An Exploration of Changing Dissertation Requirements and Library Services to Support Them

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abstract: To more fully support PhD students, librarians must be mindful of and responsive to changing dissertation requirements. Based on input obtained through an online questionnaire from directors of chemistry, political science, and English doctoral programs and from details on department websites, this paper examines what alternate forms of dissertations are increasingly acceptable in the different disciplines. Article-style dissertations are often routine in the sciences and growing in acceptance in the social sciences; so training related to the publishing process would be helpful. The humanities stand at the forefront of recognizing digital and Web-based dissertations, so training related to the digital humanities might also be suitable.

Introduction

The dissertation is a requirement universal to doctoral programs across the United States and abroad. Traditionally, this meant PhD candidates would perform independent, original research in their field of study and then write a book-length monograph (with no coauthor) about their chosen thesis. Librarians might assist with literature searching, and faculty advisers might provide guidance and feedback, but the process of completing the dissertation was expected to provide PhD students with experience performing in-depth research. Educators commonly agree that doctoral students should continue to learn these research skills and contribute new knowledge in their discipline, with the aim of becoming experts in their area of study. However, there is some dispute over the suitability of traditional dissertations in meeting these goals.

Dissertation requirements differ by nation, by university, and frequently, by department within a graduate school. In many cases, universities and graduate schools allow
departments much latitude. Exactly what is accepted sometimes depends on the faculty adviser, the dissertation committee, or both, so differences in format, length, scope, and quality are possible.

Discussions about changing the dissertation are not new. In 1960, Bernard Berelson reminisced about earlier times when universities required that all dissertations be published and suggested that doing so again would help maintain doctoral standards. In 1989, Peter Monaghan brought up many issues, including whether article-type dissertations should be acceptable, how to deal with coauthored works, and what to do about the longer-than-expected time many students took to complete their doctoral degree. A 1991 report published by the Council of Graduate Schools soon thereafter summarized the many practices and differing viewpoints at North American universities and strongly recommended that graduate schools allow for variation in dissertations due to disciplinary differences. Almost 20 years later, Laura Jones noticed dissertations in the sciences taking the form of several published papers, including coauthored works, and media dissertations emerging in the humanities. The evolving dissertation seems to take its cue from changing trends in the different disciplines and also from alarm over the time needed to complete a degree. Stacey Patton pointed to the traditional dissertation as a possible cause for delayed completion and encouraged the acceptance of alternate forms such as those featuring digital content.

There are many arguments for accepting alternate forms of dissertations. Some have to do with new research and scholarly communication trends in the different disciplines, and some are related to preparing doctoral students for their future careers. When serving as president of the Modern Language Association (MLA), the professional association for scholars of language and literature, Sidonie Smith remarked that digital humanities research and collaborative scholarship were becoming more common in the discipline and it was time for dissertations to reflect those trends. Allowing such changes would result in doctoral students who are well-prepared to do this type of research post-graduation. Leonard Cassuto and Paul Jay also believe adequate career preparation is important and call for doctoral programs to offer multiple tracks depending on students’ career goals, and dissertation requirements that vary accordingly. This kind of change can give doctoral students an advantage when they seek employment. One reason some PhD students have the option to submit a multi-paper dissertation rather than a traditional one is so they might have an accepted or published article by the time they go on a job interview, making them a stronger candidate. Disseminating doctorate research findings in the form of articles benefits the scholarly community, which is unlikely to read a traditional dissertation, and aids the student by increasing the impact of his or her work because more people would see it.
There is, of course, some opposition to nontraditional dissertations. Faculty who are against the idea fear alternate forms of dissertations will not be rigorous enough and worry that students pursuing them may graduate lacking the skills they should have learned from writing a traditional dissertation. Future employers who share this perspective might then view students who complete nontraditional dissertations less favorably. This may be of particular concern for students hoping to obtain a tenure-track position if hiring and tenure and promotion committees have more traditional standards. The acceptability of alternative dissertations is a concern for both students and heads of doctoral programs because the dissertation is a reflection on how strong and successful a program is. As acceptance grows, however, new dissertation formats become less of an issue.

Another concern is that students might publish prematurely, without adequate preparation. Such students might not be fully aware of the scholarly conversation and might not be ready to face the criticism from peer review or possible rejection of their work. To help alleviate the anxiety that may result from pressure to publish, Anthony Paré argues for increased pedagogy related to the publication process.

