

Research Practices Survey Preliminary Analysis and Recommendations Survey Completed by APSU 1000 Students, Fall 2008

EXECUTIVE SUMMARY

Description of the Study

During Fall Semester, 2008, APSU 1000 students were surveyed to determine their experiences and opinions concerning academic research. The purposes of this research are to (1) study students' research habits, (2) examine the relationship between students' research skills and their beliefs and attitudes about their ability to use the Internet, (3) use these findings to improve the ways in which librarians help students to develop their research skills, and (4) determine what changes occur in research abilities as students progress through their academic careers.

847 out of a possible 1236 students completed the survey. Students who completed the survey were compared according to age, gender, and ethnicity with the population surveyed. Those who completed the survey were representative of the population surveyed.

This is a preliminary analysis of the data gathered and descriptive statistics are reported. Analysis is ongoing with respect to various questions including whether students had completed LILT (Library Information Literacy Tutorial) before or after completing the RPS Survey.

Recommendations

APSU library faculty already collaborate with many classroom faculty to provide students with opportunities to learn effective research strategies. The following recommendations point out areas where learning needs to occur based on the data gathered in this study survey.

- Continue collaborations between library and classroom faculty whereby students learn to use library online databases and catalogs to effectively complete academic assignments.
- Provide learning opportunities where students may become even more confident in their abilities to create and attach documents in emails, use a web-based course management tool such as D2L, and accomplish other computer tasks that enhance academic success.
- Provide opportunities for students to learn how to effectively use search strategies, including Boolean operators, truncation, subject headings, and more within the more sophisticated search engines found in the library's online databases and catalogs
- Provide opportunities for students to learn how to correctly format papers & cite sources.
- Provide opportunities for students to learn how to use RefWorks which is funded through the Technology Access Fee that students pay each year.
- Continue to encourage students to make use of librarians' expertise by asking for assistance.

STUDENT EXPERIENCE WITH LIBRARIES AND RESEARCH
(Questions 26-45)

Higher percentages of students use online sources, no doubt due in part to the increase in sources available electronically, but they still use print sources too. Also, a higher percentage of students use Google and other “Visible” Web resources than use the online databases and catalogs found in libraries (the “Invisible Web”). **Students may benefit from continued collaborations between library and classroom faculty resulting in opportunities for students to learn to use online databases and catalogs as a means to efficiently complete academic assignments.**

During the past year, students completed **school assignments**, papers, and research papers using at least three sources as follows: 30% completed five or more such projects, 61% one to four, and 9% none. In the case of 75% of the students surveyed, **a teacher or librarian had talked** with one or more classes about how to use library resources, including Internet resources.

Of the students surveyed, 75% indicated that their **most frequent reason** for using libraries in the past academic year was to conduct research for school assignments or projects, or to do other academic work. Students indicated their **frequency of use** during this time period as follows:

	High School	Public	College/University
Once a week or more	21%	6%	32%
Once or twice a month	24%	15%	16%
A few times a year	37%	36%	15%
Never	18%	43%	37%

When surveyed about the **types of sources used**, 85% of the students indicated that they used print sources and 88% online sources for research. The percentages of students using **print**:

library books	72%
encyclopedias or other reference sources,	74%
academic or research journals	51%
newspapers or magazines for the public	60%
other print sources	64%

The percentages of students using **online**:

Google, Yahoo Search or other general Internet search engines	98%
Online journals, magazines, newspapers or encyclopedias	83%
Online booksellers (e.g., Amazon.com)	63%
Google Scholar	66%
Online indexes or databases	59%
Online library catalog	55%
Other online sources	62%

STUDENT CONFIDENCE WITH USING THE INTERNET AND COMPUTERS*(Questions 1-12, 23-25)*

While a high percentage (94% or above) of students are confident that they can use the Web, receive & send email, check their class schedules, and use social networking sites, **some students may benefit from instruction covering other tasks such as how to**

- download files
- create and attach documents to email
- use D2L or appropriate course management tool
- scan, save, edit pictures
- recover a deleted file
- create or edit web pages

