



National Organization of Research Development Professionals

Research Development Lessons Learned: Strategies for Securing Research Funding

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Agenda

Overview of BYU

Research Development Challenges

Meeting the Challenges

Outcomes

Summary

Brigham Young University

- Founded in 1875 and sponsored by the Church of Jesus Christ of Latter-day Saints
- Among the largest private universities in the U.S. (largest religious university)
- Over 30,000 undergraduate and graduate students
- Highly ranked in various surveys of universities (best value, quality of education, least debt, etc.)
- Carnegie classification- R2: Doctoral Universities – Higher research activity (<\$40M outside funding/year)



Undergraduate Teaching Emphasis

“All faculty members at BYU teach regularly, an important commitment at a university that focuses on providing a premier undergraduate education. BYU professors are also active in research in order to stay current in their fields and contribute to a resolution of world problems.¹”

¹From BYU Academic Overview

Research Support

University provides

- Full faculty salary – salary does not depend on research funding (although tenure does for many departments)
- Start-up funds to new faculty
- Research laboratory facilities and funds for equipment
- Faculty research and student mentoring grants

Significant student involvement in research

- Graduating seniors who worked with a faculty member on a research project¹
 - 36% for all disciplines at BYU (higher in STEM disciplines)
 - 24% for other research universities
 - 22% for universities with over 20,000 undergraduates
- Significant number of students co-author research articles in peer-reviewed journals
- Significant number of students present at major conferences

¹National Survey of Student Engagement – response from seniors

Wide Range of Research and Scholarship Efforts

Departments and Disciplines with Active Research/Scholarship Programs

Physical & Mathematical Science

- Chemistry
- Biochemistry
- Geology
- Physics
- Astronomy
- Computer sciences
- Mathematics
- Statistics



Engineering and Technology

- Chemical engineering
- Civil engineering
- Electrical engineering
- Mechanical engineering
- School of Technology



Family, Home and Social Sciences

- Anthropology
- Economics
- History
- Geography
- Psychology
- Archeology
- Family Life
- Economics
- Political sciences
- Sociology
- Social Work



Education

- Education and Schooling
- Counseling and Special Education
- Teacher Education



Life Sciences

- Agriculture
- Biology
- Health Sciences
- Microbiology and Molecular Biology
- Nutrition, Dietetics and Food Science
- Physiology
- Developmental Biology
- Exercise Science
- Plant and Wildlife Sciences



Nursing

Humanities (Languages)

Law

Visual and Performing Arts

Business

Research Impact

- Faculty in many disciplines
 - Regularly publish the results of their research in top journals
 - Serve as editors on publications, proposal review panels
 - Participate in, and lead professional organizations
- Faculty have received national and international recognition
- Quality of research experience students receive reflected in graduation statistics
 - BYU consistently among the top 10 schools who send graduates on to PhD programs
- BYU #1 in technology transferred per dollar invested in research

Challenges Securing Research Funding

- No “big picture” of BYU research expenditures
 - No central repository for reporting all funds that are expended for research
- No history of Research Development
 - There has never been a central, university-level RD effort
 - Some effort by research administration to help with proposal development
 - No RD professionals until 2012
 - Now two full-time, one part-time professional to support 4 colleges, over 650 faculty
 - Not all faculty or administrators see the need for RD

Challenges Securing Research Funding

- Faculty have heavy teaching loads
- Faculty (particularly newer faculty)
 - Have limited experience in finding funding
 - Are inexperienced at writing and marketing proposals
- Silo'ed research
 - Less than 30% of research awards are interdisciplinary or multidisciplinary
 - No tools or formal programs for learning about research across campus
- Lack of extensive graduate research programs
 - Focus on undergraduate education makes it more difficult to develop graduate programs
 - Few graduate students receive fellowships from federal sources

Meeting the Challenges

- Create “big picture” of BYU research expenditures
 - Working with Office of Research and Creative Activities (ORCA) to develop more complete reports of research funding
 - Determining funding from individual colleges
 - Instituting more standardized reporting
- Advocate for BYU as a research institution
 - Host funders on campus (NASA, NSF, NIH, Army Research Labs, Office of Naval Research, National Geospatial Intelligence Agency, Fulbright, etc.)
 - Provide lab tours
 - Arrange individual faculty meetings
 - Visit funders
 - Federal and private

Meeting the Challenges

Grow Research Development by:

- Monthly RD bulletins and newsletters
- Targeted emails
- Presentations and college and department meetings
- Research Development Website
- Regularly meet with individual faculty

PHSS Research Development Services helps BYU faculty identify external funding opportunities and develop proposals. [View this email in your browser](#)

RESEARCH DEVELOPMENT NEWSLETTER

UPCOMING RESEARCH DEVELOPMENT EVENTS

Pivot Training

Pivot is a database that contains extensive funding opportunities and researcher profiles. The training will be held on **July 16, 2015 from 11:00 a.m. to 12:00 p.m. in 2233 HBLL**. You will learn how to search for opportunities and find potential collaborators. Plan to attend by sending an RSVP to fhssresdev@byu.edu.



Funding News, Opportunities, and Resources

WELCOME!

