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Academic subject guides : a case study of use at San José State University

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**ACADEMIC SUBJECT GUIDES:
A CASE STUDY OF USE AT
SAN JOSÉ STATE UNIVERSITY**

A Thesis

Presented to

The Faculty of the Graduate School of

Library and Information Science

San José State University

In Partial Fulfillment

of the Requirements for the Degree

Master of Library and Information Science

By

Shannon M. Staley

August, 2005

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ABSTRACT

ACADEMIC SUBJECT GUIDES: A CASE STUDY OF USE AT SAN JOSÉ STATE UNIVERSITY

By

Shannon M. Staley

Subject guides are lists of resources created by academic librarians to assist students in meeting their research needs. While academic librarians ascribe great importance to the creation and maintenance of subject guides, it is often difficult to tell whether students and faculty find them useful. A review of the literature reveals a lack of user-centered data in this area. This study involves the distribution of two survey research instruments to investigate if and how undergraduate students and teaching faculty use subject guides at San José State University. Students in three areas of study—Nursing, Journalism & Mass Communications, and Organization & Management—are surveyed on their use of subject guides. Teaching faculty across all disciplines are also surveyed on the use of subject guides in their field(s). Study results show that students who have received library instruction are likely to use subject guides more frequently. Also, teaching faculty members who use subject guides are more likely to encourage their students to do so.

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CHAPTER 1

Introduction

Subject Guides Defined

Stevens, Canfield and Gardner (1973, p.41) define a subject guide as a “kind of map to the resources of the library [that lists] various resources...designed for an introductory exploration of a subject.” Academic librarians view subject guides—also called research guides, pathfinders, electronic library guides, and library guides—as a critical resource in helping students get started on their research in a particular subject area. They are also important reference tools for the librarians themselves who are often called upon to answer questions on a subject that is outside of their primary area of expertise.

Typically, subject guides contain lists of key resources on a particular area of study and reside on an academic library web site. Books, Articles, Web Sites, and Links to Local Information are some of the page headings one might see within a web-based guide. However, subject guides existed in paper form long before the World Wide Web. The advent of the copy machine in the 1970’s actually led to wide distribution of subject guides in libraries and their subsequent popularity among librarians (Regan, 1999).

Subject guides are the academic librarian’s response to complaints of students’ poor research habits, and they are often referred to in library instruction sessions as a starting point for research at San José State University. The guides are meant to educate students on the various library resources available on a particular topic and the correct use of these resources—whether scholarly or popular, primary or secondary—in

researching and completing their course assignments. Some subject guides also include tips on searching, citing research, and evaluating information to determine how authoritative and relevant it is to the purpose of an assignment or term paper. This has become particularly important in the web environment, which promises quick information but offers little guarantee of its accuracy or authenticity.

While academic librarians ascribe great importance to the creation and maintenance of subject guides, it is often difficult to tell whether students and faculty find them useful. Web site usability testing often yields inconclusive results because the test sample is not representative of the actual campus population. Also, testing conditions are not relevant enough to the users' actual information-seeking environment. Even web log statistics are vague indicators of use since it is uncertain whether the total number of hits reflects students' or librarians' use, and in many cases, web site statistics software does not allow a breakdown of different sections within the guide. These statistics have become particularly problematic at San José State University's King Library where academic and public librarians both rely on the use of subject guides to provide service to the campus community.

Subject Guide Creation at San José State University

San José State University grants bachelor's and master's degrees in 134 areas of study which are supported by subject guides as well as course-integrated library instruction and hands-on workshops. Subject guide content is managed by a database-driven content management system using ColdFusion and Microsoft SQL. With this system in place, access to online databases—a popular library resource—was categorized

by discipline and linked to corresponding subject guides in the hope that students using them would also notice other resources available through the subject guide.

In addition to the mandatory list of library databases relevant for each subject area, other pages of resources within the guides can be crafted to the needs of different academic programs on campus. The system was deliberately set up to offer librarians flexibility in customizing guides to particular subject areas while at the same time retaining the same interface and usability protocols that users would encounter from one guide to the next. For example, librarians can create subject-specific annotations for resources in their area of expertise, the content of pages can be broken into subheadings of choice, and each guide contains a promotional box that can be populated with miscellaneous information such as a librarian's office hours, discipline-related library events, or notice of a new library resource. Librarians are also able to link from their subject guides to supplemental course materials maintained on the campus server. The flexibility of this system nicely unites a concern for academic freedom with that of federal accessibility standards¹ and current World Wide Web Consortium guidelines². Moreover, librarians are able to create new guides and update the content of existing ones independently of the King Library Web Team, without having to practice any web development languages themselves.

¹ Section 508 of the Rehabilitation Act Amendments of 1998 requires that electronic information be accessible to persons with disabilities (<http://www.access-board.gov/sec508/508index.htm>).

² The World Wide Web Consortium (W3C) provides protocols and guidelines to ensure web site interoperability (<http://www.w3.org>).

Research Problem

There is a need for more rigorous investigation into how academic subject guides are used by students and faculty in a university setting. Use of subject guides is likely to differ from one school to the next, depending on the size of the student body, the focus of curricula, students' use of the library, and a host of other factors. Since it is impractical to investigate all types of students using all types of subject guides, this research—a case study—examines the use of subject guides at San José State University among students in three different areas of study—Nursing, Journalism & Mass Communications, and Organization & Management. The use of subject guides among teaching faculty is also examined. In particular, this exploratory study seeks to answer the following questions:

- How frequently do students in different academic programs at San José State University use subject guides? Are there unique trends in use among different groups?
- How frequently do teaching faculty members use subject guides?
- What factors, if any, positively impact the use of subject guides among students?
- Do students and teaching faculty perceive subject guides as useful?
- How can librarians make subject guides more useful for different academic communities at San José State University?

While this study examines broad usage patterns among teaching faculty in all departments, Nursing, Journalism & Mass Communications, and Organization & Management students are surveyed on their use of subject guides with the hope of introducing discipline-specific trends among primary users. See Chapter 6 for more information on why these particular disciplines were originally chosen.

CHAPTER 2

Literature Review

While much of the literature on subject guides focuses on establishing guidelines, formats, and cost-cutting measures, very few of these recommendations are backed by user-centered data. Even studies involving usability testing of subject guide web pages with student and faculty participants is questionable since test samples are too small to be generalizable. However, survey research conducted in this area shows the potential of reaching a broader audience.

Lack of User-Centered Data

Early recommendations on subject guide creation stress consistency of format and include a number of potential content ideas, yet offer no insight into how users perceive them. Warner (1983) outlines how subject guides at MIT adhere to a rigid pattern of introduction and definition of scope along with lists of books, encyclopedias, handbooks, bibliographies, journals, journal articles as well as reviews, symposiums, and government documents whenever appropriate. Stevens, Canfield and Gardner (1973) add that subject guides contain lists of subject headings. Breivik (1982) notes that subject guides should also include indexes, abstracts, and other relevant supplemental materials.

In subsequent articles, user needs are looked at and mentioned, but not backed by any empirical evidence or user feedback. Jackson (1984) emphasizes a need to change headings in subject guides from a type of source to a process or action to be accomplished. He points to the example of older headings such as Abstracts, Indexes, Monographs, and Bibliographies and suggests replacing them with new headings that

reduce library jargon, like *Getting Started*, *Finding Articles in Journals*, and *Finding Lists of Other Sources*. Similarly, Peterson and Coniglio (1987) comment on the readability of subject guides from seven large academic libraries. They conclude that library tools and information are not easy to explain or understand, and that the subject guides selected for the study were found to be written at a complex reading level, one that needed to be simplified in order for students to make proper use of them. However, student users were not involved in their study.

Later studies emphasize the need for more usable subject guides beyond improved readability, but again, fail to support this with empirical evidence. Kapoun (1995) notes that subject guides should not be so patterned and formulaic that they fail to guide students down different avenues of the research process. Lavery (1997, p.59) expands on that criticism by suggesting that subject guides include “a complete research strategy within a subject area rather than limitation to the traditional list of reference tools.” She further notes that building in active links to instructions on how to use different resources (e.g. the library catalog) helps to make the subject guide a more complete research tool. Also, Dahl (2001) points to a number of guidelines for creating subject guides including consistency, readability and usability, although she uses previous literature instead of user studies to define these categories for evaluation.

Morville and Wickhorst (1995) emphasize guidelines in selecting electronic resources for inclusion in online subject guides to help patrons make sense of the vast amounts of information available on the Internet. They recommend that librarians consult virtual libraries, web information directories, Internet search engines, and online

communities for different electronic resources and check them against criteria for inclusion in the guide. Silet (1999) reiterates the need for criteria governing the selection of web resources for subject guides. He further notes the need to document them as part of the library's overall collection development policies. Certainly, having selection criteria makes sense. However, little insight is provided on how subject guides are actually used by patrons.

Some articles emphasize the need to pool resources and collaborate with other libraries and campus communities in building subject guides to save time. For example, Stevens, Canfield and Gardner (1973) claim that building a subject guide takes about fifteen hours (although it is unclear how they arrive at this conclusion) and advise librarians to share their guides and adapt others' for their own use to conserve staff resources. Warner (1983) also points to the possibility of interviewing library volunteers for creating subject guides in the interest of saving time. Thompson and Stevens (1985) detail a project in which one of the authors worked with a library science reference class to develop a series of subject guides for different topics. This, they claim, enabled library science students to practice their research and collection development skills in a particular subject area, while at the same time helping supply the library with new subject guides to assist other students. Similarly, Sugarman and Demetracopoulos (2001) discuss their partnership with teaching faculty, graduate students, and other librarians in creating a world history subject guide to broaden the scope of accessible resources and build a vested interest in its use.

More recently, a number of commercial products and new technologies have emerged that may be used to assist librarians in further streamlining the creation of subject guides. Antelman (1999) describes the benefits of database-driven technologies that allow web managers to control the information architecture and maintain design consistency of library web sites. Bills, Cheng, and Nathanson (2003) describe examples of two libraries using relational databases to diminish the time needed to create subject guides. They note that with a database-driven solution in place, librarians no longer have to maintain proficiency in web development languages and skills. Further, since identical resources and descriptions often occur in multiple subject guides, duplication and maintenance efforts are largely reduced through this new technology. OCLC's *Pathfinder*, Queensland University of Technology's *Into Info*, and Ex Libris' *Metalib* are several products that offer streamlined development capabilities and support sharing of subject guide resources among those in the library profession.

