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Cutting the Gordian (workload) Knot? Adding Data Services to Academic Library Public Services

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"Cutting the Gordian (Workload) Knot? Adding Data Services to Academic Public Services"

Introduction

The late political theorist of democracy Robert Dahl advised his field to count stuff: get data and use it (https://tinyurl.com/RbtDahl). LIS certainly does that. The mid-20th century saw recommended statistical standards that included weeding, collection ratios to population, collection size and breakdowns (periodicals, fiction, juvenile literature, etc.) and circulation and reference transactions per capita (Ammons 1995).[1] Everything from analyses of libraries' reference statistics (e.g. Lubans 1977; Dennison 1999), to research libraries' aggregate interlibrary loan data (Weaver-Meyers, Clement and Mahin 1989), to aggregated national data on library use as well as academic library visits, circulation, interlibrary loan data and expenditures on electronic resources (e.g. Davis 2006; Fiels 2011) has been analyzed for workload implications. But therein lies the rub: librarians consistently complain that aggregated data on public services – even for one institution – don't capture quality, the drivers of workload, or the complexity of public services work in *their* workplace (e.g. Lubans 1977; CAUT Librarians 2000; Anderson, Fisher and Walker 2021). We're counting stuff, but it's seemingly not telling us things we want to know: our Gordian Knot.

[1] Using these as performance standards, data showed they produced mixed results. Such data measures were subsequently abandoned by LIS professional associations.

How so? The data the profession produces on librarian workloads can't give us the answers we seek. The library and information science (LIS) literature wants two irreconcilable things out of its workload data: 1) aggregate *comparable* data to document and measure use of libraries and its value; and 2) accurate descriptions to document and measure the *individual* work done by librarians. *That* is our Gordian Knot. This point has been summarized in a recent article: a study of librarian time allocation to "Quantify librarian contribution to the education and research missions" of their university "was a success," but another goal "that allows comparison with other … efforts" needed further investigation (Winterman and Asher 2021, 545). So, even though there have been many studies and publications on workload (and many more commenting or complaining about it), there are no standard measures of workload for public or academic librarians beyond the most elemental, nor for divisions within libraries like technical vs. public services (see the literature review in Anderson, Fisher and Walker 2021). This is an unsettling state of affairs: so much of the data is unusable when seeking to justify the expense of a library (see Buschman 2017a; 2017b).

We propose here to change the question asked: how can we achieve a reasonable *balance* of workload *within* a group of librarians? That of course implies a focus on *a* library of a specific type: here a medium-sized academic library of an R2 institution. The goal was to answer a common and longstanding question: we are in continual process of assessing what needs to be done and how/where to shift workloads, but how do we know we're doing it in a reasonable and fair way beyond anecdotes and intuitions (e.g. Church-Duran 2017)? For instance, like many academic libraries our new Research Data Services are growing (see Joo and Schmidt 2021; Fuhr 2022; Sheikh, Malik and Adnan 2023; Andrikopoulou, Rowley and Watson 2022), and our commitments to in-person and university core requirements in English 1201 and 1202 tend to be

open-ended, crowding out other instructional commitments. The working assumption here is that definitions and taxonomies of types of work will be *particular* to solve a local problem. The problem of a meta-analysis covering the profession must wait, but much like an earlier study, we are suggesting that locally-produced data viewed from a higher level of abstraction may well generate broader insights for the profession (Buschman and Chickering 2007). This article will proceed with an overview of the general literature on academic librarian public services workload to add substance to the characterization given above, then move on to the schema and rubric developed at Seton Hall University Libraries before summarizing the conclusions to be drawn from that case.

Method, Broad Patterns and Three Groupings in the Literature

Method: To check this interpretation, a survey and sampling of the literature on workload was conducted in *Library, Information Science & Technology Abstracts* (*LISTA*) in August 2022 combining "libraries or library or librarian" AND "public services" AND "workload or work load or work-load." This resulted in approximately 50 articles. Abstracts (and full-text when available) were scanned for 1) a focus on academic libraries, 2) substantive engagement with *workload as a concept* (vs. simply mentioning it in passing), and 3) use of data or cases. As a check on these results, a search for "libraries public services workload" was run in Google Scholar and additional citations were captured and de-duplicated. Finally, a check for updated publications was performed in March of 2023 by one of the co-authors. A total of 25 articles were chosen using rubrics 1-3 above,[2] and grouped into three broad categories.

[2] The reader may note that a small number of the selected articles appear to fall outside of the rubric. However, their literature reviews or data discussions substantively sweep in public services or academic libraries. Those that did not were items like the Annual Reports of the Librarian of Congress (that deployed the word "workload" several times), centralized selection in an academic library, or the need for an engineering library.

Broad Patterns: The literature on workload is circular. Literature reviews in many of the articles quickly established a baseline of studies and issues. In fact, the selected articles quickly reached data saturation: "when data collection ceases to provide new information and when relationships and patterns … are fully developed," and theoretical saturation when the "data categories are 'full' (i.e. fully depicted …) in terms of their properties and dimensions" (Powers and Knapp 2011, 166, 185). First, there is the constant tug between nationally normed data and definitions and categories locally generated to capture local conditions going on for 60 years or more (Anderson, Fisher and Walker 2021, 1-2), paralleling problems in assessing cataloging productivity and workloads (Buschman and Chickering 2007). The second is the perennial divide between public (PS) and technical services (TS): "TS work tends to be very regular and scheduled, whereas PS work may involve more outreach and time away," making data collection more difficult in the latter (deChambeau, McCullough, McGurr and Monaco 2021, 76).[3] Third, there is consistent fear of managerial initiatives and pushback against decisions based on data (e.g. CAUT Librarians 2000; Budd 2018, 385; Anderson, Fisher and Walker 2021). Out of this welter three workload study groupings emerged.

Grouping 1: Rights and Responsibilities: "Many studies of the workload of academic librarians are really a subset of the huge body of literature on faculty status" (Schreiner-Robles and Germann 1989, 82; see also Budd 2018, 380-381; McCormick, Russell and Plassche, 2022). Librarian faculty status and workload is characterized in and often shaped by collective bargaining agreements that tend to focus on the workload rights and responsibilities of librarians. Thus framed, it has three characteristics in the literature and documented practices of the field: 1)

[3] On this trope, see also Pun, Song and Zunia 2020; https://hacklibraryschool.com/2011/04/07/techuserservice/; and https://celeripedean.wordpress.com/2014/05/26/technical-vs-public-services/.

delimiting work legitimately assigned to a qualified academic librarian, 2) setting hours per week of assigned work, and 3) additional rights and responsibilities (governance, scholarship, committees) and ways to evaluate the overall workload that draw on the data of the previous two characteristics (e.g. Goudy 1995; CAUT Librarians 2000; McAbee and Graham 2005; Harrington and Gerolami 2014; Brennan 2018; Budd 2018, 381-382; deChambeau, McCullough, McGurr and Monaco 2021).[4] This in turn drives data collection, which tends to focus on how much time is spent on what tasks during a work week, with concomitant and frequent complaints about understaffing, time to adequately perform work, and that responsibilities for service and scholarship are not considered in scheduling of public service librarians' workload (e.g. Metz 1991; Schreiner-Robles and Germann 1989; CAUT Librarians 2000; Harrington and Gerolami 2014; Church-Duran 2017; Budd 2018, 385-386; Winterman and Asher 2021; McCormick, Russell and Plassche 2022).

Grouping 2: Job Stress: Related to the expressions of fear and pushback to workload decisions informed by data is the second grouping: job stress, framed nicely by Schreiner-Robles and Germann: "To what extent does the number of activities librarians undertake … lead to stress and possible burnout? [A]re they able to accomplish quality work or [are they] spread too thin, resulting in mediocrity?" (1989, 87) Though there are data indicating that the structure of academic public services librarianship workload *adds* to job satisfaction (see the citations in Schneider 1991, 388-391 and Budd 2018, 385), there are consistent and loud complaints in the literature about the related issues of excessive work variety, understaffing, lack of advancement, overall workload, and lack of work release for other duties that lead to job stress (e.g. Schreiner-Robles and Germann 1989; CAUT Librarians 2000; Huprich 2007; Warren and Scoulas 2021;

[4] For samples that illustrate this pattern, see https://tinyurl.com/UNebKearnyLib, https://tinyurl.com/OaklandULibwkload, and https://tinyurl.com/UNCWilmLibWkload.

