



Article

Open Education Resources: The New Paradigm in Academic Libraries

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Abstract

Academic library budgets are contracting while library usage is increasing. How can academic libraries best help campuses reduce costs and better serve their communities? One strategy is collecting campus-created content online and making it available through the campus Institutional Repository. All faculty, including tenure track and adjuncts, at California State University San Marcos were invited to participate in a brief Web-based survey with both quantitative and qualitative questions. With an 18% response rate, the survey results indicate a strong interest in free or reduced cost educational materials, as well as a high level of concern about the cost of educational materials. Faculty responses indicate they are looking for alternatives to high priced curriculum materials, and are looking to the library for assistance. The crisis in scholarly communication and educational budgets is coming together to create a surge of support for free or low cost educational resources. Many campuses across the country have created programs to support open educational resources, with the main push coming from campus libraries or librarians. The data from this survey and examination of current campus climate, combined with the analysis of implementation factors by other organizations, will bolster the argument for libraries to create open repositories for campus scholarship.

A confluence of events with an outdated publishing model that relies on bloated textbook prices and the scholarly communications crisis positions libraries to give access to materials that are created on campus and beyond. In 2012, Bosch and Henderson reported the growing disparity between the funding for materials in academic library budgets and the ever-increasing costs of serials and databases. While nearly 70% of academic libraries reported their current budgets remained flat or decreased from the previous year, there was a five to six percent increase in serials subscription inflation rates (Bosch & Henderson, 2012).

Price sensitivity surrounds more than just library serials. The high price of academic textbooks is a major concern for students. Some campuses have addressed textbook costs by creating alternative publishing arrangements for their faculty to identify low cost educational materials. The University of Massachusetts at Amherst's Open Education Initiative was launched in 2011 and has saved over \$750,000 for students thus far (University of Massachusetts Amherst Libraries, 2013). Temple University has an Alternative Textbook Project that grants faculty members seed money to create low cost textbooks (Bell, 2012). An interest in providing lower cost materials to students can also help create awareness of the scholarly communication crisis (Bell, 2012).

The decision on whether or not to use campus-created content and open educational resources may come as a response to the rising costs of education. Billings, Hutton, Schafer, Schweik, and Sheridan (2012) discuss how book cost, not student need, may influence a student's decision whether to take one particular course over another. As cited by Billings et al. (2012), a *Chronicle of Higher Education* survey from 2011 reports that 78% of undergraduate students decided not to purchase the required textbook because it was too expensive. This figure might be higher at institutions like California State University San Marcos (CSUSM) that serve underrepresented populations. CSUSM is a medium-sized comprehensive state university and home to a diverse population of students, nearly 30% Hispanic, 27% are first-generation college students, and 60% of the student body receives financial aid (CSUSM, 2013a). In fact, CSUSM has been designated both a Hispanic Serving Institution and an Asian American Native American Pacific Islander Serving Institution (CSUSM, 2013b).

But will students be able to locate the material if it is made available in the institutional repository (IR)? Wesolek (2012) reported at the North American Serials Interest Group on the study of the University of Utah repository. Their top three groups of users are faculty/staff, 14.9%; graduate students, 24.8%; and undergraduate students, 21.8%. In addition, 75% of the searches were initiated in Google. CSUSM's IR, ScholarWorks @ CSU San Marcos (<https://csusm-dspace.calstate.edu/>) is prominently displayed on the Library website, and subject specialists use ScholarWorks for classroom instruction when appropriate.

States have reduced the amount of support they provide for higher education, California included. From FY 2008 to FY 2013, California has reduced the amount it spends per student by 29.3%; during this time, the tuition has increased by more than 70% (Oliff, Palacios, Johnson & Leachman, 2013). In 2012, California Governor Jerry Brown signed several bills to support California's students and to reduce the financial burden being placed upon them including State Bill 1052 and State Bill 1053 (Office of Governor Edmund G. Brown Jr., 2012). SB 1052 promotes the development of open textbooks for some of the most popular undergraduate courses in public post-secondary schools. It also created the California Open Education Resources Council, which is to be made up of faculty from the University of California and the California State University systems (Public postsecondary education: California Open Education Resources Council). SB 1053 (Public postsecondary education: California Digital Open Source Library) establishes the California Digital Open Source Library, which will host the digital open educational materials created by SB 1052.

