linking them to the world both locally and globally. The authors argue librarians and library instruction are the heart of developing globally prepared students. Stevens and Campbell (2006) state:

Information literacy is directly linked to global citizenship in that IL instruction focuses on the competencies that enable individuals to better understand their world and the role their choices and actions have in shaping that world. As such, IL has the potential to enhance social capital. By fostering the information literacy skills and habits of mind that are foundational for lifelong learning, students develop an increased awareness and understanding of themselves as members of the global community.

This case study developed from ongoing conversations between a librarian and a faculty member about the need to integrate information literacy skills into political science and global studies courses. The two colleagues worked as a team to fully integrate information literacy into the curriculum of a Global Studies course with the goals of increasing the students' information literacy skills, encouraging a sense of global citizenship, and becoming cognizant of the connection between information literacy, global citizenship, and the concept of lifelong learning. Together they developed the course goals and objectives, syllabus, assignments, library instruction sessions, and assessment measures. The librarian created pre-test and post-test instruments to measure the students' information literacy skills and worked with the faculty member to create assignments related to each step of the research process based on the Association of College and Research Libraries (ACRL) Information Literacy Standards. The

librarian was involved in every step of the assessment of the students' performance and provided feedback to the faculty member and students. The collaboration was deemed successful, as the students' information literacy knowledge increased; although, they recognized that one course would not be sufficient to provide the students all of the information literacy skills they need to become true lifelong learners. Stevens and Campbell also believed the goal of heightening the global awareness and competency of the students was achieved. For many students, their research into resource conflicts became very personal and they appeared to internalize how they were connected to the world and how their consumption of resources affected other people around the globe (Stevens and Campbell 2008).

METHODOLOGY

The purpose of this study was to determine if intervention with information literacy instruction focusing on appropriate reference and scholarly resources relating to countries and their cultures would improve students' level of information literacy skills. During the spring 2009 semester, approximately seventy-five students participating in ECU's Global Understanding anthropology classes, Anthropology 1050, were provided the opportunity to take an identical pre-test/post-test questionnaire to measure their level of information literacy skills before and after library instruction. Anthropology 1050 emphasizes virtual communication with a variety of countries to explore human diversity and the effects of globalization. The size of the population was relatively small as only five sections of the course were taught and class sizes were capped at fifteen students to keep the interaction with foreign partners manageable. Even though the population was small, the author believed the students enrolled in these courses would provide good insights into information literacy instruction developed around an emerging curriculum.

The author designed the questionnaire which the teaching faculty administered on the first day of class, along with other surveys given to students taking the Global Understanding course. Participation was voluntary and students gave their consent before taking the pre-test and post-test. A total of sixty-four students in the five course sections completed the pre-test. Fifty-seven students completed the post-test at the end of the semester; absenteeism, lack of consent, and students dropping the course may account for the lesser number of students completing the post-test questionnaire. Overall outcomes for each section of the course were measured and compared.

Divided into three sections, the questionnaire was designed to assess the students' performance in the identification of different types of library resources, evaluation and use of resources, and to gather demographic information about students which could provide further insight into their level of information literacy skills. In the first section, students were asked to identify sources they would use, such as travel guides, encyclopedias, newspapers and scholarly journals, to answer specific types of questions. Also they were asked to recognize appropriate citation styles for these sources. The second section assessed their application of information literacy skills for evaluating information and using appropriate resources in both print and electronic formats. The third section gathered demographic information in order to compare the skill levels of students in the individual sections of the course, determine the amount of time students used libraries and if experiences traveling or living abroad had an impact on their information literacy knowledge. (See Appendix)

The author offered the participating faculty members the opportunity to schedule information literacy instruction sessions with librarians from Joyner Library. One class participated in library instruction two times, another class three times; three classes did not

participate in library instruction. Each class had identical course plans and assignments for the semester. The author and another librarian who usually teaches instruction sessions for anthropology classes worked as a team to design lessons focused around concepts appearing in the pre-test/post-test questionnaire. After the completion of instruction, all five sections of the Global Understanding courses were given the identical post-test to gauge how well the students who received instruction learned information literacy concepts as opposed to the students who did not receive instruction. Also, the librarians and faculty members involved solicited feedback from the teaching faculty throughout the semester to determine how well the students applied the information literacy skills they learned.

