

Insights Into American Indian and Alaska Native Doctoral Students

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Background

American Indian and Alaska Natives (AI/AN) account for fewer than 1% of all doctorate recipients (National Center for Science and Engineering Statistics 2024). Perhaps as a result of their small numbers, there is a lack of research on the graduate experiences of American Indian and Alaska Native doctoral students, including their post-graduation aspirations. Using survey data from the Council of Graduate Schools' (CGS) PhD Career Pathways project, this brief provides insight into the career concerns of American Indian and Alaska Native (AI/AN) doctoral students and how programs can better support this population of students as they prepare for the job market.¹

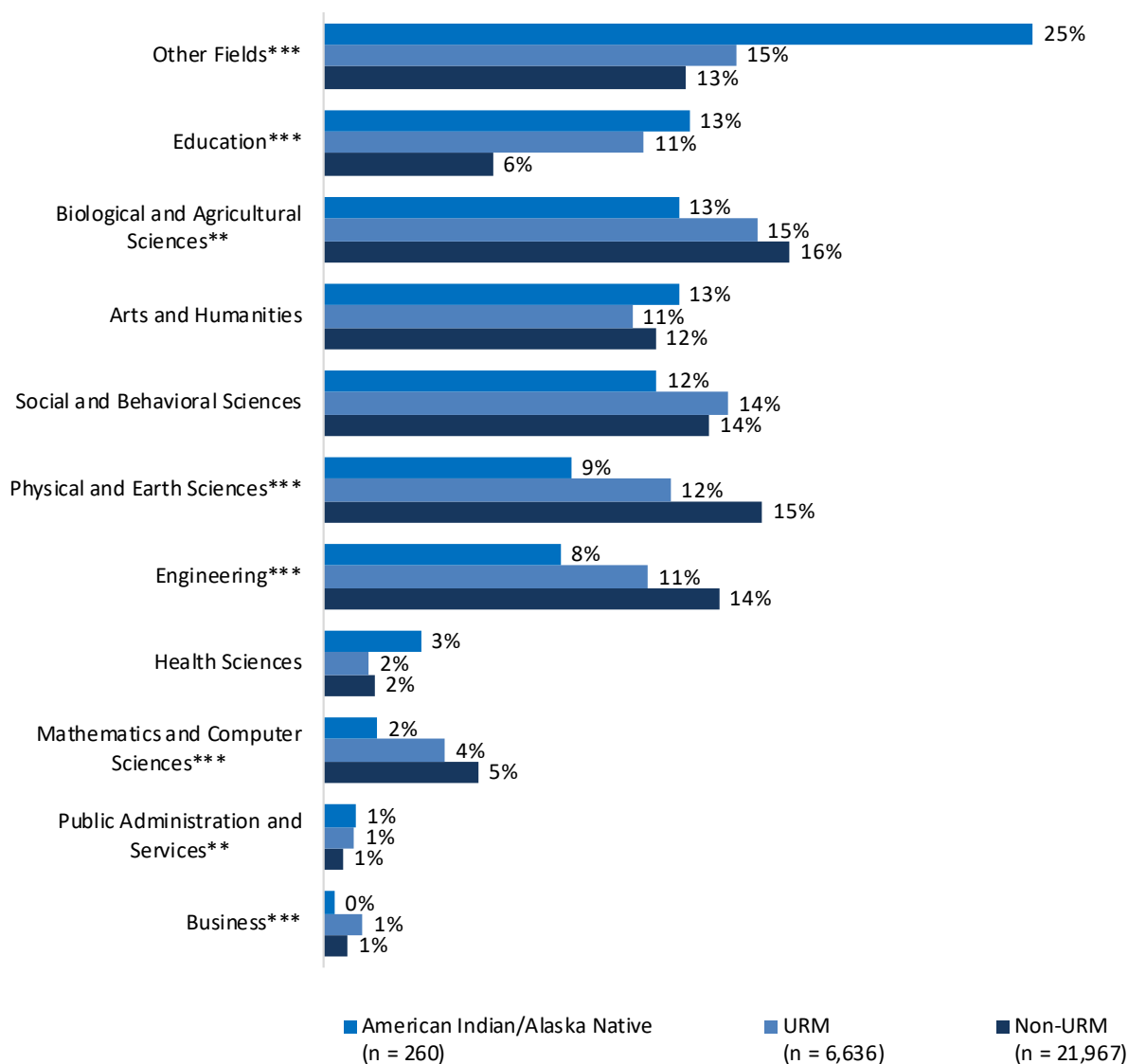
To provide context for our analysis, we provide a brief description of AI/AN student representation in our survey sample. The proportion of survey respondents that identify as American Indian and Alaska Native mirror national data at approximately 1%. American Indian and Alaska Native doctoral students are enrolled in STEM fields at lower rates than other underrepresented minorities (URM) as well as non-underrepresented minority students in the sample.² This is evidenced by the low proportions of American Indian and Alaska Native students enrolled in engineering (8%), mathematics and computer sciences (2%), and physical and earth sciences (9%) doctoral programs. Conversely, AI/AN students are represented in education and other fields at higher rates than PhD students from other backgrounds (Figure 1).

