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## Scholarly Information Seeking Habits and Behaviors of Missouri State University (MSU) Faculty

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## Introduction

A group of faculty and staff of the MSU Libraries (J. Johnson, coordinator, L. Cline, W. Edgar, S. Fischer, G. Jackson-Brown, A. Miller), assisted by W. Meadows of the MSU Department of Anthropology, conducted an ethnographic study using direct observation and semi-structured interviews of a sample of MSU faculty members to gain knowledge about faculty scholarly information seeking habits and behaviors to provide insight into the following research questions:

- What information sources and technologies are used by MSU faculty members in their scholarship?
- Where do faculty members conduct their research?
- Whom do faculty members consult for research, writing, and information seeking assistance?

## Methodology

1. Following IRB approval, a 10-question survey was distributed in April 2016 to a random pool of 551 MSU faculty members; 125 or 23% responded. The survey helped identify areas of inquiry for a subsequent set of interviews and informed the analysis of the interviews. (See Appendix II *Preliminary Survey Results*)
2. Twenty-four MSU faculty members responded to a general request sent to non-administrative, tenure track faculty in all academic departments, except for the Libraries, for individuals willing to be interviewed about research behaviors.
3. Digitally recorded oral interviews were conducted by three team members (S. Fischer, J. Johnson, A. Miller) during the 2016 fall and 2017 spring semesters. On average, each interview lasted approximately one hour.
4. In spring 2017, the interviews were reviewed by each member of the team.
5. In summer 2017, the interviews were transcribed using a professional service, generating 609 pages.
6. Three of the team (L. Cline, W. Edgar, G. Jackson-Brown) began during 2017 fall semester a preliminary qualitative analysis of the interviews, coding broadly in three areas: content, services, and spaces, based upon major themes in the Libraries' strategic planning *MSU Libraries 2020 Project* document. Subsequently each of the three analysts was paired with one of the interviewers to again review the transcripts and organize preliminary findings for each of the coding areas: content (L. Cline, S. Fischer); services (W. Edgar, J. Johnson); and space (G. Jackson-Brown, A. Miller).
7. Based on a background reading of scholarly literature, review of the survey, and the transcript analysis, a preliminary report addressing faculty information-seeking behavior in the context of content, services, and spaces was prepared and presented to Library faculty members and administration in December 2017. The research group gathered and synthesized feedback from the presentation of the preliminary report.
8. During 2018 spring semester, each of the three paired research sub-groups analyzed the interview transcripts, the 2016 faculty survey, the 2003 Library Satisfaction Survey, and the 2012 and 2014 library constituent studies (See *Appendix V*), and all feedback.

9. Out of those three analyses, the final structure for each of the areas took shape. The sub-group for content posited discovery, content per se, and the working environment surrounding content in its analysis. The sub-group for services examined the interview responses for explicit or implicit service needs or interests. Sometimes the respondents explicitly mentioned a service, e.g. Interlibrary Loan. Other times the respondents discussed a problem which, unaware to them, could implicitly be addressed by a service, e.g. they discussed their struggles to manage citations related to their research, which could be addressed by a citation management service. The sub-group for spaces conceptualized and reviewed “space,” operationally defined as physical space or cyberspace, and conducted “a close reading” of faculty research habits and behaviors. This space report concentrates on the findings drawn from two major interview questions asked during the anthropological study:
    - Where do you conduct research?
    - What social media communication do you use? (Internet/cyberspace usage)
  10. Each of the three area reports (content, services, and spaces) were reviewed by the research team as a whole to build consensus on what elements to add, remove, or amend.
  11. The final report, delivered in May 2018, extends the level of detail of the preliminary report, provides a number of quantitative appendices, and presents focused recommendations as well as areas for further study.
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## **Findings & Recommendations**

### **Content Sub-group**

Content is at the core of the information discovery and seeking behavior of faculty members, but the survey, and more so, the interviews, clearly indicate how closely related content and services, and to some extent, spaces, are to each other. Because there is a discovery phase to content, it is also discussed here. In fact, in many ways, discovery of and access to content are almost if not equally important as content itself. Because the survey and interviews were looking at information behaviors more broadly, there is little discussion of specific content resources. In the same vein, because the focus was more on practices and behaviors related to content needs, the evolution of newer content types is not discussed in any depth (e.g. books to e-books, or content creation co-existing with content). However, the group realizes that content per se has obviously evolved from a principal focus on the print monograph to the current core of digital databases and journals, and the anticipation of more distributed and heterogeneous digital resources in future iterations of content. These bear close examination and should be a part of future phases of content study by this or other groups in the Libraries [numbers in parentheses in the Content section refer to "mentions" by faculty interviewees].

### **Discovering, Searching, Accessing Content**

Faculty members appear to seek and generate information in three major steps: articulation of a research question (individually, or through interaction with disciplinary colleagues, either locally or elsewhere); finding information related to a formulated research question (search engines and professional literature, especially literature within the discipline); and execution of research (self-generated in a number of ways [fieldwork, lab, etc.], through consultation with colleagues and librarians, and subsequent information-seeking activity).

Discovery mechanisms involve many external tools in addition to Library sources, including Google (8), Google Scholar (15), ResearchGate (9) and Academia.edu (2) as well as other social media venues, along with various discipline based professional tools. Social Media as a source of content, as a formal expression of content, or formal facilitator of content is not significant apart from ResearchGate, which enjoys considerable use. Social media does have some significance as a spatial aspect of research (see discussion in Spaces section).

Initial searching also involves several direct content sources, many external, often typically tied more narrowly to the researcher's disciplinary literature (focused external academic institution sites and a discipline or specialty), professional sites/blogs, or sites with highly specific information related to the faculty member's focused research interests, and more specifically, professional association literature (NCTM, MLA, NACLA, etc.).

Searching itself is often serendipitous, whether using external or library sources. Related citations within relevant research literature remain a key resource, based on the presence of a variety of citation storage methods. When searching library-based resources, faculty members tend to avoid controlled vocabularies and place emphasis on keyword searching. Some frustration with library-centric processes or library work-arounds is present. One interviewee simply googles the name of a library database he wishes to consult instead of following the pathways on the Libraries' web page. Faculty members, like students (*Library Constituency Survey*, 2012, 2014), seem to want a clear, straight-forward search path. The information principle of precision and recall is evident here, as is Ranganathan's 4th law (save the time of the reader).

## **Content**

Faculty members appear to be comfortable with, and typically gravitate toward, discipline-based, professional association literature, and then branch to major core journal literature in the discipline when doing literature searches. This practice occurs across the disciplines (e.g., chemistry, English, marketing, mathematics). Searching processes probably don't take them much further unless they utilize significant effort in following up retrieved citations.

Faculty members are aware of and sensitive to library content brands, especially EBSCO (27 - both the family and ASC as a substitute for the family, though there are probably about a half dozen e-resources on the EBSCO platform that receive the lion's share of use in the 65-member MSU Libraries' EBSCO stable), JSTOR (10), LexisNexis Academic [*Nexis-Uni*] (4), and significantly, the digital academic journals to which the Libraries subscribe, especially the major publishers (Wiley (2), Springer, Elsevier(3), and association publications such as ACS or APS). Faculty members don't necessarily have a strong understanding of the searching capabilities of these tools, or that sometimes when they access them through external means, they subsequently have

access because the source they utilize recognizes the IP address as an institutional subscriber. They do utilize them significantly along with core disciplinary journals.

Faculty members utilize most formats – especially unstructured digital literature and digital journal literature, but also books (typically print, but not so much e-books), data, and special formats, most weighted toward digital content. In the pre-interview survey, out of 23 possible content sources, faculty members listed as the most significant two by far (for their research, as well as for simply staying current) journal articles (106) and content from internet searches (82, with individual item citations as the next highest category at 67). An aside on books – there was significant discussion of their value from about third of the 24 respondents, virtually all from COAL or CHPA, with not a great deal of expressed interest in or awareness of e-books’ significant potential, especially those in the Libraries’ 150,000 title EBSCO e-book package. Difficulty in facile utilization of e-books may be a barrier here. There is interest in data, particularly in business, natural sciences, and social sciences, with two challenges – finding reliable data, and finding data that is not overly costly to access or acquire. In addition, it must also be recognized that in some disciplines, content is highly specific in format (e.g. music, art), and like data, a fine balance must be achieved in the way in which such content is either purchased, licensed, or leased.

Faculty members often are content with identifying citations as opposed to securing immediate full text, particularly in journal literature, hence the significant branding of ILL (16). Faculty members’ work with citations runs somewhat counter to the less discriminating student predilection for full text (*Library Constituency Survey*, 2012,2014), and creates challenges in how the Libraries might provide a useful resource mix (i.e., citation vs. full-text databases), given limited fiscal means. Three of the 24 interviewees mentioned *Web of Science*.

Two other significant issues on the information organization side of content subsequently emerge – the manner of storage and the organization of citations as well as the organization and storage of “full text” information, both of which illustrate the crossover of content per se and content related services.

Also implicit in faculty member searching, discovery, organization, and utilization of external as well as Libraries-provided information, is that the broader faculty environment is one that imposes significant demands on time, and that for faculty, the information gathering and organization would ideally be as simple and straightforward as possible, and, in most ways, not involve the library physically.

### **Recommendations:**

- Enhance, facilitate, and ease the process of discovery of and access to content. Content discovery is a significant activity and should not be underemphasized. To maximize the investment in library content, discovery practices and tools should be closely evaluated.
  - Identify, implement, and advocate for best practices for library discovery services, and search and discovery engines for locally held and licensed resources as well as other research content to which the Libraries link
  - Particularly as the Libraries reviews its relationship with MOBIUS, and explores its options for an ILS, carefully consider the degree to which a system can integrate functions faculty utilize, especially ILL, course reserves, and course software



- Provide enhanced assistance to the University community in utilization of other forms of discovery. This involves services as much if not more so than content, but is noted here because of its relationship to the broader issue of content discovery
- Enhance fiscal support for content discovery and content, as well as for ancillary costs related to selective external content linkage. Such an effort is difficult both internally, given the fiscal tension between discovery and content costs, as well as externally, given the current overall institutional and state higher education fiscal outlook, and the competing demands among space, content, and personnel/administrative overhead. However, initially:
  - Split out or at least carefully track discovery costs and content costs in the content budget
  - Continue to actively seek to add to existing campus fiscal partnerships in content licensing, leasing, or purchase
  - Invest in additional effort at securing soft resources for content and discovery
  - Carefully examine relative commitments to spaces enhancement, content, and personnel/administrative costs
  - Actively monitor and match collecting activity with developments in content access, delivery, and format in concert with shifting content needs of the University community, whether by discipline or by constituency
  - Carefully explore on-demand unit access for some digital content packages, both those currently licensed and new ones, particularly those for journal literature
  - Continue to review previous purchase models and proposals for a large index-abstracting service such as *Web of Science*, keeping in mind the extraordinary fiscal implications and the potential risk to undergraduates, who thrive on immediate full-text access
- Generate greater awareness of brands. The EBSCO, *JSTOR*, and *Lexis* (i.e., *Nexis Uni*) brands are well known as are some of the discipline-based journal packages. We should consider enhanced branding or exposure for the databases on the next tier after the top five or so, particularly, some that are non-EBSCO. The Libraries should also seriously explore placement of some of its major packages in the database listings just as they currently do with Elsevier via *ScienceDirect* (e.g., Wiley, Springer, ACS, APS-IOP). In addition, a renewed effort for increasing faculty awareness of existing discovery methods (e.g., awareness of searching by publisher or vendor in the journal finder; or awareness of the capabilities of the link resolver, etc.).
- Expand the Libraries' understanding of the broader University faculty environment and culture by ramping up the interaction and contact between Library Liaisons and University faculty, and by making it a significant part of the formal library faculty member work portfolio.
  - On a macro level create a deeper understanding on the part of liaisons of the challenges University faculty members face, both collectively as departments and colleges, as well as individually in the teaching, research, and service process
  - On a micro level create a deeper understanding of and appropriate response to specific content needs of University faculty members on the part of liaisons

- Actively work to address faculty members' misconceptions or misunderstanding of resource availability or library resource techniques as they are identified and made known. Several came to light during the interviews.

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## Services Sub-group

Two high level emphases emerged from faculty interview responses: 1) increased productivity through streamlined processes and resource availability 2) training/support. Faculty either directly expressed the need for or interest in having a broad range of information services or indirectly indicated such need or interest through their responses. We categorized these emphases into service themes. The themes include the following, listed from the most frequently to least frequently discussed. Here we identify each theme, provide comments to elaborate, and present recommendations arising from the theme and comments.

### Theme One: Document Search and Retrieval

(Discussed 83 times)

**Comments:** Perhaps surprisingly, given the current prominence of search engines and the vast document retrieval they support, the respondents prioritize staying current in their fields through reading specific, respected journals within their fields, continuing a long-standing faculty tradition that arose in the era of print journals. Similarly, they engage as members of specific scholarly and professional associations critical to their work. Often they pay for these journal subscriptions and association memberships out of their own personal or work funds. The respondents discussed how they are alerted to new developments in their fields. Sometimes they use Google's alerting service, but they seemed unaware that journals and even journal databases subscribed to by MSU Libraries often provide this service.