RESULTS

In the initial section of the questionnaire, “Knowledge of Basic Resources,” the first two questions asked the students in all five classes to identify the type of information which could be found in travel guides and encyclopedias. The majority of the respondents answered both questions correctly on the pre-test and post-test questionnaires. The first question asked students what information they would normally use a travel guide to find (obtaining “information about hotels” was the correct answer offered for this question). The pre-test illustrated the percentage of correct responses ranged from 86.7% to 100%. The post-test questionnaire showed increases in the number of correct answers provided by all respondents (90.9% to 100%). One class remained at 100% for both pre-and post-test on this question. The class that previously scored 86.7% scored 100% on the post-test (an increase of 13.3%). Both of these classes received instruction. The classes who did not receive library instruction showed a 1.6% decrease in the number of correct responses. (Figure 1)

The second question asked the students to determine the type of information they would

find in an encyclopedia (the correct answer offered was “finding information about a country’s history”). Again, there was an increase in the number of correct responses overall between the pre and post tests (91.9% to 94.7%). One class scored 100% correct responses on this question; another class scored 71.4% on the pre-test and improved their score to 84.6 % on the post test (an increase of 13.2%). Both classes received instruction. The class showing an increase in the number of correct responses appeared to benefit from the instruction. The three classes who did not receive library instruction saw a decrease of 0.6% in the number of correct responses to this question. (Figure 2)

Looking at all the student responses to these two questions it appears their information literacy skills are good when identifying appropriate resources to use for learning background information about countries. The author expects many students have had exposure to travel guides and encyclopedias before entering college or they chose the correct answer by process of elimination. Even though most students excelled in answering these questions initially, analysis of the classes who received and did not receive library instruction shows some interesting results. The classes who did not attend instruction sessions showed slight decreases in their percentage of correct responses and the class which attended three instruction sessions showed a considerable increase.

Questions #3 and #4 focused on the characteristics of various periodicals. The teaching faculty required students to read newspapers from the United States as well as English language papers from their partner countries. They were also required to use scholarly journals as a part of their cross-cultural research paper. The faculty reported students experienced difficulties in distinguishing between popular and scholarly sources and wanted to see improvement in this area. The identification and evaluation of resources is an important skill for students to develop

so they can choose the most appropriate types of sources to meet their information needs. Comparing and contrasting popular and scholarly journals provided an excellent example for teaching this information literacy concept.

The first query asked the students what type of information they would NOT expect to find in a newspaper (the correct answer offered was “scholarly research articles”). The pre-test of all five classes showed 50.0% of the students selected the correct answer. The range of correct responses for the individual classes varied from 43.8% to 60.0%. The students who received library instruction demonstrated substantial increases on the post-test while the students who did not receive instruction posted a decrease in the number of correct responses. (Figure 3)

Similarly, the second query asked the students to identify the characteristics of scholarly journal articles from the choices provided and to choose the answer that was NOT a characteristic of a scholarly article. The correct answer offered was “articles are biased and present only one point of view.” The pre-test of all five classes showed 76.6 % of the students chose the correct response. The percentage of correct responses for the individual classes ranged from 72.7% to 87.5%. Again, the classes that received instruction increased the number of correct responses to this question on the post-test. (Figure 4)

The classes that attended information literacy instruction sessions demonstrated increased skill in identifying the characteristics of different types of journals, whereas the students who did not attend showed no increase in this skill. During the instruction sessions, the librarians devoted a large portion of time to teaching and reviewing the characteristics of popular and scholarly journal articles. They used active learning techniques to teach students how to distinguish between the different types of journals and to understand their use in various types of

research. Learning activities included: dividing the students into groups and giving them physical examples of each type of journal to compare and contrast, providing them with American Psychological Association (APA) style manuals and citations of different sources to label the parts of each citation and reviewing their working bibliographies to determine the strengths and weaknesses of the sources and the correctness of their citation style. A document camera was used to project the bibliographies to facilitate group review. This utilization of time appears to have been beneficial to the students. Based on the data collected in this study, the author concludes that most freshman have not had much, if any, exposure to scholarly journals prior to attending college. Detailed exposure to these materials is necessary early in their studies, if they are to develop effective information literacy skills.