¹ American Indian and Alaska Native is defined here as U.S. citizens and permanent residents who self-identify as an American Indian or Alaska Native including those of Hispanic origin.

² Underrepresented minorities include students U.S. citizens and permanent residents who identify as Black or African American, Hispanic/Latino, Native Hawaiian or Pacific Islander, or two or more races. Students who are U.S. citizens and permanent residents and identify as non-Hispanic White or Asian make up the non-underrepresented minorities category.



Figure 1. American Indian/Alaska Native Doctoral Students by PhD Field of Study³



Note: *p < 0.5; **p < 0.01; ***p < 0.001

Career Concerns of American Indian and Alaska Native Doctoral Students

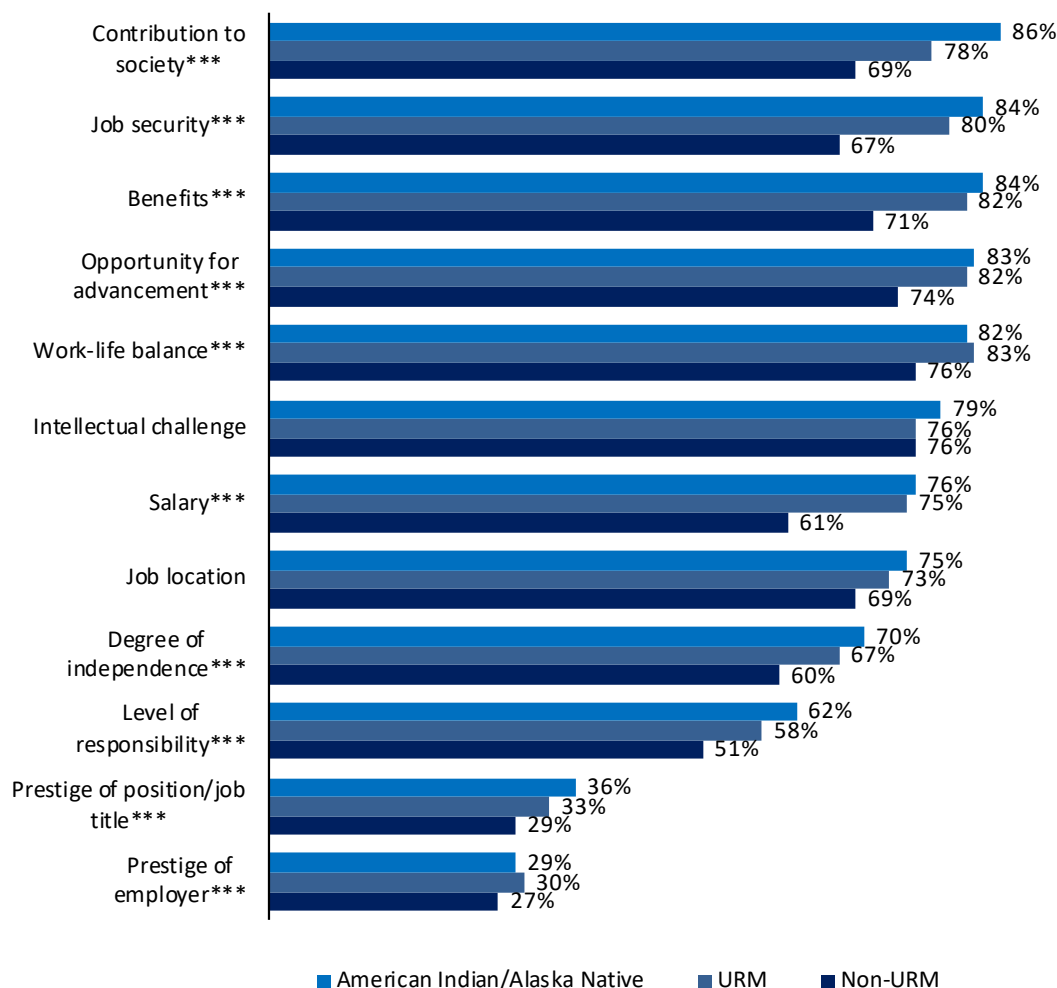
American Indian and Alaska Native PhD students place the highest importance on the opportunity to contribute to society in their first job. American Indian and Alaska Native students enrolled in PhD programs report that the opportunity to contribute to society as an extremely important or very important factor in deciding on a first job immediately following graduation at a higher rate than their peers (**Figure 2**). Eighty-six percent (n = 225) of American Indian and Alaska Native students say it is an important factor compared to 78% (n = 5,514) of URM doctoral students and 69% (n = 15,365) of non-URM students. AI/AN respondents also place greater importance on benefits, job security, and salary than other students. The prestige of an employer as well as the prestige of a tentative position, however, carry low importance for American Indian and Alaska Native doctoral students relative to other groups.

