Initial Impressions: Investigating How Future Faculty Value Academic Libraries

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Introduction

Although doctoral students soon graduate and most then become university or college faculty members, they constitute a curiously understudied population in library research. Most user studies focus on undergraduate students or faculty. Scant research studies doctoral students who are instructors/teaching assistants (TAs), and how they use libraries for coursework, research, and teaching. Faculty and potential faculty members are important users groups to examine in this time of shrinking resources coupled with growing pressure to provide empirical data to demonstrate the positive impact of services and collections on learning outcomes. Past experiences may impact perceptions of users' current libraries,[1] and evidence suggests that as time goes by, faculty members' knowledge of resources and attitudes become ingrained.[2] Librarians may thus have difficulty in changing long-held perceptions and engaging faculty as full collaborators in the instruction process.[3] This study takes a qualitative approach to explore how students pursuing PhDs conceptualize library value in a full range of research, coursework, and teaching activities, how their perceptions have changed, and how librarians may better serve them.

Literature Review
Library Value

Traditionally, academic library value has been demonstrated through use[4] and research suggests that ser-vice improvement increases impact. Driven by economic pressure and a growing assessment culture in higher education, a renewed call to prove the worth of academic libraries prompted the Association of College and Research Libraries (ACRL) to commission a study of this issue. Subsequently, the Value of Academic Libraries report[5] was issued, which advocates that worth be constructed using inputs and outputs to determine outcomes or impacts. Importantly, the critical point of view has shifted from library administrators or staff to library users and stakeholders. The Value report advocates more evidence-based research for a deeper understanding of how users define library impacts and measure or conceptualize worth. Current widely-used assessment tools, such as LibQUAL+,[6] describe user perceptions of libraries, but may lack explanatory power.

The definition and demonstration of academic library value has evolved over recent decades. Prior to the 1980s, library value was based on various input measures, such as the collection's size or expenditures.[7] By these measures, the standard points of comparison were purely by the numbers (i.e., volumes, budget, square footage). The most highly ranked libraries were those that could purchase, manage, and store the most extensive or expensive collections. Quality, namely what items the library owned, was also a factor, but since there was no standard of equivalence for quality, quantity was thus equated to quality. Little thought was given to measurements involving how or

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whether faculty and/or students used library materials. However, this definition of value was easily understood by funders, allowed for comparisons among libraries, and was apparently acceptable as evidenced (implicitly or explicitly) in the literature of this time.

Since the 1980s, books and articles appeared that listed output measures, including how often the library's materials or services were used, in addition to inputs.[8] The ratio of output to input became the important measure of library value. Both dollars spent and use (e.g., how many times an item was checked out), were inputs. Some of the most commonly used analyses were cost benefit analysis and the return on investment (ROI) analysis.[9] These, and similar analyses, tend to be economic or use based, and were popular because they gave objective measures of value that allowed comparisons among academic libraries.

The literature of the 1990s began to reflect that more user-centered measures were necessary to reflect the academic library's true value.[10] Libraries also needed to demonstrate how they enabled various users, from individuals to the whole institution, to reach desired outcomes,[11] because it was thought that merely comparing the inputs and outputs did not give any insight into impact.[12] Library and information science (LIS) researchers appear to have reached an understanding that library value may be conceptualized in a number of ways, depending on the perspective of those doing the assessing, especially because users do not usually have the background knowledge to make them good judges.[13] If users are unaware of improvements,[14] or have no concept of possible services, their assessments of value vary greatly.[15] While ideally an academic library would be valued by all of its users, limited budgets for assessment necessitate the identification of which stakeholder group (i.e., students, faculty members, administrators, or others) can provide relevant and significant feedback. Doctoral students have the potential to be one such user group.

Doctoral Student User Group

Academic libraries tend to focus on faculty, graduate students, and undergraduates as the three most significant user groups, with most studies centered on undergraduates.[16] There are several justifications for studying undergraduates, because they are the largest user group, often having the least knowledge of libraries, so they are the ones that would benefit most from instruction or other interventions. Despite their num-

bers, undergraduate library use is reportedly low,[17] although usage tends to vary by discipline,[18] because graduate students have more demanding research requirements.[19]

Because library use is, and will certainly remain, a measure of value, faculty members are also one of the most significant user groups. The overwhelming majority of institutions require faculty publication, and tenured faculty have the potential to remain at their college/university for decades, potentially ensuring years of library use related to research, publication, and teaching. Moreover, as graduates of at least one institution of higher education, faculty members, unlike undergraduates, have had experience at multiple institutions.[20] This experience makes them better able to assess their current institution.[21] Many administrators, including those who control the library budget, begin their academic careers as faculty members.[22] Unfortunately, findings indicate that faculty members may use other information resources besides their academic library, and that they may be unwilling to change their perceptions of the library and its services.[23]