While many of the aforementioned authors provide what seem like common sense guidelines to subject guide creation, formatting, and streamlining possibilities, it is not clear why they are making such suggestions or on what grounds they are based. None of them examined how campus communities actually made use of subject guides, although such information is critical to determining how subject guides should be created or made commercially available.

Limitations of Usability Testing

Even studies that seek to address user concerns have their share of limitations. Several authors conducted web site usability studies in an attempt to discover the

usefulness of subject guides as research tools with their targeted audience: students and faculty. At the University of Washington, two graduate students, seven undergraduate students, and one teaching faculty member participated in usability testing of subject guides. Most of the participants noted that they rarely or never used the subject guides for research purposes (University of Washington, 2002). At the Massachusetts Institute of Technology, usability testing of the MIT Library's web site, catalog, subject guides, and databases was conducted with four graduate and four undergraduate students. Overall findings showed that students were not familiar with these pages (Hennig, 2002). At the University of Rochester, Reeb and Gibbons (2004) conclude that students "do not relate well to subject guides" on the basis of several usability tests with four to six undergraduate students as well as other findings in the literature.

While the above studies seek to include a mix of academic users from various majors and research fields, the samples are too small to be representative of the heterogeneous user population of a university. Nielsen and Landauer's (1993) mathematical formula supporting the use of a small group of test participants is meant to be applied to a homogeneous test group, not a university full of students and faculty specializing in different disciplines with diverse research skills and needs.

Survey Research Shows Promise

Survey studies with questionnaires to investigate the use of subject guides offer more promising results because they have the potential to reach a wider audience and yield more generalizable data. At Duke University, over one thousand library patrons were questioned on their use of subject guides by way of a web site pop-up and email

survey. The results revealed that 53% had never used subject guides and another 24% reported rare usage (Jackson, 2003). In another study, undergraduate students filled out a survey after participating in usability testing of the Bucknell University Library's subject pages (O'Neill, 2002). The survey instrument itself is one of the more thorough in that it asks students to rate the usefulness of fifteen different sections of the library's subject guide pages. But the survey is administered to only twenty-one users.

Research in this area is still at an exploratory stage. There is little, if any, data to suggest usage trends at the campus level. Ultimately, a more creative approach to survey research is needed to cover a more representative sample of the user population and to yield generalizable findings on usage trends. Once this has been established, more focused qualitative approaches such as usability testing and focus group studies can be employed to observe user behaviors in greater depth, further enhancing our understanding of how campus communities interact with subject guides.

Academic Librarians and the Importance of Subject Guides

Despite unsuccessful attempts to nail down student and faculty use of subject guides, the literature clearly establishes that librarians ascribe much importance to subject guides, not only as research aids for the campus community, but also as instructional, reference, and collection development tools for themselves. This trend is further evidenced by a number of more recent studies. Cohen and Still (1999) examined the library home pages of 50 Ph.D.-granting institutions and 50 two-year colleges, and they found that 84% of the research universities and 60% of the two-year schools referenced subject guides.

Grimes and Morris (2001) surveyed librarians at 19 colleges and universities and 18 Association of Southeastern Research Libraries (ASERL). They found that 89% of respondents from colleges and universities and all respondents from ASERL libraries reported including subject guides as part of their web site content. Additionally, many librarians provided written feedback about how useful subject guides are to users. Jackson and Pellack (2004) surveyed 112 members of the Association of Research Libraries (ARL) to ascertain the perceived value of subject guides, yielding a return rate of 57% (64 responses). When asked if creating and maintaining subject guides is worth the time and effort, 75% of the respondents marked “yes.” Moreover, nearly half (49%) indicated that librarians’ performance evaluations are influenced by the quality of subject guides they create and maintain.

In all, the review of existing literature indicates serious need for more scientific studies of subject guide use in academic libraries. This study uses two surveys to uncover how different campus groups use subject guides at a major university. It contributes original data to the field and serves as a starting point for future studies in this area.

CHAPTER 3

Methodology

Two different survey instruments were employed in this case study to uncover the use of subject guides at San José State University. One survey questionnaire was distributed on paper to undergraduate students in three academic programs—Nursing, Organization & Management, and Journalism & Mass Communications—to see if students used the various pages of the subject guide in their area of study, and if so, how useful they found the pages. The second survey questionnaire was distributed to teaching faculty through email to see if and how faculty members used different subject guides for teaching and conducting research.

Survey Instrument Design

Student survey design. The student survey instrument was developed to gather as much usage information as possible within a short period of time, roughly 5 to 10 minutes. Nearly all questions contained pre-compiled answers for participants to choose from as well as an opportunity to provide further comments for clarification or to describe a scenario not covered in the identified possibilities. Three different survey questionnaires were developed since the Nursing, Journalism & Mass Communications, and Organization & Management subject guides contained unique content.

The survey questionnaires contained questions on both individual background and behavioral issues. In particular, students were asked about their major, gender, where they started undergraduate work, and whether or not they had received library instruction at San José State University. Questions on behavioral issues focused on how often

students had used each page in an associated subject guide in the past year: never, 1-5 times, 6-10 times, and more than 10 times. If they had used a particular page, they were further asked to rate its usefulness on a five-point Likert scale: very useful, somewhat useful, undecided, not so useful, and not useful at all.

Students were also asked to identify different resources they used for research purposes, including a professor's course page, e-journal lists, reference books from the library, circulating books from the library, theses or dissertations, printed newspaper sources, online newspaper sources, printed periodicals for popular magazine articles, printed periodicals for scholarly articles, course reserves, interlibrary loan, Link+, and specific web resources. In particular, this data helped to determine how students came across the subject guide, either directly or through another section on the web site, and whether or not the resources they regularly use are made available through subject guides (see Appendix A for details).

A screen grab (snapshot of screen display) of each subject guide page was presented in the questionnaires in case students did not know what a subject guide was or were unsure to which page they were actually being referred. The screen grabs were large enough that students could see key content features on each subject guide page.

The survey questionnaire was formatted so that each page contained a single screen grab of a subject guide page with related questions. This enabled students to focus easily on answering questions about each subject guide page without having to flip back through pages of the questionnaire to find a particular screen grab related to a question on another page. As an additional tactic of effort reduction, the same set of questions were

asked in reference to each screen grab, minimizing the amount of new information and mind-shifting required to read, comprehend, and answer the survey questions.

Teaching faculty survey design. The survey questionnaire for teaching faculty was shorter and more broadly defined than the one for students, in the hope of achieving a greater response rate from a typically busy group of people. The survey was also placed online for convenience since a survey in paper form would take extra time to complete and return. Similar to the student survey, the teaching faculty questionnaire included questions on individual background and behavioral issues.

Questions on individual background information included faculty status (full-time, part-time, etc.), gender, number of years at the university, and major area(s) of study. Questions about behaviors in subject guide use were geared towards the subject guides in general rather than specific pages of an individual guide. Teaching faculty members were asked to list different subject guides they had used in the past year with the aid of a screen grab containing an alphabetical list of available subject guides. Since the screen grab was not large enough to show all subject areas, a note instructed teaching faculty to click on the image for a full view of its contents. They were also asked to rate the overall usefulness of subject guides for teaching and research purposes using a five-point Likert scale: very useful, somewhat useful, undecided, not so useful, and not useful at all (see Appendix B for details).

Additionally, teaching faculty members were asked to identify other resources they regularly encouraged students to use as research tools. This list was the same as the one provided to students, with the only difference being that students were asked to

indicate resources they regularly used instead of those their instructors told them to use. The purpose of this question was to determine whether subject guides contained links to tools used by both students and faculty.

Pilot Testing

Each survey questionnaire was pilot tested prior to distribution to determine if the wording of questions was clear, how long it took to complete the survey, and whether there were any points of confusion to take into consideration.

Student survey pilot test. Student volunteers from the School of Nursing, the Department of Organization & Management, and the School of Journalism & Mass Communications were recruited by librarians in these subject areas to participate in the pilot test. At least five students from each discipline participated in the pilot testing. Each student made an individual appointment to complete the survey questionnaire under the author's supervision. Students were timed on how long they took to complete the survey. Timing was of particular concern because the student survey questionnaires ranged from 7 to 9 pages, and teaching faculty would be reluctant to include the survey in their class session if it took too much time to complete. Fortunately, students took only 5 to 10 minutes to complete the survey. It seems that effort reduction tactics employed during the survey design were successful.

After students completed the survey questionnaire, they were asked to indicate whether the questions made sense to them and if there were any that were confusing. Most of them found the questions straightforward, although a few were confused about questions asking them to rate the usefulness of a subject guide page they had never used.

The original wording of the question was “If you have used this page before, rate how useful it was for your particular purpose.” However, this language was changed to instruct students to go to the next question if they reported having never used the page before in the previous one. For example, “If you chose “never” as your choice in Question 7A, go to Question 8A. Otherwise, [for question 7B] please indicate how useful you found the page.” This wording helped clarify the intent of the question.

Another point of confusion for students arose when they were asked to indicate different kinds of resources they have used for completing their course assignments. While students understood to circle relevant choices, they found the order of two particular resources—web sites and web site search engines—confusing. In the initial version of the survey questionnaire, students were first asked if they used any particular web sites, and if so, to list their top three. Following this question was one that asked them for the same information about web site search engines. When students were asked about web sites first, many wrote down web site search engines such as Google and Yahoo, not realizing the intent of the next question. Once students were asked about web site search engines, they realized the difference and listed their favorite web sites instead. Simply reversing the order of these questions resolved this problem.

Faculty survey pilot test. Since it was difficult to identify teaching faculty members to participate in the pilot test and then take the survey again during the actual implementation, library faculty were asked to take the survey and provide feedback. This was a more realistic alternative because library faculty members were not part of the targeted audience. An email message similar to the one for teaching faculty was sent to

all library faculty members detailing the purpose of the pilot test and instructions on how to proceed. A URL link to the questionnaire was also provided. Library faculty members were specifically asked to take the survey from the teaching faculty's perspective based on their knowledge and experience of working with this group.

