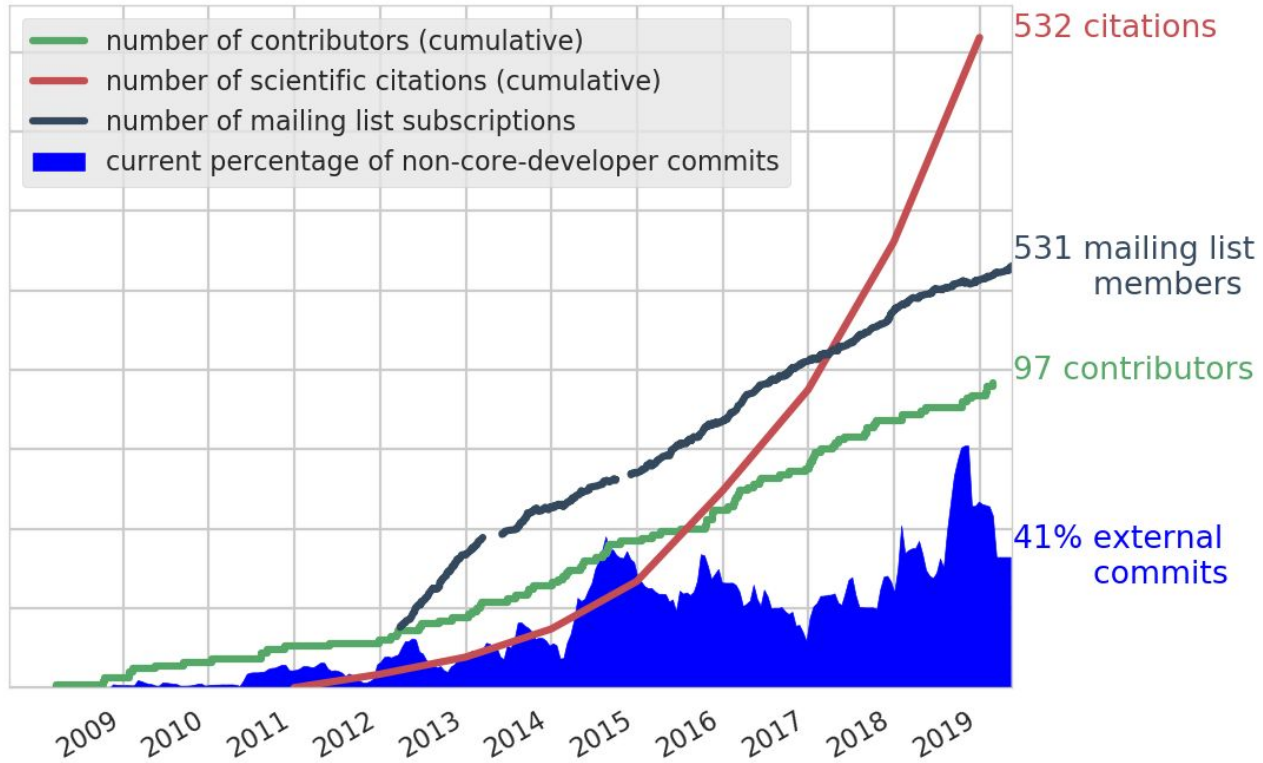# Hanging out your open science shingle:

launching an open science program by supporting a new graduate cohort

Sam Teplitzky
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Impact of Obspy, Python framework for Seismology
https://github.com/obspy/obspy
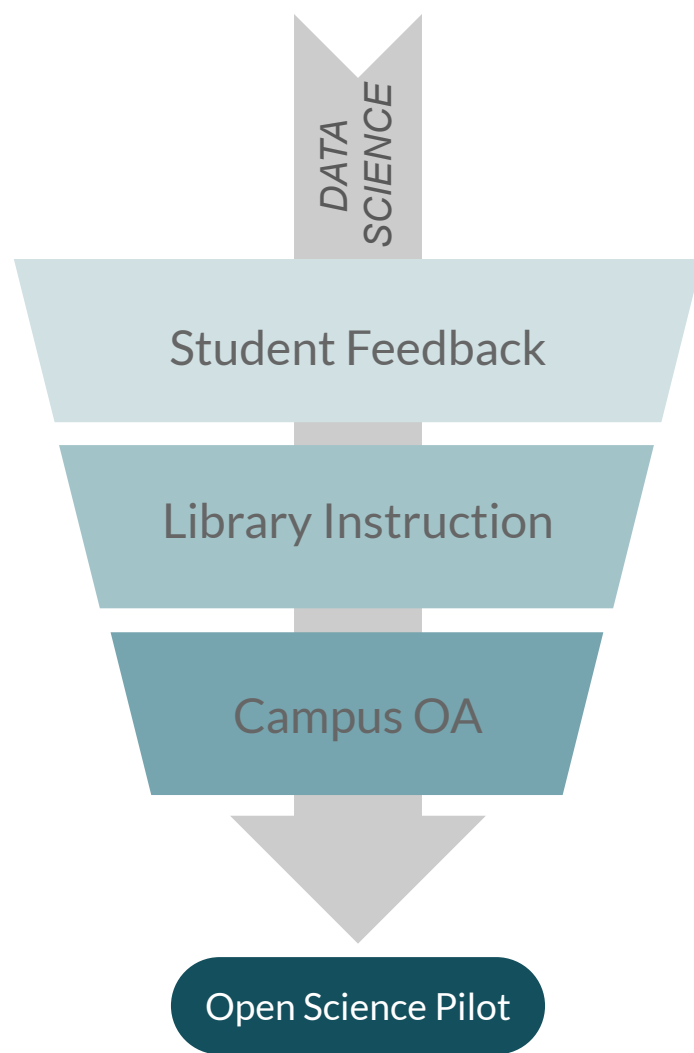
Motivating questions

