

# Raising the Profile of the NC State University Libraries' Research Support Strategies & Engagement

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OSF Project site:  
<https://osf.io/akd2v/>

## Context

- Research Excellence and Infrastructure
- Make our collections, spaces, technology, services, and expertise easy to access and evident at the point of need

## Goals of our study

- Build our awareness of researchers' behaviors, expectations, and workflows
- Gain insights into unmet and unarticulated needs
- Improve outreach and use evidence to prioritize our research support strategies and engagement

# Many channels for ground-truthing

- ULC
- Library Representatives
- Office of Information Technology (OIT)
- Office of Faculty Development (OFD)
- Graduate School
- Student Advisory Forum
- ITHAKA S+R studies
- Team feedback discussions

# Methods

- Semi-structured qualitative interviews
- IRB protocol
- 24 groups of librarians
- 102 researchers invited
- 22 researchers interviewed (undergraduate to late career, across disciplines)
- Data saturation with 12-20 interviews
- Each interview revealed new perspectives
- Openly share all of our work on Open Science Framework (OSF)

# Information Sources & Search Strategies

*“What kinds of information do you rely on to do your research and how do you locate it?”*

- Journal articles, books, government data, conference proceedings, newspapers
- GIS, industrial, census, imagery, text corpora
- Code, open source software, software & equipment manuals, GitHub
- Summon, colleagues, Google Scholar, Twitter

“Twitter is fantastic - everybody should be on Twitter if you are doing science.”

“I use the sources that are most available rather than the sources that are most important.”

## Recommendations

- Collect within these non-library resources
- Investigate ways to support computational demands on our collections

# Research Skills

*“What are the most important skills that you need in order to be successful?”*

- Soft skills: communication, team management, collaboration, design
- Hard skills: R, Python, Julia, C, Gephi, Atlas.ti, machine learning, AI
- Lacking: project management, personnel management

*“What skills are you looking to develop next?”*

As a researcher advanced in their career, their necessary skills shift from specific and fundamental skills, to interpersonal and management skills.

## Recommendations

- Target training for most needed skills (see full report), partner with campus units
- Examples: Graphic design, HPC, Agile methods

# Outreach & Communication Methods

*“How do you discover new resources, services, and events on campus?”*

- Email from trusted source, word of mouth, newsletters, social media
- Overload, decentralization, timing of outreach

*“What is your preferred format or mode of communication?”*

- Want central place to discover and personalize events, resources
- Media-rich emails

“There are brief moments” for librarians to gain entry and trust into researchers’ lives.

## Recommendations

- Support aggregation of campus events and resources with ability to personalize
- Infuse rich media in all forms of communication
- Time outreach before or at beginning of Fall semester or during exams

# Data Practices

*“What kinds of data does your research typically produce (or use)?”*

- Small → Large data
- Images, numerical, transcripts, physical data
- Generated locally and external data
- Want to use HPC
- Reproducible research practices

*“Have you encountered any challenges working with data?”*

Data storage was cited as a primary challenge by almost all of the researchers we interviewed.

They are willing to pay for help to introduce more efficiencies into their data practices, but have trouble finding experts to work with them.

## Recommendations

- Increase outreach, training for data storage options, HPC
- Promote data analysis skills workshops and data consultancy services
- Provide guidance for reproducible data management



# Collaboration

*“Do you collaborate with others as part of your research process?”*

- Every researcher collaborates
- Off and on campus
- International is hardest
- Interdisciplinary research is challenging

*What kind of challenges have you experienced in the process of working with others?*

Different fields use different language to describe similar processes and have different expectations when it comes to communicating findings.

## Recommendations

- Offer project management training
- Provide support for new authoring platforms and workflows
- Build awareness of campus Zoom license
- Offer networking events for student researchers

Logistics and technology are still barriers. Researchers need a “place” where everyone can collaborate, this can be physical or virtual.

# Publishing & Sharing Research

*“How do you typically share or publish your research?”*

- Primarily conferences and journals
- Increasingly non-traditional publishing
- Scaffolded publishing

*“Are you doing any non-traditional publishing?”*

...non-traditional publications do “influence your reputation as an international scholar even though it doesn’t weigh on P&T.”

## Recommendations

- Enhance infrastructure for dissemination and discovery of scholarship (citation standards, uptake metrics, DOI minting, graphic design assistance, repository for grey literature, data, and students works)
- Enhance outreach and support for open access publishing and open research, specifically to enable reproducibility (e.g., Open Incubator Project)

# Promoting Research

*“How do you promote your publications or other activities?”*

- Need to grow their identity
- Social media
- ORCID, Google Scholar, GitHub
- Twitter has benefits and risks

“ResearchGate is really important because it feeds into ORCID which feeds into the list of publications on the website.”

## Recommendations

- Provide best practices for building scholarly identity through social media and other forms of promotion
- Continue integrating author profiling systems including ORCID, Google Scholar, ResearchGate, LinkedIn, and faculty websites

# Overarching Challenges

*“What ‘gets in the way’ or makes it harder to get your work done?”*

- Information silos and overload
- Funding support
- Technology and research infrastructure
- Imposter syndrome

Some researchers have built “homegrown” solutions to research infrastructure problems related to data storage and transfer.

“The library puts too much emphasis on the individual to know what to look for.”