Several library faculty members responded to the survey with recommendations for changes. One suggestion was to include a brief definition of a subject guide in the event that teaching faculty members had never used one before or were uncertain of its purpose. This wording was easily added to the survey instrument. Another concern was expressed about the URL to the survey not showing up as a link in some email programs. While this could not be controlled since multiple mail programs were being used on campus with any number of local settings that could affect whether a URL shows up as a link or not, instructions were added to the teaching faculty email message asking instructors to cut and paste the URL into a web browser if it did not show up as a link in their particular email program. A final suggestion was to expand the list of other resources faculty encouraged students to use, further breaking down items into online and print categories. As a result, newspaper and article resources were more specifically defined on both the teaching faculty and student surveys to ensure consistency.

Sampling of Research Populations

Student sample. A random sample of courses was generated in each discipline. This ensured both small and large, introductory and specialized courses would have an equal chance to be included in the study. However, survey responses covered student subject guide use over the past year, including both current and past semester courses.

Consequently, this study examines how students in a variety of field-related courses make use of subject guides within particular disciplines. Further investigation into how students use subject guides at the course level is set aside for future studies.

To get a random selection of courses in each discipline, three separate lists of courses offered during the Spring 2005 semester were generated from the SJSU registration database: one for the School of Nursing, another for the School of Journalism & Mass Communications, and a third for the Department of Organization & Management. Ascending accession numbers were then assigned to courses on each list. Finally, each list was randomized using a cryptographic algorithm to generate true random numbers at the Random.org web site (Haahr, 2002).

Going down each list one by one, classes with randomly selected accession numbers were identified and surveys distributed until a proportionate sample size was reached in each discipline. The number of courses surveyed in each discipline was determined based on the size of the student research population, the size of each class, and overall student attendance rates in a given class at the time the survey was distributed. Ultimately, 10 classes in Nursing, 14 in Journalism & Mass Communications, and 19 in Organization & Management were surveyed. In all, 255 Nursing students out of 565 (45.1% of those enrolled), 247 Journalism & Mass Communications students out of 691 (roughly 35.7% of those enrolled), and 529 Organization & Management students out of 1539 (roughly 34.3% of those enrolled) were surveyed (San José State University, 2005).

Student sampling limitations. The student population figure for the School of Nursing (565) is more accurate than those for Journalism & Mass Communications (691) and Organization & Management (1539). This is because the School of Nursing keeps track of enrolled students in a separate database while the School of Journalism & Mass Communications and the Organization & Management department rely on the campus-wide system. Unfortunately, the campus-wide system includes all students who have declared a major in that subject area rather than those actually taking classes in that particular field. For example, while the campus-wide system shows the total number of Nursing majors at 1216, the School of Nursing database only shows 565 of these students taking courses during the Spring 2005 semester. Consequently, the population figures for Journalism & Mass Communications and Organization & Management are probably more conservative as well, and the actual overall attendance in Spring 2005 is likely to be lower.

Also, most freshmen and sophomore majors tallied into the campus-wide figures for Nursing, Journalism & Mass Communications, and Organization & Management, did not frequent classes actually surveyed in these subject areas. Rather, these students were most likely taking prerequisite or elective courses in other disciplines instead. See Table 1 for more details.

Table 1. Class Level Percentages by Discipline

Class Level	Nursing	Journalism MC	Organization Mgmt.
Freshman	0.4%	2.8%	8.7%
Sophomore	2.4%	8.9%	1.7%
Junior	41.2%	47.2%	41.1%
Senior	48.6%	34.1%	46.6%
Other	7.4%	7.0%	1.9%

Teaching faculty sample. Since the university had no complete list of teaching faculty members and their email addresses, a manual list was compiled from all departmental web sites on campus. In many cases, the departmental web sites did not appear to have been updated regularly and the collected information required confirmation. In all, 1000 teaching faculty email addresses were collected, including both full-time and part-time members. The potential inaccuracy of this information and the inability to know for certain which faculty members were actually teaching during the Spring 2005 semester made random sampling a less feasible approach. Consequently, a survey questionnaire was developed that could be conveniently referenced in an email message to the sample population, with the hope of capturing the broadest possible audience and gaining a higher response rate.

Administration of Surveys

Teaching faculty survey administration. The teaching faculty survey was in the form of a web page residing on King Library's web server in a directory that was

unavailable to the public. The web page form was tested in different web browsers including Netscape, Internet Explorer, Firefox, Safari, and Lotus Notes to ensure it presented consistently and worked properly. The URL to the survey was emailed to teaching faculty along with instructions and background information about the study (see Appendix D for the original email message).

Since many faculty groups on campus have different email systems, there was no easy way to broadcast an email to all teaching faculty simultaneously. As a result, University Computing and Telecommunications staff created a single email address (listserv) for the manually compiled email list. The listserv made it possible to email all teaching faculty, while preventing list members from replying to all members. Instead, all replies were routed directly to the author. This reduced unnecessary discussions and kept unwanted email messages from flooding individual accounts.

Follow-up messages were sent to those who had not responded to the survey to remind them to do so before a particular deadline. In some cases where responses from specific colleges were low, department chairs and associate deans were contacted to encourage their faculty to take the survey. In each email request, it was stated explicitly that faculty members who had already taken the survey or who were in doubt should not fill out the survey (see Appendix E for the follow-up email message).

Student survey administration. With the help of librarian subject specialists in Nursing, Journalism & Mass Communications, and Organization & Management, the faculty chair was identified in each discipline at the beginning of the Spring 2005 semester. A meeting was set up with each chair to discuss the goals of the research

project and its potential benefits to students and faculty. The chair was then asked to encourage other faculty members to participate if their particular course(s) were randomly chosen.

Instructors of selected courses were then contacted via email and asked to allocate 5 to 10 minutes at the beginning or end of one class session so that survey questionnaires could be distributed to and then collected from students in attendance. See Appendix C for the email correspondence sent to instructors. Students were specifically asked in each course setting whether or not they had already taken the survey in another class. Only those that had not taken the survey were included in the current data gathering process.

Data Coding and Analysis

All student survey responses were collected during regularly scheduled class meetings. In some cases, when students arrived late to class and were unable to finish the survey within the allotted time, the author discarded such responses. Moreover, all teaching faculty survey responses were submitted online. JavaScript was embedded in the online survey to ensure that all questions were filled out appropriately. If, for example, teaching faculty members forgot to answer a particular question, a pop-up window would alert them to complete all unanswered questions before submitting the survey. Once all survey responses were collected from students and teaching faculty, they were coded and entered into the SPSS program. Descriptive statistics were generated and advanced statistical analyses were conducted to reveal potentially significant correlations.

CHAPTER 4

Data Analysis

Student Demographics

Of the 1031 student respondents in this study, more than half (60.7%) started college outside of San José State University, while just over a third (39.3%) started college as freshmen at San José State University. Nearly all student responses are from undergraduate juniors and seniors taking Nursing, Journalism & Mass Communications and Organization & Management courses. However, a few graduates, second baccalaureates, and unclassified students (4.5% overall) taking undergraduate courses in these disciplines were included in the survey. See Table 1 in Chapter 3 for a breakdown of students by class level in each discipline.

The School of Nursing and the School of Journalism & Mass Communications typically show a higher enrollment of women (62.9%), as these are fairly female-intensive professions. See Table 2 for discipline-specific percentages.

Table 2. Gender Distribution by Discipline

Gender	Nursing	Journalism & MC	Organization & Mgmt.
Male	11.4%	32.0%	51.8%
Female	88.6%	68.0%	48.2%

The Nursing, Journalism & Mass Communications, and Organization & Management survey questionnaires each included an open-ended question asking

students to indicate their major area of study. All Nursing students reported their major as “Nursing,” while both Journalism & Mass Communications and Organization & Management students reported a range of specializations as majors in their fields, regardless of whether or not the campus officially recognizes them as such.

The School of Journalism & Mass Communications recognizes the following programs within its major area of study: Advertising, Journalism, Mass Communications, and Public Relations. However, Journalism & Mass Communications students reported a wider spectrum of specializations they referred to as majors, including “Advertising,” “Public Relations,” “Journalism,” “Photojournalism,” “Broadcasting” or “Radio Television and Film,” “Marketing & Design Studies,” “Magazine & Print Journalism,” “Mass Communications,” “Communication Studies” and “Reporting & Editing.” See Table 3 for more details.

The Organization & Management department recognizes the following concentrations within its major area of study: International Business, Human Resource Management, Management, and Hospitality Management. However, students taking Organization & Management courses during the Spring 2005 semester described majors from a number of other programs recognized in the College of Business as well as a few outside of the college. Descriptions of majors included “Organization & Management,” “Marketing,” “Accounting,” “Business Administration,” “International Business,” “Finance,” “Business,” “Hospitality Management,” “Management Information Systems,” “Human Resource Management,” “Aviation Management,” “Corporate Finance

Management,” “Communications Studies,” “Accounting & Information Systems,” and “Engineering Operation Management.” See Table 3 for more details.

Table 3. Reported Majors from Students by Discipline

Discipline	Reported Major	Total Students
<i>Nursing</i>	Nursing	100.0%
	Advertising	33.9%
	Public Relations	24.1%
	Journalism	13.9%
	Photojournalism	6.1%
	Broadcasting or Radio, Television & Film	4.9%
<i>Journalism & MC</i>	Marketing & Design Studies	3.3%
	Magazine & Print Journalism	3.2%
	Mass Communications	2.4%
	Communication Studies	2.0%
	Reporting & Editing	1.7%
	Undeclared or Unrelated Field	4.5%

Table 3 (Continued). Reported Majors from Students by Discipline

Discipline	Reported Major	Total Students
<i>Organization & Mgmt.</i>	Organization & Management	42.4%
	Marketing	7.4%
	Accounting	6.6%
	Business Administration	6.4%
	International Business	5.5%
	Finance	5.1%
	Business	4.5%
	Hospitality Management	3.6%
	Management Information Systems	3.2%
	Human Resource Management	2.3%
	Aviation Management	1.7%
	Corporate Finance Management	1.3%
	Communication Studies	1.3%
	Accounting Information Systems	0.9%
	Engineering Operation Management	0.7%
	Undeclared or Unrelated Field	7.1%

Teaching Faculty Demographics

Of the 1000 teaching faculty members surveyed during the Spring 2005 semester, 251 responded, yielding a response rate of about 25.0%. Of those who responded to the survey, 51.2% were male and 48.8% female. Most of them (64.4%) were full-time faculty, while some (30.4%) reported part-time status and a few (5.2%) described their status as “other.” When asked how many years they had taught at the university, 26.0% reported 3 years or less, 28.4% reported 4-10 years, and 45.6% reported 11 or more years.