Graduate students have some of the most potentially useful traits of both undergraduate students and faculty. Their programs of study usually involve them in finding scholarly literature outside of what their syllabi require. They also have the benefit of successfully completing at least one college degree and experience with one academic library. At the same time, they are also acutely aware that they must adapt their information practices to be accepted in the scholarly community.[24] Although most library research tend to view graduate students as a single group, which is reflected in how libraries allow all graduate students to access the same services,[25] graduate students include several groups, differentiated by the type and requirements of their degree programs.

Unlike those pursuing masters or professional terminal degrees (e.g., JDs), doctoral students pursuing PhDs are a special sub-group, required to conduct an original piece of research and write a dissertation. Some studies identified PhD students as being a useful population to study in demonstrating library value, although they have been relatively underrepresented in the literature.[26] Harris[27] is one exception, whose findings suggest that PhD students would benefit from library instruction in locating resources. Harris[28] also notes that due to the rigorous nature of its requirements (coursework, comprehensive/quali-

fying exam, proposal, dissertation), completing a PhD usually takes more time than any other degree.

The most comprehensive report on doctoral student research behavior was published in 2012 by the British Library and the Joint Information Systems Committee (BL/JISC). This research was based on 13,593 surveys and 60 interviews with British doctoral students from June 2009 to December 2011 in 72 institutes of higher education in the UK.[29] Despite its impressive scope, doctoral studies in the UK are different from those in the US, mainly because students in the latter usually do not have to take qualifying exams, resulting in shorter degree completion times.[30] This study also only looks at doctoral students as researchers. Because many in the US view the PhD as a necessary credential for a job in academia, many doctoral students also teach or assist full-time professors as TAs. US doctoral students will thus need to use the libraries extensively for their coursework, research, and teaching. Study of this unique user group presents academic librarians with an exciting opportunity to evaluate their perceptions of the value of their library across these three areas.

Method

This exploratory study uses grounded theory methods in data collection and analysis which: "consist of systematic, yet flexible guidelines for collecting and analyzing qualitative data to construct theories 'grounded' in the data themselves."[31] Without any extant research on how doctoral students conceptualize library value, patterns and themes will emerge from the interview data. Like other qualitative methods, this study seeks to collect rich data that would help generate a range of responses, rather than testing an existing theory or making generalizations about the doctoral student population.

Research Questions

Following from the literature review, this study addresses these research questions:

RQ1: How do doctoral students serving as course instructors use their academic library for their research and teaching activities?

RQ2: What do they value most about libraries?

RQ3: How do previous library experiences shape their perceptions of library value?

RQ4: What causes their perceptions of library value to change?

To address these research questions, the investigators conducted a pilot and a main study, consisting of in-depth interviews with a total of 15 doctoral students.

Selection of Participants

A purposeful sample of 15 participants was selected based on three main criteria. The first and most important criterion was to create a stratified sample of five students in three different stages of their program. These stages were: 1) in coursework; 2) completed coursework, before qualifying exams; and 3) writing the proposal/dissertation.[32]

The second criterion was to recruit students who were teaching in their departments, so they potentially had used their library for coursework, research, and teaching. Although a recent report has identified other roles for graduate students, including "writer, proto-author, and job-seeker,"[33] these roles were either less well defined than that of student, researcher, and teacher, or students only encounter these roles at the end of their doctoral student careers. The third criterion was to find students pursuing PhDs in communication or media studies. The investigators selected this subject area because these are the other two concentrations, besides LIS, offered in their school's doctoral program, and were thus familiar to the investigators. LIS students were not recruited because of their close association with libraries, which makes them unrepresentative of doctoral students. Also, the students would have similar courses of study and most research on doctoral students has concentrated in the social sciences, which allows comparison of results to other studies.[34]

The two participants for the pilot study were selected from the investigators' home institution and chosen to differ in subject concentration, program stage, age, educational background, and library usage. For the main study, nation-wide recruitment was conducted to find an additional 13 students who met the criteria. An invitation to participate was posted to the Communication, Research, and Theory Network (CRTNET) e-mail listserv managed by the National Communication Association (NCA) in November 2012. Using this listserv targeted a large number of potential participants, and, along with the compensation for completing the interview (a $30 gift card), allowed for identification of participants within two weeks. Thirteen qualified participants were selected

on a first come basis until the quota of five per their area of study was met. When these 13 were added to the two students from the pilot study the intended total of 15 respondents was reached.