Academic library budgets are contracting while library usage is increasing. While libraries may not have historically purchased textbooks, they do support the curriculum and research needs of students. Because textbook costs are so high, the role of providing supplemental educational materials is increasingly important for libraries. How can academic libraries best help campuses reduce costs and better serve their communities? One strategy is collecting campus-created content online and making it freely available. This paper explores how one campus approached making content available through ScholarWorks, an institutional repository. ScholarWorks currently provides online access to Context, an instructionally-related library exhibit series, as well as electronic theses, graduate projects, and dissertations (ETDs). This paper will also offer preliminary assessment of how students and faculty are using ScholarWorks at CSUSM to access previously unavailable content. Readers will better understand the crisis of scholarly communications and identify practical means in which they might develop and utilize the scholarship and creative works being created at their institutions.

Literature Review

Many have noted the conundrum of the scholarly publishing model: research is conducted by faculty, the content and rights to that research are given away to publishers, then sold back to libraries (and students, in the case of textbooks) at exorbitant rates (Bell, 2012). Indeed, Royster (2008) questions: "What other profession requires its members to give away the products of their labor (their copyrights) for the sake of retaining their jobs?" (p. 9). In this light, institutional repositories are part of a shift in the academy. Royster (2008) proposed institutional repositories have a role not just in providing access to scholarly content published elsewhere but specifically as a first choice for publishing original content, including authors, topics, and formats typically excluded from traditional publishing. White and Hemmings (2010) acknowledged researchers want to promote their work by providing a digital record that may not have existed previously. Miller (2008) noted how faculty and librarian scholars can work together to create "fundamentally shareable, flexible, and sustainable" (p. 44) resources for teaching and learning.

To some extent, this already occurs with library special collections that create awareness of library resources and bring users into the library. Abbey (2012) conducted a longitudinal study of the Web presence of art museum libraries, specifically to what extent art museums were promoting their unique collections digitally. Substantial growth was noted from 1999 to 2011, with a seventy-five percent increase in Web presence and social networking of the archives surveyed. Museums, like libraries, are creating online collections of free-to-use materials.

Students and faculty both benefit from, and are engaged with, library special collections via digitized materials, exhibits, and relationships with community partners (Harris & Weller, 2012). It is timely, appropriate, and critical, then, for academic libraries to build additional open education resources for faculty and students beyond subscription content. Our work looks at how libraries can provide access via the institutional repositories to research being created on our campuses.

Ultimately, dedicated staffing and funding are necessary for successful digitization programs (Lampert & Vaughan, 2009). In some cases, institutional repositories may ask users to describe the metadata content (Terras, 2011; White & Hemmings, 2011). Another consideration is the defining of collaborative roles in institutional repositories. Miller (2008) described time commitments and written contracts with departments regarding institutional repository content. For example, faculty generate and collect data for grants while librarian subject specialists can identify how best to organize and curate the metadata to make it accessible for future use.

For the purpose of this article, open education resources (OER) are any educational materials freely available online under open copyright licenses or public domain, including electronic theses and dissertations, alternative textbook sources, and other supplemental instructional materials. Librarians have a unique role as translators and mediators between content generators (faculty) and content users (students and other researchers). Libraries are positioned to provide guidance to faculty exploring alternative education materials.

Background

The “Context: Library Series” was established in 2004 to bring instructionally-related library exhibits to CSUSM. Much like the institutional repository, Context provides access to unique content that students would not normally have access to as part of their regular research and curriculum. The series, like the books, periodicals, and media of the library, supports student learning by providing access to a variety of viewpoints, and by facilitating research and dialogue related to each installation.

Context strives to provide a deeper understanding of the world around the students. For example, the inaugural installation “Lynching in America” (fall 2004) immersed students in an evocative interpretation of historical events and racial theories. Students from

history and political science classes wrote papers examining the “Veterans” in the fall 2006 exhibit featuring black and white photographs from the Vietnam War. Large photo murals of bacteria, algae, and fungi in the “Growth and Change” exhibit in spring 2006 supported curricula in biology, chemistry, and physics. Both the “Wounded Hearts: A Journey Through Grief” (in fall 2011) and “More than a Fence: (de)Constructing Mexico/U.S. Borders” (in fall 2013) exhibits provided an interactive space for students to voice their own stories, experiences, and beliefs on the subject matter. The Context: Library Series is just one example of how content is curated on a campus. Original content is created in the form of grant research, student work, arts and lecture presentations, and more. By capturing, describing, and providing access to curated materials, the library can further develop its collections with low-cost, relevant, curriculum-driven content.

