The VPR Organization and Norman Campus Research

Presentation to Associate Deans
Tuesday, 7 October 2014
Overview

• The Office of the Vice President for Research (OVPR)
• Evolution of OVPR: Context to its history, motivations and growth
• Strategic Investments and Outcomes
• Understanding the OVPR Budget
• University Research Campus
• Opportunities, not just within research
Research Mission and Vision

- **Research Mission**: To utilize the intellectual, technological, and administrative resources of the University of Oklahoma for the generation and dissemination of new knowledge to understand and improve all aspects of life and living.

- **Research Vision**: To become the Nation’s foremost public comprehensive research university of our size.
NORMAN CAMPUS RESEARCH VALUES

WE'RE ALL ABOUT PEOPLE
The University's most treasured assets are its students, faculty & staff and their dreams, ambitions and talents.

EVERY DISCIPLINE MATTERS
All disciplines of scholarly endeavor are valued contributors to research and creative activity.

INTEGRITY AND MUTUAL RESPECT DEFINE US
Integrity, ethical conduct, and mutual respect are uncompromising principles by which research and creative activity must be pursued.

OPEN DEBATE LEADS TO EXCELLENCE
Unfettered exchange and debate of competing ideas and perspectives expands understanding, promotes inclusion and ultimately leads to excellence.

WE ARE A COMMUNITY OF COLLABORATORS
Collaboration—whether among individuals in the same discipline or involving scholars across multiple disciplines, programs, institutions, and types of organizations—is recognized as a valuable means for performing research and creative activity and is strongly encouraged.

BROAD PARTICIPATION IS FOUNDATIONAL
Broad participation in research and creative activity that encompasses but is not limited to gender, ethnicity, geography, organisation, discipline, and perspective is foundational to excellence in scholarly endeavors. Increasing the participation of traditionally underrepresented groups—particularly in science, technology, engineering and mathematics (STEM)—is an institutional priority in research and creative activity.

RESEARCH AND EDUCATION ARE INTERTWINED
Research, creative endeavor, and education, at both the graduate and undergraduate levels, are intrinsically intertwined and in combination represent the foundation of knowledge creation upon which the University's scholarly enterprise rests.
Role of the VP for Research Office

- Work collaboratively with all relevant organizations to assist faculty across all disciplines in achieving their scholarly goals and dreams
  - Help locate and create opportunity
  - Help build collaborations internally and externally
  - Help define research program trajectories & prepare proposals
  - Provide financial and other resources
  - Provide end-to-end proposal and grant services
  - Create incentives and rewards
  - Promulgate useful policies and reduce administrative burden
  - Ensure tight integration of instruction and research
  - Shine a bright light on achievement
  - Recruit and retain the best faculty and students – to continue the cycle
  - Drive positive change that’s difficult to otherwise accomplish
What’s Not in the VPR Area

• Research Compliance (Legal Counsel)
  – Human Research Protections/IRB
  – IACUC
  – HIPAA
  – Environmental Health and Safety
  – Radiation and Laboratory Safety

• Export Controls (Legal Counsel)

• Economic Development and Technology Transfer (VP for Strategic Planning and Economic Development)

• Research Communications (Research Cabinet, Public Affairs)

• Graduate Programs (Dean of the Graduate College)
VPR Organization in Perspective

• We are here for ONE PURPOSE: to SERVE FACULTY and promote a culture of excellence, creativity, and success

• We are quite different from our counterparts at other institutions
  – OU is a very FLAT organization – senior administrators work with faculty directly and frequently; we’re available
  – We have resources – our budget is bigger than most VPR organizations
  – We are highly centralized → good communication and coordination
  – We offer a comprehensive array of services – from IDEA to PROJECT EXECUTION, BASIC to APPLIED, S&E to ARTS, FINE ARTS AND HUMANITIES
  – We work hard to communicate and develop resources directly in response to faculty needs as articulated by the faculty
A Journey Through Time: Strategic Growth in the VPR Organization and the Associated Impacts
Office of the VPR in 2005
With ORS & Research Campus (mostly SRTC) Removed