Pilot Study

To test the effectiveness of the interview protocol, the investigators conducted a pilot study which consisted of two participant interviews in August and September of 2012. The research protocol involved a brief survey and an interview. The survey collected basic information on demographics, educational background, and library use. The interview questions (see Appendix A) were based on the critical incident technique (CIT).[35] The CIT allows participants to identify the most critical factors surrounding their information seeking experiences.

The interviews were conducted face-to-face, lasting 45 to 60 minutes. The investigators made audio recordings and took notes during the interviews. After each interview, the investigators solicited feedback on the survey and interview questions and immediately transcribed all notes, while the audio recordings were transcribed verbatim within three weeks. The investigators made changes to the protocol based on the pilot study participant's feedback. An additional "magic wand" question was added to the interview questions (see Appendix A).

Main Study

Thirteen interviews were conducted for the main study via Skype or phone, in addition to face-to-face as in the pilot study. Responses were captured through notes and gathering as many direct quotations as possible. The modified survey and interview questions were used, following the procedures of the pilot study.

Data Analysis

The transcripts and notes from the fifteen combined interviews from the pilot and main studies underwent detailed qualitative analysis. Using the constant comparative method,[36] the investigators carefully and repeatedly read each interview individually and in comparison with the others. Throughout this process, notes of emerging patterns or themes that reoccurred in a number of interviews were made. The authors organized themes by question and identified representative or especially illustrative quotations. All analysis and coding was done manually.

Results

Demographics

Counts and percentages were computed for responses to the demographic questions. The participants were primarily female (13, 86.7%) and Caucasian (12, 80%). The three who were not Caucasian included one student each (6.7%) of African, Filipino, and Indian ethnicity. Ages ranged from 24 to 42, with a median of 27. All had received a Bachelor's degree between 1994 and 2010, with a median degree year of 2007. Three students (33.3%) earned their degrees outside of the US. Ten (66.7%) majored in communication or media studies. Between their Bachelor's and Master's degrees, most students went to a different institution (12, 80%). Fourteen (93.3%) had received a Master's degree in communication between 2004 and 2012, with a median degree year of 2010, and all earned their Master's degrees in the US.

Participants began their PhD programs between 2008 and 2012, with a median start year of 2010. A majority (12, 80%) is pursuing PhDs in communication, and the rest (3, 20%) are in media studies. Students are completing their degrees at eight different institutions across the US. Seven (46.7%) attend schools in the Northeast, four (26.7%) in the Midwest, two (13.3%) in the West, and two (13.3%) in the South. As expected of institutions awarding PhDs, all attend schools that are research universities classified by the Carnegie System as very high (13, 86.7%) or high (2, 13.3%) research levels.[37] A majority (12, 80%) attend a different institution from the one that they had received a previous Bachelor's or Master's degree.

In terms of library experience, students were relatively homogenous in the number of times they visited their academic library building or accessed resources remotely. Participants visited their physical library up to three times per week during the semester with a median of one per week. The median number of visits was once every three weeks for those in coursework, once a week for students before their qualifying exams, and twice a week for students in dissertation writing. Overall the participants accessed their library's remote resources more often than physical ones, from once every two weeks to eight times a week, with a median number of four times a week. Interestingly, the students still in coursework used e-resources more frequently than the other two groups, with a median of five times per week for the first or second years and a median of three times per week

for the other two groups. Five (33.3%) had worked in an academic library while earning the Bachelor's and Master's degrees. A majority (12, 80%) had attended a library instruction class at the start of their doctoral programs, which is higher than the 33% reported in the *Researchers of Tomorrow* study.[38]

Qualitative Results and Discussion

Research question one asked: How do doctoral students serving as course instructors use their academic library for their research and teaching activities? The following themes were revealed in the data that address this question.

Searching for Information for Research in Coursework and Beyond

In describing how they searched to fulfill research-related needs, respondents tended to use Google and Google Scholar for discovering information or resources, with a majority of those in coursework only using Google Scholar to access articles, which Connaway and Radford also found in a broader population.[39] Of the four students looking for a book, each learned about it from Google by searching for the author's name and seeing a list of their publications, or when looking for initial sources on their topic. They then went to the library catalog and requested the item.