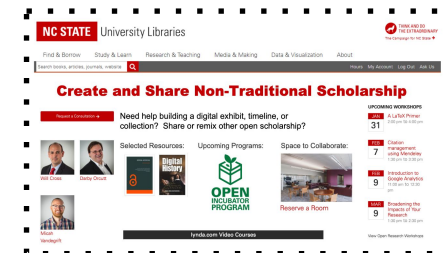
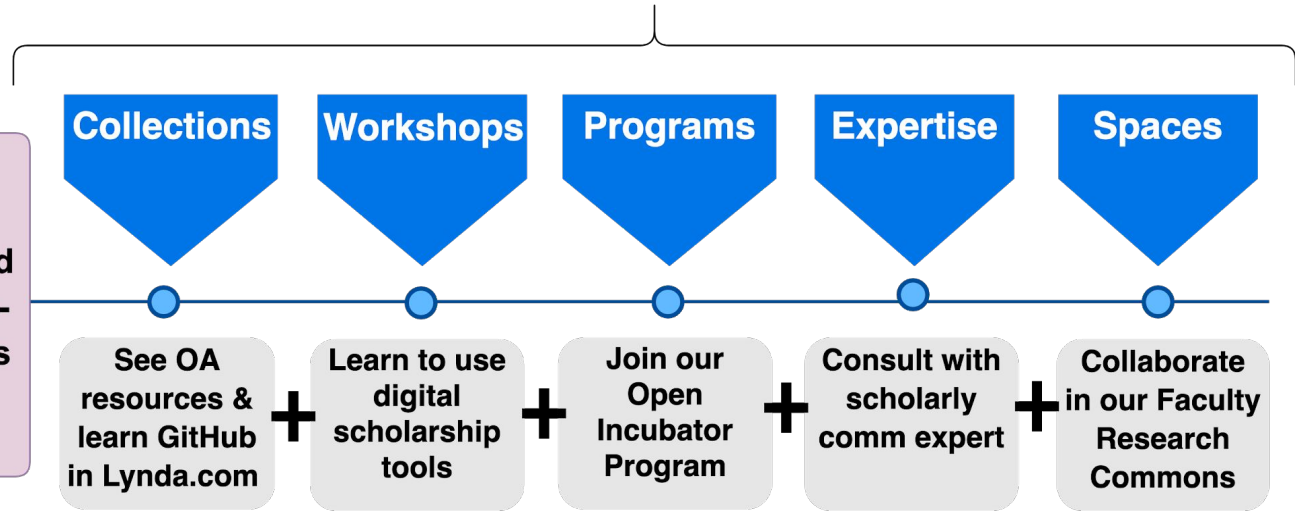
## Recommendations

- Enhance discoverability of library assets at the point of need
- Help researchers find and monitor funding opportunities
- Continue to advocate for open research practices, tools, and collections

# Research Tracks

## Library silos

Produce, distribute, and monitor uptake of non-traditional publications



# Research Tracks

**NC STATE** University Libraries

THINK AND DO  
THE EXTRAORDINARY  
The Campaign for NC State

Find & BorrowStudy & LearnResearch & TeachingMedia & MakingData & VisualizationAbout

Search books, articles, journals, website

HoursMy AccountLog OutAsk Us

Request a Consultation →

Need help building a digital exhibit, timeline, or collection? Share or remix other open scholarship?

  
Will Cross

  
Darby Orcutt

  
Micah Vandegrift

Selected Resources:



Upcoming Programs:



Space to Collaborate:

  
Reserve a Room

UPCOMING WORKSHOPS

JAN 31

A LaTeX Primer  
2:00 pm to 4:00 pm

FEB 7

Citation management using Mendeley  
1:30 pm to 3:30 pm

FEB 9

Introduction to Google Analytics  
11:00 am to 12:30 pm

MAR 9

Broadening the Impacts of Your Research  
1:30 pm to 2:30 pm

View Open Research Workshops

lynda.com Video Courses

# What's Next:

- Toolkit
- ITHAKA studies
- Aligning discovery with user journey
- Internal & external presentations
- Follow-up across library



## Researcher Feedback Toolkit

Based on the Fellows Initiative *Raising the Profile of the NC State University Libraries' Research Support and Engagement*, this document provides some questions for liaisons to help tighten the feedback loop between campus researchers and the library.

### Quick Tips for Interviewing Success:

- **Pause** - Give them time to answer, then give them more time.
- **Be Natural** - If these words don't sound right to you, they won't to them either.
- **Probe** - If they are succinct or don't provide enough info. ask follow-up questions.
- **Transition** - Keep it conversational: use transitional statements between questions.
- **Notes** - Your notes are for you: only write what you need help you remember.
- **Recording** - If you want to record the interview, ask for permission first.

### Questions:

**Data:** What kinds of data does your research typically use or produce? What challenges have you encountered in the process of working with that data?

**Skills:** What skills do you rely on for your research? What skills are you looking to develop next? What skills do you want members of your research team to acquire next?

**Collaboration:** What kinds of challenges have you experienced in the process of working with others?

**Barriers:** What "gets in the way" or makes it harder to get your work done? What are you interested in doing but not able to do now?

**Support:** Are there any resources, services, or other kinds of support that would help you more effectively conduct your research? Are there services at other institutions that NC State doesn't offer?

Learn More

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Go to Project site to find Full Report and Appendices

- Appendix A: Interview Guide for Librarians
- Appendix B: Interview Guide for Researchers
- Appendix C: Potential Training Topics
- Appendix D: Research Tracks
- Appendix E: Anonymized Dataset
- Appendix F: Related Publications & Presentations
- Appendix G: Researcher Feedback Toolkit