

National Survey of College Internships 2023 Report

Introduction

Internships and other types of work-based learning experiences are one of the most influential ideas shaping higher education today. Long considered to be an essential component of a student's education and preparation for the workforce in countries such as France, Germany, and Australia, in the United States internships are now viewed as a "high-impact practice" (HIP) that all colleges and universities should strongly encourage students to pursue (Kuh, 2008). In fact, some argue that internships should be required for graduation (Busteed & Auter, 2017), as they have the potential to impart to students critical skills, knowledge, and competencies they will need to thrive in life, work, and society.

With origins in premodern modes of vocational preparation such as apprenticeships, as well as arguments that education should be more grounded in authentic, nonacademic experience (Resnick, 1987), the modern internship typically involves a college student spending 2-3 months at an organization working alongside employees performing real-world tasks. While enthusiasm around internships today is due in part to pressure on postsecondary institutions to cultivate students' "employability" (Tomlinson & Holmes, 2016), the literature also shows that students taking an internship are 170 percent more likely to graduate (McDaniel & Van Jura, 2022), 14 percent more likely to receive a callback for a job interview (Nunley et al., 2016), and more likely to have higher wages than those without an internship experience (Saniter & Siedler, 2014; Torpey-Saboe, Leigh & Clayton, 2022). With outcomes like these, the advocacy for internships in the United States is not just understandable, but possibly overdue.

Yet there are considerable challenges in the world of internships that cannot be ignored. First, there is limited data on the number of internships in the United States, which raises key questions about whether sufficient supply exists for the potentially massive demand for internship positions. A recent study examining first-year student expectations and senior student experiences found that 70 percent of first-year students expect to participate in internships, yet fewer than half of seniors reported having participated in internships (Ghosh, Torpey-Saboe, & Clayton, 2023).

The lack of data also extends to multi-institutional evidence on the specific design features (e.g., length, pay, nature of tasks, modality) of internships, and perhaps most importantly, student experiences (e.g., supervisor quality, skills development) with these mostly off-campus positions. Without robust data on these issues, it is difficult to track student outcomes, implement evidence-based decision making, and work toward continuous improvement. The gap in basic metrics for this increasingly important educational experience was one of the primary reasons behind the creation of the National Survey of College Internships (NSCI), as well as the need for the research and practitioner communities to have access to fine-grained measures of internship program quality and accessibility.

This is important because too often internships are viewed (and measured) as a simple "yes/no" matter of student participation, which renders these complex and highly variable experiences a veritable "black box" that mysteriously transforms students into work-ready individuals (Silva et al., 2016, p. 704). Instead, the internship is a learning space not unlike a college course, where

decisions about curriculum, activities, mentorship, and student engagement must be made. In the case of internships, these design decisions sometimes yield rich learning experiences for the student, but in cases in which the employer and/or academic advisor do not pay close attention to designing a robust learning environment, the result can be similar to the stereotype of a “bad” internship when a summer’s spent pouring coffee and making photocopies (Frenette, 2013; Hora et al., 2023). Thus, surveys that simply capture whether a student took an internship or those that conflate this unique type of experiential learning with other programs (e.g., co-op, apprenticeship, service learning) will obscure these critical details of quality and student experience.

Concerns also exist about the accessibility of internships for all college students, and the potential that hard-to-get internships function as a gatekeeping mechanism keeping low-income, first-generation, and/or students of color from participating in potentially transformative experiences (Hora et al., 2019; O’Connor & Bodicoat, 2017). As the higher education sector becomes more attentive to issues of diversity, equity, and inclusion (DEI) and how structural inequalities and discriminatory practices may impact today’s college students, the sometimes problematic “internship” must be included in these priorities for improvement. This is especially the case for unpaid internships, which raise considerable legal, ethical, and educational questions (Curiale, 2009; Silva, 2020), as evidence indicates that these experiences are disproportionately completed by low-income students, students of color, and female college students (Zilvinkis, Gillis & Smith, 2020).

To address these interconnected issues of limited data and concerns about quality and inequality in the world of internships, the NSCI and related Internship Scorecard (Hora et al., 2020) were developed at the University of Wisconsin-Madison’s Center for Research on College-Workforce Transitions (CCWT) to capture key metrics related to internship programs such as their prevalence and purpose, program quality, and their accessibility to students. The NSCI is designed to capture these fine-grained aspects of students’ internship experiences, and in this report, we highlight key findings from the national administration of the survey from April 2023. The sample included third- and fourth-year students from four-year institutions (n=2,824) and students of all class years from two-year institutions (n=2,531). Data are weighted to be nationally representative by gender, race/ethnicity, class year, and financial aid status.¹ This report includes the following sections:

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¹ The survey was administered online by CollegePulse, drawing from its student panel.

What types of questions can the NSCI answer?

- **Participation:** How many students are taking internships?
- **Quality:** What is the quality of those internships? Are students experiencing strong mentoring and supervision, developing skills and networks, and growing their confidence and understanding of their career pathway?
- **Outcomes:** Which design features of internships are most associated with student satisfaction and perceptions that their internship was a valuable developmental experience?
- **Access:** Which students are experiencing obstacles to internships, what are these obstacles, and how can postsecondary institutions change to ensure equitable access for all students?
- **Discrimination:** Are students experiencing racial, gender, or other forms of discrimination during the internship experience?

With rigorous data in hand that answers important questions like these, policymakers, employers, postsecondary education leaders, career services professionals, and faculty advisors can prioritize resources. They can begin to identify strengths, weaknesses, and opportunities in their internship investments and programming. Without reliable evidence to guide decisions, internship programming (and continual improvement) becomes an exercise in faith that these programs are accessible, of high quality, and reaching all students on campus. Unfortunately, the research literature to date indicates that these assumptions are unlikely to be true, and that more rigorous monitoring of student internship experiences and outcomes is critical to improving the value of higher education for today's students.

Key Findings

- Nearly every student (96 percent) participating in an internship sought a way to connect education with career opportunities, either to gain relevant experience in a specific career (70 percent) or to explore a potential career interest (26 percent). It appears that students are savvy in seeking ways to differentiate themselves from peers “without experience” and/or wanted to discover whether a field of study was a “good fit” for them.
- Three-quarters (74 percent) of students are extremely or very satisfied with their internship. Satisfaction is tied to supervisor support and mentoring, career developmental value, and opportunities to develop durable skills.
- The vast majority of these internships (more than 75 percent) were in-person. The median time worked in an internship was 13 weeks.
- The majority of internships occurred in the final year of college, with juniors about half as likely to have had an internship in the past year compared to seniors.
- Most students who did not participate in an internship reported that they wanted to, but could not for a range of reasons (more than 6 in 10 students at four-year institutions). Among the biggest obstacles they faced were a lack of time due to heavy course loads and/or other jobs.

- Financial challenges also impeded students from participating in internships. About one-third of four-year internships were unpaid, and even paid internships sometimes require students to forgo wages or pay for additional transportation and/or housing.
- Many students reported that they were unsure of how to find an internship or that there were not sufficient internships available in their field of study.

The report proceeds as follows. The next section provides a more extensive review of the literature around college internships, including definitions, participation, features, and outcomes of internships. The three sections that follow provide the results of the 2023 administration of the National Survey of College Internships, including results on participation, type, and purpose; features of program quality; and equitable access. The last section lays out implications of the findings for practitioners.

Background: What Do We Know About Internships and College Students?

Defining Internships

The first question to answer when thinking about the literature on internships is what exactly is an internship?² In considering this question, it is critical to recognize that internships are distinct – in terms of format, governance, and student experience – from more highly structured experiences like apprenticeships, co-ops, and practicums. Thus, internships should be measured and discussed separately from these other forms of work-based learning. Additionally, the term “internship,” much like a “course” or “job,” encompasses an immense range of different programs, activities, and student experiences. As a community college administrator shared with us, the way internships are defined, designed, and implemented is truly an educational “free-for-all.” In order to impose some standardized conceptions of the experience for the field, the National Association of Colleges and Employers (NACE) provided this definition:

An internship is a form of experiential learning that integrates knowledge and theory learned in the classroom with practical application and skills development in a professional workplace setting (across in-person, remote, or hybrid modalities). Internships provide students the opportunity to gain valuable applied experience, develop social capital, explore career fields, and make connections in professional fields. In addition, internships serve as a significant recruiting mechanism for employers, providing them with the opportunity to guide and evaluate potential candidates (NACE, 2023).

