CGS Ph.D. Completion Project: Findings from the Exit Surveys

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CGS Ph.D. Completion Project

- **Goal** - to improve Ph.D. student completion and reduce attrition
- **Focus** - underrepresented minorities and women
CGS Ph.D. Completion Project

- Project funded by Pfizer Inc and the Ford Foundation
  - Phase I (2004-2007)
  - Phase II (2007-2010)
- 29 Research Partner institutions received grants, others provided data
Requirements to Participate in the Ph.D. Completion Project

- Engage in activities to increase Ph.D. completion in at least eight programs
- Implement at least six new interventions in an effort to increase completion
- Provide baseline completion and attrition data (12 years starting in 1992-93)
- Provide an additional 4 years of completion and attrition data (ending with 2007-08)
- Conduct student exit surveys
Ten-Year Completion Rates: Broad Field and Gender

Completion Rate (%)

<table>
<thead>
<tr>
<th>Field</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering</td>
<td>56</td>
<td>65</td>
</tr>
<tr>
<td>Life Sciences</td>
<td>56</td>
<td>64</td>
</tr>
<tr>
<td>Math &amp; Phy. Sci.</td>
<td>52</td>
<td>59</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>57</td>
<td>53</td>
</tr>
<tr>
<td>Humanities</td>
<td>52</td>
<td>47</td>
</tr>
<tr>
<td>All</td>
<td>55</td>
<td>58</td>
</tr>
</tbody>
</table>
Ten-Year Completion Rates By Ethnicity

- African Americans – 47%
- Asian Americans – 50%
- Hispanic Americans – 51%
- White – 55%
Categories of Potential Interventions and Survey Topics

- Selection/Matching
- Mentoring and Advising
- Financial Support and Structure
- Program Environment
- Research Experiences
- Curricular and Administrative Processes and Procedures
Ph.D. Completion – Exit Survey

**Data**
- 1406 surveys from completers
- 18 institutions
- Collected from May 2006 through August 2008
Limitations

- **No demographic data** (to ensure confidentiality of respondents)
- **No data on populations by broad field or institution**
  - Findings not generalizable to larger population of completers
  - Unable to use statistical tests to identify significant differences
- **Two different forms – long form and short form**
  - Reduced sample size for questions not on short form
  - Slightly different wording on some questions
- **Very small sample size of noncompleters (n=59)**
Number and Percentage of Respondents, by Broad Field of Study

<table>
<thead>
<tr>
<th>Broad Field of Study</th>
<th>Number of Respondents</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering</td>
<td>227</td>
<td>16%</td>
</tr>
<tr>
<td>Life Sciences</td>
<td>205</td>
<td>15%</td>
</tr>
<tr>
<td>Mathematics &amp; Physical Sciences</td>
<td>359</td>
<td>26%</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>294</td>
<td>21%</td>
</tr>
<tr>
<td>Humanities</td>
<td>321</td>
<td>23%</td>
</tr>
<tr>
<td>Total</td>
<td>1,406</td>
<td></td>
</tr>
</tbody>
</table>
Factors Contributing to Degree Completion

Percentage of Respondents

- Financial support: 80%
- Mentoring/advising: 65%
- Family (non-financial support): 57%
- Social environment/peer group support: 40%
- Program quality: 36%
- Professional/career guidance: 29%
- Program requirements: 22%
- Personal circumstances: 18%
- Other: 11%

* Denotes statistically significant factors.
Factors Contributing to Degree Completion, by Broad Field

- **Family (non-financial support)**
  - Engineering: 53%
  - Life Sciences: 57%
  - Mathematics & Physical Sciences: 61%
  - Social Sciences: 60%
  - Humanities: 61%

- **Mentoring/advising**
  - Engineering: 61%
  - Life Sciences: 67%
  - Mathematics & Physical Sciences: 70%
  - Social Sciences: 70%
  - Humanities: 73%

- **Financial support**
  - Engineering: 80%
  - Life Sciences: 82%
  - Mathematics & Physical Sciences: 83%
  - Social Sciences: 82%
  - Humanities: 82%
Various Aspects of Selection and Admissions

- Information about job placement of recent graduates available: 26%
- Information about Ph.D. completion available: 36%
- Program requirements presented in clear written form: 87%
- Received/aware of Graduate Student Handbook: 91%
- Doctoral program offered formal orientation: 70%
- University offered orientation workshop: 76%
- Campus visit before enrolling in program: 62%

Percentage of Respondents
Aspects of Selection/Admission, by Broad Field

- University offered orientation workshop
- Doctoral program offered additional formal orientation
- Campus visit before enrolling in program

