

Workforce Skills & Afterschool

The afterschool and summer learning field has long been equipping youth with transferable employability skills, and providing access to work-based learning opportunities for trade and discipline specific skill development. These programs are helping to close the gaps that exist between the skills and competencies students possess and the needs of employers—which range from communication and problem-solving skills to proficient technical skills. Afterschool programs are also connecting students to the workforce in other ways, such as helping them discover new interests and professions they may never have considered entering into and providing real-world work opportunities to help them reach their career aspirations.

What Afterschool Provides for Workforce Development

Afterschool and summer learning programs play an integral role readying students for their career pathways; not only helping them develop the foundational skills that are critical across the different contexts of their lives, but providing them with opportunities that stretch their ideas of what is possible and of what they are capable. Programs introduce students to diverse career fields, teaching them about the array of jobs within each field and connecting them to internships and apprenticeships. Afterschool and summer learning programs are making sure that all students, regardless of their zip code, receive the supports that will follow them from school to the workforce, as they make the transition into successful adults.

Afterschool programs build foundational skills integral to success in the workplace.

For over a decade employers have reported that communication, teamwork and collaboration, and critical thinking and problem solving are among the most important skills for their workforce, but are difficult to find in potential and current employees¹. Afterschool programs provide a ladder of supports that help students reach their career aspirations. Many informal learning spaces across the country, such as science centers and museums, offer **sustained skills development** and **pathways to STEM careers** through youth enrichment-to-employment programs that serve students in their time outside the classroom. These programs result in participants achieving high levels of high-school graduation and college enrollment. Please see the table below for details on one such program out of the New York Hall of Science.

Building students' workforce competencies is typically associated with programming for older youth, especially by connecting them to internships and apprenticeships, but preparing students for the workforce begins much earlier. While workforce experience for older youth is at the top of the ladder of supports, there are intermediary rungs that students as early as elementary school can reach. For instance, afterschool programs serving younger students often work with students on their communication and teamwork skills, the foundational skills employers desire in their future hires. The flexible nature of afterschool programs also lend themselves to expose students to the wide spectrum

of career fields, from introducing students to a potential new interest to taking students on field trips to local businesses to learn more about that field.

Afterschool programs provide real-world work experiences.

Connecting students to work experiences through activities such as internships, and preparing students for the work through developing job-seeking skills, are valuable opportunities afterschool and summer learning programs can provide to help students succeed in the workforce. They help students build familiarity with and capabilities in the workforce. Research has found that the benefits associated with early work experience include less time unemployed and higher hourly wages and annual earnings^{2,3}. In a 21st century economy, more and more jobs are deeply technology enabled and integrate historically discrete disciplines and skills. Almost all 113 CEOs surveyed for a Business Roundtable and Change the Equation report said that skills shortages was a problem for their companies and close to 4 in 10 companies said that at least half of their entry-level applicants lacked basic STEM skills⁴.

Afterschool is changing that. Across the nation nearly 70% of parents report that their kids have access to STEM learning in their afterschool or summer program⁵. A recent national study of 160 high quality afterschool STEM programs shows how effective these programs can be. More than 70% of students across all states reported positive gains in areas of STEM interest, STEM identity, STEM career interest and career knowledge, and 21st-century skills, including perseverance and critical thinking. 80% of said their STEM career knowledge increased because of their afterschool experience⁶.

Interest, identity, and understanding are all fostered and reinforced in out-of-school time settings⁷. Interest breeds interest, and students who participate in afterschool and summer STEM and work based learning programs seek more opportunities to engage, sparking lifelong curiosity and persistence in the STEM fields^{8,9}. Fueled by enthusiastic educators, and grounded in youth development principles such as student leadership, civic engagement, and positive adult relationships, out-of-school time programs are an essential component of strong learning ecosystems and workforce preparedness efforts. There are many examples of afterschool programs ushering kids into lucrative trades. For example, Colby from Alabama is pursuing a career as an electrician, an interest he discovered while installing solar panels on local homes through his work-based afterschool program; Colby is just one story of how afterschool works for workforce development¹⁰.

