Inventing a New Wheel: Assembling a Campus-Wide Doctoral Program Review

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Overview

- Background and Purpose
- Doctoral Review Process
- Data Sources
  - Academic Analytics and Google Scholar
  - Institutional Data (Admissions, Graduate Tracking, HR)
  - National Research Council
- Creation and Distribution of Reports
- Results To Date
- Lessons Learned
- Looking Ahead
UMass Amherst Facts

- The flagship campus of the UMass system, the only public Carnegie very high research university in the state
- Enrollment: over 28,000 students (Fall 2012)
  - 78% undergraduate, 22% graduate students
  - 2,600 students in doctoral programs
- Over 50 academic departments
  - Over 100 undergraduate majors
  - 76 master's and 50 doctoral programs
- Research and development expenditures over $181 million (FY 2011)

Background

- Program reviews every 5-7 years
  - Include graduate component of a program
- Comprehensive doctoral review never been done (with the exception of participation in NRC assessment)
- 2006: National Research Council
  (http://www.nap.edu/rdp/)
  - Results published Fall 2010
### Timeline

**2008-09**
- New chancellor on campus with renewed aspirations of reaching the level of other public AAU institutions
- Ohio State had just completed a doctoral review
- Chancellor charges Dean of Graduate School with conducting review for UMass Amherst

**2009-10**
- New provost
- Framework for Excellence
  - Increase size of faculty to 1,200 by 2020
  - Double federal research awards/expenditures
  - Increase post-doctoral appointments by 50%
  - Increase doctorates awarded to 375 degrees/year

### Timeline (continued)

**2010-11**
- Advisory committee formed to oversee doctoral review
- Graduate Dean of Ohio State invited to campus
- RFP out for faculty scholarly productivity data

**2011-12**
- (Fall) Contract with Academic Analytics finalized
- (Fall) Appointment of Special Assistant to the Provost charged with oversight of the review
- Developed conceptual design and data requirements
- (January) IR charged with producing statistical reports
- Reports sent to programs February 1, 2012

**Fall 2012**
- New chancellor with mandate for strategic plan
Purpose and Principles

- The Doctoral Review was meant to provoke discussion:
  - of strengths and weaknesses,
  - of future directions,
  - of impediments to growth or improvement.

- Guiding principles:
  - Transparent: open access to the data
  - Flexible: programs able to propose peers
  - Fair: programs compared to other programs in the same field (not to each other within the university)

The Process

- Discussions with deans/program chairs/graduate program directors

- Doctoral Programs
  - Participated in identification of peer list
  - Reviewed faculty lists
  - Had full access (all programs) to research productivity data (AA portal)

- Limitation: comparative data were retrospective
  - Institutional data reflected current academic year (although comparative data were from NRC)
Peers

- Recommended peer list: primarily AAU public universities without a medical school (13 institutions)
- For each program, peers without the program were removed
- Each program was allowed to add or substitute peers
- Peer groups for programs ranged from 5 to 13 institutions (70 additional institutions were selected as peers for at least one program)

Academic Analytics

- Private company, founded in 2005
- Goal: Provide universities with an annual release of accurate data on faculty performance in a comparative, disciplinary context
- Collects data independently
- Contains comparative data on Ph.D. programs from 380+ institutions
- Faculty classified into 172 disciplines
- Data in 6 areas of research activity: books, journal publications, journal citations, proceeding citations, awards and grants
Faculty Lists

- Academic Analytics mines institutional data sources (online directories, catalogs, websites)
  - Lists are updated annually
  - Member institutions review list and make changes (non-member institutions may review lists as well)
- Faculty to include were tenure-stream faculty and individuals expected to perform research
  - Programs were asked to review
  - Programs able to add other faculty actively involved in research (e.g. emeritus professors, faculty from research affiliates)
Google Scholar

- For selected disciplines in Humanities, Social Science, Management and Education, productivity measures were not adequately captured by Academic Analytics
  - AA has since expanded bibliographic coverage – may still not be sufficient
- Conducted our own study of citations in Google Scholar
  - Graduate student employee used ‘Publish or Perish’ software to obtain productivity data for thousands of faculty (ours and those of our peers)
  - Needed to cross-reference faculty websites to make sure citations for the right person were being counted

Student Data

- Institutional admissions data (same as what is used for standard reporting)
Graduate Tracking Data

- Used our updated graduate tracking system to build a comprehensive picture of doctoral student progress.

### Doctoral Outcomes

<table>
<thead>
<tr>
<th>Institution</th>
<th>% of students completing doctoral in 5.5 years</th>
<th>Median time to degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>UMass Amherst</td>
<td>56.7%</td>
<td>5.5</td>
</tr>
<tr>
<td>UMass Boston</td>
<td>55.0%</td>
<td>5.6</td>
</tr>
<tr>
<td>Indiana</td>
<td>10.8%</td>
<td>5.0</td>
</tr>
<tr>
<td>Penn State</td>
<td>43.3%</td>
<td>5.2</td>
</tr>
<tr>
<td>Idaho</td>
<td>14.6%</td>
<td>4.0</td>
</tr>
</tbody>
</table>

Compiling the Report

- Some data in Excel (Faculty lists, peers, notes, Google Scholar)
- Academic Analytics downloaded from web portal
- Student data (Admissions, Grad Tracking)
Compiling the Report (continued)

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Compiling the Report (continued)

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# Doctoral Program Reports

- **14 page reports**, containing:
  - Guidance & Instructions
  - List of peers
  - List of faculty, faculty characteristics and comparison
  - Academic Analytics data shown in 27 charts (grants and grant $, books, publications, citations and awards)
  - Quintile analysis of faculty and grant $ to size relationship
  - Student characteristics (demographics, size of class)
  - Admission trends and GRE scores
  - Completion data: graduation rates, outcomes, median milestone times
- **Summary of doctoral student post-graduation activities** as reported by programs

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# Doctoral Program Reports (continued)

- **Highlight reports** primarily for Deans were 2 pages with subset of information
  - Only graphical data
  - All productivity data showed counts per capita
  - Different information was presented depending on the school/college

- **Both the full and highlight reports** showed unadjusted, unweighted data
  - Did not report Faculty Scholarly Productivity Index (FSPI)
Distribution

- Distributed electronically
- Each program received its own report
  - Excel macro sent same e-mail with appropriate attachment
- All reports and highlights were available on a restricted shared drive
  - Access was provided to deans, department/program chairs and graduate program directors
Results To Date

- Program self-assessments
  - Programs able to question and/or augment data flaws
  - Most programs submitted a self-assessment
  - Many identified own areas for improvement, proposed plan and have started acting
  - Self-assessments were sent to deans

- Deans reports
  - Most Dean’s reports have been received
  - Very different styles of reports

- Advisory Committee review
  - Tasked by Chancellor to “identify areas of emphasis” (i.e., where can a modest investment make a difference?)

Looking Ahead

- Recommendations of the Advisory Committee
- Program-level actions to improve performance
- Sub-committee of Graduate Council to discuss time to degree and completion rate already in place

- Tie-in with comprehensive program review

- Updating reports with new data
  - Already done for highlight reports
Lessons Learned

- Transparency and involvement of programs paid off in terms of buy-in
  - Having an involved senior faculty member responsible for the review who worked with programs lent credibility to the process (but not necessarily the data)
  - Importance of on-going reviews and access to new data keeps programs engaged
- Ability to provide feedback to data source provider improves data quality
- Time investment to create good database is well worth it and automating report production allowed for easy re-runs with corrected data

Questions?

For more information:
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