



National Organization of Research Development Professionals

Research Development Teaming at Brigham Young University: Achieving Success Through Strategic Collaboration

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Research Development Team



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- 2 full- and 1 part-time research development specialist for nearly 800 faculty in 5 of the colleges
- Research Development specialists are paid by the colleges they support

BYU has no central, university-level Research Development office... so RD specialists collaborate and coordinate to promote faculty research



Agenda

- Overview of BYU
- Levels of Research Development Collaboration
- Outcomes
- Next Steps



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.
- Over 30,000 undergraduate and graduate students
- Highly ranked in various surveys of universities (best value, quality of education, least debt, etc.)
- Carnegie classification
 - Doctoral university
 - Higher research activity
 - <\$40M external research funding/year





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



Family, Home and Social Sciences

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



Life Sciences

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

Engineering and Technology

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



Education

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



Nursing

Humanities (Languages)

Law

Visual and Performing Arts

Business





Levels of Strategic Collaboration for Research Development

- **External to the University** - develop research opportunities with potential funders outside the university
- **Across the University** – make faculty aware of external funding opportunities and help them improve their proposal development and writing skills
- **Within the Colleges** – research development personnel share budgets, resources and expertise to support individual faculty



External to the University: *Develop Research Opportunities with Potential External Funders*

- **Connecting faculty with Program Officers**
 - Find contacts to Utah-based foundations (and some large foundations) through our **philanthropy office**
 - Attend events and conferences to network and cultivate relationships
 - **Meet with program officers in Washington D.C.** to discuss faculty research
 - Attend and host webinars and **share information with faculty and other research developers**
 - **Tap current and former faculty expertise** in finding opportunities and contacting program officers





External to the University: *Develop Research Opportunities with Potential External Funders*

- **Visits to campus by external funding specialists**
 - **National Geospatial Intelligence Agency** program officer visit and labs tour
 - **NSF** Food, Energy, Water program officer visit
 - **NASA and Department of Defense** experts
 - **Fulbright** staff visit and presentations for faculty and students
 - **Department of Education and NIH specialists** who spoke about funding opportunities and reviewed proposals
 - **Crowdfunding** specialist from the University of Utah
 - **International funding** specialist
 - **Foundation funding** specialists
 - **State of Utah** Program visits about Energy Research Triangle
 - **General Mills** and other large companies
- **Keys to successful seminars**
 - **Faculty panels**
 - **One-on-one interviews with speaker**



External to the University: *Develop Research Opportunities with Potential External Funders*

- **Visiting labs and companies**

We choose companies and laboratories to visit based on potential alignment with faculty research interests



- **Sandia Labs**

Developed potential Faculty-Sandia research alignments and facilitated follow-up collaboration discussions involving at least 16 faculty

- **Army Research labs, AFSOR and other DoD**

Visited POs; developed potential Faculty-DoD research alignments and facilitated collaboration discussions

- **Microsoft, Google, Facebook, National Instruments, Moxtek**

Identified potential research collaboration opportunities for faculty; work with the University's philanthropy organization (LDS Philanthropies) to nurture funding opportunities



We “Cast a Wide Net” for external funders who can support faculty from multiple Colleges



Collaboration Across the University: *Leveraging Campus Resources to Find External Funding*

- RD **works with university librarians** to provide training on online funding databases (like PIVOT and Foundation Center)
- Monthly RD bulletins and newsletters that contain funding opportunities (**RD specialists share these bulletins**)
- Emails with funding opportunities targeted to individual faculty and groups
- **Research Development Website** displays upcoming funding opportunities for a range of disciplines (<http://researchdevelopment.byu.edu>)

FHSS 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 HRL1**. You will learn how to search for opportunities and find



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

Federal funding for science and engineering at universities down 6 percent

Posted on July 10, 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

Search

National Organization of Research Development Professionals (NORDP) 2015

WHAT'S NEW

Look here to see the latest



Collaboration Across the University: *Leveraging Campus Resources to Find External Funding (cont.)*

- Encourage faculty to attend funder conferences (RD attends as well)
 - Recently attended NIH and NABI conferences
- Regularly meet with individual faculty to find funding opportunities through:
 - **University Philanthropies**
 - Successes and challenges
 - Colleagues, journal citations, program officers
 - Federal agencies, associations, **foundations**, companies, state and municipal agencies
 - Alternative sources (**crowd funding**, Benefunder, Nine Sigma, etc.)





