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Formal and Informal Mentoring to Broaden the Pathway into Graduate Education

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This practice brief is part of ACE's Race and Ethnicity in Higher Education project, which provides a data-informed foundation for those who are working to close persistent equity gaps by presenting a comprehensive review of the educational pathways of today's college students and the educators who serve them. Visit equityinhighered.org to learn more about the project.

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BACKGROUND

Although the population of U.S. postsecondary students has become more diverse over time, racially and ethnically minoritized students remain underrepresented in graduate fields. According to the National Center for Education Statistics (2021a), Hispanic or Latino and Black or African American students represented 12.3 percent and 13.9 percent of all graduate enrollment in fall 2020, respectively, while White students constituted 61 percent. American Indian or Alaska Native and Pacific Islander students only represented 0.5 percent and 0.2 percent, respectively.¹ With the exception of Asian students, all students of color were underrepresented in graduate education when compared with their representation in the overall U.S. population; however, this was particularly pronounced among Hispanic or Latino students, whose share in total graduate enrollment was 6.4 percentage points lower than their share in the overall U.S. population in 2020 (18.7 percent) (U.S. Census Bureau 2021).²

Comparison with undergraduate enrollment data also highlights similar patterns in the underrepresentation of students of color in graduate education. The share of students who were Hispanic or Latino, in particular, was much lower in graduate enrollment (12.3 percent) than in undergraduate enrollment for fall 2020 (21.8 percent). Representation of Black or African American and Indigenous students in graduate education were more similar to their representation among undergraduate education than that of Hispanic or Latino students, although gaps remain.³ In contrast, the share of White students was much higher in graduate enrollment (61 percent) than in undergraduate enrollment (52.8 percent) (National Center for Education Statistics 2021a). The disparity in representation of students of color enrolled in graduate education compared with White students suggests that institutions may need to structure their practices to make sure students of color have smooth pathways into graduate education.

Once enrolled in graduate education, equity gaps emerge among fields of study. Hispanic or Latino, Black or African American, and Indigenous students were less likely to be enrolled and complete credentials in science, technology, engineering, and mathematics (STEM) fields. Data from the 2021 Survey of Earned Doctorates reveals that White doctoral degree recipients were more likely to complete in STEM fields, while Hispanic or Latino, Black or African American, and Indigenous students were most likely to study fields outside of science and engineering, such as social or behavioral sciences and education (National Center for Science and Engineering Statistics 2022). These differences in the field of study among doctoral degree recipients reflect persistent equity gaps (Espinosa et al. 2019; Taylor et al. 2020) and highlight the need not only to broaden pathways into graduate education overall but also to pay specific attention to the field in which students enroll and complete their credentials. This is particularly important as STEM fields tend to have a high return on investment in terms of median annual earnings when compared with other fields (Espinosa et al. 2019).

Racial disparities in graduate education are problematic because they not only limit educational opportunities for a particular group of students, but they also contribute to perpetuating inequality in the entire higher education system by creating a “ripple effect” (Wilson 1988). For example, fewer Black or African American students in postsecondary education at undergraduate and graduate levels will likely result in fewer Black or African American faculty, which in turn affects the availability of role models and resources for Black or African American college students (Kalbfleisch and Davies 1991; Nora 2003; Wilson 1988). In fall 2020, only 5.7 percent of full-time faculty were Black or African American (National Center for Education Statistics 2021b), well below the share of undergraduate and graduate students who were Black or African American.

If barriers based on characteristics such as race and ethnicity limit who pursues graduate education, it harms not only individual students or the education system but also society as a whole. If diverse perspectives are not represented and incorporated, society will lose the capacity to fully leverage talent to address complicated issues (Page 2007). In addition, research shows

1 Data reflect enrollment in postbaccalaureate education at degree-granting institutions in the 50 U.S. states and the District of Columbia. Data only reflect students who were U.S. residents and exclude international students (National Center for Education Statistics 2021a).

