False Starts and Breakthroughs: Senior Thesis Research as a Critical Learning Process

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abstract: Every senior at Haverford College writes a thesis or its equivalent, conducting independent research with guidance from faculty and librarians. Students critically engage in investigative work in archives, field studies, and labs. In this article, librarians explore the way anthropology and history thesis writers do research to define paths toward success. They examine how students use theory, interpret primary sources, and develop arguments. Evidence comes from both students and faculty. Librarians identify challenges for students, including authorial agency and reluctance to question primary sources. This research has led to changes in library instruction and in faculty course planning.

Introduction

“Intense but exciting” is a common way students describe the thesis experience, a requirement for all seniors at Haverford College in Haverford, Pennsylvania. In most departments, students spend the academic year working on a research question in close cooperation with a faculty adviser. They add to the knowledge and skills they have already gained in classes and internships by planning and carrying out an independent project. Some students thrive under these circumstances, find compelling material, and produce insightful arguments. Others have a harder time making connections and interpreting evidence. Librarians wanted to know more about the ways students do their thesis research, how they move from one stage to another, what prompts critical reflection, and what factors contribute to success as defined by students and by faculty.”
The Thesis Research Investigation

Haverford librarians explored these issues in student research in depth with anthropology and history seniors from fall 2010 through spring 2016. Our findings derive from a comprehensive view of the curriculum and departmental learning outcomes. With advice from faculty—and in concert with a similar project at Swarthmore College in Swarthmore, Pennsylvania—Haverford librarians designed and administered three sets of questions in both the 2010–2011 and 2011–2012 academic years to 35 anthropology and 43 history thesis writers. See the Appendix for the full list of questions. In 2010–2011, the questions focused on processes (“How did you define the boundaries of your research question?”) and types of material. In the second year, the librarians added questions about the ways students used different kinds of resources (“How have the primary sources you’ve used so far changed the shape of your research topic?”) and about expectations on the part of both faculty and students. The new questions for the second year helped librarians gain understanding of issues identified as significant by both students and faculty.

During the two-year period, anthropology students contributed 63 questionnaire responses, and 70 came from history students. Response rates were highest when faculty distributed questionnaires in classes. Librarians also consulted initial thesis statements, revised thesis statements, e-mail requests from students for research help, letters from faculty evaluating thesis work by anthropology seniors (these evaluation letters were available only for the first two years of the study), and all finished theses. In 2012–2013 through 2015–2016, investigative methods changed from questionnaires to in-depth interviews with targeted individuals and small groups of students and faculty. The students involved for those years numbered 47 in anthropology and 61 in history, making a total of 186 students (82 in anthropology and 104 in history) in the study from 2010 to 2016. Result highlights are discussed later, including conditions that contribute to student success. This article also describes changes in the library instruction program because of this research.

Critical Uses of Secondary Literature

At the beginning of the fall semester in both 2010 and 2011, the librarian asked anthropology students to find and use relevant articles from the Annual Review of Anthropology while working on their preliminary proposals. The librarian emphasized the importance of a broad coverage of scholarly literature while maintaining a focus on specific issues and their interpretations. The discussion of material, including ethnographies and related primary-source material, not only provided new sources to check but also indicated ways in which researchers were defining issues, choosing methodologies, and acknowledging key interpretations.

Some students incorporated a brief literature review in their thesis to set the stage for their analysis of the issues. This approach presented the student’s thinking and priorities directly. It was especially helpful in cases where the author connected issues across disciplines. Students’ research and reading through the year enabled many of them to target key factors in a scholar’s interpretation and to use those ideas critically as they developed explanations for the questions generated by their fieldwork. Thesis biblio-
Bibliographies ranged from 9 to 107 entries for the 82 anthropology theses written in 2010–2011 through 2015–2016, with the mean number of sources being 41. The mean percentage of newer scholarship (works published in the previous five years) was 35 percent, with 12 writers having 50 percent or more of their sources from this more recent period.