This article seeks to explore PhD dissertation requirements in the sciences, social sciences, and humanities in the United States today and focuses on library services that would benefit students pursuing alternate dissertation formats. Although a major function of academic libraries is to provide resources and services in support of student research, little in the literature addresses doing so for doctoral candidates completing nontraditional dissertations. As dissertation requirements continue to evolve, it is important for librarians to be aware of these changes and to learn the skills necessary to effectively assist their doctoral students.

Methodology

In the fall of 2015, 145 United States-based directors of graduate programs in the departments of chemistry, political science, and English at institutions belonging to the Association of American Universities (AAU) were sent an e-mail inviting them to complete an online questionnaire (see Appendix A). The questionnaire asked about the forms of dissertations accepted by their department, when nontraditional forms began to be accepted, and what the reasons were behind that decision. The questionnaire also included open-ended questions about library skills training required of or available to doctoral students and the type of training the respondents believed would assist the students with completing their dissertations—especially nontraditional dissertations. If there was no identifiable graduate program director listed on a department’s website, the department chair was contacted instead.

The author also thoroughly searched each department’s website for details about PhD dissertation requirements. This information—gathered from graduate student
handbooks, guides, and posted rules or requirements—was integrated with results from the online questionnaire to reveal further examples of acceptable alternate formats.

Although other universities may be much further along in accepting alternate forms of the doctoral dissertation, the author chose to study AAU members due to their reputation as leading research universities. They are the most likely to have doctoral programs in chemistry, political science, and English, and are considered influential in setting a path to changes in higher education.

Results and Discussion

Dissertations Today

Of the 145 graduate program directors and department chairs invited to participate in this study, 32 completed the online questionnaire. The 22.1 percent response rate was fairly consistent among the disciplines, with 11 of 52 (21.2 percent) participating from chemistry, 11 of 49 (22.4 percent) taking part from political science, and 10 of 44 (22.7 percent) participating from English. Even though the response rates prevent this from being a systematic study of AAU institutions, the answers provided by representatives from the three departments provide insight not only into changes in dissertation requirements in the sciences, social sciences, and humanities but also into expectations for library services to support PhD candidates in those fields of study.

All respondents indicated that the traditional single-authored monograph is still an accepted format for PhD dissertations, but scholarly articles and digital or Web-based projects are increasingly welcomed. Scholarly articles are more prevalent in the sciences and social sciences, whereas digital projects are an emerging trend in the humanities. These developments are further affirmed by policies and guidelines posted on department websites.

Data from department websites (see Appendix B) provided input about doctoral dissertation requirements in an additional 6 chemistry departments, 1 political science department, and 10 English departments. Unfortunately, the exact particulars of dissertation requirements are not typically available to the public on department websites. The departments seem to be deliberately vague about what is accepted; this may be because the scope, length, format, and style of a dissertation is often determined at the discretion of dissertation advisers or committees. In contrast, most department websites share information about the requisite dissertation prospectus and the make-up and responsibilities of the dissertation committee in great detail.
Chemistry Dissertations

Of the 11 chemistry department graduate program directors and chairs completing the online questionnaire, three (27.3 percent) indicated that doctoral dissertations could include published or accepted scholarly articles, and that this policy has been in effect at their universities since the 1990s. Two of the respondents pointed out that the articles should be peer reviewed, but the third noted that dissertation advisers could accept non-refereed articles at their discretion. Policies on coauthored articles—typical in the sciences—also varied. While all three deemed such articles acceptable, one specified that the student had to be the primary author and also needed written permission from all coauthors that he or she could include the paper as part of the dissertation. Another department allowed inclusion of articles where the student is not the primary author but expected the student to explain exactly what his or her contributions were. This practice of describing contributions is becoming increasingly common as more journals adopt it.12

Interestingly, none of the respondents mentioned how many publications are required. In fact, one stated there was no exact requirement for number of articles in his or her department. This appears to be another area where dissertation advisers have autonomy to decide what is adequate.

It is important to note that although published articles may be accepted for chemistry dissertations, PhD candidates are sometimes still expected to include additional content to make their submission more cohesive. For example, two of the respondents emphasized that an introductory or overview chapter is also required, and one wrote that a closing chapter is necessary, too.