These students who ended up finding a book were all in their pre-qualifying exam or dissertation writing stages, and all described a sophisticated understanding of the various services that the library provided, yet all of them chose to discover background information in areas that they were not very familiar with using Google. One reason was described as the "unknowness" (P1)[40] of the library versus that of Google Scholar, which one participant described as:

> "I know that Google Scholar is doing the best that Google Scholar can do. Like it feels like I've gotten thousands of entries, these are the Top 10, I know there's an algorithm. And though with all of its flaws, I feel like that task at least has run its course to whatever the end is. But again, I was always unsure with the library website" (P1).

Although these students chose to use Google or Google Scholar to find citations, they understood that they could get books from their library or through

interlibrary loan, and that the library, not Google, provided access to articles. As one student in the dissertation writing stage explained, "I always try to start from [the library page], but if I get disappointed then I go to Google. I usually find things that I need at the library" (P12). From the first semester, students understood that when using Google Scholar they had to be "connected to the library" (P4) if they wanted to actually access the articles.

Previous research indicates that graduate students use books, articles accessed physically or electronically, and databases, but their relative amounts of use vary. For instance, one study found that journals were either the most important or the least important resource as rated by their graduate student participants, and the investigators believed that this was due to disciplinary differences.[41] The *Researchers of Tomorrow* study found that e-journals were more commonly accessed than books among students in the social sciences.[42] One notable difference between the students still in coursework and those who have completed coursework is that a majority of the former only used Google Scholar to find articles, while all of the students beyond coursework did most of their searching in a library database.

There are a few possible factors for this apparent over-reliance on Google Scholar by those still in coursework. Since the median ages of participants in coursework stage, their pre-qualifying exam stage, and their dissertation writing stage were 26, 27, and 30, respectively, age was probably not a factor. Also, the only student in coursework who used a database for research was the youngest one (P15). A more likely reason for less reliance on Google Scholar post-coursework is that these students are more experienced scholars. One of the two in their pre-qualifying exam stage thought that her search "was successful because [she was] familiar enough with the search section to get it to bring up what [she wanted] it to" (P5), and described using Boolean logic in her searches. The other student in her pre-qualifying exam stage described her success as "a matter of knowing the topic area, going to the databases, realizing that I didn't know what I was looking for, and then going to Ask a Librarian" (P8). For the three students in their dissertation writing stage, two indicated that they had a thorough understanding of their topic area, knew of specific relevant journals, and were aware of gaps in their knowledge or in their personal book collection.

The third student used databases in sophisticated fashion, describing how she would use links in one article to easily connect to additional cited articles (P6). As might be expected, the advanced students discussed a deeper understanding of their topic, and library resources and services, which might account for their use of the databases over Google Scholar.

Searching for Teaching Resources

One theme that emerged in regard to teaching-related research was that the doctoral students did not see their academic libraries as being a resource, primarily because of the generic nature of the courses taught. Because all of the participants were in communication or related programs, approximately one third of the participants had taught introductory public speaking class to undergraduates. They reported that often several sections are taught each semester and they are generally required to use a standard syllabus and textbook. One participant described public speaking as:

> "almost its own kind of department…We have a director of public speaking…[and] I really try to stay focused with the book because I respect that a lot of smart people spent a lot of time to pick the book…[Also] there's an established syllabus. You do have some wriggle room. I could assign more for the class, but I feel that the effort of collecting this material would not be used by the students. Basically, I don't think they would read it" (P1).

The nature of the course with a large number of sections could thus prevent these doctoral students from going beyond the "fixed schedule [that] everyone follows" (P12).

Even when doctoral students try to find additional readings to use in their lectures or to assign to students, they do not think of the library as a resource. The textbook or Google are the most commonly referenced source of material, while online sources, such as notes and activities provided by people in the department, are other sources. None of these doctoral students seemed to feel as though they were unsupported by their departments or generally unable to find background readings for their classes, as reported by teaching assistants or graduate students working as course instructors a study by Rempel, Hussong-Christian, and Mellinger.[43] One participant explained

her primary use of the textbook for public speaking as being difficult because: "it can be hard to find really poignant or powerful speeches. There isn't really much out there that's better than what's in the textbook" (P4). Google is a popular tool because doctoral students are usually looking for non-scholarly or very concrete or specific readings or activities for their classes. One participant differentiated between her research and teaching information searches as follows:

> "I rely on the same research, I just translate it into accessible terms for my students. Instead of looking for the seminal topics, I look for more relevant ones…Also, I'll talk about the sexy provocative topics that students like to talk about. Like Facebook or betrayal" (P15).