History students were also introduced early to the idea of reviewing the literature critically. Librarians explained how a resource such as *History Compass* provided an update on research trends and new material to read. In the third month of the thesis project, students wrote their own critical reviews of the scholarly and theoretical literature relating to their topic. Faculty urged them to think about how the topic had evolved historiographically, what larger issues were involved, and where their theses fit within this broader context.

Bibliographies for history theses in 2010–2011 through 2015–2016 ranged from 9 to 145 entries, with secondary sources varying from 9 to 92 entries. The mean number of sources was 61 entries, with 24 of those primary sources and 37 secondary, 8 of which cite more current scholarship (published within the preceding five years) than older titles. In rubrics that the Department of History developed for evaluating theses, a distinguished work was marked by a mastery of the scholarly literature, an extensive and innovative bibliography, and an original contribution to the existing scholarship. Some students acknowledged the research paradox this ideal represents, needing to know in detail about many different topics and, at the same time, realizing that the research question must be sharply focused. Some students not only gained command of an extensive and often esoteric literature but also explored additional related topics and incorporated them to make a stronger argument.

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**Theoretical Frameworks for Anthropology**

Understanding issues encountered in fieldwork provided the chief research focus for anthropology thesis students. Many had previously taken coursework in developing, carrying out, and analyzing ethnographic interviews. For the thesis, they took advantage of summer internships to work in other countries and in varied settings in the United States. They came away with interviews, data, contacts, publications, and stories. They were aware of the variety and complexity of issues within the organizations and social networks where they were participant observers, joining in the activities of the group they studied. To interpret these issues, the students needed to identify theoretical frameworks that would provide meaningful explanations. The librarians analyzed the bibliographies for theses from 2010–2011 through 2015–2016 looking for works of anthropological and social science theory, including such classic thinkers as Marcel Mauss...
and Bronisław Malinowski, as well as important contemporary theorists, such as Aihwa Ong and David Harvey. The percentages of theoretical sources in the bibliographies had some dramatic outliers (0 to 48 percent), but the mean of 13 percent was by far more representative. A little more than one-fifth of the bibliographies had 20 percent or more of their titles devoted to theoretical works. This category was also the most predictive in terms of thesis quality, as indicated by faculty evaluations. With more anthropology and social science theory to read and evaluate, students could build a stronger framework for analyzing their fieldwork experiences and answering the research questions they had posed. Some students generated useful arguments by bringing the ideas of different theorists into dialog with one another, which gave the students opportunities to supplement, adjust, and critique the theories. One of the learning goals articulated by the Department of Anthropology is an understanding of how anthropologists “revise, critique and improve theoretical models.”

In part, students drew on the work of anthropologists whom they had already read in class or whom had been recommended by faculty. Librarians gave students some further ways into the theoretical literature through reference works and citation searching. The need to cross disciplinary boundaries, using theoretical frameworks from sociology, economics, public health, and other fields, represented a further complexity for many students. Even within the field of anthropology, there was the opportunity to bring cross-cultural studies to bear on understanding an issue. Many students put theoretical works and ethnographies to good use; those who were less fluent in this usage made progress over the year. Because of this study’s findings, librarians now intervene with individual coaching early in the project to put some students on a faster trajectory for identifying relevant theoretical work.