Teaching faculty members were also asked to indicate the various types of classroom settings in which they teach. 94.4% reported teaching in a traditional classroom setting, 8.8% reported teaching at least one televised course, 6.8% reported having at least one course that included both web-based and traditional classroom sessions, and 5.6% reported teaching at least one fully web-based course.

Faculty respondents represented a range of different colleges within the university. Applied Sciences and Humanities faculty provided the highest response rate, while Engineering and Education faculty the lowest. Figure 1 summarizes the counts of responses by college.

Figure 1. Teaching Faculty Survey Responses by College

Student Use of Subject Guides

Nursing, Journalism & Mass Communications, and Organization & Management students were asked to rate how frequently they used individual pages of their subject guides on the SJLibrary.org web site in the past year using the following scale: never, 1-5 times, 6-10 times, and more than 10 times. If students indicated using the pages before, they were further asked to rate the usefulness of the pages on a five-point Likert scale. Overall results indicate that students used the Articles & Databases page of their subject guide more frequently than other pages. Usage trends are unique to each discipline, depending on whether students have received library instruction and if teaching faculty themselves have used the subject guides in the past. The following sections summarize

the findings on students' use of the subject guides in each surveyed area. Specific statistics are given in Table 4 for comparison.

Organization & Management. The Organization & Management subject guide contains seven pages including Articles & Databases, Campus Links, Web Sites, Evaluating Information, Citing & Writing, Scholarly vs. Popular Articles, and Search Tips. The Campus Links page provides links to the College of Business and the Department of Organization & Management at San José State University. The Web Sites page includes links to various instructional pages that have been developed in coordination with teaching faculty for particular courses taught in the department.

The subject guide also shares a series of general information literacy pages with other subject guides including the one for Journalism & Mass Communications. Among them are pages on the difference between scholarly and popular articles, how to cite and write, how to evaluate information, how to initiate online searches, and how to avoid plagiarism. These pages were developed as part of information competency initiatives at San José State University and deemed applicable to subject guides as well. As a result, librarians can choose to include any of these pages as part of their subject guide.

The Organization & Management students appear to be using the Articles & Databases page most frequently, while making less frequent use of other subject guide pages. Even the Web Sites page which caters specifically to the BUS3 146 (Project Management) and BUS3 160 (Fundamentals of Management and Organizational Behavior) classes is little used by students in these classes. When a subset of students in this study ($n = 126$) was surveyed in two BUS3 160 classes and one BUS3 146 class

about their use of the Web Sites page, 77.7% reported never using this page, 13.5% reported using the page 1-5 times in the past year, and only 8.8% reported using the page more than 5 times in the past year. Overall, Organization & Management students reported little use of the Campus Links page (28.2%), Scholarly vs. Popular Articles page (26.7%), Citing & Writing page (18.3%), Web Sites page (17.6%), Search Tips page (10.7%), and Evaluating Information page (7.7%).

Journalism & Mass Communications. The Journalism & Mass Communications subject guide contains seven pages, five of which are shared with other subject guides including the one for Organization & Management. The seven pages include Articles & Databases, Web Sites, Citing & Writing, Evaluating Information, Plagiarism, Scholarly vs. Popular Articles, and Search Tips. The Web Sites page lists links to relevant web sites including Power Reporting, A Journalist's Guide to the Internet, California Newspaper Project, and Online Journalism Review—a USC discussion of current issues facing journalists.

Journalism & Mass Communications students share similar usage trends with Organization & Management students with few exceptions. They reported little use of information literacy pages such as Plagiarism (15.4%), Citing & Writing (15.4%), Search Tips (13.4%), and Evaluating Information (9.3%). However, Journalism students reported more frequent use of the Scholarly vs. Popular Articles page (43.3%) and the Web Sites page (31.2%), though most of them reported using these pages less than five times in the past year.

Table 4. Frequency of Use of Subject Guide Pages

Subject Guide Page		Never	1 to 5 times	6 to 10 times	10 + times
<i>Nursing</i>	Articles & Databases	8.3%	45.5%	18.4%	27.8%
	Books	45.2%	38.6%	8.3%	7.9%
	Fed. Govt. Sources	72.1%	18.1%	5.1%	4.7%
	Legislation	89.8%	8.2%	1.2%	0.8%
	Related Guides	61.0%	32.7%	3.5%	2.8%
<i>Journalism & MC</i>	Articles & Databases	23.9%	34.4%	16.2%	25.5%
	Web Sites	68.8%	23.1%	2.8%	5.3%
	Plagiarism	84.6%	13.8%	0.8%	0.8%
	Citing & Writing	84.6%	13.0%	1.2%	1.2%
	Evaluating Info.	90.7%	8.1%	0.8%	0.4%
	Scholarly vs. Popular	56.7%	36.0%	4.5%	2.8%
	Search Tips	86.6%	12.6%	0.8%	0.0%
<i>Organization & Mgmt.</i>	Articles & Databases	33.5%	36.4%	14.4%	15.7%
	Campus Links	71.8%	20.6%	3.8%	3.8%
	Web Sites	82.4%	12.9%	1.5%	3.2%
	Citing & Writing	81.7%	14.5%	1.3%	2.5%
	Evaluating Info.	92.3%	5.5%	0.9%	1.3%
	Scholarly vs. Popular	73.3%	20.4%	3.3%	2.6%
	Search Tips	89.3%	8.5%	1.1%	1.1%

Nursing. The Nursing subject guide is comprised of five pages: Articles & Databases, Books, Federal Government Sources, Legislation, and Related Subjects &

Guides. The Books page contains a link to the library catalog and CINAHL, which indexes some Nursing books and chapters in books. The Federal Government Sources page contains links to health information from federal, state, and local government sites including MedlinePlus and Google Uncle Sam. The Nursing librarian further refers to another subject guide entitled Culture & Health on the Related Subjects & Guides page.

Once again, students reported using the Articles & Databases page more frequently than other pages in their subject guide. While 54.8% of Nursing students reported using the Books page, only 16.2% reported frequent use, with most of them reporting use of 1-5 times in the past year (38.6%). Similarly, 39.0% indicated using the Related Subjects & Guides page but only 6.3% indicated frequent use. This same trend applies to the Federal Government Sources page, which only 27.9% noted using and 9.8% noted using frequently. The Legislation page has the least amount of use (10.2%), with only 2.0% reporting use of more than 5 times a year.

Articles & Databases page. By far, the list of online databases is the most heavily used page of all subject guides, although Nursing students reported more use of this page than students in the other two disciplines. Most Organization & Management students (66.5%) reported using the Articles & Databases page of their subject guide, with 30.1% reporting use of more than 5 times in the past year. Journalism students have a higher use rate at 76.1%, and 41.7 % indicated using the Articles & Databases page more than 5 times. Additionally, nearly all Nursing students (91.7%) indicated using the page, and almost half (46.2%) reported using the page more than 5 times in the past year. See

Table 4 for comparisons of how frequently students in different academic programs used the Articles & Databases page of their subject guides.

These usage patterns are further confirmed by students' level of familiarity with accessing databases through their subject guides and as standalone online resources. On the SJLibrary.org web site, students can link directly to an Articles & Database page from the home page. Once on the Articles & Databases home page, they can search for databases by general subject area, by SJSU subjects or majors, or by an alphabetical listing. If students choose to search for databases by SJSU subjects or majors, they enter the subject guides. Otherwise, they bypass the subject guides to use the tool in a different fashion.

In addition to being asked about how frequently they used the Articles & Databases page of their subject guide, students were also asked to identify other library tools they use outside of the subject guides, including e-journals, the library catalog, print sources, and online databases. Nursing students reported higher levels of use of the databases through both the subject guides (91.7%) and elsewhere (83.9%) on the site. Journalism & Mass Communications reported less frequent use at 76.1% and 76.9% respectively, and Organization & Management students reported the lowest use at 66.5% and 75.2% respectively.

Recognition of subject guide home page. Nursing students appear to recognize the home page of their subject guide as a starting point for research more frequently than students in the other two disciplines. 70.2% reported using the subject guide home page

in comparison to 61.5% of Journalism & Mass Communications students and 39.5% of Organization & Management students.

Use of Different Research Tools. When asked to identify research tools they use regularly, students from all three disciplines reported higher use of online databases than any other resource (see Table 5 for more details). Also, most teaching faculty (78.5%) reported encouraging students to use online databases more than any other resource.

However, students within the three disciplines illustrated unique usage trends as well. Journalism and Mass Communications students reported more use of news resources related to their field. 54.7% reported use of printed materials and 71.7% reported use of online newspaper sources, which is in contrast to Organization & Management (37.4% and 60.5% respectively) and Nursing (9.0% and 25.1% respectively) students. Organization & Management (42.7%) and Journalism & Mass Communications (40.9%) students reported higher use of instructors' web sites than Nursing students (20.8%). Additionally, Organization & Management (18.3%) students reported lower use of bound scholarly article sources than Journalism & Mass Communications (33.6%) and Nursing (31.0%) students.

Nursing students, in general, made more use of different tools and were more selective of quality resources. They reported higher use of e-journals lists, databases, theses or dissertations, interlibrary loan, and the library catalog (see Table 5 for specific comparisons). Nursing students also reported the lowest use of bound popular magazine sources (16.5%) and web site search engines (43.1%) for conducting research than students in Organization & Management (23.1% and 63.5% respectively) and Journalism

& Mass Communications (36.0% and 68.8% respectively). Only 3.6% of teaching faculty members in this study encouraged their students to use web site search engines for conducting research, a recommendation that is clearly not heeded.

