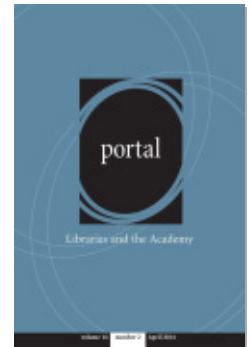# PROJECT MUSE®

A Preliminary Methodology, and a Cautionary Tale, for Determining How Students Seek Research Help Online
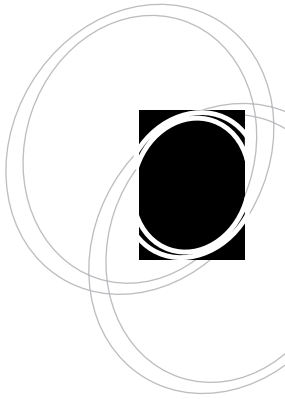
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A Preliminary Methodology, and a Cautionary Tale, for Determining How Students Seek Research Help Online

Catherine Pellegrino

abstract: This article reports on a pilot study to examine undergraduate students' help-seeking behavior when undertaking library research in online courses. A novel methodology incorporating elements of ethnographic research resulted in a small, but rich and detailed, collection of qualitative data. The data suggest that the methodology has promise for future, larger studies on students in online learning environments. The article includes a detailed discussion of the methodology's strengths and weaknesses, and offers recommendations for modifications that will improve the research design.

Introduction

Online education is a growing sector of the higher education environment. As more and more postsecondary students—including students who are registered in on-campus degree programs— enroll in courses that take place partially or exclusively online, various campus services, including libraries, have struggled to adapt their offerings to the online environment. Tailoring library services to the needs of students enrolled in online courses requires that we understand more about those students' behaviors, especially

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what they do when seeking help. If we are to position our services at the "point of need" for students in online courses, we need to understand where that point is, what learners' motivations are at that point, and what kinds of assistance are specifically ef-

fective for online students when they need to do library and information research. By determining where students turn for help, librarians and faculty can make judgments about interventions—such as redirecting students toward librarians and providing specific professional development for librarians and faculty designed around the unique needs of online learners—that may result in students getting more effective help, thereby leading to improved student learning and better quality research.

The present study sought to test an ethnographically based research methodology for eliciting information from students enrolled in online classes about where they sought help with library research assignments. The challenge of methodologies like the one used here is that they can be much more time-intensive than surveys or pretests and posttests, but the investment of time can often result in much richer, more nuanced, and more representative data and conclusions. This pilot study also assessed whether the methods used here would scale to larger studies with larger data sets.

Literature Review

The present study falls into a very specific intersection of several larger areas of research: help-seeking behaviors in general, academic help-seeking in higher education, online higher education, and students' use of library resources. While many of these are thoroughly researched fields, there appears to be little or no research on the specific combination of fields being studied here, namely how college students look for library help in online courses. What follows, then, is a brief review of the relevant literature, with a particular emphasis on examples of research design and methodologies that have influenced the present study.

> **It will come as no surprise to librarians who staff the reference desk . . . that students are often unlikely to request assistance and often find asking for help threatening.**

It will come as no surprise to librarians who staff the reference desk that research on academic help-seeking behaviors among undergraduates shows that students are often unlikely to request assistance and often find asking for help threatening.[1] Paradoxically, students who are less confident and less successful—those who stand the gain the most from effective aid—are the least likely to seek it.[2] Articles by Stuart A. Karabenick and Myron H. Dembo and by Mary Pillai review research on academic help seeking in considerable depth.