The final question in the first section of the questionnaire asked the students to identify the citation of a scholarly journal article. The author posed this question because of concerns expressed by both the teaching faculty and one of the librarians involved. In the past, each noted difficulties experienced by students trying to differentiate sources based on their citations. Many students appeared not to be able to discern the individual elements of a citation and could not interpret them to identify the source or to determine its suitability for research. Citations of books, chapters in books, and scholarly journal articles appeared to be the most challenging for students to interpret correctly, causing them great confusion and frustration during the research process. Interpreting citations is an important information literacy concept; research requires the ability to identify parts of citations and evaluate them as a whole in order to access and use the source properly.

The questionnaire provided the full citation of a book, scholarly journal article, and a newspaper article. It directed the students to choose the citation of a scholarly article from

choices provided. The pre-test results from all five classes found 48.3 % correctly chose the citation of the scholarly article. The percentage of correct responses from the individual classes varied widely from 26.7% to 75%. Interestingly on the post-test, all classes showed an increase in the number of students correctly choosing the scholarly article citation. The class that showed the most improvement, a 73.3% increase, engaged in three library instruction sessions.

(Figure 5)

The information literacy instruction related to citations appears to have benefited both classes who received instruction, but it had the most profound effect on the students attending an additional instruction session. Regarding the small increase in the scores among the students who did not receive instruction, it is possible that this was due to the requirement for all students to use both popular and scholarly journals in their assignments. This exposure may have increased their skills even though they did not participate in formal information literacy instruction.

The amount of instruction time appears to have had an effect on the increase in this particular skill also. Over the course of the instruction sessions, the librarians engaged the students in active learning exercises to separate the components of the citations, analyze each one, and identify the correct source based on their evaluation. Furthermore, the teaching faculty requested that the students and librarians critique the students' working bibliographies as a group to evaluate each other's work based on form and content. It seems likely that the amount of instructional time spent developing this skill had a bearing upon the increase in the number of students who could correctly identify the appropriate citation on the post-test.

The second section of the questionnaire, Application of Knowledge, focused on the evaluation and use of resources during the research process. The author devised situational questions to determine the students' ability to evaluate the credibility of resources, both print and electronic, and provide insight into their use of resources. The first situational question asked students to determine how they would identify the current boundaries of a country if they found an electronic map of it that did not contain a date. Students chose the BEST answer of the four resource options presented to them. The choices included: do nothing; if it is electronic it must be current, compare to a printed atlas, consult maps from the United Nations Map Division web site, and consult the country's official government web site.

Analysis of the pre-test results from all five classes indicated very few of the respondents chose the option to do nothing. "Comparing the information found to a printed atlas" was one of the more popular choices while "consulting maps from the United Nations Map Division" was less popular. "Comparing the information to the country's official web site" appealed to many students. After instruction, little change occurred in the number of students answering that they should do nothing. There were slight increases in the number of students who felt comparing the information to a print atlas was the best choice. Larger increases were noted in the amount of students who chose comparing the map to those on the United Nations Map Division web site. All classes posted decreases regarding the choice of using the country's official web site.

The librarians wanted to teach and reinforce the skill of evaluating web sites for credibility. By using electronic maps from the Internet, the librarians illustrated the concepts of authority, relevance, currency, accuracy, and purpose, all of which should be considered before using any web site as a resource for research. As an example, the librarians displayed several maps of the disputed region of Kashmir during instruction. They used maps from the United

Nations Map Division web site as the “credible source” and the official government web sites of India and Pakistan as the “questionable source” because of the governments’ opposing viewpoints related to ownership of the disputed area. The visual representation of each map caused the accuracy and purpose of the web sites to be placed into question. The librarians asked the students to evaluate each resource and determine the BEST one to use for verifying boundaries. After looking at the governmental web sites and seeing possible biases, the students better understood the question of credibility especially in cases where different forms of government and the viewpoints of political leaders may play a role in the way information is presented.

Among the students who did not receive instruction, the author was surprised to see a decline in the number who said they would use the country’s official website. Several reasons could contribute to these results, including teaching faculty discouraging or limiting the use of free web sites for research, the students being less attracted to the word “official” after taking the class once they became more familiar with the governments and their viewpoints and biases, or the lower number of students taking the post-test may have affected the percentages because of the small population size.

