

Research Practices Questionnaire Analysis and Recommendations
Survey Completed by APSU 1000 Students, Fall 2011

EXECUTIVE SUMMARY

Description of the Study

During Fall Semester, 2011, 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 abilities to use libraries, computers and the Internet; (3) determine what changes occur in research abilities as students progress through their academic careers, and (4) use these findings to improve the ways in which library faculty work with classroom faculty to help students to develop their research skills.

367 out of a possible 1362 students (27%) enrolled in APSU 1000 completed the survey. Survey participants were representative of the surveyed population, according to age, gender, and ethnicity. This analysis of the data gathered is based on the descriptive statistics that are reported.

RECOMMENDATIONS

APSU library and classroom faculty should collaborate additionally in facilitating students to learn the research skills crucial to their progression and graduation from the academy. Below are the research skill areas that should be targeted further. Specific survey results that provide information about students' knowledge, skill levels, and perceptions regarding their knowledge and skill levels appear on the pages indicated.

Learning to correctly employ search strategies, including use of Boolean operators, truncation, subject headings, and more, prepares students to become excellent researchers. Search strategies enable effective and efficient identification of resources using the more sophisticated search engines found in the library's expensive online databases and catalogs –*see page 2 and 6.*

Learning to properly distinguish among various types of sources, including refereed scholarly journals & popular magazines and primary & secondary sources, empowers students to identify and use high-quality academic materials in their academic and life work –*see pages 3, 4, 6.*

Learning to correctly format papers and cite sources enables students to successfully complete academic work. Several students stated that they need help learning how to cite sources and use different citation styles –*see page 5.*

Learning to consult experts who understand the research process and how to organize academic work assists students to navigate the process and produce high-quality work –*see pages 4, 7, 9.*

Learning to be proficient using the Internet and computers aids students to succeed –*see page 8.*

EFFECTIVELY AND EFFICIENTLY SEARCH RESOURCES

(Questions 13, 15, 17-18, 20, 63-64, 68-69, 70-71, 87-89, 96)

In order to become excellent researchers, students must learn to correctly employ search strategies, including savvy use of Boolean operators, truncation, and subject headings. This will greatly enhance their abilities to effectively and efficiently identify resources using the more sophisticated search engines found in the library’s online databases and catalogs.

Four search strategy questions (see below) were correctly answered by only 27%-35% of the students. Unsurprisingly, students find using library online databases and catalogs to be more challenging than the Internet; they are more confident in their abilities to use Google.

- 1) Only 30% correctly selected **the Boolean operator ‘OR’ to retrieve the MOST results in an online search** (movies OR films). 45% selected “the Boolean operator ‘AND.’ while 17% indicated that they “don’t know.” 8% selected “NOT” or “INSTEAD OF.”
- 2) In another question, only 27% correctly used **the * or ! symbol in place of the last letters of the work to truncate a search word**. 28% confused truncation with using Boolean operators, 25% “don’t know,” 11% selected “Typing in first syllable,” 9% selected “None of the above.”
- 3) Just 35% 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. 28% responded that they “don’t know” and the remaining 37% selected less comprehensive strategies.
- 4) Only 28% correctly indicated that **searching an electronic database in a specific academic field is likely to yield the most comprehensive list of relevant scholarly articles**. 13% chose “searching the library catalog”, 7% using a general Internet search engine, 12% “paging through print academic journal”, 23% “all of the above are equally effective”, 13% “don’t know.”

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 97%
- judge the quality of their online information seeking strategies 87%
- use online research databases such as Academic OneFile or InfoTrac 79%

When asked how challenging it is to

- a) use an Internet search engine, 90% said easy, and 9% said it was difficult.
- b) develop a list of sources to investigate, 77% responded easy; 21% rated it difficult.
- c) use a library catalog , 72% said easy; 21% found it difficult, and 7% had no experience.
- d) revise their search strategies as necessary, 70% found it easy; 29% found it difficult.
- e) use an electronic index (InfoTrac, Academic Search Premier, etc.), 64% responded easy; 22% said difficult, and 14% had no experience.
- f) use a print index, 59% found it easy, 24% found it difficult; 17% had no experience.

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.

