



College and Career Readiness | Research Brief

In today's swiftly changing economy, most young people will need education and career training beyond high school. Fortunately, 21st Century Community Learning Centers (21st CCLC) programs can help, by offering students engaging learning experiences that help to prepare them for the postsecondary future. Experts at the U.S. Department of Education have identified three sets of "employability" skills: applied knowledge, effective relationships and workplace skills. This brief explains what these skill sets involve and offers ideas on how to help students in your program develop the skills. For example, many sites around the country already use team projects to teach collaboration, a key skill for college and career.

When 21st CCLC and other out-of-school programs recruit children and youth, they can find it especially challenging to appeal to the middle and high school students whose current choices may help shape their future livelihoods. However, studies of programs for older students spotlight some successful models, such as in-depth theme programming, career exploration and actual work experience in the community. What's more, "scaffolding" the college- and career-ready activities builds motivation for youth to pursue learning about an interest area, such as information technology, by starting with basic hands-on practice, and, step by step, working up to such options as visits to workplaces and summer internships. This brief will share practical lessons from recent research on how to build college and career readiness skills into activities for K-12 students.

The Need for College and Career Readiness

Across the United States, the decline of low-skill jobs and the rise of information technology have made some kind of postsecondary education more important than ever. It has become a requirement for professionals in such fields as health care and education, and also in such technology-driven fields as computer programming and auto mechanics. Even in hard economic times, education beyond a high school diploma boosts the odds of landing a good-paying job and making a livable income over a lifetime.

Yet, once the world leader in college completion, the United States now lags behind many other countries, according to the Organisation for Economic Co-operation and Development. In 2014, our nation ranked 12th in college degrees among people aged 24-32, though in 1990, just a quarter century earlier, we led the world in four-year degrees among that same age group. We also face a growing gap in college attendance between our richest and poorest families (Belley & Lochner, 2007). To boost college attendance and completion, the federal government has put in place priorities and programs aimed at returning the United States to world leadership in college graduation by 2020.



College and Career Readiness | Research Brief

The Skills Needed for Tomorrow's Jobs

Today's college and high school graduates will face a job market that demands a broad range of skills. No matter what their career path or area of special knowledge, graduates will likely need both academic knowledge and "soft skills" such as problem solving, collaboration and time management. As we will later see, 21st CCLCs are uniquely poised to begin building many of these essential skills.

Beyond in-depth understanding of their given field, workers of the future will need three "buckets" of employability skills, according to the Office of Career, Technical, and Adult Education in the U.S. Department of Education: **applied knowledge**, **effective relationships** and **workplace skills**. Within each of these skill areas are other skill sets and specific skills.

The first bucket, **applied knowledge**, consists of *applied academic knowledge* and *critical thinking skills*. *Applied academic knowledge* means a person can thoughtfully put formal learning and technical know-how to work on the job. For example, it takes certain academic skills to recognize a life-threatening injury, teach a lesson on right triangles, design a dynamic website or diagnose faulty car brakes. In addition, *critical thinking skills* help a person apply a mix of analysis and resourcefulness to issues in the workplace. A person with this skill set can, for instance, make plans, decide based on facts and logic, and identify and resolve problems.

The second bucket of employability skills, **effective relationships**, includes the interpersonal skills and personal qualities that enable a person to work well with clients, colleagues and supervisors. Relevant *interpersonal skills* include the capacity to collaborate with others or work independently, as needed; communicate clearly and tactfully; project a positive outlook; and contribute to overall workplace goals. *Personal qualities* that build effective relationships range from drive and flexibility to honesty, responsibility and self-discipline. Other helpful qualities include a sense of self-worth, willingness to learn and interest in professional growth.

The third bucket of skills, known as **workplace skills**, includes the abilities people need to accomplish tasks on the job. Examples range from managing time and resources to using appropriate information technology and applying systems thinking to work issues.