Besides offering the field a clear definition, in the face of growing concerns about the prevalence of ineffective or poorly designed internships, NACE (2023) also provided criterion that could be used to determine whether an internship is in fact a “legitimate” educational experience, and not solely a labor strategy deployed by employers. These metrics include the degree to which the experience is an extension of classroom learning, whether skills learned via the internship are transferable to other

² For a review of the literature on college internships, see CCWT’s 2017 review on key findings on internships from across the disciplines and the world (Hora et al., 2017), and discipline- or sector-specific reviews in fields such as hospitality (Zopiatis et al., 2021), business (Sanahuja Vélez et al., 2015), and community colleges (Lucero et al., 2021). Here we provide a brief synopsis of key findings from the literature to contextualize the NSCI data and to highlight why internships and other forms of work-based learning and experiential learning are receiving so much attention in the world of higher education.

settings, if the experience has clearly defined learning goals, if supervision is provided by a professional with expertise, and if feedback and resources are provided to the student intern.

It is notable that several of these criteria also can be applied to the design and assessment of more traditional classroom or academic learning spaces (e.g., a lecture or course), indicating that the internship, first and foremost, is a learning experience for the student. Additionally, the use of the term “legitimate” is rather strong in its implication that some internships can be considered illegitimate. But we agree with this focus on quality and the primacy of student learning, which leads to the conclusion that some internships may in fact not be legitimate learning experiences, a sentiment too rarely voiced in debates about High Impact Practices (HIPs), work-based learning (WBL), and experiential learning.

While the internship literature contains many more definitions of the program (e.g., the Council on Academic Standards, 2018), the NACE definition highlights the variety of dimensions that can be used to differentiate programs. In addition, besides focusing on program quality from an educational and learning perspective, we argue that definitions and/or assessments of internship programs also should include considerations of equity and accessibility, which is the reason that this topic plays such a major role in the Internship Scorecard framework.

Finally, we note that internship programs are rapidly evolving away from a single model of three months spent in-person at an employer during the summer, to hybrid versions that can be online, both in-person and online, and even embedded in coursework. The rise of online internships was especially pronounced during the COVID-19 pandemic, and research suggests that the students were generally satisfied with their programs, especially underrepresented students (Jenkins et al., 2023; Reid et al., 2023). Some studies also documented employer satisfaction with online internships, with notable improvements in students’ communication skills (Teng et al., 2022). These studies indicate that internships are not a static and fixed type of work-based learning but are capable of evolving in response to societal changes.

Prevalence of Internship Participation in the United States

Terminology aside, the first question is precisely how many college students are taking internships in a given academic year and how many internships exist to meet the demand? Unfortunately, definitive data on either of these questions do not exist in the United States. Estimates of internship participation are not uncommon in the popular media, with some estimating that 1.5 million internships exist in the United States (Howe, 2014) or that between 500,000 and 1 million unpaid internships are taken by students each year (Compare Camp, 2020). More rigorous survey studies that capture internship participation do exist, such as the annual NACE Student Survey Report (2020) and the National Survey of Student Engagement (2022), both of which provide widely cited estimates of the prevalence and nature of college student participation in the internship labor market (see Table 1).

Table 1: Survey estimates of college student participation in national internship labor market

Source	Total Percentage of Internship Participation	Nature of Sample
National Association of Colleges and Employers (2021) ³	48.7 percent indicated participation in an internship only in response to the question, “Have you taken part in an internship and/or co-op program since starting college?”	Data from 10,579 students at 139 (mostly four-year but some two-year) institutions. Recruitment information unavailable.
National Survey of Student Engagement (2022) ⁴	48 percent of seniors had participated in “an internship, co-op, field experience, student teaching, or clinical placement.”	The 2022 Career and Workforce Preparation Module was used by 105 U.S. institutions, with 33,025 seniors responding via email recruitment.
National Survey of Student Engagement (2023)	47 percent of seniors had participated in “an internship, co-op, field experience, student teaching, or clinical placement.”	The 2022 Career and Workforce Preparation Module was used by 105 U.S. institutions, with 33,450 seniors responding via email recruitment.
State Opportunity Index (2023) ⁵	45 percent of four-year and 25 percent of two-year students from public institutions in the graduating classes of 2020-2023 had participated in an internship at some point during their educational program.	Data from a nationally representative survey of two-year (n=823) and four-year (n=7,017) recent graduates from the classes of 2020-2023.

According to the National Survey of Student Engagement measure, the longest continuously tracked metric, internship participation by senior year has hovered steadily around about 50 percent for the past 10 years, with a high of 52 percent in 2014, a one-year dip to 41 percent for the class of 2021, and a rebound to 48 percent in 2022 (Ghosh, Torpey-Saboe, & Clayton, 2023).

³ The 2020 Student Survey Report. (Bethlehem, PA: National Association of Colleges and Employers, 2021).

⁴ Sowmya Ghosh, Nichole Torpey-Saboe, and Dave Clayton. “[From College to Career: Students’ Internship Expectations and Experiences.](#)” (Indianapolis: Strada Education Foundation, 2023).

⁵ [State Opportunity Index.](#) (Indianapolis: Strada Education Foundation, 2024).

Positive Aspects and Outcomes of Internship Programs

Evidence from the interdisciplinary literature on internships demonstrates that participating in an internship has many positive impacts on graduates' wages (Bolli et al., 2021; Jung & Lee, 2017), and improved the employment opportunities such as increased likelihood of receiving a job interview (Baert et al., 2021; Nunley et al., 2016), facilitating student transitions to professional workplaces (Dailey, 2016), and enhanced employability in their first jobs (Di Meglio et al., 2022; Kim et al., 2022). There is also evidence that internships enhance outcomes such as academic achievement (Parker III et al., 2016), boost career self-confidence (Ocampo et al., 2020), and even skill development such as "soft" skills (e.g., communication) and meta-competencies (Downs et al., 2023).

The specific mechanisms whereby an internship experience leads to these outcomes remains understudied. Scholars currently speculate that the time spent developing new social networks, acquiring new skills and cultural competencies unique to a profession, and adding the experience to one's resume enhance students' prospects in the labor market.

Researchers also have begun to delve into nuances of the experience to identify elements (e.g., task autonomy, supervisor quality) that are particularly important. For instance, studies have demonstrated that the more autonomy interns are given in executing their tasks, the higher their reported workplace learning, career crystallization, and job satisfaction (Feldman & Weitz, 1990; Taylor, 1988; Ramani & McHugh, 2019; Virtanen et al., 2014). However, other scholars have found no relationship between task autonomy and outcomes such as satisfaction, developmental value, and job pursuit intentions (D'abate et al., 2009; McHugh, 2017), suggesting that more research needs to be conducted on this topic.

A considerable body of research also has demonstrated that both supervisor mentoring (i.e., providing clear directions and feedback) and supervisor support (i.e., how well the supervisor demonstrates care for employee well-being) are positively related to outcomes, including intern satisfaction, interns' commitment to internship sponsor, and a positive attitude toward the hosts' industry (D'abate, Youndt, & Wenzel, 2009; Rose et al., 2014). One of the reasons that supervisors may be so important to the interns' experience is that they represent (to the intern) the organization and even the profession, and may provide guidance, encouragement, and resources regarding the students' career plans (McHugh, 2017). Further, a recent study found that both positive (e.g., clarity, availability, provision of feedback) and negative (e.g., unavailability, lack of attention to student growth) features of supervisor communications were noticed by student interns and deeply affected how they felt about the efficacy of their programs (Hora et al., 2023).

The impacts of supervisors and mentors also has been analyzed through the lens of Social Cognitive Career Theory, which underscores the critical role of supervisor support (Okolie, 2022) from a psychological perspective, and the importance of establishing trust between students and their supervisors. Considering the mental health crisis that affected much of society in general and college students in particular during and after the COVID-19 pandemic (Jenkins et al., 2023; Reid et al., 2023), this new focus on psychological aspects of internships is critically important, as research shows that supervisors positively affect students' self-efficacy beliefs during the internship (Lin & Chen, 2022).