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Primary Sources for History

Effective use of primary sources proved a central factor in the success of the history thesis project. The mean average of primary-source titles accounted for 38 percent of the citations. For more than half of the students (56 percent), primary sources represented at least 30 percent of their bibliography, with one-third of the students relying on primary sources for half or more of their cited sources. Overall, we saw a rise of primary-source citations from 38 percent of the bibliography during the two earliest years of the study, 2010 to 2012, to 42 percent in the latest year, 2015–2016.
The senior seminar met with librarians the second week of the term to talk about sources in print, digital, and manuscript formats. The following week, librarians instructed students in intensive, one-on-one sessions on methods to identify potential primary sources and ways to access them. For some students who were not yet certain about their research focus, the availability of primary sources that addressed an issue was often a deciding factor in choosing one topic over another. Primary sources had subtler effects as well, with a student observing that the availability of one sixteenth-century text in a modern edition meant that she read it first, which pushed her topic in a particular direction. Primary sources often posed questions that required more reading and contextualization. Students needed to set aside modern categories and their initial expectations to develop a full understanding of the sources. Over the course of the project, many students came to value their primary sources as a means of exploring a question that had not been studied before.

For some students, primary sources provided the arena in which to think expansively about the factors that contributed to the issue they were researching. More successful students used primary sources to interrogate societal connections, including questions of authority and power, gender roles, and religious identity. Clearly, the focus on primary material resonated with students. Because of that focus, students incorporated rare books, manuscripts, documents, images, and objects, in both digital and physical versions, and showed facility with the material.

Use of primary sources alone, however, did not necessarily lead to success. Examining their questions critically and considering related primary and secondary sources gave a more nuanced understanding of social factors at work in that time and place. Students who engaged with both secondary and primary sources produced the most critically successful research. Those students who returned to primary texts after a further refinement of their ideas as well as a deeper engagement with secondary sources developed the richest and most meaningful outcomes. At the same time, even for the more successful students, some attributed too much authority to primary-source material, leading them to engage less critically with those texts than they typically did with secondary readings. Understanding the context of the documents and interrogating them from contemporary viewpoints, as well as from modern scholarly perspectives, represent ongoing opportunities for librarians in their engagements with students.

What Students Need for Success

Student respondents highlighted experiences that they judged as important in producing their theses, whether as challenges overcome or skills learned. Several seniors cited the difficulties of stepping up from smaller research papers to the yearlong process—that is, they found that moving from a discrete model to the open-ended nature of the thesis was more challenging than anticipated. At the same time, it was exciting to experience the chaos of thinking through the possibilities and then coming to original interpretations.
One student described it as coming to clarity with the concepts behind her research questions, which she had grappled with throughout her research.

Another student came away with the sense that disciplinary knowledge was slippery during the process but became stronger and clearer in the final revisions. Several students emphasized the importance of developing a topic in an area that they had already studied. Having background from a junior seminar helped to focus the project and address more complex questions. Other students felt the crux of the project lay in the connections between primary and secondary texts, searching for the former, balancing sources with critical works, and reflecting on the ways in which the two kinds of texts illuminated each other.

Students commented on the value of careful note-taking and the need for citations. One student underscored the value of a research journal to record what she was thinking while reading the primary source as an aid to the dialectic process of going back and reconsidering a source and thinking through different conclusions. She did not use specific recorded thoughts in the thesis, but it helped her come to fully developed conclusions. Another student found value in using a spreadsheet to refine the relevance of newspaper articles, allowing her to sift 300 potential entries down to a more manageable 160.

Students relied on support and training from faculty, which included both coursework and research experiences that grounded them in the disciplinary thinking and skill sets needed for an in-depth thesis project. They emphasized the importance of regular conversations with faculty advisers, who would push them to articulate their questions and ideas, to write daily, to read expansively, and to consider different sources, approaches, and explanations. Students underlined the importance of regular project deadlines and follow-ups with their advisers. Those students, even successful ones, who met less often with their advisers felt that they missed out on needed advice and critiques. Students wanted clarity from their teachers on what constitutes success and would have liked more preparation in their junior year, so that they could do more reading and research over the summer. Some students noted a lack of consistency in the advice they received from different faculty members. At the same time, both students and faculty acknowledged that there was a variance in student receptivity to faculty advice. One student observed that she had an easier time because, as an athlete, she was used to acting on her coach’s directions. Student respondents cited the identification of key texts as an important part of the advice that faculty provided. Librarians reinforced this critical approach by working with students to mine the texts’ bibliographies and their cited references.