When asked to list web sites they regularly consulted for research, Nursing students reported use of more authoritative sites which include: the U.S. National Library of Medicine (<http://www.nlm.nih.gov/>), Centers for Disease Control and Prevention (www.cdc.gov), the U.S. Census Bureau (www.census.gov), the American Cancer Society (www.cancer.org), the American Medical Association (www.ama-assn.org), the American Dental Association (www.ada.org), the United Ostomy Association (www.uoa.org), U.S. Department of Health and Human Services (www.hhs.gov), and National Institutes of Health (www.nih.gov).

While Organization & Management students reported using relevant web sites such as Business Week (www.businessweek.com), the Wall Street Journal (www.wsj.com), Hoovers (www.hoovers.com), and Forbes (www.forbes.com), they also noted using sites with less authoritative value such as Wikipedia (www.wikipedia.com), Dogpile (www.dogpile.com), and About.com (www.about.com).

Similarly, Journalism & Mass Communications students reported using some reputable sites such as the San Francisco Chronicle (www.sfgate.com), the New York Times (www.nytimes.com), the San Jose Mercury News (www.sjmercury.com), the British Broadcasting Corporation (www.bbc.co.uk), Cable News Network

Table 5. Use of Different Research Tools by Discipline

Research Tool	Nursing Student Use	Journalism & MC Student Use	Organization & Mgmt. Student Use
Professor's Course Page	20.8%	40.9%	42.7%
E-journals Lists	42.7%	19.8%	21.2%
Online Articles & Databases	83.9%	76.9%	75.2%
Theses or Dissertations	5.1%	4.5%	3.2%
Printed Newspaper Sources	9.0%	54.7%	37.4%
Online Newspaper Sources	25.1%	71.7%	60.5%
Bound Popular Magazine Sources	16.5%	36.0%	23.1%
Bound Scholarly Article Sources	31.0%	33.6%	18.3%
Circulating Library Books	32.2%	32.8%	28.9%
Library Reference Books	32.5%	39.3%	33.1%
Course Reserves	11.0%	11.3%	10.6%
Interlibrary Loan	7.1%	3.2%	5.1%
Link +	9.4%	8.9%	10.6%
Online Catalog	37.6%	32.0%	27.6%
Web Site Search Engines	43.1%	68.8%	63.5%

(www.cnn.com), and MSNBC (www.msnbc.com). However, they also reported using

sites with questionable research value such as Xanga (www.xanga.com), Friendstar (www.friendstar.com), MySpace (www.myspace.com), Wikipedia (www.wikipedia.org), Fark.com (www.fark.com), and Slate.com (www.slate.com).

Student research behavior in the three disciplines should be interpreted with care. Each program has its own educational goals, academic standards, and pedagogical practices that influence this behavior, making it difficult to draw strong parallels or differences at the level of this study. For example, Journalism & Mass Communications students reported the highest use of bound popular magazine articles (36.0%), compared to Organization & Management (23.1%) and Nursing (16.5%) students. This does not mean that Journalism & Mass Communications students have less rigorous research practices. Students with Advertising majors made up the largest percentage of this research sample, and it is possible that the marketing and product promotion aspects of their studies led them to consult more popular sources for this kind of material.

Teaching Faculty Use of Subject Guides

While students in three disciplines were surveyed on their use of individual subject guide pages, teaching faculty were surveyed on their use of subject guides in general. Specifically, they were pointed to an index of available subject guides and were asked to rate how frequently they used subject guides in their area(s) of study during the past year on the following scale: never, 1-5 times, 6-10 times, and more than 10 times. They were further asked to rate the usefulness of the subject guides for teaching and research purposes on a five-point Likert scale: very useful, somewhat useful, undecided, not so useful, and not useful at all.

Over half of the teaching faculty respondents (54.8%) reported using a subject guide in their area of study at least once in the past year. There appeared to be no statistically significant correlation between faculty members' particular subject area and frequency of subject guide use ($\chi^2 = 6.271, p > .05$). When asked how frequently they used subject guides in their area of study, 45.2% reported never using a subject guide, about one quarter (27.2%) reported using a guide 1 to 5 times in the past year, and roughly one quarter (27.6%) reported using a subject guide more than 5 times in the past year.

Students' Perceptions of Usefulness

Students generally find the Articles & Databases page of their subject guide to be "very useful" or "somewhat useful," with most favorable rankings coming from Nursing students. Just over a third (36.9%) of Organization & Management students rated the page "very useful," 48.4% of Journalism & Mass Communications students found the page "very useful," and over half of the Nursing students (52.5%) found the page "very useful." Similarly, 4.7% of Organization & Management students (in comparison to 3.2% of Journalism & Mass Communications students and 1.3% of Nursing students) describe the Articles & Databases page "not so useful" or "not useful at all".

Aside from the Articles & Databases page, most pages within the different subject guides were also rated "very useful" or "somewhat useful" despite less overall use.

Table 6. Subject Guide Pages & Students' Perceptions of Usefulness

Subject Guide Page		1	2	3	4	5
<i>Nursing</i>	Articles & Databases	52.5%	42.2%	4.0%	0.9%	0.4%
	Books	34.8%	53.8%	7.6%	3.0%	0.8%
	Fed. Govt. Sources	42.3%	47.9%	7.0%	2.8%	0.0%
	Legislation	46.2%	50.0%	3.8%	0.0%	0.0%
	Related Guides	29.9%	59.8%	9.3%	1.0%	0.0%
<i>Journalism & MC</i>	Articles & Databases	48.4%	42.3%	6.1%	2.7%	0.5%
	Web Sites	26.7%	49.3%	20.0%	1.3%	2.7%
	Plagiarism	27.0%	56.8%	10.8%	2.7%	2.7%
	Citing & Writing	27.1%	48.6%	18.9%	2.7%	2.7%
	Evaluating Info.	26.2%	56.5%	8.7%	4.3%	4.3%
	Scholarly vs. Popular	31.4%	53.3%	12.4%	2.9%	0.0%
	Search Tips	37.5%	53.1%	9.4%	0.0%	0.0%
<i>Organization & Mgmt.</i>	Articles & Databases	36.9%	52.0%	6.4%	3.5%	1.2%
	Campus Links	23.4%	61.7%	10.6%	4.3%	0.0%
	Web Sites	23.4%	61.7%	10.6%	4.3%	0.0%
	Citing & Writing	42.7%	45.8%	7.3%	2.1%	2.1%
	Evaluating Info.	36.6%	41.5%	19.5%	0.0%	2.4%
	Scholarly vs. Popular	29.9%	54.0%	14.6%	1.5%	0.0%
	Search Tips	35.1%	47.4%	7.0%	7.0%	3.5%

Note: 1 = Very Useful, 2 = Somewhat Useful, 3 = Undecided, 4 = Not so Useful, 5 = Not Useful at All

In general, Journalism & Mass Communications and Organization & Management students are more likely to rate pages as “undecided,” “not so useful,” or “not useful at

all.” In particular, Journalism & Mass Communication students found the Citing & Writing page and the Evaluating Information page more difficult to use than Organization & Management students. But Journalism & Mass Communications students fared better with the Search Tips page than did Organization & Management students. See Table 6 for more details on how students ranked the usefulness of different pages.

Teaching Faculty's Perceptions of Usefulness

Teaching faculty found subject guides slightly more useful for teaching than for conducting research. About half of the survey faculty (49.8%) rated the usefulness of the subject guides for teaching purposes. 17.1% found them very useful for teaching, 21.5% found them somewhat useful, 6.4% were undecided, 4.0% found them not so useful for teaching, and 0.8% found them not useful at all. A slightly smaller number of teaching faculty respondents (47.8%) rated the usefulness of subject guides for research purposes. 17.9% found the subject guides very useful for research, 17.1% found them somewhat useful, 4.8% were undecided, 4.0% found them not so useful for research, and 4.0% found them not useful at all.

Factors Influencing Students' Subject Guide Use

Academic librarians place particular emphasis on student use of subject guides because they are the primary recipients of services defined by the university mission:

“[T]o enrich the lives of its students, to transmit knowledge to its students along with the necessary skills for applying it in the service of our society, and to expand the base of knowledge through research and scholarship.”
(San José State University, 2005)

Two factors found to positively impact students' subject guide use are students' attendance at library instruction sessions and teaching faculty's awareness and previous use of the subject guides.

Teaching faculty's use. Teaching faculty were more likely to encourage their students to use subject guides if they used the guides themselves ($\chi^2 = 85.875, p < .0005$) for teaching or research purposes. Those who had never used the subject guides appeared less likely to encourage some (10.6%) or all (12.4%) of their students to use the guides. Those who had used the subject guides reported higher levels of encouragement of students to use the guides in some (51.8%) or all (21.2%) of their classes.

Library instruction. Students who received library instruction at San José State University tended to use subject guide pages more frequently. Out of 1031 respondents across three disciplines, 965 indicated whether they had received library instruction or not. A statistically significant correlation was found between attendance at library instruction sessions and the reported frequency of using the Articles & Databases page ($\chi^2 = 179.631, p < .0005$). Those who received library instruction (44.5%) were more likely to use the Articles & Database page more than 5 times a year in comparison to those who did not receive library instruction (15.9%).

Students who received library instruction also made more use of the subject guide home page than those who did not ($\chi^2 = 99.466, p < .0005$). 21.1% of those who had library instruction reported they had used the subject guide home page more than 5 times a year compared to 7.3% of those who had no library instruction. Moreover, 73.7% of students who did not have library instruction reported having never used the subject

guide home page, while only 37.4% of students who received library instruction reported the same behavior.

These trends are further reflected in the data collected within each discipline. Most nursing students (82.4%) received library instruction and reported the highest use of the Articles & Databases page (91.7%) as well as their subject guide home page (70.2%). Journalism & Mass Communications students reported a lower percentage of library instruction (72.1%) and a corresponding lower rate of use for the Articles & Databases page (76.1%) and the subject guide home page (61.5%). Finally Organization & Management students reported the lowest incidence of library instruction (62.6%), also the lowest use of the Articles & Databases page (66.5%) and subject guide home page (39.5%). See Table 7 for comparisons of library instruction by discipline.

