

Using Humanities PhD Alumni Data to Promote Program Improvement and Cultural Change

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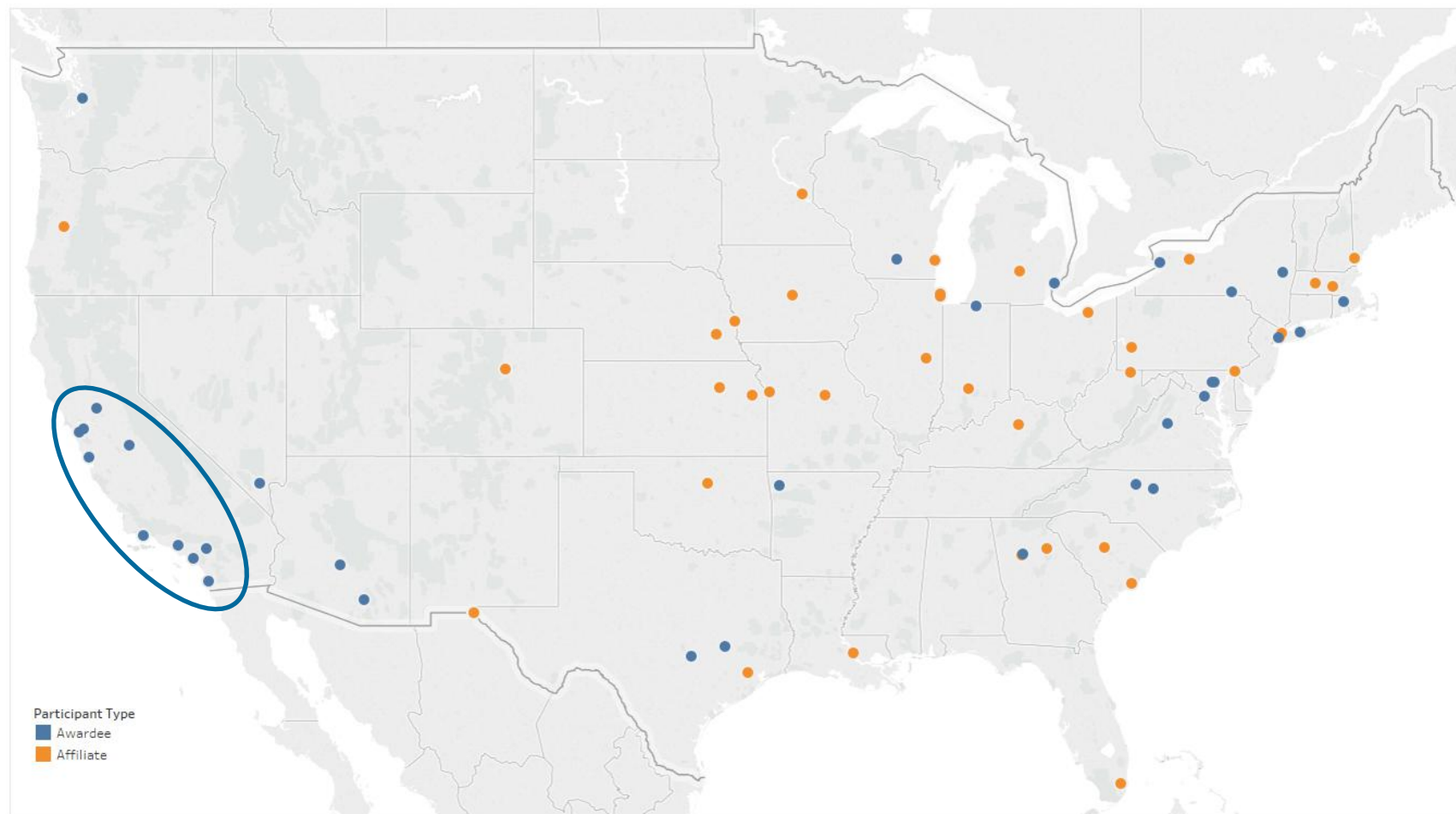
UC Humanists and Work Colloquium
April 22, 2019

Takeaways from this Presentation

- **PhD alumni are engaged in meaningful work across diverse employment sectors**
- **Recent PhDs especially those working outside the academy, feel their degree prepared them less well for current job demand**
- **Humanities PhDs do not feel well prepared for leadership team work and grant writing BUT there are disciplinary differences**
- **Professional development can make a difference**
- **Career pathways data can catalyze program development and change**

Good News: 70 universities are collecting and using data on PhD careers

Based on work supported by the Andrew W. Mellon Foundation and National Science Foundation (#1661272).