In spring 2011, the Library Dean hired an Institutional Repository Librarian to plan, develop, and implement an institutional repository at CSUSM. The goal of ScholarWorks at CSUSM is to collect, organize, preserve, and broadly disseminate the scholarship and creative works of the faculty, staff, and students. ScholarWorks is not just a library project, but one that crosses over departmental and programmatic boundaries. The primary content available in ScholarWorks comes from the electronic theses, graduate projects, and dissertations (ETDs) and the Context: Library Series exhibits, with additional content from faculty research and scholarship. Within the next year, ScholarWorks will also include content from undergraduate research and creative activities.

ScholarWorks uses the open source DSpace Repository platform with hosting and development support from the California State University Chancellor’s Office. This support configuration saves the local campus the expense of hiring programmers and developers to support ScholarWorks, but it also means that there may be significant time delays when new collections or metadata schemes need to be implemented. We will discuss this further in the challenges section of this article.

Methodology

An online survey was distributed to all CSUSM tenure track and adjunct faculty as well as to the Faculty Center, deans, and department chairs. The survey determined existing faculty awareness of library services and assessed the willingness of the community to support free online scholarly materials. The survey (see Appendix A) sought to determine existing awareness of library services, such as the ScholarWorks institutional repository, and willingness to use free online scholarly materials in curriculum development and pedagogy.

The total population surveyed was 564 faculty: 238 tenure track faculty and 332 adjunct faculty. The survey received 107 responses, an 18% percent response rate. Sixty-one percent of the respondents were tenure track. Of the 107 respondents, 41.58% were from the College of Humanities, Arts and Behavioral Sciences, followed by College of Business Administration (19.80%), College of Science and Math (17.82%), College of

Education, Health and Human Services (14.85%), and Library (2.97%) (see Figure 1). This breakdown is fairly representative of the college populations at CSUSM.