³ All figures derived from the Council of Graduate Schools, Understanding PhD Career Pathways for Program Improvement Project, 2018–2021 Student Surveys.



Figure 2. Importance of Factors to Selecting First Post-graduation Job

Percent responding, “Extremely Important” or “Very Important” to survey item “How important will the following factors be in your decision to select your first job immediately following your PhD graduation?”



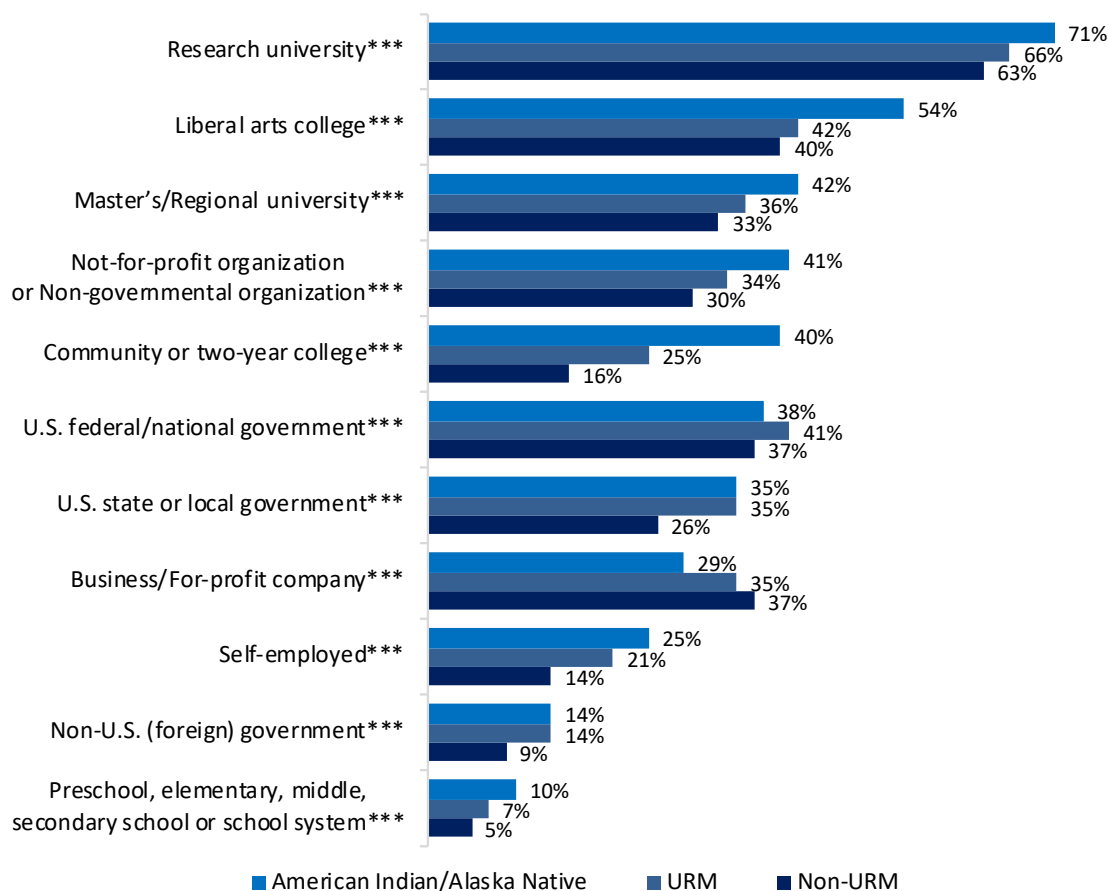
Note: *p < 0.5; **p < 0.01; ***p < 0.001