Students identified support from subject librarians as an important factor for their success in other ways. In the classroom, in individual meetings, and in e-mail exchanges, the librarians provided research strategies and tools, as well as primary and secondary sources, tailored to the needs of the individual student. In these sessions, librarians emphasized ways in which secondary sources could be evaluated, primary sources contextualized, and critical frameworks established. Students appreciated the emphasis...
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Guidance in navigating databases of online primary sources represents another area where librarians proved helpful to students. In this context, as well as in accessing original resources in general, students found librarian assistance critical. Librarians, for example, worked to address such individual research challenges as preparing to use a special collections repository both for key documents and for contextual information. A student observed that it was important to encourage this next step in research because special collections libraries can be intimidating but offer important resources.

More broadly, student respondents cited one-on-one meetings (help in narrowing searches and referrals to experts), instruction (including research and course guides), and library services (interlibrary loan) as important for their thesis work. One student strongly advised juniors to use the library because there were more ideas for thesis topics there than they realized. Thesis writers valued contact with the subject librarian throughout the project. Librarians contacted students when new books or digital resources appeared that related to their thesis topics. Knowing that another person was interested in their research made it easier for students to send quick e-mails about questions, small and large, and drop by to talk about new areas they needed to explore. Finally, and importantly, librarians reinforced lessons taught by faculty, namely the need to critically engage with both primary and secondary texts in ways that led students to a deeper understanding of their topic.

New Library Initiatives

Based on study findings, librarians reevaluated the work they did with students, not just at the senior level but at all levels of instruction. Librarians had conversations with students, faculty, and administrators, and developed new initiatives in research support and instruction. Cognizant of the experiences that serve as building blocks for thesis research, librarians now regularly contact all juniors in the departments they serve to provide individual support for their work. At the same time, they partner with faculty to provide more active learning experiences that engage students in exploration and critical evaluation. In library instruction sessions and in targeted workshops for introductory and intermediate-level courses, librarians focus on the foundational skills and key resources that students will need for the thesis. They have developed a general four-year plan of learning objectives, taking disciplinary inquiries and methodologies as guiding principles. The general plan begins with first-year students as critical information users and sophomores as developers of analytical skills, while juniors explore their chosen field of study and seniors become disciplinary practitioners through independent research. Librarians have also written rubrics that provide clear descriptions of the performance expectations for each part of the work and serve as a scaffold offering successive levels

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of time-sensitive support for student development in each department. For example, the history rubric calls for juniors to do research in special collections libraries and understand the ways archives are created. The anthropology rubric points to juniors’ use of primary sources as a preparation for fieldwork. These rubrics also incorporate concepts and skills important in digital scholarship, so that students have a variety of ways to analyze questions and present data and texts. In developing and revising these rubrics, librarians consult faculty as well as departmental plans, including the History Department’s rubric for evaluating senior theses (created with assistance from the Teagle Foundation, which supports liberal arts education) and the Anthropology Department’s learning goals. Librarians also developed rubrics for information literacy as part of a campus-wide effort to articulate assessment standards.

Within the library instruction program, there is an ongoing effort to elicit feedback from students and faculty and to incorporate improvements, particularly in terms of active learning and content. Students receive a questionnaire approximately 10 days following a class session or workshop. The delay allows students to put what they have learned to use in their research projects. Librarians ask faculty for their feedback at the end of the semester to broadly evaluate current library support and to identify new instruction and research services needed for students as well as professors. Librarians also use assessment to selectively test the full range of the instruction process from planning goals to evaluating student research papers. Steps in this in-depth process focus on librarians’ lesson plans that connect to the departmental rubrics, students’ active learning, and faculty assessment of student research, using a library checklist that correlates with rubrics and course goals. Librarians work with faculty on specific classes, but these courses are also emblematic of needs found across the curriculum, including training for interdisciplinary research and understanding scholarship as a dynamic process. What is learned in one in-depth experience is shared for use in other classes.