The information gleaned from department websites mostly affirms what chemistry respondents shared via the online questionnaire. Some universities still accept only the traditional dissertation—a single-authored monograph. However, in the sciences, where scholarly conversation takes place at a rapid pace via publications and conferences, many PhD programs in chemistry have changed their policies. Their students’ dissertations are expected to include content suitable for publication in recognized science journals, with a preference for well-respected chemistry journals that undergo the peer-review process. In fact, a number of departments ask their students to write their dissertation in the style of journal articles. This policy is meant to encourage students to prepare their research for publication either before or after submission of their dissertation.

A few chemistry department websites stated that published or accepted articles must be included in PhD dissertations. At the discretion of dissertation advisers, however, a manuscript submitted to a refereed journal could be substituted instead. Since the peer-review process may take longer than expected, this is likely a welcome option for students hoping to complete their degree in a timely manner.

Requirements at the graduate school level may dictate dissertation guidelines at the department level. Students whose dissertations are made up of several articles may be required to include additional chapters, such as an introduction and a summary that help to explain how the articles are connected. This explanatory material might not be in-depth enough to satisfy critics of article-style dissertations, though. In one chemistry department, PhD students are also asked to provide greater details about experimental procedures, to include unpublished data, and to expand on discussions...
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Given the collaborative nature of the sciences, another concern about the inclusion of scientific articles in the dissertation is their tendency to be co-authored works. In fact, doctoral students oftentimes perform research in the same field as their faculty adviser and may even co-author articles with their adviser. One chemistry department felt strongly enough about a potential conflict of interest that it allowed submitted and published articles to be included only as supplementary material in an appendix section and stated that dissertations must stand on their own without the appendix. It was permissible, however, to incorporate into the dissertation portions of manuscripts still in the process of being prepared for submission.

Political Science Dissertations

Nine of the 11 (81.8 percent) graduate program directors and chairs of political science departments completing the online questionnaire stated that “three paper” doctoral dissertations were acceptable. This was also true for the one political science department that provided specific details on its website about its PhD dissertation requirements. In all cases, a minimum of three articles was required, and they did not have to be published or even submitted to a journal. However, the departments still hope that the students will eventually publish their research. One popular reason departments have begun to accept three-paper dissertations is because they are thinking of their students’ career paths and the way in which students will be expected to contribute to the scholarly conversation in their discipline.

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The growing acceptance of article-type dissertations in political science is due to trends in the discipline. Several respondents called attention to subfields where publishing articles (rather than books) is the norm. A few others highlighted the increasing influence of economics on their departments and pointed out that three-paper dissertations are common in economics. Another remarked that the kind of research a student does may lend itself more to an article-length publication than a book-length one.

Although one department has offered the three-paper dissertation option for “decades,” another has only just begun to allow it. Others are somewhere in-between—a
few have begun accepting such dissertations within the last 8 years, and two started 10 to 15 years ago. The preference still seems to be for the traditional single-authored monograph, with article-style dissertations seldom submitted. Factors influencing this decision may be department culture and faculty advisers with the discretion to approve dissertation formats. It is also important to keep in mind that although the dissemination of new findings in certain subfields of political science may take place primarily through journal articles, in other subfields, findings may be shared via books, so the traditional dissertation would be more suitable for those students.

As with article-style dissertations in chemistry, those in political science are usually expected to be about a related theme and supplemented with additional content such as an introduction and conclusion chapter. One political science department also insisted on reasonable transitions between the article “chapters.” These requirements mean that three-paper dissertations more closely resemble a traditional book-length monograph, which may be preferred by some faculty in the department.

Policies vary on whether coauthorship is permitted. Two departments forbid it and accept only single-authored papers. Two departments allow up to one coauthored paper. Another simply states that dissertations cannot be entirely coauthored. The department that has just begun to accept article-style dissertations is still debating whether coauthorship for some papers will be allowed and whether a faculty member can be one of the coauthors. Coauthorship is less common in the social sciences than it is in the sciences, but as collaborative projects become more prevalent in the discipline, doctoral programs will likely develop more specific guidelines related to this practice.