Academic jobs are most desirable to American Indian and Alaska Native doctoral students. Employment at a research university is the most desired job type among all PhD students. However, a greater proportion of American Indian and Alaska Native PhD students (71%, n = 187) are attracted to jobs at research universities as compared to other underrepresented minority students (66%, n = 4,425) and non-underrepresented minority students (61%, n = 13,964). Similarly, American Indian and Alaska Native doctoral students show greater interest in jobs at liberal arts colleges and two-year colleges than other students (**Figure 3**). Conversely, they show somewhat less interest in employment in the business sector than their peers. Only 29% of American Indian and Alaska Native respondents (n = 23) list a job in business or the for-profit sector as extremely desirable or very desirable immediately after earning their PhD, while 35% of URM doctoral students (n = 2,323) and 37% of non-URM doctoral students (n = 8,242) report the same. Here student interest reflects alumni employment outcomes. Only 16% of the 88 American Indian/Alaska Native alumni surveyed reported employment in the business or for-profit sector compared to 21% of underrepresented minorities and 21% of non-underrepresented minorities surveyed.



Figure 3. Desirability of Post-graduation Employment Sectors

Percent responding, “Extremely Desirable” or “Very Desirable” to survey item “Indicate your preferences for the following employment sectors for the job that you would like to get immediately after earning your PhD degree.”