After analyzing these results of the map question, it became evident that two choices could be considered the BEST answer: comparing to the print atlas or using the United Nations Map Division web site. With greater increases on the post test shown by all classes who felt using a United Nations map was the best option, the author presumes students prefer to use electronic resources if possible or may lack access to current print atlases. (Figure 6)

No matter which choice was deemed the BEST answer at the time of this study, as society moves

further into the electronic age, the ability to evaluate information available from the Internet is an information literacy skill that will be of utmost importance.

Another question related to evaluating sources asked the students how they would determine if the credibility of information they found in a newspaper article about an event occurring in their assigned country. They were asked to check all applicable responses. Choices included: determine the bias of the newspaper (government run, independent, etc.), discuss it with a friend, compare the information to other resources I found, and determine the type of article (opinion piece, editorial, news report, etc.). All classes showed an increase in the number percentage of students selecting “determine the bias of the newspaper.” However, analyzing the figures by the number of information literacy instruction sessions attended shows a higher increase in the percentage of students choosing this answer; a 5.6% increase for those attending two library sessions and 12.5% increase for those attending three sessions, as opposed to a 1.7% increase for those who did not attend instruction. The choice “determining the type of article” presented similar results with the classes who received instruction increasing their percentage of choosing this response; 20% for those attending three sessions and 5.4% for those attending two sessions, while only a 1.7% increase was noted for the classes who did not receive instruction. Adversely, the percentage of students who selected “compare information to other resources” declined in all classes, but the percentage decrease was less in the classes who received instruction, 8.7% (three instruction sessions) and .5% (two instruction sessions) than in the classes who did not (18.7%).

The increase in evaluative skills related to bias in newspapers and determining the types of articles published probably came as a result of all classes having to read various types of newspapers throughout the semester. The author supposes the greater increases shown by the

classes who came for instruction were a result of participation in active learning exercises related to the characteristics of different types of journal articles and examining physical and electronic copies in the instruction sessions. The author would like to have seen increases in the percentage of students choosing “compare information to other sources I found,” but the wording of the question may have made the students focus more on answers directly related to newspapers as opposed to the information they contained.

The usage of library resources was another concept addressed in the questionnaire. The librarian posed two questions in an effort to gauge the effect of library instruction on students’ perceived usage of resources for assigned research topics. The first question asked the students to choose tools they would use from the choices provided if they were assigned to write a paper about one aspect of a foreign country where they had not lived. The students were directed to check all applicable answers to determine which resources they would choose. The choices included searching Google, reading a newspaper from the assigned country, visiting the library or its web site, and purchasing a research paper about the topic. The librarian deemed the first three choices as plausible answers, while the last one was not.

All classes showed a decline in the number of students who chose “searching Google” as an option for research, ranging from a 1.7% decrease to a 15.1% decrease. Also, all the classes posted a considerable increase in the percentage of students asserting they would read a newspaper from the assigned country (31.3%-62.5%). Interestingly, all but one class recorded a decrease in the percentage of students who stated they would visit the library or its web site. As a results of instruction the author expected to see a decline in the use of Google and increases in the use of newspapers and the library or its website; however, the results did not provide a clear link between information literacy instruction and resource usage.

Library instruction may have had an effect on some students in the participating classes, but results do not appear conclusive. According to their responses, students will use Internet search engines, such as Google, for some of their resources which may be an appropriate choice as long as they evaluate the information they find on the web. The decrease in the use of search engines for those who had library instruction may be attributed to discussions and participation in active learning activities highlighting the evaluation process and providing them examples of credible and questionable web sites. However, instruction does not account for the decline by the classes who did not participate in library instruction. The students that did not receive instruction may have relied more on one particular type of source like newspapers or more likely the teaching faculty may have discouraged or restricted the use of Internet sources.

The large increase in the number of students saying they would use newspapers from the assigned country could be attributed to the requirement that they use foreign newspapers written in English throughout the entire semester. Continued exposure to this resource likely increased its use by all classes. Library instruction appeared to increase the ability of the students to evaluate the type of source they used for its credibility, even if it did not increase the likelihood of usage.