2 According to the 2020 Census, the majority of the U.S. population was White (57.8 percent), followed by Hispanic or Latino (18.7 percent), Black or African American (12.1 percent), Asian (5.9 percent), people of more than one race (4.1 percent), American Indian or Alaska Native (0.7 percent), and Native Hawaiian or other Pacific Islander (0.2 percent) (U.S. Census Bureau 2021).

3 Indigenous students include those who are American Indian or Alaska Native and Native Hawaiian or other Pacific Islander.

that these barriers can exacerbate other existing societal problems. For example, many studies have built empirical evidence for the association between graduate degree attainment and higher social and economic status after graduation (Posselt and Grodsky 2017). Barriers to advanced degrees can therefore further the economic injustice that many communities of color face across the nation.

The evidence discussed speaks to the amount of work that still remains in order to achieve racial equity in postsecondary education, particularly in the pathway to graduate education. The practice of mentoring, however, has shown promising results in encouraging historically minoritized students to pursue graduate education.⁴ Effective mentoring practices can provide these students with useful information and experiences that are helpful in realizing their academic interests, developing an identity as a researcher, connecting them with faculty and peers in their field of interest, demystifying pathways into graduate school, and learning specific knowledge and skills needed for their graduate studies (Davis 2007; Spalter-Roth et al. 2013; Thomas, Willis, and Davis 2007).

This brief provides an overview of research and current practices on college mentoring, with particular attention to the benefits for historically minoritized students, and it explores the characteristics of mentoring that are effective in helping those students pursue graduate studies. Based on lessons from research and practice, this brief also provides considerations for campus leaders who want to implement effective mentoring practices for historically minoritized students that broaden the pathways to graduate study.

NATIONAL EFFORTS RELATED TO MENTORING

With increasing attention to the benefits of mentoring practices, mentoring has become a key component of many federally and philanthropically funded programs that support historically minoritized students in their pursuit of graduate education across the country. Examples of national programs that incorporate mentoring as a key component are highlighted herein.

The [Mellon Mays Undergraduate Fellowship \(MMUF\)](#) is an initiative funded by the Mellon Foundation to increase faculty diversity in higher education. MMUF started with an initial cohort of eight member institutions in 1988 and has grown to work with 51 member institutions across the nation. Every year, MMUF selects five new fellows from each member institution and provides mentoring and financial support to help the selected fellows enter PhD programs and ultimately pursue their careers in academia as scholars. Although each member campus has some flexibility in its operation, MMUF fellows generally start to have regular meetings with their mentors, peer fellows, and coordinators in their junior year. MMUF fellow students are also encouraged to attend MMUF regional conferences as a way of connecting with other MMUF community members outside of their campuses and to prepare for their graduate school application during their junior or senior years (Mellon Foundation 2022).

With particular attention to the biomedical field, the [Undergraduate Research Training Initiative for Student Enhancement \(U-RISE\)](#) program from the National Institute for General Medical Sciences (NIGMS) focuses on training and support for undergraduate students to transition into research-focused biomedical graduate degree programs. Using the awarded grant funding, participating institutions are allowed to provide their trainees with funding support for up to three years. The U-RISE program expects that their grant support allows students to concentrate on their research, training, mentoring, and community-building activities that help students' successful transition into a graduate program (National Institute of General Medical Sciences 2023).

With a similar goal of diversifying STEM fields, the [University Centers of Exemplary Mentoring \(UCEM\)](#), funded by the Alfred P. Sloan Foundation, aims to transform institutional awards grants to higher education institutions with the purpose of increasing recruitment, retention, and degree production in STEM fields for students from historically minoritized back-

⁴ This brief uses the term *historically minoritized* to emphasize that individuals are not born into a minority status. Rather, systemic structures, such as racism, oppress individuals into a minority status (Harper 2012). In this brief, historically minoritized is used to refer specifically to Black or African American, Hispanic or Latino, and Indigenous students.

grounds.⁵ Through a competitive grant process, institutions receive grants to offer historically minoritized students a supportive community, effective mentoring practices, and financial support that help them access and succeed in STEM doctoral programs. UCEM also encourages participating campuses to work collaboratively across all STEM departments as a way to catalyze change and institutionalize program components (Alfred P. Sloan Foundation 2023b).

