

Students Lack Research Skills ... Or Do They?

Summary of the Latest Report from *Project Information Literacy*

The headline in a recent article from the Chronicle of Higher Education read, "Students Lack Basic Research Skills, Study Finds" (<http://chronicle.com/blogs/wiredcampus/students-lack-basic-research-skills-study-finds/28112>). But the headline only tells part of the story, and you might be surprised at what students actually do know (and practice) when conducting academic research.

The study is the latest finding from Project Information Literacy (<http://projectinfolit.org/>), and is entitled, "[Truth Be Told: How College Students Evaluate and Use Information in the Digital Age](#)" (November 2010, PDF). Since 2008, researchers from the University of Washington have been exploring various aspects of the question, "What is it like to be a student in the digital age?" Previous reports from the project include:

- [Assigning Inquiry: How Handouts for Research Assignments Guide Today's College Students](#) (July 2010, PDF)
- [Lessons Learned: How College Students Seek Information in the Digital Age](#) (December 2009, PDF)
- [Finding Context: What Today's College Student Say about Conducting Research in the Digital Age](#) (February 2009, PDF)

This report presents findings from a Spring 2010 self-report survey of 8,353 2nd, 3rd, and 4th year undergraduate students across 25 U.S. colleges and universities; it also presents comparison data from a 2009 survey of 2,318 students at 6 U.S. colleges and universities. The researchers also undertook follow-up interviews with a small sample of survey respondents. Researchers asked students about their research experiences for both course-related information needs and personal information needs. Some of the findings from this study may surprise you, while others which may confirm what you've always suspected. What's clear from this study, however, is that students do not find the whole research process daunting, but rather parts of it (chiefly the beginning, and knowing where to end).

Major Findings

Here are the major findings, as related to students' course-related research:

1. Respondents felt competent in their ability to evaluate the information they were finding; they more often based their evaluation of web content on factors such as currency (77%), author's credentials (73%), the URL or web domain (71%) and interface design (71%). For library materials, which respondents evaluated less often, the factors considered were currency (67%), chart quality (57% - most often reported by students in science and engineering), and acknowledgement of differing viewpoints (50%). Students in the arts and humanities were more likely to evaluate both web content and library sources (with the one exception already noted). Overall, respondents reported using 7 or more standards when evaluating web content, but only 4 (or fewer) standards for library materials. In follow-up interviews, researchers found that few respondents viewed evaluation as an integral part of selecting or synthesizing information, but rather as a procedural

step, a hurdle to clear before moving on, and that many of them used a checklist approach, relying on only one or two criteria to determine if the work meets the standard they have set.

2. 49% of respondents reported turning frequently to instructors for assistance in evaluating the quality of sources for their course-related research (only 11% reported asking librarians). This confirmed some of the researchers' earlier findings: "Students, in fact, use libraries -- but most students use library resources -- not librarian-related services" (p. 16).
3. Many of the research techniques used by respondents were ones they brought with them from high school; "If the research technique worked for them and stood the test of time, students ported the technique to college ... and often made few changes" (p. 21). However, "students had fewer techniques for conducting research and finding information than for writing papers" (p. 19). Techniques used most frequently in the sample include creating a thesis statement early on (58%), adding their own perspective (55%), and developing an outline (51%). Far fewer respondents reported using techniques and strategies related to the information search: using system for organizing sources (43%), developing an overall research plan (33%), ending research after finding the citations required (26%), using interlibrary loan (23%), using the same topic for different assignments (6%). About 12% of respondents reported giving up after a couple of searches, and starting over with a new topic (which can be seen as either a good or bad thing, depending on your viewpoint). In interviews, students frequently reported using Wikipedia as a starting point before moving on to other sources, often discovered through the tools provided by the library. In only about 10% of cases did students report learning research techniques from campus librarians: "In a few cases, the students we interviewed did have a fuller grasp of research as an iterative process. Where did these students learn the process? They learned it from campus librarians" (p. 22).
4. In spite of a common belief that today's students are "tech-savvy," surprisingly few students reported using technology and productivity tools in their research, particularly those used for information sharing and building collective knowledge. The most commonly used tools were: highlighting feature in software package (62%), citation-making programs (such as RefWorks - 55%), document-sharing applications (e.g., Google Docs - 48%), digital "sticky notes" (29%), and social bookmarking (e.g., digg, delicious - 10%).
5. 84% of respondents cited getting started as the most difficult part of course-related research. Other difficulties included: defining a topic (66%), narrowing down a topic (62%), and filtering irrelevant results (61%). Nearly half of respondents (46%) found it difficult to know when they had done a good job, and more than a third (37%) didn't know when to end the information search. By contrast, far fewer respondents reported challenges with evaluating sources (26%), figuring out where to find sources (29%), knowing when to cite (29%), and integrating information from different sources (30%). In follow-up interviews, researchers found that "some students were afraid to commit to a topic for fear *the topic would fail them*, not that they would fail in their treatment of a topic when trying to complete an assignment" (p. 31). In other words, students' "failure to launch" was related to uncertainty that the topic was appropriate or researchable, or that it would meet with an instructor's approval. This fear may be closely related to students' views that research involves