Perhaps surprisingly as well, given the search tools available on the World Wide Web, the respondents discussed the importance and difficulty in finding data sets vital to their research.<sup>i</sup> The respondents expressed frustration that the "reference room," a place with extensive print reference tools, no longer exists as it used to. They also expressed their desire to do large scale citation searching through powerful bibliometric databases like the Web of Science.<sup>ii</sup> They do "work arounds" to get essential research resources that MSU does not provide through relying on colleagues at other universities,<sup>iii</sup> traveling to retrieve documents,<sup>iv</sup> and buying resources themselves.<sup>v</sup> [Endnotes indicated by superscript Roman numerals can be found by hovering over the numerals or at the end of this report]

### Recommendations:

- Facilitate expanded access to scholarly literature by subsidizing individual memberships to scholarly societies, or memberships to organizations that are essential for individual faculty members' research
- Explore providing a personalized alerting service for faculty members, supporting them in identifying new content relevant to their research
- Provide arrangements or engagement with other academic institutions to retrieve documents and/or data sets essential to faculty members' research but not available at MSU or through normal bibliographic tools, e.g. *WorldCat* and Interlibrary Loan

- Actively promote to faculty members the Libraries' Research Consultation and other services for faculty members to find content like documents or data sets essential for their research, but which are not available through bibliographic channels like *WorldCat* or ILL
- Continue to explore the acquisition of *Web of Science*

## **Theme Two: Document Management**

(Discussed 43 times)

**Comments:** Respondents frequently mentioned their frustrations with managing citations to documents essential to their research. They often simply keep citations in Word documents and harvest them as needed. They want but do not have time to improve their citation management, but they are supportive of the University providing citation management software.<sup>vi</sup>

Respondents consistently also said that the documents essential for their research are disorganized and/or held in various scattered and potentially unreliable places like thumb or external hard drives, personal digital devices, and various places in the Cloud.<sup>vii</sup> Faculty consistently described their document management situations as a "mess," or something similar, and some expressed their desire for campus standards and leadership in this.<sup>viii</sup>

### **Recommendations:**

- Take the lead in investigating the need for a citation management service at MSU, determining the software to use (e.g. EndNote) if necessary, and then supporting the use of that software
- Take the lead in investigating the need for a document management service (for storage, organization, description, retrieval) for MSU faculty members' research content generated and used prior to the research's publication or deposit in BearWorks

## **Theme Three: Research Support**

(Discussed 29 times)

**Comments:** Respondents expressed frustration and disappointment with MSU's prioritization of and culture with regard to research,<sup>ix</sup> the MSU Libraries' support of research,<sup>x</sup> MSU spaces available to do research, and their own success in getting research funding. Faculty indicated a need for a service and/or place to support talking about research. Several said they feel required to do research but not supported by the university culture as they do so.

### **Recommendations:**

- Provide a "personal librarian" through an enhanced, targeted liaison service, to support specific faculty members one on one during the faculty members' first or early years at MSU and provide continuing support as needed
- Continue to enhance the MSU Libraries' new interdisciplinary research space/service (see Spaces Sub-group recommendations)
- Expand the current ongoing conversations on how research fits into the priorities of MSU

## **Theme Four: Document Transportation**

(Discussed 28 times)

**Comments:** Respondents discussed their frustrations and successes in getting documents transported to them when the documents are located on the MSU campus, elsewhere within the United States, or in other nations. Respondents frequently complimented Interlibrary Loan and MOBIUS.

**Recommendations:**

- Continue Interlibrary Loan service
- Continue participation in Mobius and/or other similar cooperative organizations
- Provide document delivery service on the MSU Springfield campus
- Provide self-service checkout at Meyer Library
- Integrate these self-service checkout and document delivery services

**Theme Five: Software and Technology Support**

(Discussed 21 times)

**Comments:** Respondents discussed their needs for software training and consultation, app discovery and management, and development of Web presence. Rather than technical support, faculty indicated a need for help using software to make meaning or add intellectual value to their research. They also discussed their needs related to presenting themselves professionally on the World Wide Web, e.g. through their MSU Web page.

**Recommendation:**

- Act as a clearinghouse for human and documentary resources that educate as to how certain software packages, e.g. Qualtrics, can enhance research

**Theme Six: Social Media Management**

(Discussed 17 times)

**Comments:** Using sites like Research Gate, Academia.edu, and even Facebook, respondents discussed their use of social media in conducting and presenting their research. As discussed more fully in the finding related to space, the respondents also use social media as a means to exchange publications essential to their research and to network within research communities.

**Recommendation:**

- Provide social media consultation service, advising faculty members in ethically and effectively using social media as they
  - communicate their research
  - discover (through search and retrieval) colleagues' research relevant to their own work
  - transmit their own research to colleagues
  - present their research profile to colleagues

**Theme Seven: Specialized Services**

(Discussed 17 times)

**Comments:** Respondents discussed their need for these specialized services, often without realizing they were doing so by communicating their legal, technological, or logistical, struggles

in doing research. These include analytical services, copyright clearance, field support for research, geographic information service, special needs support (e.g. for the visually impaired), and subject guide creation.

**Recommendation:**

- Explore providing or enhancing some of these services

**Theme Eight: Document Change**

(Discussed 10 times)

**Comments:** Here respondents discussed, either explicitly or implicitly, their need for or interest in services or equipment that allow them to do things with documents. Having these would provide helpful logistical and intellectual support as they do research. Though not widely needed, these provide substantial value when they are.

**Recommendations:**

- Using in-house expertise or vendors, act as a clearinghouse to provide value-added document transformation services like scanning, binding, transcription, translation, indexing, and copyright clearance
- Enhance and increase the promotion of our current equipment lending service

**Theme Nine: Outreach**

(Discussed 3 times)

**Comments:** Resources are not communicated to new MSU faculty as well as they could be.

**Recommendation:**

- Ensure that presentation of the MSU Libraries is included in MSU's new faculty orientation

**Larger Contextual, Organizational Issues:**

(Discussed Explicitly or Implicitly Throughout the Interviews)

**Comments:** Throughout the interviews, as they explicitly or implicitly discussed their need for services, the respondents frequently indicated that they are often disconnected from the MSU Libraries as they do research. They are searching for and retrieving content, managing research documents and citations, navigating a research culture, trying to use software or social media in their research, needing documents to be transported to them, or needing things done to documents—often with little or no contact or reference with the MSU Libraries. This serves as a reminder of larger contextual organizational issues. The first is that the MSU Libraries has inadvertently positioned and promoted itself to be largely, or even almost exclusively, a library for undergraduates in terms of services. The second is a breakdown in strategic discourse within the MSU Libraries that impedes implementation of strategic priorities. The third is an organizational structure within the MSU Libraries that segments activities that need to be integrated. The fourth is the need for organization development within the MSU Libraries to address our organization's consideration of itself generically as an organization.

**Recommendations:**

- Implement a regular organization wide meeting in which our units “report out” what they are working on and the challenges they are facing. Doing so will help us address a question: How is our discourse with each other, within and across units, moving the MSU Libraries forward?
  - Hire an organization development specialist to
    - Provide management training for supervisors
    - Map our organization’s workflow
    - Develop a long-term strategy for elevating employee engagement
    - Guide us to develop a picture of organizational success
    - Restructure the MSU Libraries as needed to implement their recommendations
- 

**Spaces Sub-group**

In the study of how Missouri State University faculty conduct research, and particularly where they start in their investigations, “space” is a major concept of review, operationally defined as physical space or cyberspace. This report concentrates on the findings drawn from two major interview questions asked during the anthropological study:

- Where do you conduct research?
- What social media communication do you use? (Internet/cyberspace usage)

MSU faculty frequently report that the type of research that they conduct involves libraries or archives. Eleven of the 24 faculty members spoke about their use of special libraries and archives, outside of the MSU libraries (i.e., C.S. Lewis archives in England, Library of Congress, government documents in Portugal). Although prominent use of MSU interlibrary loan is mentioned, the faculty researchers often make site visits, as well as gain some digital access, to special libraries and archives.

MSU faculty members majorly conduct their research in their offices or labs (11 individual respondents) or in a combination of the campus office and at home (9 individual respondents). Two faculty members responded that they do research mainly from their homes. In their research, most engage in the writing process, as well as use online scholarly literature databases.

Eleven faculty members report that they conduct extensive fieldwork in their research. Many do fieldwork outside of the United States (Germany, Nigeria, Mexico, Chile, Argentina, Uruguay, and China, for example). Some do fieldwork locally.

The second question regarding space asks faculty members about their use of social media, but their answers to this and other questions inform the study about other research usage of the Internet. Cyberspace or Internet usage covers three main function areas: 1) communication, 2) information-sharing, and 3) collaboration.

Social media such as blogs, Twitter, and Facebook are nearly as commonly used, according to interview respondents, as email, Skype, listservs and websites, although email has a high standing in popularity.

Faculty members expressed their favorable use of the Internet/cyberspace to share their research. Two academic social networks, ResearchGate and, to a lesser extent, Academia.edu, were mentioned more than 40 times by 10 out of the 24 different faculty researchers. An emphasis on speed and ease of access was evident throughout many of the interviews, especially in regard to technology platforms such as ResearchGate.

The findings of the study on space raise key areas to examine—firstly, whether there exists a need to provide different kinds of physical space to MSU faculty and secondly, whether there is a viable means to provide MSU faculty access to scholarly literature that they are now frequently finding via alternative means through ILL and the Internet.

### **Is there a need to provide different space(s) for research to MSU faculty?**

In the study, MSU faculty members often state that they conduct their research at their residential homes and campus offices and occasionally in coffeehouses. Faculty members frequently refer to their usage of the Libraries' online databases and resources, as well as their utilization of the Libraries' interlibrary loan services, but seldom do interview respondents talk about conducting their research inside the library's physical building. One interviewee simply states,

So I work here [in my campus office]. I have an office at our home. And I work there. Sometimes I work at the Starbucks or the Barnes & Noble, just because that's what I did when I was in grad school.

It is recommended that the library examine investing in providing physical space in the library that is devoted to scholarly communication and research collaboration, e.g. makerspaces. Faculty members point up the importance of collaboration numerous times during interviews. As for example, one person states,

I love to collaborate. I have collaborated with a colleague in [a cross-discipline department]. She's now gone. I have collaborated with students and former students. I have collaborated with colleagues at other institutions. So those would be the key items. And I have publications with all of them.

Some faculty members in the study indicate their use of print books that are available within physical library space. However, most of the latter are involved in using rare or special collections that oftentimes they travel to access in locations outside the city of Springfield or even outside of the United States. Use of print sources is no longer viewed as optimal to many. For example, when one faculty member was asked if s/he browsed the stacks in the library, the person replies,

...I used to do it more in previous years. Now less and less, because we have electronic subscriptions and all these resources here... Yeah, and you save some time. It goes a lot faster.

In the study, often faculty researchers express a common inclination for use of the Internet to find and share resources, as well as to collaborate with their colleagues. ResearchGate is a prime resource. One faculty member's comment illustrates,

..I have LinkedIn account. I have ResearchGate, Academia.edu. Because when I went on the market three years ago, I had no presence, so folks didn't believe I was who I was. I created a LinkedIn account and Academia.edu account and ResearchGate...

**Are there viable means to provide MSU faculty access to scholarly literature that they are now frequently finding via alternative means such as via the Internet?**

It is recommended that the Libraries concentrate on making resources that are needed by faculty members more easily and quickly accessible. In some cases, faculty conduct research for literature, such as scholarly journal articles via the Internet, that are accessible through the campus library but are not readily found through the Libraries' website by faculty members. Evidence indicates that it is time to review and restructure the Libraries' website—a major space used by faculty, students, staff and others to find information.

Furthermore, in conjunction with making the Libraries' website more user friendly, efficient and effective it is recommended that librarians provide more education about legal, efficient, and effective use of the Internet.

Refer to other sections on content (discovery) and service for other recommendations that are related to those posited in this section.

**Recommendations:**

In summary, the recommendations that are made as a result of the investigation of “Space” are:

- Provide physical space in the Libraries that is devoted to scholarly communication and research collaboration
- Make resources that are needed by faculty members, which are in fact available via current means, more easily and quickly accessible; website redesign
- Provide more education about legal, efficient, and effective use of the Internet

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## II. [Preliminary Survey Results](#)

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## III. [Resources noted during MSU Faculty Interviews](#)

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## IV. [Interviewee Demographics](#)

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## V. Links to 2003, 2012, 2014 studies

### Spring 2003 Meyer Library Satisfaction Survey

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### Library Constituency Survey 2012

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### Library Survey Report - 2014

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## VI. Additional Information from Services Sub-group

**Document Search and Retrieval (discussed 83 times)** - This includes literature searching and self-alerting, specific document searching, traveling to retrieve documents at other academic institutions, relying upon colleagues at other institutions to retrieve needed documents MSU does not have but which the other institutions do have, and purchasing documents. There is still a great need for service to support document search and retrieval.

### Literature Searching and Alerting

**Comments:** The respondents prioritize staying current in their fields through reading specific journals, continuing a long-standing faculty tradition that arose in the era of print journals. Similarly, they engage as members of specific scholarly and professional associations critical to their work. Often they pay for these journal subscriptions and association membership out of their own personal or work funds. The respondents discussed how they are alerted to new developments in their fields. Sometimes they use Google's alerting service, but they seemed unaware that journals and even journal databases subscribed to by MSU Libraries often provide this service. Perhaps surprisingly, given the search tools available on the World Wide Web, the respondents discussed the importance and difficulty in finding data sets vital to their research. The respondents also expressed frustration that the "reference room," a place with extensive print reference tools, no longer exists as it did. They also expressed their desire to do large scale citation searching through powerful bibliometric databases like the Web of Science.

### *Journal Subscriptions and Association Memberships:*

**Interviewer:** How do you keep abreast of current developments in your field?

**Respondent 1:** I mean, a variety of ways, I would say. So I have a bunch of RSS feeds on journals that I regularly cite. So that's one way that I get the latest table of contents or new releases.

**Interviewer:** So do you have subscriptions? Or do you—

**Respondent 1:** Yeah, so through the journal provider.

**Interviewer:** Mm hmm. And are you buying that journal yourself, or seeking it elsewhere?

**Respondent 1:** Some of them, so I have personal subscriptions to the ones that are most, I would say either intimately connected to my field, like I just need to be reading to know what the

conversations in the field are, especially for my teaching and my leadership work. But honestly, most of the stuff that I'm citing is coming from journals that are much more specific. And I'm not subscribing to those, because they're just too cost-prohibitive.

**Interviewer:** And where do you get those?

**Respondent 1:** So then I'm mostly ILLing. And I now know what you all have and don't have, because I've done enough searching. With those RSS feeds, I sort of know, okay, I need to ILL this piece or whatever.