As one of the eight federal TRIO programs offered by the U.S. Department of Education, the [Ronald E. McNair Postbaccalaureate Achievement Program](#) (McNair Scholars Program) seeks to increase the number of students from historically minoritized backgrounds who have doctoral degrees. The program, which operates at more than 150 institutions, prepares undergraduates for doctoral education by providing access to research opportunities (McNair Scholars Program, n.d.). Key components of the McNair Scholars Program include opportunities for research, summer internships, mentoring, tutoring, and other scholarly activities to prepare students for doctoral studies (U.S. Department of Education 2023).

TYPES OF MENTORING

Mentoring happens in either formal or informal settings, or both. Formal mentoring on campuses mostly happens in organized and structured mentorship programs designed by an institution or program manager, while informal mentoring is less structured and may function outside of organized programs.

Formal Mentoring

Programs that fall under formal mentoring typically have structured rules or procedures around the mentor-mentee arrangement, the frequency and length of each session, or the types of activities involved. For example, the intergenerational mentoring program offered through [Project MALES](#) at The University of Texas at Austin, which connects male undergraduate students of color with male graduate students of color as well as faculty and staff, provides structured and purposeful guidance on mentoring activities. Mentors and mentees of this program are expected to engage in a series of formal programs, including weekly or biweekly guided mentoring sessions; weekly meetings to develop a social network between participants; monthly *pláticas*, a series that connects prominent Hispanic or Latino male speakers with mentoring participants; and semester-long community outreach and service projects that involve local high school students. Similarly, the [McNair Scholars Program at Iowa State University](#), funded by the U.S. Department of Education, has a two-year time frame of assistance to provide research experiences to minoritized students in the first year and support their graduate school application process more specifically in the second year.

Formal mentoring has the benefit of offering strategic mentoring arrangements based on the needs of students and institutions. Mentoring arrangements with different types of mentors are observed in many recent mentoring programs, with some involving faculty mentoring, graduate-undergraduate mentoring, peer mentoring, and mentoring from external expertise (Lunsford et al. 2017). As an example, the [Cal-Bridge Program](#), a statewide collaboration between the University of California (UC) system, California State University (CSU) system, California community colleges, and out-of-state participating institutions, strategically provides dual-mentoring support by pairing mentees with two different faculty mentors: one from their home institution and another one from partnering institution. The Cal-Bridge Program aims to increase underrepresented students' PhD degree acquisition in STEM majors. The State University of New York's (SUNY) [Pre-Medical Opportunity Program](#), which is designed to help qualifying sophomore students from socioeconomically disadvantaged backgrounds transition into medical schools, also provides multifaceted mentoring support. Students participating in this program are paired with peer students, current SUNY medical school students, medical school faculty, and medical professionals in the field, through which each mentoring relationship can provide a different kind of benefit.

5 The Alfred P. Sloan Foundation is now concluding UCEM initiatives, which have been in place since 2013, and transitioning into the next phase through the [Sloan Centers for Systemic Change \(SCSC\)](#) initiative. While SCSC emphasizes systemic change at the institution or department level through institution-wide collaboration and leadership, it still requires awarded institutions to develop a holistic and multilayered mentoring model to support historically underrepresented graduate students (Alfred P. Sloan Foundation 2023a).

