

VALUE BEYOND THE DEGREE:

ALUMNI PERSPECTIVES ON HOW COLLEGE EXPERIENCES IMPROVE THEIR LIVES

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FOREWORD

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At a time of uncertainty about the value of higher education and declining enrollment, alumni have a special perspective on the full value of their education. They have critical insights into how their education experiences have enriched their lives in ways that go beyond dollars and cents.

In March and April of 2022, Strada conducted a nationally representative survey of more than 3,200 alumni who have completed bachelor's degrees since 2002. The findings are eye-opening: Alumni who report they developed key skills during college earned \$8,700 more in their first year after graduation than peers who report lower levels of skill development through college. They are also more likely to attribute life and career successes to their education experiences. These skills included general and interpersonal skills such as critical thinking, problem-solving, communication, and teamwork. They also included specialized skills like data analysis and digital literacy.

The implications for this research are powerful. To help students get the greatest benefits from their education — earnings, careers, and quality of life — educators and policymakers can focus confidently on supporting students in developing a rich mixture of skills that will improve their post-completion outcomes. While many already pursue this approach to serving students, the findings in this analysis of the 2022 Strada Outcomes Survey point us all to the power of ensuring students develop — and recognize — valuable skills that equip them to get a good job, contribute to their communities, and develop a fulfilling life.

At the core of our findings was a fascinating insight that alumni who reported strong skill development were earning more money and had more positive assessments of the value of their education, including feeling their education helped them achieve their goals, was worth the cost, and had a positive impact on their career and life.

There was another very important thread to our findings: Equity gaps persist.

Compared to men, women with bachelor's degrees are less likely to meet the \$50,000 annual earnings threshold. And Black alumni are least likely to experience post-completion success, including earning at least \$50,000 per year, feeling that their education helped them to achieve their goals, and feeling that their education was worth the cost. In addition, although self-reporting of skill development is associated with better noneconomic outcomes for all students, strong reports of skill development are not associated with income gains for Black alumni.

Educators and institutions can take action to make sure students understand and develop the skills they need to succeed — with specific support for students who face the most significant barriers.

To help students get the most from their education, educators can focus on key learning outcomes. We should not assume that students develop — or recognize they are developing — critical thinking, problem solving, communication, and leadership, as well as specialized skills associated with jobs in the 21st century. These skills should be designed into the curriculum, assessed, and made explicit to students so that they can better understand how their learning relates to key competencies that will benefit them beyond college.

There is good evidence for practices inside and outside the classroom that are linked to developing valuable skills, including project-based learning, work-based learning, and engagement with campus or community-based activities. Unfortunately, access to these experiences is not equitable. Students who need to work to pay for school or serve as caregivers to others may not be able to hold an internship, join a club, or volunteer. When colleges and universities make these experiences more accessible and award credit for them when appropriate, they help students improve the trajectories of their lives.

Ruth Watkins

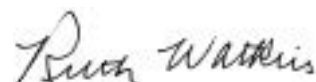




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EXECUTIVE SUMMARY

The list of benefits associated with earning a college degree is extensive and oft-repeated. It includes higher average lifetime earnings, employment security, greater self-esteem, and better health, among many others.¹ At the same time, confidence in the value of education is [declining](#) — significantly — and enrollments are decreasing.² In the face of rising tuition, lower certainty of stable employment, and a deeper examination of work-life balance, prospective students are eager for evidence that their costs in time, energy, and money will be worth it to them.

As educators and policymakers strive to reverse declining enrollment and confidence in postsecondary education, one group that has a unique perspective on the value of education is recent alumni. What did or didn't work for them? What makes them feel like a degree was worth it or that they achieved their goals? In this report, we share findings from the 2022 Strada Outcomes Survey, in which we heard directly from alumni about the multiple ways education has influenced their lives. And while socioeconomic mobility and stability are crucial to the mission of higher education, we recognize that students have other goals for their education as well. Thus, this survey provides insights on how to increase the likelihood that education after high school provides life benefits and fulfills students' broader goals in seeking education as well as their aspirations to get a good job and earn a family-sustaining wage.

Strada's nationally representative outcomes survey includes responses from more than 3,200 alumni who have completed bachelor's degrees since 2002.³ The survey provides alumni perspectives on how higher education is delivering on the benefits alumni seek, including life impact, career impact, career satisfaction, earnings, perceived value, and goal achievement. Alumni also rate the value of many experiences they had and the extent to which they developed important skills during their undergraduate education.

The survey helps us to understand key questions, including:

- What factors are associated with differences between alumni who feel their education was worth the cost and helped them to achieve their goals and those who do not?
 - What experiences and characteristics of an education are associated with higher earnings and career and life benefits?
 - How can higher education better serve students who have faced systemic barriers to success in education and the workforce?
-

KEY FINDINGS

The findings are eye-opening: Alumni who say they developed key skills during college earned \$8,700 more in their first year after graduation than peers who report low levels of skill development through college. They are also more likely to report life and career benefits from their education.

There was another very important thread to our findings — that developing skills can provide benefits for all students, but not equally. Strong skill development is associated with similar benefits in noneconomic outcomes across race, gender, and first-generation status, and similar economic benefits for men and women. However, for Black alumni, stronger self-assessments of skills developed do not appear to be associated with income gains.

Here are the key findings in greater detail:

01 **A meaningful share of bachelor's degree holders do not feel their education was worth the cost — and outcomes differ by race and gender.**

About 1 in 3 recent bachelor's degree graduates do not feel their education was worth the cost. A similar share earns less than \$50,000 per year. Black alumni are least likely to experience these post-completion benefits, and women with bachelor's degrees are less likely to earn a family-sustaining wage compared to men.

02 **Developing a key set of skills, including both general and specialized elements, is strongly associated with economic and noneconomic benefits.**

Alumni who reported strong skill development were earning more money — \$8,700 in the first year after graduation and a more than \$10,000 increase in median earnings across the 20-year cohort — and were at least three times more likely to feel their education helped them achieve their goals, was worth the cost, and had a positive impact on their career and life.

03 **Development of distinct skills was associated with distinct elements of post-completion value.**

For example, the skills most positively associated with higher earnings were quantitative skills and critical thinking or problem-solving. The skills most positively associated with life impact were leadership, critical thinking, the ability to learn new things, and creativity.

04 **Students gain key skills both inside and outside the classroom.**

Certain skills, such as critical thinking and math, are closely associated with particular majors. Other skills, such as leadership and verbal communication, are not associated with particular majors, but rather with community engagement, volunteering, and other extracurricular activities.