**Interviewer:** And are you reading them on the RSS reader, receiving the feed, rather than getting like an email notice?

**Respondent 2:** Yeah, I do have a couple from professional organizations. Right, yeah, yeah. So that's something that I always want to work on more. To tell you the truth, I think I do it more from the bibliographies in kind of like the most recent articles and books that I'm working with.

**Interviewer:** Do you have subscriptions to journals outside of what the library offers?

**Respondent 3:** Well, living in the digital age, I'm a member of the National Council [within my discipline]. And I've used startup funds with my position to pay for membership. So I have my membership dues and I also have subscriptions, digital subscriptions, to a few of the journals from the National Council of Teachers of Mathematics. So I receive email notifications when the new journals come out. So I'll look through the table of contents and have a sense, if something piques my interest, then I will go and that's how I choose what I read. But then oftentimes, it's really just I take whatever current literature I'm reading and then look at the references. I'll look at the references to see if there's something in there that I get curious about that I need to follow up on. Then I'll search for it. But then again, I do a lot with the online library databases, because of the massive power of searching.

**Interviewer:** When you research, what information sources do you use?

**Respondent 4:** Okay. I use publishing companies.

**Interviewer:** If you have trouble with some aspect of the research process, where do you go for help?

**Respondent 4:** I go to the library. I call or visit. Depending upon the problem, but I think regrading resources in literature review, I will talk to a reference librarian. So for example, I was describing that the biomechanics, there's a lot of sources I can get by myself. But when it gets outside of my area, like, for instance, dance pedagogy, I would not know where to look. So that's where I actually will consult a living person with training and experience and education and that sort of thing

### ***Alerting to New Sources:***

**Respondent:** I think all of us here are pretty good about monitoring what I would call general publication media on [our field]. I use, through Google you can go through and do Google alerts.

**Interviewer:** Oh, great. Out of curiosity, do you use the alert service for any journals? The same concept?

**Respondent:** No. I don't even know how to do that through journals. So, like I said, I just know how to do it through Google. And it typically, it will push back things like *Washington Post*, *New York Times*, and those types of—but it will actually, I have one where I have it do alert just

on Missouri .... And when I do that, I get lots of, even small town newspapers, which is really interesting to me, too. I got one the other day that was from the *Houston Herald* in Houston, Missouri. And the *West Plains Daily Quill*, and the *Joplin Globe*. And so on that one, I will receive alerts from news media that's in Missouri, too.

#### ***Access to Data:***

**Respondent 1:** The ironic thing is, the things that would seem the simplest, like just, things that are in the cannon of the field, so to speak, like this is a certain type of trend that we've observed in whatever. And when you go to find the evidence, the data that was used to make those claims, it's unbelievable sometimes how difficult it is to find it.

**Respondent 1:** And a lot of it is because it turns out that a lot of things that are solemnly held by many fields, and this is, I mean, there's a famous case in medicine. I mean, there are famous cases in almost every field, that if you actually start going back and looking at it, it comes down to one paper that was where the data were published maybe 70 or 80 years ago. And what's happened is that it has actually never been repeated. It has just been cited over and over again. So you know, if somebody, let's say 15 years down the line cited in a textbook, which was a bestselling textbook, the next thing you know, everybody goes back and cites the textbook.

**Respondent 2:** I would probably say data. I use a lot of chemical analyses. And a lot of that data is published in journal articles. Sometimes it can be difficult to access that data out of the journal article, especially if we don't have access to that journal for supplementary information. A lot of times these data sets are published as supplementary files that are associated with an article. They're not actually in the article itself. So if I have to interlibrary loan an article, I don't typically get the data that's associated with that article. I just get the actual article itself.

**Respondent 2:** Probably the data. The most difficult is most commonly what I use. Because there's no point in going into an area, and working in an area, if it's already been done. Or, if we're doing something new for that area, having that background data helps us move forward without spending a lot of extra money to redo those analyses, to redo the same work that's already been done. So having access to that data is by far the most critical thing that I need access to, and that I use on the most regular basis in my research.

**Respondent 2:** Yeah. Yeah. Yeah. The secondary stuff is usually pretty easy to come by. It's the primary materials.

**Respondent 3:** I spent, like three summers ago, I spent like six weeks almost trying to understand Mexican tax data. And I failed. (laughter) And it's not that I didn't understand, it's just that you just can't, the data aren't there to have like a comprehensive vision of their tax revenues going back before, basically, 1990. With changes in methodology, not including certain types of revenue, and so I used some data that's collected by somebody else. But I don't have too much confidence in it. I'm not sure what's going on there. But I mean the data, if there's anything that I've wracked my brain over, it's the data.

#### ***Reference Room:***

**Respondent:** --that the reference room in Meyer Library is gone. And the book that's in a collection, it's published by Gale Research, the *Dictionary of Literary Biography*, you know,

there are several volumes on German literature. There's one specifically on 19<sup>th</sup> century German writers. And I distinctly remember I have notes to an article. And so the books are gone, and working with the librarian at the reference desk, I discovered that only some of the most high frequency used ones were saved. Although I have no idea how you know in a reference room what's high-use, because they don't get checked out. So we went and actually looked in the stacks. And I mean, from what I remember, it was all English and British literature. That's just assumed to be high-frequency. And I'm sure it is. But then I was unable to find in the MLA the exact reference to this piece that I have some notes, and I always thought okay, when I'm ready to really publish this article, I need to go back and photocopy this thing and get the exact reference. But I had my notes, I had I don't know, maybe a page number. So you could call that sloppy research that I should have done that in the first place, maybe, looked it up, pages, everything, so that I could then order it on ILL. But I know that this piece exists. And I had warning that they got rid of this set that to me is just like one of the most basic reference room sources. So of course the librarian also checked immediately if it was available on MOBIUS for loan. Well no, it's not, because it's a reference work. Or if it was digitalized. If the library replaced it with the digital, and that was not either. So at the time, like then the semester started. I never got back to it. And I know all I have to do is like visit a real reference room. But you know, it's one of the frustrations to like an old book person that these gaps show up. And so I would say right now, that that is the most—

### ***Bibliometric:***

**Respondent:** I think, and this is the thing that when we had faculty orientation, I think the gentleman who spoke on the library's behalf may have the director of the library or whatever, I can't quite remember who it was. But I even remember asking him, at that point we had talked about Web of Science. But you know, if I had my dream about what the library could get, and I know it's a ridiculously large expense, but it would be Web of Science more than anything else. I mean, you can definitely get around it. But it's one of those, what I could do probably in an hour takes me three or four.

Things that I use a lot of are I use the, I think it's EBSCO database, Web of Science, which I don't think we have here. And I use the ProQuest dissertation database, which I don't think we have, either.

And the journal websites through the library. Because like Wiley, all the Wiley journals you'd have to pay if we didn't have library access through them. And the same this is true, like the American Chemical Society journals. Although I think – no, even a membership won't get you in. So those two things I'm like completely dependent on the library.

### **Relying on Colleagues**

**Comments:** This section and the next two discuss how the respondents do “work arounds” to get essential research resources that MSU does not provide through relying on colleagues, traveling to retrieve documents, and buying resources themselves. Respondents expressed their reliance on colleagues at other universities to obtain vital research sources that MSU does not provide.

**Respondent 1:** So I have friends who are kind enough to have their graduate assistants run searches on this for me and send them to me." "Well, we're quite a big enough university. We're twice as big as the university that I was at that had this. It's just, it has nothing to do with bigness. It has to do with where we're deciding to put our money. Is it the football team or is it the library?

**Interviewer:** Critical to your research, once again. Are there particular sources that are, I guess—

**Respondent 1:** Critical for what?

**Interviewer:** This is again, not necessarily, the follow-up question, too, this is what information specifically related to your field do you have the most trouble. So this is—nah, let me think here. Which information sources would be critical, meaning that you couldn't do your research without.

**Respondent 1:** Well let me just put in a plea once again here for something called the TLG. This is critical for my research. I've been asking for it for 11 years. We don't have it. When I need to use this, I need to contact my friends at other better universities that have this research, that have this thing. This is, in order to get it right—I'm not sure if I've got the spelling right, so don't write it down yet.

**Interviewer:** Oh, I got you. Google is wonderful for correcting us.

**Respondent 1:** Yeah. TLG home.

**Interviewer:** Linguae

**Respondent 1:** Grecce. Thesaurus Linguae Graecae. And, there it is. A digital library of Greek literature. What this has, this has been in existence now for about 15 years. at least. Subscription is required. Oh, a TLG cannon open access, abridged TLG. Well, abridge TLG isn't going to help me a whole lot.

**Interviewer:** Right.

**Respondent 1:** What this is, is has digitized most literary texts written in Greek from Homer to the fall of Byzantium in 1453. And what I usually need this for, people in my field to a TLG search to see how a word in Greek, when it was first used in context, how is it used?

**Interviewer:** Right, right.

**Respondent 1:** And I need this all the time. And I don't have it. And it's just crippling. Especially when I'm working with translation and stuff, as I have been for the last year and a half, it's really, really hard. So this is a critical piece that I don't have.

**Interviewer:** Yeah. It sounds like. Exactly. Part of the cog where the whole does not work without it.

**Respondent 1:** Yeah. So I have friends who are kind enough to have their graduate assistants run searches on this for me and send them to me.

**Interviewer:** Right. That's a common theme with some of the professors around here. (laughs)

**Respondent 1:** That they have to call their colleagues in other places to get the job done.

**Interviewer:** Yeah. Because we're not a big enough university to subscribe.

**Respondent 1:** Well, we're quite a big enough university. We're twice as big as the university that I was at that had this.

**Interviewer:** That had it. Wow.

**Respondent 1:** It's just, it has nothing to do with bigness. It has to do with where we're deciding to put our money. Is it the football team or is it the library? (laughter)

**Interviewer:** Indeed. I agree.

**Respondent 1:** I mean, there's a couple million going to the football team, right?

**Respondent 2:** You know, the popular periodicals from the 19<sup>th</sup> century, the newspapers and magazines. And this actually has to do with Meyer's holdings. This has to do with a financial thing. So, and this came up for me at the turn of the century. I mean, this was the case in 2000,

when the internet and digitization first started appearing. A lot of university libraries have American periodical series digitized. We do not. We still have the microfilm and microfiche. So a lot of people in my field that use periodicals have no problem finding 19<sup>th</sup> century digitized imprints. Whatever. I will sometimes contact a friend of mine in another institution and say, “Would you download a pdf for me of this,” because I know it’s there. Like I’ll know that the story is in *Godey’s Ladies Book*, and I’ll know it’s in 1849. But if I’m going to get it, I’ve got to go over there, get microfilm, roll through. And so a friend of mine in another institution can just go click, click, click.

### **Traveling to Retrieve Sources**

**Comment:** Some respondents travel from their own personal or professional resources to travel to retrieve resources that are difficult to get.

**Interviewer:** Right, right.

**Respondent:** Well, I could. I haven’t been on it in a long time. I usually do it when I’m, I don’t know. It’s funny, but I tend to do it only when I’m going to Germany, because the books are all there, right?

**Interviewer:** Right.

**Respondent:** So I have to need something, absolutely need something, and would be willing to go to the expense of ordering a scanned copy, in order to—so usually I do it if I’m going to Germany, right? So that I can be there. And in the meantime, you can write to any German library and get a scanned copy, but it’s pretty expensive. So I tend to do it only when I get a research grant.

**Interviewer:** Right.

**Respondent:** Right? Which, again, I haven’t done for a while. I had a sabbatical, so that was great. But it’s been a while since I did—but in the past, when I was, I guess, like for tenure, working for promotion, full professor, and was like really just sort of pushing harder on the research, prioritizing that more, I really needed, because of that connection to Germany. And even when scans came into being, it’s still just cheaper to get them there, for one thing. Because then you don’t pay postage.

**Interviewer:** Exactly.

**Respondent:** And get them on a disc or whatever. And frankly, it becomes quite expensive very quickly. And so that’s why, I don’t usually pay for them myself. So I don’t use them all the time. And I have had so many research grants that I kind of had a backlog of texts that I got either in the old days, before scans, when I photocopied them myself, like a decade ago, or things that I do have on scans that I haven’t even read them all. I haven’t published about them all, right? So that’s part of it, right? That I’m still doing the research and writing about a number of sources that I’ve gotten. But yeah, sure, I can show it to you.

**Respondent:** Most of my research is during the summer. I go to Germany to do it. And that’s because the library doesn’t is missing most of the basic resources that I need. Um for example, I have been trying to get for years Luther’s very basic resource Respondent Luther’s collected works the all hundred and whatever volumes in German and the library is understandably unwilling to order them because uh I would be the only one who would read them. Uh but the online resources it’s all available online but the online resource costs like ten thousand dollars to purchase and then a thousand dollars a year to maintain access to so it’s understandable. Um I have actually started um started buying the hard copies bit by bit by um by hitting up my fellow faculty members for library money. We each get about seven hundred dollars a year and um at

strategic moments I hit them up and say OK you want to give me your money? or you don't have to order books and I'll buy volumes of Luther's books with that. Yeah. So I'm starting with a I've gotten Luther's Table Talk and I've gotten Luther's letters and my next target is going to be um uh Luther's translation of the bible. Um the various editions that's in six volumes I think uh and then I'm going to tackle uh work work with somebody at the library. I can't remember who it was I was working with acquisitions person to get in touch with the publisher and then try to get me the the remainder of the set bit by bit 'cause there's no way I can raise five thousand dollars to buy the whole set at once. I would have to do it in stages. So that's a basic resource.

### **Purchasing Documents**

**Comment:** Respondents sometimes buy essential research documents out of their own resources.

**Interviewer:** So on the Yale ones, it sounds like, were you kind of commissioning them to make copies for you? It wasn't something they already had like thumbnails—

**Respondent 1:** Right. Their special collections had to pull the letters from their manuscript archives. And they created the pictures for me. And it wasn't a significant amount. I think it was 25 dollars. Or it might have been 35 dollars or something like that.