The literature on library-related help seeking introduces the concept of "library anxiety," developed by Carol Kuhlthau in her work on college students' research process, as an explanatory model for why students do not ask for assistance in libraries.[3] Edgar Bailey's work integrates some of the most significant research on academic help seeking with Kuhlthau's research process model, clarifying the relationship between the two fields of study.[4] In addition, Margie Ruppel and Jody Fagan document the long history of students failing to seek help with library research, citing studies from as early as 1972 and 1977 that show undergraduates' unwillingness to ask librarians for assistance.[5] More recently, Susan Miller and Nancy Murillo's 2012 study not only shows that, forty years

later, students still do not ask librarians for help, but also adds the insight that instead of librarians, they prefer to ask their instructors, family, and friends, or more generally, people with whom they already have a relationship.[6]

While the literature in both academic and library help-seeking behaviors shows a general trend of students failing to request assistance, the literature on online learning often shows that when students in online courses do ask for help, they tend to approach "informal" sources—friends, relatives, or classmates—rather than "formal" sources, such as instructors or librarians. For example, Margaret Taplin and a group of collaborators found that the most common providers of help for both high- and low-achieving students were family, friends, and fellow students.[7] Sherri Melrose found that students in an online graduate program in nursing sought assistance from their fellow students more often than from any other source.[8] Anastasia Kitsantas and Anthony Chow asked students in face-to-face courses, "blended" classes (partially online and partially face-to-face), and fully online courses about their preferences for seeking help. In contrast

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to Taplin's and Melrose's results, they found that students in blended and fully online courses had a greater preference for seeking help from formal sources than learners in face-to-face courses.[9] However, this study was based heavily on self-reporting of intentions and preferences, not on students' actual behaviors, which might be different from what they report to researchers.

Perhaps the most compelling example of the disconnect between students' responses in a research study and their behaviors when doing actual research is some preliminary work done by Andrew Asher and Lynda Duke as part of the Ethnographic Research in Illinois Academic Libraries (ERIAL) Project.[10] Asher and Duke gave students a pretest and posttest on basic information literacy skills and also conducted interviews with students that elicited information about their actual research process. While students scored "reasonably well" (Asher and Duke, 5) on the pretest and posttest question that assessed their skills with evaluating information sources, the researchers discovered through the interviews that students were not actually using appropriate evaluation techniques as part of their research process. How students respond on a test or survey, therefore, is not necessarily an accurate reflection of what they do in practice.

The methodological shortcomings of studies like Kitsantas and Chow's, along with Asher and Duke's discovery about students' research process, point to the need to examine learners' actual behaviors in real, authentic research situations, rather than their reported preferences, their anticipated actions (for example, "what would you do if . . . "), or their performance on pretests and posttests. Indeed, Kitsantas and Chow themselves recognize the limitations of their study and point to the need for this kind of research in the future.[11] Capturing students' behavior is much more difficult and time-consuming than simply administering a survey or a test, however, and requires research methods that, for simplicity, this article collects together under the loosely defined term "ethnographic methods."

The foundational study in applying ethnographic research methods to undergraduate students' use of the library is Nancy Fried Foster and Susan L. Gibbons's *Studying Students: The Undergraduate Research Project at the University of Rochester.*[12] An extensive, multifaceted study led jointly by an anthropologist and a librarian, it attempted to answer the question: "What do students *really* do when they write their research papers?" (emphasis in original). In the process of collecting data to answer that question, the team of researchers surveyed students both in and out of the library. The researchers also asked students to keep photographic diaries of their experience with the library, collected maps from undergraduates that showed their movements around campus on a typical day, and invited students to participate in design workshops that elicited information about how they used the library's Web site.

Inspired by the Rochester study, Lynda Duke and Andrew Asher coordinated the work of researchers at five academic libraries in Illinois to establish the Ethnographic Research in Illinois Academic Libraries (ERIAL) Project from 2008 to 2010. The results of that project, published in the edited collection *College Libraries and Student Culture: What We Now Know,* offer insights similar to those in the Rochester study. The results of the ERIAL Project also include detailed interviews with faculty about whether and how they incorporate library instruction into their courses.[13]

In a similar vein, Alison Head and Michael Eisenberg's Project Information Literacy is a multiyear, multisite research project devoted to understanding "how college students find information and conduct research—their needs, strategies, and workarounds—for their course work and for addressing issues that arise in their everyday lives."[14] Like the Rochester study, Project Information Literacy has used a variety of methods to collect data from students about their research process. The researchers have conducted discussion sessions, have done follow-up interviews, and have used content analysis methods on the transcripts of those sessions and interviews.[15] Taken together, these three studies rank as the most extensive ethnographic investigations into students' research behaviors so far attempted.