Formal mentoring programs also can intentionally arrange same-cultural or cross-cultural mentorship. Research findings on the effects of interracial or same-race mentoring suggest that both approaches have benefits and downsides. While same-race mentoring can effectively provide mentees with a role model who shares similar challenges, it also can limit the boundaries of the network available to underserved students (Lunsford et al. 2017; Morales, Grineski, and Collins 2021). Without an intentional arrangement, mentors and mentees may be inclined to seek out partners from a cultural background that is similar to their own, which in some cases can deepen the marginalization of minoritized students (Kalbfleisch and Davies 1991). In contrast, interracial mentoring can expand the network of underrepresented students, while rapport between mentors and mentees could be more challenging to establish in the beginning than in same-race mentorships (Lunsford et al. 2017).

Informal Mentoring

Informal mentoring relationships are formed between mentees and mentors based on individual needs and interests. These informal mentoring relationships typically develop spontaneously without structured intervention. They might benefit from the mentees' strong willingness to connect with their mentors, though this could also be true among formal mentoring programs. In an institutional setting, students may seek out their peers, senior students, or faculty who can provide the orientation they seek. Such informal mentoring can provide more nuanced information and personalized experiences beyond the boundaries of structured activities, as it has no specific requirements or rules for mentoring activities but rather relies more heavily on the needs of individual mentees. Informal mentoring also helps students feel encouragement from other faculty and staff with whom they are not in formal mentoring relationships. Lack of systemic support from the institutions, however, often makes the mentorship difficult to sustain.

Though informal mentoring takes place without structured intervention, some types of institution-initiated activities help informal mentorships develop. Examples of informal mentoring settings or activities include networking events, conferences, seminars, fellowship programs, and research activities in a team setting. These activities or programs have the potential to help students interact and connect with their peers, senior students, faculty, and staff and develop an informal mentoring relationship with them.

Many institutions are intentionally working to design activities or programs where informal mentoring can take place, while still having a formal mentoring structure (e.g., rules about mandatory mentoring activity requirements). For example, undergraduate students participating in [Project MALES](#) at The University of Texas at Austin are provided with informal mentoring opportunities through research and networking events such as the [Texas Education Consortium for Male Students of Color](#). As a collaboration among institutions across the state of Texas, this consortium provides students with opportunities to learn about research on and practices for improving the higher education success of male students of color and to connect with other researchers and peer students in their community beyond home campuses.

Boston College's [Graduate Mentor Program](#) also provides events such as a colloquium, lab visit, and research presentation seminar to help mentee students interact with faculty and senior students other than their assigned mentors as well as develop an informal mentorship based on their interests, while also having a mandatory meeting requirement with mentors. Similarly, with the goal of increasing minoritized students in biomedical research careers, The University of Texas at El Paso provides minoritized students with opportunities to interact and conduct research with faculty while developing an informal mentorship experience through their [U-RISE](#) program, funded by the National Institute of General Medical Sciences.

MENTORING GOALS

Depending on the specific goals of the mentoring experience, formal and informal mentoring can either be instrumental, developmental, or both. While *instrumental mentoring* focuses on helping mentees acquire certain knowledge or targeted skills (e.g., increasing research skills or knowledge of the graduate school application process), *developmental mentoring* focuses on psychological support and building social relationships. The developmental approach in mentoring works with the goals of validating mentees in their academic program, generating a sense of belonging on campus, and developing their sense of identity as a researcher (Luna and Prieto 2009, Meza et al. 2018).

The [Getting into Graduate School \(GiGS\)](#) program at the University of California, Berkeley, which targets first-generation, low-income, transfer, and other students historically underrepresented in higher education, is an example of a formal mentoring program providing instrumental support for students. GiGS requires graduate mentors to meet with undergraduate mentees at least three times per semester to help mentees prepare application materials and develop academic and career plans. Mentors are also expected to provide useful information to demystify the graduate school application process.