In addition to finding readings that she can provide context for and ones that the students will find provocative, another student described why she needed very specific and self-contained readings as:

> "For my research, I don't think that things need to be complete because I think that's my job, to put together the pieces. For teaching, I think that they need to be complete…Also there's readings every week, and if I spend time talking about the readings this week, I can't contextualize the readings for next week" (P3).

Doctoral students found it more convenient to find teaching related information from faculty or other students in their department. Students at two different institutions noted that their departments had an online resource that included syllabi, activities, and information for their lecture notes. The students do not actively avoid using the library for teaching related information. Instead, it seems that most would agree with one participant who commented that although her "library experiences have been useful… [she] never thought about using the library for teaching resources" (P11).

Library Value

Research question two asked: What do they value most about libraries? Approximately half of the participants agreed on two themes regarding what made their academic library valuable: extensive collections and one-stop convenience, findings similar to a study

by Connaway, Dickey, and Radford that also found the primacy of convenience and use of Google.[44] About one third mentioned "knowledgeable people" (P2) and two said study space. Interestingly, only the four participants in their dissertation writing phase mentioned library employees as being one of the library's most valuable aspects, and only the two in their pre-qualifying exam phase listed library spaces. The two students who listed the library space as being a valuable asset visited the library two or three times a week, which was more often than the median value of one visit per week. Perhaps because they visited the library more often, it follows that they would value the library's space.

An explanation as to why those in their dissertation writing phase were the only ones who cited library employees as being one of their library's most valuable aspects is less clear. One reason could be because two of them had worked at their undergraduate institution's library, so they may have been more willing to approach a library staff member at their current institution. Another reason could be the fact that they were required to look for more difficult to find information. First and second year students still in coursework have short timelines for work because at least one paper will be due per semester, and the shortened timeline may make them more dependent on easily findable and accessible online articles. As students find and verify gaps in the literature, they may need to do more in-depth research, which would make them more likely to seek assistance from librarians, and more likely to value this assistance.

One task that participants in their pre-qualifying exam and dissertation writing stages mentioned asking librarians for help in was looking for information in different disciplines, an area of uncertainty also identified by Fleming-May and Yuro.[45] Two students who had majored in humanities majors as undergraduates believed that they used the library differently from those in the social sciences, either because they primarily "used texts" (P2) or began searching for journal articles earlier (P14) compared to other students in their masters programs. Doctoral students may still need to look at literature outside of their current discipline in order to make their own research new or original. For example, one student was writing a paper on texting while driving, and the librarian that she consulted through her school's Ask a Librarian service recommended that she look in "transpor-

tation or transit journals or public policy journals… instead of focusing on HCI or computing journals" (P8). Although her study involved a relatively new behavior (texting), the relevant literature existed in other fields which had long studied distracting behavior while driving. Respondents were more interested in only consulting librarians, although participants in other studies have offered other suggestions for how to learn about other areas, such as organizing cross-disciplinary talks in libraries.[46]

Factors Affecting Perceptions of Library Value

Research question three and four asked: How do previous library experiences shape their perceptions of library value? What causes their perceptions of library value to change? Results for these two questions will be combined here as they suggest that for PhD students, library value tended to increase as use increased, and library use increased over time. One participant explained her increased reliance on the library over time as:

> "When you're an undergrad, you can write a paper without the library. And to some extent in the master's program there were some things I didn't have to use the library for. At the doctoral level, even the most basic assignment I have to use the library. Even using Google Scholar, without the library, it's almost worthless." (P4)

Other participants had similar comments, and some even admitted that even as master's students they "never used the library" (P1), which support the claim that doctoral students have much more demanding research needs than other students, even other graduate students. However, over a third of the participants said that they used the library the most as doctoral students. Also, one third said that library use was the only reason why their perception of its value increased.

The qualifying exams that doctoral students must pass also require them to collect a large number of books and articles for their reading list, which forms the basis of their test. These lists can be quite extensive, and one participant who is creating her reading lists estimates that she will need to borrow "60 or 70 books" (P14). This collection can then form the basis of the student's core knowledge. One student explained:

"Recently though I've been getting into the habit of using my qualifying exam reading lists and my reading notes as kind of a broader sort of database for myself" (P2).

Several students discussed their personal collections, and said they were willing to spend anywhere from ten dollars per book (P1) to "a couple hundred dollars a year" (P14).

