Including Arts, Education, and Humanities in STEM related research

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INTRODUCTION

Evolve
INTRODUCTION

Evolve or become extinct!
Universities (in many states) are moving from state supported to state located;

Increasing cuts in higher education funding
INTRODUCTION
Evolve or become extinct!

- Increased focus on quality and **IMPACT**.
- Increased emphasis on **ROI** – return on investment.
INTRODUCTION
Evolve or become extinct!

Can you justify your value?
INTRODUCTION

Evolve or become extinct!

- External federal funding supports quality, impact, and ROI!
  - It creates and fosters an impactful, high quality research and scholarly; and an effective academic and research mentorship pipeline.

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Guiding Questions
Guiding Questions

• How can the arts, education, and humanities ‘feed’ at the table of STEM funding?
Guiding Questions

• What changes in mindset, approach, and culture are needed?

• How can the arts, education, and humanities ‘feed’ at the table of STEM funding?
Overview

- A taste...large taste...of what funding is available
- “Strategic Intentionality”
- Is a culture change needed for us in higher education?
Funding Areas

• Federal government – www.grants.gov

• Foundations and other private arenas – www.pivot.cos.com (federal and private)

• Private organizations, for-profit and non-profit evaluation work

• Internal (University, college, PI overhead)
The Big Federal ‘11’

- Department of Agriculture
- Department of Commerce
- *Department of Defense
- *Department of Education
- Department of Energy
- *Department of Health & Human Services
- Department of Homeland Security
- Department of Transportation
- Environmental Protection Agency
- *National Aeronautics and Space Administration
- *National Science Foundation
  (* STTR Funding also)
Department of Health & Human Services

- OS - Office of the Secretary
- ACF - Administration for Children & Families
- AoA - Administration on Aging
- AHRQ - Agency for Healthcare Research & Quality
- ATSDR - Agency for Toxic Substances & Disease

- CDC - Centers for Disease Control & Prevention
- CMS - Centers for Medicare & Medicaid Services
- FDA - Food & Drug Administration
- HRSA - Health Resources & Services Administration
- IHS - Indian Health Service
- NIH - National Institutes of Health
- OIG - Office of Inspector General
- SAMHSA - Substance Abuse & Mental Health Services Administration
SBIRs & STTRs

SBIR & STTR Common Goals: technology innovation and increase private sector commercialization.

- Small Business Innovation Research Grants (SBIR) - Phase I, To support projects, limited in time and amount, to establish the technical merit and feasibility of R&D ideas that may ultimately lead to commercial products or services.

- Small Business Innovation Research Grants (SBIR) - Phase II, To support in-depth development of R&D ideas whose feasibility have been established in Phase I that are likely to result in commercial products or services.

- Small Business Technology Transfer Grants (STTR) – Requires small business to formally collaborate with research institution in Phase I & II
National Institutes of Health

26 Institutes and Centers with research agendas and monies

– Research Grants (R Series)
– Career Development Awards (K Series)
– Research Training & Fellowships (T & F series)
  – Program Project/Center Grants (P Series)
NIH R Series

• R03 – pilot, feasibility, 2 years, $100K
• R21 – exploratory, 2 years, $275K
• R01 – specific and large scope, 3-5 years, up to $500K (and more)

…funding announcements usually open for two or three years!
National Science Foundation (NSF)

• Funding beyond faculty including undergraduate students, graduate students, post docs, K-12 educators, small business program.

• Program areas including Education & Human Resources and Social, Behavioral & Economic Sciences
  
  • STEM is HUGE funding area!
  
  • E.g., Rapid Response, INSPIRE
Important Tips

- Read the *entire* proposal…don’t be deterred by the title.
- Don’t think outside the box, *step outside the box and think*.
- Look at *everything*…great opportunities in the less obvious funding sources (e.g. DOD, USDA)
...funding is there but what is your strategy?
Strategic Intentionality

• Management concept
  – Strategic fit between resources and opportunities
  – Relates to ‘business’ or ‘company’ vision…long-term vision…a strategic vision with intention and direction
  – It is about fit, clarity, focus, and people
    …see Competing for the Future by Hamel & Prahlad
Do you need more resources?

• Competitor analysis in U.S. business and industry → Resources

However,

• Resource is not a good predictor of success…resourcefulness is!
RESOURCEFULNESS

- Innovative collaborations
- Research agendas
- Culture change
INNOVATIVE COLLABORATIONS

• Partnerships with non-profits and for-profits
  – Increased competitiveness for grants
  – Pilot data opportunities for your and graduate students
  – Affordable strategic shift in research agenda
INNOVATIVE COLLABORATIONS

• Collaborations within your college or cross disciplinary outside of your college or university (e.g. NSF Compass)

• Minor adaptation in what you’re already doing

…outcomes measured should strategically fit with desired funding area.
If you are interested in federal funding, is your research agenda fundable?

– Bridge your research area to support federal (or funder) priorities and initiatives

– Just because it’s your research interest, doesn’t automatically make it interesting…at least when it comes to federal funding.
• New faculty, and particularly, can strategically select research areas based on funding opportunities
  …NIH and NSF early career and investigator awards exist to support this!

• Departments also can strategically position faculty to ensure funding competitiveness
CULTURE CHANGE

- They say no one can touch him.
- He’s indestructible.
- Unbeatable, he can’t be moved.
- It’s tenure man!
CULTURE CHANGE

- ‘Cul-cha’ is powerful
- Academic or higher education culture
  - Culture is not an acceptable justification for business as usual
CULTURE CHANGE

- Is tenure (in current form) good for business?
- Should faculty have option to select their research agenda?
- Should faculty be required to be on-campus for 40 hour per week?
- Should decision-making ‘power’ be based on rank or productivity?
CULTURE CHANGE

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...Did you answer from the perspective of higher education or your own productivity?
Not suggesting that we should move in this direction. However, for many

...THEIR ‘cultural’ approach to ‘The Academy’

won’t support what external funding requires

...won’t support a ROI analysis
Regardless of your religious beliefs, an evolutionary process does exist for all species including business and government...including higher education.
EVOLUTION & HIGHER EDUCATION

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...evolve or become extinct!

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CONCLUSION

✓ Funding does exist.

✓ NSF and other STEM funding are requiring interdisciplinary collaborations.

✓ Our mere presence and inclusion (with scientific merit) by itself is innovative!

✓ There is space for arts, education, and humanities research at the funding table but we might be choosing to eat outside.
Thanks!

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