**Respondent 1:** So with Yale, for example, I wasn't going to be at the Yale Library. And I communicated with them how many pages. They said it's 50 letters. I said, well about how many pages? How much material? And they gave me an estimate. They said it would be approximately, you know, it might have been 35 dollars. It might have been 65 dollars. But I know it was less than 100 dollars. It seemed very reasonable, if I compared it to traveling.

**Respondent 1:** Well, what I was actually looking at were, I can't remember if they were pdfs or jpegs or what. But I was looking at images that I actually purchased, I was looking at transcriptions of images that I purchased from Yale that they sent to me on a CD. But I found out that they were there by looking at, I can't remember if I started with the Meyer World Cat, or if I, I can't remember how I discovered that they had these letters at Yale. But it was through some online service, probably through Meyer, probably through the OCLC selecting manuscripts and a name. I don't know how I came across the reference. But anyway, then I went to the Yale manuscript catalog. Determined that the letters were, in fact, there. And I wrote to them and I actually purchased out of pocket, I purchased the images. Which they sent to me by mail on a CD.

**Respondent 1:** I purchased a picture earlier or last week, I purchased a picture from the University of Vermont Special collections, which I actually downloaded through an online site that they had me link to. But I found out about that picture through using University of Vermont's catalog description? No. I think I came across that by some kind of online, you know, some kind of Googling that I came across a reference to the picture. And so I ordered it through their special collections. Yeah. So I do a variety of things.

**Respondent 2:** So anyway, trying to find those to write these two articles, because I basically am writing two book chapters that got accepted. And so I was using them. And so I couldn't find them. So I ended up having to buy them again. (laughter)

**Interviewer:** Got to stay healthy. So we talked about what type of information you have the most difficulty finding. What type of information specifically related to your field is the easiest to find? What kind of information is easiest to find?



**Respondent 2:** Well, like I said, paying for some of those memberships makes it easy. In an ideal world, I wish I didn't have to pay for anything. I wish we had the resources available. I kind of feel like since part of my job is, I don't feel like I should have to pay for it. But that's the perfect world. The real situation is for me to be successful and do what I have to do, because I couldn't go and say, "Hey, I didn't do this because you guys didn't pay for it."

**Interviewer:** Sure.

**Respondent 2:** I don't think they would give me tenure. (laughter)

**Interviewer:** Yeah.

**Respondent 2:** So it's easy to find a lot of things with the membership to ASCD. That's one reason I've maintained the membership there through *Teachers College Record* and through AERA. Because through those three, I can get access to a lot of things on leadership. Or it will guide me in a direction if there's something I need to go and look for, to search through the library database or whatnot. And I've also found that I use, because of the limitations of the libraries, I end up using a lot more books than I used to. So that's kind of one way that I do that. Because it helps, particularly those books that kind of give you historical perspective. So you can get a lot of different citations and things out of something like that. And then using dissertations. So that's how I kind of address it, since I don't have unlimited resources, obviously. So that has made it easier to at least find those things around leadership, the achievement gap, things of that nature. There's so much out there on those, particularly achievement gap, that you can find research pieces.

**Interviewer:** Okay, great. What kind of information specifically related to your field do you have the most trouble or difficulty in finding? What kind of information's difficult to find?

**Respondent 3:** Sorry, I'm looking at a text from my wife.

**Interviewer:** Oh, yeah, go ahead.

**Respondent 3:** Because she's home sick.

**Interviewer:** Oh, no.

**Respondent 3:** Typically, the hardest, other than resources around deficit thinking, which were the hardest to find, whether it be books or journal articles, and then within that, some stuff on eugenics, since that's part of deficit thinking, those things were hard to find. Now I'd say some of the harder things to find are some of the leadership resources, where I'm looking for something like in Harvard Business Review or something, it's hard to get access to that stuff without just buying it myself.

**Respondent 3:** Like an example, recently I was looking for two articles on, I mentioned football. So the one football organization that I use a lot is the New England Patriots. Because it just so happened an MIT economist is from Boston, that's his favorite team. So he wrote two leadership books on the New England Patriots, about how they flipped their culture when Bill Belichick was hired. So I used his two books, and a couple of things they reference were a couple of articles that were in Harvard Business Review about Belichick and how he evolved when he was the head coach of Cleveland, and unsuccessful to becoming, since I was looking and I was interested in that, kind of like how a lot of young superintendents are not successful for a lot of the same reasons he was not. And so I was trying to find those two articles. And I looked everywhere. For months I was trying to find them. And I knew they existed, because I had used them in my dissertation. But I you know, I since had a computer crash, and the jump drive that had all my dissertation research broke. So there's a bunch of stuff that I had previously had that I could not, so I basically had to buy those two because I was up against the deadline and I

couldn't wait for a university to get them for me. Because I was basically kind of doing the edits on my dissertation, so I could make graduation. So those were two things I ended up buying myself.

**Document Management (discussed 43 times)** - This includes storing, organizing, and describing mostly digital documents. It also includes managing citations either manually or through citation management software, e.g. Endnote. Faculty consistently described their document and citation management situations as a "mess," or something similar, and some expressed a desire for campus standards and leadership in this, especially in citation management.

### **Citation Management**

**Comments:** Respondents frequently mentioned their frustrations with managing citations to documents essential to their research. They often simply keep citations in Word documents and harvest them as needed. They want but do not have time to improve their citation management, but they are supportive of the University providing citation management software.

**Respondent 1:** And I'll be honest with you. Just in this department, there's probably, oh, there's probably 10 or 15 of us that are tenure track down here. And I don't know that two of us that use the same. Well, no, I think there are a couple of them that do use End Note. But there's no— (laughs)

And you know, the other thing I think is frustrating about that, too, is in our department---there are tenure track faculty...And all of us use different ones. And if we were all on the same one, I think we would be able to share that with our students that we're working with, too, in that when they're in my class, I'm going through and saying, "This is what I use, I use Ref Me, and this is what I use." But then they have Dr. [X]. And it's okay, she uses EndNote. So now we're going through EndNote assistance. So if we had some commonality, it might get the students to also be able to—because I'm sure the same challenges, because we're trying to get more opportunities for students to be able to work collaboratively together. And if they're unable to share those things like bibliography libraries, it's a challenge on that.

**Respondent 1:** Yeah, typically—well, no. I use ref me, r-e-f m-e, which I think it comes out of England. But it's the, to be candid with you, and I'm a former student here, back in the old days when I was here, I used to use EndNote quite exclusively to collect my citations. But it has gotten so complex and so overwhelming that EndNote is sort of above my skill level now. It's just really above what I need. And so I use Ref Me. And I don't know if that's something that you're familiar with. But it's basically an online database that allows you to collect citations. And many times, another thing that's very handy about it is if you're searching for a citation and you want to type it in manually, it allows you to search for it. And if it finds the match, then you can automatically add it to your bibliography. And then it will allow you to insert, too, into Word, which is what the document or the program that I would use. But like I said, the Ref Me app or website or whatever is what I use.

Although I must admit, I would love the university, and maybe they do, I just have never heard about it, because we all use sort of a different method there. I wish there was one that the university would adopt and say this is going to be our reference management bibliography creation software so that you could have training, but also that you could share with other colleagues that are working on similar projects.

**Interviewer:** What do you think would be your openness to, if the university did have one?

**Respondent 2:** If the university had one and they were willing to train people, I would be thrilled. It's just so critical. I don't know how my colleagues do it, I don't, if you don't have one. Yeah. Even simple stuff like Adobe Acrobat, I know that institutionally there's been some problems with the cost of the Adobe stuff. But so much of what I have done in the past with research was connected to Adobe Acrobat, even in terms of—

**Interviewer:** The pro version?

**Respondent 2:** Yeah, the pro version. In terms of being able to annotate pdfs of text, or in terms of being able to combine pdfs. It's minor, but it's huge when it comes to that's part of the research work.

**Respondent 2:** Well it's just if it's electronic, oftentimes when you get to the point where you're writing, you want to refer back to the original. And it is so nice, and especially, I mentioned earlier that software that I used to use and I loved, called Read Cube, that I don't use anymore, what I loved about it is allowed me to load up the pdfs, and I was able to make notes on the pdfs and save them. And it also served as my bibliography creation software. And it would even do insertions in Word, too. And I loved it because when you get to the point where you're finally writing and you're looking at things and you want to go back and refer to it, going back to a paper version is just really nice to be able to go through, and even search specific terms and things like that. So that's where it's just preferable. I mean, I don't have anything against paper, and paper was my—

**Respondent 3:** You know, I'm not sure if I'd say I don't have them. But I've thought about using, there's some database, some bibliographic programs that allow you to just go compiling sources and then just download them into the bibliography, instead of having to compile a bibliography for every single paper [unclear] that you write. And I've experimented with them, but I haven't really adopted one, because I haven't found one that really seemed very useful. I mean, my old GA had started to use one. But I didn't get the sense that he really ever learned how to use it well. And I certainly didn't, either.

**Interviewer:** So right now do you have just all your sources saved in different—

**Respondent 4:** I just have—

**Interviewer:** Saved in different folders and what not?

**Respondent 4:** In different papers. I'll take, when I write a paper or something, I pull, I have my students like pull sources from older papers, just cut and paste. And then the others they just have to write in and stuff.

**Interviewer:** Right.

**Respondent 5:** So I haven't. But in theory it would be useful to have one that was additive, so all you had to do when you're compiling a bibliography would be to click somewhere and have them download.

**Interviewer:** Right. And it automatically shows up in your Word or formatted in the paper, just boom, right there for you.

**Respondent 5:** Yeah. Exactly. And you choose a different format. But I don't, I haven't done that yet.

**Interviewer:** Right, right, right. You're the second person who's said something similar to that. (laughs)

**Respondent 6:** Just what's out there. Maybe there's a, I'm sure there is probably some kind of software that would help me keep things better organized, all my electronic files and that kind of stuff. But I have a very crude system. I can find what I need to find. It may take me a minute or two and I go into my files. But I don't really struggle with using anything again, but I'm certain that there are time-saving software out there that might be helpful. But whether I'm right or not, it always feels like the startup time is not worth it. You know, learning a new software or something.

**Interviewer:** So do you just save things in one big file, generally?

**Respondent 7:** Well, okay, there is, what do they call it, EndNote or something like that? There's something called EndNote, I think it's called EndNote, which is used by a lot of, by some people. And there's another one called Papers, just simply Papers, may have a "z" at the end, I don't know. Papers, that one of the people in the department really swears by and says oh, it's way better than EndNote. And the people that use EndNote are things like well, that's what I used as a graduate student, so I still use it. So they don't really have any, other than their familiarity with it.

**Respondent 7:** So there's that. And I guess what I was saying with the bibliography database is I wish somebody somewhere might come up with a standard for MSU or something, just so that if I'm going to spend time getting into it, it's there, it's available, there's a site license, and I know that there will be some support to help with it. And it's just something that I know if I get used to, I'm not going to want to in another year oh, switch over to this other thing that somebody else thinks is so much greater. Because I won't care. Because it's sort of like, I don't really like Microsoft, but that's what we've got, and so I get used to it.

### **Document Management**

**Comment:** Respondents consistently said that that the documents essential for their research are disorganized and/or held in various scattered and potentially unreliable places like thumb or external hard drives, personal digital devices, and various places in the Cloud.

**Respondent 1:** "That is on a jump drive. It's on my computer here, I think. Is it on? No, It's not on this one. Because my computer recently crashed. I just got a new computer so it's on my computer at home. It's on my Batman and Wonder Woman jump driver. So I've got them in four different places."

**Interviewer:** Where do you save or keep all your research?

**Respondent 1:** Well, in my computer. And I need to, I need to backup once in a while.

**Interviewer:** So if you do, is it just on the little, the flash drives.

**Respondent 1:** No, I have an external drive.

**Interviewer:** Oh, you have an external.

**Respondent 1:** Portable external drive. But I haven't backed up in a while. And also I use, I like the cloud. The One Nine, or what's it called?

**Interviewer:** The OneDrive for the new 365, whatever.

**Respondent 1:** Yeah. And I keep some things that I send with that to my colleagues in Mexico in Dropbox.

**Interviewer:** Right. Final question here, where do you save or keep all your research?

**Respondent 2:** Everywhere. (laughter)

**Interviewer:** Everywhere?

**Respondent 2:** I really wish I were more systematic about this. So I've got my personal laptop, which has a ton of stuff. And I try to be good about backing that up.

**Interviewer:** Exactly.

**Respondent 3:** Yeah, I need to be better, actually. Like really crucial stuff I'll put on Dropbox. I'll email it to myself and archive it, because Gmail has unlimited storage. I've got a bunch of stuff here. And then I do have, because I'm simple, I've got a bunch of paper archives. So just like file folders full of—

**Respondent 3:** It's on the hard drive, yeah. I haven't made use out of cloud space because I do have my laptop, so that is my device. I keep that with me. I have a backpack. So I bring it with me to work every day, take it home every day. So I keep them stored locally on the computer. I haven't stored them in a cloud space, although I have several options for that. I have made use out of one drive here on campus. Particularly because we have a terabyte of space, which is phenomenal. So I've actually, I've recorded myself teaching and I just upload them to the One Drive so I have access to those wherever. But if I've got a terabyte of space, I'm going to use some of that. That's great.

**Respondent 3:** But in terms of critical documents, so like if I'm working on a manuscript, and I save a copy of the manuscript for today, I put a date on it. And then I'll upload it to either Google Docs or One Drive or whatever. A lot of my stuff I do do on Google because it's free and it's my personal space. But then again, sometimes I'll put multiple copies. So if Google were to go down, I've got it on One Drive. If One Drive goes down, I've got it on Google. So even with cloud space, we have to be careful and not just trust that the cloud's going to take care of everything for us.