- **Expenditures:** $60.5 million
- **IDC Recovery:** $11.5 million
- **Strategic Initiatives** had just begun
  - Radar, to be followed by
  - Integrative Life Sciences
  - K20 Education and Community Renewal
  - Applied Social Research
RSA Begins Deep Dive into Data

RSA08-007: A Comparison of the Number of Published Science and Engineering Articles among Big 12 Institutions and Other Peers

This study examines one important output of scholarship—the number of papers published in peer-reviewed journals, here for the science and engineering disciplines. Like any metric, paper counts are not an unambiguous measure of research productivity; quality or value. Nevertheless, they do represent a topic worthy of consideration. Chart 1 illustrates the number of peer-reviewed articles published within science and engineering disciplines from 1996 to the present, for Big 12 institutions and other peers based upon data from the ISI Thomson database Web of Science. Chart 2 shows the same information per capita.*

*Our classification of science, computer science, and engineering includes papers in these fields.

Office of the Vice President for Research
NORMAN CAMPUS AND NORMAN CAMPUS PROGRAMS AT OU-TULSA

The histograms shown of Norman and Tulsa presents the ratios of endowed sciences neuroscience.

RSA08-004: Deep Dive into Data

The charts below present funding rates for related activities, including federal budget data. The charts feature the funding success in science research.

RSA08-003: RSA

The charts below show the distribution of funds received by OU researchers, as well as various funding sources and their proportions.

RSA08-002: RSA

The distribution of funds received by OU researchers is shown in the charts below. The charts also highlight the distribution of funds received by OU researchers, as well as various funding sources and their proportions.

RSA08-001: RSA

The charts below show the distribution of funds received by OU researchers, as well as various funding sources and their proportions. The charts also highlight the distribution of funds received by OU researchers, as well as various funding sources and their proportions.

RSA08-000: RSA

The charts below present funding rates for related activities, including federal budget data. The charts feature the funding success in science research.
RSA Begins Deep Dive into Data

*OU's total does not include College of Continuing Education grants and contracts.
Big Disparity = Missed Opportunity

Total R&D by Agency, FY 2010

<table>
<thead>
<tr>
<th>Agency</th>
<th>Budget Authority (in billions of dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOD</td>
<td>$80.0</td>
</tr>
<tr>
<td>NASA</td>
<td>$11.2</td>
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<tr>
<td>DOE</td>
<td>$10.7</td>
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<tr>
<td>HHS (NIH)</td>
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<tr>
<td>USDA</td>
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</tr>
<tr>
<td>NSF</td>
<td>$5.3</td>
</tr>
<tr>
<td>DHS</td>
<td>$1.1</td>
</tr>
<tr>
<td>All Other</td>
<td>$6.1</td>
</tr>
<tr>
<td>Total R&amp;D</td>
<td>$147.5 billion</td>
</tr>
</tbody>
</table>

Source: AAAS Report XXXIV: Research and Development FY 2010. R&D includes conduct of R&D and R&D facilities. © 2009 AAAS

FY 2010 Research Expenditures by Federal Agency

- Other Federal: 0.5%
- USDA: 0.4%
- Commerce: 22.2%
- Defense: 6.3%
- Energy: 8.7%
- Interior: 1.8%
- Transportation: 2.4%
- Education: 10.4%
- HHS: 12.2%
- NASA: 5.0%
- EPA: 0.9%
- NSF: 29.2%
Another Opportunity: Applied R&D

Character of R&D By Funder, 2009
Expenditures in billions of dollars

Source: NSF, National Patterns of R&D Resources
Figures are preliminary.
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Another Opportunity: Private Sector
OU Numbers Show the Same

Norman Campus Research Expenditures by Source, FY 2003 - 2012

Source: Norman Campus Financial Support Services

The UNIVERSITY of OKLAHOMA
What the Data Told Us Relative to Peers

- We’re not as competitive
- Too many small proposals
- Far fewer national centers
- Expenditure growth trajectory that is too shallow
- Very traditional and narrow research portfolio (NSF, NIH, NOAA)
- Huge unmet potential with DOD
- Too few links with major universities, Federal labs, private companies
- The “every faculty member is an individual entrepreneur” notion is ok up to a point; however, institutional direction and alignment are needed
- Insufficient resources to assist our faculty in the development of their research programs and proposal narratives
- \(\Rightarrow\) A LOT OF UNMET OPPORTUNITIES AND UNREALIZED POTENTIAL
- \(\Rightarrow\) We need to plan based upon data but not be slaves to them
- \(\Rightarrow\) Our culture must change if we hope to be a first-rate research university
We Began Openly Telling the Not-So-Good News
What the Data and Openness Allowed Us to Do

