

Realigning the relationship between research and education

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NAE, COSEMPUP

Stresses evolving from R1 focus

- Research and teaching are viewed as separate time commitments
- Grant competition/writing takes faculty out of the lab
- Research success is rewarded more nationally/globally than great teaching
- Graduate students and postdocs support the research endeavor
 - Undergraduates are often viewed as a necessary distraction
- Funding success decreases teaching time
- Evolution of “Big Labs” decreases mentoring opportunities by PI
- # of papers expected per grad student increasing, 4 years has become 5
- Postdocs encouraged to spend as long as 5 years building cv before independence

Priorities of large public R1 universities

- Eager for strong research program
 - Research \$ is critical. Supports state-of-the-art scholarship.
 - Research \$ support graduate programs, growth of alumnae leaders.
 - Direct impact on national and global reputation.
 - Generation of intellectual property, jobs, economic growth.
- Clear responsibility to state governance and local public
 - Individual states are major stakeholders, set policy & tuition
 - 1^o metric is undergraduate education for state residents
 - Many state boards have minimal appreciation for benefits of research
 - Variable levels of support for educating foreign students
 - Local visibility aided by strong outreach and extension programs
 - Public wants universal access to an education that will improve quality of life for underserved populations
 - Quality of degree measured by employment readiness and job success
 - Quality of research measured by economic impact (e.g. new companies)
 - Philanthropy most often from local public

Opportunities in the “Cracks”

Crack

1. Indentured servitude
2. Research students pushed to academic careers
3. Stove-piped research limits future opportunities
4. Minimal job choices for UG, GS and postdocs
5. Faculty recognition focused on independent contributions
6. Limited diversity in research labs

Build back stronger

1. PTR rewards 4-year degrees
2. Include corporate internships, collaborations in PhD studies
3. Cross disciplinary, cross-cultural projects/mentors
4. Train students to think across disciplines, work in diverse teams
5. Recognize faculty collaborations across departments/colleges
6. Paid summer research for economically challenged students

Big changes: Convergence with the world of work

- Create revolving door for faculty
 - Encourage faculty to spend time in industry, government or nonprofits
 - Find place for outstanding individuals from those work sectors to join faculty
 - Eliminate boundaries between professors of practice, teaching faculty and tenure-track faculty
- Foster professional development for career flexibility
 - Train students to think analytically and broadly
 - Include consideration of ethics, responsible conduct, sociocultural awareness
 - Include teaming experience at all levels with inclusivity of all types
 - Provide breadth of internship opportunities

EXTEND RESEARCH AND TEACHING BEYOND THE UNIVERSITY WALLS
CREATE NEW VALUE AND NEW VALUES