Afterschool programs reach targeted populations.

Afterschool programs serve high numbers of young people from low-income and racially marginalized communities and can therefore play a key role in reaching the demographics often targeted by efforts to broaden participation in good-paying careers, and helping retain local workforces⁵. Combined with approaches intended to be engaging and responsive to young people's needs and interests, afterschool and summer learning programs can be particularly powerful in ensuring that diverse groups of youth experience positive personal growth, increase career awareness, and have ample opportunity to develop in demand employability skills¹¹.

What Afterschool Needs to Scale Workforce Development Efforts

Out-of-school time learning professionals constantly develop innovative cross-sector partnerships and braid federal, state, local, and private investments to support these important career focused opportunities for youth across the nation. These strategies hinge on fruitful partnerships with businesses of all sizes. While these businesses may or may not have registered apprenticeship programs to which youth may matriculate, these partnerships are fulfilling key goals of pre-

apprenticeship programs, preparing participants to enter and succeed in a variety middle and high skilled career sectors and industry recognized training programs.

Increased Partnerships with Business

Afterschool STEM Hub members and afterschool programs across the nation partner with local, national, and global businesses to support programs that link youth with career development opportunities. For example, **Girls Inc. and Lockheed Martin** formed a partnership to develop and implement an interactive approach to STEM mentorship, which engages girls ages 9-12 with company professionals. Over the last five years, Lockheed Martin employees helped Girls Inc. reach more than 2000 girls at ten sites in Lockheed Martin communities, engaging girls in hands-on STEM activities, mentorship from industry professionals, and increasing their understanding of the vast potential of STEM careers.

Across the nation, one of the biggest challenges for programs offering work-based experiential learning and career exploration is identifying and sustaining internship placement sites, and recruiting and training industry professionals to engage with youth about their career path. Challenges increase as programs consider how to sustain paid work experiences, specifically.

Increased Knowledge Sharing & Flexibility in the Allowable Use of ETA Funds

While business and youth development programs have long histories of collaboration, there is a lack of awareness of if or how these communities can work together to capitalize on Department of Labor opportunities. While many business partners may have registered apprenticeship programs in various states, it is unclear how often their efforts to engage youth via afterschool and summer programs are intentionally tied to a pathway for entering their specific apprenticeship programs. While some states, such as Washington, are using their youth focused WIOA dollars to support career connected learning for middle and high school youth, the requirement that 75% of WIOA Youth dollars be spent on out-of-school youth means that fewer resources are available to engage in-school youth early and often with real world work-based learning. While a dedicated funding stream to support disconnected youth is critical, early engagement in STEM and experiential learning can lower the number of students at risk to become disconnected out-of-school youth.

Selected Workforce Oriented Afterschool Program Examples

To date, there has been no comprehensive national study as to the prevalence of formal pre-apprenticeship partnerships between afterschool programs and their business allies. However, the Afterschool STEM Hub members and other afterschool and summer programs provide work-based learning and employability training opportunities for their students across the nation. Paid or unpaid, many prepare youth to receive industry recognized credentials, high school or college credit, and to enter the workforce with in demand skills. A selection of programs that build employability skills and connections to workforce are described below. Additional program examples are available upon request.

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| North Dakota |
| Program: North Valley Extended School Project |
| Website: https://sites.google.com/a/northvalleyctc.org/nvctc/north-valley-extended-school-project |
| The North Valley Career and Technology Center offer myriad summer camp opportunities, in addition to their school year programming. Regardless the grade range, there are workforce development opportunities for all students. While the “You’re Hired! Summer Engineering Camp” for grades 5-8 focuses on career exploration and hands-on engineering concepts, the summer programs for older |

youth are all Skills USA eligible, dive deep into trade specific skills, and have the potential to lead to industry recognized certifications and postsecondary credits. Programs include but are not limited to **welding, automotive technology, health services and nursing**, and modern business technology.