Closing Gaps in our Knowledge of PhD Career Pathways: How Well Did a Humanities PhD Prepare Them?

CGS Research in Brief, October 2018
By Hironao Okahana & Timothy Kinoshita

The vast majority of humanities PhDs still work in fields related to their doctoral education and are satisfied with their jobs. According to the National Science Foundation (NSF), 92% of humanities PhDs working in 2015 held jobs that are closely or somewhat related to their PhDs. Furthermore, 85% of humanities PhDs who are employed are satisfied or very satisfied with their current work. This percentage is consistent for the 92% who work in fields unrelated to their humanities PhD degrees as well as the 8% who work in related fields. Though these national data tell us about humanities PhDs in the workforce and their satisfaction with their current jobs, little is known about their views on the Council of Graduate Schools' (CGS) PhD Career Pathways project. This brief provides new insight into how humanities PhDs apply their doctoral training in the workforce.

Key Findings:

- A large majority of survey respondents believe that their humanities PhD education prepared them well for their jobs. Although the differences were not statistically significant, humanities PhDs who were employed by colleges and universities generally felt that their doctoral studies had better prepared them for their current job than those who were employed elsewhere. The difference was statistically significant only among those who were three years post-graduation (Figure 1).
- A large majority of survey respondents said that they would pursue a PhD in general or in the same field, if they had to start over again. Humanities PhDs three years post-graduation and working for employers other than colleges and universities were less likely to do so than academic counterparts to say that they "definitely would" or "probably would" pursue a PhD in general or in the same field. However, when comparing employees of academic institutions and those employed elsewhere, for those eight and fifteen years post-graduation, the differences were not statistically significant (Figure 2).
- Between humanities PhDs working in academia and elsewhere, there are more similarities than differences in key workforce skills and attributes. While alumni in academic and non-academic sectors stressed different types of skills, there were no statistically significant differences for twelve skills and attributes—such as "leadership," "adaptability and flexibility," and "analytical thinking"—mentioned in the survey (Figure 3).



Closing Gaps in our Knowledge of PhD Career Pathways: Preparing Future Faculty for All Types of Colleges and Universities

CGS Research in Brief, December 2018
By Hironao Okahana & Timothy Kinoshita

According to the National Science Foundation's (NSF) National Survey of College Graduates, 49% of doctoral degree holders employed in some capacity. For over two-thirds of the PhDs employed by colleges and universities, teaching is their primary or secondary work activity. In fact, 43.8% of the postsecondary teaching workforce, including many or secondary work activity, including those employed at community colleges, hold a doctoral degree (U.S. Bureau of Labor Statistics, 2018). Though the vast majority of research doctorates are conferred by Doctoral Universities, these institutions only make up 7.1% (311 of 4,360) of degree-granting postsecondary institutions in the United States (National Center for Education Statistics [NCES], 2018a) and enroll just over one-quarter of the approximately 20 million undergraduate students (NCES, 2018b). Using survey data from the Council of Graduate Schools' (CGS) PhD Career Pathways project, this brief provides new insight into how PhDs feel about their preparation to work at different types of institutions.

Key Findings:

- The vast majority of PhDs in this study who worked in non-research universities viewed teaching as their primary responsibility. A large share of PhDs working for "Research Universities" identified basic research as their primary responsibility; however, the majority (55%) also considered teaching as either an important primary or secondary responsibility (Figure 1).
- Across the sixteen skills measured in the survey, there were variations in the perceived importance by institutional sector. Those working at "Research Universities" placed higher importance on the traits of innovation, analytical thinking, persistence, and initiative compared to those with teaching as their secondary responsibility. In contrast, dependability, concern for others, and social orientation were all perceived as more important for those working in other postsecondary sectors outside of "Research Universities" (Figure 2).
- Doctorate holders in the study who were working at "Research Universities" overwhelmingly responded that their PhD prepared them well for their current job, regardless of work responsibility. When asked how well their PhD prepared them for their current job at "Research Universities," 83% of those with primary teaching responsibilities and 87% of those with secondary teaching responsibilities responded, "Extremely Well" or "Very Well." In contrast, just over half of respondents working for "Community or Two-year Colleges" answered "Extremely Well" or "Very Well" to the same question (Figure 3).



Closing Gaps in our Knowledge of PhD Career Pathways: How Well Did a STEM PhD Train Degree Recipients for Their Careers?