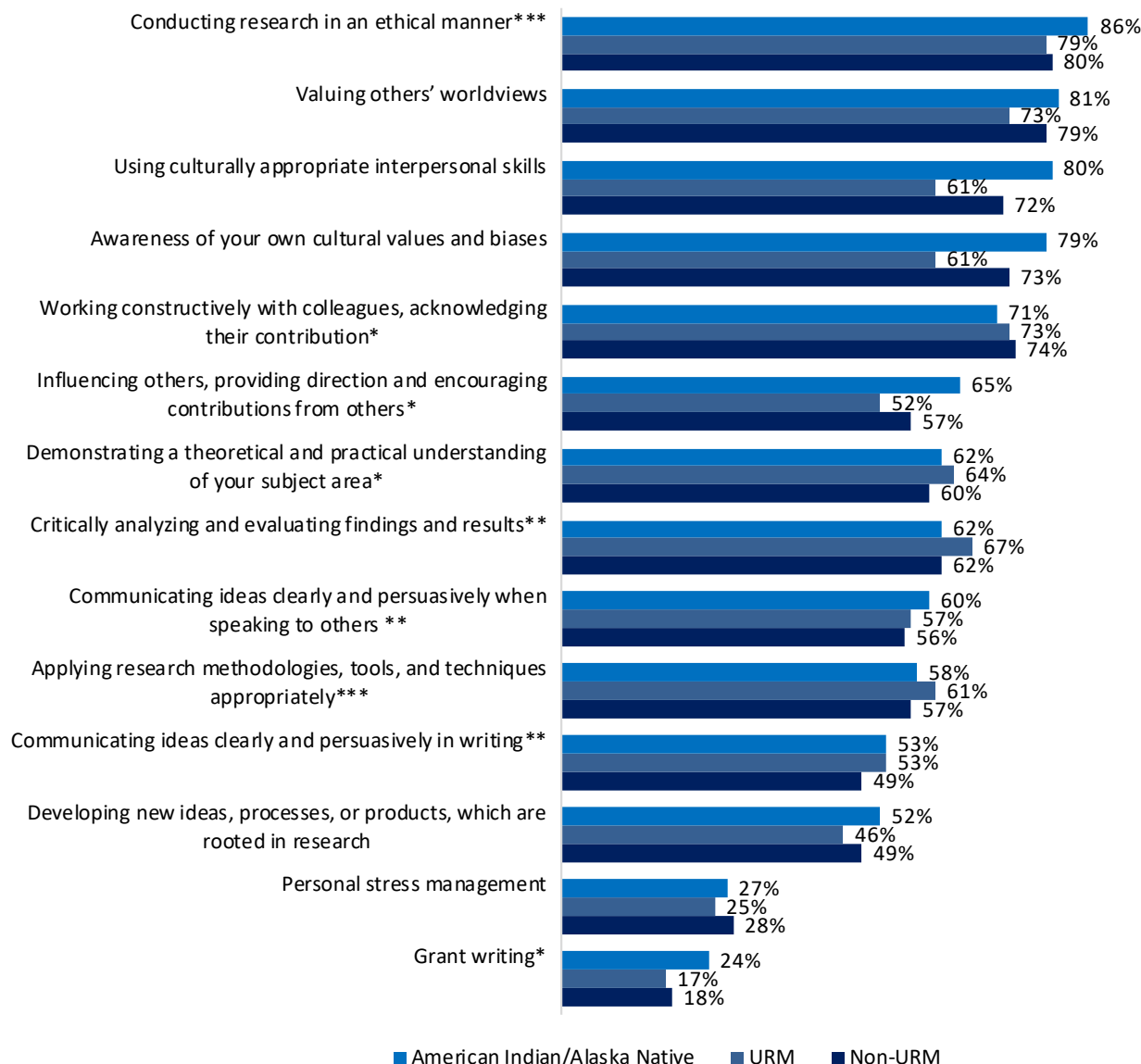
Note: *p < 0.5; **p < 0.01; ***p < 0.001

American Indian and Alaska Native students feel more prepared to employ interpersonal skills than their peers. Compared to students from other backgrounds, American Indian and Alaska Native doctoral students report a greater sense of preparedness to value other's worldviews, use culturally appropriate interpersonal skills, to be aware of their own cultural values and biases, influence others, and to communicate ideas orally (**Figure 4**). While the overwhelming majority (86%, n = 221) say they are prepared to conduct research in an ethical manner, fewer American Indian and Alaska Native PhD students feel well prepared to develop new ideas, processes, or products rooted in research (52%, n = 135).



Figure 4. Preparation in Select Attributes, Behaviors, and Skill Sets

Percent responding, “Excellent” or “Very Well” to survey item “How well prepared do you feel you are in the following attributes, behaviors, and skill sets?”