finding all of the available information, or finding the right answer. AS the researchers note, "many students lacked the research acumen to frame a college-level research inquiry into something that was manageable to research and allowed them to complete the entire process" (p. 33).

6. Finally, researchers investigated what matters most to students during course-related research; the most frequent responses are probably not all that surprising: passing the course (99%); finishing the assignment (97%); and getting a good grade (97%). But students also cared about the following: meeting citation requirements (88%); conducting a comprehensive investigation of the topic (78%); learning something new (78%); improving analytical skills (69%); improving writing skills (64%); and improving research skills (63%). They were least concerned with impressing their parents with the grade received (39%). In follow-up analysis, researchers found that "students in the sample who found the beginning initial stage of research to be the most difficult also cared about comprehensively researching a topic (78%) and learning something new (76%). This subset also found that finding answers to use in an assignment (76%) to prove they had done the research was important to them" (p. 34). This might explain, to some degree, why students find that beginning a research project is the most difficult part of course-related research.

Recommendations

The researchers have developed a set of four recommendations:

1. **Integrate research rubrics into assignment guidelines.** "We support the development and widespread use of comprehensive research rubrics -- a set of criteria about what quality course-related research entails that is part of the research assignment" (p. 38). They recommend that these rubrics be developed collaboratively, with criteria from faculty, librarians, writing centres, and centres for teaching and learning.
2. **Re-think resource-focused library instruction.** Library collections are continually changing, growing, evolving, especially in this age of digital information, even over the space of a four-year degree. "Our findings suggest that most students -- not all - use a strategy that tried to manage and control -- yes, limit -- all of the information that is swimming in front of them" (p. 39). The researchers recommend that librarians emphasize a research process in their encounters with students in the classroom and at the reference desk. "We think it is essential for librarians to teach and train student about developing and honing a research strategy with some assurance, on the students' part, that quality research is being conducted" (p. 39).
3. **Hold students more accountable for the research they do conduct.** "Consider giving research assignments that require students to use the cognitive activities of defining a topic and narrowing it down. Faculty need to ... focus on substantively helping students to learn and practice research skills" (p. 39).
4. **Assess how students are being prepared for the 21st century workplace.** "Today's students have systems for finding and using information the academic often disregards, or in some cases, even prohibits (e.g., Wikipedia). What concerns us is that they systems students are using are increasingly becoming the basis of what is being used for finding information and collaborating,

sharing, and creating knowledge in many workplaces" (p. 40). The researchers recommend initiating a dialogue among faculty, administrators, librarians and others across the academy about the information systems being advanced on their campuses, as well as around questions of grading students's competencies, and extending that dialogue beyond the academy. The focus on "developing higher level, more independent, creative problem-solvers in college should begin with engaging K-12 educators ... in building in more systematic and measured instruction and learning of research and information skills in high schools, or earlier" (p. 41).

Hopefully this provides you with some food for thought, and ideas about how we can move forward with our information literacy efforts.

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