McCormick, Russell and Plassche 2022). This often boils down to perceived lack of management connection to the realities of the work: "the stated goals of a college or university library are not always the same as those projected by the librarians themselves" (Ferguson and Taylor quoted in McAbee and Graham 2005, 21), and perceived efforts to extend managerialism into librarians' workload (e.g. Weaver-Meyers, Clement and Mahin 1989; CAUT Librarians 2000) or outright exploitation (Warren and Scoulas 2021, 314). There is a strong emotional component to this literature.

Grouping 3: Specific Work Areas of Public Services: Finally, there are data and cases on highly specific areas of public services workload: subject specialists and liaisons, consultations, embedded librarians, and interlibrary loan – each producing its own data:

- on subject specialists'/liaisons' range of duties and the duties that are most valued, the new responsibilities and skills needed to perform that work and adjusting workloads to accomplish it (McAbee and Graham 2005; Church-Duran 2017; Metz 1991);
- on consultations and their time commitments during COVID-19 (Anderson, Fisher and Walker 2021; McCormick, Russell and Plassche 2022);
- on workload implications (e.g. duplicating efforts) and cases of embedded librarianship for online courses (Hoffman and Ramin 2010);
- on interlibrary loan fill rates, borrowing, and lending outputs vis-à-vis staffing and workload in research libraries (Weaver-Meyers, Clement and Mahin 1989).

The measures are clearly varied, but one specialization is informative. Academic health sciences librarianship has produced studies on productivity metrics such as user categories of searches performed and the time they took in order to manage workload (Gann and Pratt 2013), and the time/benefit calculation in systematic review services (McKeown and Ross-White 2019; Ross-

White 2021). In light of the high dollar stakes in the health sciences, charging fees for service to meter it and proving library value are juxtaposed to the lack of productivity (that is, workload) studies in LIS producing usable data (McKeown and Ross-White 2019, 417; Phillips 1990, 146-147; Gann and Pratt 2013). The value of this literature was in the idea of addressing (admittedly narrower) workload definitions to quantify a combination of skill-and-time demands vs. the value of outcomes.

In sum – and with this exception in mind, the general workload literature is largely unhelpful to an academic library *trying to make informed adjustments* to public services workloads in a responsive and responsible way in something close to real time. It is fine, for instance, to know that academic library reference workload has long been declining (Miles 2013; Dubnjakovic 2012; Martell 2008) as is the case at our institution,[5] but where is that work going? Did it go anywhere, to whom, and where *should* it go? In other words, we are changing the question we ask of our data: how can we achieve a reasonable *balance* of workload *within* a grouping of librarians in an academic library? The contention here isn't that we don't need broad data trends – the example of reference work points up their value in situating local experience. Nor do we believe that a sophisticated methodology of collecting data is necessary. Rather, our question shaped how we looked at and asked questions of our own existing data. The remainder

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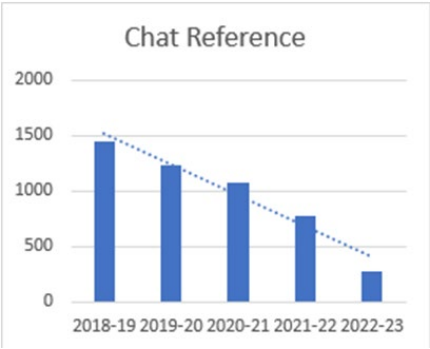


of this article will outline the process of quantifying workload and making workload decisions at Seton Hall University Libraries from 2020 to the present.

The Institutional Context and Methodology

Seton Hall University (SHU) is a private Catholic university in South Orange, New Jersey, 14 miles from lower Manhattan. Founded in 1856 by then-Bishop James Roosevelt Bayley and named after his aunt, Saint Elizabeth Ann Seton, Seton Hall is the oldest diocesan university in the United States, consisting of nine schools and colleges, with an undergraduate enrollment of about 6,000 students and a graduate enrollment of about 3,900, classified as R2: Doctoral Universities – High research activity. The University Libraries are medium size (https://library.shu.edu/library/fast-facts), with eighteen Library faculty, including assistant deans and the four librarians at the health sciences campus eight miles away. The Law School library is separate. The Libraries have been reviewing their service offerings and workload distribution since 2020: reference, student consultations, instruction, liaison work, and a new service – research data services. Some services, especially reference in all its varieties, continued to steadily decline through the pandemic, and beyond. Others, such as research consultations and requests for data software help and data analysis, have increased. At the core of Public Services there is a team of six liaison librarians on the main campus that provide full-time support to academic departments and for campus initiatives such as Diversity, Equity, Inclusion, and Accessibility, often liberally supplemented as needed/assigned by librarians from the other divisions.

An informal working group of five librarians came together in Fall 2021 to discuss possible metrics after the initial idea to measure public services workload was discussed. Data Services were increasing after a soft launch in 2020. This mirrored national trends and growth of

Data Services' role in academic libraries that began in 2021 (Tenopir, Birch and Allard, 2012; Tenopir et al., 2015; Carlson and Johnston, 2015). Additionally the number of freshman English courses had been increasing with larger freshman classes over the last several years – driving library instruction, and some liaisons were embedded in courses and creating course material which are time intensive. Accommodating new commitments and managing declining areas of service were powerful drivers, along with the fact that anecdote-driven discussions were not helping to sort out workload priorities and decisions: our internal discussions mirrored the cul-de-sac of the literature. In Year One of this project, activities that librarians were involved in were enumerated, ranging from the basic (reference, teaching freshman English ENG 1201, ENG 1202), to creating course material for upper-level courses, being embedded in a course and new research data services. Two senior librarians involved in Data Services and Liaison roles drafted the initial task list. Next three librarians involved in Access Services, Data Services and Instruction were asked to help edit and revise the list of tasks over six months, and then propose a weighting to define the level of difficulty on a scale of 1, 2, or 3, with 1 as the easiest level, 2 the mid-range, and 3 the most difficult based on time to prep for the instruction or consultation and the degree of specialized knowledge or software required to perform them. This was a sensitive assignment as librarians felt ownership of their areas of expertise and wanted their work to be reflected accurately.

The tasks were then plotted on a rubric to be added to the Annual Report as required information, revised in Year Two based on feedback. The rubric was revised again in Year Three by librarians with responsibilities in both the liaison areas and Data Services:

Table 1. Rubric tasks with complexity weighting

Task	**Complexity**	**Low**	**Medium**	**High**

Reference (weekly hours)	1	Directional questions	Book availability	Need series or resources or refer for consultation
ENGL 1201/1202	2	Present lesson plan as is	Rework lesson plan with minor - medium prep	Rework lesson plan with major prep
Equal Opportunity Program (EOP)	1.5	Present lesson plan as is	n/a	n/a
Discipline specific class - create and deliver first time	3	Create course - basic research skills	Create course - mid - level skills - Google Scholar, specific databases	Deep dive into specific topic such as literature reviews
Discipline specific class - already delivered	2	Update materials re: basic research skills	Update course materials - mid level skills.	Update deep dive materials
Data Services Research Consult (finding data)	2	Find data from easily findable source such as the World Bank.	Search for data across relevant organizations	Locate difficult to find date or if data does not exist; offer alternative data suggestions
Research Consult - navigating website, finding articles & books	2	Find books or articles related to a research topic, basic ILL	Search WorldCat for titles we may not own	In-depth help with research design or locating difficult-to-find resources.
Workshop (Citations, ICPSR, PolicyMap, OER)	2	Present lesson plan as is	Create custom scenarios for topic	Create advanced scenarios for topic
Data Services Class	3	Present pre-existing workshop	Present pre-existing workshop with updated data, techniques, or software	Create new workshop with new techniques, software, etc.
Data Services Class – Coding	2	Present pre-existing workshop	Present pre-existing workshop with updated data, techniques, or software	Create new workshop with new techniques, software, live coding, etc.
Data consult – GIS analysis	3	Student familiar with GIS and just needs refresher using their data	Software training using student found or generated data	Software training and assistance finding and cleaning data
Workshop (Data Analysis)	4	Present pre-existing workshop	Present pre-existing workshop with updated data, techniques, or software	Create new workshop with new techniques, software, etc.
Embedded in course for semester	5	Create & deliver several presentations for specific course	Involved in grading and regular class attendance	Involved in course design decision making and approval as well as writing syllabus
Outreach - social media post	0.5	Generate social media post	Create blog post	Create and run workshop or participate in planning for Hispanic Heritage

