



Faculty Survey at Pitt (Fall 2021): Findings and Recommendations

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Introduction

In late 2021, the University Library System (ULS) administered an Ithaka S+R Faculty Survey. The questionnaire covered topics in several areas, including: the role of the library in supporting faculty needs; how faculty discover and access materials for research; faculty usage of scholarly communication services; faculty research practices, including data preservation and management behaviors and needs; faculty perceptions of students' research skills; and faculty instructional practices, including OER.

Administration of the survey at Pitt took place concurrently with the Ithaka S+R national survey. This will allow ULS (in due course) to compare Pitt's findings with those of the national baseline for other Carnegie R1 institutions. Moreover, this report will provide comparisons, where possible, with findings from the Ithaka S+R Faculty Survey administered at Pitt in spring 2015.¹

Summary of findings

Role of the library (Survey questions: 26-27)

1. Pitt faculty's appreciation of the library's role in supporting their research and teaching needs is very high.
2. The importance of the library among Pitt faculty has increased over time. See Appendix 2 for more details.

Discovery (Survey questions: 1-7)

1. Only a fifth of the respondents begin their search for scholarly journals and monographs on a library website or catalog. Google Scholar and specialist databases are more popular options.
2. This trend, away from library catalogs, is likely to accelerate over time, with early-career faculty indicating a stronger preference for GS and general search.
3. Pitt library collections and subscriptions are essential to all faculty for their research and teaching. Equally important are materials that are freely available online.
4. Resource-sharing services provided by the library are essential to faculty in accessing monographs and articles not readily available at Pitt.
5. When resources cannot be readily accessed, faculty are likely to give up their search for the resource and look for a substitute with ready access.
6. More respondents point to the importance of electronic versions of monographs to their teaching and research than print versions. However, they find some aspects of working with text easier with print.
7. The majority of the respondents agree that library physical collections will become less necessary in the next five years due to the prevalence of use of e-books among faculty and students.

¹ Not many questions between 2015 and 2021 administrations remain in common. The comparisons are only possible for the questions that were identical in both administrations.

Research practices (Survey questions: 8-25)

1. Survey respondents' professional activities can be grouped into three categories: research and research administration, teaching and mentoring, and service and outreach. While most agree that the right amount of attention is given to their research and teaching activities in promotion or tenure considerations, many would like to see more value given to their mentoring activities and external engagement with partners and non-academic audiences. A quarter believes that too much weight is given to research fund-raising efforts.
2. Most respondents acknowledge the importance of analysis of pre-existing qualitative data and pre-existing quantitative data to their research process.
3. Under a tenth of the respondents claim not to generate data during their research work. For the remaining respondents - qualitative and quantitative data are the main types generated, followed by scientific data. Predictably, the balance of data types produced varies from discipline to discipline.
4. A peer-reviewed journal, followed by a conference proceeding, and a monograph or an edited volume are still the preferred modes of sharing research among all respondents (regardless of their discipline or status). However, we also note that a significant minority of respondents also share their research via blogs and social media, data and datasets, and images and media. More than half of the respondents shared their research in working papers or pre-prints.
5. Less traditional ways of sharing research are more prevalent among more junior respondents (e.g., on social media).
6. Journal prestige, audiences, and disciplinary fit are the most important considerations when selecting where to publish.
7. Respondents also would like to publish in the outlets that are free to publish and free to read.

Scholarly Communication (Survey questions: 14-21)

1. Survey respondents would be happy to see the traditional subscription-based publishing model replaced by the open-access model and to see traditional publishers involved in the new model.
2. Library's help with assessing the impact of their research post-publication is most frequently listed, followed by help with managing their public-facing webpages as extremely valuable or valuable to them.
3. Junior faculty are more likely than their senior colleagues to consider scholars outside their discipline, non-academic, and undergraduates to be important audiences for their research.
4. Respondents believe that more recognition in the promotion and tenure process should be given to non-traditional outputs such as software and code, data and datasets, and trade books.

Data Management (Survey questions: 22-25)

1. The majority of respondents believe that it is important to manage and preserve research data (for reproducibility).

2. However, they also admit to finding it challenging to organize and preserve their data, media, or images; and many consider the time spent organizing their data for deposit and re-use not “worth their time”.
3. Only a small minority of the respondents do not preserve their research data upon the conclusion of their project. Those who do, tend to manage the process themselves using either commercial or free file sharing services or institutional or disciplinary repositories.
4. The majority of respondents rely on institutionally hosted services for their data storage support, while only a quarter consider a third-party service a vital source of support.

Teaching and Instruction (Survey questions: 28-34)

1. Half of the survey respondents believe that their students have poor research skills relating to the discovery and evaluation of scholarly information, and most of respondents believe that improving these skills is an important component of their courses.
2. While many respondents recognize an important role of libraries in helping students find, access, and use primary and secondary sources of information, under half believe that libraries offer significant support in helping students identify media manipulation and misinformation.
3. The majority of survey respondents are interested in using open educational resources (OERs) in their teaching, and further, 40% are interested in creating and publishing OERs.
4. A third of all respondents report difficulties in locating OER materials for their teaching.
5. Another third of the respondents feel that Pitt does not recognize or reward faculty for taking the time to integrate OERs into their teaching.

Method

Sample

The population sample was defined using Pitt's PeopleSoft job classifications. We defined "faculty" as current employees classified in PeopleSoft under the "Job Type" classification as faculty, post-doc, or research associate. At the time, 7,640 individuals met the criteria. Since faculty in Medicine, Dental Medicine, Nursing, Pharmacy, SHRS, SPH, and Law are not directly supported by ULS, we randomly selected 20% of their overall populations to receive survey invitations. Also, we excluded from the sample all faculty employed in any of the three Pitt library systems (ULS, HSLs, and Law). Ultimately, the invitation to participate in the Ithaka survey was sent to 3,970 faculty, post-docs, and research associates across the university, including the main and regional campuses.

Administration

To encourage participation from faculty, we decided on an incentive that would benefit the student population. We selected the Pitt Student Emergency fund, which has similar offerings at Bradford, Greensburg, and Johnstown campuses. For each complete response, we donated \$2 to the funds with a cap of \$1,500.

The university Librarian sent invitations to launch the survey on 7 October 2021. Subsequent reminder emails were sent on 14 October from the Provost, 25 October from the Faculty Senate President, and 8 November from the ULS Ithaka Survey team. The survey closed on 19 November. The survey results were returned to the ULS in January 2022 as both CSV and SPSS files.

Response rates

Of the 3,970 faculty who received the invites, 946 (24%) faculty completed or partially completed the survey. Incomplete returns could result from the survey's "skip logic," where specific responses to questions may trigger the suppression of the next question or respondents' decision not to answer a question. To avoid the missing data bias, responses from incomplete surveys were included in the analysis.

Respondents from the Kenneth P. Dietrich School of Arts & Sciences comprised the largest group of respondents - 429 (45% of the total pool of respondents despite being only 31% of the pool of invitees). The second biggest cohort was from Medicine with 110 respondents (11.6% v. 16% of the total population invited to participate), followed by Swanson School of Engineering with 80 respondents (8.5% vs. 9% of the population). All other Responsibility Centers were represented in the survey by fewer than 50 respondents. See Table 1 below for population and sample breakdown by RC codes. Because of the low numbers of respondents in most RCs (under 50), no stratification of data by RC was carried out.

Table 1: Population and sample size by Responsibility Center.

Responsibility Center (RC)	Population invited to participate	% Population	Respondents	% Respondents	% diff
Kenneth P. Dietrich School of Arts & Sciences	1230	30.98	429	45.3	14.37
Medicine	637	16.05	110	11.6	-4.42
Swanson School of Engineering	369	9.29	80	8.5	-0.84
Education	212	5.34	34	3.6	-1.75
Johnstown	206	5.19	34	3.6	-1.59
Katz Graduate School of Business	187	4.71	43	4.5	-0.16
Greensburg	157	3.95	46	4.9	0.91
Bradford	141	3.55	32	3.4	-0.17
College of General Studies	132	3.32	5	0.5	-2.80
School of Computing and Information	120	3.02	28	3.0	-0.06
Social Work	115	2.90	11	1.2	-1.73
SHRS	96	2.42	20	2.1	-0.30
GSPIA	77	1.94	14	1.5	-0.46
GSPH	44	1.11	8	0.8	-0.26
LRDC	40	1.01	13	1.4	0.37
Dental Medicine	40	1.01	5	0.5	-0.48
Law	40	1.01	3	0.3	-0.69
Nursing	33	0.83	13	1.4	0.54
UCIS	30	0.76	3	0.3	-0.44
Pharmacy	22	0.55	7	0.7	0.19
Titusville	12	0.30	3	0.3	0.01
UCSUR	9	0.23	3	0.3	0.09
SVC and Provost	9	0.23	1	0.1	-0.12
Educ-Univ Service Programs	8	0.20	0	0.0	-0.20
Chancellor	3	0.08	0	0.0	-0.08
Honors College	1	0.03	1	0.1	0.08

Demographics

The tables below show the distribution of population and respondent pools by different demographics. We note differences for some groups (possible overrepresentation of arts and humanities respondents or underrepresentation of instructors and non-tenure stream faculty); however, the overall differences are small.

The tables below show the distribution of population and respondent pools by different demographics. We note differences for some groups (possible overrepresentation of arts and humanities respondents or underrepresentation of instructors and non-tenure stream faculty), however, the overall differences are small.

Survey questions were analyzed for all respondents and stratified by discipline, years in a discipline (academic age), and research vs. teaching concentration. The differences were noted only if statistically significant (where Cramer's V > 0.2 and p < 0.001).

Disciplines

Table 2: Population and sample size by Academic discipline.

Disciplines	Population	% Population	Respondents	% Respondents	% Diff
Medicine & Health Care	989	24.9	177	18.7	-6.2
Education	381	9.6	50	5.3	-4.3
Engineering	401	10.1	83	8.8	-1.3
Business	230	5.8	50	5.3	-0.5
Not specified	19	0.5	1	0.1	-0.4
Sciences	642	16.2	171	18.1	1.9
Social Sciences	674	17.0	188	19.9	2.9
Arts & Humanities	634	16.0	227	24.0	8.0
Grand Total	3970	100%	947	100%	

Faculty Rank

Table 3: Population and sample size by faculty rank.

Faculty rank	Population	% Population	Respondents	% Respondents	% Diff
Instructor/Lecturer	1603	40.4	300	31.7	-8.7
Other (Post-doc)	364	9.2	58	6.1	-3.0
Research Associate	68	1.7	16	1.7	0.0
Assistant Professor	775	19.5	201	21.2	1.7
Professor	561	14.1	168	17.8	3.6
Associate Professor	599	15.1	203	21.5	6.4
Grand Total	3970	100%	946	100%	

Tenure Status

Table 4: Population and sample size by tenure status.

Tenure status	Population	% Population	Respondents	% Respondents	% Diff
Tenure	767	19.3	286	30.2	10.9
Tenure stream	203	5.1	81	8.6	3.4
Non tenure	3000	75.6	579	61.2	-14.4
Grand Total	3970	100%	946	100%	

In other demographics, most respondents were at Pitt for ten or fewer years (52%). On the other hand, 45% of respondents have spent 21 or more years in their disciplines, and only 20% ten or fewer years. 41% of respondents spend more time teaching than researching (these are mostly in faculty rank of Instructor or Lecturer), and 36% claim to spend more time researching than teaching (these are Professors, Post-docs, and Research Associates). Finally, 40% of

respondents, in the last five years, received external funding from a public source. For a full demographic breakdown of survey respondents, see the tables in Appendix 1.

Findings

Role of the Library

Respondents generally acknowledge that the library remains an important partner in their research and teaching endeavors. Nearly 90% of respondents acknowledge the high importance of the library as a provider for the resources they need. Other highly rated library functions relate to their support for students, such as

- research support for graduate students,
- research and critical thinking skills for undergraduates, and
- provision of technology and spaces in support of student learning.

Overwhelmingly, respondents agreed that as the cost of library materials increases, the library should be adequately funded to preserve access to these materials.

Discovery

The first part of the survey was designed to understand how faculty seek scholarly information and how they access it, including their use of electronic books. All respondents find Pitt library collections and subscriptions extremely important or important to their research and teaching. Nearly all respondents find free online materials of equal importance. There are no discernible differences across academic age or disciplinary groupings.

The biggest cohort of respondents begins their search for articles and monographs either on Google Scholar (GS) or on a generic search engine (39%), followed by specialized databases (34%) and the library website or catalog (22%). The differences noted were significant for respondents' academic age (those with a shorter time in discipline tended to begin their research in GS, Cramer's V 0.279, $p < 0.001$), and research vs. teaching concentrations (those who identified predominantly as teaching faculty prefer to start their search using the library catalog, Cramer's V .334, $p < 0.001$).

We also note some differences based on respondents' discipline. While nearly 90% of early-career engineering faculty begin their research using GS or a general search engine, over a third of arts and humanities and social sciences faculty begin their search on a library website or catalog (this drops to a quarter for younger faculty). The reliance on specialist databases is the highest for researchers in medical and health-related disciplines and sciences (at 61% and 45%, respectively). Some faculty provided additional commentary. A respondent in the social sciences field noted: "I have a specific order - I start with google because then I get good policy lit. Then I go to google scholar and get highly cited classics. Then I go to pubmed. I used to use ovid at the health sciences library a lot to get a good list of articles using their various features. I use pittcat to follow up and get pdfs a lot". And a faculty in arts and humanities adds: "It depends on the context. Most often I visit journals I know are relevant, or I start with a general search on Google Scholar which then send me to the library."