05 **Skill development provides benefits for everyone — but not equally.**

Strong skill development is associated with similar benefits in noneconomic outcomes across race, gender, and first-generation status, and similar economic benefits for men and women. However, skill development does not appear to be associated with income gains for Black alum

RECOMMENDATIONS

- **Measure, and aim to improve, outcomes beyond completion.**

Our concept of student success must extend beyond the completion of a degree or credential to the career and life benefits that alumni are getting from their education. Clear outcomes data on metrics such as employment, earnings, and the extent to which students' purpose for their education was fulfilled may counteract the decline in confidence in the value of postsecondary education. These data, in turn, can generate insights that help institutions improve student outcomes across multiple dimensions.

- **Set skill development as a key goal.**

To help students get the most from their education, educators can consider a focus on skills as key learning outcomes. Rather than exclusive focus on time in class or credit hours, educators should ensure that students are developing the capabilities they will need to succeed after graduation. Mastery of general skills, such as critical thinking and problem-solving, communication, and leadership, may not be attained through undergraduate general education, nor easily bolted on with a simple soft skills workshop. These skills should be designed into the curriculum and co-curricular activities, assessed, and made explicit to students so they can better understand how their learning relates to key competencies that will benefit them in their career and life.

- **Identify high-value skills.**

Agility and adaptability will help institutions embed the skills most valuable for their students' labor market success, in addition to the durable abilities that have served bachelor's graduates well over time. General skills that colleges always have specialized in, such as critical thinking and problem-solving, are both evergreen and increasingly valuable as these human skills provide an essential complement to technology. Newer industry-specific skills are constantly changing and vary significantly by industry and geography, so regular engagement with employers is helpful to ensure alignment. Development of general and specialized skills need not be in conflict — students will be best served by being both broadly educated and specifically skilled.

- **Ensure access to experiences that produce valuable skills.**

There is good evidence for practices inside and outside the classroom that are linked to developing valuable skills, including project-based learning, work-based learning, and engagement with campus or community-based activities such as clubs or volunteering. Unfortunately, some students face greater barriers to accessing these experiences. Students who need to work to pay for school or take care of family members may not be able to hold an internship, join a club, or volunteer. Colleges and universities can target powerful learning experiences to students who face the greatest barriers and embed value and critical skills into the experiences in which they already are engaged. One key for many students who are balancing work, family, and learning is to earn academic credit for internships and work-based learning experiences.

- **Engage employers in order to erase outcomes gaps.**

Even when students graduate from the same institution, with a degree in the same field, and gain the same set of skills and experience, we see wage differences by race and gender. Higher education can help equip students with the right experiences and skills to succeed, but colleges alone cannot close earnings gaps. Employers can help by addressing their recruiting, screening, hiring, and compensation practices to ensure they are not perpetuating the systemic barriers that have inhibited equal access to career opportunity.

KEY FINDING 01

A MEANINGFUL SHARE OF BACHELOR'S DEGREE HOLDERS DO NOT FEEL THEIR EDUCATION WAS WORTH THE COST — AND OUTCOMES DIFFER BY RACE AND GENDER.

Previous Strada research has shown that students have [multiple goals for a college education](#), such as being able to financially support themselves and their families, qualifying for good jobs, advancing their career, and becoming a good role model and the best version of themselves.⁴ For this reason, we measure post-completion benefits in multiple dimensions. We measure the share of alumni who:



Feel their education helped them to achieve their goals.



Say their education was worth the cost.



Earn at least \$50,000 per year (among those employed full-time).⁵

In addition, we employ multiple indexes of value, including:



Career impact



Life impact



Career satisfaction



Financial value

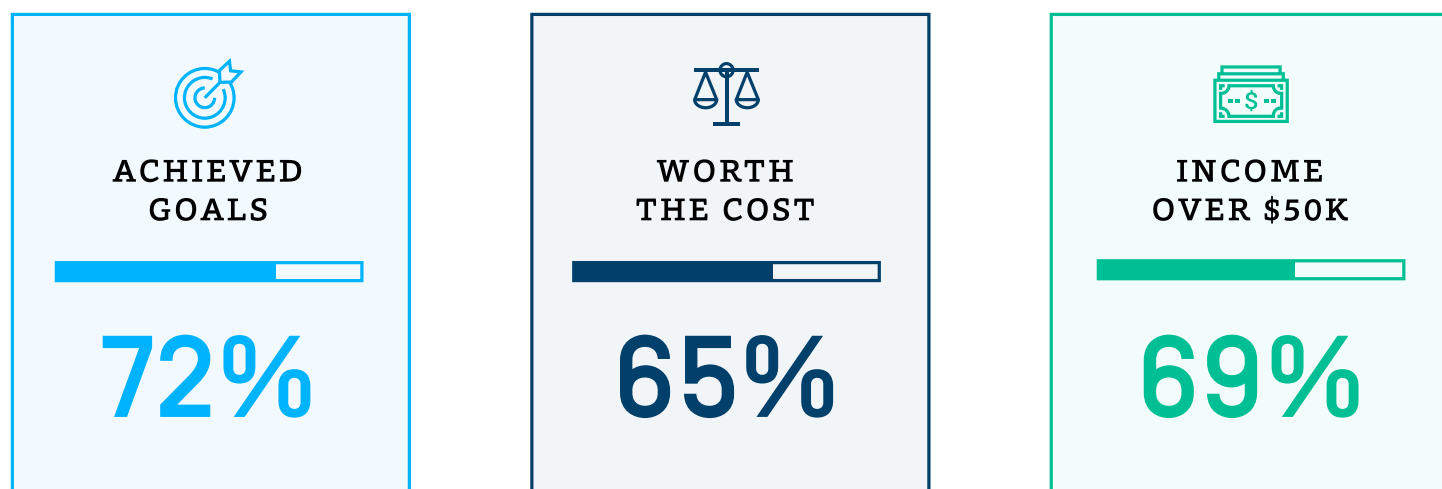


Affinity to their alma mater

This report will focus on income, perceived value, goal achievement, life impact, and career impact.

Outcomes were mixed in terms of whether students experienced the multiple dimensions of value from their education. In our survey, about three-quarters of alumni said their education helped them to achieve their goals. However, only 65 percent felt their education was worth the cost, and 69 percent of those employed full time were earning at least \$50,000 per year, as shown in Figure 1.