English Dissertations

Out of 10 English department graduate program directors and chairs completing the online questionnaire, four (40 percent) revealed that digital or Web-based projects are now being accepted as doctoral dissertations. This policy is new to their departments, with the earliest adopter beginning to allow it three years ago. Although one department saw its first such submission in spring 2015, others have not yet had any students submit a completely digital project. As acceptance for the digital humanities grows, along with student and faculty interest and expertise, this situation will likely change. In the meantime, dissertation submissions are edging in that direction, with written dissertations supplemented by digital components, such as CD-ROMs containing audio and video clips or websites featuring illustrations and exhibitions.

Information from English department websites shows that, in addition to digital content, there is also some variety in the types of written dissertations permitted. They include the traditional single-authored monograph, collections of related essays, translations, and creative writing.
include the traditional single-authored monograph, collections of related essays, translations, and creative writing. For creative writing dissertations, students submit works of fiction or nonfiction—a novel or novella, a series of short stories, a collection of poetry, or a drama. In departments that accept creative writing dissertations, a related scholarly component is still required (for example, an article-length critical essay meant to be an introduction to the reader). While English PhD students are encouraged to eventually publish, their department does not generally expect them to do so while pursuing their doctorate. In fact, only two departments state that previously published work (for example, articles) can be included in the dissertation; others do not even mention publications. With such wide-ranging possibilities allowed, departments seem to give dissertation advisers or committees the discretion to decide on suitable content and format. However, interestingly enough, guidelines for the length of an English PhD dissertation are frequently mentioned, with 250 to 300 pages being average. This limitation may stem from concern that many doctoral students in the humanities take too long to complete their degree. Perhaps the page limit encourages students to finish more quickly.

The MLA has advised that universities reconsider the traditional dissertation, partly due to worries about the time to complete a degree in the humanities and partly due to concerns for career preparation. In fact, one survey respondent cited the MLA’s 2014 report on doctoral study as the inspiration for his or her department’s acceptance of digital projects. The report recommends accepting alternative dissertation formats, increasing technology training, and utilizing the expertise of others on campus, including librarians.

Library Services

Since dissertation requirements differ between disciplines, it follows that expectations for library services would vary as well. Respondents’ answers to the online questionnaire reveal disciplinary differences in the library skills training required of doctoral students and the topics the respondents consider important for their students to learn.

Mandatory library skills training at the PhD level is much more probable in the humanities (60 percent) than in the sciences or social sciences (27.3 percent each). English students receive library research instruction in required introductory courses, research method courses, seminars, workshops, or some combination of the four, whereas chemistry and political sciences students are introduced to the library and its resources during one-hour or one-day orientation sessions. If students need additional library training beyond this, they are expected to attend optional library workshops, consult with a subject specialist librarian, or seek help from their adviser. A few respondents also direct students to their graduate school (for example, the school’s editorial office) for assistance. Libraries should keep this in mind and be cognizant of graduate school services. At the same time, it would benefit libraries to inform the graduate school about the type
of support they provide to graduate students. This would help prevent duplication of effort and might even result in cross-promotion of respective services.

The range of services university libraries offer depends on the skills of their librarians and other library staff. Database training is standard and ranks as the type of instruction of greatest interest to respondents in all three disciplines. Citation management tools (for example, EndNote, Mendeley, and Zotero) are a close second, with more interest from the sciences and social sciences. These tools would be extremely helpful for authors who change citation styles depending on journal requirements, so they might be in higher demand by students in disciplines that are likelier to publish articles. A few respondents in the social sciences and humanities believe training on special collections would be helpful for their doctoral students. This is due to the nature of their dissertations, which can delve into esoteric topics covered in special collections. One political science respondent also wants training in the use of online government resources, whereas English respondents wish to focus more on archival research. Their interests reflect the research needs in their respective disciplines.

Beyond searching the literature, doctoral students today would benefit from library training that addresses alternate dissertation formats. As article-style dissertations become more common in the social sciences, it is understandable that the head of a department would want students to receive library training on the publication cycle. After all, he or she expects students to be close to publishing prior to graduation. It is somewhat surprising that no chemistry respondents mention such an interest—especially given the strong preference in the discipline for PhD students to publish in refereed journals. Maybe they feel it is the responsibility of faculty advisers to teach their students about publishing, or perhaps they are unaware that their library might offer this service. In fact, in addition to possessing knowledge about the scholarly communication and publishing process in the different disciplines, many academic librarians are also familiar with and provide training in related topics such as impact factors, which measure how often articles in a journal have been cited; altmetrics, nontraditional measures used as an alternative to impact factors; open access; author rights; and scholarly networking tools (for example, Academia.edu and ResearchGate). At one AAU institution, two librarians are leading implementation efforts for the university’s new open access policy, which applies to doctoral students as well.