If a book or an article they need is not readily available, over 90% of faculty will "often or occasionally" search for free online access, and 70% will use their library's resource delivery

service. Interestingly, nearly 70% of faculty "often or occasionally" will give up their search for the specific item and look for an available alternative. Only a minority of faculty will often or occasionally ask a colleague from another institution (40%), contact the author (30%), or purchase an item (36%). When stratified by academic age, younger faculty are more likely to request a copy from a colleague at another institution (52% vs. 36%). Older faculty are more likely to purchase a needed item (40% vs. 25%). There are no age differences in faculty's use of interlibrary loan services – 70% of faculty across all academic age cohorts will "often or occasionally" request material via ILL. Notable differences between disciplines include a reluctance by arts and humanities faculty to give up the search for a specific resource and search for an alternative and their willingness to purchase copies from a publisher or vendor. Nearly 90% of faculty agree that e-books play a very important role in their research and teaching, while around 70% believe the same for print books. While the importance of e-books is acknowledged equally across disciplinary boundaries, faculty in arts and humanities, education, and social sciences consider the importance of print books most frequently. Over half of the respondents agree or strongly agree that, within five years, the prevalence of e-books will render library print collections no longer necessary. When analyzed by discipline, only 36% of faculty in arts and humanities and 46% in social sciences agree with this sentiment (vs. 60% - 75% for other disciplines). Reading long text cover-to-cover or a section in-depth are the only activities that respondents consider easier using print than electronic books.

Research Practices

Faculty professional responsibilities can be grouped around three themes:

- **Research:** Nearly 80% of respondents conduct academic research, and 49% are involved in fund-raising and grant proposal creation. Finally, 21% are in post-award administration. Of those, some 70% agree that there is "about right" focus on these activities in assessing their work, e.g., in tenure, promotion, or continuing employment considerations. Further, 25% believe that there is "too much attention." Early career researchers (ECRs) spend more hours per week on research fund-raising and post-award admin than more seasoned faculty. 40% of respondents held research grants from public or government organizations in the last five years.
- **Teaching:** Over 90% of the respondents are involved in teaching at either undergraduate or graduate levels. Over 80% - in student mentoring. Of those, the majority believe that there is "about right" focus on teaching in the assessment of their work (e.g., for tenure, promotion, or continuing employment), but nearly 40% feel that "too little" attention is paid to student advising/mentoring.
- **Service:** over 80% of respondents are involved in service to the university or profession, and nearly 50% - public engagement with partners or audiences beyond the academy. Over 30% of those involved in public engagement activities feel that there is "too little" focus on this activity in assessing their work.

The respondents involved in research activities rank qualitative and quantitative data analysis that they collect themselves (70%) as "very important or important" aspects of their

digital research activities or methodologies. Existing data is "very important or important" for some 60% of the respondents. Slightly over half of the respondents acknowledge the importance of models and simulations, around 40% - writing software or code, and around a quarter – computational analysis of text and GIS/mapping of data. It is interesting to note the focus of business researchers on a wide range of data and techniques, including writing software, computational text analysis, and the use of models or simulations.

When generating their data, respondents primarily collect quantitative data (48%), followed by qualitative data (46%), scientific data such as slides, samples, etc. (23%). 9% of respondents do not generate any types of data during their research process. The breakdown of types of data generated follows, somewhat predictably, disciplinary differences – with sciences, engineering, and medicine generating mainly scientific and quantitative data, social sciences – mostly qualitative and quantitative data, education, arts and humanities – qualitative data.

Predictably, peer-reviewed journals are by far the most common mode of sharing their research among the respondents – 95% of respondents share in these (including 71% who do so "often"). These were followed by published conference proceedings (with 85% of respondents publishing in these and 3% - often) and monographs or edited volumes from academic publishers (with 80% of respondents publishing these and 33% - often). More interestingly, 76% of respondents share their research in working papers or pre-prints (elsewhere in the survey, nearly 70% of respondents agree that circulating pre-prints of their publications is an important element of communicating their research findings), 57% in blogs or other social media, 56% in data and data sets, 55% in images or media and in trade magazines. Finally, around 30% of respondents share their software or code or publish their research in books for non-academic audiences. Not surprisingly, respondents with fewer years in research share their research via social media or publish their data more frequently than those with longer tenures (76% of 1-10 years in the discipline use social media vs. 45% of those with at least 21 years in discipline).

When asked about what influences their decision to select a journal for their manuscript, respondents most frequently point to the journal's coverage focus (topical to their area of research), wide readership among scholars in their field, and the journal's perceived prestige (which can be defined by its impact factor score or selectivity). Many also look for journals that they can publish for free (interestingly, there are no significant disciplinary differences here) and that articles can be accessed free on the internet. There seems to be less focus on concerns with the long-term preservation of content or the ability to link to underlying data.

Scholarly communication

The majority of respondents (90%) either agree or strongly agree that they would be happy to see the subscription-based publication replaced entirely by an open access publication model where research outputs would be free to access. They would like the same publishers involved in the new model. On the other hand, only 17% of respondents strongly agree that scholarly publishers are increasingly less important to their process of communicating research. We note small effects of academic age (junior researchers in stronger agreement with the statements). By discipline, we note that respondents from education and medicine and health care are more

likely to strongly agree that the societal impact of scholarly work should be a key measure of research performance (Cramer's V 0.200, $p < 0.000$).

80% of respondents agree that the societal impact of research should be a key measure in measuring research performance. However, only 17% of respondents strongly agree that Pitt incentivizes or promotes faculty to publish in formats that are available free to readers. Help with assessing the impact of their research post-publication is the most frequently listed as extremely valuable or valuable (63% of respondents), followed by help with managing their public-facing webpages (62%). This need for support is mostly equitably distributed across disciplinary groupings of respondents. While respondents from education are most likely to value support in negotiating publication contracts and identifying publication outlets for maximum impact (70% of respondents in education vs. just over 50% for the entire population).

While scholars and graduate students in their discipline were universally considered primary audiences for our respondents' research, respondents in education and medicine and health sciences also considered the general public and policy makers in that category. Also, regardless of discipline, more junior researchers were more likely to consider "non-academic audiences" and undergraduate students as important audiences for their research. Depending on the format, between 50 to 70% of respondents claim that their published outputs are available online, free of charge.

Scholarly monographs, edited volumes, and trade books for general audiences are the least likely to be available free online, while data, code, and journal articles are most likely. Respondents' outputs are most likely to be available "elsewhere online" and equally in D-Scholarship or in a disciplinary repository.

Generally, respondents agree that non-traditional research outputs should receive less recognition than standard outputs, such as articles and monographs in academic promotion and tenure committees. Respondents identified some exceptions: software or code, data and datasets, and trade books were mentioned as outputs that deserve equal or more recognition than articles and academic monographs.

Research data

Respondents almost universally agree that it is important for researchers to organize and deposit their data sets so others can attempt to reproduce their findings. However, the majority of respondents also admit to finding it difficult to organize and preserve long-term their data, media, or images. 70% of respondents also strongly or somewhat agree that the time to organize and preserve data for others to use is not worth the effort.

80% of respondents tend to store their working data and files on their own computers, while 60% also use cloud-based storage.

When asked about the perceived value of sources of support for managing and storing their research data, respondents pointed to institutionally managed hosted services (over 72% find them extremely valuable), personally accessed hosting services (65%), and other freely available software (55%). Support from a library or IT department is highly valued by 43% and 40% of respondents, respectively. Interestingly, commercial services such as Figshare or Mendeley and scholarly societies were highly valued by just under a quarter of the respondents.

8% of researchers do not preserve their data after the conclusion of their project. The majority of respondents (over 60%) preserve their data using commercially or freely available software services, 40% use either institutional or disciplinary online repositories, and 16% rely on publishers to preserve their research data. 6% of respondents claim that their campus library preserves their data on their behalf.

Teaching and instruction

Half of the survey respondents agree that their undergrad students have poor skills related to locating and evaluating scholarly information. Nearly 70% believe that improving these skills is an important educational goal of their courses. Furthermore, 57% of respondents believe that librarians contribute significantly to their students' learning by helping them locate, access, and make use of materials for their coursework. Respondents' disciplinary backgrounds do not seem to predict their responses.

Respondents particularly value the library's support in the following aspects of instruction: academic integrity (54% find it valuable or extremely valuable), understanding copyright (52%), and discovering media content for teaching (50%). Moreover, respondents in arts and humanities, education, and social sciences value the library's role in helping them diversify course materials (e.g., centering on works of authors of color and/or anti-racist content). (Cramer's V 0.200, $p < 0.001$).

While survey respondents prioritize course texts and materials that are of no or low costs to students (65% do so often) and give preferences to materials available through the library (43%), only a handful inform librarians about the contents of their course reading lists (12% do so often) or liaise with a librarian before finalizing these lists (5%).

The use of OERs in teaching at Pitt is high. 91% of respondents reported the use of open textbook(s), and 82% of respondents reported teaching with open course modules or video lectures. When it comes to creating OERs, the trend is reversed – 33% of respondents created open video lectures, 29% - open course modules, and 15% - open textbooks. While some 70% of respondents are interested in using OERs in their teaching, only 40% are interested in creating and publishing OERs.

Their views on ease of locating OERs for their teaching, institutional support for using OERs, and institutional recognition for faculty developing OERs are mixed (with around 20% claiming that they are easy to find and access and another 20% claiming difficulties in locating such materials or expressing no opinion on the matter). No significant differences based on demographic stratifications such as academic age or discipline were noted.

Recommendations

Collections and access

1. Focus on improving the discoverability of ULS licensed and open-access and other freely available materials via GS and other search engines.
2. Help researchers configure their browser to allow GS to access Pitt holdings.
3. Focus on improvements to resource-sharing services.
4. Plan library spaces around activities other than access to physical materials.

5. Promote and provide support for reading, annotating, and note-taking tools from e-books (e.g., Adobe Digital Editions, Readwise, Liner).
6. Consider ULS journal subscription/access models to meet faculty needs where researchers want to publish for free and allow their content to be freely available while respecting their need to publish in high prestige outlets.

Research Support

1. Consider ULS support for capture, preservation, and access to new modes of scholarly communications (e.g., blogs and social media, data and datasets, and images or media).
2. Strengthen ULS support for research outputs assessment and impact.
3. Provide support to faculty to update a public website with their scholarly outputs.
4. Explore further opportunities for support in data management and preservation (particularly, where funder mandates are in place).

Student Support

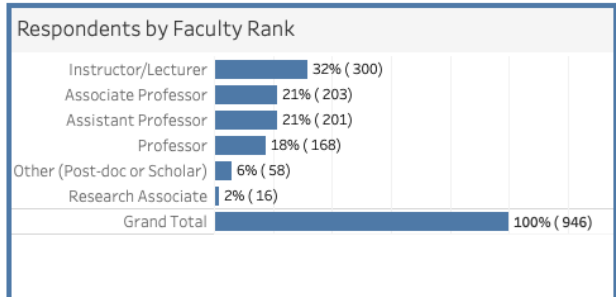
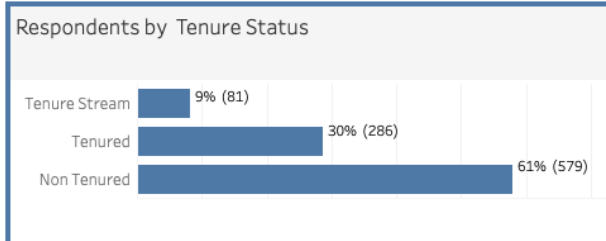
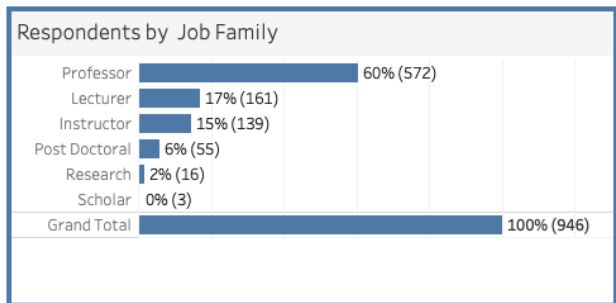
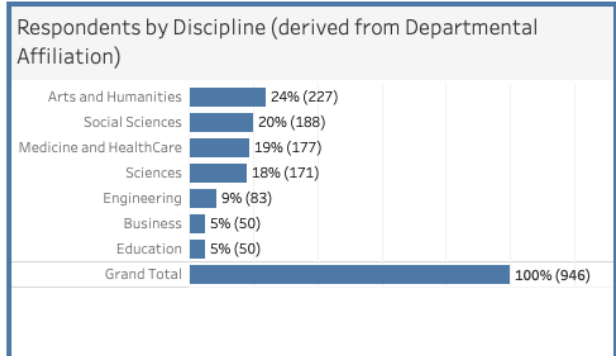
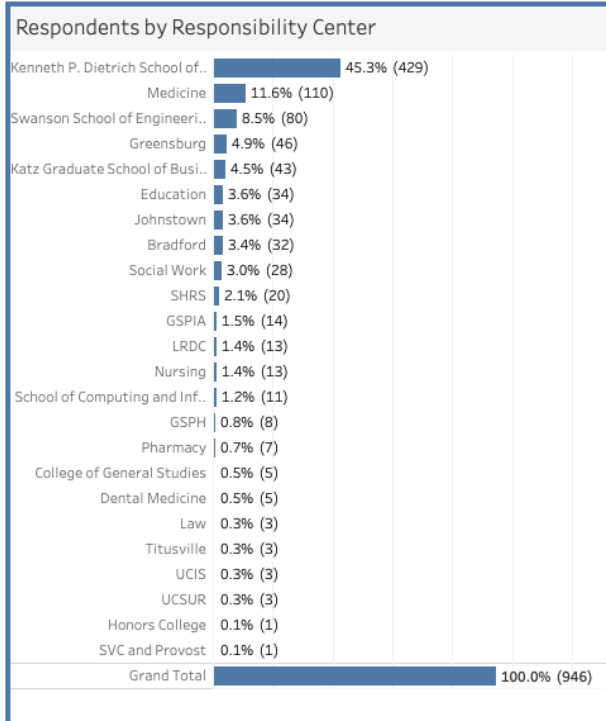
1. Expand research support for graduate students (e.g., tools, skills, scholarly comms.).
2. Pivot support for instructors teaching undergraduate courses, to support critical skills development that may lie outside their own curricular goals, (e.g., ethical use of information, copyright, identifying media manipulation).