College and Career Readiness | Research Brief

Tips for Building Work-Life Skills

Whether your 21st CCLC program serves elementary, middle school or high school students, you can help them connect school-day learning, college and careers. Consider these tips as starting points:

- Create a learning environment that feels like a workplace. Use project-based learning or other hands-on instruction. Have students work in teams. This teaches them to build effective relationships and apply academic knowledge from school.
- Give students a voice in the program. Encourage them to devise and carry out activities and projects. This will help them learn to manage time and resources, communicate effectively and use systems thinking to achieve goals.
- Bring on the experts. Even the best 21st CCLC staff won't have deep knowledge in every career field, so look to families and community members to enrich your program. Invite the fire chief or an arson investigator to probe the science of extinguishing and investigating fires. Ask an architect or a contractor to show how buildings are designed. Have a doctor or nurse explain how medical tests help determine what makes people sick.
- Plan for student growth. Set up your program so young people can learn at different levels. Activities can build from simple exploration (touring a workplace) to afterschool projects, then to intensive weekend or summer sessions. For students who master the basics and need more challenge, arrange internships in career fields of interest.

The Role of Out-of-School Time Programs

The federal government created the 21st CCLC program to give children — especially students from high-poverty, low-performing schools — academic enrichment during nonschool hours. Nationwide, 21st CCLC sites help students meet state and local standards in reading and math, offer activities to complement school programs, and provide participant families with literacy classes and other education. In addition, 21st CCLC sites have a role to play in building college and career readiness. For starters, the centers can help youth expand their school learning about science, technology, engineering and math (STEM); expose them to a variety of careers; and help them explore their postsecondary options. Meanwhile, resourceful 21st CCLC staff members can integrate some of the key employability skills discussed earlier into the enrichment activities they offer.

The potential for impact is tremendous. Before 21st CCLC was created, one study of 73 afterschool programs (Durlak & Weissberg, 2007) found that 5- to 18-year-old participants improved



College and Career Readiness | Research Brief

significantly in three areas: feelings and attitudes, indicators of behavioral adjustment and school performance. The authors elaborated: “More specifically, after-school programs succeeded in improving youths’ feelings of self-confidence and self-esteem, school bonding (positive feelings and attitudes toward school), positive social behaviors, school grades and achievement test scores. They also reduced problem behaviors (e.g., aggression, noncompliance and conduct problems) and drug use.”

Not all afterschool programs, however, had this kind of impact. For building skills, programs that worked took an evidence-based approach Durlak and Weissberg call SAFE: *sequenced, active, focused and explicit*. In other words, the effective programs sequenced activities with the end goal in mind, enabled young people to be active in their own learning, planned enough “focus time” to strengthen skills and clearly stated what they wanted to achieve.

Engagement of children and youth is crucial to college and career training. A study of 30 out-of-school time programs serving middle and high school youth from largely low-income families illustrates how programs can encourage career skills (Hynes, Greene, & Constance, 2012). Programs that successfully engaged youth used some mix of *career exploration, work experience* and *substantive theme programming*. For example, the study highlighted Techno Teens, a three-week summer program that trained high school students to create their own video games, with the guidance of a computer programming expert. Students also created marketing letters about their games, and learned about real-world use of computer skills through visits to local companies. The young people in this program learned to work with computer software (*applied academic knowledge*), while practicing such soft skills as collaboration and communication.

In another study, researchers at Policy Studies Associates worked with The After-School Corporation to examine the common features of 10 high-performing afterschool projects (Birmingham, Pechman, Russell, & Mielke, 2005). All began with with “a broad array of enrichment opportunities,” such as art, music, dance and sports, which offered many of the participating children their first chance to try these activities. On top of this exposure, the projects systemically worked to build skills in literacy and some level of mastery in the arts. Successful projects also fostered strong relationships among stakeholders, through such activities as team-building exercises for the children, classroom management training for staff and support services for families. In addition, all of the projects had able leaders with a background in child development and the commitment to train their staff in effective programming. Finally, each of the high-performing projects enjoyed a mix of on-the-ground autonomy and consistent administrative and fiscal support.



College and Career Readiness | Research Brief

Yet another study suggests the value of designing career programs around best practices in youth programs (Hynes, Constance, Greene, Lee, & Halabi, 2011). These practices range from exposing young people to actual work to building skills through hands-on projects, helping youth explore their interests and linking youth to adult mentors.