CGS Research in Brief, April 2019
By Hironao Okahana, Enyu Zhou, & Timothy Kinoshita

The vast majority of STEM PhDs work in fields related to their doctoral education and are satisfied with their jobs. According to the National Science Foundation's (NSF) Survey of Doctoral Recipients, 92% of employed doctoral scientists and engineers in 2017 held jobs that are closely or somewhat related to their PhDs (NSF, 2019). Using data from the Council of Graduate Schools' (CGS) PhD Career Pathways project, this brief provides new insight into how STEM PhDs apply their doctoral training in the workforce.

Key Findings:

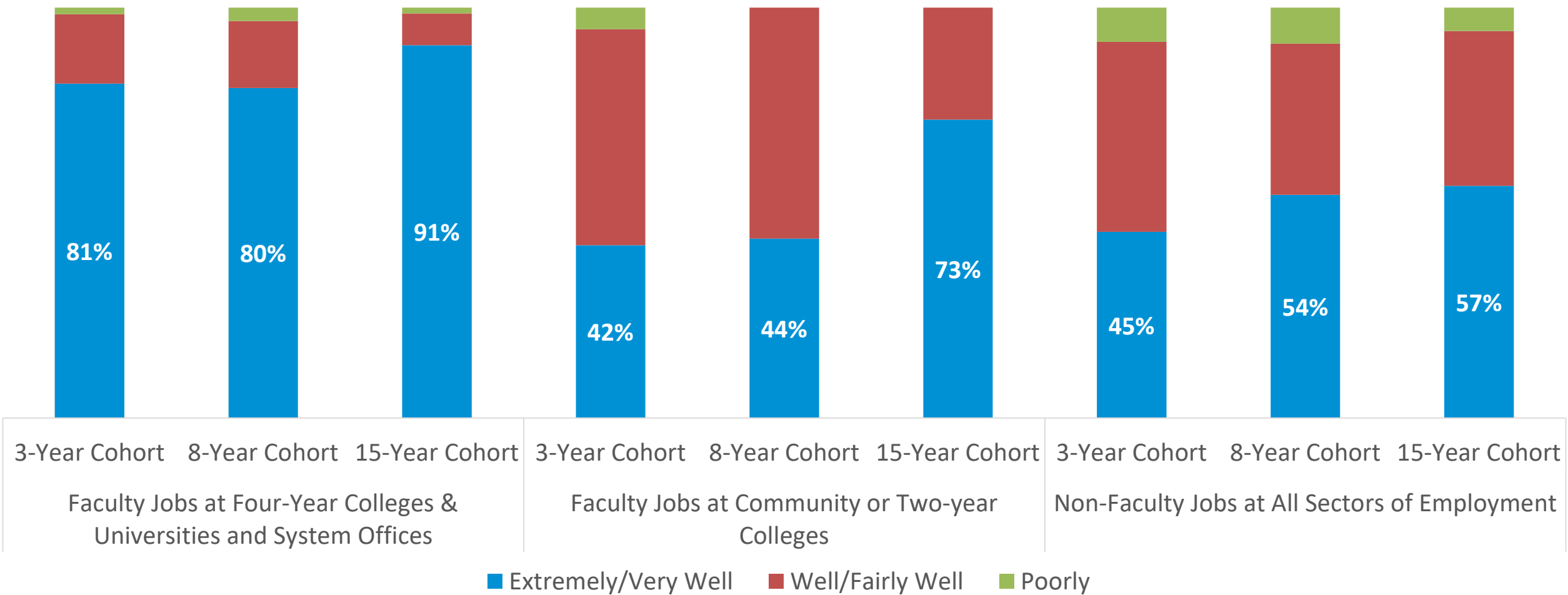
- A large majority of survey respondents in various stages of their postdoctoral careers believe that their STEM PhD education prepared them well for their jobs. However, there are some differences between those employed by colleges and universities and those who are employed elsewhere.
- Among those who earned their PhDs in Life Sciences, Physical Sciences, or Engineering, fewer graduates who worked outside of the academy felt that their PhD education prepared them extremely well or well for their current jobs. There was no difference by sector of employment and those who earned a PhD in the Behavioral Sciences (See Table 1).
- A large majority of survey respondents report that they "definitely" or "probably" would still pursue a PhD in general and in the same field again. Across different STEM broad fields and different PhD cohorts, alumni in both employment sectors were equally likely to say that they would pursue a PhD again. Notable exceptions are for engineering and physical & earth sciences alumni 15 years out. Although more than a half of them would still pursue PhDs again, fewer graduates in earth sciences alumni 15 years out, compared to those working for outside of the academy, indicated that they would definitely jobs outside of the academy, compared to those working for colleges and universities, indicated that they would definitely probably do so (See Table 2).
- PhD graduates within and outside of academia identify similar job skills and attributes as important. Across different STEM broad fields and employment sectors, there are many similarities in terms of attributes and skills crucial to successfully perform work, but was particularly important for those who work at colleges and universities. On the other hand, cooperation was particularly important for those who outside of the academy. (See Figure 1 & Table 3)