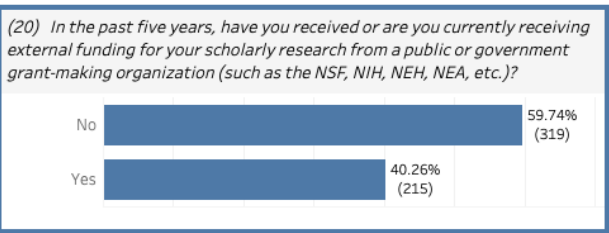
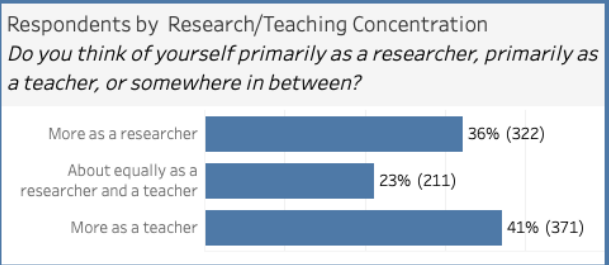
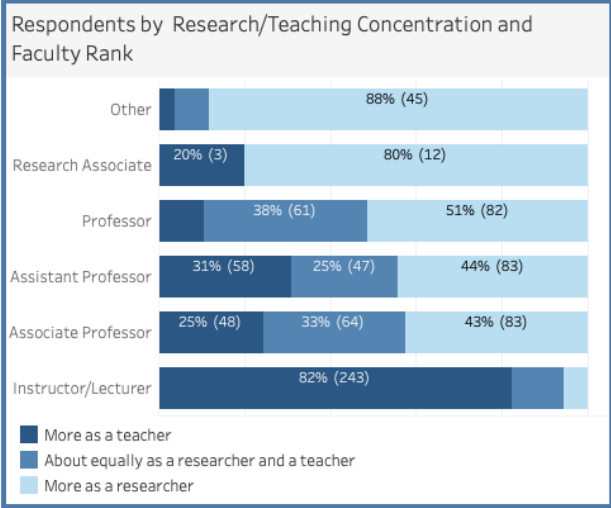
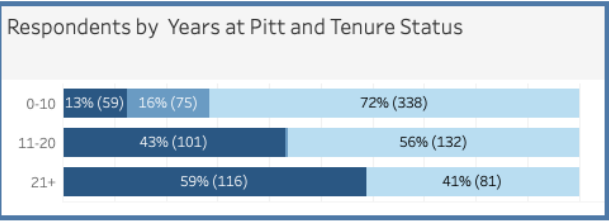
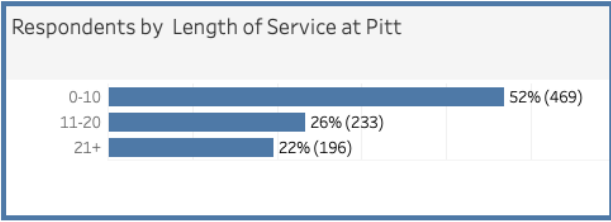
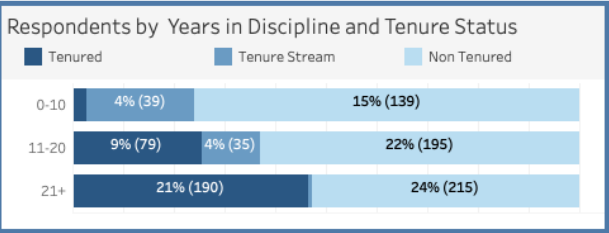
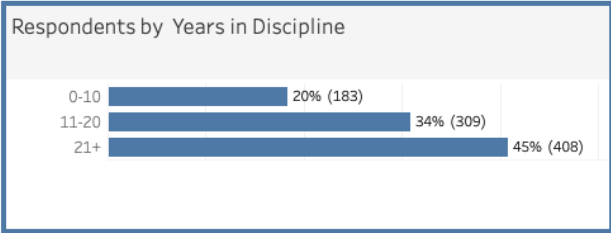
Communications

1. Improve communications to faculty about existing and new(er) ULS services.
2. Communicate the survey findings to the university administration, particularly where they express the value of library services to their research and teaching.

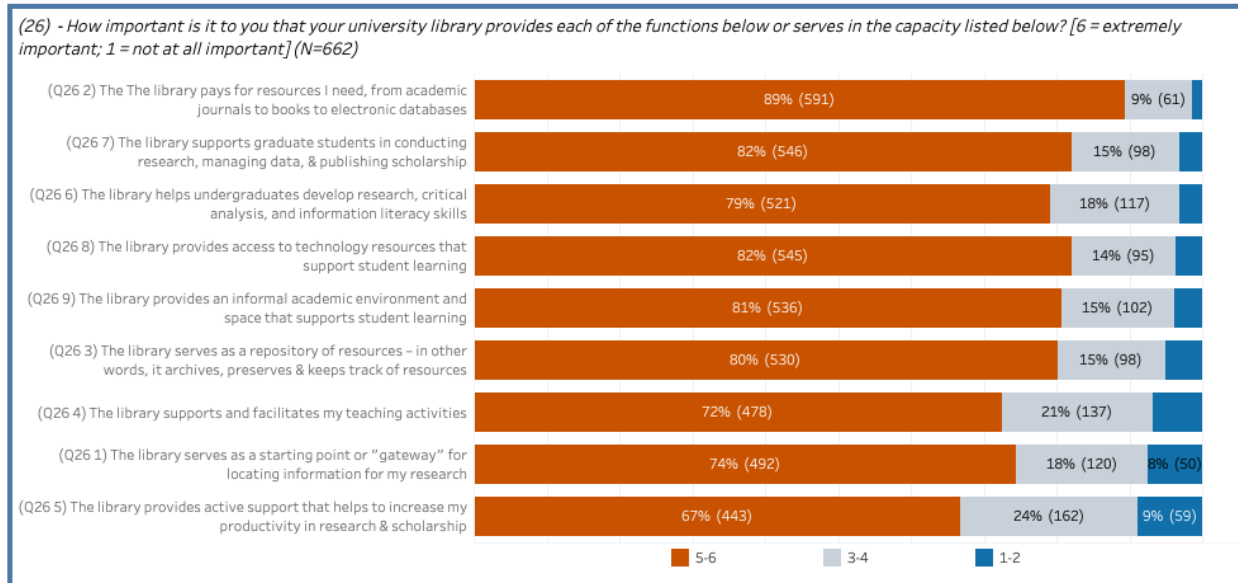
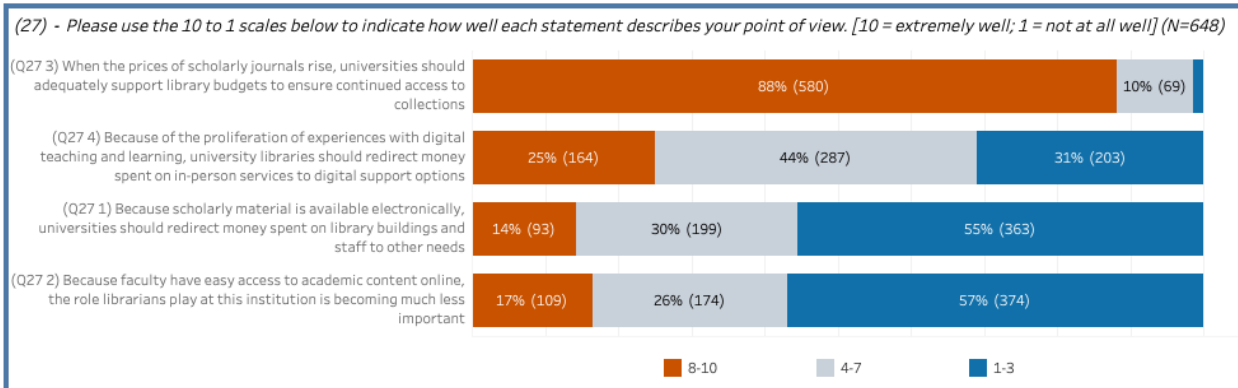
Appendix 1

Demographics



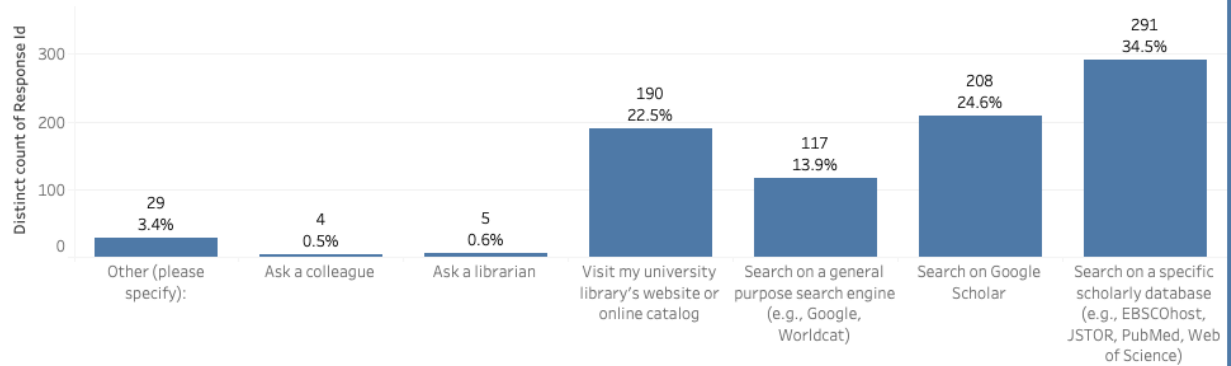


Role of Library

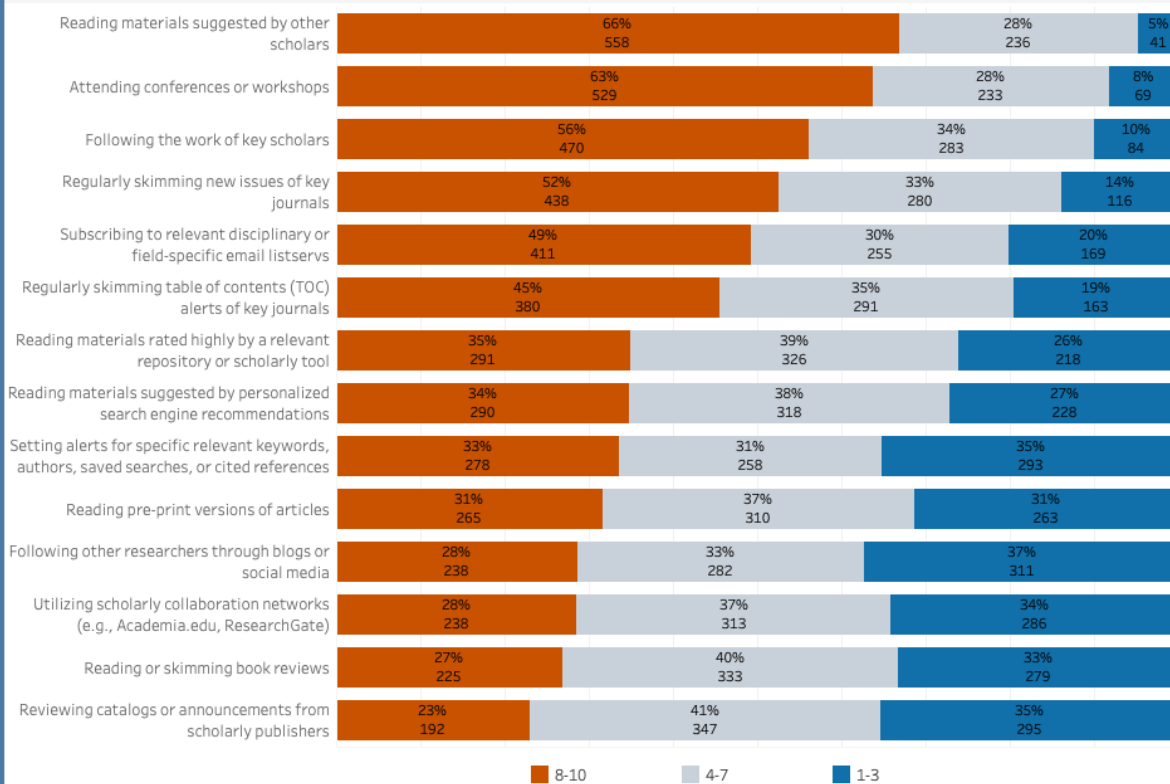


Discovery

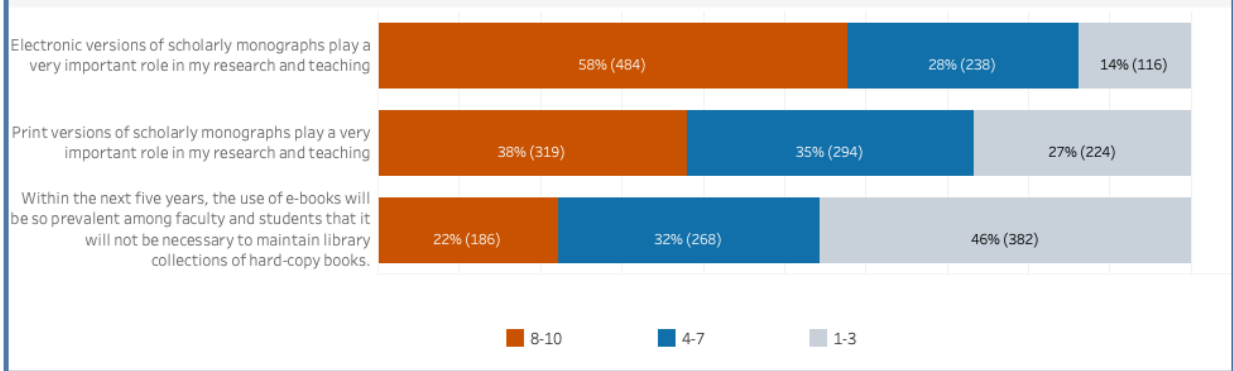
(1) When you explore the scholarly literature to find new journal articles and monographs relevant to your research interests, how do you most often begin your process? Select one of the following:



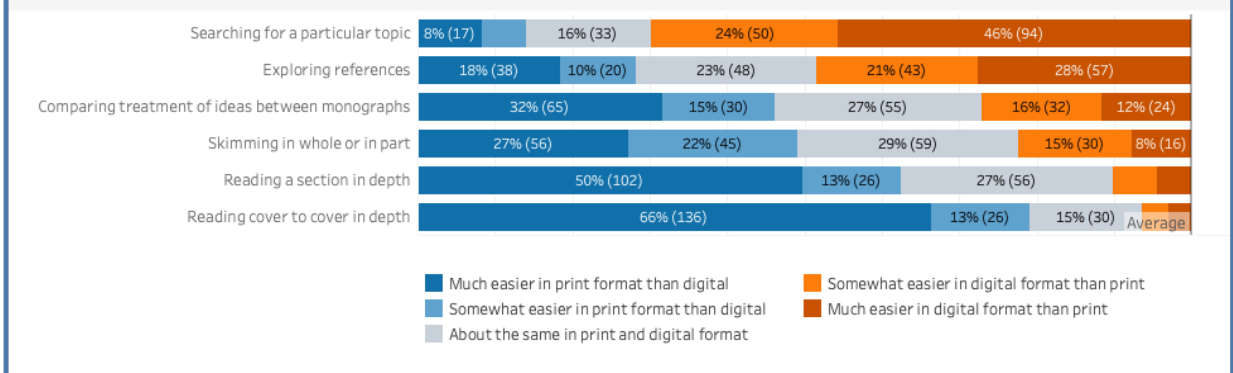
(2) You may employ a variety of different tactics to "keep up" with current scholarship in your field on a regular basis. Please use the scales below to rate from 10 to 1 how important each of the following methods is for staying current with new scholarship in your field. [10 = extremely important; 1 = not at all important]



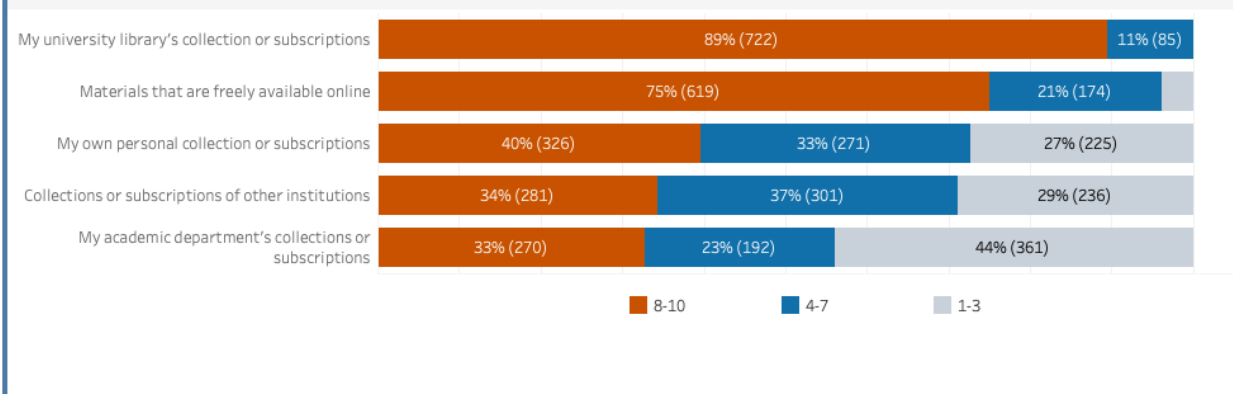
(3) Please use the 10 to 1 scales below to indicate how well each statement describes your point of view – a 10 equals “Extremely well” and a 1 equals “Not at all well.” Please note: the phrase “scholarly monograph,” which appears in this question and in other questions throughout this survey, refers to a single volume book for an academic audience often authored by a single scholar. [10 = extremely well; 1 = not at all well]



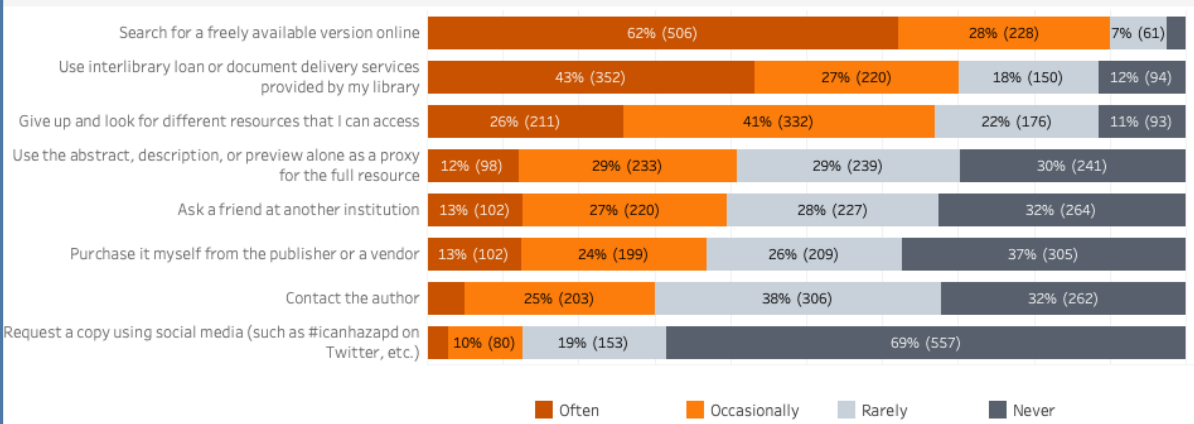
(4) Below is a list of ways you may use a scholarly monograph. Please think about performing each of these activities with a scholarly monograph in print format or in digital format, and use the scales below to indicate how much easier or harder it is to perform each activity in print or digital format. Please select one answer for each item. [Contingent on respondent selecting between 8-10 in Q3 for ‘print versions’ and ‘electronic versions’ items]



(5) When you think about the journal articles and/or scholarly monographs that you routinely use - for research as well as for teaching - how important are each of the following sources? [10 = extremely important; 1 = not at all important]

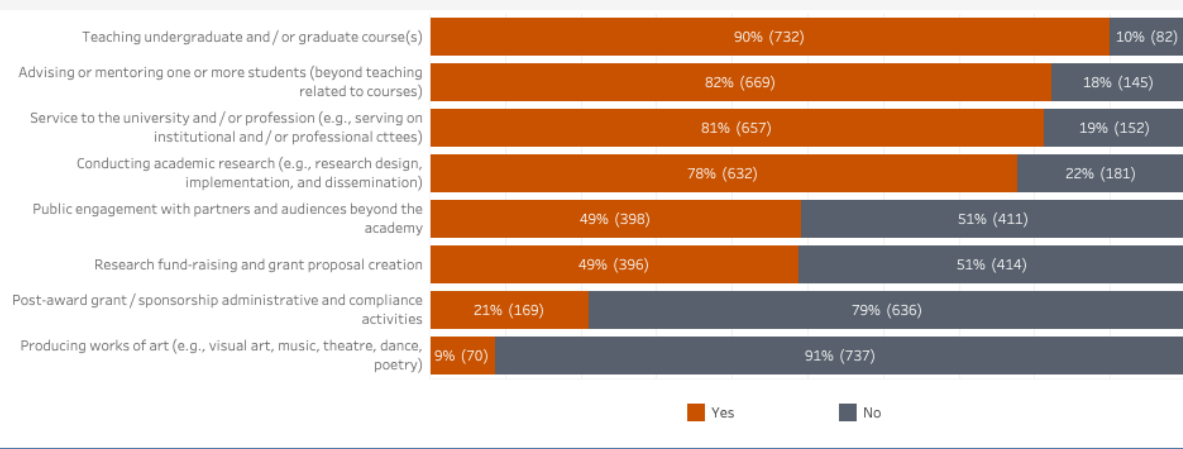


(6) When you want a scholarly monograph or journal article that you do not have immediate access to through your university library's physical or digital collections, how often do you use each of the following methods to seek access to that material?

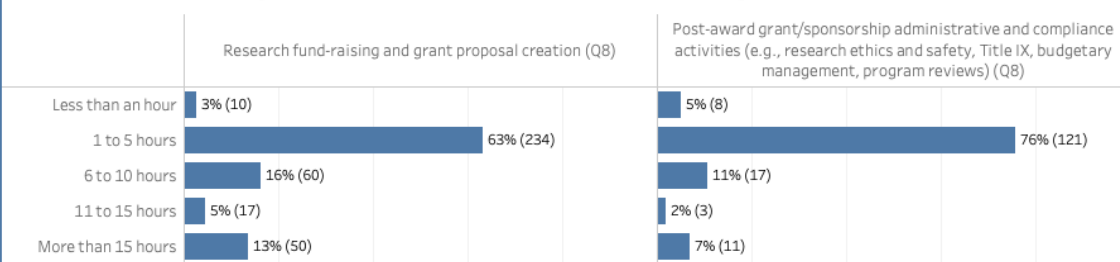


Research Practices

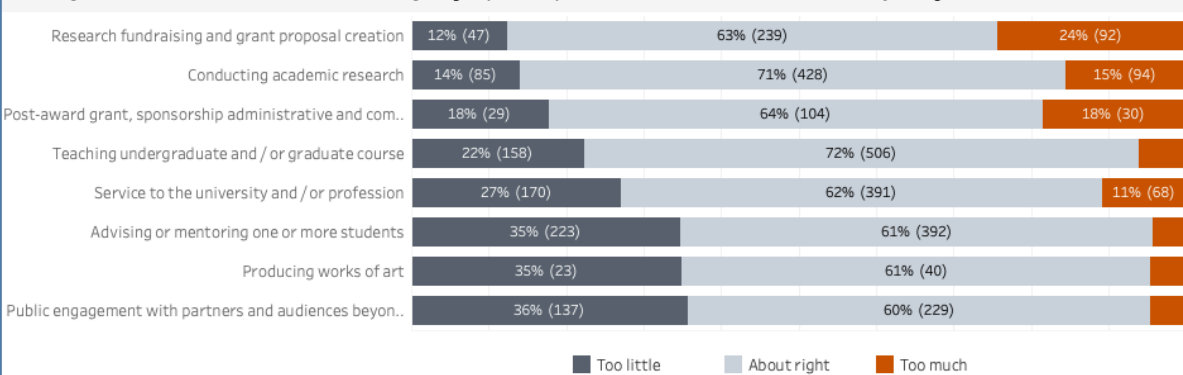
(7) Please indicate which, if any, of the following are among your professional responsibilities.



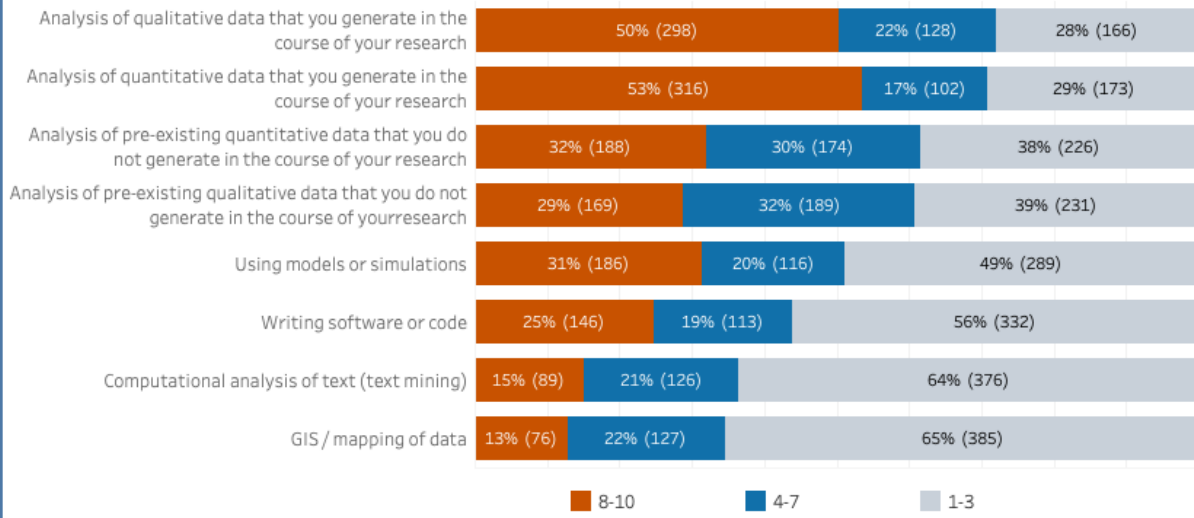
(8) You indicated the following are among your professional responsibilities. In a typical week, approximately how many hours do you spend on each of the following activities? [Respondent pool limited to those with indicated activity in Q7]



