

WHAT INFORMATION LITERACY MEANS TO ME: COLLABORATING WITH FACULTY TO UNDERSTAND STUDENT PERCEPTIONS OF INFORMATION LITERACY

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INTRODUCTION AND BACKGROUND

The question of students' information literacy rarely has a simple answer and is determined by numerous factors. This is further complicated by faculty perceptions of students' information literacy skills. Many assessment methods, both qualitative and quantitative, have been developed to help librarians determine whether students are information literate, but communicating these results to faculty can be challenging. Additionally, trying to use these results to enhance the curriculum can be daunting for a faculty member.

The Miami University Libraries have partnered with the University's Center for the Enhancement of Learning and Teaching (CELT) to establish a faculty learning community (FLC) for embedding information literacy into the curriculum. This FLC is now in its fifth year, and provides another avenue for faculty and librarians to forge partnerships regarding information literacy. Each year a new group of eight faculty members and four librarians meet regularly to discuss information literacy and devise ways in which it can be effectively incorporated into classroom assignments. Learning community members work together to complete projects throughout the year ranging from syllabi revisions to research studies. These projects generally stem from faculty members' own interests and goals.

The learning community for the current academic year had one common objective: to learn about the information

literacy skills of the students in their own classes. Multiple learning community meetings were utilized to discuss this goal, resulting in a survey designed to determine how students find information, how they view their own expertise in finding the information, and how applicable this information is to life outside the classroom.

REVIEW OF THE LITERATURE

Many studies involving students' perceptions of the research process have been conducted. Below is a sample of the research available.

Wang and Artero (2005) examined students' use of Internet resources. Students were likely to turn to the Internet when conducting research, but they had difficulty dealing with the amount of information they found. Students reported trusting online information, using a source only because it met their needs, and needing to learn how to format citations.

Kipnis and Frisby (2006) surveyed occupational therapy students who reported seeking help first from classmates. The majority of students searched unsuccessfully for 30 minutes before seeking help. They tried multiple strategies including trial and error and consulting an expert.

Upon the completion of an online information literacy course (Scales & Lindsay, 2005), students saw its relevance to future coursework, careers, and in everyday life. A minority of students felt that course-related questions generated the need for information literacy skills. These students did not connect information literacy with lifelong learning. However, the majority "connect[ed] it to broader concepts including human development, curiosity, and a need for knowledge" (p. 520).

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The Association of College and Research Libraries (ACRL) worked with the National Survey of Student Engagement (NSSE) to add questions relating to students' information literacy skills (ACRL, n.d.) to their nationwide survey. The majority of students contacted librarians for research help only sometimes or never. The same was true for conducting research in the library. However, the majority of students replied that they used online library resources often or very often. Most students chose not to attend a library instruction session or use a library tutorial.

Project Information Literacy, conducted by The School of Information at the University of Washington, recently published their preliminary findings of interviews with college students (Head & Esenberg, 2009). Students were interviewed to determine how they research for assignments and personal inquiries, the obstacles they encountered, and their strategies for dealing with those obstacles. Among common frustrations were retrieving too many results, recognizing relevant information, and trouble navigating the library. A majority of students reported waiting until a few days before an assignment was due to begin their research. Resources students found particularly valuable included the library website, databases, and librarians. While nearly all students reported using Wikipedia as a part of their research, it was used to gain a "big picture" view of a topic.

Faculty generally emphasize the importance of information literacy, though they recognize that many students lack research skills. Instructors ranked most outcomes tied to ACRL Information Literacy Standards as important (Gulilkson, 2006). Skills that held less value were related to use of information technology tools, ability to gather primary source information through a survey or study, and journaling and reflecting on the search process. Departmental affiliation played a role in which skills faculty members valued most.

In a similar study, 91% of faculty felt that by the end of their college careers, students should acquire all seven skills in the model for information literacy instruction created by the Society of College, National and University Libraries (Weetman, 2005). A majority of faculty taught these skills in the classroom and included them in assignments and assessment. Humanities professors were most likely to do this, computing sciences and engineering were least likely to include these skills.

Singh (2005) studied journalism and communication faculty's perceptions of their students' information literacy skills. Thirty-three percent included library research as a requirement. Less than 1% felt their students met all ACRL standards. Faculty "s[aw] that their students are not as information literate as they could be, recognize[d] that their students have research skills and practices that need improvement, and understood that their university library is structured to provide specialized research instruction" (p. 308). Birmingham et al. (2008) had similar results when adapting Singh's survey for schools in Canada.