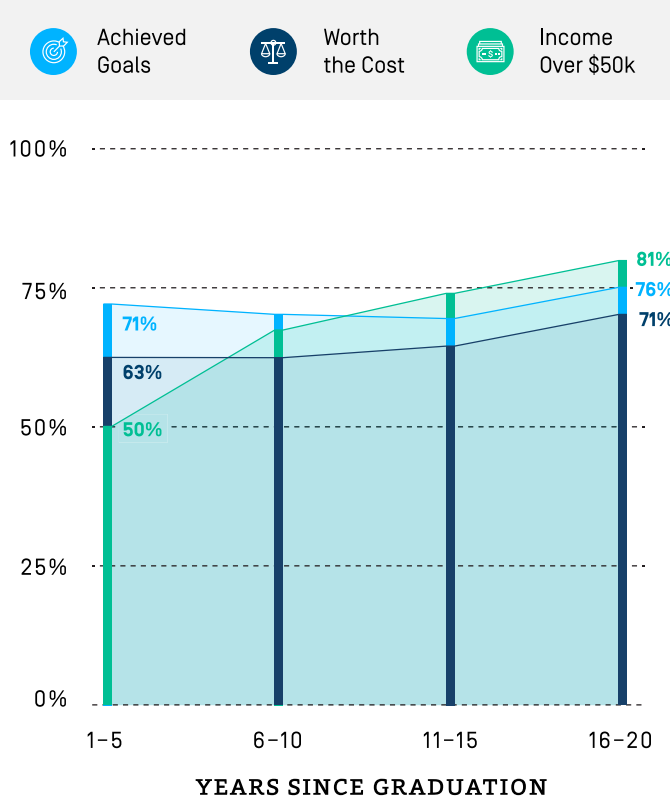
Figure 1: A framework for measuring benefits beyond completion



Source: 2022 Strada Outcomes Survey, bachelor's degree graduates 2002-2021, n=3,230. Current income is for full-time employed only.

Unsurprisingly, income was correlated with years since graduation, with about half of alumni who had graduated in the previous five years earning \$50,000 or above, but 4 out of 5 alumni who graduated 16 to 20 years ago meeting that threshold. Assessments of goal achievement and cost value were more stable across alumni from different graduation cohorts, as shown in Figure 2.

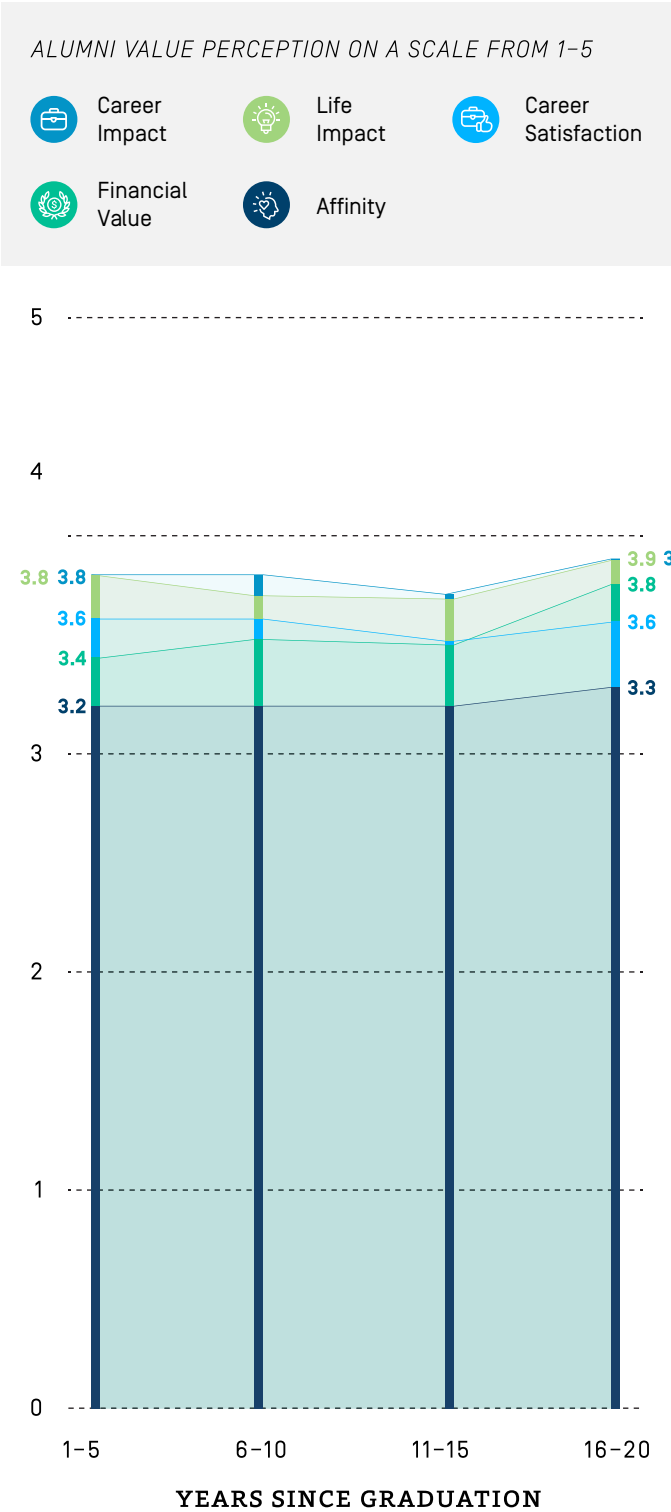
Figure 2: Share of alumni who meet measures of post-completion success



Source: 2022 Strada Outcomes Survey, bachelor's degree graduates 2002-2021, n=3,230. Current income is for full-time employed only.

The career impact, life impact, career satisfaction, financial value, and affinity indexes are also quite stable across graduation cohorts, as shown in Figure 3. On a scale of 1 to 5, the average score for both life impact and career impact was 3.7, with a median of 3.6 and 3.8, respectively, indicating that fewer than half of alumni gave average ratings of 4 or 5 for the underlying questions. [See appendix for questions in each index.]