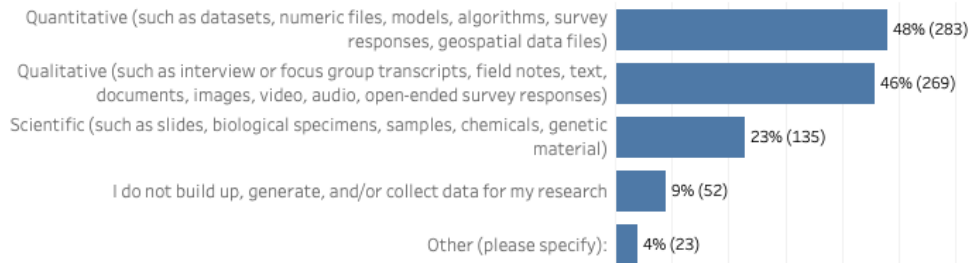
(9) You previously indicated you are currently performing the following activities. When you think about how your work is assessed, such as for tenure, promotion, research funding, continuing appointment, contract renewal, or annual review, do you think that the amount of consideration given to each of the following activities is too much, too little, or about right? [Respondent pool limited to those with indicated activity in Q7]



(10) How important to your research is each of the following digital research activities and methodologies today? [10 = extremely important; 1 = not at all important] [Contingent on respondent selecting "yes" to conducting academic research in Q7]

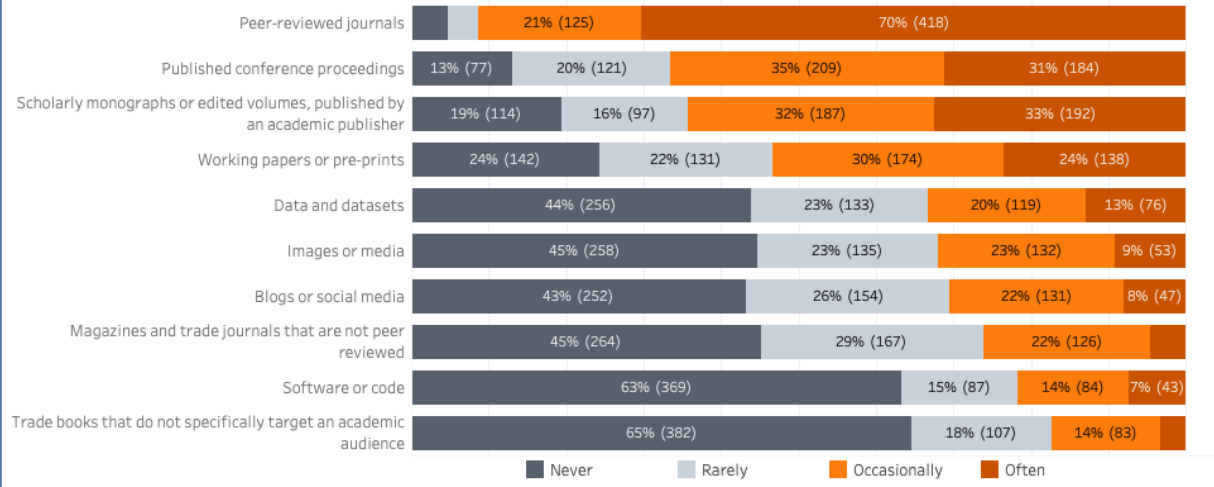


(11) Which of the following best describes the types of research data or evidence you build up, generate, and/or collect for your own research? Please do not include re-use of pre-existing data and/or sources that were collected or generated by someone else. [Contingent on respondent selecting "yes" to conducting academic research in Q7] Please select all that apply:

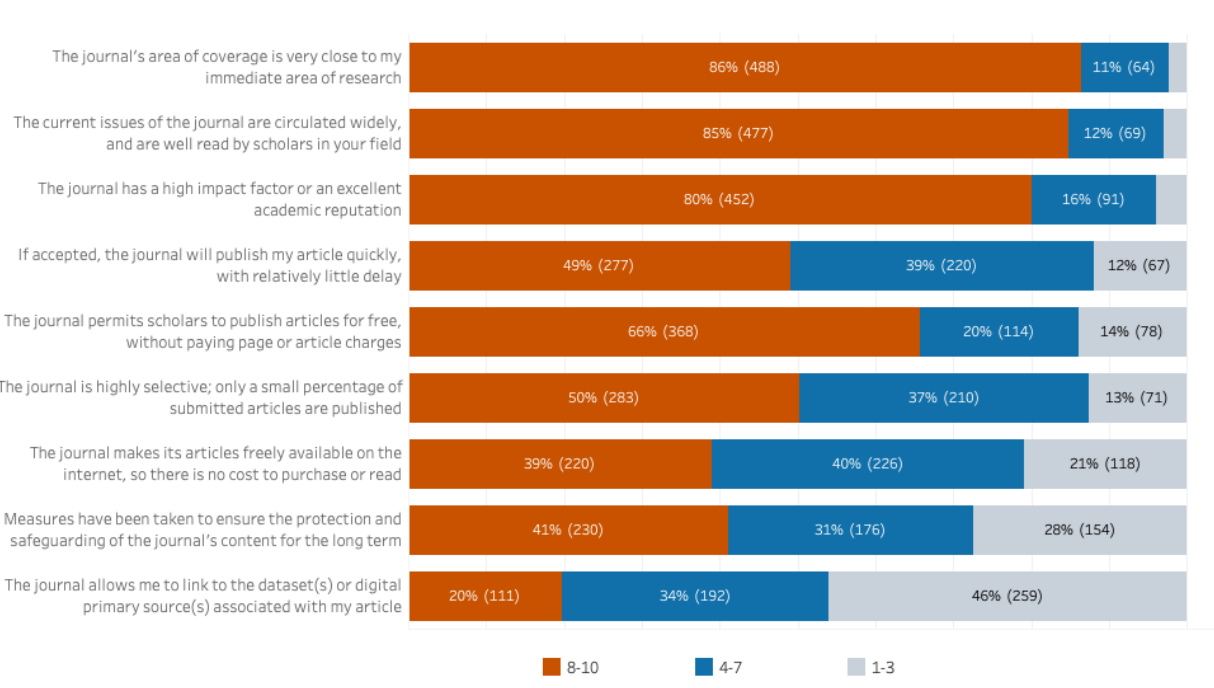


"Other" include music scores, microscope images, community murals, simulation data and theories

(12) - You may have the opportunity to share your scholarly research in a variety of different formats. Please use the scales below to indicate how often you have shared your scholarly research in each of the following ways in the past five years. [Contingent on respondent selecting “yes” to conducting academic research in Q7]

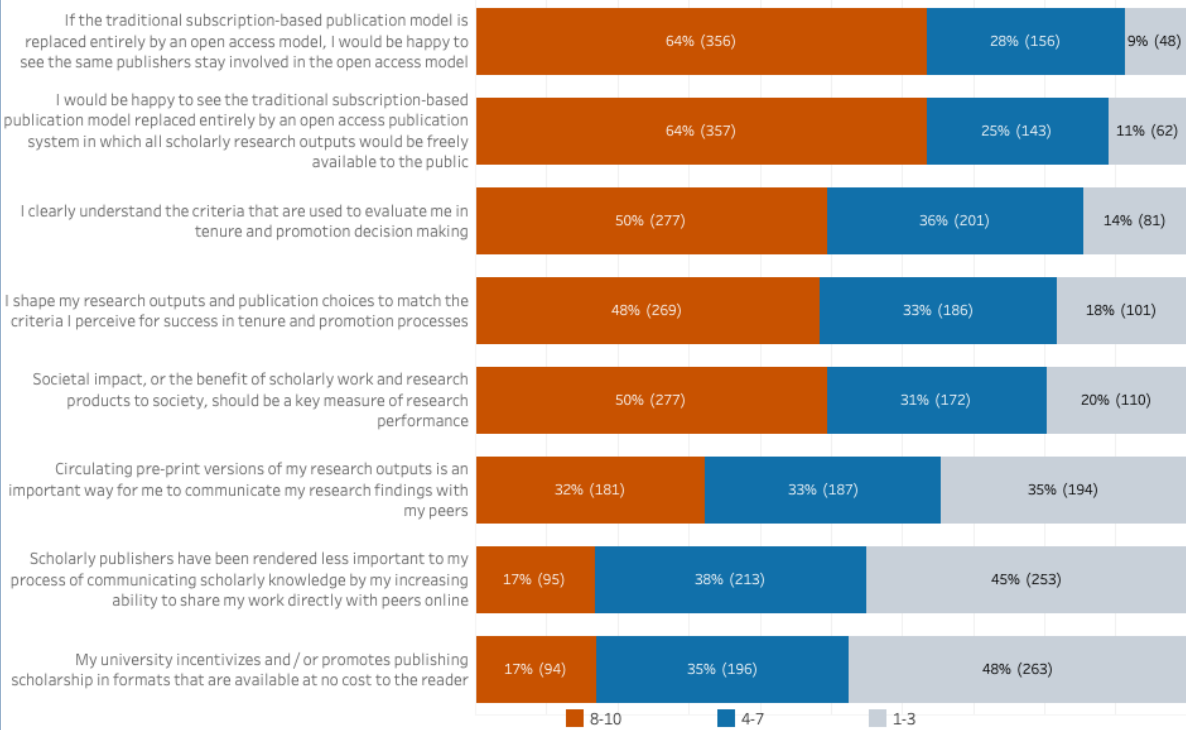


(13) - When it comes to influencing your decisions about academic journals in which to publish an article of yours, how important to you is each of the following characteristics? [10 = extremely important; 1 = not at all important] [Contingent on respondent selecting “yes” to conducting academic research in Q7]

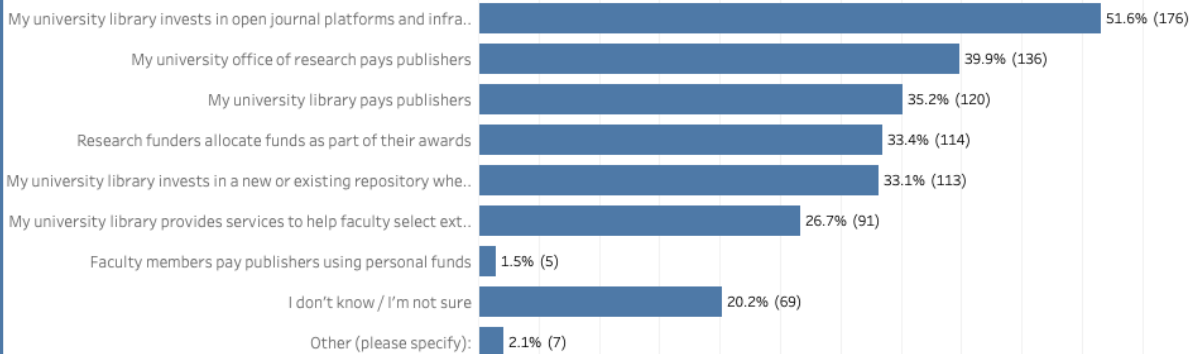


Scholarly Communication

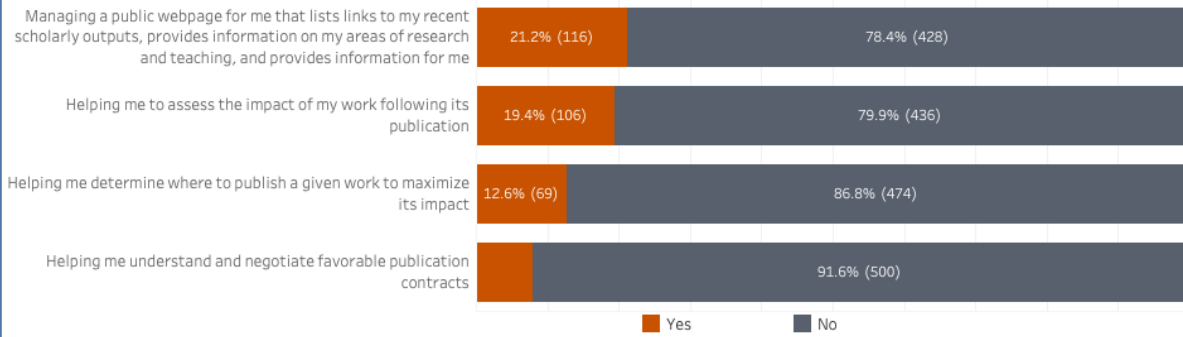
(14) - Please use the 10 to 1 scales below to indicate how well each statement describes your point of view. [10 = extremely well; 1 = not at all well]
[Contingent on respondent selecting "yes" to conducting academic research in Q7]



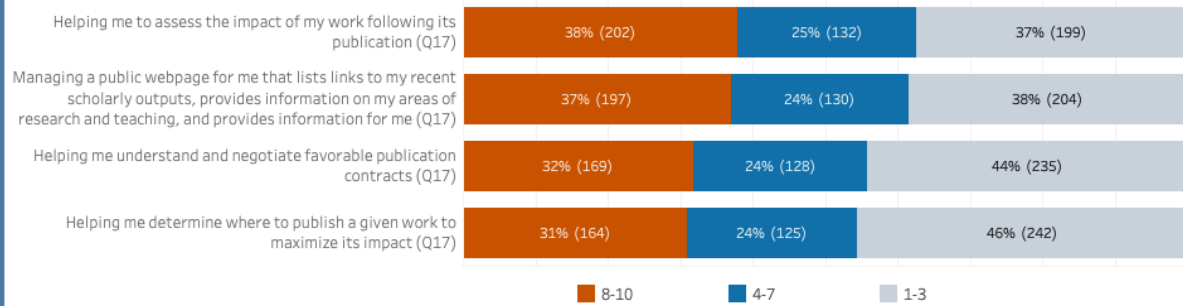
(15) You previously indicated you would be happy to see the traditional subscription-based publication model(s) replaced entirely by an open access publication system in which all scholarly research outputs would be freely available to the public. What payment model would you most prefer under an open access publication system? Please select all that apply. **[Contingent on respondent selecting between 8 - 10 for "I would be happy to see the traditional subscription-based publication model replaced entirely by an open access publication system in which all research outputs would be freely available to the public" item in Q14]**