While students are beginning to include digital components as part of their dissertations, libraries increasingly offer more advanced technology-related services. To help their students prepare digital or Web-based components for their dissertations, respondents from the English department would like to see more library training in the digital humanities, covering topics such as digitization, curation, and the dissemination of digital content.
Related to this, librarians should consider providing training on copyright, creating websites, and preserving digital content for the long term. In the social sciences, students may be interested in learning to use geographic information systems (GIS) to capture, store, analyze, and present spatial or geographical data. They may also want to learn Python, a programming language that can be used to manipulate social science data. A political science respondent noticed that both topics are taught at his or her library. In the chemistry library at one institution, students can request information technology (IT) support. At another university, the chemistry librarian is invited to a class session where he or she teaches chemistry software in addition to library resources that are relevant to chemistry. It is unclear if the software the librarian teaches is related to a chemistry database (for example, as the drawing tool ChemDraw might be to SciFinder, a discovery tool that indexes the chemical literature), or if the software is unconnected.

As dissertation formats change, students will need assistance with submitting and preserving them. Traditionally, university libraries have stored print copies of dissertations. Today, dissertations are often deposited electronically into institutional repositories (IRs). Some students have written about their struggles with submitting and archiving “hybrid dissertations.” The library could provide training on digital preservation, and if the library is responsible for the IR, it could ensure that the system can accept dissertations in all formats approved by the university.

When new research and scholarly communication trends begin to develop, librarians need to learn new skills to continue supporting their users. An area that has recently received much attention in higher education is data management. Many funding agencies in the sciences and social sciences now require applicants to submit data management plans (DMPs) outlining how they will handle their data during their research and after the project is completed. Some funding agencies also expect data sharing. In response to this, a number of academic libraries have begun to provide data management training to faculty and students, including assistance with creating DMPs. One political science respondent was aware of DMP training for PhD students at his or her institution, and one chemistry respondent expressed interest in seeing such training at his or her library. Although data management training for graduate students is not yet required at most universities, this may change—especially in the sciences, where many doctoral students work on grant-funded projects with data management and data sharing mandates. It is important to teach them data management skills so that they can properly adhere to the DMP and any data sharing requirements. These skills are likely serve them well in their future careers.

With such wide-ranging categories of library training, it is not difficult to see why some respondents stated on the questionnaire that they are uncertain what they can expect of their library. In addition to varying librarian and library staff skills, the budget often affects what a library can provide to its users. Nevertheless, libraries should periodically update their students and faculty—especially department chairs and directors—about new offerings. In fact, one chemistry respondent expressed an interest in more updates about library resources and might appreciate the same for library services.

Since different campuses have their own unique set of students and faculty, libraries must develop services that best serve their particular users. Regular communication with faculty, students, and the graduate school can clarify what the needs and expectations
from these stakeholders are. With this information, the library can work cooperatively with them to develop a prioritized list of training—that which must be offered immediately and that which should be developed in the future—so that PhD students can complete their degrees in a timely manner. Partnerships with nonacademic units such as the writing center or international student services can also help with identifying needs and marketing services to graduate students.19

There are a number of possible venues for providing library training to PhD students, and some do not even involve librarians or library staff. One chemistry respondent indicated that PhD students in his or her department received required library training in a research methods class that does not include any library personnel. A political science respondent stated that some professors in his or her department discuss library-related topics in their classes. Students may also receive some library training from their faculty advisers, although the extent of that training can vary from adviser to adviser.20 To ensure that all students learn library research skills, it is best to integrate library training into the graduate curriculum (for example, a research methods course). If a course is not feasible, perhaps offering library instruction within (existing) programs in individual departments or at the graduate school would be possible. Options include orientations, thesis boot camps, dissertation writing retreats, and weekly seminar sessions. Separate library workshops are another alternative, and most respondents were aware of their existence. In addition to providing training, libraries should consider collecting materials (for example, books, articles, tutorials, and the like) that would help students completing alternative dissertations. New faculty advisers may also appreciate these resources.