Figure 3: Average score on indexes of post-completion success

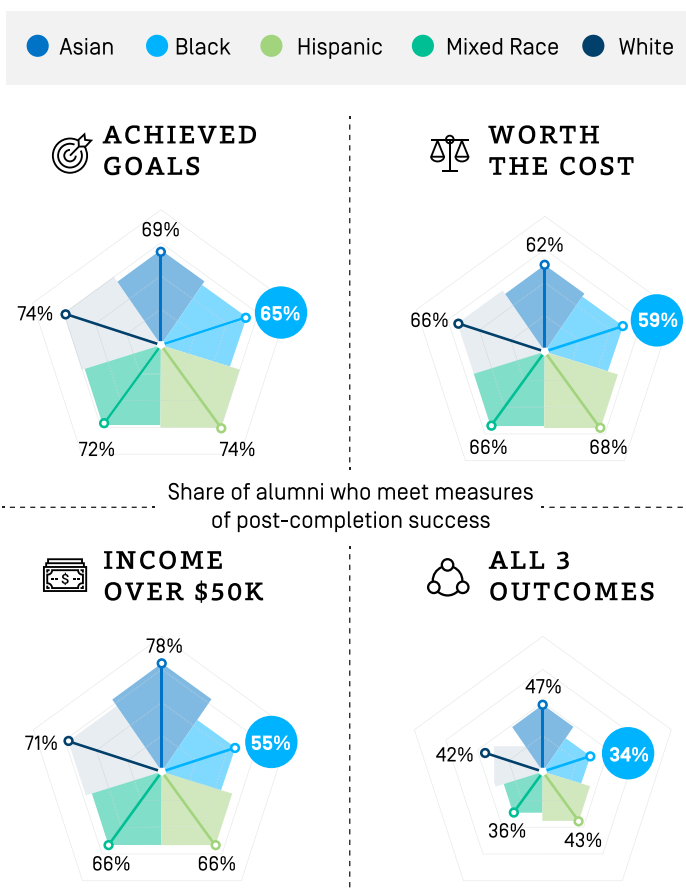


Source: 2022 Strada Outcomes Survey, bachelor's degree graduates 2002-2021, n=3,230. Current income is for full-time employed only.

Unfortunately, post-completion outcomes are systemically worse for certain populations. Black alumni are least likely to experience economic and noneconomic benefits. This includes all of the following: earning at least \$50,000 per year, feeling their education helped them to achieve their goals, and feeling their education was worth the cost, as shown in Figure 4. Similarly, first-generation students are substantially less likely than those with college-educated parents to be satisfied with their education and earn above \$50,000 per year, as shown in Figure 5. Finally, women are less likely to be earning a family-sustaining wage compared to men, as shown in Figure 6.

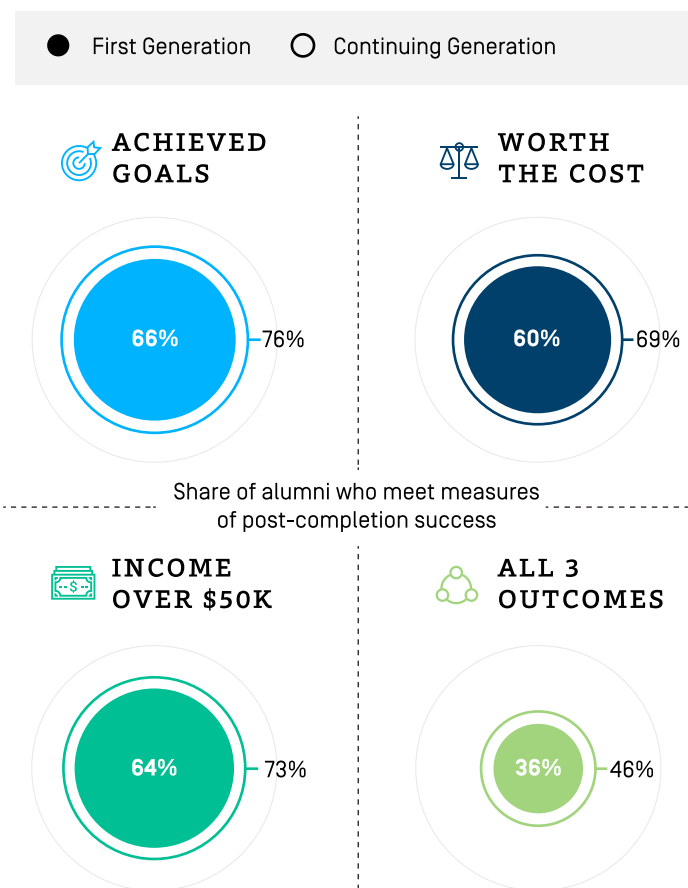


Figure 4: Post-completion outcomes by race and ethnicity



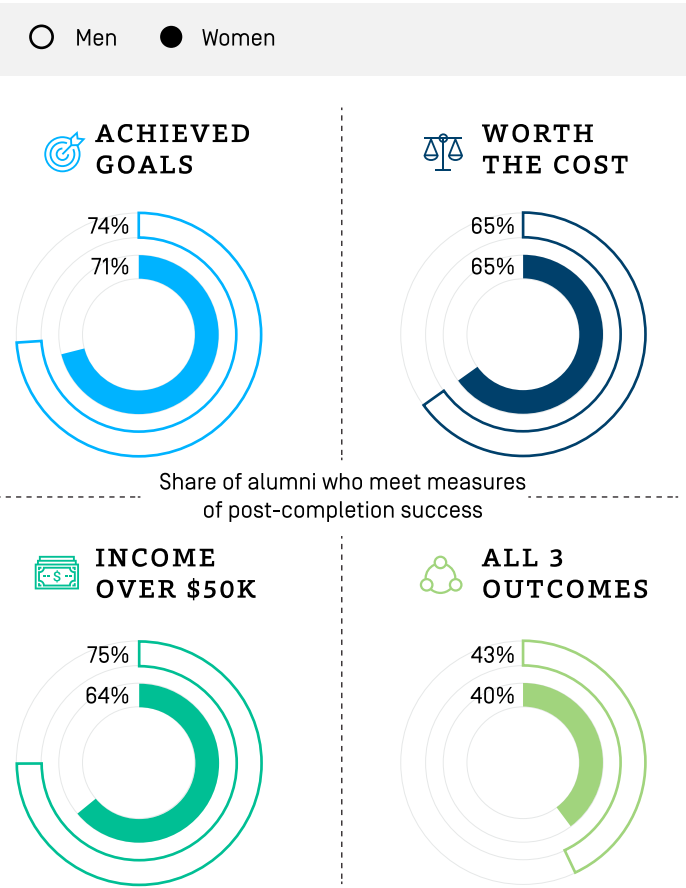
Source: 2022 Strada Outcomes Survey, bachelor's degree graduates 2002-2021, n=3,230. Current income is for full-time employed only.

Figure 5: Post-completion outcomes by first-generation status



Source: 2022 Strada Outcomes Survey, bachelor's degree graduates 2002-2021, n=3,230. Current income is for full-time employed only.