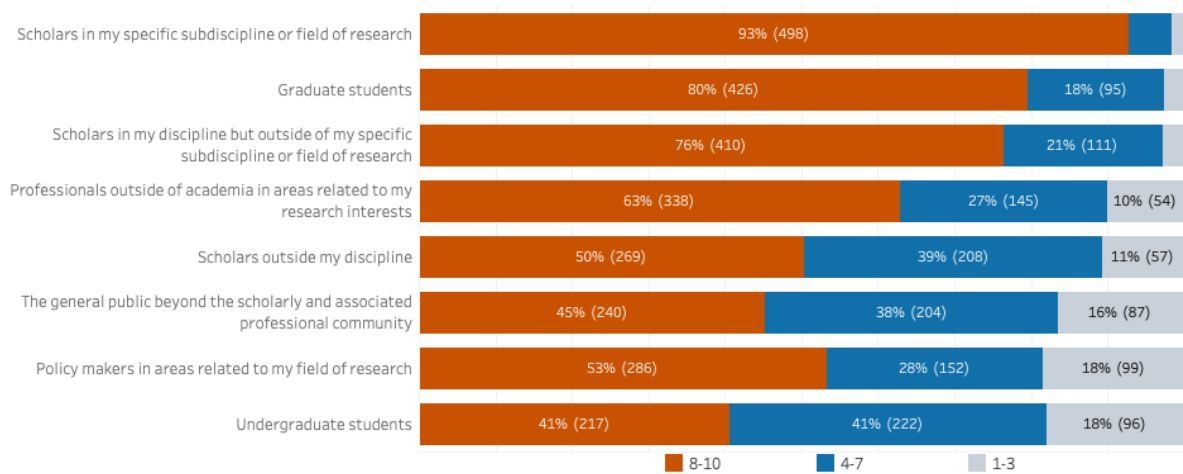
(16) Does your university library, scholarly society, university press, or another service provider assist you with any of the following aspects of the publication process? [Contingent on respondent selecting "yes" to conducting academic research in Q7]



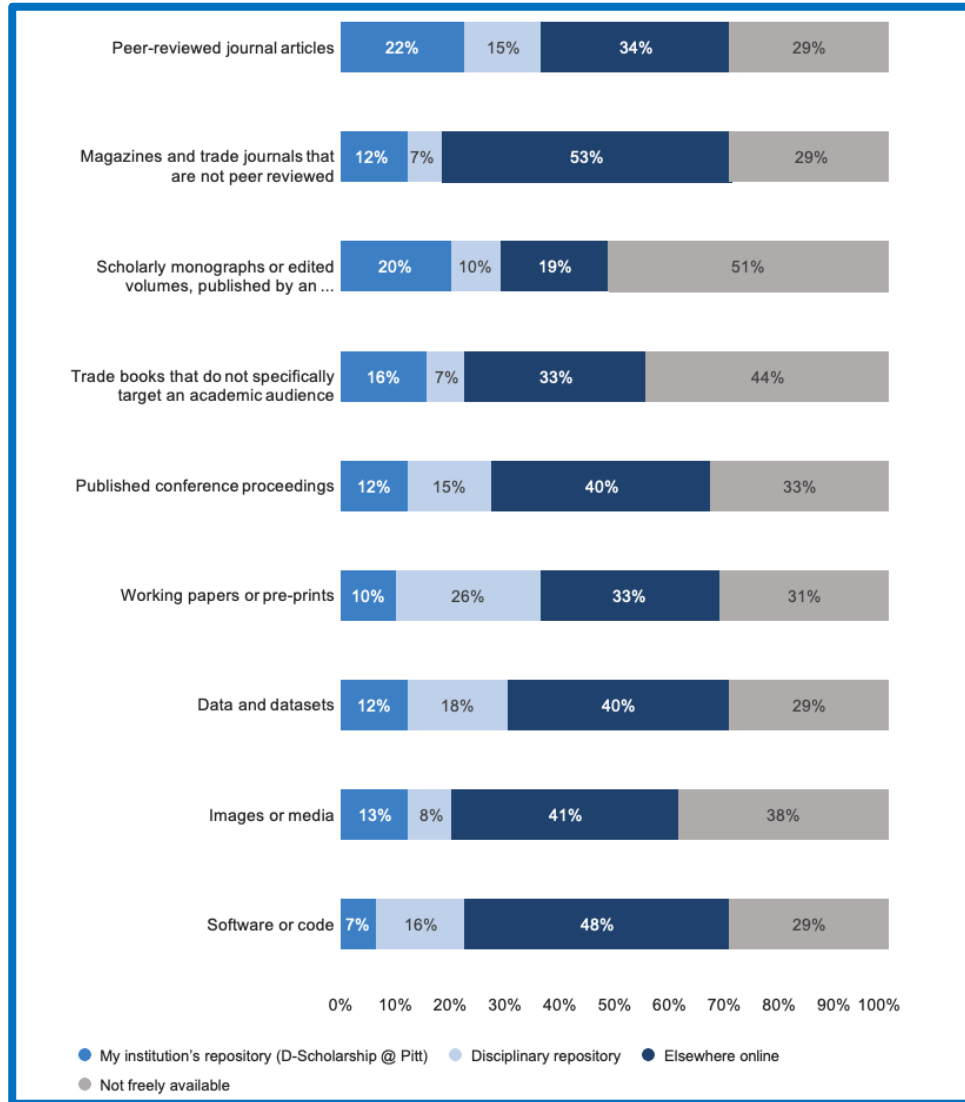
(17) - How valuable do you find support from your university library for each of the following aspects of the publication process, or how valuable would you find it if this support was offered to you? [10 = extremely valuable; 1 = not at all valuable][Contingent on respondent selecting "yes" to conducting academic research in Q7]



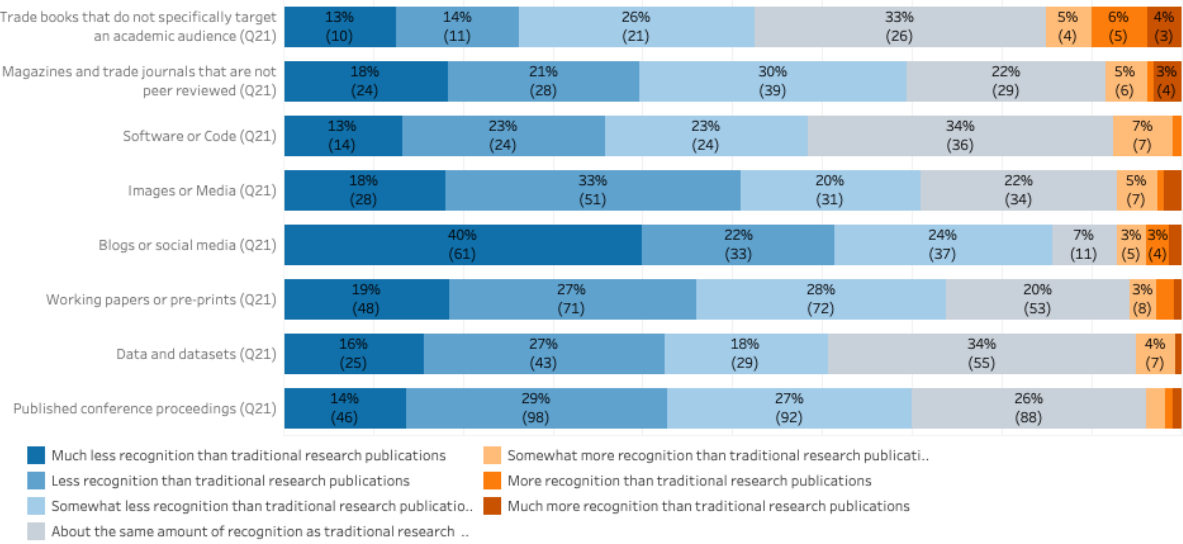
(18) - How important is it to you that your research reaches each of the following possible audiences? [10 = extremely important; 1 = not at all important] [Contingent on respondent selecting "yes" to conducting academic research in Q7]



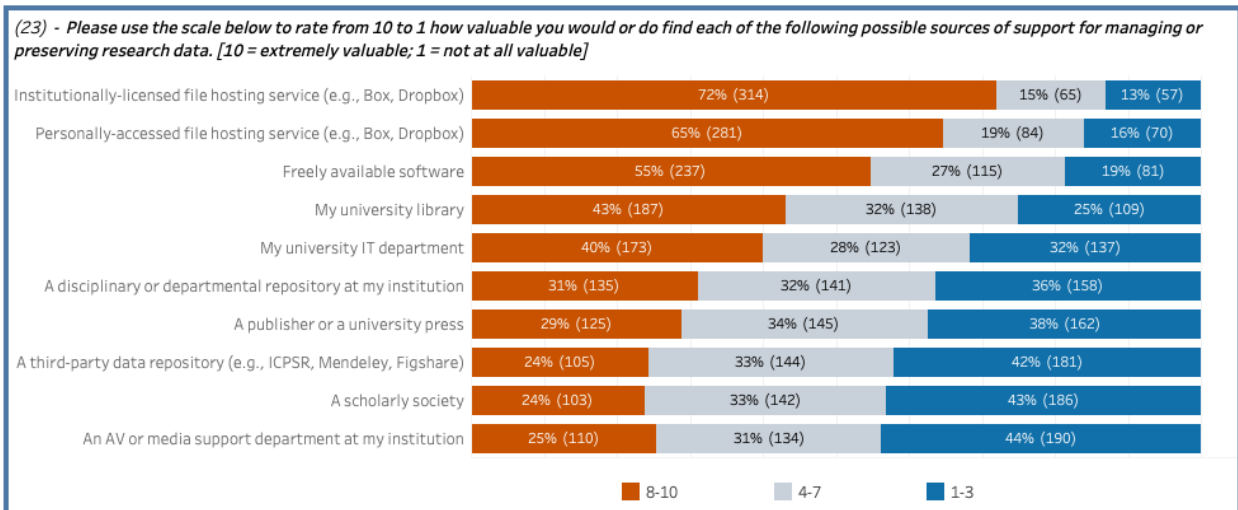
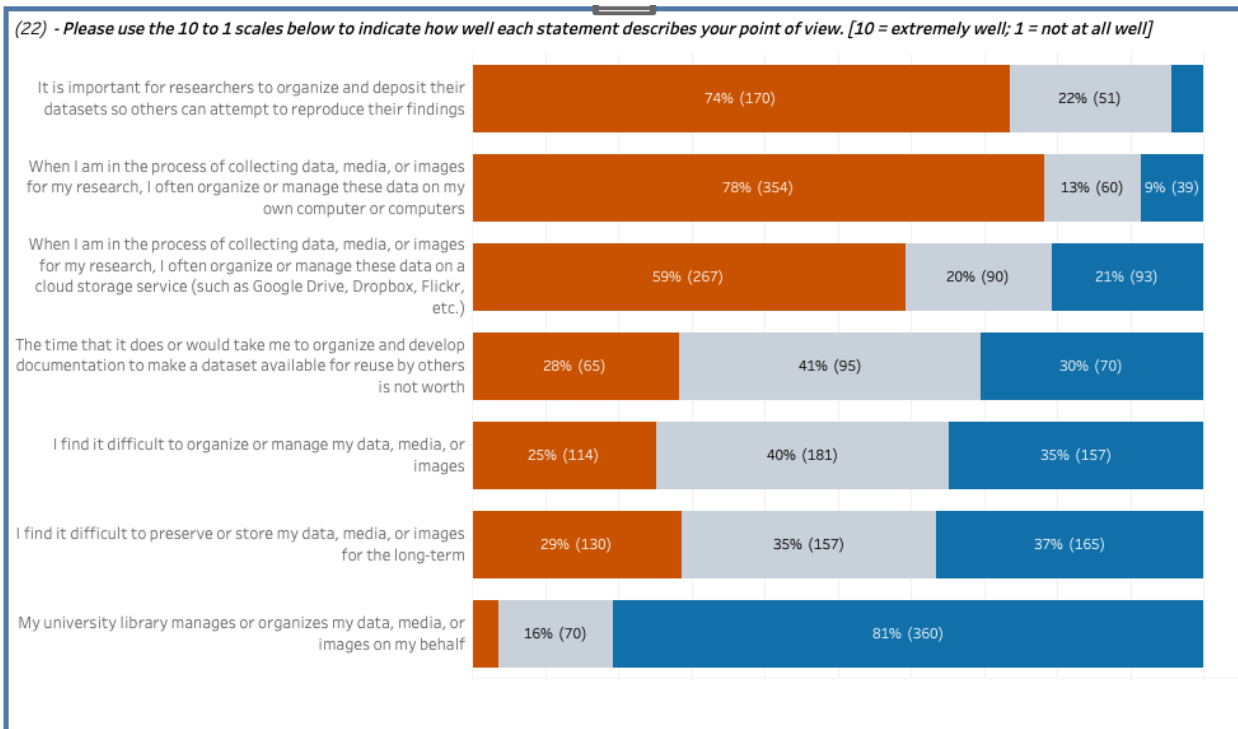
(19) [Contingent on respondent selecting “often” or “occasionally” to any items in Q12, those items are pulled forward to this question]. Are your research publications and/or products **freely available online** through your institution’s repository, a disciplinary repository (such as arXiv, SSRN, etc.), or available elsewhere online (such as your personal webpage)? For each item listed below, please select all hosting sources that apply.