				Month or Petersheim
Outreach - social media blog post	1	Write and publishes blog post	Interviews people for blog post	
Outreach - full semester	4	Consistent social media campaign throughout semester	Hosts in-person or virtual library events	Coordinates events with other departments or organizations on or off-campus

Meanwhile, the data was being incrementally used: we do not want to infer that no progress on workload analysis can be made for three years. Data Services tasks were broken apart as data consultation requests and software specific consultation increased, thereby increasing workload complexity in that area: Qualitative (ATLAS.ti), quantitative (STATA), and ArcGIS software requests arrived with additional needs ranging from help with class problem sets to advanced analysis with doctoral theses. Additional software was purchased during the pandemic to ensure cloud access while the SHU community was still remote (previously, software availability often meant dedicated workstations in the University Libraries' Information Commons).

The rubric was checked against faculty annual reports submitted at the end of each academic year, revealing that workload data and information contained in the annual reports were inconsistent at times. As noted, the annual report template was updated twice to ensure reporting on the same tasks with the same terminology to produce aggregated annual totals (instead of having to retroactively confirm or correct the data as had been done):

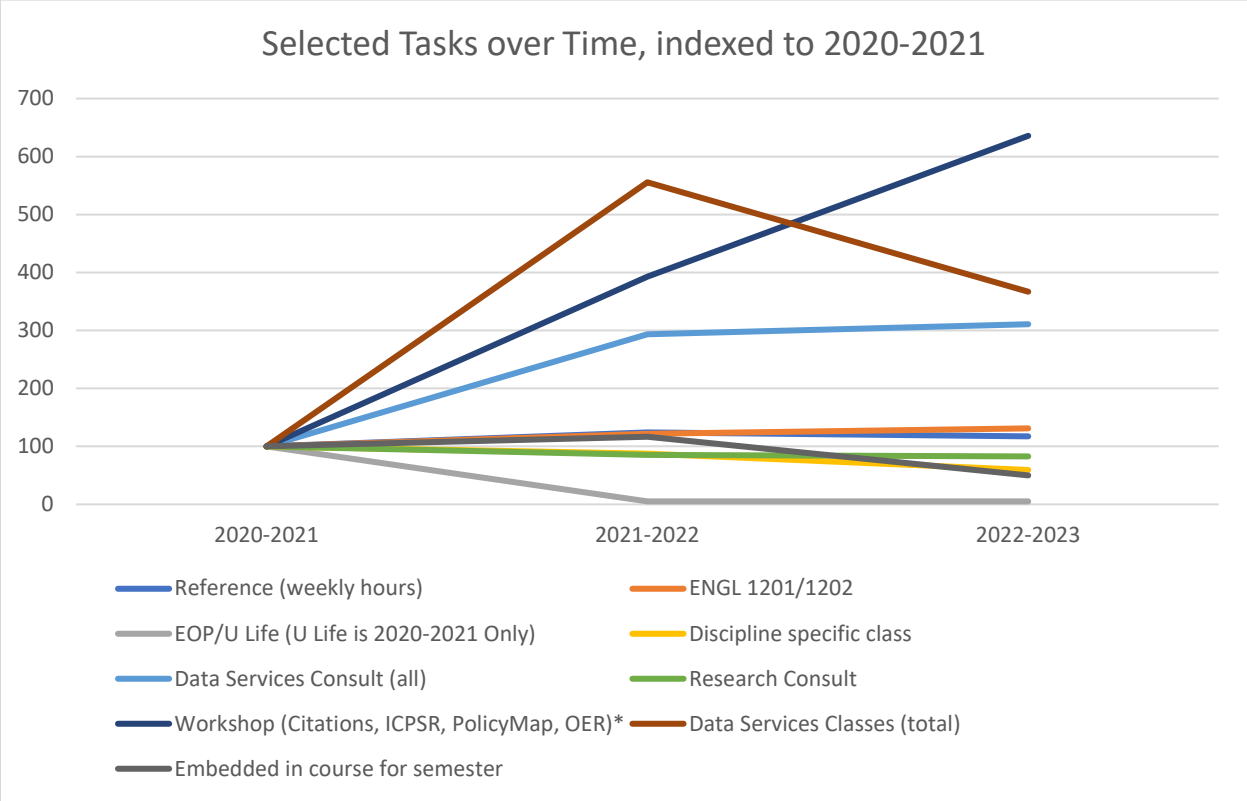
Table 2. Aggregated annual totals by task

Task	2020-2021	2021-2022	2022-2023
Reference (weekly hours)	29	36	34
ENGL 1201/1202 sessionsx	135	167	177
EOP/University Life (U Life is 2020-2021 Only)	77	4	4
Discipline specific class - create and deliver first time	96	76	54
Discipline specific class - already delivered	0	8	3

Data Services Research Consult (finding data)	93	271	289
Research Consult - navigating website, finding articles & books	278	237	230
Workshop (Citations, ICPSR, PolicyMap, OER)*	14	55	89
Data Services Class - ArcGIS, STATA, SPSS, Coding*	0	40	17
Data Services Class- Coding	0	6	12
Data consult – GIS analysis	0	2	0
Workshop (Data Analysis)	9	4	5
Embedded in course for semester	6	7	3
Outreach - social media post		0	0
Outreach - social media blog post		8	28
Outreach - full semester		3	0

*includes co-taught classes/workshops

Figure 1. Selected Tasks, Change Over Time, Indexed to AY 2020-2021



Last, the rubric was divided up by person to get a weighted workload (number of task events times the level of difficulty):

Table 3. Breakdown by person for AY 2020-2021 (PSL = Public Services Librarian, CSL = Collections {Technical} Services Librarian)

Task	**PS L1**	**PS L2**	**PS L3**	**PS L4**	**PS L5**	**PS L6**	**PS L7**	**PS L8**	**CS L1**	**CS L2**	**CS L3**
Reference (weekly hours)	4	4	4	2	4	0	0	4	2	3	2
ENGL 1201/1202/EOP/U Life	48	28	20	12	43	5	15	15	12	13	10
Discipline specific class - create and deliver first time	15	10	7	18	8	19	10	0	4	0	5
Discipline specific class - already delivered	0	0	0	0	0	0	0	0	0	0	0
Data Services Research Consult (finding data)	0	0	0	20	0	0	0	0	5	0	0
Research Consult - navigating website, finding articles & books	75	61	47	42	33	20	0	0	0	0	0
Workshop (Citations, ICPSR, PolicyMap, OER)*	2	0	0	0	0	0	4	2	0	0	0
Data Services Class - ArcGIS, STATA, SPSS, Coding*	0	0	0	0	0	0	0	0	0	0	0
Data Services Class- Coding	0	0	0	0	0	0	0	0	0	0	0
Data consult- quantitative analysis	0	0	10	0	0	0	0	0	10	0	0
Data consult – qualitative analysis	0	0	8	0	0	0	0	0	10	0	0
Data consult – GIS analysis	0	0	0	0	0	0	0	0	0	0	0
Workshop (Data Analysis)	0	0	4	1	0	0	0	0	4	0	0
Embedded in course for semester	2	2	0	0	2	0	0	0	0	0	0
Weighted Total Score	**309**	**222**	**209**	**196**	**190**	**107**	**68**	**38**	**124**	**37**	**29**