Table 7. Library Instruction Attendance by Discipline

Instruction	Nursing	Journalism & MC	Organization & Mgmt.
Yes	82.4%	72.1%	62.6%
No	12.2%	23.1%	30.1%
Not Sure	5.4%	4.8%	7.3%

Additionally, library instruction attendance seems to be correlated with students' academic levels. It was found that seniors used subject guide pages more frequently than juniors ($\chi^2 = 25.436, p < .0005$). Seniors (56.0%) were more likely to have had library instruction than juniors (44.0%). Similarly, 64.3% of juniors reported not having library instruction, while only 35.7% of seniors indicated so.

Seniors were also found more likely to make frequent use of the Articles & Databases page than juniors ($\chi^2 = 16.649, p < .0005$). 15.2% of seniors reported having never used the Articles & Databases page of their subject guide compared to 31.3% of juniors. Similarly, 47.9% of seniors indicated having used the Articles & Databases page more than 5 times a year, whereas only 27.6% of juniors indicated use at such frequency.

Unsurprisingly, seniors were also more likely to have used the subject guide home page as a starting point for their research than juniors ($\chi^2 = 49.962, p < .0005$). Only 12.6% of juniors reported having used their subject guide home page, while 22.9% of seniors indicated use of their subject guide home page.

CHAPTER 5

Research Findings and Interpretations

Research Findings

An analysis of survey responses yields several statistically significant research findings about how subject guides are being used by students at San José State University. Students who have attended library instruction sessions are more likely to make use of subject guides. Moreover, library instruction attendance appears to be correlated with student academic levels. In general, seniors are more likely to have attended a library instruction session than juniors, and seniors report more frequent use of subject guides. Additionally, teaching faculty members who are familiar with and use subject guides in their area of study are more likely to encourage students to use them.

This study explores students' use of subject guides during the past year, and while the author broadly concludes that students make less use of subject guide pages overall (aside from the Articles & Databases page), a closer examination of how they are using individual pages at the departmental and course level would provide more context in which to assess the data. For example, if students in one Nursing class make use of a particular subject guide page, and this page is otherwise not used by other Nursing students, can the author conclude that overall use is low if the page is specifically created for and valued by this small group? How do students in different types of courses (research-based, practicum, skills-based) make use of subject guides, and are there specific trends that can better inform the creation of these finding aids? Also, how do other factors such as academic performance and departmental-specific standards impact

the use of subject guides in particular courses? These and other questions can be investigated through more detailed studies in the future.

Interpretations and Recommendations

The academic research setting. At San José State University, King Library contains a maze of different research routes, whether a History student is trying to filter items in the library catalog for primary print sources or a Business student is trying to figure out which database and search strategy is most appropriate for finding articles on company structures. By their nature, academic libraries are information rich, and so are their web sites. Librarians are challenged with presenting the many tools available to students including index resources, reference and background sources, a wide array of online databases, the library catalog, e-journals lists—each with its own unique interface to learn—without overwhelming them.

This is particularly the case with online databases because they are such a popular resource. At San José State University, 201 academic databases with a variety of interfaces and ways to search are available on the SJLibrary.org web site. Providing students with web site instructions on how to make effective use of these different resources would be a daunting task. Such instructions would likely go unnoticed since web site users, in general, are unwilling to read vast amounts of text.

Google mania. This dilemma has become particularly difficult in the “Age of Google” when students expect relevant, full text search results in milliseconds from a simple keyword search. In a study on student searching behavior, Becker (2003, p.84) notes that undergraduate students acknowledged the importance of various information

competence skills in assessing appropriate online information sources during interviews. “In practice, however,” she further notes “these students frequently abandoned source evaluation altogether and, following the path of least resistance, relied exclusively on basic Google searching,” not only compromising results but adding frustration to the search process in having to filter through so many hits. Ironically, students view advanced searching options as too complicated despite more honed search results. This study underscores the importance of library instruction and coordinated efforts between library and teaching faculty in promoting student use of library resources such as subject guides.

Academic librarians are often pressured to provide quicker and easier ways of retrieving information, although some are reluctant to forfeit the full sophistication of search tools for educating students on how to become more skillful researchers. Federated searching products such as *MetaFind* and *MetaLib* seek to simplify the online searching process by permitting searches across multiple databases within the comfort of a single interface. While this may simplify the search process on the front end, the back end is often compromised since search terms are interpreted differently by each database, students are unable to use special features of individual databases, and evaluating information becomes more difficult because results can be a mix of scholarly publications and trade literature (Baer, 2004).

Although these technologies bring benefits as they continue to advance, the field has not yet evolved to the point of posing research questions that retrieve immediate, relevant, pre-filtered search results. Even *Google Scholar* is being followed by librarians

with some skepticism. Abram (2005) points out that this new resource is currently focused on the scientific, technical, and medical fields and wonders if humanities, history, and literature will eventually be included. He asks whether *Google Scholar* can easily accommodate the research needs of different users including undergraduates, graduates, teachers, university faculty, and research and development specialists in private industry. In other words, will filtering through results across multiple disciplines and publication types introduce more confusion? Will students pay for publications that are available through their academic institution? Despite the advantages of current searching technologies, students will still need to choose the best search strategy, weigh their search results, select appropriate sources, and integrate them into an assignment or research project.

Library instruction is vital. While academic subject guides pull together relevant resources and tools into a single portal as a starting point for research, their existence does not ensure students will use them or be confident users. Students must have the skills to extract and synthesize the information. Otherwise, the tools are useless. Library instruction provides students with a foundation in information literacy by educating them on the procedures for using different library tools, and most importantly, by emphasizing critical thinking to uncover the most relevant materials and incorporate them into a comprehensible form. Unfortunately, the merits of library instruction are often lost in students' cries for faster access to information and more tools like *Google*. Many academic librarians themselves exert pressure for more simplified tools because they

worry that money is wasted when students are unwilling or unable to learn the complexities of the library's existing resources.

Library and teaching faculty alliances. This study found that students from different disciplines who have received library instruction are more likely to make use of subject guides in their particular area. The implication, needless to say, is that librarians at university libraries need to become more proactive in extolling the virtues of library instruction. This is not an easy task since teaching faculty members often see a disjunction between their own doctoral status and those of librarians, which negatively influences their perceptions of the library and its services (Haynes, 1996). Moreover, many are entrenched in a culture of autonomy and resistance to change (Hardesty, 1995).

In particular, the field of library and information science is often perceived by teaching faculty in other disciplines as lacking a strong research culture (Haddow & Klobas, 2004). Crowley (1998) indicates a possible solution lies with library and information science educators convincing academic librarians to accept the standards of teaching faculty, which include pursuing a doctoral degree. If academic librarians were to receive managerial support to attain higher degrees, this could evolve into a career option that would raise their status in the eyes of teaching faculty. Also, Park (2003) points out that half of the ranked library and information science programs in the United States and Canada do not require students to take a course on research methods, which negatively impacts research application in their field and further diminishes the image of librarians.

At San José State University, students graduating from the School of Library and Information Science need only demonstrate their cumulative knowledge in the field by writing two short papers on faculty-selected topics that may or may not be meaningful to them. While submitting a master's thesis is another way to graduate from the program, there is little encouragement to contribute original research from the school, and students generally prefer to graduate sooner rather than later, thus opting to write two short papers instead of a longer thesis. Additionally, the onus lies on the individual student to persuade faculty members to endorse a particular research project and guide them through a closer examination of a field-related problem. Consequently, librarians new to the academic field are not generally equipped with a foundation for scientifically assessing the value of their profession, which limits their ability to participate in evaluation projects as equal partners with teaching faculty.

Empirical evidence and statistically significant data are needed to persuade teaching faculty of the importance and complimentary role of library instruction in effective use of emerging technologies. This is particularly true for those faculty members whose students do not participate in course-integrated library instruction. Further, increasing university administrators' awareness of the benefits of library instruction may strengthen the university's policies on library and teaching faculty collaboration. Only then will academic librarians have support to balance the benefits of new technologies with necessary skill-building efforts through library instruction, thus holding students more accountable for the quality of their research and enhancing the rigor of the curricula.

Aside from improving assessment skills and communicating with teaching faculty the benefits of library instruction, academic librarians should coordinate the development of **appropriate** course assignments with their teaching counterparts as well. In a survey of six community colleges, Feldman and Sciammarella (2000) found that 80.0% of the librarians reported inconsistencies between student assignments and research sources available in the library. The authors surmise that lack of communication between library and teaching faculty is largely to blame. Future coordination between library and teaching faculty at San José State University should concentrate on fine-tuning individual course assignments that are appropriate to information competency initiatives and the resources available at King Library. This should not only involve the development of appropriate course assignments, but corresponding requirements on the types of tools and sources that are acceptable for research in a particular field.

The Information Literacy Assignments Resource Center on the SJLibrary.org web site partly addresses the need for more collaboration between library and teaching faculty in this area. The guide is composed of three parts: a summarization of the Association of College & Research Libraries (ACRL) Information Literacy Competency Standards for Higher Education, common assignments matched to ACRL standards, and actual course assignments from different colleges at San José State University that are matched to ACRL standards. The Literacy Assignments Resource Center is an online resource meant to assist teaching faculty in integrating information literacy principles into their course assignments.

Once student assignments and source requirements have been established that incorporate relevant information literacy principles, librarians can work with teaching faculty to determine how best to support individual course assignments with instructional resources such as subject guides. For example, how can pages such as Citing & Writing, Search Tips, and Evaluating Information be more customized at the subject or course level? This is not to suggest that subject guides at San José State University should be individually customized for every course within a program. With over 4000 undergraduate courses offered during the Spring 2005 semester, this would pose a tremendous workload on already overworked library faculty (San José State University, 2005). However, a survey of course objectives and assignments within a particular subject area may yield broad patterns of need that can be more easily addressed and tested against user needs.