**Respondent 4:** Obviously I print some. But I don't print nearly as much as I used to.

**Interviewer:** What do you do for long-term storage?

**Respondent 4:** That's a good question. My stuff is a mess. It's an absolute mess. I do use Dropbox. I have not yet paid for a subscription. So I don't have all my materials on Dropbox. I have what I worked on most recently. (laughs) And by most recent, maybe, I don't know, maybe two or three years back. I have some materials that are older backed up to the Missouri State server space. I have materials backed up on hard drives, and on external hard drives.

**Interviewer:** So how many places do you generally keep a copy?

**Respondent 4:** Too many. Oh, I probably try to make sure that I have two places. So on Dropbox and then either on my office PC, I mean, I try to use my office PC as the main one.

**Interviewer:** As in the hard drive on your computer?

**Interviewer:** (laughs) Yeah. How about your paper?

**Respondent 4:** Oh, my paper stuff is a mess! We moved to this building from Pummill in 2009. And when we made that move, I had been here through two sabbaticals. I was starting my fifteenth year. And I purged a lot of paper. And that's been seven years ago. And I'm ready to purge paper again. And part of it is just where I am in my life. Just thinking, I don't want those papers on teaching composition anymore, 110. I don't have any plans to teach it again. And if I do, I'm not going to use that stuff.

**Respondent 5:** Yeah. Because at home, we have outdated stuff and we change stuff. But I do have a couple of, like an external hard drive at home that I've put things from an old laptop on.

You know, I've used iCloud for a few things. And I also have a Google Drive. But it's like someone somewhere else that I'm working with says, "I'm going to put this on Google Drive. And our whole group is going to use Google Drive. So I have a Google Drive account. And I have some things on Google Drive. And I haven't transferred everything from Google Drive to Dropbox. I also thought oh, then I can have more space without paying. But then I've got to remember what's on what space.

**Interviewer:** Okay. And then I have one question that's not on here, but I've added. Where do you store your research once it's completed?

**Respondent 6:** Okay. Yeah. So I have a couple of different storage methods. So we actually have physical samples we have to store. And I have basically a closet that I've categorized all these, the thin sections, the rock samples. We have them all stored in an organized fashion over in my research space. Ones that we're currently working on are actually over there. Other ones are currently there now, but they're going to be moved to a long-term storage site that's downtown in one of the spaces that the college has acquired for that type of thing. Data, papers, archiving, journal articles that I've downloaded or my personal articles are all done on external hard drives. So when I'm finished with a project, I have fold on, I have an external hard drive that's dedicated to just manuscript articles that are download that's all categorized and organized as best as possible in an external hard drive. In my lab, I've got an external hard drive that's dedicated to just backing up and storing photographs off of the microscope, geochemical data, things like that that's data-related. And then I've got another hard drive that's for figures and things I drafted that take up space on a hard drive. For active projects, I use the OneDrive, the Microsoft OneDrive, the business OneDrive.

**Respondent 6:** Right. And I have, I mean, I have on my, now on my research, sort of also relevant to here, and maybe not that particular question, that little computer that you see sitting over here in the corner is a server that is on the network. It is not a computer that I use for computing. All it has in it is basically a hard drive. And it just holds information. And that's for my research group. And so it's on the network, it's got an address. I've got it secured so that only certain groups can get into it. One of them is my research group, and I have ability to get into the [CAMS?] system here and sign people up for it. So then they can get to it. And on that is where I keep all of the journal articles that I've downloaded. So now there are hundreds and hundreds and hundreds of these things that are relevant to various projects that we've worked on, and just some general information as well.

**Respondent 6:** So I haven't really gotten into it. Partly because I haven't figured it out enough. Now one thing I've been trying to do for my own research group, which is also related to this, is electronic notebooks. And I looked into a lot of electronic notebook software, lots of which costs a bunch of money. And not only does it cost a bunch of money, it's a subscription, so you have to pay a bunch of money every year. Maybe not quite so much money, but money every year. And I don't think that's sustainable. So I did a little reading, and after reading around, I decided that this thing that comes with the Microsoft Office called OneNote, or is that what it's called? This thing.

**Interviewer:** Okay. Yeah. Excellent.

**Respondent 6:** So there's that. I guess to a certain extent, what would also be helpful is if somebody on campus wanted to look around. I don't know how widespread this would be for electronic notebooks. Things that, you know, the concept there is that students will keep their

notes in a notebook that maybe they will have a tablet or something. And so they can write them in there.

**Interviewer:** So this would be for students, like—

**Respondent 6:** Well, it would be for research, it would be for a research group.

**Interviewer:** Okay. So to have enough to, okay, yes.

**Interviewer:** Okay. So to have enough to, okay, yes: So instead of giving them a notebook and say here, keep your notes in this notebook, they actually keep the notes online so that anytime I want to, I can look at their notebook and I can feedback and say, you're not keeping enough notes, or whatever. Because what happens is, I'll give somebody a notebook. And then at the end of the semester I'll get it back and they've taken like two pages of notes, even though they've done a whole project. So where's all the stuff?

**Interviewer:** Right. This way you can kind of check [unclear] process a lot easier and say hey—

**Respondent 6:** Students can then look at each other's notebooks. And so if they're looking and somebody, if they're working on projects that are similar, one can kind of see what other people are doing to see if they're having the same problems or whatever. And I think that that would be a great concept. I'm trying to do that with OneNote. I don't know how well that's going to work. I mean, it looks like it might.

**Interviewer:** But you'd like to have the sort of portable—

**Respondent 6:** No, no, no. No.

**Interviewer:** Oh, just an electronic—something online that everybody can access.

**Respondent 6:** Right. Everybody can access. And I don't know, that would be less important to me at the moment, because I've got OneNote, and I think OneNote will work okay. It's just that I haven't used it enough to be very good with it. It seems kind of tedious to set up. But once it's set up, it seems, I mean for my notebook, I can put stuff in there. That's why I have so many tabs in my notebook, because I keep thinking, this is something that I want to have at my fingertips. And so I'm going to put it in my notebook, because I can just go click and it will be there. So I'm still kind of playing around with that. But if there was a really good package that MSU would like to provide again as a standardized, site license, whatever, even if it's not paid for, I would be happy to have some kind of, you know.

**Respondent 7:** Yeah, I use flash drive. I also email files to myself in order to preserve them that way. It's a good way to back things up, too. Every time I get into a project and I get scared that what would happen if I had a crash right now, I email something to myself, just so it will be there in the ether space somewhere.

**Respondent 7:** On my laptop and then when I'm specifically working on something I always back it up on a memory stick. I haven't yet learned how to back it up to a the cloud but I'm hoping I mean I don't want to I I just read all these terrible things about how information gets stolen and stuff. So I'm reluctant to backup just on whatever cloud is out there. Um I'm hoping Jay Jenkins here our technician will teach me when I get my new laptop how I access Missouri State University's um data whatever it is server. That's where probably. So that's the answer to your question that I would want to store stuff on the MSU server yeah.

**Interviewer:** Right.

**Interviewer:** So, do you, related to storage, do you have any long-term storage? You put some in the pdf, or you just—

**Respondent 8:** Yeah, I do. Typically what I do, when I finally get to the point where I'm going to publish, I will go back and make sure that I've saved all of those electronic ones. So, for example, just yesterday, here on my OERI project here, I can see I've got 27 citations in the bibliography. And I did save all 27 (laughs) that were electronic into a file folder named OERI. Okay. But that's just sort of a separate thing just down the road if that gets accepted for publication, I want to make sure I've got it and I don't have to go back and have the potential problem of having a link that is no longer live or active and we can download it. So I just did that yesterday. In fact, I saved all of those OERI links.

We're still right now in the process on the four-day school week, and you can see I've got 48 sources for that one. And we're not to the point where we've even submitted for publication. But when we finally do get to the point where we are, I will do that at that point, is that when we're finally submitting to journals for hopeful acceptance, I will go through and download the electronic versions and keep them in a file folder.

**Interviewer:** And where is that file folder? On a flash drive, or--

**Respondent 9:** It's on my desktop here.

**Interviewer:** It's on your desktop?

**Respondent 9:** Yeah, it's on my desktop. And I don't know if I can show you. But it's over here. I don't save it on the cloud or anything like that.

**Interviewer:** Do you back it up anywhere on—

**Respondent 9:** Yes, I've got a backup drive on the back of my Macintosh that's attached here. It backs it up nightly. And also once an hour. Every hour—

**Interviewer:** Oh, nice.

**Respondent 9:** Macs automatically will push to an external hard drive hourly. And then it will do a complete backup every 24 hours. So, yeah, it backs it up, too.

**Interviewer:** That's good. So if your hard drive ever fails, you're not out of luck.

**Respondent 9:** Yeah. Yeah. Unless it was in that hour. (laughs) But I've never had it fail yet. But I just mentioned to you earlier, they had to rebuild my desktop whenever we switched to the new Outlook. For some reason, it didn't like my Mac. And they had to rebuild the whole thing. So they did have to, so, but it was great, because it was all backed up and they had no problem with that. So I've never lost any data. So I've got nothing to complain about. (laughs) And I'm not opposed. I mean, I love Google Drive. I use Google Drive quite a bit. I use Dropbox quite a bit. I tried, just for my own management system, I try to keep personal things on Google Drive, and I try to keep university things on Dropbox. That's just so it keeps me separate. So at that same time that I would go through and save that, I would probably save my research, also, to Dropbox, just because that's what I'm familiar with. I know that they got that on this new version of whatever we're on now on—

**Respondent 10:** That is on a jump drive. It's on my computer here, I think. Is it on? No, It's not on this one. Because my computer recently crashed. I just got a new computer so it's on my computer at home. It's on my Batman and Wonder Woman jump driver. So I've got them in four different places."

**Interviewer:** Where do you save or keep all your research?

**Respondent 10:** Well, in my computer. And I need to, I need to backup once in a while.

**Interviewer:** So if you do, is it just on the little, the flash drives.

**Respondent 10:** No, I have an external drive.



**Interviewer:** Oh, you have an external.

**Respondent 10:** Portable external drive. But I haven't backed up in a while. And also I use, I like the cloud. The One Nine, or what's it called?

**Interviewer:** The OneDrive for the new 365, whatever.

**Research Support (discussed 29 times)** - This includes additional MSU support for grant seeking and writing, support for scholarly and teaching research, and research consultations. Faculty indicated a need for a service and/or place to support talking about research. Several said they feel required to do research but not supported by the university culture as they do so.

**Comment:** Respondents expressed frustration and disappointment with MSU's prioritization and culture with regard to research, the MSU Libraries' support of research, access to potential research assistance at other universities, the MSU spaces available to do research, and their own success in getting research funding.

### **Research Culture and Prioritization**

**Respondent:** And I don't know how many people are doing that kind of work to know like on an institutional level whether, so part of the issue is, there isn't so much a culture here of even talking about how people do their research. Whereas that was my experience at [my previous university], obviously. I mean, there were people talking about their own work, and talking about their methods. And you know, that doesn't exist here because that's not so much the prioritization. And so, as a result, it makes it challenging to talk to folks about those things.

**Interviewer:** And so when you talk about people not talking about it, do you mean like methods and learning from each other how to do things, or—

**Respondent:** I think there's not a culture of research. (laughs) At least, I will say, I can't speak for, obviously, all departments or other, so there's not a culture of research...And so people are talking about getting logistics done; they aren't talking about their scholarship. And so that's the culture. And so it's sort of like we're going to talk about how we're going to draft a rubric for the work that we're going to do. We're not going to talk about like, "Tell me about what your inquiry is." Yeah.

**Interviewer:** Okay. Yeah.

**Respondent:** So to me, part of this is a byproduct of a kind of institutional culture around the role of research. So, I don't know.

**Interviewer:** Yeah, just what's emphasized.

**Respondent:** Yeah, exactly. Yeah.

**Respondent:** But I also don't have a sense, you know, I don't have a sense that my colleagues are doing the same kind of work. And so that also makes it, so I don't really use colleagues to find support for that sort of thing.

**Interviewer:** Right. Right. Are there any other sources of help that you go to?

**Respondent:** No.

**Interviewer:** No? Okay. All right. No problem. (laughs) Are there aspects of the research process that are more troubling than others? Any troubling aspects of the research process that you've found difficult—

**Respondent:** I think it's the access and time issue for me, yeah. I mean, I'll just be honest and say that MSU's prioritization of research is not the same. And so I have recalibrated how to talk about that. And I probably seek more support from colleagues who are at other institutions, you know. I have colleagues that teach at other institutions where they have an editor for everything

that they write. And they have the kind of library access like I was describing at [my previous university].

**Interviewer:** Sure.

**Respondent:** And so I probably go to those folks. And that also amplifies my frustration when I hear them talk about things like, “I can just send my article when I think it’s ready to my editor, who will help me.” And I think, what?! (laughter)

**Interviewer:** Wow. So is their editor in the institution?

**Respondent:** Yeah! So they hire her, like literally that person who will check citations for them, that they’re accurate, that they’re current, that the parentheticals match the, will help condense, I mean, so that just makes it hard. Because if, as a researcher, if I want to stay in that same sort of way of producing, it’s just a lot more work here to do that.

**Interviewer:** Right. Not as much support services.

**Respondent:** No. If you know where those people exist—(laughter) No, I don’t work, I mean, because I do ethnographical work, it’s qualitative. So anything that I do that verges even remotely on—so this is an institution, also, that prioritizes quantitative. That’s not unique to this institution. So we have that, I know, and I know that gentleman, because he comes to the writing stuff. But that’s just not—so there aren’t qualitative supports for the kinds of things that I’m thinking about. And that holds true even for like, I had to ask my department for help with End Note. I had to ask my department for anything--

**Interviewer:** With purchasing, you mean?

**Respondent:** Yeah. So all of those things that actually support my research come out of the department, whereas often at other institutions, they’re kind of institutionalized. So that’s been a difference, too.

**Respondent:** And I don’t know how many people are doing that kind of work to know like on an institutional level whether, so part of the issue is, there isn’t so much a culture here of even talking about how people do their research. Whereas that was my experience at [my previous university], obviously. I mean, there were people talking about their own work, and talking about their methods. And you know, that doesn’t exist here because that’s not so much the prioritization. And so, as a result, it makes it challenging to talk to folks about those things.