Figure 2. Weighted breakdown by individual, AY 2020-2021

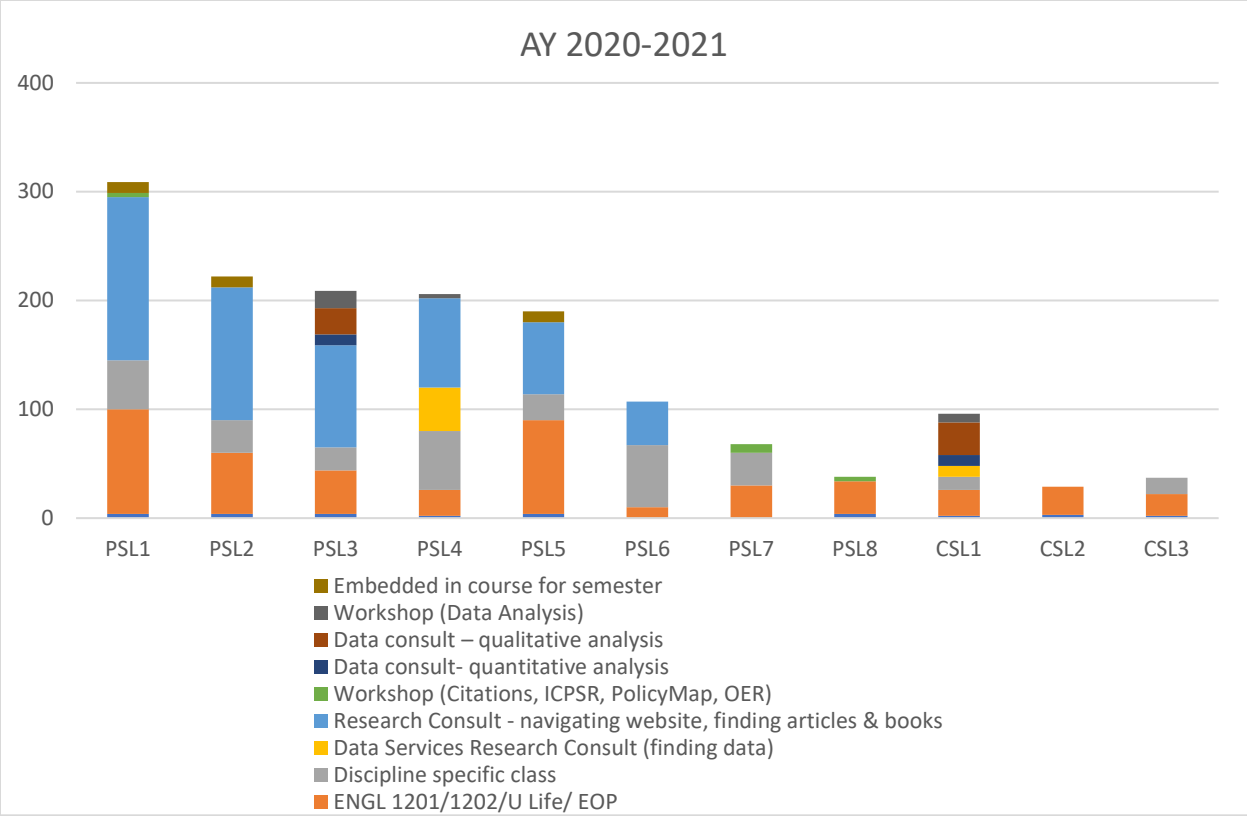


Figure 3. Weighted breakdown by task, AY 2020-2021

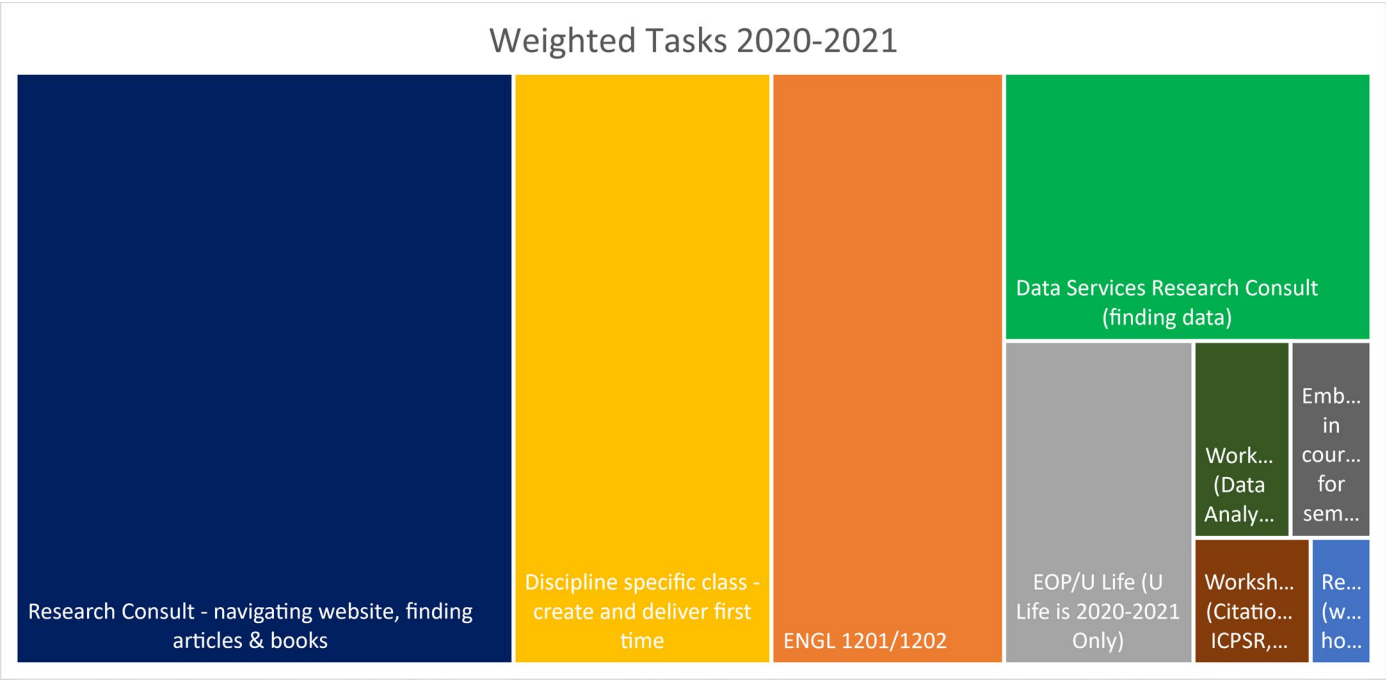


Table 4. Breakdown by person for AY 2021-2022

Task	PSL1	PSL2	PSL3	PSL4	PSL5	PSL6	PSL7	PSL8	CSL1	CSL2	CSL3	Other*
Reference (weekly hours)	4	5	5	4	2	0	4	3	1	2	2	4
ENGL 1201/1202	21	18	15	15	14	13	0	14	6	12	16	20
EOP	1	0	1	0	1	0	0	0	0	1	0	0
Discipline specific class – first time	36	13	4	6	2	6	0	0	0	8	1	0
Discipline specific class – already delivered	5	1	0	0	2	0	0	0	0	0	0	0
Data Services Consult	0	0	7	20	0	0	0	0	43	0	0	0
Research Consult	62	52	33	40	11	39	0	0	0	0	0	0
Workshop (Citations, ICPSR, PolicyMap, OER)	8	0	0	3	6	1	1	0	3	0	0	2
Data Services Class – ArcGIS, STATA, SPSS	1	0	15	2	0	0	0	0	10	0	0	2
Data Services Class- Coding	0	0	0	0	0	0	0	0	4	0	0	0
Data Consult – GIS analysis	0	0	0	0	0	0	0	0	0	0	0	0
Workshop (Data Analysis)	0	0	0	0	0	0	0	0	0	0	0	0
Embedded in Course	1	3	0	0	0	3	0	0	0	0	0	0
Outreach - social media post	0	0	0	0	0	0	0	0	0	0	0	0
Outreach - blog post	0	0	0	0	0	8	0	0	0	0	0	0
Outreach - full semester	1	0	1	0	0	1	0	0	0	0	0	0
Total Weighted Score	**317.5**	**201**	**177.5**	**184**	**75.5**	**151**	**6**	**31**	**143**	**51.5**	**37**	**54**