Percentage of Respondents

Engineering  Life Sciences  Mathematics & Physical Sciences  Social Sciences  Humanities
Availability of Academic Advisor at Different Stages

- Dissertation defense *: 90%
- Dissertation (ABD) stage: 90%
- Qualifying examinations *: 83%
- Preliminary examinations *: 82%
- Coursework: 81%
Availability of Advisor at Various Stages, By Broad Field

- **Dissertation defense** *
  - Engineering: 96%
  - Life Sciences: 89%
  - Mathematics & Physical Sciences: 87%
  - Social Sciences: 90%
  - Humanities: 89%

- **Dissertation (ABD) stage**
  - Engineering: 95%
  - Life Sciences: 88%
  - Mathematics & Physical Sciences: 88%
  - Social Sciences: 85%
  - Humanities: 83%

- **Qualifying examinations** *
  - Engineering: 83%
  - Life Sciences: 82%
  - Mathematics & Physical Sciences: 80%
  - Social Sciences: 80%
  - Humanities: 83%

- **Preliminary examinations** *
  - Engineering: 79%
  - Life Sciences: 76%
  - Mathematics & Physical Sciences: 81%
  - Social Sciences: 82%
  - Humanities: 80%

- **Coursework**
  - Engineering: 82%
  - Life Sciences: 82%
  - Mathematics & Physical Sciences: 83%
  - Social Sciences: 80%
  - Humanities: 76%
Feedback, Mentor, Satisfaction with Quality of Relationship, By Broad Field

- Satisfied with quality of relationship with mentor(s) *
  - Engineering: 94%
  - Life Sciences: 94%
  - Mathematics & Physical Sciences: 93%
  - Social Sciences: 91%
  - Humanities: 94%

- Had access to someone who provided advice on academic and professional matters (beyond immediate research project)
  - Engineering: 70%
  - Life Sciences: 78%
  - Mathematics & Physical Sciences: 75%
  - Social Sciences: 81%
  - Humanities: 77%

- Received regular feedback from advisor and/or program about academic progress
  - Engineering: 88%
  - Life Sciences: 84%
  - Mathematics & Physical Sciences: 78%
  - Social Sciences: 89%
  - Humanities: 87%

Percentage of Respondents

Council of Graduate Schools
Received Support & Guaranteed Multi-year Financial Support, By Broad Field

- **Humanities**: 66% offered, 92% received
- **Social Sciences**: 73% offered, 91% received
- **Mathematics & Physical Sciences**: 72% offered, 96% received
- **Life Sciences**: 77% offered, 96% received
- **Engineering**: 63% offered, 96% received
- **Overall**: 70% offered, 94% received

Percentage of Respondents

Council of Graduate Schools
## Number of years of guaranteed multi-year financial support, By Broad Field

<table>
<thead>
<tr>
<th>Field</th>
<th>2-3 years</th>
<th>4-5 years</th>
<th>6 or more years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities</td>
<td>8</td>
<td>28</td>
<td>64</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>2</td>
<td>25</td>
<td>73</td>
</tr>
<tr>
<td>Mathematics &amp; Physical Sciences</td>
<td>13</td>
<td>22</td>
<td>65</td>
</tr>
<tr>
<td>Life Sciences</td>
<td>16</td>
<td>26</td>
<td>58</td>
</tr>
<tr>
<td>Engineering</td>
<td>13</td>
<td>19</td>
<td>68</td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td>12</td>
<td>22</td>
<td>66</td>
</tr>
</tbody>
</table>

**Percentage of Respondents**
Sources of Non-loan Financial Support

- Teaching assistantship stipend: 70%
- Research assistantship stipend: 55%
- University/department fellowship or scholarship: 59%
- Private/external nationally competitive fellowship or scholarship: 22%
- Private/external locally competitive fellowship or scholarship: 9%
- Other: 6%
- Work study: 2%
Type of Support, By Broad Field

- **Private/external, nationally competitive fellowship or scholarship**
  - Engineering: 16%
  - Life Sciences: 14%
  - Mathematics & Physical Sciences: 30%
  - Social Sciences: 28%
  - Humanities: 36%

- **Research assistantship stipend**
  - Engineering: 78%
  - Life Sciences: 66%
  - Mathematics & Physical Sciences: 59%
  - Social Sciences: 66%
  - Humanities: 77%

- **University/department fellowship or scholarship**
  - Engineering: 66%
  - Life Sciences: 69%
  - Mathematics & Physical Sciences: 63%
  - Social Sciences: 48%
  - Humanities: 50%

- **Teaching assistantship stipend**
  - Engineering: 56%
  - Life Sciences: 72%
  - Mathematics & Physical Sciences: 51%
  - Social Sciences: 77%
  - Humanities: 72%