Students were presented four source citations and asked **which one is LEAST appropriate for a paper**. They responded as follows: Encyclopedia (2000) 40%, Website (.com, 2006) 28%, Journal article (2002) 18%, and University Press book (1980) 14%. Asked **on what basis they responded to the previous question**, 44% selected “All of the above [see following responses] equally influenced me,” 22% “Whether the source is likely to be scholarly,” 15% “Whether the source was a print or Internet source,” 13% “How recently the source was published,” and 5% “The number of pages with information about this topic.”

Responding to a question about the **best way to determine whether to use a particular source**, 51% selected “All of the above [see following responses] are equally valid criteria for choosing among sources,” 23% “whether source is scholarly,” 8% “How easily you can get the source,” 8% “How recently the source was published,” 8% “Whether the source is a print or Internet source,” and 2% “Whether the author is highly respected.”

Distinguishing between academic journals and popular magazines, only 20% correctly selected the *least accurate* statement, while 20% said that they didn’t know. **Distinguishing between primary and secondary sources**, just 38% correctly chose the *most accurate* statement, while 20% indicated that they didn’t know. Only 37% were able to select the best **description of a peer-reviewed or refereed journal**; 25% said that they 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	41%	35%	12%	12%
Translated –other language	42%	29%	11%	18%
Publish. peer-review journal	8%	53%	25%	14%
Is posted on a political blog	17%	29%	41%	13%
Was recently published	44%	27%	13%	16%
Has lengthy reference list	20%	58%	9%	13%
Publish. by university. press	9%	70%	9%	12%
Publish. in Time,Newsweek	10%	46%	30%	14%

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

85% of the students rated the **challenge of determining whether a source is appropriate for an academic project** as easy, while 84% judged **deciding what information from their sources to integrate into their projects** to be easy.

The percentage of APSU students who indicate that they possess confidence that they can

- determine the quality of information provided on a Web page 90%
- judge the quality of information I find on the World Wide Web 90%
- tell the difference between commercial and organization or professional association Web sites 88%
- identify a fake or bogus Web site 80%

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 or manage the information that they gather**, students indicated they use the following methods.

- Paper folders, files, or note cards 90%
- Computer folders or files (My Documents, Microsoft Word files, etc.) 94%
- Email 82%
- Online tools (bookmarks, blogs, MySpace, etc.) 59%
- Other 59%
- Bibliographic management software (Endnote, Refworks, ProCite, etc.) 33%
- I did not use any tools for organizing or managing research information 12%

Expressing the challenge presented by **physically locating sources in a library**, 69% believed it to be easy. While 38% believed **obtaining materials through inter-library loan** to be easy, 33% of the students had had no experience with inter-library loan.

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.

The results below indicate that most students do not fully understand what a citation is, nor are they able to correctly identify different types of sources, which plays an important role in the process. Responding to a question asking what else they want to learn, **several students stated that they need help learning how to cite sources and use different citation styles.**

For the purpose of assessing their skill levels:

Students were asked to consider **what a citation is in a scholarly article or research paper.**

Only 22% correctly answered “source information for any ideas or text from someone else’s written work.” 14% chose “a direct quotation from someone else’s written work,” and 6% chose “the physical location of a source.” 42% of the students selected “All of the above,” while 15% said they “don’t know.”

Students were asked **when a citation is NOT required.** 51% correctly answered “when you are describing your own findings or analysis.” 9% selected “you are paraphrasing, rather than quoting, a source,” and 8% selected “more than one source says the same thing.” 19% chose “All of the above,” while 13% said they “don’t know.”

The percentage of students who were able to **correctly identify a source** as

- an entire book less than 34%
- a journal article less than 18%
- a portion of a book just 8%

Only 60% were able to correctly **identify the journal issue number in a citation.**

Answering questions designed to measure their perceptions of their abilities:

82% of the students were confident that they can accurately cite online resources that they use in term papers; 8% were not and 10% were undecided. When asked how challenging it is to

- a) **document their sources**, 66% responded easy; 31% difficult, 3% no experience.
- b) **know *how* to document a source**, 72% found it easy, while 26% difficult.
- c) **know *when* to document a source**, 77% easy; 22% difficult

When asked how often in the past academic year that they were **required to use a specific format or style for the sources** in bibliographies assigned as part of research projects, nearly 70% stated almost always, 13% often, 10% sometimes or rarely, and 7% never.

Students were 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. 68% responded three or more; 25% indicated one or two; and 7% responded none.