All students who received instruction stated on the pre-test that they would visit the library or its web site. The 7.7% decline on the post-test in the class that came to the library three times is not as noteworthy as it would seem because it only equates to one person. There could be a number of reasons that person did not choose using the library as a resource including: relying solely on the Internet for information, a bad experience with the research process, or not checking all possible answers to the question. Even though it appears library instruction may not have increased usage by those who participated in library instruction, it did not appear the

experience adversely affected their answers. However, the author believes the lack of exposure to the library and its resources may account for the decline in the number of students choosing this answer among the classes who did not receive instruction.

The final situational question asked the students what resources they would use to learn about a country's culture and customs if they decided to study abroad in France for a year. The choices provided were Google, a travel guide, an encyclopedia, and a book. The students were asked to check all applicable resources and all choices were deemed plausible ones. Mixed results materialized from this question also. The overall results comparing all five classes showed a 16.5% decrease in the number of students who would use Google from (84.4% to 67.9%), less than a 1% change in the number of students choosing to use travel guides and encyclopedias, .9% decrease (81.3% to 80.4) and a .2% increase (76.6% to 76.8%) respectively, and a 13.2% increase (54.7% to 67.9%) in the number of students who believed they would use books.

The class that received library instruction twice showed a 7.5% decrease (87.5% -80.0%) in the use of Google and a 12% increase (81.3% to 93.3%) in the use of books. The class that received instruction three times posted an enormous decline of 61.5% (100.0% to 38.5%) in the use of Google, but showed a notable decrease in the percentage of students who claimed they would use books also. The percentage dropped from 73.3% to 61.5% (an 11.8% decrease). Interestingly, the classes who did not receive library instruction increased the percentage of their responses about using books from 33.3% on the pre-test to 57.1% on the post-test (a 23.8% increase). Analyzing the classes individually, it appears library instruction may have had an impact in the decreased use of Google, but little or no impact on the use of travel guides, encyclopedias, and books.

The final section of the questionnaire asked demographic questions to determine student enrollment in individual classes, travel abroad experience, and regularity of library use. All of the questions in the first two sections of the questionnaire were filtered and analyzed by class to determine the impact of information literacy instruction and have been discussed in the results of this study. Travel abroad and living in a foreign country proved difficult to analyze due to the size of the population studied, the variety of responses, and the exclusion of international students from consideration; therefore, results for this question were omitted.

Regarding library use, the questionnaire asked students how often they used library resources, either print or electronic, during a given semester. The answer choices included frequently, occasionally, and never. Comparing the overall figures from the pre-test and post-test the results showed slight increases in the number of students who used the library frequently. The analysis of the data related to the instruction sessions offered an interesting scenario. The class that participated in instruction twice showed a decrease in the number of students who said they used the library frequently. On both the pre-test and post test all students said they used library resources either occasionally or frequently, but after instruction the choice of occasional use increased. Similarly, the percentage of students who stated they would use the library frequently declined. The class that participated in instruction three times recorded an opposite set of results. A few students stated they never used the library on both the pre and post tests. Those who chose the response “occasionally” declined 42.5% while the number of students who said they “frequently” used library resources rose 41.5%. Only small percentage changes were recorded for each answer from the students who did not receive information literacy instruction. (Figure 7)

The author believes library instruction played an important role in increasing the use of library resources among the class that received instruction three times. Instruction gave them more exposure to resources, more practice with research skills, and by raising their comfort level in seeking assistance when needed. Results from the class that received instruction twice were more difficult to discern. Several reasons could explain the decline in the number of students who said they used the library frequently, but none provide concrete answers. It appears the students' perceptions changed during the semester. They may have stated on the pre-test that they frequently used the library because they thought it was the answer the librarians expected. They may have perceived they used the library frequently until they realized all of the resources available to them and came to the conclusion that they did not use the resources as much as they initially thought. Similarly, they may have used resources heavily during a previous semester, but only used them on an occasional basis during the semester when the study was conducted. It may have been necessary to make the question less ambiguous by defining a specific number of times associated with the answers "occasionally" and "frequently".

The classes who did not receive instruction showed slight increases in the number of students who said they used library resources frequently and a decrease in the number of students who said they never used the library. These classes had the same assignments as students who attended instruction. The requirements of the assignments could account for the changes. Teaching faculty may have encouraged the use of library resources even though they did not participate in library instruction. Also the need for specific types of information for the assignments may have led students to use the library's resources on their own. Mixed results remained prevalent in this portion of the questionnaire. Library instruction may have played a role in more frequent use of library resources for some students, but not all.