Table 1. Percent Responding "Extremely Well" or "Very Well" to Survey Item "How well did your PhD prepare you for (your current job)?" by Selected Employment Sector for Selected Fields & Doctoral Cohorts

| Selected Fields | Year | Academic | | Non-Academic | |
|------------------------------|---------|----------|--------|--------------|--------|
| | | 3 Year | 6 Year | 3 Year | 6 Year |
| Biological Sciences | 3 Year | 80% | 82% | 66% | 72% |
| | 15 Year | 79% | 76% | 76% | 74% |
| Engineering | 3 Year | 87% | 87% | 67% | 75% |
| | 15 Year | 80% | 84% | 71% | 67% |
| Physical & Earth Sciences | 3 Year | 92% | 92% | 67% | 75% |
| | 15 Year | 76% | 76% | 75% | 75% |
| Social & Behavioral Sciences | 3 Year | 80% | 80% | 68% | 75% |
| | 15 Year | 80% | 80% | 68% | 75% |

Boldface denotes statistical significance difference by employment sector (p < 0.05)

% of Arts & Humanities PhDs Who Feel That Their PhD Education Extremely or Very Well Prepared for Their Current Jobs by Cohort and Institutional Sector of Current Employment.



Arts & Humanities PhDs 3-Year Cohort: How well did your graduate program prepare you in the following knowledge, attributes, and behaviors?



Arts & Humanities PhDs 3-Year Cohort by Field: How well did your graduate program prepare you in the following knowledge, attributes, and behaviors?