Increasing teaching faculty awareness. Findings from this study further suggest that academic librarians should provide information about subject guides to new teaching faculty members, perhaps during library orientation. Individual librarians can also contact teaching faculty in their subject area and encourage them to link to appropriate subject guides from their course web pages. Some teaching faculty members build their own course web pages using a content management system that has been set up by the university web master. Perhaps a built-in feature to this system can prompt teaching faculty to link to relevant subject guides as part of their content options.

Enriching subject guide content. Librarians at King Library can also make more immediate changes to the Nursing, Journalism & Mass Communications, and

Organization & Management subject guides. In general, they can link to department pages that contain teaching faculty's course web pages, particularly on the Journalism & Mass Communications and Organization & Management subject guides since these students reported higher use of those pages. Including links to appropriate web sites students use frequently might also be helpful.

Librarians can also provide access to more library tools that students use regularly or those they would like students to use more often. *Serials Solutions* has enabled students to obtain a list of all journal titles available electronically at King Library in their particular area of study. Nursing students reported using the e-journals list twice as much as those in Journalism & Mass Communications and Organization & Management. Adding a direct link to this subject-specific information could create a more comprehensive research guide for students who regularly use the tool and raise more awareness of its availability to others.

Journalism & Mass Communications students reported high use of print and online newspaper resources. Creating a separate page of news sources in this subject guide might prove useful. Also, since these students described their major area of study in different ways, the librarian in this subject area may want to explore categorizing resources under these headings or even creating a separate subject guide for some of them. For example, over one third (33.9%) of Journalism and Mass Communications students described their major as Advertising, suggesting that a new subject guide in this area could be useful.

These same general recommendations can be applied to the Organization & Management subject guide since students taking these courses also described their majors in multiple ways. A few students identified their major as “Human Resource Management,” “Aviation Management,” “Corporate Finance Management,” “Accounting & Information Systems,” and “Engineering & Operation Management”. These subject areas could be subtitles for categorizing resources within the Organization & Management subject guide. Additionally, a page of related subjects could be added with links to existing subject areas that students identified: Marketing & Decision Sciences, Accounting & Finance, Hospitality Management, Management Information Systems, International Business, Business, and Communication Studies.

Once all changes are in place, more user-centered studies can be conducted to see how well they support students’ needs or if new problems must be addressed.

CHAPTER 6

Conclusion: Limitations and Future Research

Research Limitations

Research findings and observations from this study should be considered with an awareness of associated limitations. Inevitably, the level of support and available resources in each research environment affects overall results.

Originally, this study was planned to include students from the following academic programs: Art & Design, Computer Science, Nursing, Journalism & Mass Communications, and Organization & Management. The five academic programs were chosen based on consideration of the number of undergraduate students enrolled in the programs, the extent to which different types of programs were represented (Sciences, Social Sciences, Humanities, and Applied Sciences), the availability of corresponding librarian subject specialists in this area, and whether or not these librarians had fully developed and promoted their subject guides. However, faculty in the Art & Design and Computer Science programs ultimately opted to drop out of this study because of ensuing curricular demands. As a result, it was not possible to survey students on subject guide use from a balance of disciplines at San José State University.

While surveying students in a few chosen departments allowed the author to make discipline specific observations and added some depth to the research, random sampling of the overall population of currently enrolled students at the university level would have widened the scope of this study and strengthened the research design. Although this was

part of the original plan, logistical difficulties prevented the author from implementing the research as planned.

At San José State University, few students are assigned e-mail addresses on the campus network, and there is no feasible way to broadcast a survey to all currently enrolled students electronically. Consequently, the author was unable to use a third survey instrument to gather data on general usage trends among all San José State University students (both graduate and undergraduate) that would serve as a backdrop for comparison with all departmental teaching faculty survey responses in this study. While one alternative was to create a web-based survey, it is impossible either to ensure participation by the whole student population at San Jose State University or to prevent duplicate responses from occurring.

The survey sample of the teaching faculty population may also be problematic, although in a different way, and the research findings regarding teaching faculty's use of subject guides in general should be taken with caution. Only 25.0% of the sample population responded to the survey, which is lower than expected. Also, the research sample was not generated randomly, and therefore the results cannot be generalized to the whole group. Since the faculty survey was conducted in web format, the implication of its "natural sampling" on the validity of research findings remains unclear. It may be argued that respondents to web-based surveys are likely to be those that have ready access to a computer and feel fairly comfortable using this medium as a form of communication. Individual comfort levels could ultimately affect whether or not different teaching faculty members decided to respond to the survey. Consequently,

those that responded to the survey do not necessarily provide representative results. Further research is needed to determine how web-based surveys may be best designed and what sampling strategies may be used to counter balance its inherent limitations and increase the external validity of research findings (Dillman & Bowker, 2001).

Summary

Through the deployment of three survey instruments, this case study focuses on the actual use and perceived usefulness of subject guides among undergraduate students in Nursing, Journalism & Mass Communications, and Organization & Management as well as among all teaching faculty members (both part-time and full-time) at San José State University in the Spring 2005 semester. In addition to questions on general use and perceived usefulness of subject guides, students were also asked to indicate any other resources they used to complete course assignments, and teaching faculty were asked to identify other resources they encouraged their students to use. Asking research subjects to identify additional research tools allowed the author to further determine the comprehensiveness of existing subject guides.

Overall findings of this study indicate that students who have received library instruction are likely to make more frequent use of subject guides, although students are mainly using the Articles & Databases page within their subject guide. Moreover, library instruction attendance appears to be correlated with student academic levels. In general, seniors are more likely to have attended a library instruction session than juniors, and seniors report more frequent use of subject guides. Also, teaching faculty members who have used the subject guides are more likely to encourage their students to use them.

Both teaching faculty and students generally described the subject guides as “very useful” or “somewhat useful” no matter how frequently they used them.

Future Research

While students are typically the primary intended users of subject guides, the effectiveness of subject guides in assisting students to complete assignments and research projects has yet to be determined. For example, what steps are of particular concern to a student getting started with a course research project, and are these steps discernible when the student is using the subject guide?

Subject guides in general are mainly lists of resources, and this presentation by itself does not match the Information Search Process (ISP) students go through to find materials (Kuhlthau, 1991). Kuhlthau (1991, p. 361) describes this problem as “a gap between the system’s traditional patterns of information provision and the user’s natural process of information use.” Based on findings from five studies, Kuhlthau (1996) concludes that students engage in common tasks forming six stages of the ISP: initiation, selection, exploration, formulation, collection, and presentation.

Kuhlthau’s research is seminal in the field of library and information science, and her work provides important insights that can shape the framework in which library resources are presented to students. A subject guide that incorporates the step-by-step process of how to complete different kinds of assignments—each step addressing a different stage of the student ISP—would more closely parallel students’ mental model. The challenge will be how to provide a feasible level of customization while still

retaining the benefits of database-driven technologies, thus ensuring continued control of usability and accessibility standards.

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Appendix A

Student Survey Template

San José State
UNIVERSITY

**Dr. Martin Luther King, Jr.
Library**

One Washington Square
San José, CA 95192-0028

You have been asked to participate in a research study investigating how academic library subject guides are used by students and faculty at San Jose State University. You will be asked to complete a survey through email (or during one class session if your particular class is chosen for participation in the study). There is no foreseeable risk to subjects participating in this study. San Jose State University students and faculty stand to benefit from this study as the results will assist SJSU faculty and librarians at King Library in developing more useful tools to support campus research practices.

Although results of this study may be published, no information that could identify you will be included. There is no compensation for your participation.

Questions about this research may be addressed to Shannon Staley at (408) 808-2408. Complaints about the research may be addressed to Jo Bell Whitlatch at (408) 808-2005. Questions about research subjects' rights or research-related injury may be presented to Pamela Stacks, Ph.D., Interim Associate Vice President, Graduate Studies and Research, at (408) 924-2480.

No services of any kind, to which you are otherwise entitled, will be lost or jeopardized if you choose not to participate in the study. Your consent is being given voluntarily. You may refuse to participate in the entire study or any part of the study. If you choose to participate, you are free to withdraw at any time without any negative effect on your relations with San Jose State University or with any other participating institutions or agencies.

Shannon M. Staley

The California State University:
Chancellor's Office
Bakersfield, Channel Islands, Chico,
Dominguez Hills, Fresno, Fullerton,
Hayward, Humboldt, Long Beach,
Los Angeles, Maritime Academy,
Merced, Monterey, Northridge, Pomona,
Sacramento, San Bernardino, San Diego,
San Francisco, San Jose, San Luis Obispo,
San Marcos, Sonoma, Stanislaus

1. Please indicate your academic level in school:
 - a. Freshman - Undergraduate
 - b. Sophomore - Undergraduate
 - c. Junior - Undergraduate
 - d. Senior - Undergraduate
 - e. Graduate
 - f. Unclassified
 - g. Other
2. Please indicate your major: _____
3. Please circle your gender: Male Female
4. Did you begin college at SJSU or elsewhere? SJSU Elsewhere
5. Have you received library instruction before at SJSU Library? no yes not sure
6. Please indicate how often you have used the following subject guide on the King Library web site within the past year. See the illustration below.

Screen Grab of Subject Guide Home Page

Note: Image should be large and clear enough for students to read page content

- (6. contd.) Please circle the best option that describes how frequently you have used this library web page within the past year.
- a. Never
 - b. 1 – 5 times
 - c. 6 – 10 times
 - d. more than 10 times

Comments (Optional):

7A. How frequently have you used the Articles & Databases section of the guide in the past year (please see illustration below).

Screen Grab of Articles & Databases Subject Page

Note: Image should be large and clear enough for students to read page content

(7A. contd.) Please circle the best option that describes how frequently you have used this library web page within the past year.

- a. Never
- b. 1 – 5 times
- c. 6 – 10 times
- d. more than 10 times

Comments (optional):

7B. If you chose “never” as your choice in Question 7A, go to Question 8A. Otherwise, please indicate how useful you found this page.

- a. Very Useful
- b. Somewhat Useful
- c. Undecided
- d. Not so useful
- e. Not useful at all

Comments (Optional):

8A. Please specify how frequently you have used this section of the guide in the past year (please see illustration below).

Screen Grab of Subject Guide Page A

Note: Image should be large and clear enough for students to read page content

(8A. contd.) Please circle the best option that describes how frequently you have used this library web page within the past year.