| Statistics | | | | | | |
|---|----------|--------------------------|--------------|----------|------------|----------------------|
| Not Available | | | | | | |
| Credit/Credential | For Pay | 21 st CCLC \$ | Other Fed \$ | State \$ | Private \$ | (pre) apprenticeship |
| <ul style="list-style-type: none"> ● HS CTE Credit ● Industry certification and test prep possible ASE, CNA, AWS ● May articulate credits to relevant postsecondary programs | possible | yes | unknown | yes | yes | Unknown |

| Maryland | | | | | | |
|---|---------|--------------------------|--------------|----------|------------|----------------------|
| Program: Digital Harbor Foundation | | | | | | |
| Website: http://www.digitalharbor.org/2017/01/dhf-college-credit/ | | | | | | |
| Digital Harbor Foundation, in partnership with the Community College of Baltimore County, offers college credit to high school youth enrolled in its afterschool program. The courses offered as part of this program are focused on Digital Fabrication, including advanced 3D printing, 2D vector design for laser cutting, and CNC milling. Upon completion of the afterschool courses and accompanying requirements, high school youth are eligible to earn 3 college credits equivalent to the College's DFAB101 course, which is part of the Associate of Applied Science degree. | | | | | | |
| Statistics | | | | | | |
| Began in 2016 | | | | | | |
| <ul style="list-style-type: none"> ● 43% of inaugural participants received college credit | | | | | | |
| Credit/Credential | For Pay | 21 st CCLC \$ | Other Fed \$ | State \$ | Private \$ | (pre) apprenticeship |
| Yes | No | No | Yes NSF | Yes | Yes | No |

| California: | | | | | | |
|---|---------|--------------------------|--------------|-----------------|-------------------------------|----------------------|
| Afterschool and summer programs are key partners in CA's education ecosystem, including the "linked-learning" effort. These programs are especially well suited to support the 3 rd and 4 th pillars of linked-learning, work-based learning , and personalized student supports. | | | | | | |
| Program: Think Together | | | | | | |
| Website: https://thinktogether.org/about/ | | | | | | |
| The Workforce Readiness Education Program (WREP) provides youth with a pathway toward self-sufficiency through academic support, workforce preparation, internships, certification, and enrollment in post-secondary education. Students first take a sequence of 7 classes afterschool focused on employability skills, and are then placed in a 10-week internship/work-based learning opportunity. Students work 2 days per week for 2 hours per day; once a week, students participate in THINK's academic support program for continued training. After 90 hours, students can earn 5 CTE credits. Since 2013, WREP has provided 250 internships across 3 counties and 4 school districts. | | | | | | |
| Statistics | | | | | | |
| <ul style="list-style-type: none"> ● Program participants increased the on-time graduation rate by 30% ● 96.7% enrolled in college ● 51% in community college of which 44% have an intent to transfer to 4-yr | | | | | | |
| Credit/Credential | For Pay | 21 st CCLC \$ | Other Fed \$ | State \$ | Private \$ | (pre) apprenticeship |
| HS CTE credit | yes | yes | yes (varies) | Yes (CA ASSETS) | Yes (Chase & Bank of America) | Unknown |

| | | | | | | |
|--|----------------|--------------------------------|---------------------|-----------------|-------------------|-----------------------------|
| New York | | | | | | |
| Program: Science Career Ladder, NY Hall of Science | | | | | | |
| Website: https://nysci.org/learninglab/youth-development/science-career-ladder/ | | | | | | |
| High school and college students actively engage visitors at hands-on science and technology exhibits; facilitate design-based activities for families and school-based audiences in Design Lab; learn and perform science-based demonstrations; attend and participate in regularly scheduled professional development and training sessions on communication, teaching, science topics, and exhibits; and participate in career development opportunities, including workshops, field trips, networking events, and STEM Nights. | | | | | | |
| Statistics | | | | | | |
| <ul style="list-style-type: none"> • More than 3,000 students have worked in the program since 1986. • Among those, 92 percent have obtained college or advanced degrees, compared to just 39 percent for an age-comparable New York City cohort. | | | | | | |
| Credit/Credential | For Pay | 21st CCLC \$ | Other Fed \$ | State \$ | Private \$ | (pre) apprenticeship |
| No | Yes | Unknown | Unknown | Unknown | Yes | No |