Influencing others, providing direction and encouraging their contribution

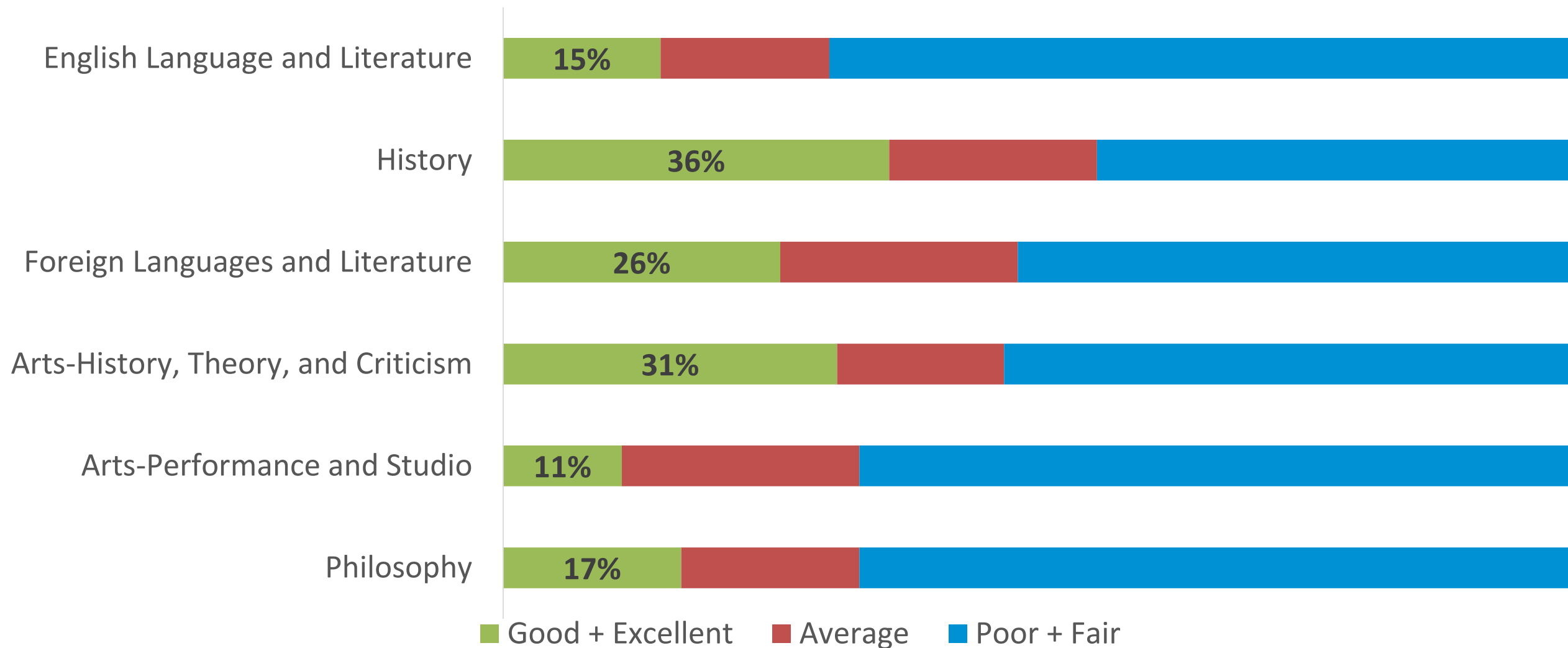


Arts & Humanities PhDs 3-Year Cohort by Field: How well did your graduate program prepare you in the following knowledge, attributes, and behaviors?

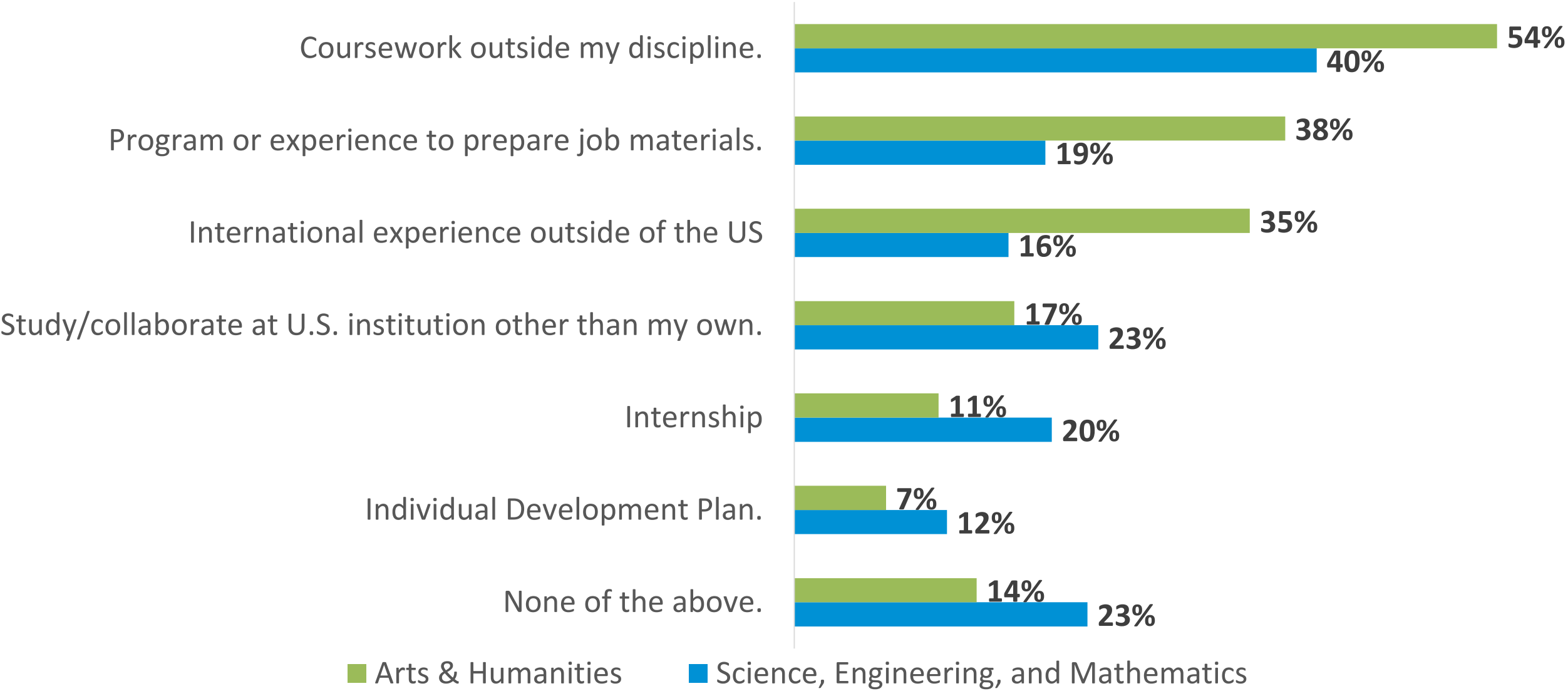
Working constructively with colleagues, acknowledging their contribution