*adjunct/intern

Figure 4. Weighted breakdown by individual, AY 2021-2022

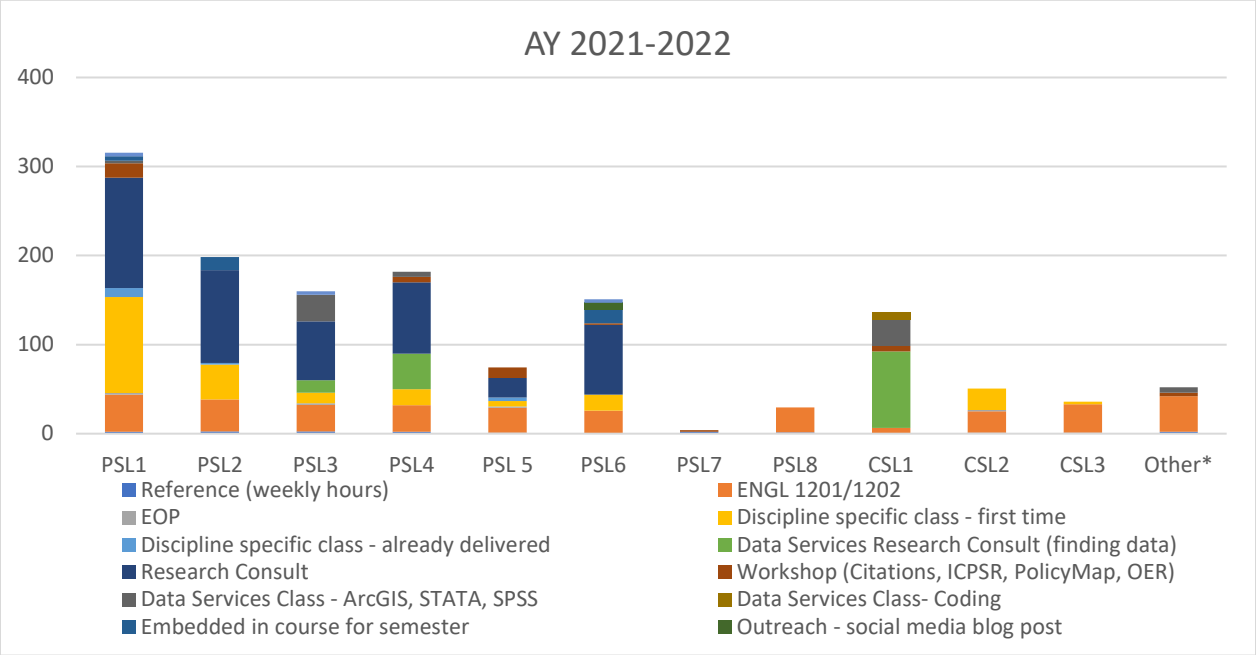


Figure 5. Weighted breakdown by task, AY 2021-2022

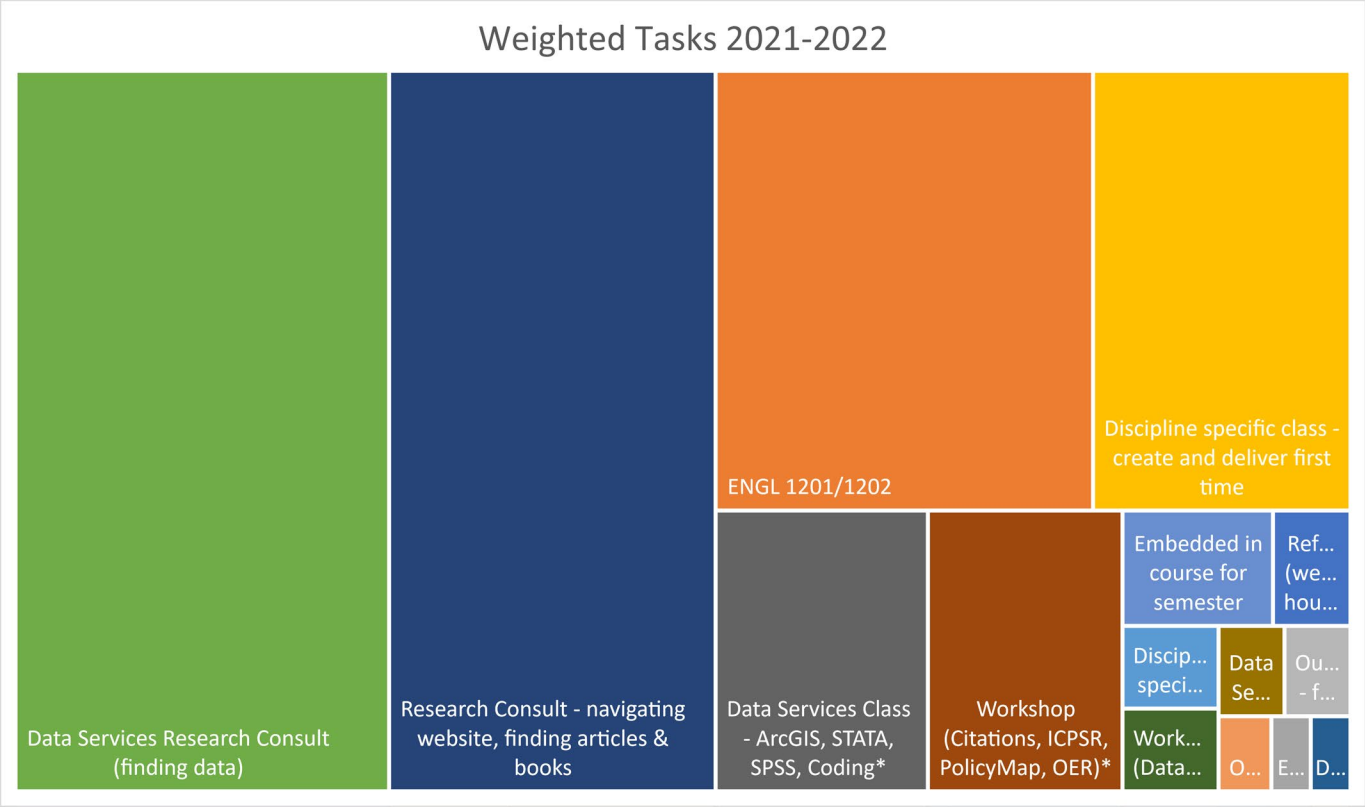


Table 5. Breakdown by person for AY 2022-2023

Task	PS L1	PS L2	PS L3	PS L4	PS L5	PS L6	PS L9	PSL 10	CS L1	CSL 2	CS L3	CS L4	CS L5	Other*
Reference (weekly hours)	4	4	3	0	4	4	0	3	0	2	2	2	2	4
ENGL 1201/1202	29	24	5	17	4	24	7	14	0	11	11	5		31
EOP	1	0	1	0	1		0	0	0	1	0	0	0	0
Discipline specific class – first time	21	10	2	0	0	12	0	4	0	4	0	0	1	0
Discipline specific class – already delivered	1	0	0	0	0	0	0	0	0	2	0	0	0	0
Data Services Consult	0	0	19	0	0	0	0	60	6	0	0	28	0	0
Research Consult	72	37	39	0	0	15	4	63	0	0	0	0	0	0
Workshop (Citations, ICPSR, PolicyMap, OER)	9	1	13	0	4	0	0	13	1	1	0	4	0	0
Data Services Class – ArcGIS, STATA, SPSS	0	0	1	0	0	0	0	5	0	0	0	0	0	0
Data Services Class-Coding	0	0	1	0	0	0	0	2	4	0	0	0	0	0
Data Consult – GIS analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Workshop (Data Analysis)	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Embedded in Course	0	1	0	0	0	2	0	0	0	0	0	0	0	0
Outreach - social media post	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Outreach - blog post	0	0	0	0	0	27	0	1	0	0	0	0	0	0
Outreach - full semester	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Weighted Score	**290.5**	**163**	**167.5**	**34**	**21.5**	**155**	**22**	**339**	**22**	**43.5**	**24**	**76**	**5**	**66**