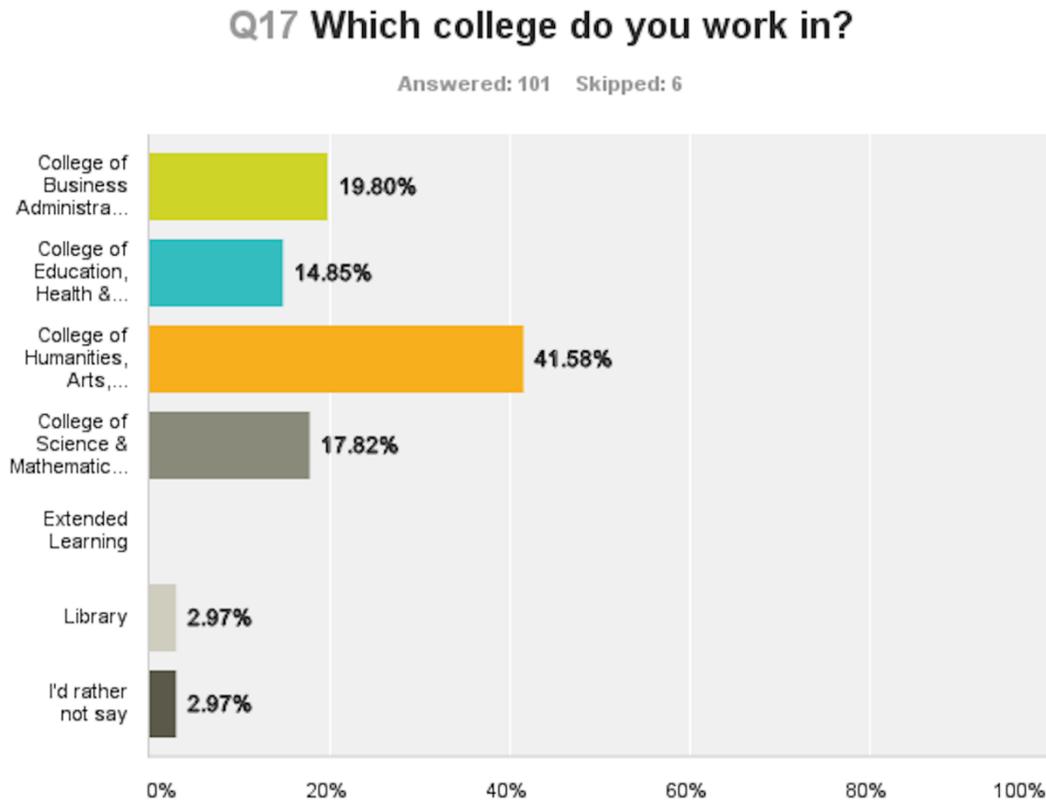


Figure 1. Survey Response by College

Results

The survey results show a strong interest in free or reduced cost educational materials, as well as a high level of concern about the cost of educational materials. Faculty responses indicate that they are looking for alternatives to high priced materials, and are looking to the library for assistance. Most noteworthy is the response to the survey question: “Are you interested in utilizing free or low-cost primary source materials in your pedagogy/curriculum development?” 70% indicated *yes*; four percent, *no*; and 26%, *not sure* (see Figure 2). Similarly, in response to the question “How important is the cost of textbooks or other required materials in your course planning?” the vast majority of respondents (83%) indicated *very important* or *important*. Ninety-four percent indicated concern about the cost of educational materials. In conjunction with a strong interest in using free or low-cost educational materials, this concern with the rising costs of textbooks suggests the timeliness of libraries providing access to free, locally created content, as well as a readiness of users (in this case, faculty) to utilize this content.

Q3 Are you interested in utilizing free or low-cost primary source materials in your pedagogy/curriculum development?

Answered: 107 Skipped: 0



Figure 2. Survey Response

In the survey, 88 of the 107 faculty respondents indicated they typically find source materials for their curriculum development online, followed by journals in their discipline and colleagues (see Figure 3). The library can build upon this willingness to use online source materials with content available in their institutional repositories.

Q4 Where do you typically find source materials for your pedagogy/curriculum development? Check all that apply:

Answered: 105 Skipped: 2

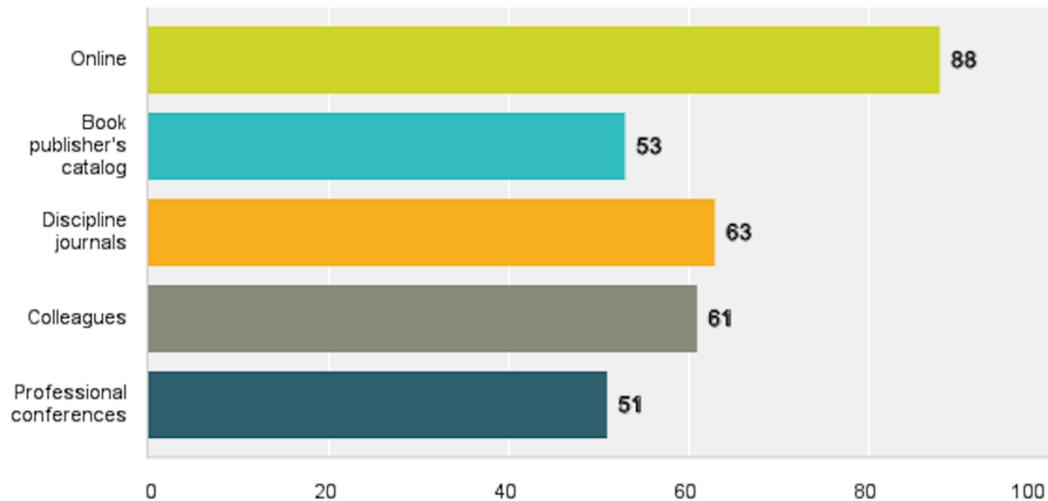


Figure 3. Survey Response

Fifty percent of respondents indicated they attended or participated in past library exhibits. Twenty-five percent have utilized the exhibits in their curriculum (see Figure 4). Despite this awareness of the library's physical exhibits, only 10% (11 respondents) were aware of the virtual library exhibits, and only five respondents had accessed the exhibits online via the institutional repository. The virtual exhibits are in a nascent stage; there is need for a marketing campaign to promote usage and awareness of this library resource. In fact, 51 respondents indicated they would be *very likely* or *somewhat likely* to allow students to use the virtual exhibits in their research or assignments; 43 respondents are *very likely* or *somewhat likely* to assign the virtual exhibits as part of coursework.