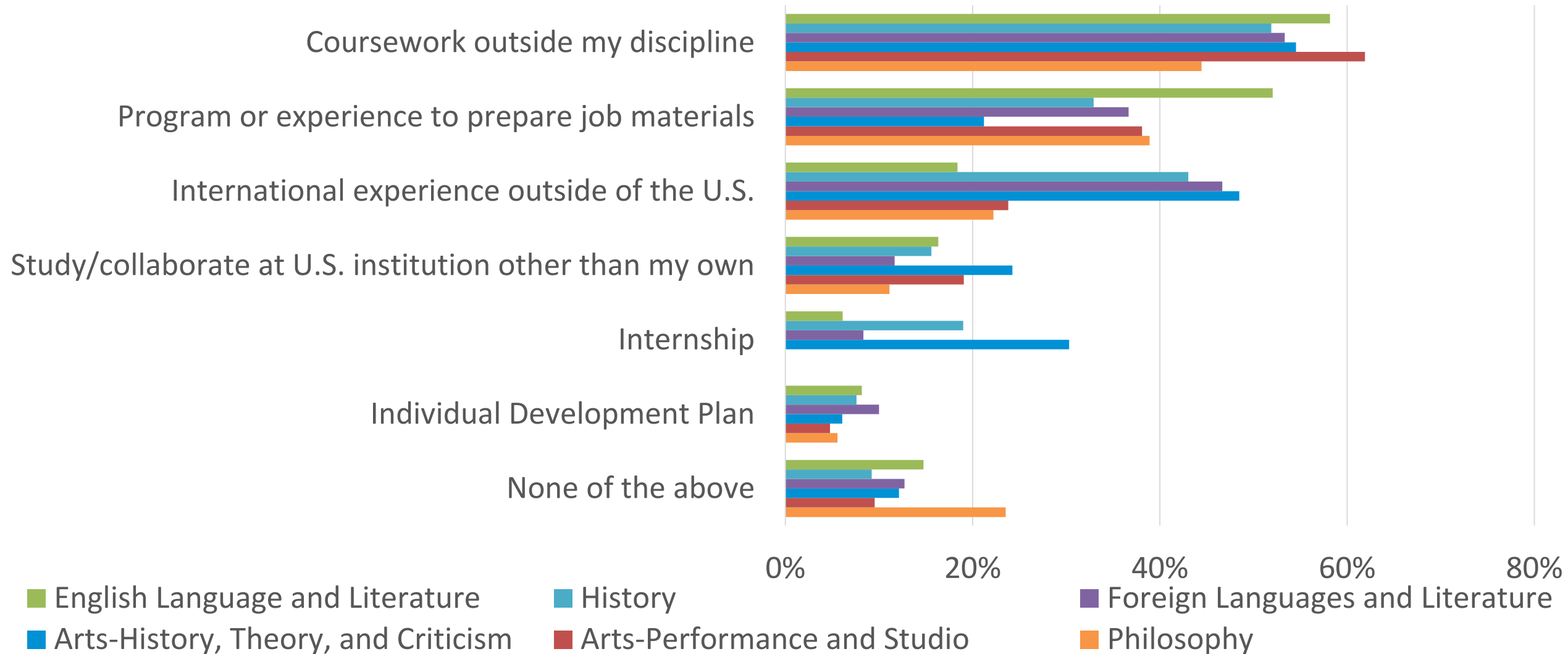
Arts & Humanities PhDs 3-Year Cohort by Field: How well did your graduate program prepare you in the following knowledge, attributes, and behaviors? Grant writing



Arts & Humanities & SEM PhDs 3-Year Cohort: Participation in Various Types of PhD Experience



Arts & Humanities PhDs 3-Year Cohort by Field: Participation in Various Types of PhD Experience



The Graduate School at the University of Notre Dame PhD Career Pathways Project

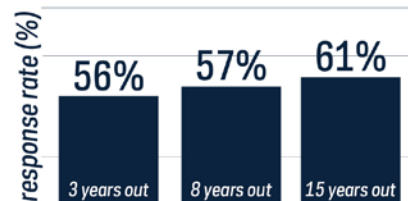
Communiqué #1: Wave 1 Humanities PhD Alumni

**YOUR
RESEARCH
MATTERS™**



UNIVERSITY OF NOTRE DAME | THE GRADUATE SCHOOL

ND Survey Response Rate



82%
surveyed alums report
ND prepared them "very
well" or "extremely well"
for their current jobs

Career Preparation for Diverse Job Sectors



government



archives



startups



universities



libraries



nonprofits

Career Skills and Attributes

PhD Career Pathways consortium data suggest that the skills humanities PhD alumni use in academic and non-academic careers are more similar than different.