STUDENT EXPERIENCE WITH LIBRARIES AND RESEARCH

(Questions 26-45)

Students will continue to benefit from collaborations between library and classroom faculty resulting in opportunities for students to learn how to use expensive online databases as a means to efficiently complete academic assignments using high-quality academic materials.

Of the APSU 1000 students who responded to the Research Practices Survey (n=367), 50% report **using a college or university library once a week or more.**

Of the students surveyed, 81% 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:

Frequency	High School	Public	College/University
Once a week or more	20%	5%	50%
Once or twice a month	18%	12%	17%
A few times a year	40%	38%	17%
Never	22%	46%	16%

During the past year, students completed **school assignments**, papers, and research papers using at least three sources as follows: 32% completed five or more such projects, 61% one to four, and 7% none. In the case of 81% of the students surveyed, **a teacher or librarian had talked** with one or more classes about how to use library resources, including Internet resources.

Students responded that they use both print and online sources; 88% use online and 80% print.

The percentages of students using **online**:

Google, Yahoo Search or other general Internet search engines	97%
Online journals, magazines, newspapers or encyclopedias	85%
Online library catalog	67%
Online indexes or databases	59%
Other online sources	51%
Online booksellers (e.g., Amazon.com)	42%
Google Scholar	36%

The percentages of students using **print**:

library books	64%
encyclopedias or other reference sources,	58%
academic or research journals	59%
newspapers or magazines for the public	51%
other print sources	50%

EXPERIENCES ASKING FOR HELP

(Questions 54-60)

Students should be encouraged to take better advantage of librarians’ and others’ expertise. They need to learn more about the process of research.

When asked **how many times during the past academic year that they talked with a librarian about a research project** that they were doing, 51% of the students indicated rarely.

How often students sought out help or advice when working on research assignments

Experts	Often	Almost Always	Sometimes	Rarely
Teachers or professors	33%	29%	24%	14%
Librarians	15%	7%	27%	51%
Parents or other adult family members	24%	19%	27%	30%
Friends, classmates, or siblings	35%	30%	25%	10%
Writing labs, writing centers, or help groups	18%	9%	18%	55%
Help screens, online tutorials, or other Electronic resources	19%	13%	26%	42%

ATTITUDES/BELIEFS ABOUT RESEARCH

(Questions 78-86)

Students were asked **how much they enjoy doing research**. 6% enjoy the process very much, 20% quite a bit, 39% answered some, and 35% 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.	95%
Skillful researchers know the best way to approach any research question.	94%
Good research yields clear results; poor research yields ambiguous results.	87%
Careful researchers can ultimately get to the truth.	86%
A course in research skills would be useful.	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.	27%

STUDENT CONFIDENCE WITH USING THE INTERNET AND COMPUTERS*(Questions 1-12, 23-25)***Students need assistance in building their confidence levels with several tasks including**

- download files from the Internet to a personal computer
- scan, save, and edit the size of a scanned picture
- recover a deleted file
- create and make changes to web pages

On the other hand, a high percentage (95% or above) of students do indicate confidence in their ability to perform certain key tasks (see below) using the Internet and computers.

Percentages of students who agree that they are confident in their ability to

browse/surf the World Wide Web	99%
receive and send email messages	99%
open a document received as an email attachment	98%
create and send a Word document via email	98%
attach and send a document via an email message	97%
use social networking sites such as MySpace or FaceBook	97%
use a web-based course management tool such as D2L	96%
use the university's Web portal to check their class schedule	95%
download files from the Internet to a personal computer	91%
scan a picture to save on a computer	84%
edit the size of a scanned picture	79%
recover a file accidentally deleted	60%
create a home page on the World Wide Web	68%
make changes on a Web page	55%

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

Some students need to learn to begin their research earlier. Narrowing topics, developing thesis statements, and writing papers continue to challenge some students.

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	43%
I divide the work pretty equally across the available time.	32%
I do most of the work soon after an assignment is given	13%
I do all the work just before or on the due date.	12%

When asked **how challenging** the following components of research are,

- 86% of the students find **narrowing your topic** to be easy and 13% difficult.
- 73% of the students find **developing your main argument or thesis statement** to be easy, while 26% find the process difficult.
- 78% find **writing the paper** easy compared with 21% who find it difficult.

One percent of the students indicated that they had no experience with the above components of research.