As a follow-up to the two years of library questionnaires, Haverford’s 10 anthropology seniors in the fall of 2012 responded to a skills inventory from their professor that asked about their research and fieldwork experiences. They indicated a general familiarity with developing a research question, searching databases effectively, and acquiring material through interlibrary loan. Most students, however, had not yet written a literature review, which is a foundational skill for the thesis. Only one student had used media, knew how to cite them, and understood the copyright issues involved. In terms of individual research tools, only two of the respondents used WorldCat, a catalog maintained by the Online Computer Library Center (OCLC) that lists the holdings of tens of thousands of libraries worldwide, and Dissertations & Theses, ProQuest’s online database that indexes, abstracts, and provides full-text access to dissertations and theses. These are both key resources for expanding the literature search and bringing in more recent work. Up-to-date dissertations can often provide literature reviews for topics that have not been treated in journals. Overall, these responses indicated that juniors could profit from more experience with extended research to build skills and confidence before they became engaged in extensive reading and topic development.
for the thesis. These points remind librarians to be clear and focused in class instruction and individual meetings, so that students have more opportunities to understand the way scholarship is organized and to engage with it actively.

For anthropology and history students alike, their knowledge of reference tools often develops unevenly, which complicates efforts to contextualize primary and secondary sources. Furthermore, students generally demonstrate a greater willingness to engage critically with secondary sources than with primary or theoretical sources. To address this larger issue, librarians are working with faculty to acclimate students to a more critical engagement with sources. Some faculty have already changed their course assignments to concentrate more directly on the critical thinking skills most needed for their discipline.

For seniors embarking on theses, librarians can now cite compelling points about the process that previous writers felt were important, such as being open to new ideas; appreciating the iterative process of scholarship through discussion with librarians, friends, and fellow researchers; and listening to faculty advisers who will push them to think about bigger and more sophisticated questions. Librarians also watch for students who may get caught in the mechanics of research instead of stepping up to engage critically with texts. Along with faculty, librarians emphasize the importance of consistent and thoughtful attention across the full academic year.

At the end of the year, students are unanimous in citing the importance of the thesis experience. They have epiphanies, breakthroughs, and personal insights that come after false starts and hard work. This kind of learning—active, committed, and transformative—is the work that librarians must promote in conjunction with faculty so that every student may succeed in meaningful ways.

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Appendix

Questionnaires for Anthropology and History Thesis Writers

2010–2011 First Set of Questions (after students submitted their initial thesis statements in September)

1. Has your topic changed since your first proposal at the beginning of the month?
2. Why did you decide to work on this topic?
3a. What kinds of primary sources (including fieldwork) will you use? [anthropology students]
3b. What kinds of sources do you think you will use? [history students]
4a. What kinds of approaches do you think you will use to develop your argument (e.g., cross-cultural comparison, gender, medical visual studies, etc.)?
4b. What kinds of approaches do you think you will use to develop your argument (e.g., biography, comparison, statistics)?
5. What kind of background information, previously published scholarship, or data sources will you need to support your thesis?
6. Do you think your topic will present particular challenges in finding the research materials that you need?
7. How do you feel about your thesis project at this point?

Second Set of Questions (midway through the thesis)

1. What was your process for finding sources?
2. How did you decide which sources to include?
3. In looking at your sources as a group, are there patterns that emerge?
4. Did you identify experts and/or collections you need to visit or further explore?
5. How has your topic changed as a result of this process?