| | | | | | | |
|--|----------------|--------------------------------|---------------------|-----------------|-------------------|-----------------------------|
| Minnesota | | | | | | |
| Program: Cookie Cart | | | | | | |
| Website: http://cookiecart.org/youth-program/ | | | | | | |
| A hands-on, job-training program that teaches essential employment skills. The Bakery Program takes a creative, engaged teaching approach to equip teens with fundamental job skills including: responsibility to manage their work schedule, and themselves; appropriate workplace behavior and language; collaboration to take direction from managers and work together with peers; and initiative to complete tasks and problem solve. Young people who show responsibility and initiative are promoted to Cart Captain. In this role they take leadership in directing youth employee teams, training new youth employees, and managing work assignments. Teens are able to take the National Career Readiness Certification (NCRC) issued by ACT showing prospective employers that they have the foundational skills necessary to be successful in the workplace. Additionally, Cookie Cart offers ServSafe as a certification option, which meets the standards set by the Minnesota Department of Health. | | | | | | |
| Statistics | | | | | | |
| <ul style="list-style-type: none"> • In 2016, 227 teens had their first paid job experience • 89% gained employment ready skills • 45% achieved at least 1 of 3 ServSafe industry skills certification | | | | | | |
| Credit/Credential | For Pay | 21st CCLC \$ | Other Fed \$ | State \$ | Private \$ | (pre) apprenticeship |
| <ul style="list-style-type: none"> • National Career Readiness Certificate (NCRC) • ServSafe certification | Yes | Unknown | Unknown | Unknown | yes | Unknown |

| | | | | | | |
|--|--|--|--|--|--|--|
| Minnesota | | | | | | |
| Program: STEP-UP Achieve | | | | | | |
| Website: https://www.achievempls.org/stepupachieve | | | | | | |
| STEP-UP Achieve–directed by AchieveMpls and part of the City of Minneapolis STEP-UP program–places 700 diverse and talented young people (ages 16-21) each year in paid internships with over 150 top Twin Cities employers , from Fortune 500 companies to small local businesses. One of the country’s top youth employment programs, STEP-UP is preparing tomorrow’s workforce today through work readiness training certified by the Minneapolis Regional Chamber of Commerce , meaningful paid internships, industry-recognized certifications and advanced career opportunities. The program serves youth who face some of the greatest barriers to employment, particularly youth from low income families, youth of color, and youth with disabilities. STEP-UP helps businesses identify and nurture young talent for their industries, provides youthful energy and tech savvy | | | | | | |

in the workplace, and **offers opportunities for employees to gain valuable supervisory and mentoring experience.**

Statistics

- In 2016, 750 youth obtained paid internship experience at 150 companies
- 90% of interns were from low-income families
- 73% of supervisors said if they had a job opening they would hire their intern

| Credit/Credential | For Pay | 21 st CCLC \$ | Other Fed \$ | State \$ | Private \$ | (pre) apprenticeship |
|-------------------|---------|--------------------------|--------------|----------|--|----------------------|
| Possible | Yes | Unknown | Unknown | Unknown | Yes see 2017 partner employers | Unknown |

Afterschool STEM Hub Members' Community Reach

The Afterschool STEM Hub is a collaboration among a diverse set of national education leaders and stakeholders*, who are experts in learning and engagement, and support cross-sector partnerships at the national, state, and local level. Connect with us for ideas, program examples, and research: stemhub@afterschoolalliance.org.