Collaboration Across the University: *In-depth Funding Seminars (cont.)*

- RD person is the university administrator for Faculty Fulbright Fellowships and Awards

- Received training in Fulbright opportunities in Washington D.C.
- Conducts Fulbright funding seminars (**with the help of the faculty development office**) and reviews proposals

Fulbright seminar in March with a Fulbright Scholar representative had more than 50 faculty attend

- Coordinates with **other university offices** to help graduate students apply for Fulbright Student awards

Fulbright student presentation in March with a Fulbright Student representative and several ambassadors had more than 100 students attend



*Impact: The first year RD supported effort, **80 % success rate**; 10 years prior to RD support, 25% success rate*



Collaborations Across the University: *Improve Faculty Grant Proposal Writing*

- Grant proposal writing “boot camps”
 - Idea came from NORDP presentation by Robert Porter
 - 4-day bootcamp at end of Spring semester presented by RD specialists and a **faculty member from the English Department**
 - 2-day workshop at end of Fall semester presented by RD specialists
 - Work with the faculty development office to promote the bootcamp
 - Topics: pre-proposal activities; writing, editing, revising; marketing
 - Faculty who have received awards give advice
- **Faculty write and critique each others efforts**
 - Funding strategy
 - Draft proposals
- Support after workshops and bootcamps
 - Help faculty generate complete proposals (provide templates)
 - Convene faculty review panel for proposals, abstracts



*Dr. Jon Balzotti, English professor,
expertise is Proposal Writing*





Collaborations Across the University: *Improve Graduate Student Proposal Writing*

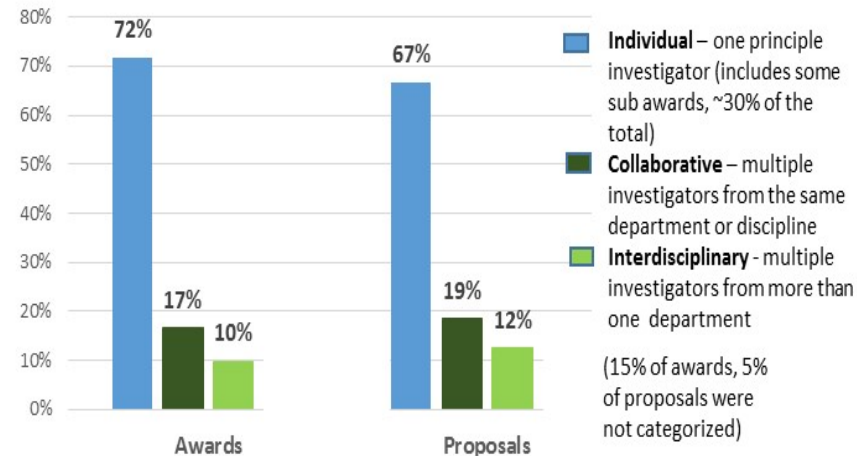
- Idea developed as a way to engage faculty with grant writing through their students
- **RD coordinates with the Graduate Studies Office and the National Scholarships and Fellowships Office, and the Graduate Student Society** to provide 3 seminars on proposal development to graduate students
 - Develop a fundable idea
 - Find funding opportunities
 - Write persuasively
 - Learn about campus resources
- RD will review graduate student grant proposals
 - Developing a graduate student summer proposal writing “bootcamp”
- RD provides specific information about graduate student opportunities including:



Collaborations Across the Colleges: *Promote Interdisciplinary Teaming*

- BYU's research is silo'ed; RD is creating a more collaborative environment
- RD specialists are organizing interdisciplinary groups
 - Address the growing focus on interdisciplinary research
- RD forms interdisciplinary teams
 - Look at grand challenges to determine which teams to form
 - Identify potential team members
 - From **faculty requests**
 - From database of faculty research interests (**collaborative effort between RD specialists**)

Types of Awards and Proposals at BYU Over the Past 10 Years





Collaborations Across the University: *Promote Interdisciplinary Teaming (cont.)*

- RD forms interdisciplinary teams (cont.)
 - Facilitates 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
- Evolution of IDR efforts
 - University creating seed funding for IDR groups
 - Research Development will manage proposal efforts
 - One team has submitted a proposal to the NSF





Collaborations Across the University: *Promote Networking*

- Idea came from NORDP presentation on using speed-dating for research networking
- Conduct Research (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
 - 5 Research Networking Events to date
 - Overwhelmingly positive (>80%) response from participants
 - Collaborations have formed
 - Over 300 attendees and 154 presenters from all colleges (mostly the STEM disciplines)
- Develop searchable research activities database
 - Research interests of individual faculty



Faculty Research Interests Search Tool

Keyword Search	<input type="text"/>	<input type="button" value="Search"/>
Faculty Name	<input type="text"/>	<input type="button" value="Search"/>
Faculty Research Interest	<input type="text"/>	<input type="button" value="Search"/>
College Name	<input type="text"/>	
Department	<input type="text"/>	
Research Areas	<input type="text"/>	<input type="button" value="Search"/>
Research Group	<input type="text"/>	<input type="button" value="Search"/>
Research Projects	<input type="text"/>	<input type="button" value="Search"/>
<input type="button" value="View Speed Networking Presentations"/>		



Collaboration Within the Colleges: *Sharing Resources to Best Serve Faculty*

- Picture of Research Development at BYU circa 2012

- BYU hired first full time Research Development “specialist” to support College of Engineering and College of Physical and Mathematical Sciences; no infrastructure; no data; no defined interface with other BYU organizations
- Traveled frequently the first couple years; started collaborating with philanthropies, BYU’s faculty development center and research administration office
- Became “STEM” RD when College of Life Sciences added; part time student and admin help provided

BYU | IRA A. FULTON COLLEGE
ENGINEERING AND TECHNOLOGY



BYU | The College of Life Sciences

- Research Development additions since 2012

- Full time RD specialist for the College of Family, Home and Social Sciences
- Recently, added part time RD specialist for the College of Education



BYU | David O. McKay School of Education



Collaboration Within the Colleges: *Sharing Resources to Best Serve Faculty (cont.)*

- Current picture: RD Collaboration Approaches Synergy
 - STEM RD student and admin support RD data and metrics development and seminar logistics for all colleges
 - RD representatives share budgets to provide seminars and activities for a wider range of faculty
 - RD representatives meet regularly to:
 - Brainstorm about which seminars to have and how to promote them
 - Share ideas about the focus of research development and how to progress it
 - Designate who will attend which meetings and conferences to develop specific relationships and expertise
 - Each RD representative participates in writing bootcamps—sharing his or her expertise



Outcomes

- In 2016, about 500 participants in RD events... *about 20% of participants are outside of the colleges currently funding RD*
- In 2013 and 2014, faculty participating in RD events submitted 24-28% more proposals and received 33-40% more awards than those not participating
- In 2015, faculty working with BYU Fulbright Liaison (the FHSS RD specialist) had an 80% Fulbright success rate (success rate over 10 prior years was 25%)



Next Steps for Strategic Collaborations

- External to the University
 - Expand our in-depth seminars on particular funding agencies
 - Bring more experts from corporations, foundations, state and local offices
 - Encourage faculty to attend conferences put on by funding agencies or companies; interact with program managers
- Across the University
 - Developing several university-wide initiatives administered by the college RD
 - RD presence at the University Research Council
 - More effective interactions with groups who do research
- Within the Colleges
 - More effectively promote seminars and workshops
 - Become a campus presence



Questions?

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