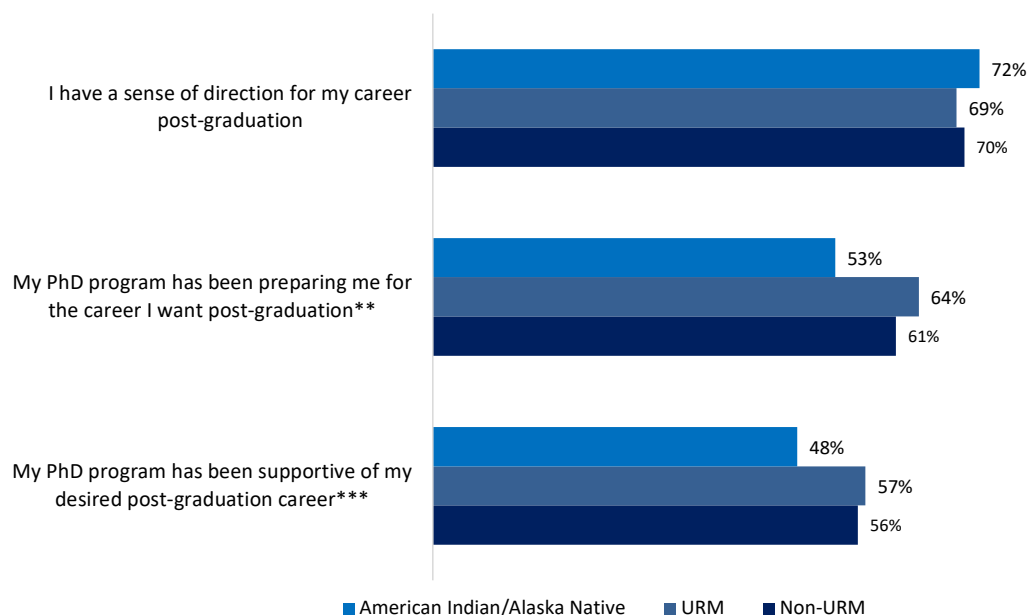
Note: *p < 0.5; **p < 0.01; ***p < 0.001

The majority of American Indian and Alaska Native doctoral students have a sense of direction for their post-graduation career. Over 70% (n= 153) of American Indian and Alaska Native PhD students report they have a sense of direction for their post-graduation career. However, American Indian and Alaska Native students are less likely to report a sense of preparation for post-graduation careers from their PhD program. Fewer than half of AI/AN students (n = 102), say they felt prepared, while 56% of URM students (3,074) and 57% of non-URM students (n = 9,879) said the same. Additionally, American Indian and Alaska Native students are much less likely to feel their program supports their desired post-graduation careers than their peers (**Figure 5**). A little over 50% of American Indian and Alaska Native students (n = 112) report feeling supported compared to the 61% of underrepresented minority PhD students (n=3,362) and 64% of non-underrepresented minority PhD students (n = 11,063).



Figure 5. Sense of Direction, Preparation, and Support for Post-graduation Plans

Percent responding, “Strongly Agree” or “Agree” to survey item “Please rate your level of agreement with each of the following statements.”



Note: *p < 0.5; **p<0.01; ***p<0.001

Takeaway Points

Despite a strong sense of direction for their post-graduation careers, American Indian and Alaska Native doctoral students feel relatively unsupported and unprepared by their PhD programs with regards to their desired careers. American Indian and Alaska Native doctoral students show interest in a wider variety of employment sectors than other students and have particularly strong interest in academia. While positions at research universities are desirable across the board, American Indian and Alaska Native students are also receptive to positions at two-year colleges, much more so than other doctoral students, perhaps reflecting an interest in teaching at tribal colleges. This openness provides an opportunity for programs to expand their student career preparation for positions at a variety of educational institutions and in turn increase students' sense of support for their desired careers.

Basic financial concerns are key considerations for American Indian and Alaska Native students when selecting a first job. However, the survey results illustrate that the opportunity to contribute to society is one of the most important factors for American Indian and Alaska Native PhD students. Current AI/AN students do not feel supported or prepared by their programs to pursue jobs that serve the community, even though American Indian and Alaska Native alumni say they would pursue a PhD again at similar rates (81%) to underrepresented minorities (82%) and non-unrepresented minorities (80%).⁴ To address this gap, PhD programs might highlight jobs beyond academia such as those at non-profit organizations and non-governmental organizations that tackle societal issues or those within government that serve tribal communities.

