



# Dropping Out, Clocking In, and Falling Behind

## What Happens to Youth Who Work and Drop Out?

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Last year, the Urban Institute brief “Dropping Out and Clocking In” profiled a little-researched group of high school dropouts: teens who leave school early and work. Our analysis showed that these young people contribute substantially to their households, on average about 24 percent of household income. Moreover, many of their families are low income and receive relatively little support from the federal safety net. Youth earnings undoubtedly make a difference to both these youth and their families in the short term.

But questions remain about how these young people fare over the long term. Are they able to go back to school? Do they have successful careers? Or do early choices between work and school jeopardize their future economic well-being?

To answer these questions, we examined data on 1,900 youth from the National Longitudinal Survey of Youth 1997 (NLSY97) for whom we had complete data, not just on early employment and graduation, but also on educational attainment, employment, hours worked, and earnings at age 25.<sup>1</sup>

## How Do Teens Who Work and Drop Out Compare to Their Peers?

One of the biggest challenges of this analysis was identifying the youth who leave high school without their diplomas to work.<sup>2</sup> At a single point in time, it is easy to make discrete categorizations using simple information on work and education. However, in longitudinal data like the NLSY97, work and school enrollment are fluid for many youth between the volatile ages of 16 and 18. As a result, their status can change several times over this period.

Because of this volatility, we decided to use two simple variables to classify youth. First, we determined whether youth had obtained their regular high school diplomas by age 19. About 80 percent of our NLSY97 sample had graduated by this age; another 20 percent had not. Members of the latter group were labeled *dropouts* for this study. Second, we used data on employment at age 17 to gauge youths' likelihood of early connections to the labor market at a time we might expect them to be enrolled in and attending high school. Over 70 percent of our sample was engaged in paid work at age 17.

Crossing these two variables for education and work yielded four categories of youth:

- *Nonworking dropouts*: 8.4 percent of the sample
- *Working dropouts*: 11.0 percent of the sample
- *Nonworking graduates*: 19.3 percent of the sample
- *Working graduates*: 61.3 percent of the sample

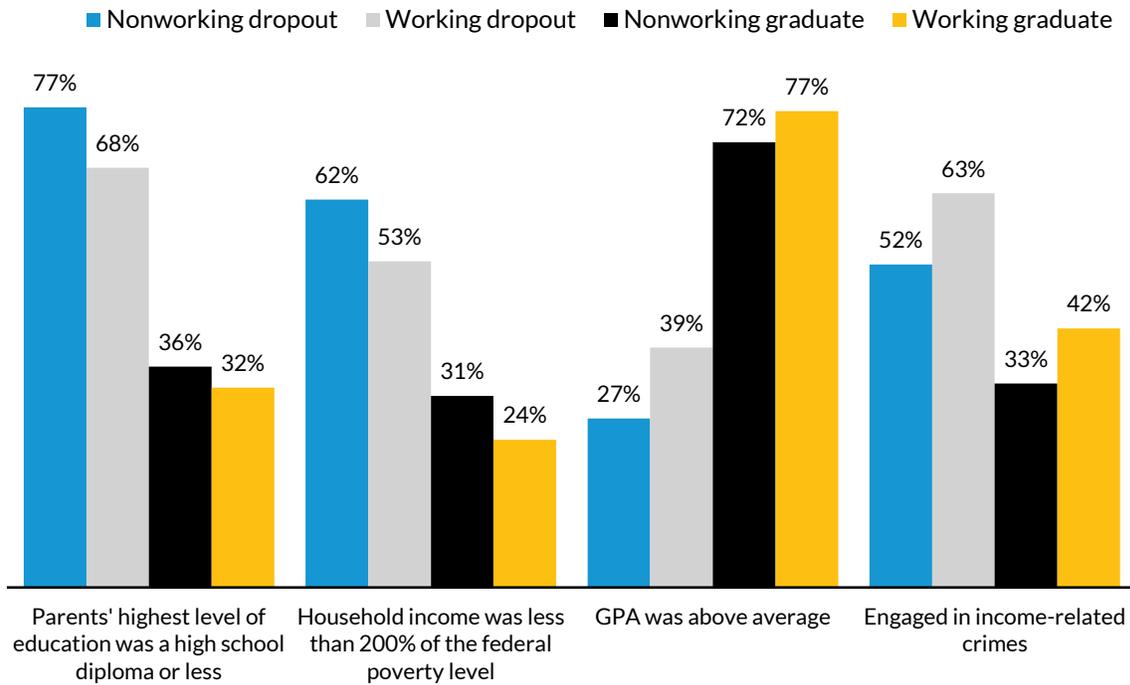
*Graduates* in our sample were more likely to work during high school than *dropouts*: 57 percent of *dropouts* worked during high school compared with 76 percent of *graduates*.

Youth who leave school early and work had some small initial advantages over *nonworking dropouts* (figure 1). *Working dropouts* had parents with slightly more education and higher household income, and they performed a little better in school. Nevertheless, the differences between *working dropouts* and *nonworking dropouts* were dwarfed by the differences between *dropouts* and *graduates*. All youth who dropped out disproportionately came from families with low socioeconomic status. They also tended to struggle more academically and were more likely to engage in income-related crimes during adolescence.<sup>3</sup>

Controlling for other factors that affect an individual's ability to graduate from high school by age 19,<sup>4</sup> we find that individuals who worked at age 17 were roughly 88 percent more likely to have graduated by this age than those who didn't work. While this finding is significant, it is small compared to other household socioeconomic characteristics. For instance, compared with those whose parents' highest level of education was less than a high school diploma, youth who had at least one parent with a diploma were more than twice as likely to have graduated. Youth who had at least one parent with a bachelor's degree were more than four times as likely to have graduated.