At ND, our findings were consistent, with ND alumni in both academic and non-academic careers citing the following top 5 skills they use in their current jobs:



critical
analysis



understanding the
broader significance
of one's research



written
communication



tools and
techniques



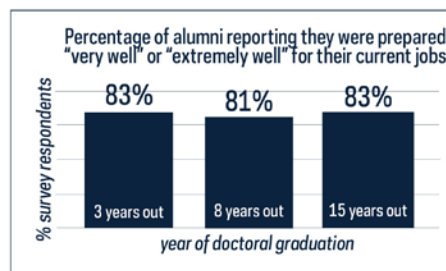
oral
communication

Career Preparation Adaptability

PhD Career Pathways consortium data suggest alumni from 3 years out felt less prepared for their jobs than those 8 and 15 years out.

At ND, this was not the case, with 83% of alumni from 3 years out reporting they were prepared "very well" or "extremely well" for their current jobs.

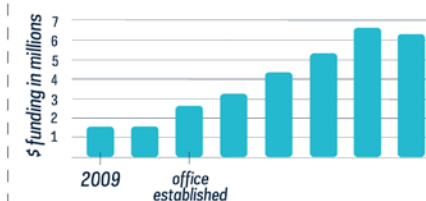
These findings suggest ND's career preparation approach has adapted well with changing career trends.