| Organization | Geographic Reach | Estimated # of Youth Served | Programs Reached | Affiliate Networks |
|--|------------------|-----------------------------|------------------|--------------------|
| Afterschool Alliance | National | NA | >26,000 | 50 |
| Association of Science-Technology Centers | National | 59,000 | 100+ | 400 |
| Boys & Girls Clubs of America | National | 4.3 million | 4,362 | NA |
| Every Hour Counts | National | 240,000 | 1,400 | 9 |
| ExpandEd Schools | New York | 1 million (1998-2017) | ~86 | NA |
| Girls Inc. | National | 152,000 | NA | 83 |
| National Network of Statewide Afterschool Networks | National | NA | NA | 50 |
| National 4-H Council | National | 6 million | NA | NA |
| National AfterSchool Association | National | NA | NA | 32 |
| National Girls Collaborative | National | NA | 36,000 | 33 |
| National Summer Learning Association | National | NA | NA | 34 |
| Oregon ASK | Oregon | >6,600 | >440 | NA |
| Techbridge Girls | CA, WA, DC | 14,055 | 17 | |
| Vermont Afterschool | Vermont | 12,000 | 300 | 50 |
| YMCA of the USA | National | 9 million | 2,700 | NA |

*Not all Afterschool STEM Hub members directly serve youth or youth programs. Rather, they operate in the critical roles of funding, research, and coalition building. These members include the PEAR Institute at Harvard University, STEM Education Coalition, STEM Next Opportunity Fund, Cornell Lab of Ornithology, University of Washington- Dr. Brownyn Bevan, and University of Virginia-Dr. Robert Tai.

REFERENCES

1. The Conference Board, Inc., the Partnership for 21st Century Skills, Corporate Voices for Working Families, and the Society for Human Resource Management. (2006). Are They Really Ready to Work? Employers' Perspectives on the Basic Knowledge and Applied Skills of New Entrants to the 21st Century U.S. Workforce. Retrieved from <https://files.eric.ed.gov/fulltext/ED519465.pdf>.
2. Baum, C. L. and Ruhm, C. J. (2014). The Changing Benefits of Early Work Experience. Retrieved from <http://www.nber.org/papers/w20413.pdf>.
3. Employment Policies Institute. (2014). The Lasting Benefits of Early Work Experience. Retrieved from <https://www.epionline.org/studies/the-lasting-benefits-of-early-work-experience/>.
4. The Business Roundtable and Change the Equation. (2014). Solving the Skills Gap. Retrieved from https://www.ecs.org/wp-content/uploads/Solving_the_Skills_Gap.pdf.
5. Afterschool Alliance (2014). America After 3PM: Afterschool Programs in Demand. Retrieved from http://www.afterschoolalliance.org/AA3PM/national.html#c/stem/p_of_parents_report_stem_learning_opp.
6. The PEAR Institute: Partnerships in Education and Resilience, Harvard University and IMMAP: Institute for Measurement, Methodology, Analysis & Policy, Texas Tech University. Afterschool & STEM System-Building Evaluation. Retrieved from https://docs.wixstatic.com/ugd/e45463_e14ee6fac98d405e950c66fe28de9bf8.pdf.
7. Banks, J. et. al. (2007). Learning in and out of school in diverse environments. The Learning in Informal and Formal Environments Center (LIFE) and the Center for Multicultural Education, University of Washington, Seattle. Retrieved from http://life-slc.org/docs/Banks_et-al-LIFE-Diversity-Report.pdf.
8. Bevan, B. & Michalchik, V. (2013). Where It Gets Interesting: Competing Models of STEM Learning after School. Afterschool Matters, Spring 2013. Retrieved from <https://www.niost.org/2013-Spring/where-it-gets-interesting-competing-models-of-stem-learning-after-school>.
9. Falk et al. (2016). Understanding youth STEM interest pathways in a single community: the Synergies project. International Journal of Science Education, Part B Vol. 6, Iss. 4.
10. Youth Today. (2017). 21st Century After-school Programs Connect Kids to Careers, Advocates Tell Congress. Retrieved from <https://youthtoday.org/2017/06/21st-century-after-school-programs-connect-kids-to-careers-advocates-tell-congress/><https://youthtoday.org/2017/06/21st-century-after-school-programs-connect-kids-to-careers-advocates-tell-congress/>.
11. National Research Council (2015). Identifying and Supporting Productive Programs in Out-of-School Settings. The National Academies Press. Retrieved from <https://www.nap.edu/catalog/21740/identifying-and-supporting-productive-stem-programs-in-out-of-school-settings>.