Figure 6: Post-completion outcomes by gender



Source: 2022 Strada Outcomes Survey, bachelor's degree graduates 2002-2021, n=3,230. Current income is for full-time employed only.

When we look at the indexes of career and life impact, we also see gaps. First-generation alumni report less positive career and life benefits. Women and Black alumni report life benefits on par with the average across all groups, but report lower career benefits.

STRADA RECOMMENDATION:

Measure, and aim to improve, outcomes beyond completion.

These disparate outcomes illustrate that our concept of student success must extend beyond the completion of a degree or credential to focus on the career and life benefits that alumni are getting from their education. After nearly five decades focused on access and two decades focused on completion, higher education leaders increasingly are recognizing the need to look beyond completion to assess how well they are serving their students. Using clear outcomes data on metrics, such as employment, earnings, and the extent to which students' purpose for their education was fulfilled, can help institutions better understand and communicate the value of a postsecondary education. Clear outcomes data also will enable further research on the factors associated with post-graduation benefits to give practitioners and policymakers the insights they need to help more students realize the full promise and value of their education.

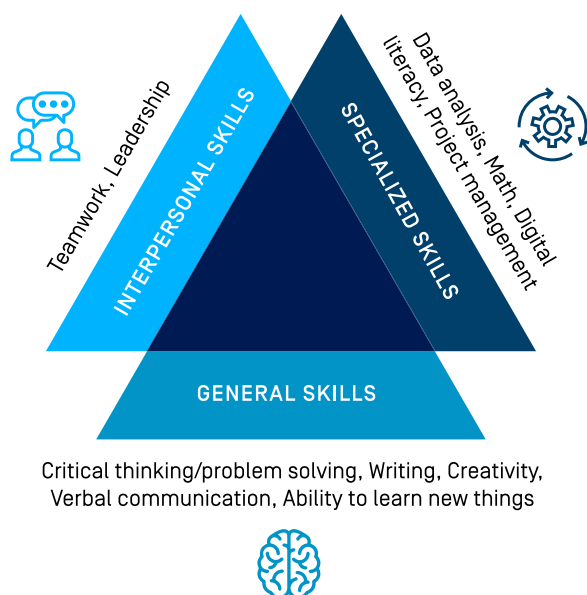
KEY FINDING 02

DEVELOPING A KEY SET OF SKILLS, INCLUDING BOTH GENERAL AND SPECIALIZED ELEMENTS, IS STRONGLY ASSOCIATED WITH ECONOMIC AND NONECONOMIC BENEFITS.

What can colleges and universities do to help their students experience both economic and noneconomic benefits of education? To examine the factors most closely associated with positive post-completion outcomes, we ran a series of regression models to control for variables known to be associated with differences in earnings, including field of study, additional education, years of experience, gender, race and ethnicity, and first-generation status.

Building upon the [2021 Strada Outcomes Survey report](#), we included as predictors academic experiences, community experiences, and career experiences, with the new addition of students' self-assessed skill development across 11 key skills. The 11 skills were drawn from the most in-demand skills for employers according to job postings reviewed by Emsi (now Lightcast) as well as key skills identified by higher education partners and alumni, and overlap with skills identified in both the National Association of Colleges and Employers competencies and the American Association of Colleges and Universities Essential Learning Outcomes. When using factor analysis, these skills clustered into three groups, as shown in the table below:

Table 1. In-demand skills



Although these distinct factors were revealed, it turned out to be not any one of these factors in particular, but rather a high overall average across the factors, which was associated with stronger student outcomes beyond completion. High overall skill development had the strongest and most consistent relationship with all the economic and noneconomic outcomes we examined. With skill development on a scale of 1 to 5, averaged across the 11 skills, the highest level of skill development was associated with an \$8,700 higher median income in the first year after graduation, and more than \$10,000 higher median income across the 20-year cohort overall, as shown in Table 2. Beyond median earnings, high skill development also boosted alumni's chances of being in the top two income quintiles by about 20 to 30 percentage points.

Table 2: Predicted income differences associated with alumni perceptions of skill development

FROM LOW SKILL TO HIGH SKILL DEVELOPMENT

● First-year Income ○ Current Income

PREDICTED DIFFERENCE IN MEDIAN INCOME

+\$8,672

+\$10,308

PREDICTED INCREASE IN PROBABILITY OF BEING IN THE TOP 2 INCOME QUINTILES

+19 PP

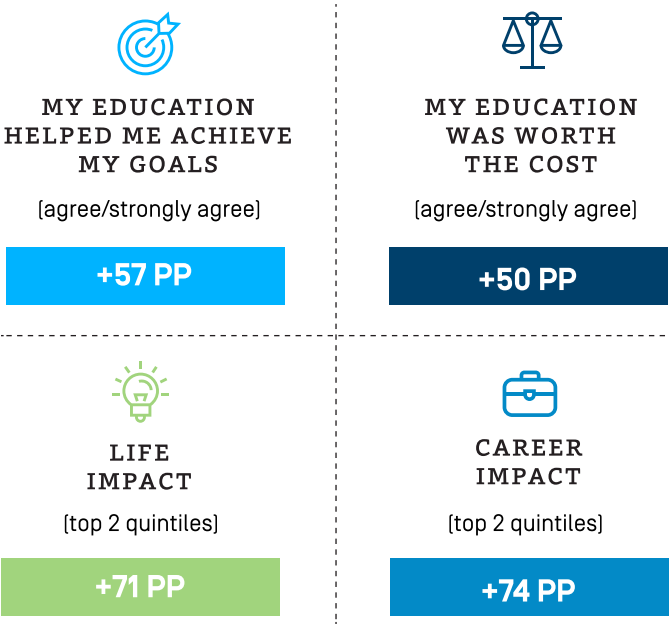
+29 PP

Control variables: Race, gender, generational status, field of study, academic experience, career experience, graduate education, and community experience.

Source: Strada Outcomes Survey, bachelor's degree graduates 2002-2021, n=3,230. Current income for those working full-time.

In addition, alumni who rated their skill development highly experienced a range of other benefits from their education. They are 50 percentage points more likely to say their education was worth the cost and 57 percentage points more likely to say their education helped them to achieve their goals, compared to alumni who rated their skill development as low, as shown in Table 3 and Figure 7. They are also substantially more likely to be in the top two quintiles for career and life impact (a boost of 74 and 71 percentage points, respectively) as shown in Figure 8.