### **MSU Libraries’ Support of Research**

**Respondent 1:** I mean, I’ve used the library’s sort of like chat feature. But most of what I’m asking when I ask those things, I usually get referred to somebody else. Which is fine. I get that. I think, so one thing, and maybe I’m just not aware of this. But it’s, like it’s hard. So in [my previous university], even as a graduate student, I was connected with specific librarians who I could go to for help, whether it was finding books in my field, and I’m sure it’s just a size thing here that this isn’t something that I feel like I have at my fingertips. So like I could make an appointment with that person and say, “I’m trying to do a search for everything related. Here’s what I’ve tried. Do you have any other suggestions?” And that person would sit down with me and say, “Hey, did you realize we had X?” Or, “Have you tried this?” And I found that, you know, I didn’t need to use that so much at the end of my time there, because I then knew how to work the system better. But that would be something that I think I might take advantage of.

**Interviewer 1:** Oh, go ahead.

**Respondent 1:** I don’t know what I was going to say. (laughs)

**Interviewer:** So you mentioned kind of a personal librarian. So would you want that same person all the time? Or just that service by multiple people?

**Respondent 1:** Well, what made it helpful was that that, so those librarians had, like, okay, they were connected to certain fields that had, right, so this is the person that does education and anthropology, whatever. So they had collections. So then they knew the kinds of journals that those folks were most inclined to use. And that was just incredibly helpful, because they would know what databases. Like you all have JSTOR, which is great. But most of the JSTOR offerings are great for my colleagues in English, but not for me, because mine is about timeliness of the stuff that's coming out. And most of the work that I'm doing isn't about like historical perspectives or analysis of literature, which is less timely. Do you know what I mean?

**Interviewer:** Right. [unclear]

**Respondent 1:** So anyway, having access to that person, and then that person could say things like you were just saying, like, "You can put an alert on X. Did you know that?" Or, "We're happy to get," or, "Did you know we just got—" And it wasn't anything formalized. It was just like, if you went in to see them and you said, "This is the work I'm doing." So I don't know how, I mean, that's what was helpful is that they just had some awareness, enough of the field to know like these are the kinds of things that those people are interested in.

**Respondent 2:** One thing that I have found so I guess what would be really nice is any time at least during normal business hours to have a reference to have a highly qualified reference librarian available at Meyer Library. Occasionally I get stumped by something. Or my students get stumped by something. And uh and I once maybe I once had the very negative experience of calling Meyer Library reference desk and getting a student helper and that's all that was there. And that I that I was actually rather upset with. It's like are we so poor that we can't even afford a highly qualified reference librarian? And I have to say I'm very very spoiled because I studied I did my PHD at Princeton Seminary. And so our reference librarian was completely totally specialized in anything and everything that had to do with Christianity. So and and her mother she told us on the first day at graduate orientation I remember that we were PHD students and she did her part of orientation and she said if you can't find something don't waste your time come to me. And it would be really really cool if we had that at Missouri State. If we had reference librarians who were not just nice. I mean you guys are really really nice but who were really really knowledgeable and I understand it's a challenge cause you can't be specialists in every field under the sun that we teach here. But but yeah yeah to to just come across a student assistant that was kind of that that was very very disappointing. Yeah yeah and there's like a specific thing so like uh my so I have a student who's working on a nineteenth century English translation of a work on von Calvin. And he sent me a he's a very very very good student. He's going to go far in life. And he sent me a note saying I reading this and I'm thinking that the words used here use to mean something different from what they mean today. Where do I go to find out what they meant in the eighteenth century? And he's talking about the English language. Well all I was I'm not a specialist in English but I was able to tell him there is a great big fat Oxford English Dictionary which is at least six six inches fat. And um and and I referred him to that because I believe that has would have sixth century meanings as well. But I I didn't tell him to call the library because I figured chances are he would get somebody who would have no clue what he was talking about. I don't know. That's how much faith I've lost in the library. (Laughs)

### **Research Assistance**

**Respondent:** OK Uh, yeah. So would that be an aspect of the research process that would be more troubling than another. Or are there  
Well it would be really really cool if the library if there were some sort of database of contacts around the world for research. I mean for me that would be Ger that would be Europe. If there were some sort of a database of contacts of library contacts in Europe who would actually respond to emails. Sometimes in in Germany sometimes people do respond and sometimes they don't respond. It's kind of hit and miss.

### **Research Space**

**Respondent:** None. My main barriers to academic research at this point in history are about space. Just physical space.

**Interviewer:** Just not having enough room in your office?

**Respondent:** Right, exactly. Or my lab space, which I have none of. Yeah, to share space or none, having none. Having to try to find conference space. So if I were to want to get management or executive personnel onto campus again, which I've done, I wouldn't. Because I just don't have a suitable place to bring them.

**Interviewer:** And what would constitute a lab space? Like what would you envision?

**Respondent:** For me, well, you know, Hill 313, the computer lab here, works pretty well for some of the things I do. Really, a large seminar space, which works for both classes and for research for executive kinds of experiences. Assessment centers, if I really were thinking big here, I'd have simulation exercises. And a room for isolated activity. But you have to have them all functioning, right? So the all have to be working at once in sort of a central administrative location. So that's not happening anytime soon.

### **Research Funding**

**Interviewer:** Yeah. Are there aspects of the research process that are more troubling than others?

**Respondent:** For me, it's funding. I don't do well with funding. I have a, as you would call it, a perfect record with NSF. I've probably written 20 proposals over the years, and not even come close. So for me, but see, the thing is, what is frustrating, I think, for me about that is I can do my research without the funding. But the problem is that the funding is required for the job. And I largely see it as a, well, I won't say it's a waste of time, because there are things about writing the proposals that are really invaluable.

**Document Transportation (Discussed 28 times)** - This includes moving documents from other places to them, through Interlibrary Loan, MOBIUS, or on-campus document delivery. Respondents frequently complimented ILL and MOBIUS.

**Comment:** Respondents discussed their frustrations and success in getting documents transported to them when the documents are located on the MSU campus, elsewhere within the United States, and in other nations.

### **MSU Campus**

**Respondent:** You know, at [my previous university], even as a graduate student, I could have books delivered to my mailbox on campus.

**Respondent:** Yeah, so that, too, is like—so then I have to – I mean, just last week, there were two titles. The one sitting right up there is a Springfield history book that's written by one of our

history professors. And I want to be able to use it. I'm going to a conference next week. So it connected with some work that we're doing with a school in the area. So I had to say to her, "Please go in the stacks and find these two books for me. Check them out." She has a proxy card for me. "Check them out and bring them to me." Then I had to email her again to remind her to do it. I mean, I know that may seem really small, but it's a huge thing that I can't even just get a book to my mailbox so I don't have to spend the time that it takes to do that.

### **United States**

**Respondent:** Um, I have to think about that. There are some books and some journals that Meyer doesn't have. Usually I can get those through interlibrary loan. There are, I guess, two types that I have in the last few years run across challenges with, one more understandable than the others. One is 19<sup>th</sup> century books which most people wouldn't consider like old, special collections. So they may be like at MU Columbia, they might have them. Somewhere in Saint Louis, somewhere in Kansas City. We don't have them but they can't be interlibrary loaned, and they're not yet digitized. Now a lot of them are digitized, but occasionally I'll run across one that's not digitized. And I'm like, oh, man. So these are books that were just, you know, they're not Harriet Beecher Stowe's *Uncle Tom's Cabin*. It might be a novel by Anne Hampton Brewster, who's one of my subjects. Or by another woman writer who had decent readership in the 19<sup>th</sup> century. Enough so that a lot of public libraries even bought the person's books. But with time they've gotten either thrown out or, because they're 19<sup>th</sup> century texts, they're in their special collections and they don't want to ship them out.

### **Other Nations**

**Respondent 1:** In fact, I must give credit to the two ladies in your interlibrary loan department. I think they deserve an award. And I remember I told Byron when he was here. I said, "Look," I said, "these two ladies. I couldn't believe how they were able to source for archival materials from within the United States. They didn't have to go to Nigeria. That was magic. So I gave them at least, I prepared at least, what I based on my research and my experiences growing up in [my home country], and completing my first 12 years of primary, secondary education there, and issues I've come across in my studies and in my conferences over and in Europe, Africa and here. And in a relatively short period of time, the materials were arriving from me to use. And they were calling me, "Come and pick up your materials." So I was quite impressed with how they efficiently found those resources for me.

**Respondent 2:** So that's one area. The other area are articles, sometimes books, that are published maybe in Europe, another country, that not many people in the US have. And it's been hard to get those through interlibrary loan. I'd say that's probably not typical for people at Missouri State, unless they're, maybe historians have that trouble. Historians or maybe anthropologists do. I don't know. It's not typical of someone who--

**Interviewer:** So getting things from overseas is a challenge.

**Respondent 3:** Yeah. Yeah.

**Interviewer:** Right. And you did mention earlier that you do use interlibrary loan when you can't get a hold of—

**Respondent 3:** Oh, yeah. I use it quite a bit, actually, MOBIUS and interlibrary loan, I use quite a bit.

**Interviewer:** Okay. What kind of information, specifically related to your field, do you have the most trouble or difficulty in finding? What kind of information is difficult to find?

**Respondent 4:** Stuff about, that is produced in the countries, and that is more empirical and more specific to the cases. So I have, for [a South American nation], for example, there's some production of books, they like to write books. And you cannot buy them on Amazon. And therefore I usually work through the interlibrary loan with those. Those are, I would say, the hardest. Or old newspapers from the countries, also. Their international newspapers. So those are more difficult to get by.

**Respondent 4:** For newspapers, it was the interlibrary loan, the interlibrary folks that would request them. But that took like three weeks for, just to get, you know, one thing. But I guess that's how it goes, right?

**Software and Technology Support (Discussed 21 times)** - This includes software training and consultation, app discovery and management, and development of Web presence. Rather than tech support, faculty indicated a need for help using the software to make meaning or add intellectual value to their research.

**Comment:** Respondents discussed their support needs in providing software essential to their research as well as their needs related to presenting themselves professional on the World Wide Web, e.g. through their MSU Web page. They discussed their need for technical support but also emphasized their need for intellectual support for software, e.g. in learning what the software does for researchers and how that can advance their research.

### **Software Support**

**Interviewer:** What technologies have you used, software, hardware in your pursuit of academic research?

**Respondent:** In terms of software, there's so much, I mean, the, you know, using browsers so that you can peruse websites, like, the library website, there's the thing that connects you to information that you're seeking. But the software that resides on servers like [Millesecond, Ink,] in Seattle that we used to create and administer ITs and we use that a lot, that's essential for what I do. The inQSIT that is housed here, I use less, students increasingly are using Qualtrics.

### **Research software**

**Respondent:** NVivo, hyper Research, Qualtrics, RStat

### **Software Training: ArcGIS**

**Respondent:** A lot. (laughter) My number one thing is the computer, with Word, Microsoft Word, and Excel. I use a lot of Excel for my data processing. Other computer programs that I use pretty regularly is Adobe Illustrator. And just started recently, some of my graduate students are using Inkscape, the freeware version of Adobe Illustrator, basically. So those are some of the big programs I use basically on a daily basis. Some of research also requires that I use a program called Crystal Viewer, Crystal Maker. It allows me to take geochemical data that I get off an instrument and basically create like 3D crystal models. So looking at where the atoms are located and how they're bonded together, based off of the information that I get. That was a piece of software that I purchased as part of my startup, and I use in classes as well as for my research.

Then I have another program that I use on a regular basis, which is a geochemical modeling program called Igpet. And it creates like XY diagrams. And I can do what's called a mass-balanced model. So it takes into consideration the volumes of different magmas and how things are mixed together, and the contamination processes that take place. It allows me, so I don't have to do it by hand, basically. And it creates the diagrams and shows the different plots that would show those models right in a single program, as opposed to having to do it in Excel or something like that.

Outside of the computer, my number one piece of hardware that I use is a petrographic microscope, which I have a personal one that I purchased as part of my startup that I use, and my graduate students use, almost on a daily basis. That's to look at rocks and make a thin slide of a rock. I've got a whole bunch of them around here I can pull one out here and show you. maybe I can. But it basically allows us to shine light through a rock and actually see what it looks like, and define some different properties of a rock. It's similar to like a biological microscope, but it's just the way the light is triangulated through it.

### **Technology Support**

**Respondent 1:** What would be critical would be [a specific named source] in German the authoritative edition and like I said I'm in the process of. I don't know why it didn't occur to me to try to get it piece meal all these years that I've been here but I've started on that and hopefully by the time I retire the library will have [this resource] You can't really do any kind of research or publication [in my topic] without having access to those. We have the American edition and I'm keeping that up to date and ordering the new volumes but that's nowhere near complete. That's only a fraction of what [this author] actually wrote. Oh, another thing that would be really to have as a library resource as a database uh would be access to the online edition of this American edition. Um and I did purchase that for myself and uh and then I discovered that uh that every time computer software you know. It becomes obsolete every five or six years because of computer software. So in order at this point I can still get it on my old computer but my old computer at home is about to die. I can't get it on my work computer. My home computer is about to die. Once I get a new computer I'm going to have to buy the resource again. I mean it's only a hundred whatever dollars but still it's a hundred whatever dollars and it makes me annoyed because I've already bought it once. So that would be important to have because that's not available to me in Germany. So that's really awkward. I mean I have to refer to both in my papers and to have to keep putting these notes in my manuscripts you know refer to this refer to that refer to that when you're back in the states. Refer to this when you're in Germany. That's kind of annoying going back and forth.

**Respondent 2:** I use two different platforms. One of them is called finale, and the other one is called Sibelius. I started on other programs. The notation software has been out there since about '86 or '87.

**Interviewer:** Oh, wow, really?

**Respondent 2:** And so I've used like three or four or five different platforms over the years. But nowadays, most of my students, and me included, we work on either Sibelius or Finale or both. In my case, I was pretty much a Finale user until about '07, when the publisher that I work with for my band music announced that it was becoming a Sibelius-only publisher. They sent me a free copy of the program and said, "Send us all of your music in Sibelius format from now on."