American Indian and Alaska Native doctoral students are well prepared to engage with colleagues from diverse backgrounds. High percentages of AI/AN doctoral students report being equipped to value the worldviews of others, work constructively with others, and use culturally appropriate interpersonal skills. However, a gap exists in their perceived research skills. Although American Indian and Alaska Native students show a readiness to conduct ethical research, a large portion feel ill-equipped to translate that research into new ideas, processes, or products. This suggests PhD programs may benefit from coupling training in research ethics with training in applied research.



Conversation Starters for PhD Professional Development

We encourage graduate schools to engage in campus conversations about how to best serve American Indian and Alaska Native doctoral students. Culture change happens incrementally and requires active participation by students, faculty, and administrators. A good first step is understanding how your campus community communicates with American Indian and Alaska Native doctoral students. Questions you might consider asking your graduate school staff, college deans, and graduate program directors include:

- How can you create an environment that is supportive of American Indian and Alaska Native doctoral students and their cultural identities to ensure their sense of belonging in your program and institution?
- How can you support American Indian and Alaska Native students whose career decisions are informed by a desire to serve the community?
- What tools and resources could your program or institution provide to increase awareness among students of the diversity of employment opportunities and sectors for PhD holders?
- What kind of professional development opportunities could your program or institution offer to equip students with skills necessary for careers both in and beyond the professoriate?
- Does your university have opportunities to create relationships with two-year and tribal colleges that might be sources of training and employment for your students?

Additional Resources

CGS Resources for Culturally Aware Mentoring: These [mentoring resources](#) are intended to help support reflection, dialogue, and action by graduate education leaders, faculty, staff, and students interested in social justice in graduate education programs and institutions. Many of the resources focus on anti-Black racism while others focus on or include Asian-American, [Indigenous](#), Latinx, or Pacific Islander communities. Some resources may be particularly helpful in identifying potential actions and motivating a commitment to programmatic or institutional change.

CGS PhD Career Pathways Research Briefs: The research briefs that have resulted from CGS's analysis of national data can help institutions contextualize their own institution's data, inform programs about alumni outcomes at the national level, and start conversations about skills and resources that will support the career success of graduate students. The project research briefs are available on the [CGS website](#).

CGS PhD Career Pathways Data Dashboard: The [data dashboard](#) provides an overview of the graduate school experiences and career outcomes of PhD alumni. Deans and other researchers can use the filters, interactive graphs, and views to better understand the career trajectories of PhD alumni across demographic groups, fields of study, and job sectors.

CGS Communications Guide for Career Diversity: CGS has developed a [communications resource](#) designed to help university partners advocate for greater transparency about PhD careers and support career diversity. The tool includes tips for supporting career diversity in campus social media and guidance on communicating the value of diverse careers.

About the Data Source

The CGS PhD Career Pathways Project Student Survey was distributed to current PhD students between 2018–2021. This brief is based upon a subset of this aggregated data set and includes 30,505 domestic doctoral students.

References

National Center for Science and Engineering Statistics (NCSES). 2024. *Doctorate Recipients from U.S. Universities: 2023*. NSF 25-300. Alexandria, VA: U.S. National Science Foundation. Available at <https://ncses.nsf.gov/pubs/nsf25300>.

The CGS PhD Career Pathways Coalition

CGS PhD Career Pathways built a coalition of 75 doctoral institutions working to better understand and support PhD careers across all broad fields of study. Over the course of the project, universities collected data from current PhD students and alumni using surveys that CGS developed in consultation with senior university leaders, funding agencies, disciplinary societies, researchers, and PhD students and alums. The resulting data has allowed universities to analyze PhD career preferences and outcomes at the program level and help faculty and university leaders strengthen career services, professional development opportunities, and mentoring.

About CGS

For over 60 years, the Council of Graduate Schools has been the only national organization dedicated solely to advancing master's and doctoral education and research. CGS members award 86.9% of all U.S. doctoral degrees and 59.8% of all U.S. master's degrees. CGS accomplishes its mission through advocacy, developing and disseminating best practices, and innovative research.

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