*adjunct/other

Figure 6. Weighted breakdown by individual, AY 2022-2023

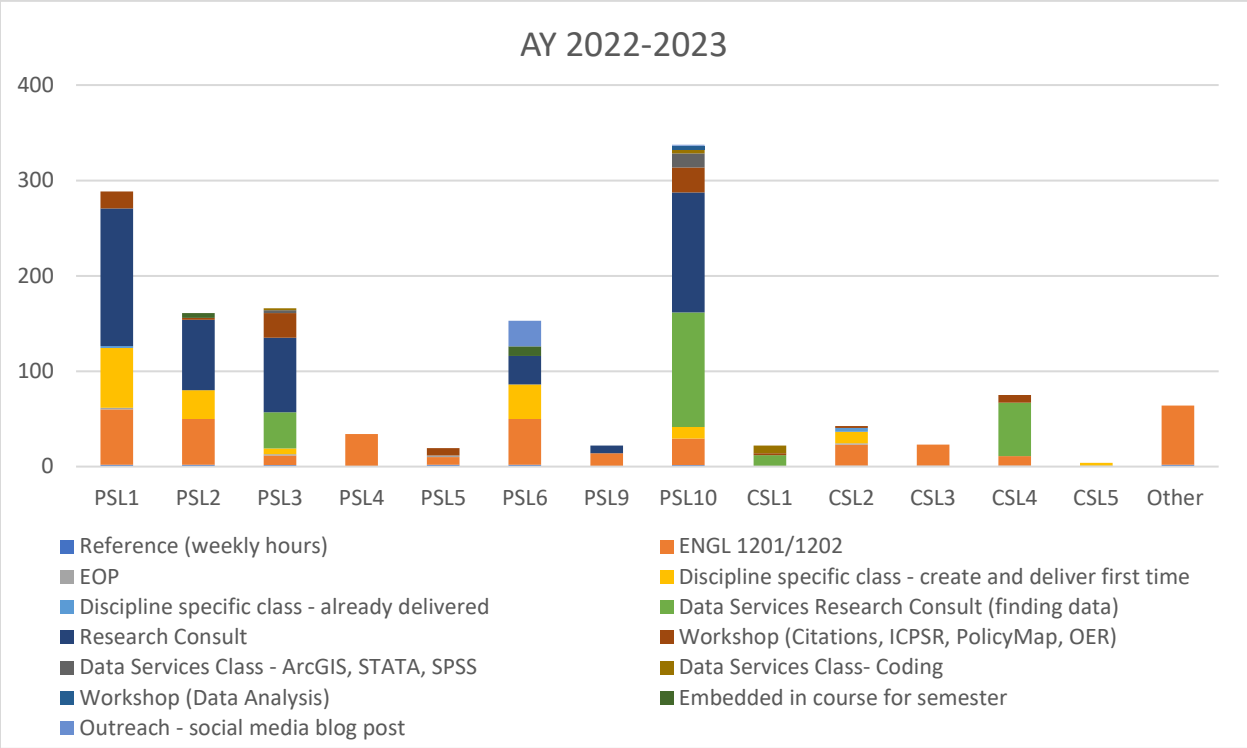
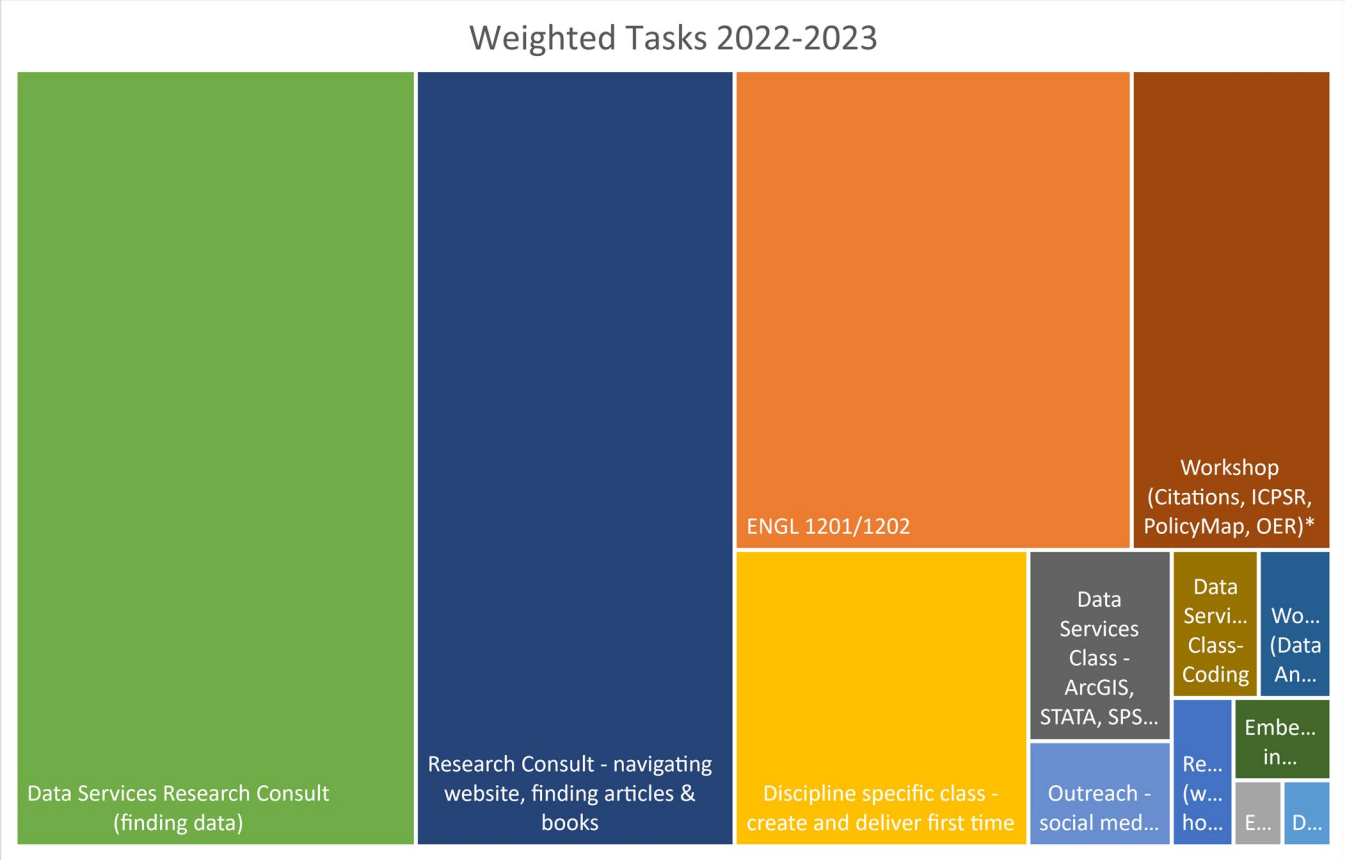