However, none of these three studies has addressed the context of online learning. To be fair, the kind of intensive, face-to-face research methods that these studies used are remarkably difficult to replicate in the online environment; indeed, the current study is designed to test one methodology for getting the same kind of rich, qualitative data from participants who might never meet the researcher in person. Several smaller-scale research projects have attempted this kind of detailed work with students in online environments, however. For example, Sherri Melrose used focus groups and individual interviews to determine that students in online graduate courses turned first to other students for help with coursework.[16] Minna Puustinen, Josie Bernicot, and Alain Bert-Erboul used a novel methodology that captured uniquely authentic data about how French middle-school children look for help: the researchers studied transcripts of the students' requests for assistance in an online homework help forum.[17] And in the introduction to the ERIAL book referenced in this article, Andrew Asher, Susan Miller, and David Green review several additional studies that use similar methods.[18]

Most relevant to the research presented here is a study by Hilary Hughes that used a methodology based on the critical incident technique (CIT) to study international students' use of online information resources.[19] The critical incident technique is a method

for identifying behaviors that contribute to success or failure in specific situations—in this case, students' effective or ineffective use of online resources to learn. Critical incident technique emphasizes the direct observation of human behavior, and the method can be used to collect evidence of how people behave in actual situations rather than artificial environments or hypothetical situations posed by surveys and other instruments.[20] Although Hughes's study did not examine help-seeking behaviors as such, it did involve students' research skills and used semi-structured interviews and firsthand observation of students' responses to specific tasks. Hughes notes that the process was "painstaking and time consuming," raising concerns about scalability, which the present study was also intended to test.[21]

To summarize, then, the research presented here lies at the intersection of several fields of study that, individually, have been studied to greater or lesser degrees. The methodology tested here, however, is designed to answer a research question—"Where do students in online courses turn for help with library research?"—that combines those fields in a novel way. Research methods that are influenced by ethnographic models have the potential to yield richer and more precise data than survey-based methodologies but carry the danger of being impractically time-consuming and resource-intensive. This pilot study therefore also attempted to assess the feasibility of the research method, how easily it could be expanded, and its portability to other campuses and contexts.

Methods

To collect the data, I worked with a faculty member who was teaching two online courses at Saint Mary's College, a women's college in Indiana, in the summer of 2012, both of which required students to complete semester-long research assignments. After obtaining approval from the institution's board for research with human subjects, I designed three sets of "research diary" prompts to be included as part of the required work of the course. The prompts, the full text of which are included in the Appendix, asked about how students dealt with challenges in the research process and specifically whom they turned to for help in overcoming those challenges.

To encourage broad participation while simultaneously allowing students to give their informed consent and opt out of the study if they chose, students were required to complete the diaries and submit them to the faculty member to receive full credit for the assignments, but they were not required to submit them to the study. To minimize the faculty member's grading burden, all students who completed the diaries received full credit. While the faculty member was interested in the students' responses, the responsibility for analyzing the results lay with the researcher. This mechanism also allowed the faculty member to strip any personally identifying information from the diary entries before passing them along to the researcher, thereby preserving the students' anonymity.

The prompts were timed to coincide with the usual stages of the research process. Two weeks into the six-week course, the first set of prompts asked questions about beginning the research process, whether the students had identified any articles or sources yet, and whether they had encountered any difficulties. Four weeks into the course, at approximately the time that students would be deeply involved in gathering and evaluating information, the second set of prompts asked further questions about challenges

and difficulties that the students might have encountered and the critical question of whom they had consulted for help when working on the project. At the conclusion of the course, after the research projects had been submitted for a grade, the third prompt asked the students to reflect on their research process and consider what they wished they had done differently and what they might do differently in the future.

