Graduate Student Training Questions*

Where are our doctoral graduates going?

Do we know (beyond anecdote) about how well their graduate experience prepared them?

Are changes needed?
What are they?
How do we assess and choose possible changes?

* with answers resolved at the level of MPS fields
Relative Size of MPS Fields
6885 Doctorates in 2014

Fraction of Doctorates

- Mathematics: 27%
- Chemistry: 37%
- Astronomy: 4%
- Physics: 19%
- Materials: 12%

Source: NSCES 2014 Survey of Earned Doctorates
All Doctorates in MPS Fields 1958 - 2014

Source: NSCES 2014 Survey of Earned Doctorates
All Doctorates 1958 – 2014

Source: NSCES 2014 Survey of Earned Doctorates
Doctorates in MPS Fields 1958 - 2014

Source: NSCES 2014 Survey of Earned Doctorates
Mathematical and Physical Sciences

Employment Sector MPS Doctorates 2013

Source: NSCES 2013 Survey of Earned Doctorates

<table>
<thead>
<tr>
<th>Sector</th>
<th>Fraction in Sector</th>
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</thead>
<tbody>
<tr>
<td>4 yr college</td>
<td>50%</td>
</tr>
<tr>
<td>2 yr college</td>
<td>30%</td>
</tr>
<tr>
<td>For-profit business</td>
<td>10%</td>
</tr>
<tr>
<td>Self employed</td>
<td>4 yr college</td>
</tr>
<tr>
<td>Non-profit org.</td>
<td>2 yr college</td>
</tr>
<tr>
<td>Fed govt</td>
<td>For-profit business</td>
</tr>
<tr>
<td>State/local govt</td>
<td>Self employed</td>
</tr>
</tbody>
</table>

Mathematics

Chemistry

Physics

Astronomy

Source: NSCES 2013 Survey of Earned Doctorates
Do we know (beyond anecdote) about how well their graduate experience prepared them?

Possible Proxy Variables

Rates of unemployment, part-time, and full-time employment

Involuntarily employed in job unrelated to doctoral field

Primary and secondary work activity
(for example, research, teaching, management)

In four-year institutions: tenures status, faculty rank