Table 3: Predicted value increase associated with alumni perceptions of skill development



Control variables: Race, gender, generational status, field of study, academic experience, career experience, graduate education, and community experience.
Source: 2022 Strada Outcomes Survey, bachelor's degree graduates 2002-2021, n=3,230.

Figure 7: Skill development, goal achievement, and cost value

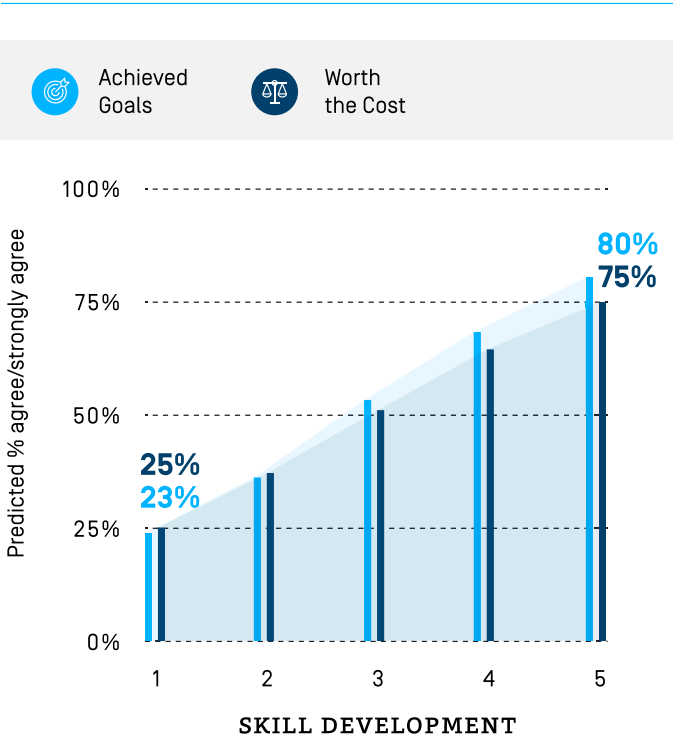
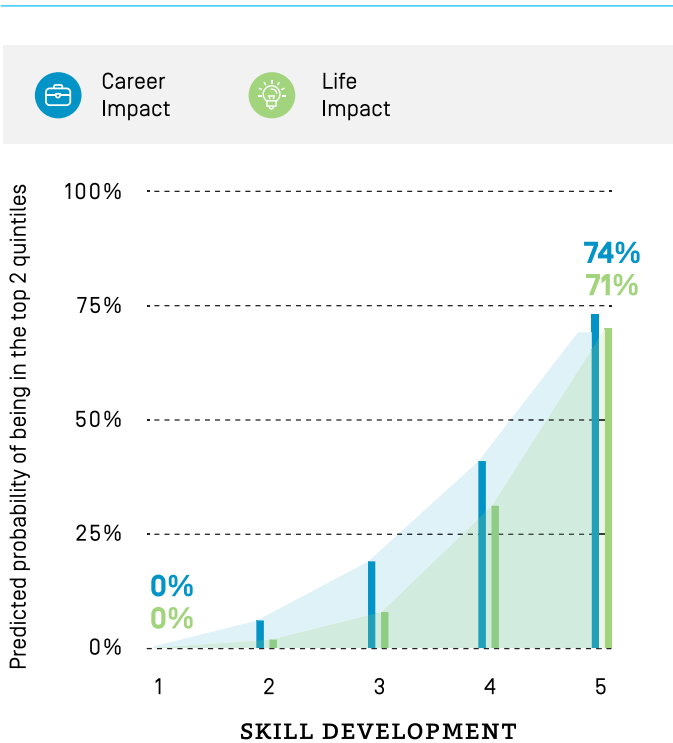


Figure 8: Skill development and career and life impact





STRADA RECOMMENDATION:

Set skill development as a key goal.

The importance of acquiring skills is evident in the labor market, as employers are dropping degree requirements but increasing skill requirements.⁶ A body of recent research has shown that general skills, such as problem-solving and communication, are increasingly economically valuable,⁷ yet these skills are difficult to measure.⁸ Helpful frameworks do exist, such as the National Institute for Learning Outcomes Assessment Degree Qualifications Profile or the American Association of Colleges and Universities VALUE rubrics,⁹ but skills acquisition is still not clear enough to students and employers.¹⁰

Part of the difficulty lies in the lack of universal definitions and language around skills, which is complicated by the fact that competence in “communication” or “critical thinking” may look very different according to contextual factors such as industry and geography. Therefore, supporting students in opportunities to practice skills in context, both inside and outside the classroom, is key to their development.¹¹ Examples of ways that students can apply and practice skills include active and project-based learning, undergraduate research, service learning, internships, campus clubs, and volunteering.¹² In order to promote these best practices in the classroom, institutions can provide faculty with the needed training and support. Faculty could benefit from additional professional development and support around instructional design, especially in discipline-specific contexts.

Furthermore, institutions can help faculty better communicate to students the skills that already are built into their coursework and experiences. Often, faculty are intentional about building in opportunities for students to develop certain skills, but these intentions may not be explicit to students. Some institutions are experimenting with tagging skills to particular assignments to help students create a digital portfolio or creating transcript distinctions, badges, or other credentials to document skill mastery. Finding ways to track and document career and life-relevant skills can help to motivate students and allow them to better communicate their qualifications.

Efforts like these represent an important mindset shift from exclusive focus on number of courses or credit hours to more learner-centered metrics, such as whether students acquired competencies or developed certain abilities. This perspective is not new, with its roots in the foundational writings of Dewey and Bloom,¹³ but higher education can still benefit from refocusing on education as a means not primarily to fill students with knowledge, but rather to equip them with the capabilities and confidence they need to thrive in their careers and lives.











KEY FINDING 03

DEVELOPMENT OF DISTINCT SKILLS WAS ASSOCIATED WITH DISTINCT ELEMENTS OF POST-COMPLETION VALUE.

Even among these skills identified as valuable by employers and educators, not all skills are created equal. These data allow us to break down the list of skills on which alumni rated themselves, revealing that certain skills are more closely tied with earnings benefits, others with life benefits, and some with both. Table 4 shows which skills have a statistically significant and positive relationship with each of the post-completion outcomes.

The skills most positively associated with higher earnings were quantitative skills, critical thinking or problem-solving, and verbal communication. The skills most positively associated with life impact were leadership, critical thinking, the ability to learn new things, and creativity. The skills that were associated with the greatest number of beyond-completion outcomes were critical thinking/problem-solving, math, leadership, and the ability to learn new things.