LIMITATIONS OF THE STUDY

Due to the small size of the population, the results may not be generalizable to a larger population of students. Also the population size and composition appeared to affect the results about the question related to travel and living abroad making those results difficult to analyze. Some questions gauged student perceptions of the information they knew or the actions they would take in certain research situations. Student perceptions and their actions in real-life situations may not be analogous to the answers they provided on the questionnaire. Mixed results arising from library usage questions made it difficult to draw strong conclusions about the effectiveness of information literacy instruction in this study.

FURTHER RESEARCH

Many avenues exist for further study of the integration of information literacy into globalized curricula. Librarians would benefit from learning about students' previous experiences with research and the different types of information resources they used in the past to determine their base level of information literacy skills when they begin college courses. Studying the various types of students enrolled in Global Understanding classes may be advantageous as well. Differences in the students' age, gender, race, ethnicity, university status, or academic achievement may affect their skill levels. Also, the transferability of these ideas into different disciplines, higher level courses, and distance education courses would require further research.

LESSONS LEARNED

This collaborative project between librarians and faculty members produced both expected and unexpected outcomes. The results confirmed the notion that information literacy

instruction benefitted students in Global Understanding courses especially when dedicating considerable amounts of each class time to teaching specific skills. Students performed at satisfactory levels with the identification and use of basic reference resources related to countries and cultures, but they needed instruction to develop more advanced skills such as evaluation and application of information.

With the assistance of the teaching faculty, integrating information literacy instruction did not take an inordinate amount of time or extra effort to achieve. The librarians and faculty scheduled multiple instruction sessions because a one-shot session would be insufficient for teaching the necessary skills required for the assignments. However, teaching specific skills important to the faculty members could be accomplished in two or three class sessions. Active learning exercises proved extremely helpful in teaching more advanced information literacy skills and they also served as an informal assessment tool to measure the students' progress.

Even though this study provided mixed results, the author believes integrating information literacy instruction in globalized courses is an avenue librarians should investigate. Instruction designed to teach or reinforce the location and access of country and cultural information as well as other appropriate library resources combined with an emphasis on synthesis and evaluation will benefit students over time. Although students cannot become proficient in the use of information literacy skills in a few classes or one semester, constant use of these skills will help them become better analysts of information, better researchers, and better decision makers. These life-long skills will assist them in both their personal and professional lives as the global community continues to evolve and provide challenges and benefits during the 21st century.

REFERENCES

- Chia, Rosina. "Global Academic Initiatives." personal communication, September 9, 2008.
- Fischer, Karen. 2009. "East Carolina U. uses simple technology to link its students with peers overseas." *The Chronicle of Higher Education*, May 8, 2009. <http://chronicle.com/free/c55/i35/35a02302.htm> (accessed May 15, 2009).
- Grassian, Esther S. and Joan R. Kaplowitz. 2001. *Information literacy instruction: Theory and practice*. New York: Neal-Schuman.
- Horton, Forest W., Jr. and Barbie E. Keiser. 2008. Encouraging global information literacy. *Computers in Libraries* 28: 8-9.
- Organisation for Economic Co-Operation and Development. 2009. *Education at a glance 2009: OECD indicators*. <http://www.sourceoecd.org/vl=1407749/cl=39/nw=1/rpsv/ij/oecdthemes/99980029/v2009n17/s1/p11> (accessed November 12, 2009).
- Office of Institutional Planning, Assessment, and Research, East Carolina University. 2009. *Fact book 2008-2009*. <http://www.ecu.edu/cs-admin/ipre/FactBook2009.cfm> (accessed May 7, 2009).
- Reimers, Fernando. 2009. "Global competency is imperative for global success." *The Chronicle of Higher Education*, January 30, 2009. <http://chronicle.com/weekly/v55/i21/21a02901.htm> (accessed May 8, 2009).
- Stevens, Christy R. and Patricia J. Campbell. 2008. Collaborating to connect global citizenship, information literacy and lifelong learning in the global studies classroom. *Reference Services Review* 34: 537-540.
- University of North Carolina Tomorrow Commission. 2007. *Executive Summary*. <http://www.northcarolina.edu/nctomorrow/execsummary.pdf> (accessed June 19, 2009).