These doctoral students did compare the libraries at their former institutions to the ones that they currently use, but not very often. Three noted that their undergraduate or master's level schools were smaller than their current school, and thus their libraries there were "similarly small" (P5). A third of the participants also appreciated the increase in resources available online, although this could have had as much to do with the time they were undergraduates as the actual libraries themselves as libraries in general have increased their online holdings. Only one student noted that her master's institution "did not have so many books" (P12) compared to her current one. Students may not have compared the resources from one school to another because they did not have to use their school's academic libraries in their earlier studies.

A few reported that they used their library less as doctoral students. Two participants said that they used the library more as undergraduates, and one used the library more as a master's student. These respondents also reported using the physical library to study, making it possible that they conflated overall library use with using the library building. This exploratory data also suggest that the best opportunities for libraries to be valued, as noted by three participants, were when they had to do more in-depth research, or conduct research outside of their accustomed discipline, or when they are taking on new roles, such as teaching.

Limitations
One limitation of this study was that six of the fifteen participants were from the same school as the investigators. This convenience sample may have resulted in participants being more inclined to paint their view of the library's value or their library use in a more positive light. However, qualitative scholars claim that while the investigator's background and knowledge will sensitize them to view their data in certain ways, this is not necessarily undesirable especially in explor-

atory contexts.[47] The other participants may also have been inclined to increase the value of their libraries because the advertisement for the study stated that the investigators were part of the library and information science department. Interview questions were phrased to make the questions as open and as neutral as possible.

Like other exploratory studies, this research was also limited in terms of sample size, study length, and importantly, a lack of theoretical saturation. Charmaz's definition of grounded theory methods states that the study is not complete until the investigators have reached theoretical saturation, in which additional interviews do not yield any more themes.[48] Theoretical sampling is used to identify potential participants who can help the investigators reach theoretical saturation.[49] The themes found here are offered as initial findings, meriting further study.

Conclusion and Future Directions
This exploratory study interviewed 15 doctoral students about how they used their academic libraries for teaching and research, how they conceptualized library value, and what caused their perceptions of library value to change. By focusing exclusively on PhD students and recruiting students in their coursework, before their qualifying exams, and in their dissertation writing stages, this study found differences in how the students in different stages looked for research related information.

Those in coursework tended to rely exclusively on Google Scholar, while students in more advanced stages used a variety of library services. However, students in all stages did not use, or think to use, their libraries when seeking teaching-related information. In general, for this task they were not looking for scholarly materials, and many preferred to use information provided by their departments. Participants were able to articulate differences between their previous and current academic libraries, but since many did not use their previous libraries much, or their libraries were smaller, they tended to view their current library in a favorable light. Events that caused their perceptions of their academic library's value included writing papers that required background research outside of their area, preparing for qualifying exams, and taking on new roles as course instructors.

These preliminary findings suggest that PhD students are a useful group when studying perceptions

of academic library value, and how they change. However, more research needs to be conducted to discover what library interventions at different times over the course of a doctoral student's career are most successful at changing perceptions of library value. Future work could study a broader range of disciplines (e.g., Humanities, Science, Law). It is also recommended that longitudinal studies of participants through the different stages of doctoral student life, or studies involving students from a variety of sizes and types of universities. Soon this population become faculty themselves whose perceptions of librar-

ies are passed on to the other generations of students they will guide.

Engendering positive attitudes and promoting deep understanding of how to use library resources in this group of young, emerging scholars will have a profound influence for many years to come. There is an opportunity here for librarians to endeavor to find out more about PhD students in their programs of study and to develop appropriate, systematic instruction and outreach during this impressionable stage in their careers, which can have a broader impact that could resonate throughout academe.

Appendix A: Interview Questions

1. When you have an information need related to research, how do you go about finding that information?

2. Can you remember a particular time when you needed information to help with your research and found it? What made this successful for you?

3. Can you remember a particular time when you needed information to help with your research and could not find it? What made this unsuccessful for you?

4. When you have an information need related to teaching or any teaching assistant-related duties, how do you go about finding that information?

5. Can you remember a particular time when you needed information to help with your teaching and found it? What made this successful for you?

6. Can you remember a particular time when you needed information to help with your teaching and could not find it? What made this unsuccessful for you?

7. Describe how your library use differs when comparing your research and teaching information needs?

8. Reflect on your previous library use before you became a doctoral student. What has changed? More specifically, how has your view of the library's importance changed?

9. How important is the library when you are seeking information for research and teaching? What do you value most about libraries and why?

10. If you had a magic wand that would allow you to change your academic library, what would you want to change?

11. Is there anything else that you would like to add about libraries or your information seeking activities?

Notes

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