However, empirical research on internships is complicated by the fact that the term masks considerable variation representing a complex class of experiences and programs. Programs labeled as "internships" vary along a variety of dimensions that include differences in program

function, modality (e.g., online or in-person), disciplinary or professional affiliation, duration, location, activities, and supervision (Bayerlein & Jeske, 2018; Maertz et al., 2014). This programmatic diversity can be seen as a strength, as students with different goals and situations can find a wide range of internship opportunities to fit their needs (O'Neill, 2010), yet this variation also results in different levels of quality, a lack of clarity regarding which features of an internship (e.g., length, nature of tasks, type of mentorship) are essential for a high-quality experience, and a lack of standardization regarding how researchers define and thus study internships in the field.

For example, different fields of study require distinct sets of skills and competencies, resulting in variation in internship designs and unequal labor market outcomes. Recent studies on internships in the business sector highlight the significance of problem-based learning (Herman et al., 2021), while those in STEM and political science fields have underscored analytical and interpersonal skills (Lucas, 2023; Ruppert et al., 2023). Moreover, since the students have unequal access to internships due to their majors, communications and English majors face challenges such as lower earnings, fewer jobs matching their degrees, a higher rate of unemployment, and a longer time to secure entry-level work compared to business and engineering graduates (Moss-Pech, 2021). Researchers also have found that whether an institution requires an internship has an impact on student outcomes, with students in voluntary internships experiencing more positive outcomes in labor market achievements compared to those in mandatory ones (Bittmann & Zorn, 2020).

Negative Aspects and Outcomes of Internship Programs

While there are several positive aspects of internship participation, there exists a negative side to the college internship experience. Critics of the internship market have long raised legal, ethical, and equity-related concerns about unpaid internships, particularly the dangers of students not receiving the protections, rights, and wages ensured under federal labor law (Curiale, 2009; Jacobson & Shade, 2018; Rothschild & Rothschild, 2020) or lack of risk management and even life-or-death situations (Odlin, 2022). Further, low-income, first-generation, and working students continue to struggle to find and complete internships due to sociocultural capital (Hora et al, 2022; Hora et al., 2021), where they also face financial barriers “working multiple part-time jobs, taking out additional loans, or even skipping meals” in order to add an internship to their résumé (Curiale, 2009, p. 1536).

Gaps in internship participation are especially pronounced among low-income students, first-generation students, and those from public schools (Shandra, 2022). Many students may not have access to extensive networks or mentors who can share information about position openings and strategies for obtaining them (Frenette, 2013; Parks-Yancy, 2012), while students attending under-resourced institutions may lack access to the information and training provided by well-resourced career services units (Allen et al., 2013).

Finally, research indicates that unpaid internships often are pursued by students who have historically been marginalized in the labor market — low-income students, students of color, and female college students (Zilvinkis, Gillis & Smith, 2020) — making a challenging transition to the workforce even more difficult by working for free while continuing to incur living and/or tuition expenses.

Besides the financial costs of unpaid work, research suggests that unpaid internships may be less impactful than paid positions for post-graduate student outcomes. The NACE 2022 Student Survey reveals that paid interns received an average of 1.61 job offers, which was higher than unpaid interns and non-interns, who received averages of 0.94 and 0.77 job offers, respectively (NACE, 2022). Likewise, analysis of data from the Baccalaureate and Beyond longitudinal study reveals an

earnings boost for students who had participated in paid internships, but no earnings advantage associated with unpaid internships (Torpey-Saboe, Leigh & Clayton, 2022).

Consequently, the college internship is not unlike other extracurricular programs in higher education — such as study abroad — that are known to be disproportionately pursued by privileged students with ample resources (Covington, 2017; Simon & Ainsworth, 2012) or that put additional financial stress on under-resourced students. It is in this landscape of both problematic and promising features of college internships that we situate our work, and which motivates the NSCI in service of increasing the quality and accessibility of internships for all students in the United States.

Participation, Type, and Purpose

Participation

The NSCI data show that 41 percent of seniors and 22 percent of juniors at four-year institutions had participated in an internship in the past 12 months (see Table 2).⁶ The biggest differences in participation rates are by field of study. Students in health professions majors reported the lowest internship participation (24 percent), while students majoring in business or engineering have the highest internship participation (47 percent each). Most internships for four-year students were in the for-profit sector (56 percent), followed by nonprofit organizations (31 percent) and government (14 percent).

Among two-year college students, 13 percent participated in an internship during the past 12 months. Similar to the four-year population, participation varied by field of study: students in the biological sciences, agriculture, and natural resources majors reported the lowest internship participation (10 percent) while students in social service professions reported the highest internship participation (19 percent). (More detail on participation rates by race/ethnicity, first-generation status, and income can be found in the appendix).

Table 2: Internship participation in the past 12 months

Internship Participation In The Past 12 Months	
Four-Year Seniors	41%
Four-Year Juniors	22%
Two-Year Students	13%

Internship Type

A majority of four-year respondents who participated in internships did so via in-person internships (75 percent), though nearly one-fifth of internship participation was online (see Table 3). The ratio of in-person to online differs sharply from the administration of the NSCI during the pandemic in 2021, when 45 percent were online. This suggests that the once-promised rise of online internships as a substantial part of the internship economy was perhaps short-lived. In the two-year sample, among those who participated in an internship, 79 percent participated in internships via in-person modalities and nearly one-fifth of internship participants completed online internships.

⁶ The narrower time restriction of the past 12 months and the inclusion of juniors in this study likely explain the lower overall participation rates found here compared to surveys of seniors or alumni that ask about participation during the entirety of a student's undergraduate education.

Table 3: Internship modality

Internship Modality		
	Four-Year Institutions	Two-Year Institutions
In-person	75%	79%
Online	19%	18%
Other	6%	3%

The median weeks worked in an internship among four-year interns is 13 weeks — a little more than three months. About 33 percent of students report working nine weeks or fewer, 42 percent of students worked between 10-19 weeks, and 31 percent of students worked more than 20 weeks in their internship (see Table 4). The median weeks worked by two-year students during their internships is 16 weeks; 29 percent report working nine weeks or fewer, 34 percent worked 10-19 weeks, and 37 percent worked 20 weeks or more.

Table 4: Internship duration

Duration (In Weeks):		
	Four-Year Institutions	Two-Year Institutions
55 or more	6%	8%
50-54	4%	4%
45-49	3%	3%
40-44	1%	1%
35-39	3%	5%
30-34	1%	4%
25-29	7%	5%
20-24	6%	7%
15-19	21%	18%
10-14	21%	16%
5-9	32%	20%
Fewer than 5	1%	9%

Purpose

Most students (70 percent) report that they were motivated to participate in an internship to gain experience in a specific career that they plan on pursuing as their chosen profession, while slightly more than a quarter (26 percent) of students were motivated to pursue an internship to explore career options (see Table 5). This could signal a need to create additional ways for students to engage in career exploration, such as shorter field visits or classroom visits by employers to provide students more opportunities to get a sense of the authentic work of a profession.

For two-year students, about 3 in 4 students (73 percent) report that they were motivated to participate in an internship to gain experience in a specific career that they plan on pursuing as their chosen profession, while 21 percent did so to explore career options.

Table 5: Internship purpose

	Purpose	
	Four-Year Institutions	Two-Year Institutions
Gaining experience in a specific career that I plan on pursuing as my chosen profession	70%	73%
Exploring career options	26%	21%
Other	4%	5%

Features of Program Quality

The NSCI examines three primary markers of internship quality:

1. A plan for the intern’s learning,
2. The level of the job activities that interns participate in, and
3. Supervisor mentoring and support.

There also are three primary internship outcomes through which we examine quality. They are the degree to which interns:

1. Develop skills,
2. Forge professional connections, and
3. Gain confidence or clarity around their career goals.

Quality Markers: Learning Plans, Level of Tasks, Supervisor Mentoring and Support

The NSCI data show that 63 percent of students who participated in internships were provided with written learning goals and activities for their internship, indicating that significant structured learning supports are provided to new interns (see Table 6). This is a promising finding, indicating the majority of students experience some level of intentionality and structure in their internships. In the European context, this structure is established in required learning contracts.⁷

For two-year respondents, the data show that 71 percent of students who participated in internships were provided with written learning goals and activities for their internship, indicating that most student interns were receiving structured support and clear expectations at the onset of their internship.