**Percentage of Respondents**
Effect of Teaching or Research Assistantship on Length of Program, By Broad Field

### Teaching Assistantship

- **Engineering**: 90% Decreased, 10% Increased
- **Life Sciences**: 88% Decreased, 12% Increased
- **Mathematics & Physical Sciences**: 78% Decreased, 22% Increased
- **Social Sciences**: 77% Decreased, 23% Increased
- **Humanities**: 80% Decreased, 20% Increased

### Research Assistantship

- **Engineering**: 54% Decreased, 46% Increased
- **Life Sciences**: 64% Decreased, 36% Increased
- **Mathematics & Physical Sciences**: 70% Decreased, 30% Increased
- **Social Sciences**: 54% Decreased, 46% Increased
- **Humanities**: 52% Decreased, 48% Increased

*Percentage of respondents who reported a decreased or increased length of program.*
Percentage of Respondents Who Worked Outside the University, By Broad Field

- Engineering: 28%
- Life Sciences: 21%
- Mathematics & Physical Sciences: 32%
- Social Sciences: 63%
- Humanities: 57%
Percentage of Respondents Who Took Loans, By Broad Field

- Engineering: 30%
- Life Sciences: 37%
- Mathematics & Physical Sciences: 41%
- Social Sciences: 51%
- Humanities: 68%
Amount of Loan, By Broad Field

Note: *Small sample size (n<50)
Aspects of Program Environment

- Program provided office space: 78%
- Program provided campus mailboxes for students: 86%
- Program had a student lounge: 67%
- Students created informal events open to all students: 87%
- Program had events with guest speakers from outside the program or university: 95%
- Program sponsored events that allowed for informal interaction among students: 85%
- Program sponsored events that allowed for informal interaction between faculty and students: 83%

Percentage of Respondents
Program Provided Mailboxes and Office Space, By Broad Field

Percentage of respondents

<table>
<thead>
<tr>
<th>Program provided campus mailboxes for students</th>
<th>Program provided office space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering</td>
<td>93, 94</td>
</tr>
<tr>
<td>Life Sciences</td>
<td>79, 66</td>
</tr>
<tr>
<td>Mathematics &amp; Physical Sciences</td>
<td>91, 91</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>75, 66</td>
</tr>
<tr>
<td>Humanities</td>
<td>90, 71</td>
</tr>
</tbody>
</table>

Council of Graduate Schools
### Program Expectations Clearly Articulated During Various Stages, by Broad Field

<table>
<thead>
<tr>
<th>Stage</th>
<th>Engineering</th>
<th>Life Sciences</th>
<th>Mathematics &amp; Physical Sciences</th>
<th>Social Sciences</th>
<th>Humanities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissertation defense</td>
<td>83</td>
<td>88</td>
<td>92</td>
<td>96</td>
<td>96</td>
</tr>
<tr>
<td>Dissertation (ABD) stage</td>
<td>79</td>
<td>83</td>
<td>85</td>
<td>93</td>
<td>93</td>
</tr>
<tr>
<td>Qualifying examinations</td>
<td>81</td>
<td>82</td>
<td>89</td>
<td>96</td>
<td>96</td>
</tr>
<tr>
<td>Preliminary examinations</td>
<td>85</td>
<td>86</td>
<td>89</td>
<td>96</td>
<td>97</td>
</tr>
<tr>
<td>Coursework</td>
<td>89</td>
<td>94</td>
<td>94</td>
<td>94</td>
<td>95</td>
</tr>
</tbody>
</table>

Percentage of Respondents

 Council of Graduate Schools
Opportunity to Provide Feedback, by Broad Field

- **Engineering**: 58% (Had opportunity) 43% (Participated)
- **Life Sciences**: 62% (Had opportunity) 50% (Participated)
- **Mathematics & Physical Sciences**: 50% (Had opportunity) 40% (Participated)
- **Social Sciences**: 65% (Had opportunity) 55% (Participated)
- **Humanities**: 54% (Had opportunity) 43% (Participated)
Research and Publication Opportunities While in Doctoral Program

- Published on own research while in program: 87% (Engineering), 76% (Life Sciences), 63% (Mathematics & Physical Sciences), 77% (Social Sciences), 87% (Humanities)
- Provided opportunities to work in interdisciplinary teams or participate in interdepartmental reading groups: 47% (Engineering), 40% (Life Sciences), 37% (Mathematics & Physical Sciences), 57% (Social Sciences), 92% (Humanities)
- Provided research opportunities to prepare for dissertation research before conclusion of coursework: 84% (Engineering), 77% (Life Sciences), 71% (Mathematics & Physical Sciences), 82% (Social Sciences), 87% (Humanities)

Percentage of Respondents