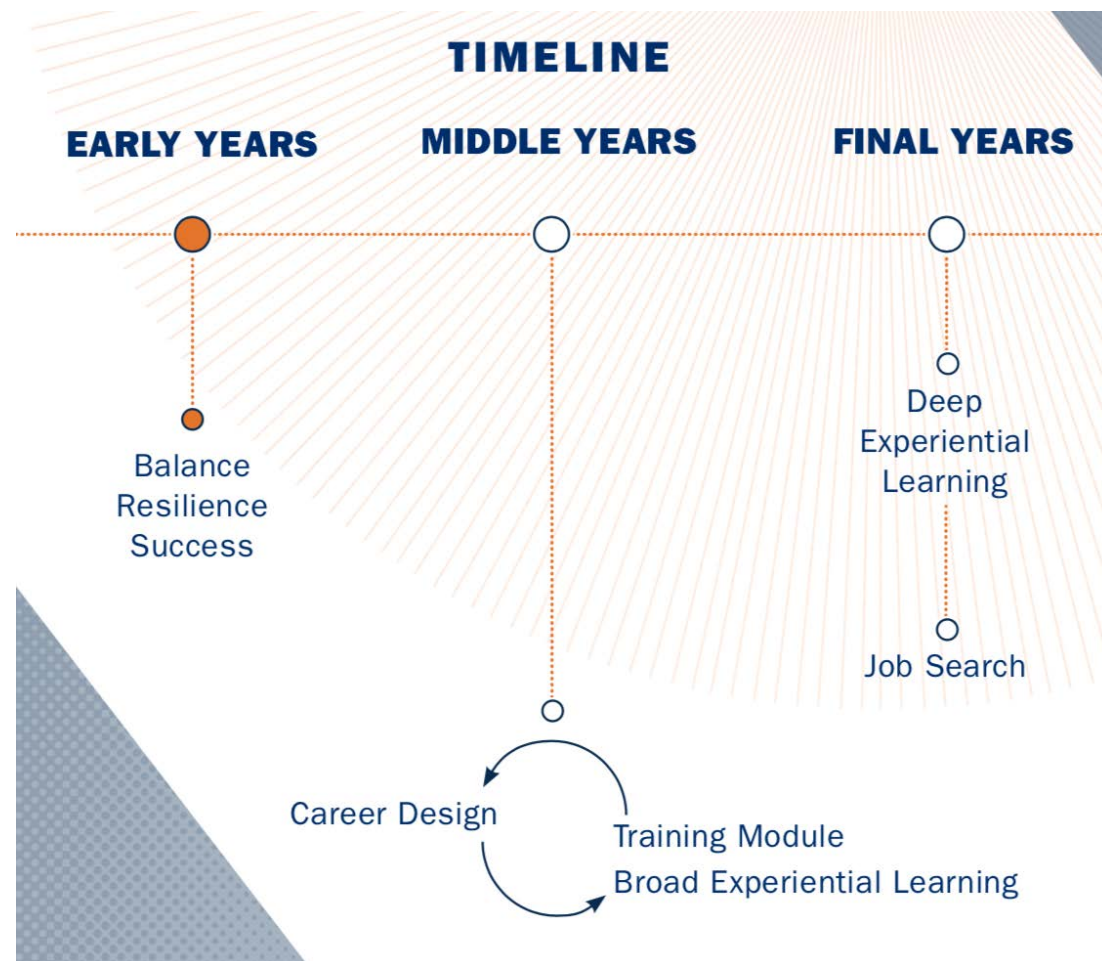


Room to Improve: Grant Writing

ND alumni felt least prepared for grant writing. This feedback challenges us to raise awareness for internal grant-writing resources, like the Office of Grants and Fellowships which has helped students raise millions in external funding.

Annual external funding awarded to grad students





- Foundations (teamwork, design thinking)
- Science Policy
- Communicating research
- Data literacy
- Praxis
- Career design
- Startup
- Tomorrow's Professor Today (TPT)

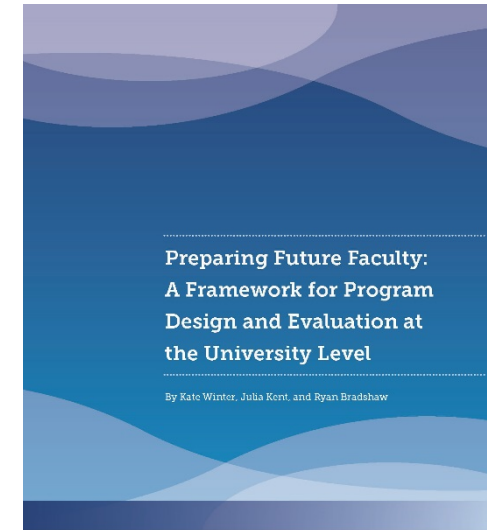
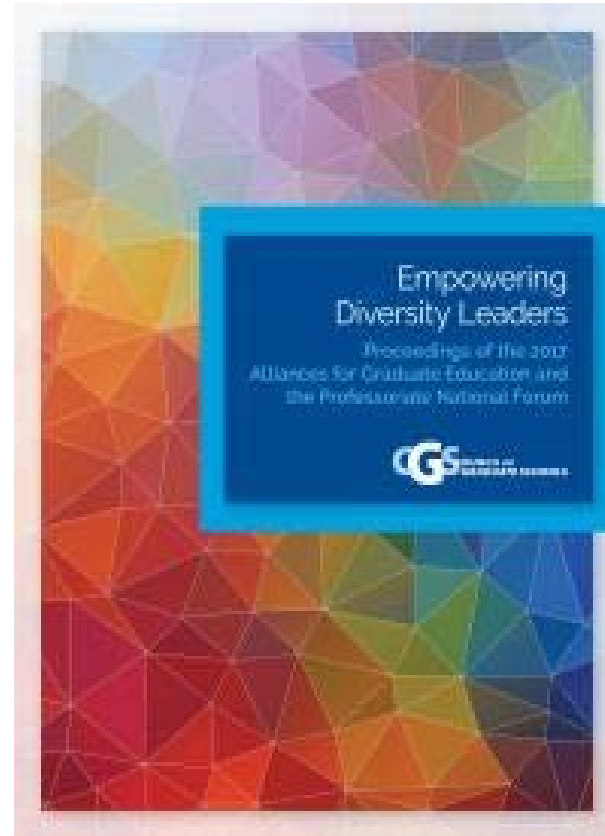
“The PhD Careers Pathway project is, for the first time, providing us with actionable data that graduate programs can use to support flexible career outcomes. For example, an overwhelming majority of the UNC-Chapel Hill alumni from the three, eight, and 15 year cohorts indicate that networking opportunities with former students who pursued careers outside academia would be valuable. In addition, a significant majority indicate that internship opportunities would be a useful resource.”

Steven Matson
Dean of the Graduate School
UNC Chapel Hill

What Do We Mean by Professional Skills and Professional Development?



Resources



INSTITUTE
on **TEACHING**
and **MENTORING**