Figure 7. Weighted breakdown by task, AY 2022-2023



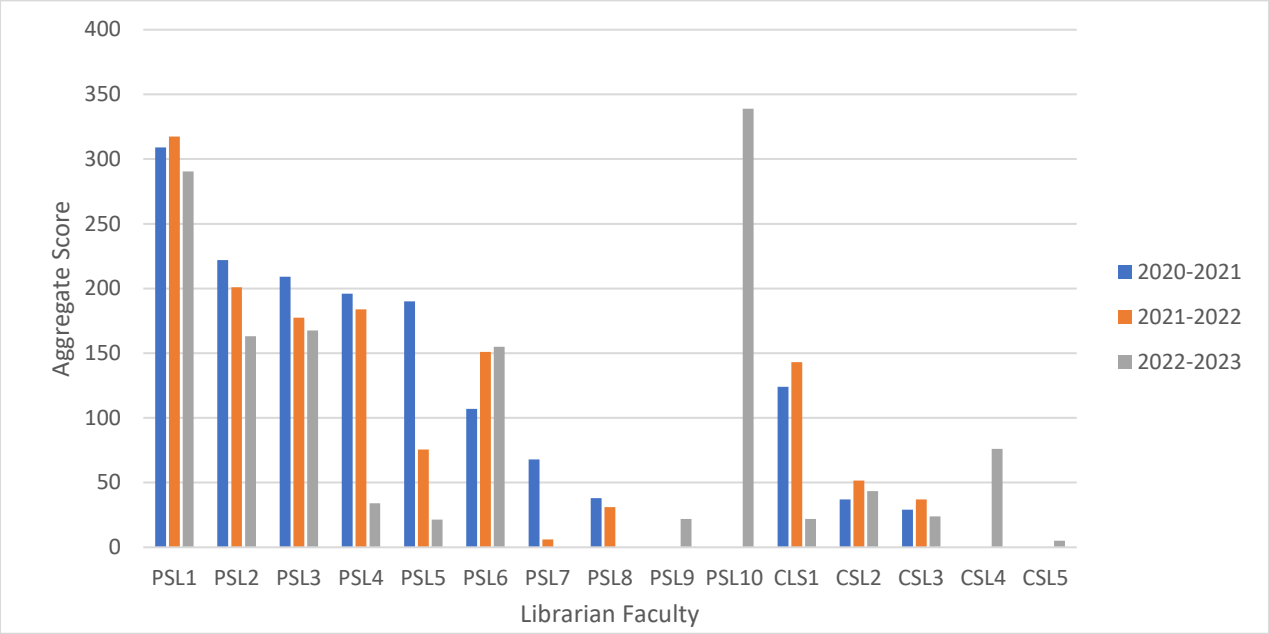
Finally, based on the level of difficulty, a weighted workload score was created over 3 academic years:

Table 6. Total weighted workload score by person over time

	2020-2021	2021-2022	2022-2023
PSL1	309	317.5	290.5
PSL2	222	201	163
PSL3	209	177.5	167.5
PSL4	196	184	34
PSL5	190	75.5	21.5
PSL6	107	151	155
PSL7	68	6	N/A
PSL8	38	31	N/A
PSL9	N/A	N/A	22
PSL10	N/A	N/A	339
CSL1	124	143	22
CSL2	37	51.5	43.5

CSL3	29	37	24
CSL4	N/A	N/A	76
CSL5	N/A	N/A	5

Figure 8. Total weighted workload score by person over time



Discussion

Librarian faculty members began to model their reports and metrics to map onto the Public Services Rubric in varying degrees, and it was necessary clean the workload data at times, as noted. For instance, if self-reported instruction numbers were undifferentiated, the breakdown in subject matter and type of class was verified against a jointly maintained online instruction calendar supervised by the Instruction Coordinator – a particularly important part of Public Services workload at Seton Hall University Libraries. Weekly reference hours were verified by reviewing the reference schedule distributed at the start of each semester and the average of the two numbers was taken as representative for the year if there was a difference. Number and type of consultation, course embedment, and outreach metrics could not readily be verified if not

reported by faculty members. These numbers are consequently less formally reliable, but ours is not a far-flung unit: whiteboard notes on whereabouts, hallway discussions, etc. confirmed the essentials and the details.

There was initial worry and resistance in accepting that this was an exercise to define future services for the library, and the concern instead was that librarians were being evaluated by the resulting scores. It was communicated that public services librarians would naturally have higher scores because the vast majority of their time was devoted to the 15 tasks in the rubric, that individual subject specialties would affect score outcomes, and so forth. Members of the technical services team also received scores, but their assistance with instruction or research consultations *should* be smaller than those in on the public services team. We knew they contributed, but we couldn't be sure if we had a reasonable balance within our Public Service offerings of commitments across the Library.

Part of this process was to identify librarians that might need some workload release from activities such as English instruction for freshmen, reference hours, and research consultations in order to pursue changes or innovation in our public services, e.g. designing workshop sessions and asynchronous modules for ENG 1201 and 1202, or tutorials for the simpler research data services sessions. We are well aware of the workload implications of creating original course material or being embedded in several courses over a semester is very time consuming and requires the librarian's focus to be involved with a course on a weekly basis. That was one of the key needs to evaluate public services workload and preventing burnout. While a small team, it was possible that the group was not aware of all of the projects that the individual librarians were undertaking. Therefore, this workload assessment also helped bring to light projects that were taking place in various areas of library work and instruction material and asynchronous tools

shared. For example, an academic integrity module created for and used by the School of Business by its liaison librarian could be widely reused across campus. In other words, the workload data allowed sharing of information. The data was also evaluated by type of activity since it is important to understand where the bulk of the librarians' time was being spent. For example, the library has a successful instruction program where the freshman class of 1,600 visit the library twice in their freshman year and receive live instruction. The workload data revealed that the freshmen were receiving an average of 57.83% of the librarians' instruction time over the period of study – the library team was teaching 90 live sessions per semester:

Table 8. Instruction sessions by type on a semester and annual basis

Discipline	Fall 2020	Spring 2021	**2020-2021**	Fall 2021	Spring 2022	**2021-2022**	Fall 2022	Spring 2023	**2022-2023**
ENGL 1201/1202	72	63	**135**	78	89	**167**	88	89	**177**
Africana Studies	0	3	**3**	1	0	**1**	0	2	**2**
Anthropology	1	1	**2**	0	2	**2**	1	1	**2**
Art History	0	3	**3**	3	0	**3**	0	0	**0**
Biology	0	0	**0**	1	1	**2**	0	2	**2**
Business	3	5	**8**	2	2	**4**	2	1	**3**
Catholic Studies	0	0	**0**	0	0	**0**	0	0	**0**
Chemistry	1	0	**1**	2	0	**2**	1	0	**1**
Communication	4	1	**5**	3	2	**5**	7	6	**13**
CORE	0	0	**0**	0	0	**0**	0	0	**0**
Data Services	12	21	**33**	409	43	**92**	49	34	**83**
Diplomacy	5	2	**7**	1	0	**1**	1	1	**2**
Education	0	5	**5**	6	3	**9**	7	3	**10**
English	5	2	**7**	7	0	**7**	3	0	**3**
Environmental Studies	1	0	**1**	1	1	**2**	1	1	**2**
EOP	0	0	**0**	4	0	**4**	4	0	**4**
History	9	1	**10**	3	3	**6**	4	2	**6**
Journalism	1	1	**2**	3	1	**4**	0	1	**1**
Latin American & Latinx Studies	0	0	**0**	0	0	**0**	0	0	**0**
Political Science	7	3	**10**	2	1	**3**	0	2	**2**
Psychology	2	2	**4**	1	1	**2**	1	1	**2**
Public Relations	0	1	**1**	0	0	**0**	0	0	**0**
Religious Studies	0	0	**0**	0	0	**0**	1	2	**3**
Social Work	2	0	**2**	2	0	**2**	1	1	**2**
Sociology	1	0	**1**	1	0	**1**	0	0	**0**

Theology	0	1	**1**	0	1	**1**	0	2	**2**
ULife	73	0	**73**	0	0	**0**	0	0	**0**
Women and Gender Studies	0	1	**1**	0	0	**0**	0	0	**0**
Other Workshop	14	15	**29**	18	9	**27**	15	8	**23**
Total	213	131	**344**	188	159	**347**	182	154	**341**

This data provoked some re-thinking of this workload commitment: there could be different modalities the instruction program can employ to reduce the amount of live instruction while achieving instructional goals. With the rise in asynchronous instruction post-pandemic, it seemed like 90 live sessions taught per semester might not be the right way to allocate librarian time, and based on this, discussions about ensuring that we reach upper division students and the information literacy skills we want them to graduate with began. As future projects emerge, a review can be undertaken with this data to consider the return on the investment of librarian time.