Table 6: Internship plan for learning document

Plan for Learning: Written document that outlined the learning goals and activities for internship, provided by academic advisor or internship host organization.	
Four-Year Institutions	Two-Year Institutions
63%	71%

The degree of autonomy and support interns experienced varied quite a bit. Slightly more than a third (38 percent) of four-year students who participated in internships report that they mostly

⁷ R.S. Ramani, & P.P. McHugh, P.P. “Student Perceptions of the Value of Internship and Job Pursuit Intent: A Two-Country Examination.” *Academy of Management Proceedings* (Valhalla, NY: Academy of Management, 2019).

engaged in relatively high-skill tasks and were provided with review of their work by a supervisor. Another 27 percent report participating in autonomous work with support from their supervisor as needed. However, a quarter of the respondents report that they worked on low-skill tasks after being trained by their supervisors and 10 percent of respondents report that they participated in job-shadowing tasks where they observed their supervisor perform tasks (see Table 7).

Two-year students tended to be assigned less advanced work. Only about half of two-year students (46 percent) were engaged in autonomous work (18 percent) or high-skill tasks with supervision (28 percent), whereas for four-year students about two-thirds (65 percent) of interns characterized their internship as autonomous work or high-skill tasks. Of the two-year respondents, 20 percent report that they participated in job-shadowing tasks where they observed their supervisor perform tasks. This is twice the amount reported by our four-year respondents for the same type of task. This disparity may reflect challenges in quality of internships available to two-year populations or could be a reflection of the fact that two-year students are at an earlier point in their academic and professional development compared to juniors and seniors at four-year institutions.

Table 7: Tasks and activities

Tasks And Activities		
	Four-Year Institutions	Two-Year Institutions
Job shadowing: you mostly shadowed your supervisor and observed them perform tasks	10%	20%
Low-skill tasks with supervision: you mostly engaged in relatively low-skill tasks after being trained by your supervisor	25%	34%
High-skill tasks with supervision: you mostly engaged in relatively high-skill tasks after being trained by your supervisor, who would then review and approve your work	38%	28%
Autonomous work: you mostly worked on your own project(s) independently with support from a supervisor only as needed	27%	18%

Supervisor mentoring and support can be valuable for student interns in shaping their job skills and increasing the value of their professional experience. Overall, about half of four-year students (48-54 percent) report that their supervisor *very often/often* suggested specific strategies for achieving career goals, encouraged new ways of performing in the job, or helped an intern to meet challenging deadlines. Respondents were more likely (68-69 percent) to report other types of supervisor mentoring, such as that their supervisor gave them feedback on job performance or gave them assignments that presented opportunities to learn new skills (see Table 8). On the other end of the spectrum, some students rarely or never experienced mentoring (9-22 percent, depending on the specific survey item).

Table 8: Supervisor mentoring for students at four-year institutions

Supervisor Mentoring					
Four-Year Institutions	Very Often	Often	Sometimes	Rarely	Never
Supervisor suggested specific strategies for achieving career goals	22%	32%	29%	13%	5%
Supervisor encouraged new ways of performing in the job	19%	31%	31%	14%	5%
Supervisor gave feedback regarding job performance	30%	39%	22%	7%	2%
Supervisor gave assignments that presented opportunities to learn new skills	30%	38%	23%	7%	2%
Supervisor helped to finish tasks or meet deadlines that otherwise would have been difficult to complete	19%	29%	30%	14%	8%

For two-year students, overall, about half (51 percent) of students report that their supervisor *very often* or *often* encouraged new ways of performing in the job, while 38 percent helped interns finish tasks or meet deadlines that would otherwise would have been difficult to complete (see Table 9). It was more common for students to report that their supervisors gave feedback regarding job performance (70 percent), gave assignments that presented opportunities to learn new skills (66 percent) or suggested specific strategies for achieving career goals (60 percent).

Table 9: Supervisor mentoring for students at two-year institutions

Supervisor Mentoring					
Two-Year Institutions	Very Often	Often	Sometimes	Rarely	Never
Supervisor suggested specific strategies for achieving career goals	28%	32%	24%	9%	7%
Supervisor encouraged new ways of performing in the job	24%	27%	29%	11%	9%
Supervisor gave feedback regarding job performance	31%	39%	20%	7%	3%
Supervisor gave assignments that presented opportunities to learn new skills	30%	36%	25%	6%	4%
Supervisor helped to finish tasks or meet deadlines that otherwise would have been difficult to complete	10%	28%	28%	12%	10%

In addition to supervisor mentorship, respondents report that they received high levels of support from their supervisors. More than 70 percent of four-year students report that their supervisors cared about their well-being, cared about their satisfaction at work, appreciated the amount of effort they made and that they respected them (see Table 10). At the same time, a troubling 7-10 percent of students did not feel appreciated, respected, or cared for by their supervisor.

Table 10: Supervisor support for students at four-year institutions

Supervisor Support					
Four-Year Institutions	A Great Deal	Quite A Bit	Some	A Little	None
Supervisor cared about my well-being	33%	39%	17%	7%	3%
Supervisor cared about my satisfaction at work	32%	40%	18%	6%	4%
Supervisor appreciated the amount of effort I made	45%	33%	15%	5%	2%
Supervisor respected me	44%	35%	14%	6%	2%

While most two-year students report high positive supervisor support (66-77 percent a *great deal* or *quite a bit*), 10 percent of respondents report that their supervisor cared only a little or not at all about their well-being, their satisfaction at work, and the amount of effort they made, and 6 percent did not feel their supervisor respected them (see Table 11).

Table 11: Supervisor support for students at two-year institutions

Supervisor Support					
Two-Year Institutions	A Great Deal	Quite A Bit	Some	A Little	None
Supervisor cared about my well-being	36%	30%	24%	6%	5%
Supervisor cared about my satisfaction at work	33%	36%	22%	5%	4%
Supervisor appreciated the amount of effort I made	44%	31%	14%	7%	3%
Supervisor respected me	45%	32%	18%	3%	3%

Quality Outcomes: Development of Skills, Connections, Confidence and Clarity

In terms of skill development, a top skill gained through their internship experience was communication, with 80 percent of four-year respondents indicating that their internship allowed them opportunities to improve their communication *often/very often* (see Table 12). A similar percentage of interns reported developing problem-solving (79 percent) or teamwork skills (71 percent), though leadership skills (56 percent) were less likely to be developed.

Table 12: Skill development for students at four-year institutions

Skill Development					
Four-Year Institutions	Very Often	Often	Sometimes	Rarely	Never
Communication	45%	35%	15%	4%	1%
Teamwork	40%	31%	19%	9%	1%
Problem-solving	47%	32%	15%	4%	1%
Leadership	31%	25%	24%	17%	3%

Two-year students reported similar skill gains for communication (77 percent), problem-solving (72 percent), and teamwork (70 percent) through their internship experience, while fewer reported gaining leadership skills (53 percent) (see Table 13).

Table 13: Skill development for students at two-year institutions

Skill Development					
Two-Year Institutions	Very Often	Often	Sometimes	Rarely	Never
Communication	42%	35%	17%	3%	3%
Teamwork	45%	25%	19%	7%	5%
Problem-solving	46%	26%	21%	5%	2%
Leadership	31%	22%	26%	16%	5%

Another important feature of internships is that they offer an opportunity for students to expand their professional networks. The data show that 87 percent of four-year students and 81 percent of two-year students report that their internship helped to expand their professional network (see Table 14).

Table 14: Internship expanded professional network

Internship Expanded Professional Network	
Four-Year Institutions	Two-Year Institutions
87%	81%

Furthermore, about three-quarters (71-74 percent) of four-year respondents report that their internship provided them with developmental value such as helping them become more confident in pursuing a future career, providing opportunities to learn new career-related skills, and helping to clarify career goals. Respondents were somewhat less likely to report a direct job connection such as help identifying organizations with job opportunities (see Table 15). On the other hand, 9-17 percent of interns reported little to no developmental value in their experience, with another 17-23 percent reporting some value, depending on the item.