METHODS AND PROCEDURES

Surveys were administered to courses in which learning community members were instructors. Sixteen courses

with approximately 350 students enrolled yielded 300 valid responses. A paper survey was utilized for several reasons. The learning community determined that the most effective mode of administration would be during class time, and most classes were held in rooms without computers. Also, it was important that the survey be administered without outside influences, including the instructor. A copy of this survey is available in the Appendix.

Miami's Institutional Review Board granted human subjects approval prior to administration of the survey. Librarians from the learning community administered surveys at the beginning of class time without the instructor present. Students participated in the survey voluntarily, and survey administrators made it clear that completion did not affect grades. Results were compiled by class, with aggregate data presented to faculty members. The learning community then utilized the data to redesign assignments to better incorporate information literacy.

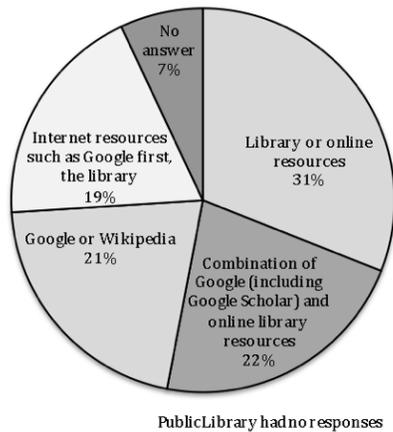
SURVEY RESULTS AND TRENDS

A few general trends emerged from data analysis. An overwhelming number of students preferred online resources, such as Google or library databases. Even students who use library resources exclusively expressed preference for online tools. Rather than using print or online encyclopedias, students tended to use Google or Wikipedia to learn more about their topic and then follow up with library research. One student noted: "I usually start with Google-just as a jumping off point. I avoid Wikipedia altogether. Depending on what my assignment is - I'll go to online newspapers and magazines mostly." Surprisingly, most students did not see research as a process and instead listed resources they used when asked to describe their search strategy. Because 60% of those surveyed were either juniors or seniors, it is not unexpected that 45% have had to write at least 15 papers since they started at Miami.

Although both faculty and librarian members of the learning community started this project confident in their understanding of students' search behavior, as well as in their perceptions of what research skills students should have, some survey results were surprising. One assumption we made before administering the surveys is that students are overly reliant on Internet resources such as Wikipedia and Google. However, only 21% of students indicated that they exclusively use Google, Wikipedia or both for scholarly research. One of the more revealing responses was "I get either on Google or Wikipedia. Take the info I want, rephrase it and use it." In contrast to this research technique, 31% of students surveyed said that they solely use library resources, either online or in print. In many responses the feeling of pride of this fact was apparent through the words such as "obviously," or the specific mention that Google or Wikipedia were avoided in their scholarly search: "I search online journals, go to the library to search through books and not use Google." The remaining 41% prefer a combination of library resources and non-library websites and search engines. The interesting feature of this trend is the lack of awareness of online encyclopedias through the library website among those

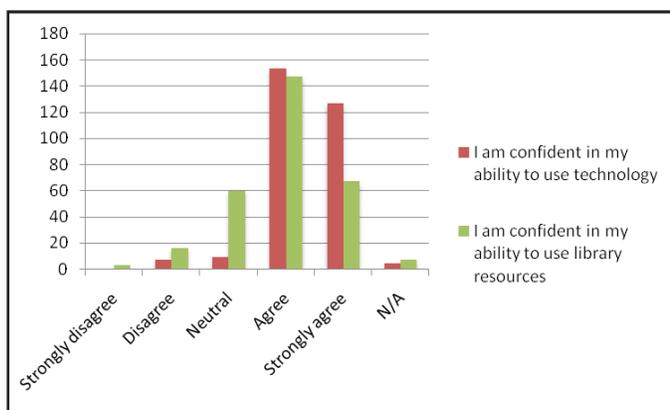
learning more about their topic from Google and Wikipedia before starting their library research.