**Further Research**

Since this was an exploratory study limited to assessing changing dissertation requirements in three specific departments, there are a number of opportunities for further research using similar methodology. Given that there may be variation within a discipline, additional study of other departments is necessary to more clearly focus on the needs of students in particular subject areas. In addition, it would be worthwhile to explore developments in other types of doctoral programs, such as business administration, education, or nursing. It would also be interesting to compare how trends in acceptable dissertations and submitted dissertations relate to career trajectories in the different doctoral programs.

As academic libraries expand their services to support doctoral students pursuing nontraditional dissertations, it would be valuable to identify successful efforts so that other institutions might replicate them. Matters of interest include topics that students attend training for, training formats, and any campus partners involved.
Conclusion

There are clear disciplinary differences in the dissertation formats recognized by AAU institutions. While the traditional single-authored monograph continues to be accepted in the sciences, many departments see the article-style dissertation as more desirable, with emphasis on the importance of chemistry students writing articles for publication in well-respected peer-reviewed journals. Given the nature of research in the discipline, coauthored works are generally allowed. In political science, the three-paper dissertation has become more widely accepted, but format preferences in the social sciences depend on scholarly communication trends in the student’s field of study. Certain subfields favor the monograph; others favor articles. Coauthorships are not typical in this discipline and so are less acceptable. The traditional monograph still dominates in the humanities, although some English departments accept translations, creative writing, or collections of related essays that also contain a related scholarly component. Digital or Web-based dissertations are a new trend in this discipline and only just beginning to be accepted at some universities.

As PhD dissertation requirements change in academic departments, so too must the services offered by academic libraries. To support doctoral students pursuing article-style dissertations, libraries could provide training on the scholarly communication and publishing process, author rights, open access, and impact factors. For students engaging in digital projects, libraries might consider instruction on digitization, copyright, creating websites, and digital preservation. In some cases, libraries may decide to work with another unit on campus (such as the graduate school, IT, or an academic department) to present new services within an existing program, especially if that will help students learn the skills they need to complete their dissertations. Most importantly, however, librarians need to be cognizant of emerging research and scholarly communication trends that may lead to changes in dissertation requirements at their university and be willing to continue learning new skills to more fully support their doctoral students.

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Appendix A

Questions from Online Questionnaire

1. By participating in this study, you agree to be a study subject. Do you agree to be a study subject? (Yes / No)

2. Your university:

3. Your department:
   a. Chemistry
   b. English
   c. Political science
   d. Other: ____________________

4. Dissertations have traditionally been single-authored monographs. In recent years, however, dissertations at some universities have taken the form of articles, Web-based products, etc. What forms of the dissertation are accepted for PhD candidates in your department? (Select all that apply.)
   a. Single-authored monograph
   b. Scholarly article(s)
   c. Web-based project
   d. Other: ____________________

5. If you selected answer choices b, c, or d in Question 4 above: Please use the space below to provide additional details to clarify the parameters involved for each format (e.g., if scholarly articles are accepted: how many are required; how many are expected to have been accepted or published by degree completion; must these be peer-reviewed articles; and how many must be single-authored). Feel free to also include links to additional information that is readily available (i.e., does not require a log-in) online.

6. If you selected answer choices b, c, or d in Question 4 above: When did dissertations in your department begin to take on a nontraditional form? If your department accepts more than one type of nontraditional dissertation, please indicate when each type became acceptable.

7. If you selected answer choices b, c, or d in Question 4 above: What were the reasons for this change? (If unknown, it is all right to state so.)

8. What library training is required of doctoral students in your department? Please note topics covered and whether this is through a library course, library research instruction taught during a regular class session, mandatory library workshops, or something else.
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9. If library training is optional, what is provided? (This question seeks to determine what library offerings you are already aware of, so there is no need to research what is available.)

10. What library training would (you like to see offered to) assist your students with their dissertations? Of special interest is library support that may help students completing nontraditional dissertations.

Appendix B

Department Webpages with Data about Dissertation Requirements

Chemistry
- https://www.chemistry.msu.edu/graduate-program/prospective-students/brochure/
- https://www.chem.purdue.edu/docs/gradhandbook/HANDBOOK%202015%20WORD.pdf

Political science

English
- http://english.uiowa.edu/graduate-program/phd-handbook/dissertation
- http://dornsife.usc.edu/engl/phd-requirements/
Notes

9. Ibid.
14. Ibid.