Instrumental support is also an essential part of the formal mentoring offered in California's [Community College Pathway to Law School](#) initiative, a part of the California Leadership-Access-Workforce program that was established in 2015 by the State Bar of California's Council on Access and Fairness. The Community College Pathway to Law School is a collaborative initiative with 26 California community colleges, 11 undergraduate universities, and 15 law schools in California that is intended to broaden pathways to law schools and legal professionals, particularly for historically minoritized students in community colleges. This initiative provides a prescribed curriculum and specialized academic advising from law school advisers, along with Law School Admission Test (LSAT) preparation advising. Another example of a program that supports students' transition into a professional school, [SUNY's Pre-Medical Opportunity Program](#) provides qualifying undergraduate students with supplemental tutoring for medical school admissions and assistance with Medical College Admission Test (MCAT) preparation, along with mentoring support from senior students, faculty, and medical professionals.

While many institutions have sought to effectively support the acquisition of targeted skills through instrumental mentoring, more institutions have recently attempted to balance instrumental and developmental goals to provide comprehensive support for students, encompassing academic, psychological, social, and professional needs (Lunsford et al. 2017). The [UCEM program at Duke University](#), funded by the Sloan Foundation, is an example of mentoring program with a holistic approach. With a goal of diversifying research communities of engineering and the physical sciences, this program highlights a multidimensional mentoring support system that provides research skill development opportunities and focuses on student well-being and community building. [Southern Regional Education Board \(SREB\)-State Doctoral Scholars Program](#) also declares that they provide "multiple layers of support" from recruitment to completion, including financial assistance, professional development, career advising, networking opportunities, and mentorship throughout the experience. Additionally, students in the Doctoral Scholars Program can participate with the [Institute on Teaching and Mentoring](#), where they engage in workshops on academic and research skills, networking, and building a community for historically minoritized students.

With a great emphasis on developmental mentoring, Cornell University highlights the goal of building a sense of belonging and gaining exposure to graduate education through their program [Graduate Students Mentoring Undergraduates \(GSMU\)](#). This program is designed to help underserved students transition to their postbaccalaureate program and is a collaborative initiative between the Office of Academic Diversity Initiatives and the Graduate School Office of Inclusion and Student Engagement. For these goals, Cornell University encourages mentor students to reflect on and share their experiences as a graduate student—including both successes and difficulties—to validate mentees' experiences and help them manage their challenges. The University of Washington also declared that increasing students' confidence about STEM major choices and their sense of belonging is the key goal in their [Women Engineers Rise \(WE Rise\)](#) program, which aims to increase women in the engineering field by providing mentoring and training primarily for college students who identify as women and are from disadvantaged backgrounds. Through its WiSE Women of Color Café Hour, WE Rise collaborates with other groups on campus to bring together women of color in engineering so that they can create a community space.

HOW MENTORING BROADENS PATHWAYS TO GRADUATE EDUCATION FOR UNDERREPRESENTED STUDENTS

This review of campus practices and related research shows that mentoring is effective at encouraging historically underserved students to pursue graduate education in many ways. First, mentoring demystifies pathways to graduate school by providing useful information about graduate school life, the application process, and resources available to students. In Meza and colleagues' (2018) evaluation study of the [GiGS](#) program at the University of California, Berkeley, mentee students reported that participating in the program helped them improve their understanding of the difference between a master's degree and a doctoral degree as well as their knowledge about the graduate school application process, including creating a curriculum vitae or academic resume, writing a strong statement of purpose, and finding funding opportunities. Luna and Prieto (2009) also supported this notion through interviews with Hispanic or Latino students who reported that after participating in a mentoring program they gained a better understanding of graduate school life and how graduate education programs can support their career goals. This benefit of mentoring addresses the hidden curriculum of applying to graduate school and can be particularly useful for students without family or significant others who have experienced the process of applying to graduate school.

Second, mentoring is often offered along with research exposure or in a research setting, which allows students to realize or evaluate their aptitude for research and to learn useful research skills necessary for graduate school life. In Kiersma and colleagues' study (2012) of a pharmacy undergraduate-graduate mentoring program, mentee students reported an improved perception of research and mentors also reported that their mentees' research skills had improved. Mentee students also indicated that their research experience through the mentoring program had a positive impact on how they viewed graduate school. A 2013 study by Eagan et al. also confirmed the positive effect of research exposure on graduate enrollment of minoritized students. According to their analysis, participation in an undergraduate research program significantly increased students' intentions to enroll in a STEM graduate program.