Table 4. Skills associated with improved outcomes

		 ACHIEVED GOALS	 WORTH THE COST	 CAREER IMPACT	 LIFE IMPACT	 FIRST-YEAR INCOME	 CURRENT INCOME
	CRITICAL THINKING	+	+	+	+		+
	WRITING		+		+		
	CREATIVITY				+		
	VERBAL COMMUNICATION			+		+	
	LEARN NEW THINGS	+	+	+	+		
	TEAMWORK			+	+		
	LEADERSHIP	+	+	+	+		
	DATA ANALYSIS & STATS			+	+		+
	DIGITAL LITERACY						
	MATH		+	+	+	+	+
	PROJECT MANAGEMENT						

Source: 2022 Strada Outcomes Survey, bachelor's degree graduates 2002-2021, n=3,230.



STRADA RECOMMENDATION:

Identify high-value skills.

In order for higher education to provide the best value for students, it ought to 1) excel at providing the evergreen skills that higher education was designed to instill, such as critical thinking, communication, quantitative skills, and the ability to learn new things; and 2) be dynamic and responsive to a changing world by identifying the most valuable specialized skills for students in specific industries and geographies. General skills will always hold value, but they can be enhanced by adding industry-relevant competencies to give students a foothold in a career trajectory as soon as they graduate. Higher education institutions and employers can engage and align with one another to ensure students are being equipped with the skills they need to succeed right out of the gate.

KEY FINDING 04

STUDENTS GAIN KEY SKILLS BOTH INSIDE AND OUTSIDE THE CLASSROOM.

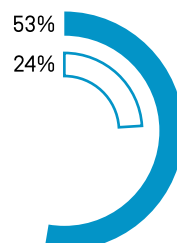
Are skills simply proxies for majors, or are there other types of experiences or practices related to skill development? These data give us the opportunity to go beyond degrees as proxies for skills and examine the relationship between fields of study and the skills students say they obtained. In some cases, there is a good match. Unsurprisingly, math skills are closely associated with quantitative majors. However, other skills, such as leadership and verbal communication, are not associated with particular majors. Instead, we see differences by participation in community engagement, volunteering, and other extracurricular activities, as shown in Figure 9. For example, students who participated in campus leadership and volunteering were nearly 30 percentage points more likely than those who did not participate to say they had developed their leadership skills quite a bit or a great deal. For community engagement and off-campus volunteering, the difference was 20 percentage points; for sports, clubs, and social groups, 18 percentage points; and for paid internships, there was a 12 percentage-point difference in self-assessed leadership skills between participants and nonparticipants.

Figure 9: Development of leadership skills, by extracurricular activities

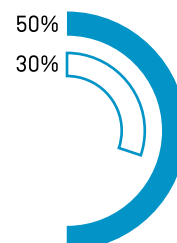
DEVELOPMENT OF LEADERSHIP SKILLS BY EXTRACURRICULAR ACTIVITIES

● Participated ○ Did not participate

CAMPUS LEADERSHIP & VOLUNTEERING

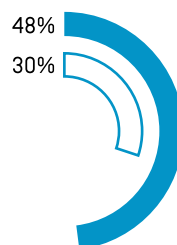


COMMUNITY ENGAGEMENT & VOLUNTEERING

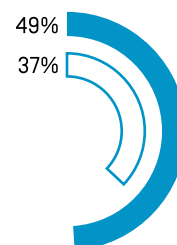


Leadership developed
“quite a bit” or a “great deal”

SPORTS, CLUBS, & SOCIAL GROUPS



PAID INTERNSHIP



Source: 2022 Strada Outcomes Survey, bachelor's degree graduates 2002-2021, n=3,230.



STRADA RECOMMENDATION:

Ensure access to experiences that produce valuable skills.

Participation is uneven across demographic groups for curricular and co-curricular activities that deliver valuable skills.¹⁴ Women, underrepresented minorities, and first-generation students are less likely to major in fields that deliver quantitative skills. Sixty-five percent of recent economics Ph.D. graduates have at least one parent with a graduate degree, and only 14 percent are first-generation college students.¹⁵ At the bachelor's degree level, only 32 percent of economics degrees between 2008 and 2018 were awarded to women, and women and underrepresented minorities trail in the share of degrees in other quantitative and high-earning fields, such as mathematics and statistics, engineering, and computer science, as shown in Table 5.¹⁶ This underrepresentation is rooted in a variety of causes that begin before and extend beyond students' undergraduate education, but there are promising approaches to encouraging greater diversity in these fields, including targeted recruitment, student support at the program level, particularly during introductory courses,¹⁷ creation of more inclusive cultures within the field,¹⁸ and diversifying faculty.¹⁹

Second, low-income and first-generation students who may need to work and support families are less likely to be able to participate in extracurricular activities associated with skill development. Similarly, access to valuable work-based learning experiences, such as [paid internships](#), is lower for women and underrepresented minorities.²⁰ If higher education is to do more than simply "[xerox privilege](#)," it is important to ensure that skill-building coursework and opportunities to build skills outside of class are accessible to all students. This includes embedding high-impact practices into the activities students already participate in, such as required coursework, advising, or student work experiences, and allowing students to earn academic credit for internships and work-based learning experiences.

Finally, improving access to skill development will require grappling with higher education's structural inequalities, including differential access to financial resources for institutions that primarily serve Black and Latino students, and whether and how colleges create engaging and culturally affirming campus environments,^{21,22} including addressing imposter syndrome and cultural biases within certain disciplines and professions.²³

Table 5. Share of STEM degrees, 2008-2018

	Share of degrees awarded to:		
	To women	To Hispanics or Latinos	To Blacks or African Americans
Mathematics & Statistics	42%	11%	4%
Engineering	28%	12%	5%
Computer Science	20%	11%	9%





Source: National Center for Science and Engineering Statistics.

KEY FINDING 05

SKILL DEVELOPMENT PROVIDES BENEFITS FOR EVERYONE — BUT NOT EQUALLY.

We've seen that access to skill-building curricular and co-curricular experiences is unequal. But are the benefits of skill-building equal for all groups? For noneconomic outcomes, we find that strong skill development is associated with similar benefits across race, gender, and first-generation status, as shown in Table 6.