Grouped Question Categories

Students who agree that they are confident in their ability to

browse/surf the World Wide Web	97-98%
receive/send email & open email attachments	96-98%
use the university's Web portal to check their class schedule	96%
use social networking sites such as MySpace or FaceBook	94%
download files from the Internet to a personal computer	91%
create and attach a Word document to email	89-91%
scan, save, and edit a picture	83-86%
use a web-based course management tool such as D2L	81%
recover a file accidentally deleted	62%
create or make changes to a Web page	55-56%

EFFECTIVELY AND EFFICIENTLY SEARCH RESOURCES*(Questions 13, 15, 17-18, 20, 63-64, 68-69, 70-71, 87-89, 96)*

Students will benefit from opportunities to learn effective search strategies, including Boolean operators, truncation, subject headings, and more, to use in the more sophisticated search engines found in the library's online databases and catalogs. The percentage of students who correctly answered four questions about search strategies ranged between 14% and 28%. Students find using electronic indexes (databases) and library catalogs to be more challenging than an Internet search engine. They are more confident in their abilities to use Google to find information than they are using online databases.

APSU students who agree that they possess confidence that they can

- **effectively use a search engine such as Google or Yahoo** 99%
- **find specific information on the World Wide Web;** 97%
- **find information on the Web to complete their class assignments** 96%
- **judge the quality of their online information seeking strategies** 86%
- **use online research databases such as Academic OneFile or InfoTrac** 69%

When asked how challenging it is to

- a) **use an Internet search engine to identify & retrieve sources**, 93% said easy, and less than 1% each said it was very difficult or had had no experience.
- b) **develop a list of sources to investigate**, 79% responded easy; 21% rated it difficult.
- c) **revise their search strategies as necessary**, 73% found it easy; 25% found it difficult.
- d) **use a library catalog**, 69% said it was easy; 21% found it difficult, and 11% had no experience.
- e) **use a print index**, 61% found it easy, 20% found it difficult; 19% had no experience.
- f) **use an electronic index (InfoTrac, Academic Search Premier, etc.)**, 58% responded easy; 20% said difficult, and 22% had no experience.

In terms of assessing their skill levels, only 20% correctly selected **the Boolean operator 'OR' to retrieve the MOST results in an online search** (movies OR films). 43% selected "the Boolean operator 'AND'" while 25% indicated that they "don't know."

In another question, only 14% correctly used **the * or ! symbol in place of the last letters of the work to truncate the search word**. 22% confused truncation with using Boolean operators, 20% selected "None of the above" and 38% "don't know."

Just 28% of the students correctly selected that **searching again using the subject headings that closely match your research topic** is the most efficient way to find a comprehensive listing of other books in the catalog on the topic described. 33% responded that they "don't know" and the remaining 39% selected less comprehensive strategies.

Only 21% correctly indicated that **searching an electronic database in a specific academic field is likely to yield the most comprehensive list of relevant scholarly articles**. 21% chose "searching the library catalog", 10% using a general Internet search engine, 8% "paging through print academic journal", 22% "all of the above are equally effective", 27% "don't know."

CORRECTLY FORMAT PAPERS & CITE SOURCES
(Questions 19, 31, 53, 67, 76-77, 91-94, 98-99)

Students need more opportunities to learn how to correctly format papers/cite sources.

While 65% of the students responded that they had completed three or more projects including at least three sources in the past academic year, their knowledge and ability to cite is lacking. Even though correctly identifying the type of source to be cited plays an important part in creating correct citations, less than 38% recognized a book, less than 19% a journal article, and less than 12% a portion of a book. Only 44% of the students answered correctly a question regarding when a citation is not required. Just 27% correctly answered a question dealing with what a citation is in a scholarly article or research paper. Interestingly, in responding to the end of the survey, open-ended question regarding what else they want their course instructors or librarians to know or something that they want to learn, several students stated that they wanted help learning how to cite sources and avoid plagiarism.

