Defining and Addressing Burden: Theory, Research, and Practice

May 24, 2024

Participation by:
- Faculty-Administrator Collaboration Team (FACT) – Session Host
- The Research Systems Technologies Committee (RSTC)
- Open Government: Research Administration Data Subcommittee (OG-RAD)
FACT: Agenda

- **Introduction** – 5 min (Steve-Moderator)
- **The FACT Perspective** – 15 min (Mark, Carmen, Kelly)
  - The Burden of Change
- **The RSTC Perspective** – 20 min (Lori)
- **The OG-RAD Perspective** – 15 min (David)
  - The need for high-quality data
  - RPOS Proposed Project –
- **Open Discussion** – 20 min
The Faculty-Administrator Collaborative Team (FACT) brings together paired institutional representatives for focused dialogue and joint efforts to enhance faculty-administrator collaborations that support successful research operations and reduce administrative burden.

The Open Government Research Administration Data (OG:RAD) effort is FDP’s data centric, evidence-based subcommittee. Dedicated to surfacing pain points, assessing them for burden, compiling evidence, and working with our Federal partners to provide feedback to help ensure efficiency and effectiveness in their modernization efforts.

The Research Systems Technologies Committee (RSTC) serves to advocate for, optimize, and integrate technology solutions across the full life cycle of the research enterprise, in the service of the FDP’s mission to streamline the administration of federally sponsored research and foster collaboration.
Spring 2023
OG:RAD proposal to assess faculty experience maintaining researcher profile information and was in search of a faculty lead.

November 2023
Carmen Scholz email to FACT Group

January 2024
FDP Joint (FACT, RSTC, OG:RAD) Session- Understanding the Source and Impact of Burden

April 2024 –
Researcher Profile Optimization Study Project Charter Draft Created. Multiple review sessions across FACT, OG:RAD, RSTC teams.

May 2024
The FACT Perspective: The Burden of Change

Mark Haselkorn, Professor, University Washington
Kelly Shaver, Emeritus Professor, College of Charleston
Recap and "Big Picture"

• Basic Principle #1

Change always produces burden

For example, “The National Science Foundation (NSF) has made SciENcv the required format for the biographical sketch section of NSF proposals submitted on or after October 23, 2023.”
Recap and "Big Picture"

• Basic Principle #2

Burden does not go away by itself, but it can be reduced (a form of additional burden).

When burden is borne, the burden for others remains; when burden is reduced, everyone benefits.

For example, if I figure out how to do my biosketch in SciENcv, I bear the burden of the change. If I effectively share what I learn with everyone else or simplify the process, it is extra burden but everyone else benefits.
Recap and “Big Picture”

• Basic Principle #3

If no one takes action to either bear or reduce the burden, then the last person in the process must bear the burden.

For example, if NSF doesn’t take on the burden of making it easier to put a biosketch into SciENcv and an administrator doesn’t do it, then the researcher must bear the burden.
Recap and “Big Picture”

• Assertion #1

The best way to address burden is for stakeholders to get together at the onset of a change, determine the best way to reduce the associated burden, and do it. This shares the additional burden, benefits everyone, and greatly increases the likelihood that everyone will be on board and satisfied with the change.

For example, prior to launching the biosketch change, research agencies, research administrators, and researchers get together and design, develop, and implement the easiest way for everyone impacted to handle the change with reduced burden.
Current Faculty Perspective and Ideal Future State
How Many CVs Do I Need?

- The error-free, perfectly formatted one I would use to apply for a job
- The different one my university system requires for my yearly evaluation
- The different one required for my School’s 5-year accreditation review
- The different one my university requires for its 10-year accreditation review
- The one maintained in ORCID (often not editable)
- The Google Scholar profile I must check periodically
- The different one required for an NSF biosketch
- The different one required for an NIH biosketch
- The different one required by any federal agency not using the “common forms”

BUT THE SAME PHOTO COULD BE PUT ON THEM ALL!