Table 15: Career developmental value at four-year institutions

Developmental Value					
Four-Year Institutions	A Great Deal	Quite A Bit	Some	A Little	None
Helped clarify career goals	36%	35%	20%	7%	2%
Provided skills relevant to career goals	35%	36%	19%	7%	3%
Gave opportunities to learn new career-related skills	37%	36%	19%	6%	3%
Helped identify organizations with job opportunities	31%	30%	23%	11%	6%
Become more confident in pursuing future career	39%	35%	17%	7%	2%

Two-year student interns also gained confidence and clarity from their experiences. About 2 in 3 respondents report that their internship helped give opportunities to learn new career-related skills (71 percent), made them more confident in pursuing a future career (72 percent), helped clarify career goals (68 percent), and helped them to identify organizations with job opportunities (63 percent) (see Table 16).

Table 16: Career developmental value at two-year institutions

Developmental Value					
Two-Year Institutions	A Great Deal	Quite A Bit	Some	A Little	None
Helped clarify career goals	37%	31%	24%	5%	3%
Provided skills relevant to career goals	40%	27%	21%	10%	2%
Gave opportunities to learn new career-related skills	40%	31%	20%	5%	3%
Helped identify organizations with job opportunities	38%	24%	26%	7%	5%
Become more confident in pursuing future career	41%	31%	19%	7%	2%

Overall, about three-quarters of students (74 percent of four-year students and 72 percent of two-year students) report being *very or extremely satisfied* with their internship experience, suggesting there is room for improvement in about 1 in 4 internships (see Table 17).

Table 17: Satisfaction with internship

Satisfaction With Internship					
	Extremely Satisfied	Very Satisfied	Somewhat Satisfied	A Little Satisfied	Not At All Satisfied
Four-Year Institutions	37%	37%	18%	5%	3%
Two-Year Institutions	41%	31%	19%	5%	4%

Equitable Access

Examining indicators of internship quality is helpful to understand the benefits students could potentially gain through internships. However, too many students never have the opportunity to participate at all, as access to internships is not equitable across populations (Ghosh, Torpey-Saboe, & Clayton, 2023; Hora, et al., 2020). This section examines characteristics of internships that impact equity, including pay, logistical barriers, ease of finding internships, and discrimination.

One of the key issues impacting equity is lack of compensation for some internships. Lack of pay makes internships less accessible to students facing financial pressure to earn money while in college. Our current findings show that of those who participated in internships from four-year colleges, about a third (31 percent) were unpaid (see Table 18). Meanwhile, 50 percent of two-year respondents report that they worked in unpaid internship positions. These compensation-related disparities reveal the disproportionate challenges that two-year candidates may face when it comes to accepting such internships. It suggests the need for further studies that examine income-related challenges and/or how populations navigate costs associated with beginning an internship, especially when the role is an unpaid internship position.

Table 18: Compensation

Compensation		
	Paid	Unpaid
Four-Year Institutions	69%	31%
Two-Year Institutions	50%	50%

Among those who did not participate in an internship, many had wanted to: 63 percent of four-year students without internships and 49 percent of two-year students without internships were interested in participating. For many of these students, financial concerns were a key consideration. About 1 in 3 four-year students (33 percent) said that needing to work at their current job prevented them from participating in an internship and about 1 in 4 (25 percent) said that insufficient pay was a reason for not taking an internship (students were able to report multiple barriers). Other common barriers included time pressure (a heavy course load was the most commonly reported barrier), or difficulty finding or being selected for an internship. Logistical concerns such as lack of transportation or childcare also were reported by some students (see Table 19).

Table 19: Obstacles to participation for students at four-year institutions

Obstacles To Participation	
Four-Year Institutions	
Heavy course load	58%
Not selected for internships they applied for	38%
Lack of opportunities in field	33%
Current job	33%
Unsure how to find an internship	28%
Insufficient pay	25%
Transportation	18%
Child care	3%

Two-year students report that the three greatest obstacles to participating in internships were being unsure how to find an internship (45 percent), having a heavy course load (40 percent), and needing to work at their current job (40 percent) (see Table 20). While four-year students share the similar obstacle of a heavy course load, a key difference is that two-year students' No. 1 obstacle — being unsure how to find an internship (45 percent) — is the fifth obstacle identified by four-year students (28 percent). This potentially indicates a lack of resources to connect students at two-year institutions to internship opportunities and may have implications for practitioners who support the college-to-career outcome needs of these students.

Table 20: Obstacles to participation for students at two-year institutions

Obstacles To Participation	
Two-Year Institutions	
Unsure how to find an internship	45%
Heavy course load	40%
Current job	40%
Lack of opportunities in field	28%
Insufficient pay	20%
Not selected for internships they applied for	18%
Transportation	15%
Child care	7%

Barriers were similar across demographic groups, as seen in Figure 1, though there are a few differences of note. Male students were less likely than students of other genders to report financial obstacles such as insufficient pay or needing to work at their current job as a barrier to participation. Likewise, continuing generation students also were less likely than first-generation students to find these financial barriers to be challenging. Hispanic, Black and students of another race or ethnicity were more likely than white or Asian students to find transportation to be difficult. Male students and Asian students were relatively more likely than others to report not being selected for an internship as a significant obstacle.

Figure 1: Percentage breakdown of multiple obstacles of internship participation by race, gender, and first-generation status of four-year students

	Heavy course load	Applied to internship but not selected	Lack of internships in field	Work at current job	Not sure how to find internships	Insufficient pay	Lack of transportation	Internship canceled (COVID-19)	Lack of childcare
Asian	58%	48%	33%	21%	26%	14%	15%	3%	1%
Black	52%	28%	25%	29%	27%	22%	22%	4%	3%
Hispanic	65%	32%	35%	38%	30%	23%	26%	5%	3%
Others	54%	37%	32%	37%	22%	34%	21%	4%	3%
White	57%	34%	32%	34%	27%	29%	11%	5%	2%
Male	51%	48%	29%	25%	27%	17%	14%	4%	2%
Not male	60%	32%	34%	34%	27%	28%	17%	4%	2%
First-gen	59%	34%	33%	34%	27%	29%	17%	4%	4%
Not First-gen	57%	38%	32%	30%	27%	22%	15%	5%	1%

For two-year students, most barriers are consistent across demographic groups, with a few key differences (see Figure 2). Asian students are much more likely than students of other ethnicities and races to cite a heavy course load as a barrier to internship participation, but less likely to cite the need to work at a current job. White students were notably less likely than students of other races and ethnicities to say that being unsure how to find an internship was a challenge for them.

Figure 2: Percentage breakdown of multiple obstacles of internship participation by race, gender, and first-generation status of two-year institution students

	Not sure how to find internships	Heavy course load	Work at current job	Lack of internships in field	Insufficient pay	Applied to internship but not selected	Lack of transportation	Lack of childcare	Internship canceled (COVID- 19)
Asian	48%	51%	32%	29%	17%	18%	17%	7%	3%
Black	46%	36%	35%	28%	15%	18%	21%	9%	5%
Hispanic	47%	42%	39%	23%	20%	14%	18%	7%	3%
Others	50%	38%	39%	31%	20%	16%	13%	12%	3%
White	38%	39%	42%	29%	24%	16%	10%	9%	2%
Male	47%	42%	38%	31%	17%	21%	14%	2%	3%
Not male	44%	40%	39%	27%	21%	15%	15%	10%	3%
First-gen	44%	42%	39%	28%	20%	16%	17%	9%	3%
Not First-gen	45%	37%	39%	26%	21%	16%	12%	8%	3%

Finally, beyond pay and access, we find other potential equity issues in internship participation. For example, 14 percent of those who participated in internships report that the internship job posting had no statements about nondiscriminatory hiring practices and 6 percent of four-year respondents report that they felt discriminated against during their internship (see Tables 21 and 22). These numbers were slightly higher for two-year students, pointing to the need to study what protections interns have when participating in these temporary positions.

Table 21: Nondiscrimination statement

Nondiscrimination statement: Internship posting had an explicit statement about nondiscriminatory hiring and/or workplace behaviors on the basis of race, gender, sexuality, disability status, and/or other personal attributes			
	Yes	No	Unsure
Four-Year Institutions	61%	25%	14%
Two-Year Institutions	54%	27%	19%

Table 22: Experiences with discrimination

Experiences with discrimination: Felt discriminated against during internship based on race, gender, sexuality, disability status, and/or other personal attributes	
Four-Year Institutions	Two-Year Institutions
6%	10%

From Research to Action

While the potential for internships and other work-based learning experiences to support students in their journey from education to employment is clear, educational institutions, employers, and researchers will need to work collaboratively to ensure that more students have the ability to participate in a positive internship experience. Examination of students' experiences with internships through the NSCI provides insights that leaders and practitioners can use to guide their efforts to increase access and maximize the benefits students experience.