Conclusion, Discussion and Limitations

This article discusses how to revamp a Public Services academic library division using and framing workload data because innovative units do not strive to continue running services the same way year after year, but need a rational method. University and library priorities change, users change, curricula change, librarians' skills evolve and change with turnover and new hires. Technology and database features change. One can review librarian output by following the steps below. If other institutions that want to apply this methodology, we recommend:

HOW TO ASSESS CURRENT LIBRARY SERVICES
1. Isolate the key deliverables or outputs in the library or unit.
2. Add a weight to each task based on level of difficulty.

3. Multiply the task and the weight to determine level of "effort".
4. Enter the number of deliverables (classes, consultations, workshops)
5. Determine the priority of the items in # 4. What can deliverables be automated asynchronously; what services can be decreased or increased based on current demand?
6. (Optional) Define a simple rubric with low, medium, and high outputs.
7. Discuss results with stakeholders and determine how often this "inventory" will be reviewed and discussed.
8. Make recommendations for new services, decreasing or pausing existing services, based on current demand for highest priority deliverables.

As demonstrated with the freshman English instruction data, workload data can capture cross-divisional workload support from technical and collection services. While our library functions and is managed as a unit, aggregating divisional contributions allows management to track work traded between them for equity purposes, ensuring overall institutional goals are met. This was critical at a time of turnover in technical services: what could we reasonably expect from this unit?

The University Libraries now have three years of data that shows the shift in how our Public Services librarians are spending their time – and not spending their time. There has been a conscious workload shift toward offering more data services coverage because of demand, and a conscious shift away from reference. In other words, we are adjusting workload around a new service. Four librarians had the preexisting skillset or were willing to learn qualitative and quantitative software tools, consequently, on average approximately 50% of their time was allocated to Data Services across instruction and consultations. The number of Data Services workshops and classes grew by 151.52% over the period, representing an increasingly significant percentage of the overall Public Services workload mix. Their proportion increased from 9.59% of instruction sessions in 2020-2021 to 24.34% in 2022-2023. The total instruction load

remained largely consistent year-on-year, indicating that number is the approximate carrying capacity of the department as currently constituted. Consequently, the growth of Data Services and the heightened intensity of the freshman English class load, which grew by 28.15% from an already time-intensive base, is, in workload terms, crowding out traditional discipline specific instruction which declined by 41.67% over the period. Some of this discipline specific instruction was likely captured by Data Services, particularly in data-intensive social science disciplines such as diplomacy, political science, and economics but that phenomenon could not account for such a significant and persistent decline. Instrumental in managing these shifts in instruction were the contributions of the faculty librarians from Collections Services as well as seasonal help from interns and adjuncts. Collectively they covered on average a little under a third (32.64%) of freshman English instruction, allowing the workloads of the six full-time Public Services librarians to remain more manageable despite the increased demands on that instruction type.

The growth of Data Services was evident elsewhere in the workload data. While reference chat inquiries collapsed, mirroring national trends, the number of research and data consultations increased by 39.89%, fueled by the growth of Data Services, with data consultations representing 55.68% of consultations in 2022-2023, up from 25.07% in 2020-2021. By aggregating data on these metrics, it allowed for a check on the balance of workload for those individuals contributing to Data Services, as all but a single staff member occupy dual roles with responsibilities that lie outside of it. Data Services are discussed consistently in academic library literature for a dozen years with the publication of Kellam and Peter's (2011) numeric data services and sources for the general reference librarian. This evolved into the growth of research data management in academic libraries, with the Association of Research Libraries (ARL)

leading the charge: librarians identified the need for research data management for grant applications and data archiving at the conclusion of a project for preservation and sharing data, and the consensus extends to research data management training to existing and new library school graduates (Carlson and Stowell-Bracke, 2013; Carlson, et al., 2013; Lake, et al. 2016; Johnston, et al., 2018; Kellam and Johnson, 2016; Parham et al., 2016; Thomson and Kellam, 2016).

That is to say, justifying, designing and offering Data Services is well-documented, but an interesting finding is that none of the recent literature reviews on data services even mentions workload effects or how that work is accommodated institutionally in academic libraries (Joo and Schmidt 2021; Fuhr 2022; Sheikh, Malik and Adnan 2023; Andrikopoulou, Rowley and Watson 2022). Another search in *LISTA* as of September 2023 of "public services" AND "change management produced 15 results and adding librar* eliminated 3 which discussed "public sector" outside the context of libraries. Adding the term data was only fruitful as a word search within the article full-text. And the results confirmed the previous literature review in the form of broad, non-specific brush strokes that did not get at a process of gathering, weighting and making workload data useful. For example:

- One library "has experimented with new approaches to remain relevant, including changing work habits, offering decentralized services, and creating innovative workflows. … Libraries increasingly identify research support as a specific area that requires the coordination and strategic development of research data management, open scholarship, citation analysis, and copyright, among other areas. To address research support needs, [we] realigned its liaison librarians into cross-functional divisions." (Malecki, et al., 2021, 426, 435).

- "It is no secret that liaison roles and responsibilities have been drastically changing over the last few years. While the pace and scope of that change varies between institutions, there are several areas where these developments are converging and most libraries are following suit. But these changes deal with far more than a simple update in duties" (Ippoliti, 2017).

As a limitation, Access Services is one significant component of Public Services only partially accounted for in this workload data and analysis. At Seton Hall Access Services includes circulation (wrapping together resource sharing and course reserves), interlibrary loan, and stacks maintenance overseen by the Access Services librarian. Some of the workload within the rubric like freshman English instruction and reference work are reflected in the data, as well as disparate tasks such as in-depth bibliographic investigations and research consultations. But impromptu inquiries fielded by the Access Services Librarian while at the Circulation desk (e.g. "I need a critical analysis of Author X") are reference transactions that are sometimes captured in the data, sometimes not. Other vital public services tasks are performed by the Access Services Librarian not directly represented in the data are: access policy development, review/updates, technology investigations and reviews for the Integrated Library System and ILL management software, staffing and supervision of six full time and two part time staff employees, hiring, training, scheduling, performance evaluations, work-task guidance, documentation and tracking procedures for group study rooms, planning for book displays, new library maps and other stacks projects, seasonal schedule fluctuations. All are significant time demands and vital to the smooth functioning of our Public Services. Arguably, the staff roles, in their initial interface with library patrons and partner institutions around access issues, request statuses, lost and overdue material, and so on represent a significant contribution to Public Services work as well as a bridge

between Public Services librarian workloads and initial library contact with a larger community of library users and reinforcing the conduit role of Access Services.

However approximate, this workload modelling using weighted scores accomplishes several things for Seton Hall University Libraries. First, it situates and quantifies what is known locally and nationally in terms of public services trends (decline in reference, the opportunity costs of in-person instruction (vs. its benefits), new services like research data service and the time commitments involved. Second, it provides a means of capturing the balance or imbalances of workloads beyond anecdote. After all, it doesn't get us very far if we focus on particular incidents that do not capture a broad pattern ("My freshman English class had a rising junior that had a very sophisticated paper topic that took a lot of time to help her with.") Third, it performs this task *between* divisions of the University Libraries. And fourth, it allows us to – up to a reasonable point – monitor, plan and distribute public services workloads beyond the whims of administrative, professor and student demand-of-the-moment that end up accumulating – or going away – in the course of a semester or a year: workload can still be broken or seriously unbalanced even if you never look at your data. That change is hard is a commonplace. Change in academic librarian public services requires "everyone to redirect resources and make decisions that are political in nature. [Librarians] are asked to loosen their times to the activities that [have] defined them as librarians[:] a crossroads of competing values" that can *feel* as a devaluing of the former work, a questioning of competency and steep learning curves (Malenfant 2010, 73-74, 67). Workload data helped us de-personalize some of those issues. New data services all by themselves bring librarians into unfamiliar collaborations and arenas of the research enterprise – upending or changing professional identities (Andrikopoulou, Rowley and Watson 2022, 356-357). The changes we implemented can't or shouldn't be instant – as so much of the hype about

change in the literature would have it. But it should be intentional. Last, we still hold out hope that reframing our workload questions might help inform national data – as national data helped inform our local workload questions as we have attempted here.

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