Preparing Graduate Students for Evidence-Informed Teaching: New Models for Future Faculty to Serve the “New Majority”

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Session Outline:

• Goals of the Teagle Foundation’s “Graduate Student Teaching in the Arts & Sciences” (GSTAS) initiative
• Models, promising practices, and challenges
  • GSTAS projects
  • Council for Graduate Schools (CGS) projects
• Lessons learned about institutionalization and scaling up
• Facilitated discussion
Goals of the “Graduate Student Teaching in the Arts & Sciences” Initiative

• Engage graduate students with evidence-informed teaching principles and practices

• Cultivate a community of practice among both graduate students and participating faculty

• Support expansion and sustainability in preparation of graduate students for effective college teaching
Project Models

Leadership by teaching/learning centers:

• **Cornell**: Teaching certificate program focused on high-impact teaching practices and scholarship of teaching and learning

• **Columbia**: Summer institute focused on technology-enriched teaching and semester-long peer observation of teaching program

• **Princeton**: Year-long seminar focused on scholarly approaches to teaching and preparation of teaching-related products
Project Models

*Leadership by departments/divisions:*

- **Northwestern:** History Department workshop series on teaching history, with fellowship support for participating graduate students.

- **Stanford:** Faculty-grad student teaching teams in the Humanities, with year-long plenum on teaching in the humanities.
Project Models

Leadership by disciplinary association:

- **American Historical Association:** Expert team of history SoTL faculty providing national conference sessions and departmental consultations

Hybrid structure:

- **UC-Berkeley:** “How Students Learn” content integrated into Teaching Resource Center PFF Summer Institute and support for faculty-grad student redesign of departmental pedagogy sources; AHA consultations in History
Project Models

Other variations in project models:

• Disciplinary vs. interdisciplinary emphasis
• Extent and nature of faculty engagement
• Role of other units and leaders in the institution
• Opportunities for application in actual teaching assignments
Promising Practices

Multi-faceted engagement:

• With scholarship on how students learn and backward design of instruction

• With other scholar-teachers (grad students, faculty) in communities of practice

• With practice in developing materials, delivering courses, and debriefing

• Of project leadership in all the above

• With institutional strengths and priorities
Common Challenges

**Conundrums of culture change:**

- Disincentives and perverse reward structures
- Countervailing departmental norms and priorities
- Scarcity of time and money
- Perceived divide between teaching and research
- Limited attention to learning assessment and program evaluation
Preparing Future Faculty to Assess Student Learning: models, promising practices, & challenges

- 3-year CGS project supported by Teagle Foundation and Alfred P. Sloan Foundation.

- Special emphasis on foundation & gateway courses.
  - 17 gateway STEM courses revised or in process

- Engaged graduate students (future faculty) and current faculty across 7 universities (STEM, Humanities, Social Sciences)
  - 871 graduate students

- Common (CGS RFP required):
  - Graduate schools to leverage significant pre-existing institutional programs (e.g. PFF, CIRTL) and expertise in undergraduate learning assessment
  - Clear plan for integrating project activities into undergraduate, particularly gateway course classrooms
Goals

• Provide graduate students who aspire to faculty positions with strategies to
  • identify learning needs & opportunities in courses,
  • respond with enhanced teaching and learning techniques, and
  • engage with other graduate students and faculty in evidence-based conversations within and across the arts and sciences.

• Enhance integration of skills and understanding in student learning assessment into the majority of existing PFF-like professional development programs

• Disseminate models/best practices for integrating STEM and humanities/arts learning assessment skills into PFF-like programs
**Project Models**

- **Cornell University** – revised/created workshops leading to assessment certificate; hosted campus-wide events on learning assessment; integrated assessment into academic career programming through teaching statement workshops;

- **Harvard University** - Multi-disciplinary, university-wide working groups developed learning assessment metrics for use in undergraduate and graduate gateway curriculum; developed a course for all GSAS students and postdocs on learning assessment; hosted university-wide retreats and symposia.

- **Indiana University (multiple campuses)** – collaborated with Center for Teaching and Learning to integrate learning assessment into existing workshops and certificate programs; pairs of faculty/graduate student assessment fellows (SEA Scholars) developed rubrics for measuring learning outcomes and compiled and analyzed course-based data about student acquisition of information literacy skills.

- **Michigan State University** – leveraged 3 programs to establish communities of practice where faculty/graduate student teams developed a comprehensive database of graduate student training, promoted gateway course reforms, and redesigned TA training programs to emphasize backward design.

- **North Carolina A&T State University and University of North Carolina at Greensboro (joint project)** = Web-based tutorials that address learning assessment at the program-level and institution-level (beyond mere course- and micro-curricular settings) and added learning assessment component to existing Preparing Future Leaders program.

- **University of California Merced** leveraged the inclusion of assessment in its mission statement as an institution by incorporating training in learning assessment into PFF through four integrated PFF online modules focused on assessment.
Promising Practices: Leverage the Change Agents

**Graduate Students as “Assessment Fellows” can:**
- Increase faculty dialogue and accelerate undergraduate curricular reforms (Harvard, Cornell, Michigan State, Indiana University)

**Graduate Schools can:**
- Bring together key stakeholders from across campus
- Advocate for enhanced professional development of graduate students aspiring to faculty positions
- Engage and incentivize faculty (experts, enthusiasts, converted resistant faculty)
  - Provide sub-awards, seed grants to stimulate involvement
- Foster meaningful integration into university’s core curricular reform, research, teaching, learning, and engagement missions
- Collaborate with other institutions through peer learning: PI meetings and CGS sessions at summer & annual meetings
  - Resource libraries with activities & rubrics, examples of classroom research
  - Develop and share online training modules
- Create journal clubs for graduate students & postdocs to foster peer-to-peer learning and idea exchange
- Promote collection and exchange of data on undergraduate gateway obstacles
Common Challenges and Possible Solutions:

- Student recruiting & engagement, self-selection bias
- Limited TA ability to reform gateway courses
- Faculty resistance to change or to having students spend time on PFF
- Lack of tools or lack of awareness of existing resources
- Lack of experience with different institutional cultures and institution- & program- (vs. course-) level perspective
- Humanities graduate students’ unfamiliarity with step-by-step analysis, hypothesis-testing, quantitative data
Institutionalization and Scaling Up

- Commitment of senior leadership
- Different project models matched to institutional cultures/policies
- Project leadership/partnerships
- Project funding, especially for graduate students
Discussion

• What are the tradeoffs among the various models?
• What most needs to be disseminated from these projects in order to promote change?
• Looking at models— If your current situation, or the institution where you did your graduate work, were to undertake this effort, which model would be most appealing and why? If unlikely, why?
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