Educators and Institutional Leaders

- **Use internships intentionally.** Support students and employers in the development of structured learning plans and objectives so that students have clear targets for skill development or other goals they want to achieve during their internship. Dedicated advisors, including faculty advisors, could facilitate the development of these learning plans and assist students with securing aligned internships.
- **Prepare students to secure and thrive in internships.** Provide additional ways for students to engage in career exploration early in their academic journey in preparation for an internship. This could include site visits, employer visits to the classroom, and collaborative projects with employers that are embedded in coursework.
- **Connect internships to other student experiences and support.** Integrate and coordinate internships and other experiential learning experiences across departments on campus to ensure a more holistic, student-centered approach that is based on research and uses resources effectively. This includes intentional collaboration across those entities that lead career services, service learning, and alumni engagement.

Employers

- **Embed internships in your talent strategy.** To overcome the known financial obstacles facing some students, prioritize investments in paid internships as a means to develop a more diversified workforce and talent pipeline.
- **Have a voice in design.** Engage with colleges and universities to design and scale industry-specific internships and other learning opportunities for students.
- **Strengthen supervision.** Establish processes and standards for the supervision and mentorship of interns, including clearly defined roles and responsibilities for interns and measures of accountability for supervisors.

Researchers

- **Understand the spectrum of opportunities.** Continue to examine and differentiate the range of internships and other experiential learning experiences offered to students, focusing especially on quality, access, and equity.
- **Identify the contributions of component parts.** Develop and advance more nuanced definitions and assessment tools for internships, focusing on both skills and social capital.
- **Examine “best fit” student experiences.** Measure and examine student goals and expectations for internships (program features, learning goals, student satisfaction) to better understand what types of internships are best suited for a range of students.
- **Document employer experiences.** Investigate employer perspectives on the value of internships and other work-based learning models to better understand employer motivations and identify opportunities for improvement.

Principles for Effective Work-Based Learning

Educational institutions, employers, and researchers all have an important role to play in supporting the policies and practices that will allow more students to benefit not only from internships, but also other work-based learning experiences. While the NSCI findings and recommendations focus solely on internships, Strada’s research and similar work done by other experts in the field support a broader set of principles that can inform programmatic and policy discussions about the many kinds of work-based learning experiences.

PAY

Unpaid internships are often out of reach for students who work part time to pay for their education. The gold standard is an employer-paid, quality internship or work-based learning experience that is both affordable and accessible to a wide range of students. In some internship models, government entities, education providers, or philanthropic resources can help offset any additional costs, but any student-required costs should be kept to a minimum to maintain accessibility.

CREDIT

Ideally, all internships and work-based learning experiences should be for credit and/or embedded into a course and aligned to the student's major and field of study.

MENTORSHIP AND COACHING

Students should have supervised, human-supported mentorship and coaching from both the educational institution and the employer that includes guidance, feedback, and career planning. At the institutional level, this might include assigning advisors that help place students in internships.

SKILLS AND COMPETENCIES

Internships and work-based learning experiences should provide in-demand, transferable skills and related disciplinary knowledge that connect to a student’s education and career goals, as well as their talents and interests. This means identifying specific disciplinary skills that students can acquire during the internship and ensuring that these are incorporated into orientation, mentoring, and everyday work.

EQUITY FOCUS

Internships and work-based learning experiences should be designed and measured so they are accessible to all interested individuals, regardless of the financial, logistical, and systemic barriers they face.

AVAILABILITY

Quality internship and work-based learning opportunities should be accessible through a range of education, training, employer, intermediary, and workforce providers and contexts.

Developing more research-based guidelines for internships and the broader work-based learning landscape will require both will and resources, but as the available research shows, the potential benefits often outweigh the costs. For more detailed information and research on internships and work-based learning, please visit <https://stradaeducation.org/work-based-learning/>.

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Appendix A

Table A1. Internship participation

Internship Participation: In the past 12 months, have you participated in an internship?	Four-Year Total	Four-year juniors	Four-year seniors	Two-Year Total
All	36%	26%	44%	13%
By Race				
Another race or ethnicity	34%	28%	38%	19%
Asian, Asian American	48%	37%	55%	18%
Black/African American	43%	34%	52%	11%
Latino/Hispanic	31%	20%	41%	11%
Two or more races/ethnicities	40%	34%	43%	14%
White, Caucasian American	35%	23%	42%	14%
By Gender				
Women	37%	26%	45%	11%
Men	35%	24%	42%	17%
Another gender identity	41%	38%	43%	15%
By First-generation status				
First-generation	34%	24%	42%	12%
Not First-generation	37%	27%	44%	15%
By Major				
Arts and humanities	30%	15%	38%	12%
Biological sciences, agriculture, and natural resources	29%	28%	29%	10%
Business	47%	26%	61%	14%
Communications, media and public relations	45%	22%	63%	15%
Education	35%	18%	46%	11%
Engineering	47%	41%	51%	10%
Health professions	24%	13%	34%	11%
Physical sciences, mathematics, and computer science	39%	47%	46%	18%
Social sciences	43%	27%	52%	12%
Social service professions	42%	20%	59%	19%
Other majors	28%	24%	31%	14%

Table A1. Internship participation (continued)

	Four-Year Total	Four-year juniors	Four-year seniors	Two-Year Total
By Income (Total household income)				
Low	34%	25%	41%	13%
Middle	36%	26%	42%	13%
High	43%	32%	49%	20%
By Industry				
Accommodation and food services	2%	4%	2%	7%
Administrative and support and waste management and remediation services	2%	2%	2%	1%
Agriculture, forestry, fishing and hunting	4%	5%	3%	2%
Arts, entertainment, and recreation	9%	10%	9%	9%
Construction	3%	4%	3%	2%
Educational services	11%	11%	12%	8%
Finance and insurance	10%	8%	11%	9%
Health care and social assistance	18%	19%	18%	23%
Information	5%	3%	5%	8%
Management of companies and enterprises	3%	3%	2%	3%
Manufacturing	6%	4%	6%	2%
Mining	0%	0%	0%	0%
Other services (except public administration)	9%	8%	9%	8%
Professional, scientific, and technical services	9%	10%	9%	8%
Public administration	4%	2%	5%	2%
Real estate rental and leasing	1%	1%	1%	3%
Retail trade	1%	2%	1%	1%
Transportation and warehousing	2%	2%	2%	2%
Utilities	1%	1%	1%	2%
Wholesale trade	0%	0%	0%	0%
By Organization type				
Government	14%	10%	16%	20%
For-Profit	56%	62%	53%	43%
Nonprofit	31%	29%	32%	37%

Table A2. Unweighted (n) of internship participation

Internship Participation: In the past 12 months, have you participated in an internship?	Four-Year Unweighted n (Yes, I participated)	Two-Year Unweighted n (Yes, I participated)
All participants	1,129	310
By Race		
Another race or ethnicity	42	17
Asian, Asian American	294	33
Black/African American	91	38
Latino/Hispanic	119	72
Two or more races/ethnicities	69	24
White, Caucasian American	514	126
By Gender		
Women	781	226
Men	301	68
Another gender identity	47	16
By First-generation status		
First-gen	365	152
Not First-gen	762	158
By Major		
Arts and humanities	89	22
Biological sciences, agriculture, and natural resources	140	12
Business	205	42
Communications, media and public relations	41	9
Education	40	17
Engineering	143	8
Health professions	80	71
Physical sciences, mathematics, and computer science	160	47
Social sciences	118	13
Social service professions	25	18
Other majors	88	51
By Income (Total household income)		
Low	348	138
Middle	272	84
High	348	47
By Industry		
Accommodation and food services	24	20
Administrative and support and waste management and remediation services	20	7
Agriculture, forestry, fishing and hunting	39	8
Arts, entertainment, and recreation	93	23
Construction	23	6
Educational services	114	32
Finance and insurance	130	18
Health care and social assistance	208	80
Information	42	17
Management of companies and enterprises	29	7
Manufacturing	51	5
Mining	0	3
Other services (except public administration)	110	25
Professional, scientific, and technical services	114	20

Table A2. Unweighted (n) of internship participation (continued)

