



# Training Tomorrow's Workforce

Community College and Apprenticeship as Collaborative  
Routes to Rewarding Careers

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# Executive summary and recommendations

With nearly 15 million workers unemployed and another 9 million working part time involuntarily, the time is right to invest in upgrading the skills of many in the U.S workforce. Sound investments in skills today are likely to yield high returns in the form of added earnings and improved productivity tomorrow and well into the future. If directed at improving qualifications for middle-skill jobs, enhanced training can reduce inequality while promoting economic growth.

The president and the U.S. Congress are responding to the training agenda in a variety of ways, by increasing spending and promoting innovation in K-12 education and in post secondary college and job training programs. The Community College Initiative—part of the Student Aid and Fiscal Responsibility Act of 2009—would authorize \$730 million per year for several purposes. One is to fund innovative and effective programs that “... lead to the completion of a postsecondary degree, certificate, or industry-recognized credential leading to a skilled occupation in a high-demand industry...” Some of the dollars would go directly to states for reforms in community colleges.

In addition, President Barack Obama has proposed significant funding to help support construction projects to modernize facilities at community colleges. These proposed reforms reinforce recent legislation that expands college grants and loans and increases their accessibility to workers on unemployment insurance. At the same time, serious state fiscal woes have limited the budgets of community colleges and strained their capacity to serve the increasing numbers of students who wish to enroll.

Although a primary target of these interventions is to expand community colleges, the ultimate goal is to upgrade the skills of American workers and improve their prospects for rewarding careers. This paper considers a complementary approach to increasing valued and marketable skills: scaling up apprenticeship programs, especially in combination with community college and other postsecondary education programs. Apprenticeship programs train individuals to achieve the skills of a fully skilled worker through supervised, work-based learning and related academic instruction. Apprentices are employees at the firms and organizations where they combine productive work along with learning experiences that lead to demonstrated proficiency in a significant array of tasks.

Apprenticeship programs offer an array of advantages over pure postsecondary education programs. Since apprenticeship openings depend on employer demand, mismatches between skills taught and supplied and skills demanded in the work place are unusual. Apprenticeship provides workers with a full salary so that participants can earn while they acquire valued skills. Apprentices learn in the context of real work settings and attain not only occupational skills but other work-related skills, including communication, problem-solving, allocating resources, and dealing with supervisors and a diverse set of coworkers.

Apprenticeship is particularly appealing as a way of integrating minorities—especially minority young men—into rewarding careers. Having learning take place mostly on the job, making the tasks and classroom work highly relevant to their careers, and providing participants wages while they learn can give minorities increased confidence that their personal efforts and investment in skill development will pay. In addition, mastering a skill by completing an apprenticeship gives graduates a genuine sense of occupational identity and occupational pride. Apprenticeship offers a respected, portable certification. These advantages help explain why many countries have been working to expand their programs significantly.

There are currently about 470,000 apprentices in programs registered with the Department of Labor and perhaps another 500,000 or more in unregistered programs. About 56 percent of registered apprentices are in construction trades and about the same share are in joint union-management programs. However, most programs are undertaken by employers. Although research on apprenticeship programs is sparse, one careful study found that both the short-term and long-term earnings gains and overall social benefits from apprenticeship training are extremely high. The lifetime return to apprenticeship training is estimated at more than double the return to community college participation.

Can these benefits of apprenticeship training be incorporated into community college and other postsecondary settings? What is the rationale for apprenticeship-community college collaboration and the current state of collaboration? What steps should be taken to expand apprenticeship and collaborations between community colleges and apprenticeship programs?

This paper examines and provides some answers to these questions. Although the paper does not capture the full the complexity and diversity of community colleges and apprenticeships in the United States, it describes examples of cases in which the two systems do and do not interact.

Collaboration between community colleges and apprenticeship programs makes sense for several reasons. Worker success in occupations requires that they gain not only content knowledge about their field but also other skills—including problem solving—used in the context of the occupation as well as on other jobs. For many occupations, community colleges are well-positioned to provide the academic-based instruction

but cannot deliver the necessary nonacademic skills and occupational expertise. These require learning in the context of productive work and real operations, the type of learning that comes with apprenticeship training.

For community colleges, apprenticeships assure relevance for their students and allow students to document their abilities to perform in the workplace. In addition, they allow overcrowded, strained community colleges to offload some of their education and training to effective work-based learning under skilled supervisors. For apprenticeships, community colleges provide college credit and a college framework.

Notwithstanding the logic of collaboration, several barriers can limit the interactions between apprenticeship programs and community colleges. Sponsors of apprenticeship—usually employers but often union-employer programs—sometimes find that community colleges do not offer courses that are well-tailored to the apprentice’s needs. The content may not be sufficiently specific, the equipment at the college may be dated, the courses may not be offered or may meet at times that working people find hard to accommodate, and the starting dates of semesters may not meet employer needs. It may take too long for community colleges to develop new courses that are required as new programs or new technologies in existing programs arise.

Still, the paper finds many examples of collaboration. About one-third of all apprentices obtain their academic instruction from community or technical colleges. Some apprenticeship programs—for example, several sponsored by the Utility Workers of America—require apprentices to complete an associate’s degree along with their apprenticeship training. Some states—including Florida and Washington—provide tuition subsidies to community colleges for those in apprenticeship training. Community colleges often grant college credit for courses apprentices take as part of their related instruction. Many programs use community college instructors for courses held outside the school.