Table 6. Predicted value boost associated with alumni perceptions of skill development, by demographic group

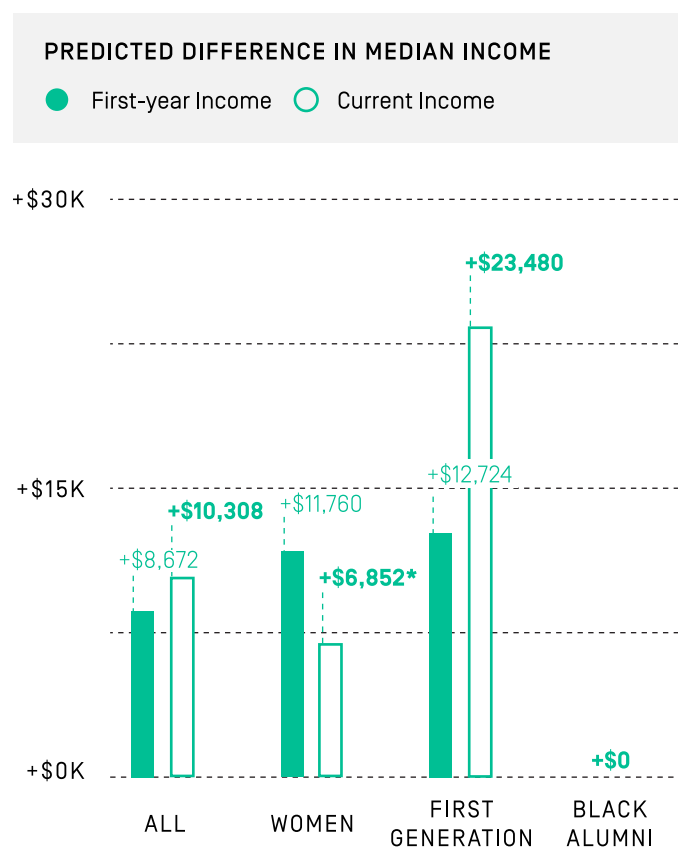
	All	Women	First Generation	Black Alumni
 Achieve my goals	+50 PP	+45 PP	+53 PP	+50 PP
 Worth the cost	+57 PP	+57 PP	+46 PP	+61 PP
 Life impact	+74 PP	+63 PP	+61 PP	+74 PP
 Career impact	+71 PP	+66 PP	+68 PP	+82 PP

Control variables: Race, gender, generational status, field of study, academic experience, career experience, graduate education, and community experience.

Source: 2022 Strada Outcomes Survey, bachelor's degree graduates 2002-2021, n=3,230.

When it comes to economic outcomes, the benefits of skill development are not equal. First-generation students see above-average benefits from strong skill development, but, even after controlling for field of study and co-curricular experiences, women see lower-than-average benefits, and Black alumni do not see any statistically significant economic benefits from skill development, as shown in Table 7.

Table 7. Predicted income boost associated with alumni perceptions of skill development, by demographic group



Control variables: Race, gender, generational status, field of study, academic experience, career experience, graduate education, and community experience.

Source: 2022 Strada Outcomes Survey, bachelor's degree graduates 2002-2021, n=3,230. Current income is for full-time employed only. *p=0.1



STRADA RECOMMENDATION:

Engage employers to help erase outcomes gaps.

It is striking that the predicted income boost associated with skills is substantially smaller for women and nonexistent for Black alumni. Colleges and universities have substantial responsibility to ensure that their students are prepared to succeed beyond completion, but on their own, their power to shape certain outcomes is limited. Employers also have a role to play to ensure their recruiting practices are reaching students in an equitable way, and their hiring and compensation patterns are unbiased. Some universities have taken a proactive stance in requiring employers to agree to a set of practices and principles in order to recruit their students. And some employers have committed to hire diverse talent, particularly in fields in which diversity historically has been lacking. More research should be done to uncover and highlight successful examples of employer partnerships and how these partnerships can contribute to stronger and more equitable success beyond completion.



A RESEARCH AGENDA FOR OUTCOMES BEYOND COMPLETION

Previous Strada research has highlighted institutional performance gaps related to equity in student outcomes beyond completion, as well as the strong relationship between career-connected experiences and positive financial and nonfinancial outcomes for students.²⁴ In particular, we found that participation in paid internships was predictive of both higher earnings and goal achievement, though access to these work-based learning experiences was uneven.²⁵ This report expands upon the 2021 report by including skill development as a predictor alongside academic, community, and career-related experiences. These results suggest skills may be the mechanism by which career-connected experiences lead to better outcomes.

The findings suggest several lines of further inquiry and research. The first would be a deeper analysis of the links among skills, experiences, and outcomes, and whether these connections operate differently by race, gender, or first-generation status. An additional line of inquiry would be to examine other potential mediating variables between the student experience and post-completion outcomes, such as the development of social capital.

Another line of research would be to dig deeper into skills measurement. One step would be to compare self-assessed skill development with more objective assessments of skills or with employer perceptions. Another would be to further explore the differing meaning and value of skills by industry and geography.

Additionally, there is research to be done about institutional context. A comparative look across institutions could reveal top performers and lead to potential case studies. An expansion to look at associate degree recipients or completers of nondegree credentials could be instructive for understanding how the relationship between learner experiences and outcomes may be consistent or differ across types of credentials and institutions.

Finally, it will be important to track outcomes beyond completion over time. Just as we have a sense of whether enrollments are increasing or declining and whether completion rates are rising or falling, we need to know how the outcomes students experience after completion may be changing for the better or the worse in order to set goals and measure progress.

CONCLUSION

The findings in this study are meant to add to the ongoing conversation about how to ensure higher education fulfills its promise of value to all students. This includes rethinking what we mean by student success to include outcomes beyond completion and focusing on developing both specialized and general skills, which are linked to economic and noneconomic benefits. Key tools here are supporting faculty to expand work-integrated and active learning and embedding these practices in universal student experiences both inside and outside the classroom. This work cannot be done by higher education alone, but depends on cross-sector partnership and a shared sense of responsibility. By building on the existing strengths of higher education and being nimble and adaptive to changes over time and by geography, this collaborative approach will lead us toward a future in which more students realize their aspirations and are confident in the value of their education.

View this report online at stradaeducation.org/report/pv-release-Nov-16-2022/.



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Strada Education Network is a nonprofit organization dedicated to helping people take advantage of education and training after high school that helps them secure a good job, do meaningful work, contribute to their communities, and lead a fulfilling life. We believe education and training after high school have the potential to be the most powerful and equitable ways to help all people thrive in their careers and lives. To help students succeed beyond completion of a certificate or degree, we conduct research, make charitable grants and social impact investments, and support Strada Collaborative, which directly serves students and workers. Learn more at stradaeducation.org.