Internship Participation: In the past 12 months, have you participated in an internship?	Four-Year Unweighted n (Yes, I participated)	Two-Year Unweighted n (Yes, I participated)
Public administration	39	8
Real estate rental and leasing	10	7
Retail trade	20	4
Transportation and warehousing	22	3
Utilities	15	3
Wholesale trade	0	5
By Organization type		
Government	156	61
For-Profit	636	120
Nonprofit	319	112

Table A3: Four-year students' internship purpose

	Internship Purpose		
	Navigate different career options	Gain experience in specific career	Other
Total	26%	71%	4%
Gender			
Men	24%	71%	5%
Women	26%	70%	4%
Another gender identity	31%	67%	2%
Race			
Another race or ethnicity	58%	41%	1%
Asian, Asian American	28%	69%	3%
Black, African American	31%	66%	4%
Latino	25%	70%	5%
Two or more races/ethnicities	23%	72%	5%
White, Caucasian American	22%	74%	4%
First-generation status			
First-generation students	26%	71%	4%
Not First-generation students	26%	71%	4%

Table A4: Two-year students' internship purpose

	Internship Purpose		
	Navigate different career options	Gain experience in specific career	Other
Total	21%	73%	5%
Gender			
Men	20%	73%	7%
Women	22%	74%	4%
Another gender identity	29%	71%	0%
Race			
Another race or ethnicity	20%	80%	0%
Asian, Asian American	17%	78%	5%
Black, African American	33%	64%	3%
Latino	14%	82%	4%
Two or more races/ethnicities	40%	60%	0%
White, Caucasian American	20%	72%	7%
First-generation status			
First-generation students	21%	74%	5%
Not First-generation students	22%	73%	5%

Table A5: Four-year students' internship modality

	Internship Modality		
	In-Person	Online	Other
Total	75%	19%	6%
Gender			
Men	79%	16%	5%
Women	73%	20%	7%
Another gender identity	68%	17%	16%
Race			
Another race or ethnicity	75%	21%	4%
Asian, Asian American	73%	21%	6%
Black, African American	62%	25%	13%
Latino	73%	22%	5%
Two or more races/ethnicities	76%	23%	2%
White, Caucasian American	80%	14%	6%
First-generation status			
First-generation students	72%	20%	8%
Not First-generation students	77%	18%	5%

Table A6: Two-year students' internship modality

	Internship Modality		
	In-Person	Online	Other
Total	79%	18%	3%
Gender			
Men	82%	16%	3%
Women	78%	20%	3%
Another gender identity	61%	32%	7%
Race			
Another race or ethnicity	69%	32%	0%
Asian, Asian American	58%	36%	7%
Black, African American	76%	17%	7%
Latino	83%	16%	1%
Two or more races/ethnicities	68%	17%	14%
White, Caucasian American	85%	15%	0%
First-generation status			
First-generation students	78%	18%	4%
Not First-generation students	81%	18%	2%

Table A7: Two- and four-year students' length of internship

	Internship Duration (Weeks)			
	Four-Year		Two-Year	
	Mean	SD	Mean	SD
Total	18.7	13.7	22.1	16.8
Gender				
Men	18.4	13.5	20.2	15.4
Women	18.8	13.8	22.7	17.5
Another gender identity	18.5	12.4	22.2	13.4
Race				
Another race or ethnicity	17.3	13.9	23.6	16.1
Asian, Asian American	17.9	13.1	22.5	17.6
Black, African American	20.4	14.7	22.4	18.3
Latino	19.5	15.7	23.5	17.3
Two or more races/ethnicities	19.3	13	18.4	15.9
White, Caucasian American	18.7	13.4	21.6	16.4
First-generation status				
First-generation students	19.7	14.4	23.2	16.7
Not First-generation students	18.3	13.3	21.1	16.9

Table A8: Four-year and two-year students' mean satisfaction ratings by key student characteristics

	Internship Satisfaction			
	Four-Year		Two-Year	
	Mean	SD	Mean	SD
Total	4.0	1.0	4.0	1.1
Gender				
Men	4.0	1.0	4.0	1.1
Women	4.0	1.0	4.0	1.1
Another gender identity	4.2	0.7	3.7	1.1
Race				
Another race or ethnicity	4.1	0.9	3.7	1.1
Asian, Asian American	3.9	0.9	4.1	0.9
Black, African American	4.1	0.9	4.0	1.2
Latino	4.0	1.1	4.1	1.0
Two or more races/ethnicities	3.9	1.0	4.0	1.3
White, Caucasian American	4.0	1.0	4.0	1.1
First-generation status				
First-generation students	4.0	1.0	4.0	1.1
Not First-generation students	4.0	1.0	4.0	1.1

Table A9: Four-year and two-year students' career development

	Career Development Scale			
	Four-Year		Two-Year	
	Mean	SD	Mean	SD
Total	3.9	0.9	4.0	0.9
Gender				
Men	3.9	0.8	3.8	0.9
Women	3.9	0.9	4.1	0.9
Another gender identity	3.7	0.8	3.8	0.7
Race				
Another race or ethnicity	3.7	1.0	3.8	0.9
Asian, Asian American	3.8	0.9	4.0	0.7
Black, African American	3.8	1.0	4.1	0.9
Latino	3.9	1.0	4.1	0.8
Two or more races/ethnicities	3.9	0.8	3.9	0.9
White, Caucasian American	4.0	0.8	4.0	1.0
First-generation status				
First-generation students	3.9	0.9	4.1	0.9
Not First-generation students	3.9	0.9	4.0	0.9

Table A10: Four-year students' mean scores on career development scale

	Four-Year Career Development Scale				
	Helped clarify career goals	Provided skills relevant to career goals	Gave opportunities to learn new career-related skills	Became more confident in pursuing future career	Helped identify organizations with job opportunities
Mean (Standard Deviation)					
Total	3.9 (1.0)	3.9 (1.0)	4.0 (1.0)	3.7 (1.2)	4.0 (1.0)
Gender					
Men	4.0 (0.9)	3.9 (1.0)	3.9 (1.0)	3.7 (1.2)	4.0 (1.0)
Women	3.9 (1.0)	4.0 (1.0)	4.0 (1.0)	3.7 (1.2)	4.0 (1.0)
Another gender identity	3.7 (0.9)	3.8 (0.9)	3.7 (1.0)	3.4 (1.1)	3.8 (1.0)
Race					
Another race or ethnicity	3.8 (1.1)	3.7 (1)	3.8 (1.1)	3.6 (1.2)	3.8 (1.1)
Asian, Asian American	3.8 (1)	3.8 (1)	3.9 (1)	3.6 (1.2)	3.9 (1)
Black, African American	4 (1)	3.9 (1.1)	3.8 (1.2)	3.6 (1.3)	3.9 (1.1)
Latino	3.9 (1.1)	4 (1.1)	4 (1.1)	3.8 (1.2)	4.1 (1.2)
Two or more races/ethnicities	3.9 (1)	3.9 (0.9)	4 (0.8)	3.6 (1.3)	4 (1)
White, Caucasian American	4 (1)	4 (1)	4 (1)	3.7 (1.2)	4 (1)
First-generation status					
First-generation students	3.9 (1.1)	4 (1)	4 (1)	3.8 (1.2)	4 (1)
Not First-generation students	3.9 (1)	3.9 (1)	3.9 (1)	3.6 (1.2)	4 (1)

Table A11: Two-year students' mean scores on career development scale

	Two-Year Career Development Scale				
	Helped clarify career goals	Provided skills relevant to career goals	Gave opportunities to learn new career-related skills	Became more confident in pursuing future career	Helped identify organizations with job opportunities
Mean (Standard Deviation)					
Total	4.0 (1.0)	4.0 (1.0)	4.1 (1.0)	3.9 (1.1)	4.1 (1.1)
Gender					
Men	3.8 (1.0)	3.8 (1.1)	3.9 (1.0)	3.6 (1.2)	3.9 (1.0)
Women	4.1 (1.0)	4.1 (1.0)	4.1 (1.0)	4.0 (1.1)	4.1 (1.0)
Another gender identity	3.6 (1.1)	3.7 (1.0)	4.2 (0.7)	3.8 (0.9)	3.8 (1.2)
Race					
Another race or ethnicity	3.7 (1.1)	3.8 (1.1)	3.9 (0.9)	3.9 (0.9)	3.5 (1.2)
Asian, Asian American	3.9 (0.9)	4.2 (0.8)	4.1 (0.8)	3.7 (1)	4 (0.8)
Black, African American	4 (1.1)	4.2 (0.9)	4.2 (1.1)	3.9 (1.2)	4.1 (1.1)
Latino	4.2 (0.8)	4.1 (1)	4.1 (0.9)	4 (1.1)	4.1 (1)
Two or more races/ethnicities	3.8 (1.2)	3.8 (1.2)	4 (1.2)	3.9 (1.1)	4.1 (1.1)
White, Caucasian American	4 (1.1)	4 (1.1)	4.1 (1.1)	3.9 (1.2)	4.1 (1.1)
First-generation status					
First-generation students	4.1 (0.9)	4.1 (1.1)	4.1 (1)	4 (1.1)	4.1 (1.1)
Not First-generation students	3.9 (1.1)	4 (1)	4.1 (1)	3.8 (1.1)	4 (1.1)