South Carolina, for example, offers a distinctive form of collaboration. Using a special grant from the legislature, the technical college system in South Carolina hosts the Apprenticeship Carolina initiative. Staff housed at the college system actively market apprenticeship and encourage employers to use community college and other resources for related courses. Other potential areas of collaboration are infrequent, including the granting of college credit for skills developed in apprenticeship programs and the use of community colleges as a base for recruiting potential apprenticeship sponsors.

Data on the views of employer sponsors comes from both a national sample of more than 900 apprenticeship sponsors as well as an in-depth set of interviews with a smaller number of sponsors. The interviews revealed some barriers to collaboration. One is the limited flexibility of community college courses—they are not offered enough on a regular basis and may be cancelled if the classes are too small. Other sponsors see the courses as not adequately matched to the requirements of the occupation. Although some sponsors

acknowledge that obtaining a joint associate's degree would add to the apprenticeship certification, others see little added value for their workers beyond the apprenticeship credential itself. In all likelihood, however, community college certifications would add significantly to the status, adaptability, and long-term earnings of apprenticeship completers.

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## Recommendations

The most important strategy for expanding apprenticeship-community college collaborations is to increase the employer demand for apprenticeships. More apprenticeships will lead to more collaboration as community colleges see opportunities for closer links with employers and jobs. Expanding apprenticeship training will diversify the nation's portfolio of training strategies and incorporate a wider variety of strategies that succeed in raising skills and earnings. Several actions taken today can increase opportunities for workers to gain occupational credentials valued in the labor market, but achieving a major expansion of apprenticeships will require a long-term effort. Although the community colleges and apprenticeship programs already cooperate in some ways, what policies might expand their collaborations? Here are 10 recommendations that can be implemented in the short run.

- Fund measures to scale apprenticeship programs by expanding the budget for marketing the programs and providing an incremental subsidy to employers expanding their programs. Marketing and technical assistance are necessary to show employers the advantages of apprenticeship training and to help them implement registered apprenticeships. Quality reviews should accompany the technical assistance to assure that the new apprenticeships yield the necessary skills for mastery of relevant occupational skills.
- Providing more resources for these purposes to the Office of Apprenticeship at the federal level and some state apprenticeship offices would generate large numbers of added slots which, in turn, would lead to social benefits—added earnings and tax revenue—that far outweigh the added costs. Tax credits can complement the marketing efforts and increase incentives for employers. One possibility is a tax credit of \$4,000- \$5,000 for each new apprenticeship position beyond 80 percent of last year's level. Given the job projections analyzed in this paper, increasing the penetration of apprenticeships in fields that already offer apprenticeships could generate a five-fold increase in some places.
- Encourage more states to subsidize portions of the tuition of apprentices taking community college courses. This step would encourage more employers to use community colleges for their related instruction and could ultimately lead more apprentices to obtain associate's degrees.
- Follow the earnings pathways of community college students and use the results as performance indicators. House bill H.R 3221 moves in this direction. Such a step could encourage community colleges to work closer with apprenticeship programs, since they

have an excellent track record of achieving earnings gains. At the same time, research with these data might provide evidence to apprentices about the long-term benefit of seeking an associate's degree alongside their apprenticeship certification.

- Draw on existing standards and develop new standards to award college credit for expertise gained and mastered on the job. The American Council on Education has produced a National Guide to College Credit for Workforce Training; it suggests credit levels for various components of several apprenticeship programs.<sup>1</sup> Some schools already offer such credits through this process or their own processes but the practices are spotty. Already, four-year colleges and universities offer credit to students for internships that involve far less documented expertise than apprenticeship. Doing so in the apprenticeship context would encourage more apprentices to complete degree programs.
- States should use their discretionary funds within the Workforce Investment Act to coordinate joint initiatives between apprenticeships and community college, potentially linked with WIA and even high school programs.
- States could provide incentives for contractors on state-funded programs to offer apprenticeship programs, including programs linked to community colleges. Some states—notably Washington—already use mandates and incentives for this purpose.
- Use funds available in the Community College Initiative to undertake innovations that foster apprenticeship-community college collaborations.
- Set aside funding from the reentry programs and other labor-related and justice-related programs to experiment with apprenticeship expansions for ex-offenders. The experiment could focus on two to three sectors, involve industry associations, local employers and close linkages between the criminal justice system, apprenticeship staff, and community colleges. The project would include a rigorous evaluation.
- Undertake a number of nonexperimental research projects to provide important policy-relevant information on apprenticeship and community colleges. For example, qualitative research on the use of apprenticeship and/or community colleges to train for a particular occupation could examine the curricula in each type of program, test graduates, and determine employer satisfaction and program costs. Another low-cost project could track earnings profiles of apprentices and conduct field interviews to determine whether apprenticeship completers subsequently take postsecondary courses and achieve postsecondary degrees.
- Experiment with training modalities—including apprenticeship and community college—to determine their net impacts on urban young people. It is possible to use experimental methods without rejecting applicants for the programs. Impact studies could test the effect of recruitment on participation into various programs as well as the separate

impacts of apprenticeship and community college on employment and earnings. These studies could provide persuasive evidence about the efficacy of recruitment into programs, the effects of training on earnings, and the employer's perceived estimates of productivity impacts. The study should also incorporate a study of employers participating in the apprenticeship program.

Finally, this paper recommends the development of a long-term strategy to expand apprenticeship training, including college credit and other collaborations with community colleges. The goal should be to provide sufficient opportunities to cover at least 20 percent of the U.S. entry-level work force. To develop this strategy, foundations and governments should come together to sponsor a study group. The group would commission papers, learn lessons from the major apprenticeship expansions in the United Kingdom and Australia, hold a major conference and public meetings, and then propose a sequence of policies to bring the U.S. apprenticeship system to scale and to ensure close collaboration with colleges, especially community colleges.

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