Why can’t AI be used by the last 8 to scrape from the first one?
The RSTC Perspective: Interfacing across multiple systems

Lori Ann Schultz, University of Texas, San Antonio
Various systems in play for faculty to navigate:
- SciENcv (started as FDP Demonstration in 2012)
- PubMed / NLM/ NCBI universe
- ORCID
- Local systems: employment, education, funding

Uneven services/burden reduction depending on faculty discipline

Resources to assist faculty across institutions

User-centered design & experience
• Provides the infrastructure for data re-use
  • APIs to read and write:
    • Validated information added by member institutions: universities, funders, publishers, etc.
  • ORCID record
    • Population of the record increases data reuse to reduce burden – all in one place
  • Researchers remain in control
• ORCID exists to provide the means to accomplish all of this
Engaging with ORCID records

**Free**
- Researcher access to ORCID, forever
  - Setup
  - Access
  - Modify
- Public API to retrieve public data

**Membership (not free)**
- Member organizations can:
  - Write to ORCID records (employment, education, funding, publications)
  - Access trusted data
  - Connect with 5 institutional systems (examples: HR, grants, FAR, etc) to sync records both ways
- Consortia Members:
  - Affiliation manager
  - Member portal
Common Forms & SciENcv

• SciENcv has proven it can handle form changes for NIH, NSF, Dept of ED IES

• NSF started SciENcv requirement last year, implementing common forms May 20, 2024.

• Other agencies TBD

• The forms themselves are only a construct. It’s the data that matters.
The OG-RAD Perspective: The Need for High-quality Information and a Proposed Researcher Profile Optimization Study (RPOS)

Carmen Scholz, Professor of Chemistry, University of Alabama in Huntsville
David Driesbach, Assistant Vice President of Research, Florida International University
Topics

- The Need for High-Quality Information
- Introduction of Researcher Profile Optimization Study
The Need for High Quality Information

Low Quality Information

High Quality Information
Describing High-Quality Information

Understandable, Complete, Burdenless
Clean, Shareable/Linked, Timely
Disambiguated, Compliant, Accurate
Benefits of High-Quality Information

- Provides more time for researchers to do research
- Empowers research security efforts
- Enables open science
- Facilitates team science and collaboration
- Supports universities ranking and reputation efforts
- Promotes the career development of researchers
The Challenges For Everyone

- Complexity and diversity of university and federal environments
- Need for researcher profile information in many digital locations
- Complexity of regulatory requirements and related processes
- Differing citation formats
- Rapidly evolving technology and data ecosystem
- Complexity and diversity of researchers and their profile information

Researchers

Federal Sponsors

Universities

National Labs
The Proposed Solution - RPOS

Researcher Profile Optimization Study

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Established With Collaboration Across FDP Groups

FACT
- Carmen Scholz
- Mark Haselkorn
- Kelly Shaver
- Steven Post

RSTC
- Lori Ann Schultz
- David Saunders

OG:RAD
- Stephanie Endy
- Rick Fenger
- Avi Tembular
3 Proposed Project Outputs

Survey
Researcher/Administrator Experiences

Survey
University Infrastructures

Data Assessment
Required Researcher Profile Information
Scope of Researcher Profile Information

Biographical Sketch

Current and Pending Information

Collaborators and Other Affiliations

- National Science Foundation (NSF)
- National Institutes of Health (NIH)
- Office of Naval Research (ONR)
- Department of Agriculture (USDA)
- Air Force Office of Scientific Research (AFOSR)
- Army Research Office (ARO)
- Army Medical Research and Materiel Command (AMRMC)
- National Aeronautics & Space Administration (NASA)
- Environmental Protection Agency (EPA)
- Department of Homeland Security
Benefits of RPOS Project Outputs

Improved Understanding of University Research Infrastructures Information

Improved Understanding of Researcher Profile Information (quality, variability, utility)

Improved Alignment of Concurrent and Future Efforts

Improved Adoption of Future Changes

Improved Understanding of Researcher/Administrator Experiences

Improved Awareness of Best Practices

University Infrastructures Data

Researchers/Administrators Experiences Data

Assessment of Researcher Profile Information Required Across Agencies
Where We Go From Here

May/June 2024
Formal Acceptance of Project

Summer 2024
Recruit Volunteers across FDP and Begin Project Planning

Fall 2024 – Spring 2025
Survey Designs and Data Assessment

Summer 2025
Survey Approvals and Dissemination

Fall 2025
Survey Analyses/Final Report
**Project Team**

- Co-Leads (David Driesbach and Carmen Scholz)
- Operating under guidance of RSTC, OG:RAD and FACT Group Leadership
- Project Team Structure TBD during Planning with Volunteers from:
  - All types of organizations
  - All types of perspectives
  - Various FDP committees
WE WANT YOUR FEEDBACK

RPOS
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