The RD website is designed to help faculty obtain sustainable levels of funding to support their research goals. Feedback is welcome.

QUICK LINKS

- Get Started
- Request A Funding Search
- Find Funding Sources
- Funding Opportunities
- Write an Effective Proposal
- Market Ideas
- Review Faculty Research
- Review Additional Resources

Federal funding for science and engineering at universities down 6 percent

Posted on July 16, 2015 by RDAdmin

NSF Press Release 15-071: Latest figures show obligations down for R&D and facilities that support science and engineering. Of the six federal agencies that provide science and engineering funds, only one showed an increase. [Read more here.](#)

Research Area: Funding Opportunity

START YOUR FUNDING SEARCH

Use PIVOT to find opportunities by typing in keywords that reflect your research interests.

pivot

Funding opportunities

National Organization of Research Development Professionals (NORDP) 2015 Conference

Posted on June 1, 2015 by RDAdmin

Highlights from Keynote speaker Hunter Daulton

WHAT'S NEW

Look here to see the latest news and updates to the RD Website

3/24/2015

Added 4th presentation

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Meeting the Challenges

Grow Research Development with Support from Key Faculty

- Faculty panels share experiences during funder and proposal development seminars
 - Panelists become consultants
- Faculty-led proposal abstract reviews
- Faculty panels for proposal reviews
- Program Officers and funder referrals
- Successful proposal examples
- Support from Deans and Department Chairs



Meeting the Challenges

- Work around heavy teaching loads
 - RD takes some of the burden from faculty by:
 - Finding opportunities
 - Helping manage proposal preparation
 - Developing seminars by experts in certain types of funding (NIH, NSF)
 - Helping graduate students find and apply for funding
- Find funders that work with BYU's expertise
 - Many BYU faculty have foreign language expertise and have lived outside the U.S.
 - RD person is the university administrator for Fulbright Fellowships and Awards
 - Conducts Fulbright funding seminars
 - Reviews proposals

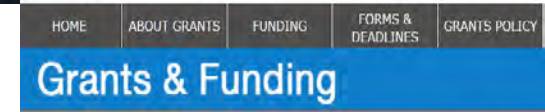
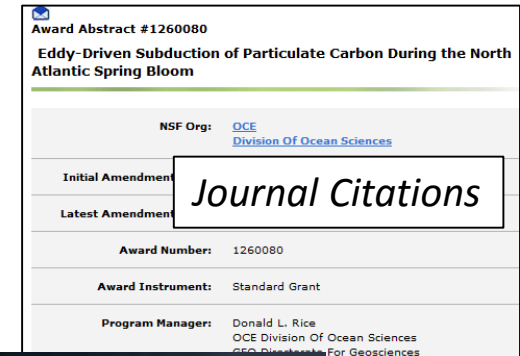


Fulbright Representative Impact: The first year RD supported effort, high success rate (4 awards and 1 alternate out of 5 proposals submitted). In the 10 years prior to RD support, 28 awards received out of 114 proposals submitted

Meeting the Challenges

Help faculty find funding opportunities

- Encourage faculty to systematically and regularly conduct funding searches
- Encourage faculty to attend funder conferences (RD attends as well)
- Help faculty “cast a wide net” to find funding opportunities
 - University Philanthropies
 - Colleagues, journal citations, program officers
 - Federal agencies, associations, foundations, companies, state and municipal agencies
 - Alternative sources (crowd funding, Benefunder, Nine Sigma, etc.)



Meeting the Challenges

Help faculty find funding using online search tools

- RD does individual and group funding searches
- Online tools that RD provides training on:
 - PIVOT
 - Foundation Center
 - Grants.gov, CFDA, other online search tools
 - Funder websites
- RD provides knowledge about funders

The screenshot shows the PIVOT funding search interface. The top navigation bar includes links for Home, Funding, Profiles, Admin, and a search dropdown. The left sidebar lists categories: Most Popular (10), Editor's Pick (6), Health Science Funding News (5), and Humanities and Social Science Funding News (6). The main content area has search filters for 'Search by text' and 'Search by sponsor', a search input field with the placeholder 'Search funding opportunities', and buttons for 'Search Pivot', 'Advanced Search', and 'Search Tips'. Below the search filters, a 'Most Popular' section highlights 'Young Faculty Award (YFA)' from the 'Defense Advanced Research Projects Agency (DARPA)'. A table titled 'Tracked Opps (582)' is shown below, with columns for 'Sort' and 'Deadline'.