- a. Never
- b. 1 – 5 times
- c. 6 – 10 times
- d. more than 10 times

Comments (optional):

8B. If you chose “never” as your choice in Question 8A, go to Question 9A. Otherwise, please indicate how useful you found this page.

- a. Very Useful
- b. Somewhat Useful
- c. Undecided
- d. Not so useful
- e. Not useful at all

Comments (Optional):

9A. Please specify how frequently you have used this section of the guide in the past year (please see illustration below).

(9A. contd.) Please circle the best option that describes how frequently you have used this library web page within the past year.

- a. Never
- b. 1 – 5 times
- c. 6 – 10 times
- d. more than 10 times

Comments (optional):

9B. If you chose “never” as your choice in Question 9A, go to Question 10A. Otherwise, please indicate how useful you found this page.

- a. Very Useful
- b. Somewhat Useful
- c. Undecided
- d. Not so useful
- e. Not useful at all

Comments (Optional):

10A. Please specify how frequently you have used this section of the guide in the past year (please see illustration below).

Screen Grab of Subject Guide Page C

Note: Image should be large and clear enough for students to read page content

(10A. contd.) Please circle the best option that describes how frequently you have used this library web page within the past year.

- a. Never
- b. 1 – 5 times
- c. 6 – 10 times
- d. more than 10 times

Comments (optional):

10B. If you chose “never” as your choice in Question 10A, go to Question 11.

Otherwise, please indicate how useful you found this page.

- a. Very Useful
- b. Somewhat Useful
- c. Undecided
- d. Not so useful
- e. Not useful at all

Comments (Optional):

11. What other resources do you use to complete your research or course assignments?
Please circle all that apply.

- a. Professor's Course Page
- b. E-journals List
- c. Online Articles & Databases
- d. Theses or Dissertations
- e. Printed Newspaper Sources
- f. Online Newspaper Sources
- g. Printed Periodicals for popular magazine sources
- h. Printed Periodicals for scholarly article sources
- i. Circulating Books from the library
- j. Reference Books from the library
- k. Course Reserves
- l. Interlibrary Loan
- m. Link +
- n. SJLibrary Online Catalog
- o. Web site search engines

(Please specify your favorites)

- p. Web Sites
- (Please specify your favorites)

- q. Other (Please specify):

Comments (Optional):

Appendix B

Teaching Faculty Survey

SJSU Instructor Survey

This survey is meant for all current instructors at SJSU. Please answer every question below (except for those marked optional, which are voluntary). All information you provide is confidential. This survey instrument and research project has been approved by Graduate Studies and will take about 5 minutes to complete. [Read more about your rights](#) as a participant and who to contact with any questions.

1. Please specify in which department or school you teach:

Choose an Academic Program

If you teach in more than one department or school, or you cannot find the appropriate entry in the dropdown above, please indicate other(s) below:

1.
2.
3.

2. Please indicate your gender:

☐ Male ☐ Female

3. Please indicate whether you are currently teaching:

☐ Full Time ☐ Part Time ☐ Other (Please specify):

4. What types of classes do you currently teach. Please indicate all that apply.

- ☐ In person classroom meetings
- ☐ Mostly web based courses with some in person classroom meetings
- ☐ Web-based courses
- ☐ Televised Courses
- ☐ Other (Please specify):

5. How many years have you taught at SJSU?

- ☐ Less than a year
- ☐ 1 to 3 years
- ☐ 4 to 10 years
- ☐ 11 to 20 years
- ☐ more than 20 years

6. About how many hours do you spend in a typical 7-day week (in person or electronically) using the campus library?

- ☐ None
- ☐ 1-4 hours
- ☐ 5-10 hours
- ☐ 11 - 20 hours
- ☐ More than 20 hours

7B. If you chose "never" for question 7A, go to number 8. Otherwise, please indicate all subject areas you have used within the last year.

1.
2.
3.
4.
5.

7D. If you chose "never" for question 7A, go to number 8. Otherwise, please indicate how useful you found the Your SJSU Subject / Major: Get Started page for research purposes.

- ☐ Very Useful
- ☐ Somewhat Useful
- ☐ Undecided
- ☐ Not so Useful
- ☐ Not Useful at All

Comments (optional):

8. Do you encourage your students to use the Your SJSU Subject / Major: Get Started section of the library web site?

- ☐ Yes, in all classes
- ☐ Yes, in some classess
- ☐ Yes, in classes with research or project assignments
- ☐ Never

Comments (optional):

9. What research tools do you regularly encourage students to use? Please check all that apply.

- ☐ Professor's Course Page
- ☐ E-journals List
- ☐ Online Articles & Databases
- ☐ Theses or Dissertations
- ☐ Printed Newspaper Sources
- ☐ Online Newspaper Sources
- ☐ Printed Periodicals for popular magazine articles
- ☐ Printed Periodicals for scholarly articles
- ☐ Circulating Books from the Library
- ☐ Reference Books from the Library
- ☐ Course Reserves

- └ Interlibrary Services (also known as Interlibrary Loan)
- └ Link+
- └ SJLibrary.org Online Catalog
- └ Web Search Engines: Please Specify favorites:

1. _____
2. _____
3. _____

Web Sites: Please Specify favorites:

1. _____
2. _____
3. _____

Other: Please Specify:

1. _____
2. _____
3. _____

Comments (optional):SubmitReset

Appendix C

Email Message to Teaching Faculty of Randomly Drawn Courses

Subject: Library Research Project Involving Nursing Students

Dr. X,

I spoke with your department chair about a research project I'm conducting for my master thesis in Library & Information Science. Specifically, I plan to distribute a survey in randomly selected Nursing courses. Your department chair suggested that I email instructors to see if I could arrange a time to distribute the survey during the beginning or end of a class session.

My research has been approved by Graduate Studies and all human subject review paperwork is complete. Also, my findings will help determine how library services can better support research practices in particular academic programs like Nursing. I have pilot tested the survey and it takes 5 to 10 minutes to fill out. Would it be possible for me to come to one class session for the following course?

NURS 146A

Thanks for your time,

Shannon Staley

Appendix D

Email Message to Teaching Faculty Listserv

Subject: Provide Input on SJSU Library Services in Your Subject Area

Hello,

As a graduate student in Library & Information Science, I am conducting a research project for the completion of my degree. This project, Academic Subject Guides: A Case Study of Use at San Jose State University, has been approved by Graduate Studies including all human subject review paperwork. The results of this survey are confidential and will ultimately help academic librarians in King Library to determine how best to customize services for different groups and programs on campus.

The survey is short and takes no longer than 5 minutes to fill out at the URL address noted below. I am attaching a one-page description of my project for those who would like further information. A copy of participant rights can be downloaded and printed from the site as well.

http://sjlibrary.org/survey/faculty_survey.htm

PLEASE NOTE: If the URL address does not appear as a link in your particular mail program, please copy and paste it into a web browser to complete the survey.

P.S. All email addresses on this list have been compiled from the SJSU web site and will only be used for the purposes of distributing this survey and follow up reminders. All findings will be generalized and published in the form of a master thesis that will be available at King Library.

Appendix E

Follow-Up Email Message to Teaching Faculty Listserv

Subject: Reminder Message: Provide Input on SJSU Library Services in Your Subject Area

Instructors,

As a graduate student in Library & Information Science, I am conducting a research survey for the completion of my degree. The results of this survey are confidential and will ultimately help SJSU librarians determine how best to customize services for different academic programs on campus. The survey is short and takes no longer than 5 minutes to fill out at the URL address noted below.

I am very thankful to those instructors who have already filled out this survey. However, since I have not received many responses, I am encouraging others who haven't had a chance to respond, to do so by May 1st.

The online survey is located at the following address:

http://sjlibrary.org/survey/faculty_survey.htm

PLEASE NOTE: if you have already filled this survey out, do not fill it out again. If in doubt as to whether you have filled this survey out before, don't fill it out. I want to avoid having my results skewed by duplicate responses.

If the URL address does not appear as a link in your particular mail program, please copy and paste it into a web browser to complete the survey.

Thanks very much,

Shannon Staley

Appendix F

Human Subject Review Board Approval Letter

**San José State
UNIVERSITY**

**Office of the Academic
Vice President**

**Academic Vice President
Graduate Studies and Research**

One Washington Square
San José, CA 95192-0025
Voice: 408-283-7500
FAX: 408-924-2477
E-mail: gradstudies@sjsu.edu
http://www.sjsu.edu

To: Shannon Staley
5642 McDonald Avenue
Newark, CA 94560

From: Pam Stacks,
Interim AVP, Graduate Studies & Research

Date: January 11, 2005

The Human Subjects-Institutional Review Board has approved your request for exemption from human subjects review under category "A" in the study entitled:

"Academic Subject Guides: A Case Study of use at San Jose State University."

This approval is contingent upon the subjects participating in your research project or the subject's data collected for the research project being appropriately protected from risk. This includes the protection of the anonymity of the subjects' identity when they participate in your research project and concerning all data that may be collected from the subjects. The Board's approval includes continued monitoring of your research to assure that the subjects are being adequately and properly protected from such risks. If at any time a subject becomes injured or complains of injury, you must immediately notify Pam Stacks, Ph.D. Injury includes but is not limited to bodily harm, psychological trauma, and release of potentially damaging personal information.

Please also be advised that all subjects need to be fully informed and aware that their participation in your research project is voluntary, and that he or she may withdraw from the project at any time. Further, a subject's participation, refusal to participate, or withdrawal will not affect any services that the subject is receiving or will receive at the institution in which the research is being conducted. This approval is granted for a one-year period and data collection beyond January 11, 2006 requires an extension request.

If you have any questions, please contact me at (408) 924-2480.

Cc: Jo Bell Whitlatch, Geoffrey Liu

The California State University:
Chancellor's Office
Bakersfield, Channel Islands, Chico,
Dominguez Hills, Fresno, Fullerton,
Hayward, Humboldt, Long Beach,
Los Angeles, Maritime Academy,
Monterey Bay, Northridge, Pomona,
Sacramento, San Bernardino, San Diego,
San Francisco, San José, San Luis Obispo,
San Marcos, Sonoma, Stanislaus