How have workflows changed?
What new roles have emerged for librarians?
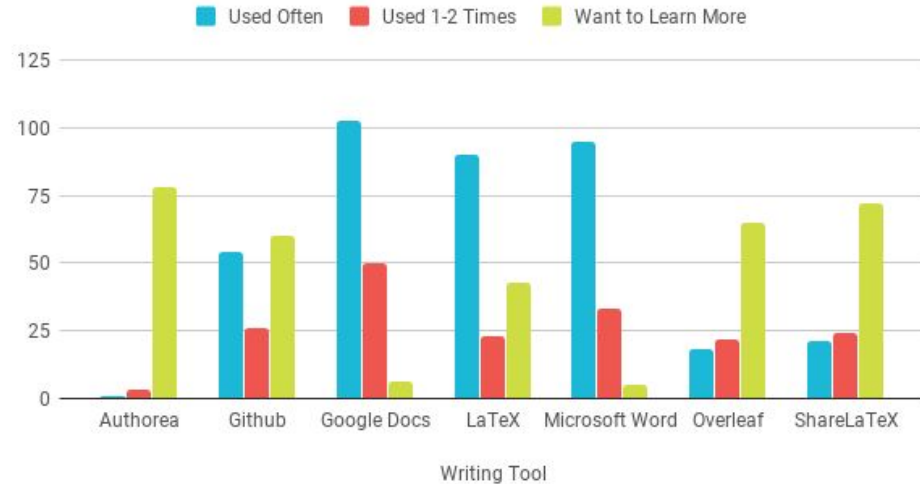How can libraries support open science?

Background

Threads:
Open Science Pilot

Thread 1: Student Feedback

- 2016 Survey of graduate student preferences for collaborative writing tools

- Anecdotal requests for Python consultations

- Growth of data science on campus; Jupyter notebook use increasing but exposure & experience among students is uneven

Collaborative Writing Tools - Survey Results

Thread 2:
Changing Approach
to Library Instruction

Library **orientations** and
workshops aligned with
research workflows.

Research
Workflow
Cycles

DISCOVERY

DATA
COLLECTION

ANALYSIS

WRITING

PUBLICATION

OUTREACH
&
IMPACT

Adapted from Bosman and Kramer (2016):
https://doi.org/10.6084/m9.figshare.3468641.v1

Thread 2:
Changing Approach to Library Instruction

Library **orientations** and **workshops** aligned with research workflows.

Course developed:

WRITING

Thread 3: Campus Open Access/Elsevier

- University of California Open Access policy

- Elsevier shut off - awareness among students

UC Presidential Open Access Policy

Also available as a PDF.

Issuance date: October 23, 2015

I. Policy Summary

The University of California is committed to disseminating its res...
university system, the University of California is dedicated to maki...
University of California recognizes the benefits that accrue to its ou...

Research ▾   People ▾   Campus & community

Berkeley News

CAMPUS & COMMUNITY, CAMPUS NEWS

Publisher Elsevier halts UC's access to new articles

By Gretchen Kell, Media relations | JULY 10, 2019

Email   Print

Tweet   Share 576

Open Science Pilot

Reproducible workflows
using open tools,
in the Berkeley context

Selecting topics

- Strengths in the library
- Conversations with faculty
- Recruit other instructors
- Give opportunities

EPS Graduate Student
2019 Research Workflows Workshop Series

| DISCOVERY | DATA | ANALYSIS | WRITING | PUBLICATION | OUTREACH |

THEME	DATE	TIME	TOPIC	INSTRUCTOR
DISCOVERY	WED 8/21	4 - 5	Introduction to Research Workflows and Literature Searching	Sam Teplitzky
WRITING	FRI 8/30	11 - 12	Citation Management	Susan Powell & Erica Newcome
WRITING	FRI 9/13	11 - 12	Collaborative writing in LaTeX with Overleaf	Anna Sackmann Sam Teplitzky
DATA	FRI 9/20	11 - 12	Dynamic data management, publishing and citation	Anna Sackmann
ANALYSIS	FRI 9/27	11 - 12	Jupyter Notebooks best practices	Yuem Park
DATA/ ANALYSIS	FRI 10/4	11 - 12	Approaches to Github and reproducible code	Nick Swanson-Hysell
PUBLICATION	TBD		Publishing and authorship trends in the Earth Sciences	

Collaborations

ORGANIZERS/PRESENTERS:

- Administrative Staff:
  Graduate student advisor; Undergraduate student advisor

- Three librarians

- Library staff member/new MLIS

- Faculty member

- Graduate student

ATTENDEES:

- Graduate students; faculty participant; undergraduate alum

Assessment

Anecdotal:

I had never heard of any of this before.

This has been really great!

You should make this a credit class.

Awaiting:

Topic evaluation/suggestions

Scheduling

Future participation as co-instructors

"Negative Results"

- Mixed attendance
- Climate strikes - 9/20, 9/27
- Scholarly Communications session postponed
- How open was the open pilot?

Next steps, let's collaborate

- Pilot: Cohort check-in Spring 2020

- Jupyter Notebook Open Citation searching project (in development)

  Learning outcomes - Use scaffolded Python code in the provided Jupyter notebook template to make Crossref subject and author queries

  a. Extract reference information from Crossref query results
  b. Visualize Crossref query results in bar plots and line plots. Interpret distributions and trends over time found in results
  c. Compare results from two different keyword queries
  d. Explore/Discover new research directions

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