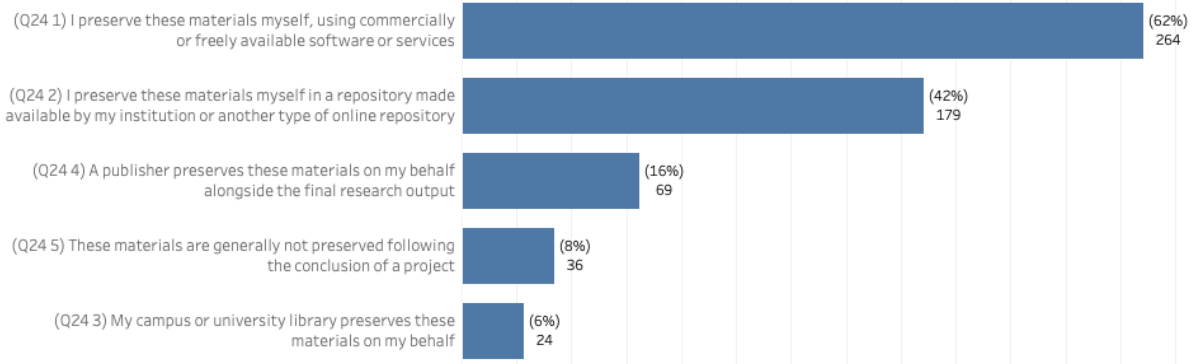
(21) - In a previous question, you indicated that you share your research in the following research product(s). When you think about how your work is assessed, such as for tenure, promotion, research funding, continuing appointment, contract renewal, or annual review, how much recognition should you receive for these research products compared to traditional research publications such as journal articles and scholarly books?



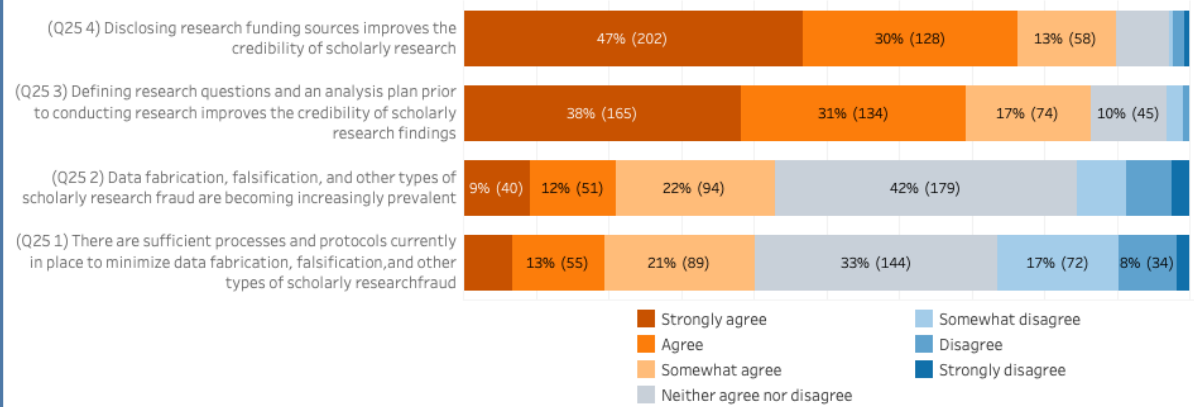
Research Data



(24) - If your collections or sets of research data are preserved following the conclusion of your projects, what methods are used to preserve them? Please select each method by which they are preserved or indicate that they are not preserved. (N=414)



(25) - Please read the following statements and indicate the degree to which you agree or disagree with each.

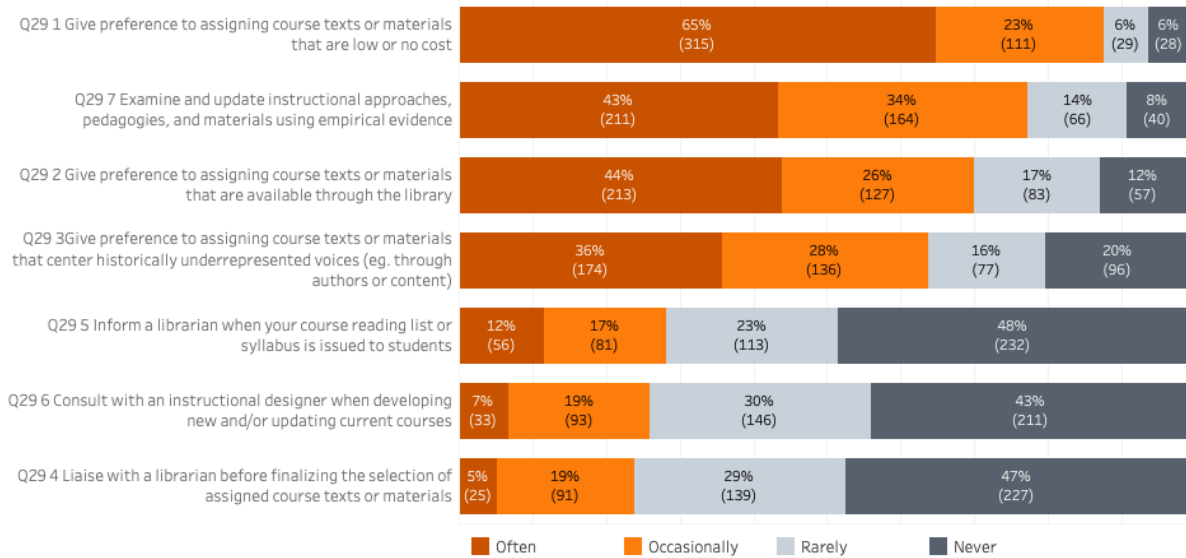


Teaching and Instruction

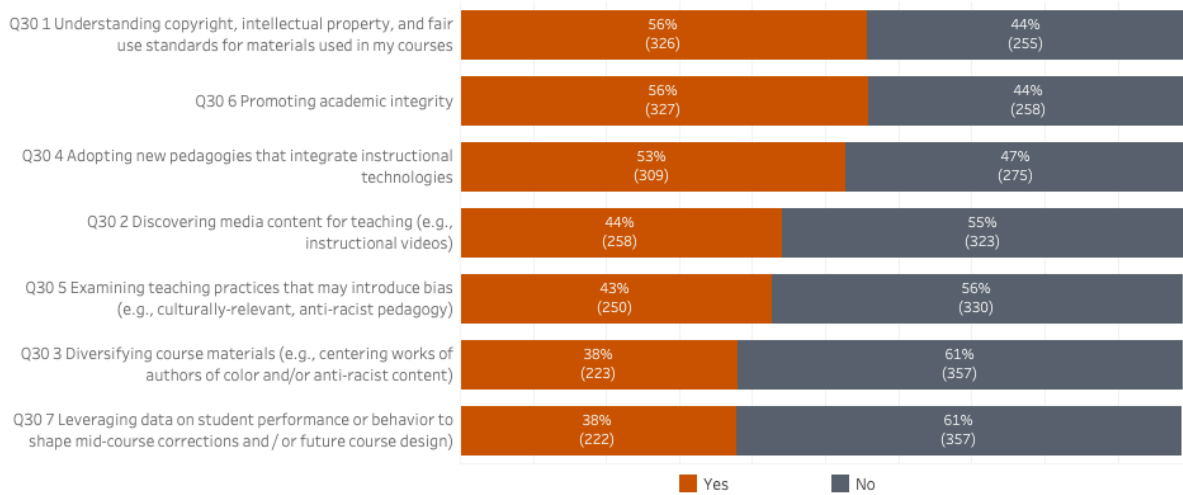
(28) - Please select which types of courses you have taught in the last 2 years (N=602)



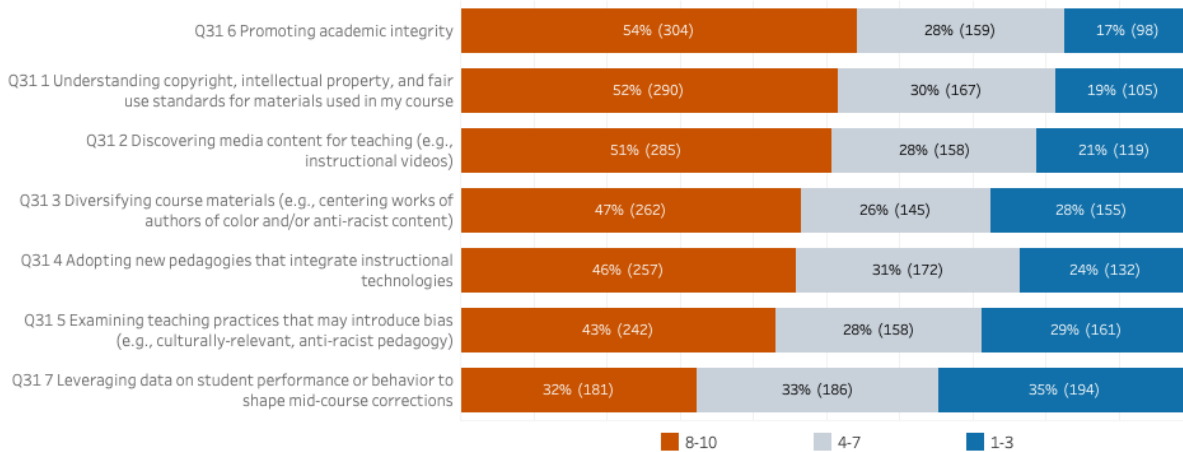
(29) - In general, how often do you perform each of the following when designing or structuring your undergraduate courses?



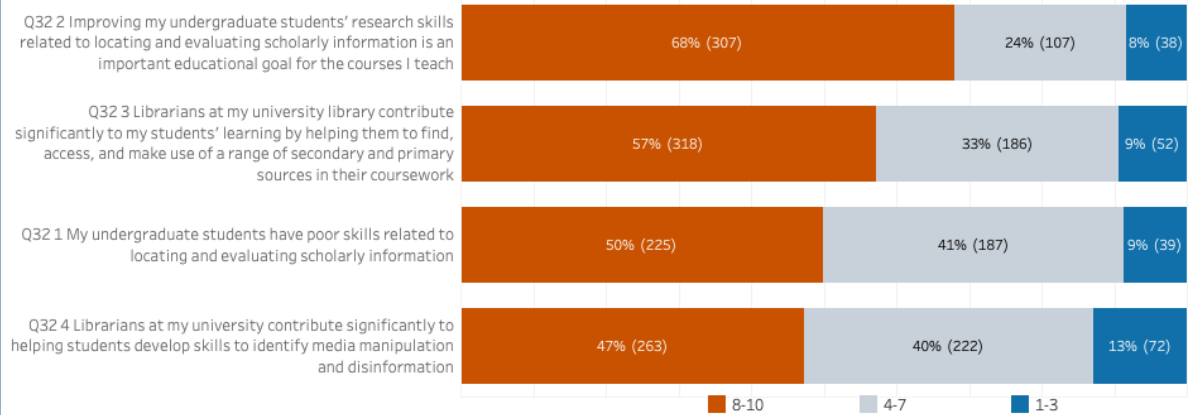
(30) - Does your university library, instructional designer, teaching and learning center, or another service provider assist you with any of the following aspects of instruction?



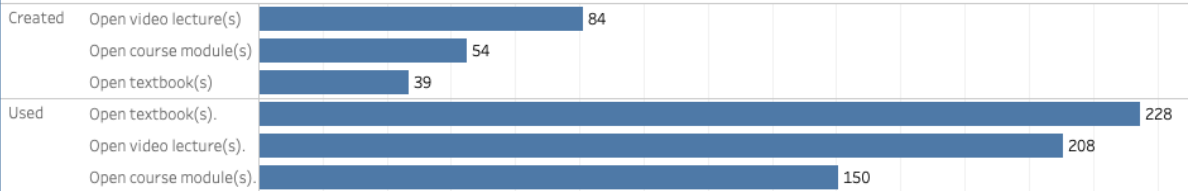
(31) How valuable do you find support from your university library for each of the following aspects of instruction, or how valuable would you find it if this support was offered to you? [10 = extremely valuable; 1 = not at all valuable]



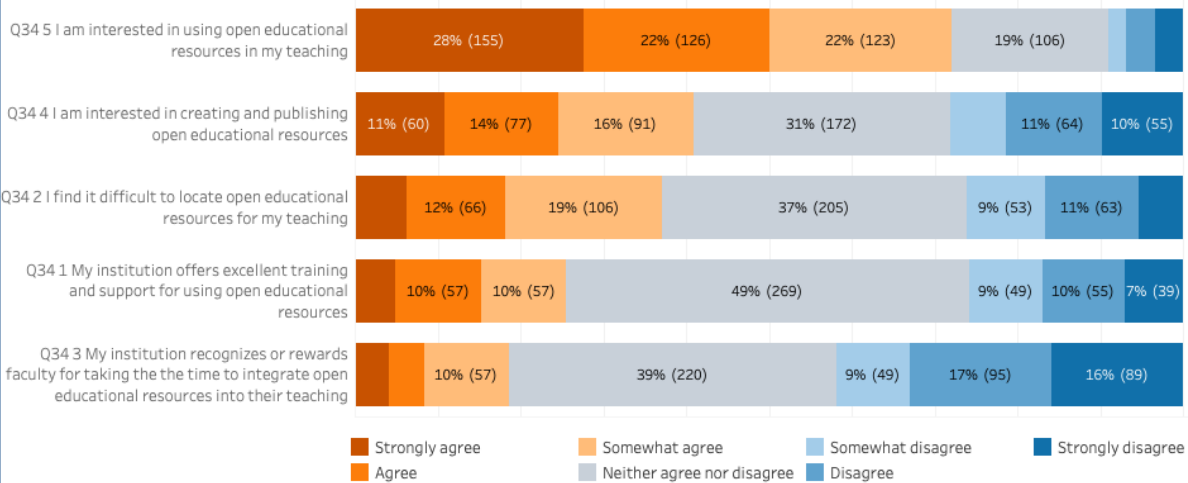
(32) Please use the 10 to 1 scales below to indicate how well each statement describes your point of view. [10 = extremely well; 1 = not at all well]



(33) Please note: Open educational resources are teaching, learning, and research materials used for educational purposes that reside in the public domain or have been released under an open license, such as Creative Commons, that permits no-cost access, use, adaptation, and redistribution by others with no or limited restrictions. Which, if any, of the following open educational resources have you created and/or used in your courses? Please check all that apply.