Figure 1: How Students Describe their Process for Finding Information

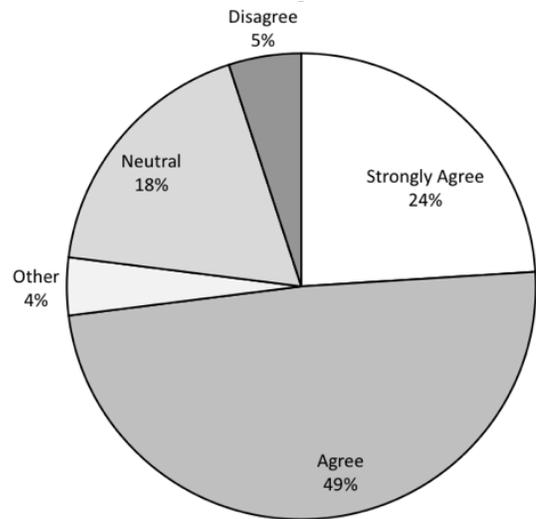


Overwhelmingly, students expressed their comfort with using technology, confirming assumptions of faculty. On the other hand, an assumption that librarians often make is that students' confidence in using technology is closely followed by their confidence in using online resources. The graph in Figure 2 shows that the students surveyed are far less enthusiastic about their ability to use library resources. Thirty-one percent of all students say they go exclusively to library resources for their research projects, but only 23% strongly agree that they are confident in using library resources. We concluded that students know where to find reliable and credible information, but they do not feel as competent finding it. Sadly, there is a possibility that students are unaware of what is available to them and therefore unable to develop their library research skills. One of the respondents sums up this hypothesis in an unexpected way: "I used Ebscohost some in high school and other similar programs but I don't think I have access to them anymore." Another student, possibly also unaware of the interlibrary loan options, describes a bad research experience as "when I cannot find relevant material, or worse when I can find it, but do not have access to it."

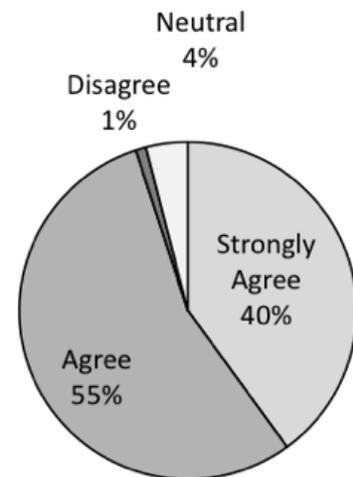
Figure 2: Student Perceptions of Technology and Library Resource Use



Figures 3a and 3b: Student Perceptions of the Transferability of Information Literacy Skills



3a. Skills transfer to job setting



3b. Skills transfer to other classes

Both instructors and librarians were curious whether the amount of research that students are expected to do in college would affect not only their confidence with research but also whether or not they understood the importance of doing research. The findings suggested that many students saw the value of research assignments and were able to transfer the knowledge gained to other endeavors. In particular, they realized how the research skills they learn in one class can be transferred to another. Fifty-five percent agreed and another 40% strongly agreed that the skills they used to find scholarly information in one class can be utilized in other classes. The numbers of students who agreed that the skills used in finding scholarly information could be utilized in a job setting was slightly smaller (49% agree and 24% strongly disagree), but the numbers were still strong. While student response did not clearly indicate which specific research skills they thought would be useful, it was heartening to find that students recognized how information literacy can contribute to lifelong learning.

USING THE SURVEY DATA

The purpose of this survey was for the faculty learning community members to redesign their research assignments and, in some cases, entire syllabi to improve the students' information literacy skills. Due to some surprising results of the survey, these changes were drastic. Each professor paired up with a librarian to implement these changes into their syllabi. One faculty member chose to embed a librarian in one of her courses to aid with the understanding of research as a process and to increase their awareness of services available to them, as well as their comfort level with library resources. The same professor also changed her other syllabus to reflect the step-by-step process of research assignments. Instead of the final project on oral history being an interview of a witness of a historic event, it is now several assignments, two of which require more thorough research of the event at two different stages of the project. Many decided to make the process of research a more prominent feature in their courses. Another faculty member also replaced a research paper with a series of assignments reflecting each of the ACRL Information Literacy Standards. We developed a data processing model for that series, which includes a list of resources and services with each step of the research process. The students will turn in their research papers at every stage of completeness from gathering resources, to analyzing, synthesizing, and evaluating their product. All faculty members of the learning community were enthusiastic and hopeful about the changes they made.

CONCLUSIONS AND RECOMMENDATIONS

Though many of our survey results helped us better understand our student population, the librarians found that the most valuable aspect of this project was the chance to collaborate with the faculty. It was a wonderful opportunity for us to learn what kinds of information literacy skills faculty want their students to learn. In turn, it helped faculty to better understand how their students perceive information literacy and how these perceptions make our task of teaching these skills challenging. Our faculty became more receptive to changing researching assignments and involving librarians in the process as a result of this survey.