When asked **how many school assignments, papers, or research projects they had completed in the past academic year that required them to include at least three sources** in a Bibliography, References, or Works Cited list, nearly 65% responded three or more; nearly 27% indicated one or two; and a little less than 9% responded none.

Nearly 75% reported that in the past academic year, they were **required to use a specific format or style for the sources** in bibliographies assigned as part of research projects.

When asked how challenging it is to

- a) **document their sources**, 66% responded easy; 32% rated the experience as difficult.
- b) **know *how* to document a source**, 70% found it easy, while 27% found it difficult.
- c) **know *when* to document a source**, 75% students said it was easy; 23% difficult

In terms of assessing their skill levels, students were asked to consider **what a citation is in a scholarly article or research paper**. 27% correctly chose “source information for any ideas or text from someone else’s written work.” 16% chose “a direct quotation from someone else’s written work,” 9% chose “the physical location of a source,” and 15% selected “All of the above.” 22% don’t know.

Students were asked **when a citation is NOT required** 44% correctly answered “when you are describing your own findings or analysis.” 12% selected “you are paraphrasing, rather than quoting, a source,” 7% selected “more than one source says the same thing,” and 15% chose “All of the above.” 22% don’t know.

Only 54% were able to correctly **identify the journal issue number in a citation**. Students who were able to **correctly identify a source** as

- an entire book less than 38%
- a journal article less than 19%
- a portion of a book just 12%

EVALUATING APPROPRIATE SOURCES FOR ACADEMIC WORK

(Questions 14, 16, 21-22, 74-75, 90, 95, 97, 100-110)

Students need more opportunities to learn to distinguish between various types of sources, including primary & secondary sources and academic journals & popular magazines. They also need to learn what is meant by a peer-reviewed or refereed journal. Only 18% of the students were able to select the correct statement in distinguishing between academic journals and popular magazines; 34% didn't know. Just 42% were able to select the correct statement when distinguishing between primary and secondary sources; 25% didn't know. With regard to questions about peer-reviewed or refereed journals, only 25% were able to choose the best description; 38% didn't know. Responses to additional questions about scholarly journals indicate the need for students to learn more about this type of source.

APSU students who agree that they possess confidence that they can

- **determine the quality of information provided on a Web page** 89%
- **judge the quality of information I find on the World Wide Web** 88%
- **tell the difference between commercial and organization or professional association Web sites** 83%
- **identify a fake or bogus Web site** 76%

85% of the students surveyed rated the challenge of **determining whether a source is appropriate for an academic project** as easy, while 82% judged **deciding what information from their sources to integrate into their projects** to be easy.

Distinguishing between academic journals and popular magazines, only 18% selected the *least accurate* statement, while 34% didn't know. **Distinguishing between primary and secondary sources**, just 42% selected the *most accurate* statement, while 25% indicated they don't know. Only 25% were able to select the best **description of a peer-reviewed or refereed journal**; 38% didn't know.

Students responded to questions in which they had to **conclude whether a source was scholarly based on a single characteristic** presented.

	Cannot determine	Scholarly	Non-scholarly	Don't know
Is available online	37%	35%	16%	12%
Translated –other language	34%	36%	11%	19%
Publish. peer-review journal	12%	45%	26%	17%
Is posted on a political blog	20%	27%	35%	18%
Was recently published	40%	33%	11%	16%
Has lengthy reference list	17%	58%	10%	15%
Publish. by university. press	9%	67%	8%	15%
Publish. in Time,Newsweek	14%	48%	21%	17%

EVALUATING APPROPRIATE SOURCES FOR ACADEMIC WORK - continued*(Questions 14, 16, 21-22, 74-75, 90, 95, 97, 100-110)*

Students were presented four source citations and asked **which one is least appropriate for a research paper**: Encyclopedia (2000) 40%, Journal article (2002) 22%, Website (.com, 2006) 19%, and University Press book (1980) 18%. Asked **on what basis**, 22% chose “Whether the source is likely to be scholarly,” 17% selected “Whether the source was a print or Internet source,” 12% chose “How recently the source was published,” 8% picked “The number of pages with information about this topic,” and 41% selected “All of the above equally influenced me.” Responding to the **best way to determine whether to use a particular source**, 24% “whether source is scholarly,” 11% “How easily you can get the source,” 11% “How recently the source was published,” 6% “Whether the source is a print or Internet source,” 5% “Whether the author is highly respected,” and 43% “All of the above are equally valid criteria.”