(34) Please read the following statements and indicate the degree to which you agree or disagree with each.



Appendix 2: Comparisons with 2015 survey

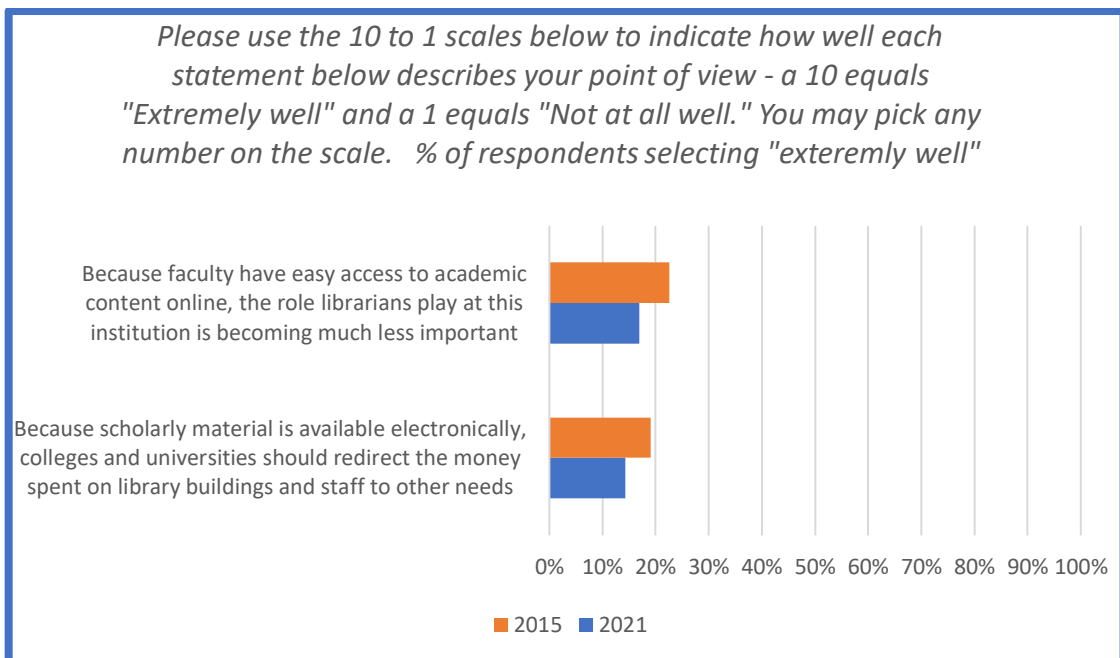
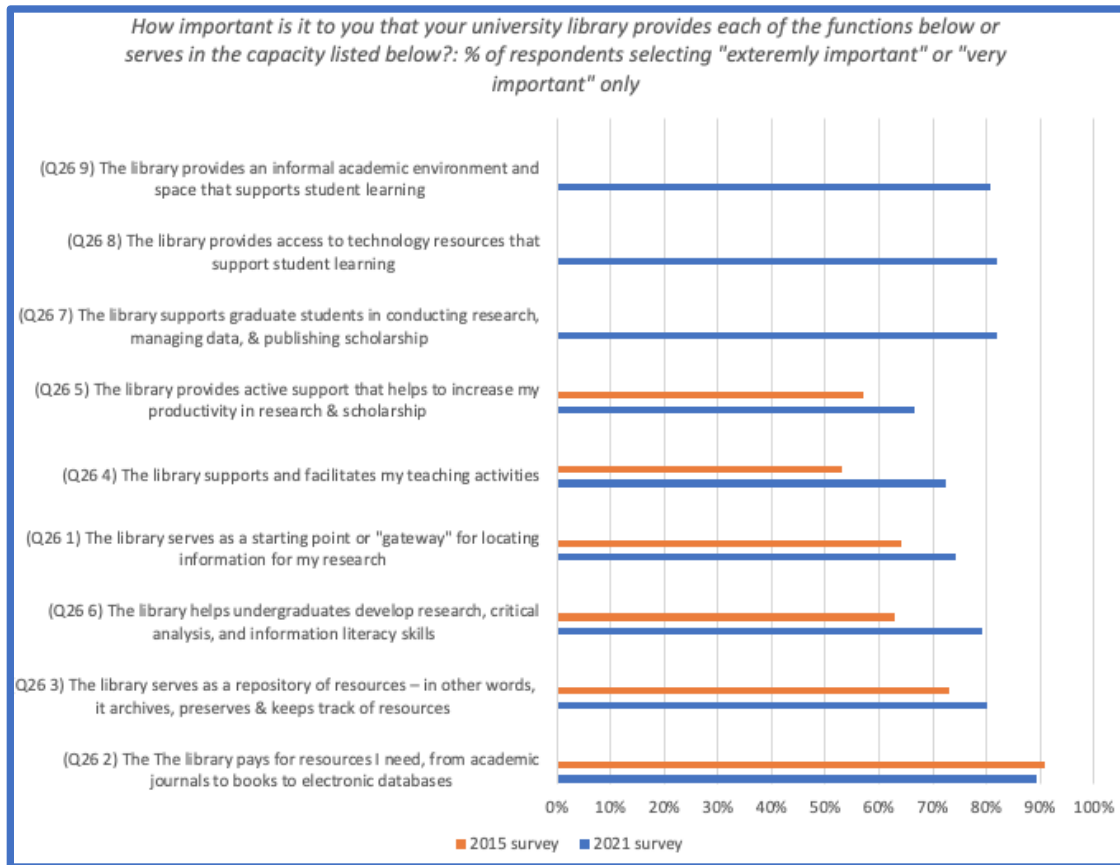
Demographics

Responsibility Center	% of Respondents	
	2021	2015
Business	4.5%	3.7%
Education	3.6%	5.8%
Swanson School of Engineering	8.5%	6.8%
General Studies	0.5%	1.0%
Kenneth P. Dietrich School of Arts and Sciences	45.3%	35.8%
Information Sciences	3.0%	2.3%
Law	0.3%	1.5%
Public and International Affairs	1.5%	2.3%
Social Work	1.2%	1.9%
Regional Campuses (Combined)	14.0%	14.0%
Public Health	0.8%	5.3%
Dental Medicine	0.5%	2.3%
Health and Rehabilitation Sciences	2.1%	5.1%
Medicine	11.6%	18.7%
Nursing	1.4%	4.4%
Pharmacy	0.7%	3.1%

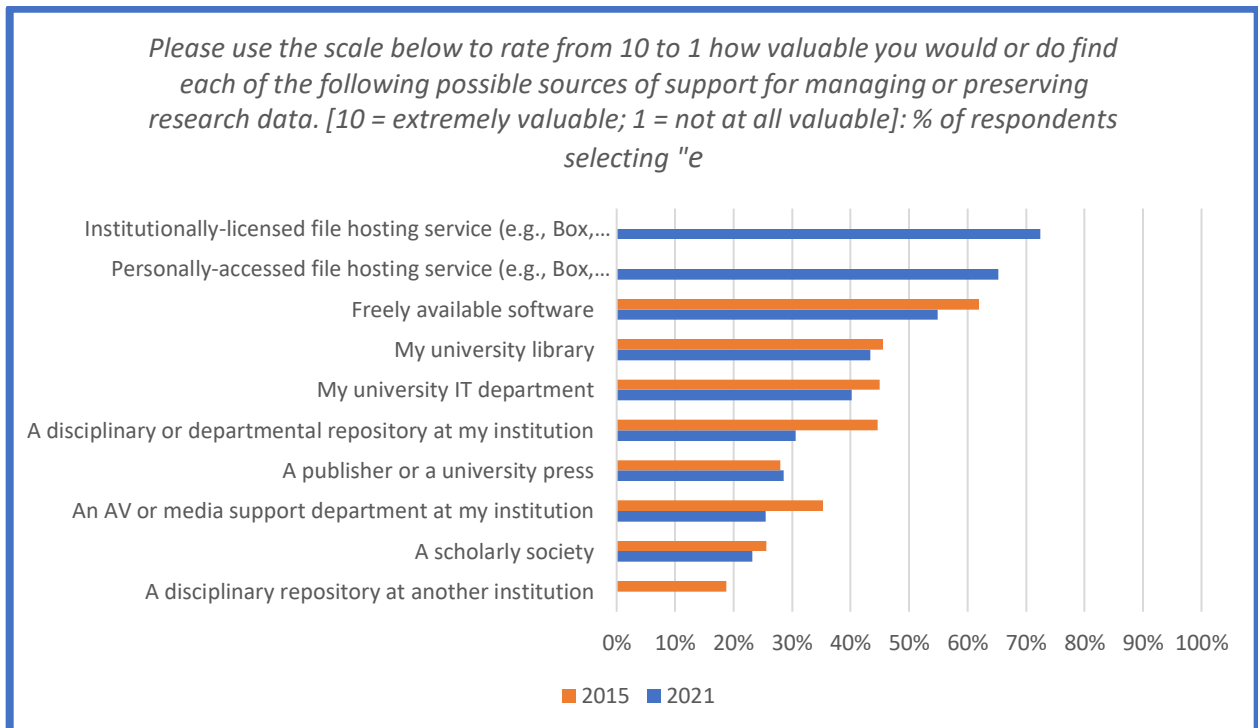
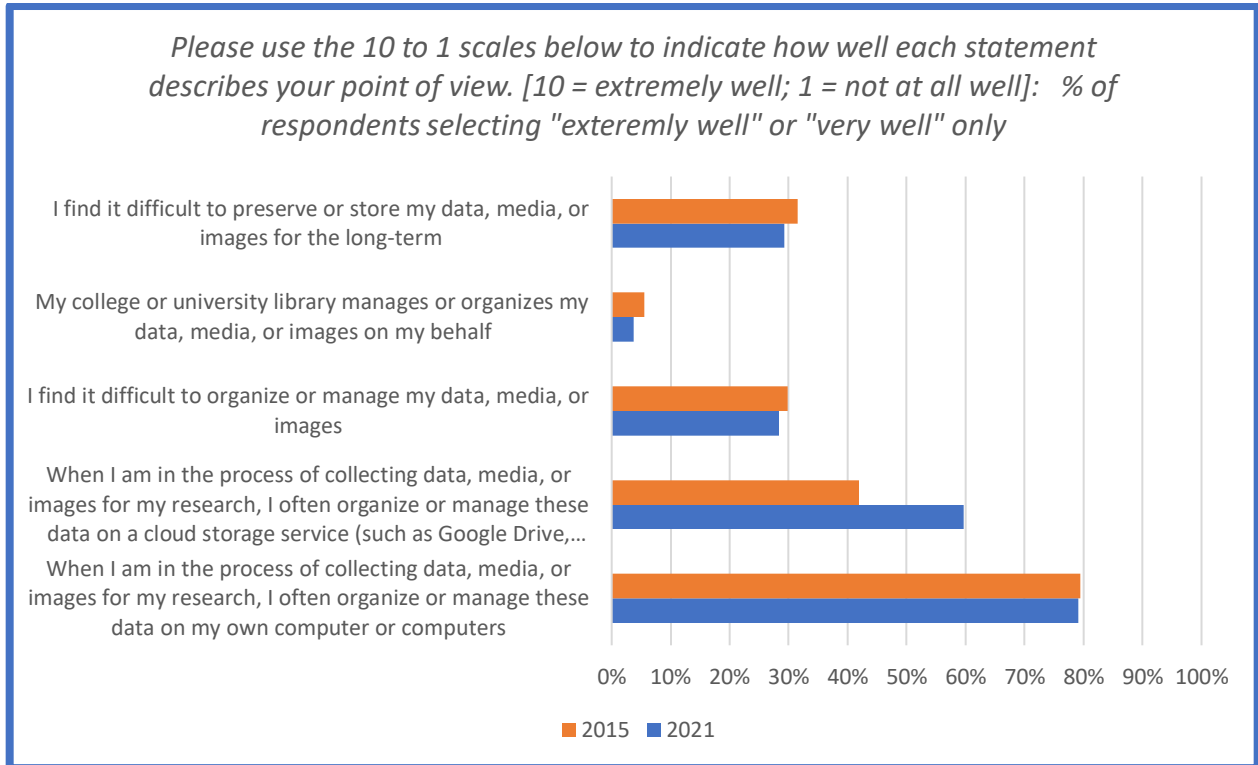
Do you think of yourself primarily as a researcher, primarily as a teacher, or	% of Respondents	
	2021	2015
Much more as a researcher than as a teacher	36%	47%
About equally as a researcher and a teacher	23%	27%
Somewhat more as a teacher than as a researcher	41%	25%

For how many years have you been in your field?	% of Respondents	
	2021	2015
0-10 years	20%	20%
11-20 years	34%	31%
21+	45%	49%

Role of the Library



Research data



*If your collections or sets of research data are preserved following the conclusion of your projects, what methods are used to preserve them?
Please select each method by which they are preserved or indicate that they are not preserved.*