Third, mentoring provides opportunities to connect with faculty and graduate students and develop social networks in their fields of interest. These social experiences help students feel more comfortable when interacting with other scholars and contribute toward developing their aspirations for graduate study and their identity as a researcher, all of which eases students' transitions into new institutional or disciplinary cultures (Bordes and Arredondo 2005; Horowitz and Christopher 2012; Meza et al. 2018; Morales, Grineski, and Collins 2021). Meza and colleagues (2018) showed that students who participated in the [GiGS](#) mentoring program were more likely to feel familiar with leading scholars in their field of study, and they tended to have more than two faculty members who would write a strong letter of recommendation for their graduate school application. Hispanic or Latino students interviewed by Luna and Prieto (2009) also reported expanded social networks through mentoring participation.

Lastly, the benefits of mentoring can also be extended to historically minoritized students who serve as mentors; they are not just limited to mentee students. Mentoring experience provides mentor students with opportunities to reflect on their academic journeys, expand their network, and develop their skills to effectively interact with mentee students. This is why Cornell University created its [GSMU](#) program with the goal of supporting graduate mentor students in addition to its primary goal of supporting undergraduate mentee students. [GSMU](#) program expects graduate mentor students to reflect on their own experiences; help mentee students' reflection; and develop healthy relationships with their mentee students as mentors, colleagues, and educators for mentor students' own growth and development.

INSTITUTIONAL SUPPORT FOR EFFECTIVE MENTORING PRACTICES

Institutional support can maximize the benefits of effective mentoring practices. Such support can start by creating a well-planned needs analysis of students from diverse backgrounds and then setting a considerate recruitment policy and establishing a goal of activities that encourage historically minoritized students to access and succeed in mentoring practices. Meza and colleagues (2018) showed the importance of a recruitment policy that is friendly to historically minoritized students in increasing their access to the mentoring program.

Financial support, in particular, can provide students from disadvantaged backgrounds with an opportunity to positively consider the option of going to a graduate school when they otherwise would have had more financial barriers in pursuing their graduate study. Financial support also can help those students concentrate on their academic planning and mentoring activities by reducing the burden of responsibilities other than their studies. As an institutional example, [Stanford University's VPUE STEM Fellows Program](#) provides financial support for graduate school application (e.g., Graduate Record Examinations (GRE) books and test fees, application fees) and quarterly and summer stipends for participating undergraduate students, in addition to the mentoring support. This program is designed to cultivate the skills and interest of undergraduate students to increase diversity in STEM fields. The importance of financial support is also highlighted in many other mentoring programs, including the Mellon Foundation's [MMUF](#), the Sloan Foundation's [UCEM](#), NIGMS's [U-RISE](#), and SREB-State [Doctoral Scholars Program](#).

Institutional support for faculty and staff development is also important to enable effective mentoring practices. As more philanthropic efforts place increased emphasis on systemic change, institutions may consider supporting the development of equity-minded and inclusive mentoring practices as part of faculty mentor training (e.g., how to develop a mutual expectations agreement between mentors and mentees). [UCEM at Duke University](#) provides an example of this organizational support for mentors. Duke University offers workshops for faculty to learn how to address issues in mentoring—including the issue of implicit bias—and to share their challenges and successes in mentoring. In addition, seed funds for departmental gatherings are offered for faculty mentors to facilitate collaboration among mentors, which is an integral part of their multi-mentor model. While some institutions have institutional support systems for faculty and program staff, more attention is still needed for mentor education and support systems. According to the National Academies of Sciences, Engineering, and Medicine's (2019) report on mentoring practices in STEM fields, training and support for mentors are offered in a very small percentage of campuses relative to their importance in delivering effective mentoring practices.