Because the prompts were staged throughout the course and timed to coincide with the research process, the students were being asked about actions they had recently taken and behaviors in which they may even have been currently engaged. In addition, the journal prompts were relevant to an actual research assignment, rather than an artificially designed set task, and they asked about students' actual behaviors, not about their preferences or hypothetical behaviors in imagined settings.

Once the diary entries were collected, the plan was to perform an initial, informal qualitative analysis of the text, looking for patterns in the sources that students consulted for help when they encountered challenges or barriers in their research. Had this been a full-scale study with a sufficiently large number of participants, this initial examination would have been the point at which to begin using qualitative textual analysis tools to construct a grounded theory describing students' research-related help-seeking behaviors in online courses. Even though this pilot study did not yield enough results to enable systematic analysis of the students' responses, the data that we obtained were nevertheless remarkably detailed, and in some cases underscored previous research on where students in face-to-face classes turn for help with library research.

Results

At the conclusion of the semester, the anonymized research diaries were collected, and we discovered that the participation rate in the study had been extremely low. Each prompt yielded two to five responses, from a total enrollment between the two classes of twenty-four students. There are several possible explanations for the low participation rate: first and most obviously, the total enrollment for both sections was relatively small. Had this research been done with courses whose enrollment totaled 250 students, a similar response rate would have yielded 20 to 50 responses, which could have been enough to be useful. (Hughes noted that a sample of 26 participants was "relatively small" for a qualitative study using textual analysis, so a range of 20 to 50 responses would be appropriate for an initial study.[21] A subsequent, more comprehensive study would need an even larger pool of data.)

A second reason for the low response rate may have been that there was insufficient incentive to participate built into the research design. My agreement with the faculty member stated that students would be required to complete the research diaries to receive full credit for the research assignment, but as the assignment was actually structured, completion of the research diary was one element in an unweighted evaluation rubric consisting of some fourteen items. Its presence in the rubric may have gone unnoticed by many students, or students may have calculated—understandably—that the unspecified benefit to their grade on the assignment was an insufficient compensation for the time spent completing the research diaries.

In addition to the structural problems of the assignments, both courses were also being used as sites for an unrelated research project conducted by the teaching faculty member, which asked a great deal more of the students as participants than this study did. This second research project may have resulted in a certain amount of "survey fatigue" or "research fatigue" among the students. Under the circumstances, it is entirely understandable that students might have prioritized their faculty member's research project over that of an outside researcher. Related to the issue of survey fatigue, it is worth noting that both online courses contained a large number of individual items that needed to be completed each week, including assigned readings, discussion board posts, blog posts, and homework assignments submitted via e-mail, as well as the final research project. Merely keeping track of every task to be done may have been a considerable challenge for the students, resulting in some tasks—especially those with no clear point value assigned to them—being overlooked or strategically skipped.

Discussion: Lessons Learned and Future Research

Despite the low volume of responses, the data that were collected contained fascinating clues hinting at insights that future research may illuminate. Many of the students' responses were rich and detailed, providing precisely the kind of deep description that researchers need to arrive at a full and accurate picture of students' research and help-seeking behaviors in online courses. For example, when asked if they had encountered any difficulties in the early stages of research, one student reported that she initially had trouble finding enough sources, but then broadened her search terms and found "plenty of resources." This is significant not only because it indicates a narrow-to-broad search strategy, but also because the student was able to articulate exactly what the problem was and what she did to address it, thereby showing evidence of awareness of the student's own search strategy. Another student mentioned that she had merely been "gathering material" but not examining what she found to see if it was "useful material," indicating a two-stage process whereby the student first collected many resources in a relatively broad search, and then examined those sources more closely later to assess their relevance to the project at hand.