ORGANIZING WORK & LOCATING/ACQUIRING SOURCES*(Questions 46-52, 72-73)*

Students will benefit from learning about Refworks, and other ways to organize their work.

Responding to questions regarding **how they organize the information that they gather**, students indicated use of the following methods.

Paper folders, files, or note cards	92%
Computer folders or files (My Documents, Microsoft Word files, etc.)	92%
Bibliographic management software (Engnote, Refworks, ProCite, etc.)	77%
Email	74%
Online tools (bookmarks, blogs, MySpace, etc.)	59%
Other	51%
I did not use any tools for organizing or managing research information	12%

Expressing the challenge presented with **physically locating sources in a library**, 79% believed it to be easy, while 39% believed **obtaining materials through inter-library loan** to be easy. However, 40% of the students had had no experience with inter-library loan.

EXPERIENCES ASKING FOR HELP*(Questions 54-60)*

Students will benefit from learning to use of librarians' expertise by asking for assistance.

When asked **how many times during the past academic year that they talked with a librarian about a research project** that they were doing, 6% of the students indicated five or more times, 13% three or four times, 38% once or twice, and 43% rarely.

Students were asked **how often they sought out help or advice when working on research assignments** as follows:

	Often	Almost Always	Sometimes	Rarely
Teachers or professors	36%	29%	25%	10%
Librarians	15%	8%	31%	46%
Parents or other adult family members	24%	15%	29%	32%
Friends, classmates, or siblings	38%	26%	24%	12%
Writing labs, writing centers, or help groups	68%	16%	9%	7%
Help screens, online tutorials, or other Electronic resources	17%	11%	21%	51%

NARROWING TOPIC, DEVELOPING ARGUMENT, & WRITING PAPER*(Questions 61-62, 65-66)*

Students were asked which of the following statements best describe the way you pace your work on a research assignment.

I do a little work soon after the assignment is given, but do most of it toward the end	41%
I divide the work pretty equally across the available time.	34%
I do most of the work soon after an assignment is given	17%
I do all the work just before or on the due date.	8%

When asked how challenging the following components of research are,

- 82% of the students find **narrowing your topic** to be easy and 16% difficult.
- 71% of the students find **developing your main argument or thesis statement** to be easy, while 28% find the process difficult.
- 78% find **writing the paper** easy compared with 20% who find it difficult.

ATTITUDES/BELIEFS ABOUT RESEARCH

(Questions 78-86)

Students were asked **how much they enjoy doing research**. 5% enjoy the process very much, 13% quite a bit, 46% answered some, and 36% indicated that they enjoyed research very little.

Students were asked to respond to the following statements concerning **different beliefs about the research process**. Percentages of students who agree follow each statement.

If a researcher cannot understand something within a short amount of time, she should keep on trying.	96%
Skillful researchers know the best way to approach any research question.	95%
A course in research skills would be useful.	88%
Good research yields clear results; poor research yields ambiguous results.	85%
Careful researchers can ultimately get to the truth.	84%
When it comes to research, some people are just naturally better at it than others.	83%
Successful researchers understand things quickly.	56%
When two researchers disagree, one of them must be wrong.	23%

Conclusion

This research study was conducted to examine the relationship between APSU first-year undergraduate students' information literacy skill levels, their experience with and attitudes toward conducting library-based research, and their Internet self-efficacy levels. This preliminary analysis and recommendations will be used by APSU library faculty in collaboration with classroom faculty to help students succeed in their academic work that involves library-based research.