And it was kind of nice, because I learned both programs now. And I can work with students who come in working with either one of them.

**Respondent 2:** And they have their difference. They have pros and cons, both of them. But by and large, I really like Sibelius for large ensemble things, like the band pieces. Because the part extraction, when you have to print out all the individual parts, is much more intuitive than it is with Finale. But for vocal pieces and also for small ensemble works, two to three players or maybe just one, I like Finale better for that. Because it just has some features that make it easier for me to do that kind of work.

**Respondent 2:** But the advantage to this is wow, things are so much simpler in terms of distribution. Once a piece is done, I can create a little synthesized mp3 of the piece and send it to the director that I've written it for and the score and say, is this what you had in mind, do you want me to change anything before I extract the parts? And then when the publisher wants it, I just send him the Sibelius file and go from there.

**Interviewer:** Wow. That's great. So you don't have to make a recording to send to them?

**Interviewer:** So when you struggle about deciding upgrades and such, how do you make your decision?

**Respondent 2:** Oh, most of the time I put it off until I really have to. (laughs) Especially if it involves having to pay money. So.

### **Web Presence**

**Respondent:** Well, maybe an upgraded version of Sibelius and Finale might be a nice thing. And one thing, I guess, you know, a lot of this can be handled through a Facebook page nowadays. But the website that the university has on each faculty member and everything, it would be nice to be able to put a lot more information on that about pieces that have been performed or premieres and things like that. And not have to actually put it on there myself and figure out how to use the software. And I know some faculty members have done that and are really good at that. But I've got to spend my time copying parts. So, you know, I would say maybe just somebody to help with the web presence that we're able to project would be a good thing.

**Social Media Management (discussed 17 times)** - This includes using sites like ResearchGate, Academia.edu, or even Facebook effectively and ethically to advance their research. There seems to be a pattern of using these sites to send and retrieve peer reviewed, published articles outside of publisher approved channels.

**Comment:** Respondents discussed their use of social media in conducting research. As discussed more fully in the finding related to space, the respondents use social media as a means to exchange publication essential to their research.

**Interviewer:** Do you use any social media sites in your research?

**Respondent:** Not for research. Partly because, probably mostly because of my own personality. I think, like any sort of technology type of things, I'm probably the last person to adopt something. I mean I, like having a cell phone, I fought it tooth and nail until about seven, eight years ago, before we had our first child. And my wife threatened my life. (Interviewer laughs) You know, thou shalt have a cell phone. And it's not that I don't appreciate what it brings and whatever, but you know, I'm just not one to rush to use new technologies or anything. So social media is one of those things that I know a lot of people who use it and they use it very



effectively. I just haven't gotten on the bandwagon, so to speak. There are a couple of people, however, who have used that to use some very elegant studies. Because I didn't even realize that the number of blogs that are out there where people who are taking, let's say, an organic chemistry class are writing about their experiences. Or people who are doing a PhD in some sub-discipline of chemistry, and they're exchanging their experiences, their thoughts and all of those things. And it can give you a tremendous amount of insight about what the problems are, how the students view each element of the process or whatever thing that they're talking about.

#### **Research Gate:**

**Respondent:** But I've never, it has functions where you can post questions. I've never, I don't want to hang out my dirty laundry and say I'm ignorant to this fact, somebody help me.

**Respondent:** You can put your work there. But what ResearchGate does, it tracks how many times folks cite your work. And that's obviously something we need for tenure and promotion.

**Respondent:** Oh, I find another thing, another site, this site, I don't know if you guys use it. This is brand new. This is so good. It's called ResearchGate.

**Respondent:** Yeah. ResearchGate and –ResearchGate s quite helpful. It's brand new.

#### **Academia.edu:**

**Respondent:** So she created an Academia.edu page for me. And immediately then, the phone started ringing because then folks were like, 'Oh, we found you. We found your work.'

**Specialized Services (Discussed 17 times)** - These include analytical services, copyright clearance, field support for research, geographic information service, special needs support (e.g. for the visually impaired), and subject guide creation.

**Comment:** Respondents discussed their need for these specialized services, often without realizing they were doing so by communicating their legal, technological, or logistical, struggles in doing research.

#### **Analytical services**

**Respondent:** Yes. Especially with my research, there's a lot of analytical services that I need to have access to, that unless you're at a large institution it's very difficult to have access to those in-house, on campus. So I have to travel. That's my biggest problem with research is the requirement to travel to do the analyses. And then in addition to that, there's also something that everybody has problems with, probably, is funding the research. That's probably across the board. I'm probably no different than anybody else on that one.

#### **Special needs research support**

**Interviewer:** Oh, wow. How interesting. Wow. Okay. Well, where do you conduct most of your academic research?

**Respondent:** You know, in terms of location, where I sit down to—

**Interviewer:** Yes.

**Respondent:** Where I collect data or where I sit down to write?

**Interviewer:** Actually, everything.

**Respondent:** Okay. Well, my research begins in my home office. (laughs) I have a room dedicated for online work. As you know, or people may not know this, most programs in this

department are online-based. So it is imperative that I work even at odd times, after closing time from here or weekends or even very early in the morning.

**Interviewer:** Sure. Right. (laughs)

**Respondent:** So I have in my home an office where I have a duplicate of the kinds of computers I use with speech, with Braille output. I have a Braille embosser. So I can go on the internet at any time to source information. And then I can make notes with my Braille embosser. So the home office is very critical for my research. If I need to make phone calls to an organization between America or overseas, I can also do that conveniently from my home office.

Then my second primary place of research would be here. Because when I get resources like those ones I obtain from interlibrary loan, I can't read them. They are not in Braille. And some of them are not easy to scan with the scanner.

**Interviewer:** Right.

**Respondent:** I do hire, on my own, personal clerical assistants. Like student workers. I typically do not get my grad assistant involved in extensive research work, because the grad assistant is really, the focus of the grad assistant is not in terms of helping, it's to really help with navigating the [unclear] for my courses, going through assignments that are in print that have been submitted by students. The majority of my students are sighted students, even though they are learning to become teachers of the blind. We do a lot of mailing back and forth, being an online program.

**Interviewer:** Right.

**Respondent:** We update materials as they come in and go out, check them when they come in, and so on. So she has very little time out of the 20 hours a week to assist me with research. So I typically get student workers I pay on my own to assist me with the extensive material that has to be looked at. But I prefer them, those student workers, to work with me here, rather than go to my home office.

**Interviewer:** Sure.

**Respondent:** So we do such activities when they are available. We have a contract we reach. I try to schedule them when they're available, when I'm available, so mutually convenient. Sometimes we are here on the weekends. It is more quiet, no distractions. (laughs)

### **Copyright clearance**

**Interviewer:** So where else do you go for material?

**Respondent:** It depends what the project is. Let me see. What are some of my other favorite places? There's a new one that's going to be launched that a friend has started. So I don't know if she's got, she had sent me a, I don't know if it's going to show up yet. It's going to launch in another month, and she sent me all the data that's going to be contained within the website. But it's, oh, no, hold on.

**Interviewer:** Living song dot org?

**Respondent:** Yeah. Let me make sure I have the—oh, living song project dot org, that's what I screwed up. And this—here, okay. This is going to launch in the next month. She sent me all the Excel spreadsheets with the data in it. So I've been—

**Interviewer:** Great.

**Respondent:** I used it. Yeah. It's good to have friends. But this new, she and my, so this is Elizabeth Avery, who's at the University of Oklahoma in Norman, and Quinn Patrick Ankrum, who's down at Texas Tech. And what they've done over the last six years is data entry on thousands and thousands of songs. So you can search by poets, you can search by voice type. It

has range. It has the city of its premiere. So if you're going to do, if it's the hundredth anniversary of Iowa City's first whatever, you know, you can go and say okay, well what songs have been premiered in Iowa City and do those things. Or what singer premiered them. So it's really interesting from a recital programming standpoint, because then you can really program for very specific events or specific scholastic reasons, academic reasons.

So yeah, so living song is going to be huge. They're also going to have, yeah, over six thousand songs. They're also going to create set lists. So if you have a dream list of repertory I want to do soon, or if you have many different recital programs going on like I do, you could keep all of that there. Another website I go to all the time, of course, is IMSLP, which you may have heard of. It's infamous/famous. It's the Petrucci Music Project. So libraries all over the country have been scanning in things within the public domain. Where it gets sticky is that they house the servers in Canada, whose copyright is different than the US. So it's up to the user accessing it to know their own country's laws, which quite frankly people don't care about, and they should.

### **Geographic information service**

**Interviewer:** Minteql. Or, no. M-i-n-t-e-q-l. Minteql. Sorry. I'll have to go back and [unclear] (laughs) What technologies do you struggle with?

**Respondent:** GIS.

**Interviewer:** GIS.

**Respondent:** I have tried to like take courses here in the department and make my own maps. And it's just like I take the class and I cannot make the map. (laughs) So for that we have a guy that actually makes old maps for us. He's a staff member for our department. And he's a GIS expert.

### **Content Education (Discussed 12 times) - This includes training in resource use or specialized tours of the library.**

**Comment:** Either explicitly or implicitly, respondents expressed their need to be educated as to the resources already provided by MSU Libraries.

### **Journal Databases**

**Respondent:** "Could you show me how you get to EBSCO Host and what you use in it?" "On ours? I have not honestly used ours a lot. I've used MU's because I have access to it."

**Interviewer:** Good. Earlier you had mentioned that Crystal Gale is working with you on getting more familiar with our databases? Could you elaborate on that?

**Respondent:** Yeah. She's worked with me when I needed help to familiarize myself with the search engines, with the databases, academic search engines to get better results. Because I think for somebody who's using a screen reader, it's not what you can just do willy nilly. You have to really have a structure, and you need somebody to show you the structure to be able to know what databases you need to maximize your results. Like I said earlier, it takes a lot of steps and one needs to practice.

**Respondent:** But I think I need to get great exposure to the search engines and the databases. Sometimes when I go there and I try to look for things on my own and I can't get the results, and I go there and they use some other database and they come up with the fantastic results, I'm always amazed at how do they do that. Yeah. Yeah. So they are very good. But I wish I were more proficient using those databases with my screen reader.

**Respondent:** So ultimately I think what can help us is more training. At least for me. I would say if I can get my suggestions, if I can get more training in database searches using the appropriate engines, they have several databases there. They have all those different databases. It just takes more training to become proficient using them. That's what I would like to do. More training.

### **Mobius/Prospector**

**Interviewer:** That's a good, and there's also Prospector as well.

**Respondent 1:** What is that?

**Interviewer:** It's basically MOBIUS out in Colorado and Idaho I think are the two participating states. So just like MOBIUS is pretty much all around Missouri and some of the surrounding little areas just on the other side of the border, think MOBIUS only in Colorado, and I think a little bit of Idaho.

**Respondent 1:** But they actually do bring the books over?

**Interviewer:** They send them, yeah. They will send books. So if you can't find the book through MOBIUS, try Prospector. And then eventually ILL will be the last resort.

**Respondent 1:** Okay, I wasn't aware of Prospector.

**Interviewer:** That [little jump?]. you can find it, I think, in the databases. Or not in the databases. Where is it listed? I know if you go to MOBIUS, there's a link to Prospector on MOBIUS. And I know there's another way to find it on our website as well. But it's basically MOBIUS, only over there. It's a way to kind of think of it. Okay, I digress. For what purposes would you use, well, for what purposes would one, print or electronic, be preferable over another in your research?

**Interviewer:** Okay. So do you ever use Prospector? Are you familiar with Prospector, since you use MOBIUS?

**Respondent 2:** No. What is that?

**Interviewer:** Like MOBIUS is a group of libraries within Missouri. Prospector's mainly ones in Colorado, but there's also one in Wyoming. So like if you scroll back to the top, you can search like, oh Prospector's there, too, and they've got additional materials. Or sometimes if you see this, that with it when you're in a record, you can search Prospector, that icon, too.

**Respondent 2:** Oh, okay. And then I can get it that way. Right?

**Document Change (Discussed 10 times), Document Manipulation (Discussed 8 times), Equipment Lending (Discussed 5 times)** - These include audio conversion, along with document scanning, editing, indexing, transcription, translation, and lending audio recording devices or cameras. These seem to be services that, while not highly demanded, provide real convenience.

**Comment:** Here respondents discussed, again either explicitly or implicitly, their need for or interest in services or equipment that allow them to do things with documents. Having these would provide substantial logistical and intellectual support as they do research.

### **Transcribing**

**Interviewer:** Good. Well the last question is, what technologies do you currently not have that would benefit your academic research?

**Respondent 1:** Well those apps for transcribing.

**Interviewer:** Can you think of any others that you're missing?

**Respondent 2:** Well, the Web of Science is a huge one, which we've talked about. And then, like I have some software that helps me analyze transcript data and audio data connected to transcription.

**Interviewer:** What technologies do you struggle with?

**Respondent 3:** I don't, I mean, when I've had to learn things, usually it's on an as-need basis, right? Probably true for all of us. So I feel like—but I think part of a byproduct of living, you know, working in a space that doesn't have the same culture of research that I'm used to, I was living and working alongside people that would be like, "Hey, did you hear about the new software for transcription?" And so then that sort of keeps you current and eager to learn things. And now my way of figuring that out, I was just reading what people are writing and thinking like oh, that's interesting. I should think about that. So that's, you know, that's just—but I don't think that, I think I've been successful in being able to figure that out as I go. And I don't have time to do all of the other, like the social media stuff that actually I think I might enjoy. But it's a decision based on time, mostly. And the other thing is, there isn't support. So like my department will buy some software for me. But there isn't support for that software.