Third Set of Questions (after students submitted their theses in late April)

1. What kinds of sources did you use for your thesis research (e.g., online primary-source collections, archives, interviews)?
2. What kinds of methods did you use (e.g., comparative, statistical, biographical, etc.)?
3. How did you keep track of the different directions of your research (e.g., vocabulary lists, reference management software like Zotero or EndNote, citation searching)?
4. How did you define the boundaries of your research question? Did you shift focus as you learned more?
5. What was the most rewarding part of the thesis experience? Conversely, what was the least productive part of the experience?
6. Was there one source or process that stood out as particularly significant for your final argument?
7. Did your project change in response to the research you did? Please tell us briefly how.
8. What advice would you give to someone starting a thesis?
9. What can librarians do in the future to help students make their thesis research more efficient and productive?

10. How would you rate the TriCo Library [the tri-college libraries of Bryn Mawr, Haverford, and Swarthmore Colleges] collection (1 to 10) as a resource for the initial research and development of your topic? Are there subject areas that need more materials?

11. How do you feel about the thesis project at this point?

2011–2012 First Set of Questions (after students submitted their initial thesis statements in September)

1. Name:
2. What is your thesis about?
3. How did you arrive at your topic? Have you previously done research on this topic in a class or over the summer?
4. Please briefly describe any research experience you’ve had to this point that you think will be helpful in completing your thesis, whether or not it’s directly related to your topic.
5. What do you think will be the first step in your research process? What will be the second step? The third?
6. Where and how will you find secondary sources for your topic?
7a. What kinds of fieldwork experiences are you planning? [anthropology students]
7b. What kinds of primary sources will you use? [history students]
8. What challenges do you expect to encounter in completing your thesis?
9. What do you think you’ll gain during this process?
10. How do you feel about the thesis at this point?

Second Set of Questions (midway through the thesis)

1. Name:
2. What is your thesis about?
3. In the first survey, we asked about the first three steps in the research process. Understanding that research is a moving target, could you briefly describe your process to this point? What’s ahead?
4. Are there challenges, particular to your topic, with finding, selecting, and incorporating the research materials that you need?
5. Do you feel the research experiences you’ve had in the past prepared you for your thesis?
6a. How have the fieldwork experiences and primary sources you’ve used so far changed the shape of your research topic? [anthropology students]
6b. How have the primary sources you’ve used so far changed the shape of your research topic? [history students]
7. What challenges do you expect to encounter in completing your thesis?
8. How do you feel about the thesis at this point?
Third Set of Questions (after students submitted their theses in late April)

1. Name:
2. What is your thesis about?
3. For what purposes did you use secondary sources?
4a. What did fieldwork contribute to your research that was unique? [anthropology students]
4b. What did primary sources contribute to your research that was unique? [history students]
5. What challenges did you encounter in completing the thesis and how did you deal with them?
6. Do you think you met your faculty’s expectations for a successful thesis? Do you feel some clarity about what those expectations were?
7. What advice would you give students before they start a senior thesis?
8. What did you learn about research during this project?
9. How do you feel about the thesis at this point?

Notes


3. The authors want to thank the faculty of the Anthropology Department at Haverford College, particularly Maris Gillette and Zolani Ngwane, and the members of the History Department, especially Darin Hayton and James Krippner, for their generous support and insightful discussions of student research.

4. Haverford partnered with Swarthmore College in Swarthmore, Pennsylvania, on its Tri-College Seed Grant intended to support new initiatives in research and teaching. Librarians from the two schools organized student and faculty events for conversations about thesis
research and then developed student questionnaires for use during the 2010–2011 and 2011–2012 academic years.


10. In two-year increments, we saw the following growth in primary source use: 2010–2012, 38 percent; 2013–2014, 42.12 percent; and 2015–2016, 42.72 percent.

11. The recent library literature is rich with studies and reflections on the assessment of instruction and research support for undergraduates. See, for example, Debra Anne Hoffmann and Kristen LaBonte, “Meeting Information Literacy Outcomes: Partnering with Faculty to Create Effective Information Literacy Assessment,” Journal of Information Literacy


15. Librarians drew on the library’s learning objectives as well as ACRL’s Framework for Information Literacy for Higher Education to formulate the information literacy rubrics.