• Be comfortable that identifying and talking openly about weaknesses allows us to focus on addressing them
• Couple this conversation with clear actions
• Link all decisions with expected outcomes based upon hard data – we’d never before been able to show the consequences of inaction
• Get central administration support for our plans
When Kelvin Became VPR in 2009

Office of the Vice President for Research

The UNIVERSITY of OKLAHOMA
Can we address all of the challenges brought to light by the RSA data analyses using this structure?
OU’s Federal Research Expenditures
Insight from Peer Institutions

Organizational Charts for
Big 12 Institutions
and
Other Peer Institutions as specified

Big 12 Institutions
- Baylor University
- University of Colorado
- Iowa State University
- Kansas State University
- University of Kansas
- University of Missouri
- University of Nebraska
- Oklahoma State University
- University of Oklahoma
- Texas A&M University
- Texas Tech University
- University of Texas

Other Peer Institutions
- UCLA - missing
- Florida State University
- University of Illinois
- University of Michigan
- North Carolina State University
- Penn State University
- Purdue University
- University of Washington/Seattle
- University of Wisconsin

Office of the Vice President for Research
NORMAN CAMPUS AND NORMAN CAMPUS PROGRAMS AT OU-TULSA
• **Competitiveness** – The ability for OU to compete more effectively in the national and international marketplace of ideas, people and resources.

• **Engagement** – The ability for OU to engage across its programs, and with other organizations, aligning interests, building relationships, establishing mechanisms for pursuing new activities, and communicating OU’s strengths and capabilities to multiple sectors.

• **Culture** – An inspiring environment and institutional personality that incentivizes and rewards creativity and bold, transformative thinking, and that maintains accountability with the highest standards of excellence in all scholarly endeavors.
• What we **all agreed** we must do...
  • Think **bigger**
  • Raise **expectations** and accountability
  • Improve **rewards** and motivate **risk-taking**
  • Seek more national **centers** and large projects
  • Increase engagement with certain Federal **agencies**
  • Submit higher quality, more **competitive** proposals overall
  • Develop more effective ways of **investing** in research
  • Establish an additional **Federal presence** in Norman
  • Develop **new support** infrastructures and contracting vehicles
  • Engage more effectively with **industry**
  • Be more active in **driving** the national research agenda
Programmatic Actions Taken Thus Far

✓ Created Center for Research Program Development & Enrichment (CRPDE)
✓ Created Faculty Challenge Grant Program (seed funding up to $100K/project)
✓ Created a Strategic Initiative in Defense/Security/Intelligence (DSI)
✓ Created Center for Applied R&D (CARD)
✓ Launched a Centers Initiative to garner more nationally competitive centers
✓ Created Research Liaison Program
✓ Re-­competed the University Strategic Organizations
✓ Created a VPR Faculty Awards Program
✓ Created a Recognition Program for Exceptional Achievement in Research & CA
✓ Overhauled the Research Council Funding Portfolio
✓ Established a Norman Campus Undergraduate Research Coordinator
✓ Began discussions regarding a Faculty Leadership Academy
✓ Began executing a Broadening Participation Initiative
✓ Created a pilot Arts and Humanities Faculty Fellowship Program
✓ Began University-wide Effort to Nominate Faculty for Prestigious National Awards
✓ Initiated the Presidential Research Professorship
News Extra!

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Accreditation Team Praises OU as a Leading Public Research University

Excellence in research and creative activity is a way of life at the University of Oklahoma.

That excellence most recently has been validated by the Higher Learning Commission of the North Central Association of Colleges and Schools, which reaccredited the University and called OU “one of the country’s leading public research universities that is committed to quality in its research, instructional and service missions.”