	Sort	Deadline
Strengthening the Public's and/or K-12 Students' Environmental Literacy for Community Resilience to Extreme Weather Events and Environmental Changes ruper_glacier		13 Apr 2015 Application
LIMITED Young Faculty Award (YFA) New_Career_DOD		13 Apr 2015 Full Proposal

Meeting the Challenges

Break down the silos with:

- Speed Networking Event
 - Format is a 3-minute presentation to group of diverse faculty including non-presenters (about 30 presenting to about 60)
 - Focus is on identifying potential collaboration opportunities and learning about research across campus
- Informational Seminars
 - Specific Funders (NSF, NIH, DoD, NASA, DOE, Fulbright)
 - Proposal Development topics (developing fundable idea, finding funding, pre-proposal, proposal writing, editing and revising, marketing)
 - One key to successful seminars – faculty panels



Meeting the Challenges

Break down the silos with:

- Interdisciplinary Teams
 - Identify possible teams from grand challenges
 - Identify potential team members
 - From faculty requests
 - From database of faculty research interests
 - Facilitate team meetings
 - Typically provide lunch
 - Identify and decompose funding opportunities
 - Initiate discussions by having faculty share research interests and methods used
 - Lots of brainstorming
 - Identify college funding that can support initial research efforts



Goal: eventually one or several proposal efforts result from IDR discussions

Meeting the Challenges

Facilitating Interdisciplinary Teams:
Have a room set aside for IDR efforts

- Large computer display screen
 - HDMI connection
 - Chromecast
 - Speaker phone
- Printer
- White boards
- Storage cabinets
- Reconfigurable as long conference table or separate work areas



Meeting the Challenges

Help inexperienced faculty write proposals:

- Proposal Development Bootcamp and Workshops
 - 2-day workshop each year at end of Fall semester presented by RD specialists
 - 4-day bootcamp at end of Spring semester presented by RD specialists and a faculty member who teaches proposal writing to students
 - Topics: pre-proposal activities; writing, editing, revising; marketing
- Faculty write and critique each others efforts
 - Ideas
 - Draft proposals
- Support after workshop and bootcamp
 - Help faculty generate complete proposals
 - Convene faculty review panel

Meeting the Challenges

Be proactive about reporting RD efforts:

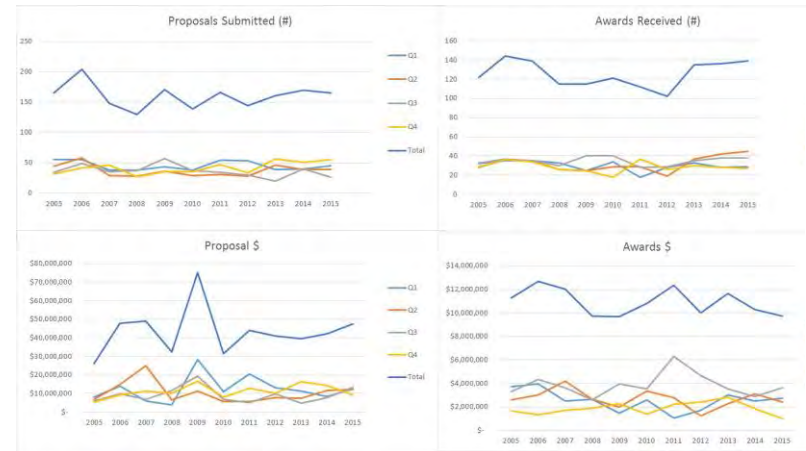
- Formal status report to deans every 6 months
 - Coordinate less formally several times per month
- Identify success
 - Develop metrics
 - Gauge faculty responses through Qualtrics surveys
 - Use comments to improve workshops and better target our efforts to faculty needs
 - Share success stories with college administrators
- Identify improvements
- Outline future activities

Meeting the Challenges

Examples of metrics:

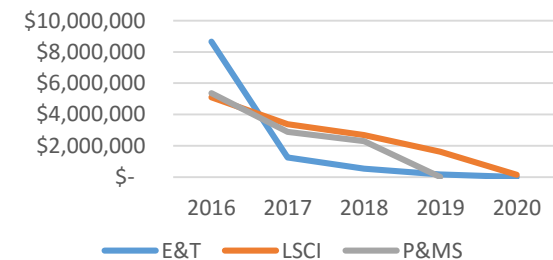
- **Funding levels**

- RD reports # and \$ of proposals submitted and awards received by quarter
 - Look for trends
 - Don't tie RD effort to award amounts ... *RD has no authority to force a proposal development effort*
- Estimate "backlog"
 - Funding levels if no new awards received
 - Declining numbers of new awards is a cause for concern



- **RD Impact**

- Several awards can be directly tied to RD efforts
- Track all faculty helped in some way (find funding, proposal help, training, seminars)
 - Faculty who were helped submitted **25-30% more proposals** and received **25-30% more awards** than those who were not helped



Outcomes

- Types of RD efforts with positive outcomes:
 - Intensive writing workshops
 - Workshops on finding funding
 - Seminars on how to secure funding from particular sources (NSF, NIH, Fulbright, etc.)
 - Opportunities for faculty to interact with program officers
 - Individual proposal review and editing
 - Possibility of making RD a central university function
- RD efforts that are still evolving
 - Progress of IDR teams from brainstorming to proposal writing
 - Engaging additional research funding resources at BYU (e.g., philanthropies)

Summary



- Four years of research development has helped us identify what works and what doesn't
 - NORDP conferences have lead to new workshops and research development efforts
- Even though BYU has no formal, central RD function, RD specialists have become a "virtual" university-wide research development group
 - We represent colleges and departments that do most of the research on campus
 - We coordinate most of our activities across the colleges we support
- Our RD effort is still evolving