Q8 Have you utilized any of the library exhibits in your pedagogy/curriculum?

Answered: 106 Skipped: 1

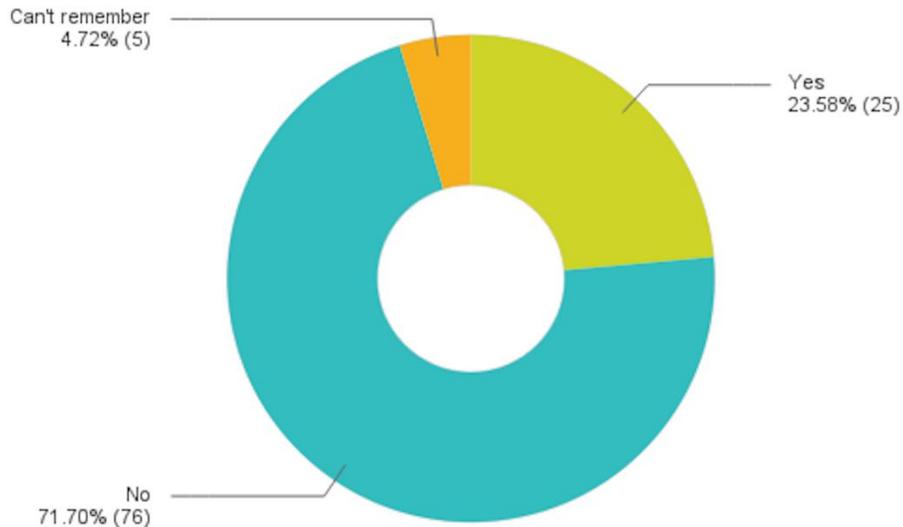


Figure 4. Survey Response

While the faculty may not be aware of all the material available in the repository, the material is being accessed. CSUSM does not currently track the IP addresses or require authentication to view the material, so users may be coming from communities on campus as well as around the globe. While we do not track where our users are coming from, we do track usage statistics with Google Analytics.

Challenges to Implementation

One challenge is for libraries to advocate for and help users better understand what “open” means, while defining the library’s role in curating the material. The influential “NMC Horizon Report” (Johnson et al., 2013) identifies “openness -- concepts like open content, open data, and open resources” as the primary trend in higher education for 2013-2018:

As authoritative sources lose their importance, there is need for more curation and other forms of validation to generate meaning in information and media. “Open” continues its diffusion as a buzzword in education, and

it is increasingly important to understand the definition. Often mistakenly equated only with “free,” open education advocates are working towards a common vision that defines “open” as free, copyable, remixable, and without any barriers to access or interaction. (Johnson et al., 2013, p. 7)

Trends in higher education sometimes work well on the macro level and don't necessarily translate to the local or micro level. The survey results bolster the argument that the campus climate is ready for libraries to create sustainable open educational resources, indicating the potential for success both at the macro and the micro level.

Cirasella and Deutch (2012) addressed challenges of creating digital archives of the library's standing collection of artwork, including acquiring copyright from artists, taking high resolution photographs of artwork encased in glass, and writing detailed descriptions for each piece of artwork. Another challenge, identified by Royster (2008), is providing resources for students creating fully-accessible PDF files for their theses and dissertations.

For organizations that utilize a hosted service for their institutional repository, timing and workflow are additional considerations that must be factored in. Even though the CSUSM ScholarWorks repository is hosted by the system-wide Chancellor's Office, progress on ingesting materials came to a complete stop when the Chancellor's Office staff person left the organization. A candidate has been hired and the position filled, but not without a backlog of materials and development needing to be done for all of the CSU-hosted IRs. Since CSUSM's ScholarWorks repository is hosted by the Chancellor's Office, progress on ingesting materials is seriously impacted by staffing changes at that level.

Conclusion

The data from this survey and an examination of the current campus climate combined with the analysis of implementation factors by other organizations supports the argument for campus libraries to create open repositories for campus scholarship. There are numerous benefits to facilitating faculty use of institutional repositories. By providing open access, their research will have broader dissemination than subscription journals, which in turn will lead to increased citations. The research may also be disseminated more quickly than a journal's review and publication cycle. Faculty retain the copyright to their own work in their institutional repository, thereby allowing them to further disseminate in other venues, publications, or conferences. Depending on the institution, faculty may also publish their pre-publications, poster presentations, and slides in the repository. By providing access to pre-publications, faculty may still submit their work for publication in traditional journals that offer the perception of validity or worthiness in their discipline.