“The University is extremely proud to have received such a complimentary and supportive report from our accrediting institution,” said OU President David L. Boren. “It is confirmation of the high standards of excellence which are being met at OU.”

The accreditation team, led by chairman W. Randy Smith, Jr., Provost for Academic Programs at The Ohio State University, noted that OU recently was awarded the highest tier of research activity, the “Very High Research Classification” from the Carnegie Foundation. The Carnegie Classification system is a widely used framework for grouping U.S. colleges and universities. Its primary purpose is for educational research and analysis.

“The Carnegie Foundation’s Very High Research designation is one of the most important measures that distinguish among institutions of higher education,” said Kelvin Droegemeier, OU vice president for research. “The classification greatly increases OU’s stature and visibility nationally, opens doors of opportunity for increased external funding, improves the University’s ability to recruit outstanding faculty and students, and has a positive impact on numerous other rankings that utilize the Carnegie designation as a metric.”

Another key indicator of the university’s research excellence, the HLC-NCA accreditation team said, is Aspire 2020, a research program initiated by OU in 2010 to address, develop and pursue ways and means of increasing the research intensity characteristic of the University.

Through Aspire 2020, groups of faculty, staff and students have developed suggestions and proposals for increasing participation of undergraduate students in faculty research, levels of support for and the academic qualifications of graduate students recruited by the University and the number of external grant proposals submitted by University faculty for research support.

“Aspire 2020 committees created energy, enthusiasm, engagement and new ways of considering research, particularly multidisciplinary research,” President David L. Boren said.

continued on page 2
2010: Aspire 2020 Begins
Today
Center for Research Program Development and Enrichment (CRPDE)

- Works with faculty one-on-one, and in groups, to develop their scholarly programs
- Supports the development of proposals, from individual investigator to center, from idea through completed narrative
- Stimulates collaborative and interdisciplinary research
- Supports student and post doctoral research development
- Facilitates outreach, broadening of participation, and multi-institutional engagement
- Aligns OU with national initiatives and special programs (e.g., CIF21, Big Data, STEM Ed, I-CORPS, INSPIRE, SBIR/STTR, EPSCoR)
• **Mission**
  
  – To provide an administrative framework to increase substantially **applied research and development**, and related education and training, on the OU Norman Campus

• **Goals**
  
  – Open new spaces of **opportunity** for researchers and students
  
  – Support business processes and personnel for **applied research and development contracts** that are not presently being pursued (e.g., GSA Schedules, ID/IQ)
  
  – Bring the intellectual capacity of OU to government and private industry through a new **consulting framework**
  
  – Augment traditional faculty capacity with a staff of full-time, professional, **non-faculty researchers**
Today
Undergraduate Research and STEM Education

- Several new courses developed
  - Research Sooner!
  - First Year Research Experience (FYRE)
  - Honors Engineering Research Experience (HERE)

- Additional programs being planned

- STEM Education strategy being developed
Evolution of VPR Organization

Office of Research Services (2009)

2009
Expenditures: $78.2M
New Awards: $72.9M

SRTC + Research Campus (2009)

12

Federal Expenditures
Essentially Flat for 5 Years

Operations + Faculty Support (2009)

5

DOD Expenditures Flat for a Decade

Dearth of national centers, big projects, partnerships with Federal labs

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Evolution of VPR Organization

Office of Research Services (2009) 27
Office of Research Services (2013) 28
SRTC + Research Campus (2009) 12
Campus-Wide Equipment, Facilities, Budget (2013) 16
Operations + Faculty Support (2009) 5
Faculty Support (2013) 9 + CRPDE

Additional FTE of 3.75
1.0 0.5 1.0 1.0 0.25 0.0

The UNIVERSITY OF OKLAHOMA
Cost-Benefit of Staff Additions

- **Today’s Annual Cost Of New Staff Funded by VPR**: $730,000
- **Impact on Today’s VPR Budget**: 3.8%
- **Expenditure Increase ($18M)**: 23%
- **Both FLAT Before**: DOD Increase = 177%, Federal Direct Increase = 49%
- **IDC Recovery Increase ($6.5M)**: 42%