**Interviewer:** When you do transcribe on-site, what are you doing? Like handwriting, or typing on a laptop?

**Respondent 3:** Not anymore. I'm typing on a laptop. And then, I have also, when I come back here with a bunch of pictures, so say I'm looking on the screen at letters that Anne Hampton Brewster wrote, and I've got all the images, I actually through one of my grants got DragonSpeak software, so that I could read her letters and just read aloud to save my hands. I'm not getting carpal tunnel.

**Interviewer:** Is that working well for you?

**Respondent 3:** Absolutely. But I also had to decide, do I really need to transcribe all these letters? You know, what's the end product? Am I trying to publish her letters? Or am I writing about her letters? And I ended up not transcribing them all, because in this particular case, I thought what I really need to do, I can read the manuscripts. The advantage of transcribing them, though, is that then I could do a word search if I wanted to search for names or locations. So in some cases, I've done transcriptions of all the manuscript letters. And in some cases, I've just worked with the manuscripts, you know, reading them on my screen, depending. So yeah, I use the DragonSpeak software to do the transcriptions. And it's worked for me. I don't use it regularly.

**Interviewer:** Okay. Are there any, let's see, transcription or analysis or editing services you use?

**Respondent 4:** No, no, no. I do everything. And at this point, I don't really transcribe unless there's specific things. So what I do when I do interviews is I take notes. So those are all, for example, notes from interviews. And then if I need anything, then I'll transcribe. But I know where it is.

**Interviewer:** Okay. So you're immediately taking your own notes—

**Respondent 4:** Yeah, because taking notes allows for having to pay attention and solve the confusions there. I found that taking notes in an interview's really good. At least for me.

**Interviewer:** Okay. Are there any other things about that research process that you do that we haven't already discussed?

**Respondent 4:** I don't think so. I don't think so.

**Interviewer:** Okay. Great.

**Respondent 4:** I need to get on that, on the technology for recording and transcribing, now that we're talking about it.

### **Editing**

**Respondent:** And so I probably go to those folks. And that also amplifies my frustration when I hear them talk about things like, "I can just send my article when I think it's ready to my editor, who will help me." And I think, what?! (laughter)

**Interviewer:** Wow. So is their editor in the institution?

**Respondent:** Yeah! So they hire her, like literally that person who will check citations for them, that they're accurate, that they're current, that the parentheticals match the, will help condense, I mean, so that just makes it hard. Because if, as a researcher, if I want to stay in that same sort of way of producing, it's just a lot more work here to do that.

**Interviewer:** Right. Not as much support services.

### **Indexing**

**Interviewer:** Oh, no, that's not necessarily that we do it. Any service anywhere that you use on campus or in the community.

**Respondent:** Well so what I've tried to do is have research assistants that help me with that. I have paid to have an index, something indexed for me, a book project indexed. I'm trying to think of other things.

### **Writing**

**Respondent:** And then, a second issue is writing. So English is not my native language. So not the first editing, but the latter editing, where you have to, I don't know, where it's not about grammar or anything, but about, I don't know, your article is 12,200 words, and you have to get to 12,000. Okay?

**Respondent:** So 12,200, and you have to, so those 200 words, it doesn't seem that you can get them out. So that's a lot of work, because you have to tweak the languages. So that sort of little last-end editing of the language.

**Interviewer:** Oh. (laughs)

### **Scanning**

**Respondent:** Because I am trying to live a paper-free, I'm trying to develop a paper-free society. Now you can look on my desk and you can see that there are papers. But that stack right there is becoming digitized. That's why it's there. I'm going through this box. I moved from a big office to a little office. And so I have room for one file cabinet, and it's full. So I've taken all – all – of my journal articles that I've collected over the many years. It's now down to one box. I started with three. And little by little, folder by folder, I'm going through and deciding what I want to keep and what I don't.

**Interviewer:** And then digitizing, scanning—

**Respondent:** I either scan it or if it's from an American Chemical Society journal or something, I can just download it now. Because that's another thing. Some of the publishers have gone all the way back to the beginning of their existence and digitized everything. So yeah, that's great. And then I can keep it on the disk over here, on the server that is available from anywhere. And so I just take my library with me.

**Respondent:** I loved it when the library put in the scanning stations. Because before that, actually, I had a grant that allowed me to purchase a portable scanner.

**Interviewer:** Oh, nice.

**Respondent:** And I had a research assistant. I had two research assistants. They actually took the scanner over and used it. And also they scanned from microfilm pdfs for me. So the fact once the library got the scanners, that was totally great. I'm trying to think of, yeah, I mean—

### **Field Support**

**Respondent:** But let's say I'm going on a field research trip and I want to stay there for a couple of months, or things like that. I'm not going to take my stuff. So probably what would happen is I would plan and see what exactly can I do there that I need the least amount of stuff. And there probably I would use more—so I would have something drafted and work just on the writing, or things like that. Or I would use my sources, or I would be doing mostly interviews. Or, if I need something specific, I would email my [colleague at MSU], if he's here, and ask him to photocopy this, scan this, send it to me.

### **Equipment Lending**

**Interviewer:** Yeah. These things that we have work pretty well. I can show you.

**Respondent:** Yeah, this is kind of cool.

**Interviewer:** Yeah, the little tripods. We'll go ahead and end it.

**Interviewer:** Okay, so we were talking about this recorder I'm using.

**Respondent:** Yeah, I was wondering if you guys, if you could borrow something like that, right?

**Interviewer:** So that's a technology you don't currently have that would benefit you.

**Respondent:** No, no. Yeah, yeah.

**Interviewer:** Okay. Great. We'll look into that.

**Interviewer:** Sure. Right. What technologies do you currently not have that would benefit your academic research? What type of technologies?

**Respondent:** Yeah, I think it's database access, like we talked about before.

**Interviewer:** And it sounded like maybe current [digital] video or audio recorders?

**Respondent:** I mean, I'm in a kind of lull right now. But yeah, when I get ready to move into more work, that would be true. So access to or the ability to acquire a video camera and backup for each of those. So that would be helpful.

**Outreach (discussed 3 times) -** This included liaison service for new faculty and orientation for new faculty.

**Comment:** Here a respondent mentioned that the library's resources are not communicated to new faculty as well as they could be.

**Respondent:** So I just can't imagine that of the list of places that new faculty were dragged around Missouri State University, that the library was not one of them. And I don't want to be a crybaby about some of the places that we went. But some of them, I cannot imagine that I will

ever need to know where surplus property is stored at this university. (laughter) And you know what, where it was sort of entertaining as I went to school here as an undergrad, so I'm a native here. So I'm familiar with the campus, so that wasn't a big issue for me. But almost everybody else that was on that bus with me when they drug us all around campus had never even been to Springfield before other than the job interview process. And the thought that they would go through that and not even know where Meyer Library is— (laughs)

**Interviewer:** Yeah. Astonishing.

**Respondent:** So that might be something to put on somebody's radar over there to see how do we get in the loop with the orientation of new faculty, and somehow get that put on the—even if it's not a requirement that people go, but to receive an invitation to new faculty to say welcome to Missouri State, we're Meyer Library, or whatever library, and we want to help you. And I never got anything from the library. And I wasn't a digger by nature, and I'm not bashful about calling over and asking for help. But I'm just saying, some people might be. And that might be something that needs to be on somebody's radar over there to say.

**Other Stuff:**

**Respondent:** So that's a big tool that I use on a regular basis. On campus, other tools that I use is the secondary electron microscope over in the physics department. We're over there a couple of times a month, probably, taking pictures of the same kind of rocks. It gives us a slightly different chemical picture, as opposed to what the rock looks like under the microscope. And then off campus, I use a lot of mass spectrometry equipment. So it's geochemical, it's a chemical method to determine, quantitatively determine, what chemical elements are in a rock.

**Respondent:** So I've somewhat touched on it a little bit. This is something that probably goes beyond the university, but it's something I feel that could really benefit. Or beyond the library, especially, but it would be more the university level that would benefit the entire university. One of the things that's, because of the way that science in particular, and geology in particular, is taught is incorporation of a lot of research in the coursework. So we do a lot of undergraduate research. And some, like the colleges in particular, CNAS in particular has done really well with providing opportunities for undergraduate research. So like the Undergraduate Research Day, or the graduate college with the Graduate Research Forum. Some things I've experienced at other universities providing resources for undergraduate research. And having funding mechanisms. So I know that's always a difficult topic. But like we do for travel grants for graduate students. Maybe having something like that for an undergraduate research program on campus would, I think, really benefit the university as a whole, and the researchers in this university as a whole, by having more access to being able to get university students, whether they're get students or undergraduates, actively involved in research earlier in their career. Yeah. (laughs)



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<sup>i</sup> One respondent said, “The ironic thing is, the things that would seem the simplest, like just, things that are in the cannon of the field, so to speak, like this is a certain type of trend that we’ve observed in whatever. And when you go to find the evidence, the data that was used to make those claims, it’s unbelievable sometimes how difficult it is to find it.”

<sup>ii</sup> One respondent commented, “I think, and this is the thing that when we had [at] faculty orientation, I think the gentleman who spoke on the library’s behalf may have the director of the library or whatever, I can’t quite remember who it was. But I even remember asking him, at that point we had talked about Web of Science. But you know, if I had my dream about what the library could get, and I know it’s a ridiculously large expense, but it would be Web of Science more than anything else. I mean, you can definitely get around it. But it’s one of those, what I could do probably in half an hour takes me three or four.”

<sup>iii</sup> A respondent commented, “So I have friends who are kind enough to have their graduate assistants run searches on this for me and send them to me...Well, we’re quite a big enough university. We’re twice as big as the university that I was at that had this. It’s just, it has nothing to do with bigness. It has to do with where we’re deciding to put our money. Is it the football team or is it the library?” Another said, “So I have friends who are kind enough to have their graduate assistants run searches on this [resource I need] for me and send them to me.”

<sup>iv</sup> A respondent who does research in [Europe] frequently commented, “Right? Which, again, I haven’t done for a while. I had a sabbatical, so that was great. But it’s been a while since I did—but in the past, when I was, I guess, like for tenure, working for promotion, full professor, and was like really just sort of pushing harder on the research, prioritizing that more, I really needed, because of that connection to [Europe]. And even when scans came into being, it’s still just cheaper to get them there, for one thing. Because then you don’t pay postage.”

<sup>v</sup> One respondent who works in the humanities said, “So with [at another major research university], for example, I wasn’t going to be at the [their] Library. And I communicated with them how many pages. They said it’s 50 letters. I said, well about how many pages? How much material? And they gave me an estimate. They said it would be approximately, you know, it might have been 35 dollars. It might have been 65 dollars. But I know it was less than 100 dollars. It seemed very reasonable, if I compared it to traveling.” She eventually used her own money to buy these letters.

<sup>vi</sup> Commenting about citation management software packages, one respondent said, “If the university had one and they were willing to train people, I would be thrilled. It’s just so critical. I don’t know how my colleagues do it, I don’t, if you don’t have one.” Another said, “So there’s that. And I guess what I was saying with the bibliography database is I wish somebody somewhere might come up with a standard for MSU or something, just so that if I’m going to spend time getting into it, it’s there, it’s available, there’s a site license, and I know that there will be some support to help with it.”

<sup>vii</sup> One respondent said, “That [document] is on a jump drive. It’s on my computer here, I think. Is it on? No, It’s not on this one. Because my computer recently crashed. I just got a new computer so it’s on my computer at home. It’s on my Batman and Wonder Woman jump driver. So I’ve got them in four different places.” Commenting on her research materials, one respondent said, “My stuff is a mess. It’s an absolute mess. I do use Dropbox. I have not yet paid for a subscription. So I don’t have all my materials on Dropbox. I have what I worked on most recently. (laughs) And by most recent, maybe, I don’t know, maybe two or three years back. I have some materials that are older backed up to the Missouri State server space. I have materials backed up on hard drives, and on external hard drives.”

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<sup>viii</sup> Commenting on his document management, one respondent said, "Right. Everybody can access. And I don't know, that would be less important to me at the moment, because I've got OneNote, and I think OneNote will work okay. It's just that I haven't used it enough to be very good with it. It seems kind of tedious to set up. But once it's set up, it seems, I mean for my notebook, I can put stuff in there. That's why I have so many tabs in my notebook, because I keep thinking, this is something that I want to have at my fingertips. And so I'm going to put it in my notebook, because I can just go click and it will be there. So I'm still kind of playing around with that. But if there was a really good package that MSU would like to provide again as a standardized, site license, whatever, even if it's not paid for, I would be happy to have some kind of, you know."

<sup>ix</sup> Comparing MSU to her previous institution, one respondent commented, "And I don't know how many people are doing that kind of work to know like on an institutional level whether, so part of the issue is, there isn't so much a culture here of even talking about how people do their research. Whereas that was my experience at [my previous university], obviously. I mean, there were people talking about their own work, and talking about their methods. And you know, that doesn't exist here because that's not so much the prioritization. And so, as a result, it makes it challenging to talk to folks about those things... I think there's not a culture of research. (laughs) At least, I will say, I can't speak for, obviously, all departments or other, so there's not a culture of research... And so people are talking about getting logistics done; they aren't talking about their scholarship. And so that's the culture. And so it's sort of like we're going to talk about how we're going to draft a rubric for the work that we're going to do. We're not going to talk about like, 'Tell me about what your inquiry is.'... MSU's prioritization of research is not the same."

<sup>x</sup> One respondent said, "I mean, I've used the library's sort of like chat feature. But most of what I'm asking when I ask those things, I usually get referred to somebody else. Which is fine. I get that. I think, so one thing, and maybe I'm just not aware of this. But it's, like it's hard. So in [my previous university], even as a graduate student, I was connected with specific librarians who I could go to for help, whether it was finding books in my field, and I'm sure it's just a size thing here that this isn't something that I feel like I have at my fingertips. So like I could make an appointment with that person and say, "I'm trying to do a search for everything related. Here's what I've tried. Do you have any other suggestions?" And that person would sit down with me and say, "Hey, did you realize we had X?" Or, "Have you tried this?" And I found that, you know, I didn't need to use that so much at the end of my time there, because I then knew how to work the system better. But that would be something that I think I might take advantage of."