Finally, multi-institutional collaboration can develop synergy in effectively serving historically marginalized students and facilitating their transition into graduate education. These collaborations can be sought across different levels of institutions or among institutions that share similar challenges or goals. Since not all institutions have graduate education programs on their campuses, some institutions strategically partner with other institutions that offer graduate education to smooth their students' transition into graduate education. The [Community College Pathway to Law School initiative](#), which supports underrepresented community college students' entrance to top California law schools, is an example of such collaborative initiatives. As another example, the Sloan Foundation also encourages its eight participating campuses to collaborate with each other in their operation of the UCEM programs.

CONSIDERATIONS FOR CAMPUS LEADERSHIP

Many campuses want to use effective mentoring practices in order to help focus their efforts toward increasing graduate education enrollment of historically minoritized students. This section summarizes lessons that show how college mentoring practices can help these students pursue a graduate education. While institutional contexts vary greatly, these lessons can provide useful guidance for campus leaders who are looking to either implement effective mentoring practices or revise and improve existing mentoring practices to broaden the pathway into graduate education.

- Assess how mentoring practice aligns with other campus-wide initiatives or goals to support historically minoritized students. Mentoring to support underrepresented students' pursuit of graduate education is likely to intersect with other diversity, equity, and inclusion initiatives or institution-wide goals of increasing student persistence and success. Providing a clear connection between mentoring and institution-wide goals will help all students, faculty, and staff to understand the importance of mentoring in fulfilling these larger goals.
- Consider the needs of the student body when determining the type of mentoring program that the institution wishes to offer. Several existing mentoring programs are structured as formal mentoring programs and many also offer the opportunity to develop informal mentoring relationships. Both formal and informal mentoring programs can bring many benefits to targeted students and broaden the pathway into graduate education.
- Have internal conversations around the eligibility requirements for student participants in the mentoring program. Be particularly considerate around requirements such as grade point average and attendance so that the program can best serve historically minoritized students.
- Determine the right balance between instrumental and developmental approaches in the mentoring program and put those into consideration when deciding if the program will focus on helping historically minoritized undergraduate students to succeed as they begin graduate education, during their graduate program, or after graduate school while transitioning into a professional career. Instrumental activities might be particularly crucial to encourage specific behaviors in each of these stages, but developmental activities for gaining the confidence and psychological support to go through the process are also relevant.
- Strategically match mentors with mentees by considering the benefits and downsides of different types of arrangement (e.g., interracial or same-race arrangement) and the needs of students.
- Consider providing multifaceted mentorship involving different types of mentors (e.g., faculty, peers, staff) for synergy. Multifaceted mentoring relationships can better serve various needs of students and maximize the effects of mentoring. For example, faculty-student mentoring can provide different benefits of mentoring compared with peer mentoring.
- Consider providing financial support to encourage historically minoritized students to participate in mentoring and help them focus on pursuing their education. Financial support can sometimes make a difference in the attendance of a mentoring program among historically minoritized students, especially when it comes to adult learners who work and have other responsibilities beyond their studies. Financial support can be packaged as a scholarship, or it could take the form of assistance toward application fees for graduate school, research travel funds, or support to pursue intellectual projects, among others.
- Evaluate program impacts to improve the quality of activities. To do so, start by setting clear mentoring goals and indicators to evaluate the progress of the program. Surveying mentoring participants' perception and satisfaction with the program and tracking students' educational and career pathways after their participation in the mentoring can be helpful in reviewing and improving the mentoring program.
- Consider collaborating with other institutions or organizations based on the needs of the students and the possibilities of the institution. For example, community colleges can boost or develop a mentoring program that leverages their relationship with four-year institutions (e.g., Community College Pathway to Law School initiative) to facilitate students' transition to graduate education. Institutions also have options to work in partnership with or apply to national-level grant programs.
- Finally, consider developing a support system for program participants who serve as mentors (e.g., graduate students, faculty, staff). This support can include mentor education and training sessions or space for mentors to share their challenges and successes in mentoring.

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