The institutional repository can provide open education resources for use in the classroom and in pedagogical development. It can act as a low-cost/no-cost alternative

repository for textbooks, and in some cases comply with legislative mandates (California Senate, 2012; California Senate, 2012a). Many federal and state granting agencies, such as the National Institutes of Health and the National Science Foundation, have public access policies that require researchers to publish data gathered with grant funding (U.S. Executive Office of the President, 2013; U.S. Department of Health and Human Services, 2013). The institutional repository can also provide access to previously inaccessible content with virtual representations like those in the Context: Library Series.

Future research might address best practices in implementing institutional repositories, how libraries might better market and promote the IR, and how best to sustain user-created content. Libraries might also consider how to make IRs more interactive, such as providing means of discussion about the content, or even crowd-sourcing cataloging and contribution of content, as was done in the “socially-constructed” Grateful Dead Archive Online (<http://www.gdao.org/>). Additionally, research is needed to address the usability of IR websites, how easily people are able to find material, and how people are using these resources.

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Appendix A

1. How often do you use the library website?

- Daily
- Weekly
- Monthly
- Once a semester
- Never
- I prefer not to answer

2. How important is the cost of textbooks or other required materials in your course planning?

Very important Important Neither important nor unimportant Unimportant Very unimportant

3. Are you interested in utilizing free or low-cost primary source materials in your pedagogy/curriculum development?

- Yes
- No
- Not sure

4. Where do you typically find source materials for your pedagogy/curriculum development? Check all that apply:

- Online
- Book publisher's catalog
- Discipline journals
- Colleagues
- Professional conferences

Other (please specify)

5. Are you concerned about the cost of educational materials?

- Yes
- No

6. If yes, how concerned are you about the cost of educational materials for students?

Extremely concerned Moderately concerned Somewhat concerned Slightly concerned Not at all concerned

Powered by **SurveyMonkey**

7. Have you attended/participated in any library exhibits?

- Yes
- No
- Can't remember

8. Have you utilized any of the library exhibits in your pedagogy/curriculum?

- Yes
- No
- Can't remember

9. Are you aware of the virtual library exhibits? If your response is no, you may skip to question 12.

- Yes
- No

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10. Have you used or accessed the library exhibits online?

- Yes
- No

11. What changes (if any) would improve the online exhibits?

12. Overall, are you satisfied with your experience using the library's web-based resources?

Very satisfied	Somewhat satisfied	Neither satisfied nor dissatisfied	Somewhat dissatisfied	Very dissatisfied
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. How likely would you be to allow students to use the following resources in their research/assignments?

	Very likely	Somewhat likely	No opinion	Not likely	Highly unlikely
A digital repository of theses and dissertations	<input type="radio"/>				
A virtual archive of the CSUSM library exhibits	<input type="radio"/>				
Digitized materials from the University Archives	<input type="radio"/>				
PDFs of faculty scholarship, i.e. journal articles	<input type="radio"/>				
Data sets (NOT confidential data)	<input type="radio"/>				

14. How likely would you be to assign the following resources to your students for coursework?

	Very likely	Somewhat likely	No opinion	Not likely	Highly unlikely
A digital repository of theses and dissertations	<input type="radio"/>				
A virtual archive of the CSUSM library exhibits	<input type="radio"/>				
Digitized materials from the University Archives	<input type="radio"/>				
PDFs of faculty scholarship, i.e. journal articles	<input type="radio"/>				
Data sets (NOT confidential data)	<input type="radio"/>				

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15. Please share any additional comments that you may have.

16. What is your status on campus?

- Tenure Track Assistant Professor/Librarian
- Tenure Track Associate Professor/Librarian
- Tenure Track Full Professor/Librarian
- Adjunct/Lecturer
- I'd rather not say

17. Which college do you work in?

- College of Business Administration (CoBA)
- College of Education, Health & Human Services (CoEHHS)
- College of Humanities, Arts, Behavioral & Social Sciences (CHABSS)
- College of Science & Mathematics (CSM)
- Extended Learning
- Library
- I'd rather not say

18. If you would like to be entered into the optional drawing for one of five coffee cart gift cards, please enter your email address. Please note that your email address will NOT be stored with your survey answers.

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