We highly recommend that librarians at other institutions take advantage of opportunities to work with faculty to create these kinds of research projects. Of course, not all librarians have the advantage of participating in faculty learning communities focusing on information literacy, but there are often other ways to reach out to faculty. Like-minded librarians might start with their liaison areas to gauge interest in working on creating a survey or other research projects. Librarians might be surprised by how receptive faculty can be. Though they do not always call it information literacy, instructors are just as concerned as librarians about the research skills of their students.

Included in the appendix is the survey tool distributed to students to help readers see questions they might want to ask, but we found that creating the survey questions with faculty ultimately made the results more useful for everyone involved.

Although the conversations we had designing the questions were sometimes heated and challenging, the collaboration was incredibly constructive in understanding each other's viewpoints. If we had to do the survey again, there are certainly things we would change, but in the end the faculty input made it a worthwhile endeavor.

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APPENDIX: SURVEY ADMINISTERED TO STUDENTS

This survey is meant to determine your perceptions on searching and finding information. The information gained from this survey will be used by faculty members to enhance assignments to better reflect what students already know about finding information. We also will share this information with librarians and faculty members outside the university via publication.

You may choose to answer any/all of the questions in the survey, and do not have to complete the survey as a requirement for this class (and you will not be penalized for not taking the survey). Your instructor will not know who completed the survey. Completion of the survey indicates that you give your consent to participate in this project, and use the data as described above.

Please choose one: I am _____ Age 18 or Older _____ Under Age 18

On how many papers or projects have you had to use outside sources while at Miami?

0-3	4-7	8-11	12-15	More than 15	Don't Know	Not Applicable
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In one paragraph, describe your process as you search for information. Where do you go? How do you search? What is your usual search strategy?

What online resources do you utilize most often for paper/project research?

In your opinion, what is the difference between a good research experience and a bad research experience?

When you reach a dead-end when searching (meaning that you are diligently searching, but still cannot find any relevant information), what do you do?

Please think about the work you do for your research assignments and indicate whether you agree or disagree with the following statements:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	DK	NA
I am confident in my ability to use technology.							
I am prepared to do library research.							
I am confident in my ability to use library resources.							
What I am learning about finding information will be valuable when I leave school.							
Grades motivate me to find the best information possible.							
Conducting library research is just busy work.							
My instructors place too many restrictions on the types of resources I may use.							
I understand why my instructors place restrictions on the types of resources I may use.							
When I am doing research, I generally believe most information I find.							
When I am doing research, I look only for information that confirms my thesis.							

When I am doing research, I look for multiple viewpoints.							
The amount of information that I find overwhelms me.							
The content of the information I find intimidates me.							
The skills I have used to find scholarly information in one class can be utilized in other classes.							
The skills I have used to find scholarly information can be utilized in a job setting.							
Google is always the first place I go when I need to find scholarly information.							
Wikipedia is a source of scholarly information.							
I prefer using electronic resources over resources available only in print.							
I plan a search strategy before I begin to look for information.							
Searching for information is a trial and error process (I enter words until I find what I want).							
I can locate resources in the library.							

When you study for your courses, how often do you study at the following locations?

	Rarely	Sometimes	Regularly	Frequently	All the time	DK	NA
King Library (or other Oxford campus library)							
Miami Hamilton Library							
Miami Middletown Library							
Dorm/Apartment/House							
Shriver Center							
Classroom Building							
Lane (or other) Public Library							
Other							

When you need information for a paper, how often do you use the following resources?

	Rarely	Sometimes	Regularly	Frequently	All the time	DK	NA
Google (or another search engine)							
Course textbook							

The library catalog							
Database of scholarly journals							
Google Scholar							
Wikipedia							
Friends or colleagues							
Professor/TA							
Librarian (in person consultation)							
Librarian (via IM or chat)							
Librarian (via text message)							
Other (please specify)							

Class Standing

Freshman (less than 30 credit hours)	Sophomore (30- 63 credit hours)	Junior (64-95 credit hours)	Senior (96+ credit hours)	Graduate Student	Other
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Age

Under 18	18-22	23-29	30-39	40+
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Race/Ethnicity (check all that apply)

African-American/ African/ Black	Native American/ Alaskan Native	Asian American	Asian, incl. Indian subcon.	Hispanic/ Latino	Mexican American/ Chicano	Puerto Rican
Native Hawaiian, Pacific Islander	White or Caucasian	Other	Do not wish to answer			

Gender

Male	Female
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Estimated Current GPA

4.0-3.5	3.49-3.0	2.99-2.5	2.0-2.49	1.99-1.5	1.49-1.0	< 1.0
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