Most significantly, when asked whom they had talked to about their research projects, and how those people had (or had not) helped them, students indicated that they had consulted with many types of people. From a pool of just five responses, students identified: their instructor, a spouse, a fiancé, and a librarian at a student's local public library. Several students identified the instructor as a source of help, and one mentioned that she knew that the librarians at the campus library were available if she needed assistance. This variety of potential providers of help closely parallels the assortment of sources that Project Information Literacy found students using for course-related research. In Project Information Literacy, the most prominent human (that is, not search engines or library databases) sources of help were instructors, classmates, and friends; the least consulted human helper was librarians.[21]

The data suggest that similar studies, designed to produce larger response rates, have the potential to offer valuable insights into students' help-seeking behaviors in online learning environments. The keys to designing such studies appear, from the experience

documented here, to be better collaboration with teaching faculty, meaningful incentives for participation, and a careful understanding of the role of the research project within the context of the entire course. Prospective researchers need to work closely with the instructors of courses that are being used as research sites and ensure that the instructors understand the importance of student participation in the study. Instructors need to be willing to construct incentives for completing the assignment that are meaningful to students (for example, specific point values for completing the research journal) while also permitting students to opt out of participation in the study without penalty. The burden of participation needs to remain as low as can be feasibly arranged, and if possible, only one research study should be conducted on any one cohort of students at any one time.

Finally, researchers should choose research sites with care: while courses with larger enrollments may seem intimidating because of the potential to yield unwieldy quantities of data, larger data sets are, in this case, better than data sets that are too small to produce generalizable conclusions. In addition, researchers should pay particular attention to the overall structure of the course and its assignments, choosing a class where students do fewer tasks over the length of a semester. In such an environment, overwhelmed students are less likely to overlook or ignore the tasks associated with the research study. To some extent, the completion of many small tasks is an inherent element of online learning, replacing the function of class discussion and face-to-face interaction with the instructor, so it may not be possible—or even desirable—to select a course where such tasks are completely absent. Researchers should, however, try to select if possible a course where the structure and organization of the tasks and assignments are clear and transparent to students, and ideally, where the research journal may fit seamlessly into the existing structure of the course.

Conclusion

The aim of this study was to test a novel, ethnographically based methodology for studying the library-related help-seeking behaviors of students in online courses, and to assess the feasibility and scalability of the method to studies with larger numbers of participants. The basic methodology used here has the potential to generate rich qualitative data, since the responses offered highly suggestive insights into students' research methods and how they look for help. The critical elements for encouraging participation and eliciting detailed data are the structure of the incentive model and the total enrollment of the courses; both of these challenges can be addressed with strategies outlined here.

A first step toward providing effective assistance will be to understand more about how students look for help to place the assistance in the most accessible and useful location for them.

The methodology introduced here holds real promise for learning more about the help-seeking behaviors of students in online courses. As more and more students in higher education, even those enrolled in on-campus programs, are taking some portion of their coursework in online environments, tailoring library research assistance to

their needs will become increasingly important. A first step toward providing effective assistance will be to understand more about how students look for help to place the assistance in the most accessible and useful location for them.

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Appendix

Research Diary Prompts

First Research Diary (two weeks into the six-week course):

- Where are you in the research process at this point? What was the last thing you did in the research for your project? (It's OK to say, "I haven't started yet.")
- Have you successfully located sources for your research project yet? What problems or difficulties have you had, and how have you addressed them?

Second Research Diary (four weeks into the six-week course):

- So far, what has been difficult in doing the research for this project? Have you encountered any problems that you couldn't solve, or dead ends? If so, what have you done instead?
- Who have you talked to about this project? How did (or didn't) they help you? (It's OK to ask for help with your research from your instructor, librarians, etc.)

Third Research Diary (six weeks into the six-week course, after the research project has been completed):

- Now that your research project is finished, or almost finished, what do you wish you'd done differently at the beginning of the project? What do you think you might do differently the next time you have a research assignment?

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