Challenges and Implications

Among the problems faced by out-of-school programs, including those dealing with college and careers, is recruiting and retaining teenagers — the students who most need to be thinking about future plans. One study of this issue (Deschenes, Arbeton, Little, Herrera, Grossman, Weiss, & Lee, 2010) looked at factors that help to keep youth in such programs. The top two factors in retention, the study concluded, are (1) the breadth of leadership roles for participants and (2) the location of the programs in community-based organizations rather than schools, from which many young people feel disaffected.

Doing effective career exploration often requires staff with deep knowledge of a specific field. To address this challenge, one team of researchers presents solutions such as these: find a local a business with an expert on staff who can help teach, partner with vocational schools or colleges, and hire one expert staff member who can work at several project sites (Hynes, Constance, Greene, Lee, & Halabi, 2011).

No matter how expert the staff or engaging the program, turning short-term explorations of careers into long-term learning that can set youth on a productive path remains a challenge. To address this, one study suggests scaffolding college- and career-ready programs (Hynes, Greene, & Constance, 2012). In practical terms, program planners can build on exploratory activities to create “higher-level, more intensive programs” for youth who want to learn more about a career path. For instance, one out-of-school program cited by researchers offered a three-day summer program that was designed to recruit students into a school-year afterschool program in the same career field. Drawing on their own structures and resources, 21st CCLC sites can build similar scaffolding into their college and career activities.

Engaging youth, finding the right staff and engineering a long-term impact are all doable for an out-of-school time program that wants to help students explore college and career pathways. Certainly, 21st CCLC sites can play a role in exposing young people to careers, building their employment skills and offering short-term but potentially life-changing ventures into the world of work.



College and Career Readiness | Research Brief

REFERENCE LIST

Belley, P. & Lochner, L. (2007, October). The changing role of family income and ability in determining educational achievement (NBER Working Paper No. 13527). National Bureau of Economic Research, Cambridge, MA.

http://economics.uwo.ca/people/lochner_docs/thechangingrolenber13527.pdf

Birmingham, Pechman, Russell, & Mielke (2005). Shared Features of High-Performing After School Programs: A Follow-Up to the TASC Evaluation. <http://www.sedl.org/pubs/fam107/fam107.pdf>

Durlak, J. A. & Weissberg, R. P. (2007). The impact of after-school programs that promote personal and social skills. University of Illinois Chicago Collaborative for Academic, Social, and Emotional Learning (CASEL). <http://files.eric.ed.gov/fulltext/ED505368.pdf>

Career and Technical Education, U.S. Department of Education. Employability Skills Framework. <http://cte.ed.gov/employabilityskills/index.php/framework/>

Deschenes, S., Arbeton, A., Little, P., Herrera, C., Grossman, J. B., Weiss, H. & Lee, D. (2010, April). Engaging older youth: Program and city-level strategies to support sustained participation in out-of-school time. Harvard Family Research Project, Public/Private Ventures and the Wallace Foundation. <http://www.wallacefoundation.org/knowledge-center/after-school/coordinating-after-school-resources/Documents/engaging-older-youth-research-synopsis.pdf>

Holzer, H., & Hlavac, M. (2011, April). An uneven road and then a cliff: U.S. labor markets since 2000. Retrieved from <http://www.s4.brown.edu/us2010/Data/Report/report4.pdf>

Hynes, K., Greene, K. M., & Constance, N. (2012, fall). Helping youth prepare for careers: What can out-of-school time programs do? *Afterschool Matters*.

<http://files.eric.ed.gov/fulltext/EJ992134.pdf>

Hynes, K., Constance, N., Greene, K., Lee, B., & Halabi, S. (2011, November). Engaging youth in career programming during out-of-school time: Lessons for program design from a study of experienced out-of-school time programs. <https://www.google.com/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#q=Hynes%2C+K.%2C+Constance%2C+N.%2C+Greene+Engaging+youth+in+career+programming+during+out-of-school+time>



College and Career Readiness | Research Brief

Porter, E. (2014, September 10). A simple equation: More education = more income. *New York Times*. http://www.nytimes.com/2014/09/11/business/economy/a-simple-equation-more-education-more-income.html?_r=0

Will, M. (2014, September 17) U.S. trails in college graduation in global study: Lag also cited in preschool enrollment. *Education Week*. <http://www.edweek.org/ew/articles/2014/09/17/04oecd.h34.html>