Table A12: Four-year and two-year students' mean supervisor mentoring scales by student characteristics

	Internship Supervisor Mentoring			
	Four-Year		Two-Year	
	Mean	SD	Mean	SD
Total	3.6	0.9	3.7	0.9
Gender				
Men	3.6	0.8	3.6	0.9
Women	3.6	0.9	3.7	0.9
Another gender identity	3.6	0.8	3.5	1.0
Race				
Another race or ethnicity	3.6	1.0	3.5	0.8
Asian, Asian American	3.6	0.8	3.8	0.6
Black, African American	3.7	0.9	3.8	1.1
Latino	3.7	0.9	3.8	0.8
Two or more races/ethnicities	3.6	0.8	3.5	1.0
White, Caucasian American	3.6	0.9	3.6	1.0

Table A13: Four-year students' internship tasks

	Four-Year Internship tasks			
	Job Shadowing	Low-skill Tasks with Supervision	High-skill Tasks with Supervision	Autonomous Work
Total	10%	25%	38%	27%
Gender				
Men	11%	24%	39%	26%
Women	9%	25%	38%	28%
Another gender identity	28%	22%	30%	20%
Race				
Another race or ethnicity	13%	18%	17%	52%
Asian, Asian American	11%	27%	43%	20%
Black, African American	4%	22%	39%	34%
Latino	13%	28%	32%	27%
Two or more races/ethnicities	21%	17%	33%	29%
White, Caucasian American	8%	26%	41%	25%
First-generation status				
First-generation students	13%	26%	31%	30%
Not First-generation students	8%	24%	42%	26%

Table A14: Two-year students' internship tasks

	Two-Year Internship tasks			
	Job Shadowing	Low-skill Tasks with Supervision	High-skill Tasks with Supervision	Autonomous Work
Total	20%	34%	28%	18%
Gender				
Men	15%	40%	25%	19%
Women	24%	27%	32%	17%
Another gender identity	24%	40%	13%	24%
Race				
Another race or ethnicity	12%	47%	27%	15%
Asian, Asian American	22%	38%	16%	25%
Black, African American	30%	34%	17%	19%
Latino	21%	40%	25%	14%
Two or more races/ethnicities	18%	32%	28%	22%
White, Caucasian American	17%	30%	35%	18%
First-generation status				
First-generation students	20%	40%	24%	15%
Not First-generation students	19%	28%	33%	21%

Table A15: Four-year and two-year students' mean scores for opportunities to develop skills by student characteristics

	Internship Skills			
	Four-Year		Two-Year	
	Mean	SD	Mean	SD
Total	4.0	0.8	4.0	0.9
Gender				
Men	4.0	0.8	3.8	0.9
Women	4.0	0.8	4.1	0.9
Another gender identity	4.0	0.7	3.7	0.8
Race				
Another race or ethnicity	4.0	0.9	3.8	0.8
Asian, Asian American	3.9	0.7	4.0	0.7
Black, African American	4.1	0.8	4.1	0.9
Latino	4.0	0.9	4.1	0.9
Two or more races/ethnicities	4.1	0.8	4.0	1.0
White, Caucasian American	4.0	0.8	4.0	1.0
First-generation status				
First-generation students	4.1	0.8	4.0	0.9
Not First-generation students	4.0	0.8	4.1	0.9

Table A16: Four-year students paid and unpaid internships

	Internship Compensation	
	Paid	Unpaid
Total	69%	31%
Gender		
Men	80%	21%
Women	62%	39%
Another gender identity	64%	36%
Race		
Another race or ethnicity	61%	39%
Asian, Asian American	79%	21%
Black, African American	75%	25%
Latino	60%	40%
Two or more races/ethnicities	54%	46%
White, Caucasian American	71%	29%
First-generation status		
First-generation students	61%	39%
Not First-generation students	73%	27%

Table A17: Two-year students paid and unpaid internships

	Internship Compensation	
	Paid	Unpaid
Total	50%	50%
Gender		
Men	56%	44%
Women	44%	56%
Another gender identity	50%	50%
Race		
Another race or ethnicity	50%	50%
Asian, Asian American	79%	21%
Black, African American	62%	38%
Latino	37%	64%
Two or more races/ethnicities	24%	76%
White, Caucasian American	50%	50%
First-generation status		
First-generation students	49%	51%
Not First-generation students	51%	49%

Table A18: Four-year students' experience with discrimination policy

	Discrimination Policy		
	Yes	No	Not sure
Total	61%	14%	25%
Gender			
Men	63%	14%	23%
Women	59%	14%	27%
Another gender identity	78%	11%	11%
Race			
Another race or ethnicity	85%	9%	6%
Asian, Asian American	66%	17%	17%
Black, African American	59%	20%	21%
Latino	64%	12%	24%
Two or more races/ethnicities	59%	14%	27%
White, Caucasian American	58%	13%	29%
First-generation status			
First-generation students	62%	12%	25%
Not First-generation students	60%	15%	25%

Note: The above table is from the survey item, "In the internship posting or announcement for the position, was there an explicit statement about nondiscriminatory hiring and/or workplace behaviors on the basis of race, gender, sexuality, disability status, and/or other personal attributes?" (Yes/No/Not sure)

Table A19: Two-year students' experience with discrimination policy

	Discrimination Policy		
	Yes	No	Not sure
Total	54%	19%	27%
Gender			
Men	55%	21%	23%
Women	53%	17%	31%
Another gender identity	67%	7%	26%
Race			
Another race or ethnicity	49%	19%	31%
Asian, Asian American	48%	33%	19%
Black, African American	55%	17%	29%
Latino	49%	24%	26%
Two or more races/ethnicities	63%	27%	10%
White, Caucasian American	56%	14%	30%
First-generation status			
First-generation students	54%	15%	31%
Not First-generation students	55%	22%	23%

Note: The above table is from the survey item, "In the internship posting or announcement for the position, was there an explicit statement about nondiscriminatory hiring and/or workplace behaviors on the basis of race, gender, sexuality, disability status, and/or other personal attributes?" (Yes/No/Not sure)

Table A20: Four-year students' experience with discrimination in internship

	Discrimination in Internship	
	Yes	No
Total	6%	94%
Gender		
Men	4%	96%
Women	7%	93%
Another gender identity	15%	85%
Race		
Another race or ethnicity	25%	75%
Asian, Asian American	6%	94%
Black, African American	10%	90%
Latino	5%	95%
Two or more races/ethnicities	8%	92%
White, Caucasian American	4%	96%
First-generation status		
First-generation students	7%	93%
Not First-generation students	5%	95%

Note: The above table is from the survey item, "Did you ever feel discriminated against during your internship based on your race, gender, sexuality, disability status, and/or other personal attributes?" (Yes/No)

Table A21: Two-year students' experience with discrimination in internship

	Discrimination in Internship	
	Yes	No
Total	10%	90%
Gender		
Men	10%	90%
Women	9%	91%
Another gender identity	38%	62%
Race		
Another race or ethnicity	21%	80%
Asian, Asian American	4%	96%
Black, African American	16%	84%
Latino	7%	93%
Two or more races/ethnicities	5%	95%
White, Caucasian American	11%	89%
First-generation status		
First-generation students	6%	94%
Not First-generation students	14%	86%

Note: The above table is from the survey item, "Did you ever feel discriminated against during your internship based on your race, gender, sexuality, disability status, and/or other personal attributes?" (Yes/No)