FIGURE 1

Adolescent Characteristics, by Analysis Group



Source: US Department of Labor, Bureau of Labor Statistics, National Longitudinal Survey of Youth 1997 cohort, 1997–2011 (rounds 1–15).

The nature of early work for *graduates* and *dropouts* in our sample also differs. Though the share of *working dropouts* and *working graduates* who held conventional jobs during the school year did not differ significantly, *working dropouts* were more likely than both *nonworking dropouts* and all *graduates* to find alternative ways to earn money through under-the-table activities.

Moreover, at age 17, *working dropouts* worked more hours per week during the school year and earned over \$1,000 more per year than *working graduates* (table 1). However, the most striking difference between these two groups was in the share of youth’s contribution to household income. Because *dropouts* came from relatively low-income households, their earnings accounted for a much higher share of their families’ income than those of their *working graduate* peers. Early workers who dropped out contributed 24 percent of their families’ resources, whereas those who managed to stay in school contributed only about 12 percent on average.

TABLE 1

**Work Characteristics at Age 17, by Graduation Status at Age 19**

	Total sample of young workers	Dropouts	Graduates
Share who worked during the school year (%)	90	88	91
Average hours worked per week during the school year <sup>a</sup>	18.4	21.1	16.6
Average annual earnings <sup>a</sup>	\$3,613	\$4,674	\$3,384
Average youth earnings as a share of household income (%) <sup>a</sup>	15	24	12

**Source:** US Department of Labor, Bureau of Labor Statistics, National Longitudinal Survey of Youth 1997 cohort, 1997–2011 (rounds 1–15).

<sup>a</sup> Difference between dropouts and graduates is statistically significant at  $p < .001$ .

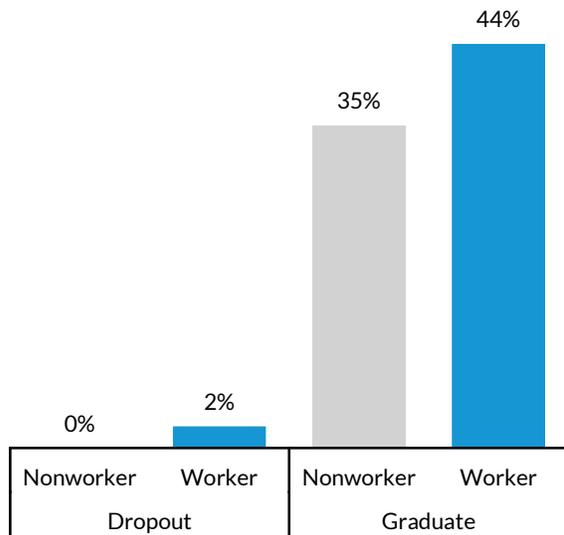
## Do Youth Who Work and Drop Out Ever Go On to College?

College experience is important for young adults to set them on a positive, long-term income trajectory. Overall, 40 percent of youth in our sample had completed at least some college by age 25.

However, college attendance was highly unlikely for *all* youth who did not finish high school on time; only 2 percent of *working dropouts*, and no *nonworking dropouts*, had completed this milestone by age 25 (figure 2). These rates are substantially lower than those of youth who graduated on time, regardless of whether they worked. Regression analyses confirm that, when we control for other observable characteristics, youth who work and drop out are no more likely to attend college than other students who leave high school before completion.<sup>5</sup> Further, young people who earn money under the table are 34 percent less likely to enroll in college than those who do not.

FIGURE 2

Adult College Experience, by High School Graduation and Adolescent Worker Status



Source: US Department of Labor, Bureau of Labor Statistics, National Longitudinal Survey of Youth 1997 cohort, 1997-2011 (rounds 1-15).

Note: Includes college coursework that did not lead to a degree.

## How Do Youth Who Work and Drop Out Fare in the Labor Market as Adults?

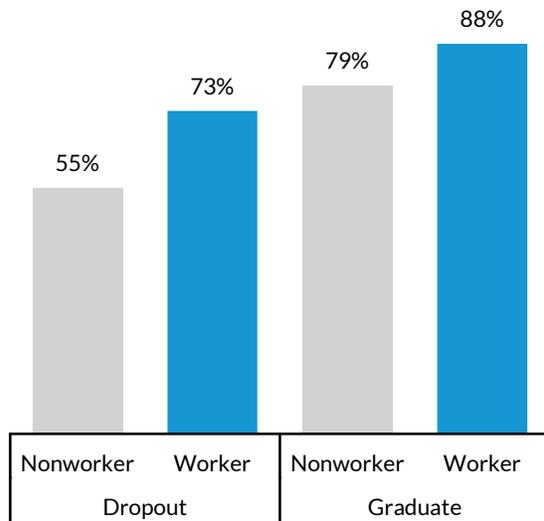
Since most colleges require applicants to have a high school diploma before admission, it is unsurprising that *graduates* in our sample were more likely to have college experience by the age of 25. In contrast, adult employment is a more flexible milestone as it reflects the effects of all methods of professional development, both academic and on the job.

Overall, 82 percent of youth in our sample were employed at some time during the year at age 25. As seen in figure 3, all *graduates* had relatively high rates of employment, but early work made a noticeable difference among *dropouts*. Youth who worked early and dropped out reported employment at 25 at a rate almost 20 percentage points higher than *nonworking dropouts*. *Working graduates* were also more frequently employed than *nonworking graduates*, but this difference is less dramatic.

When we controlled for other observable characteristics, *working dropouts* were nearly twice as likely as *nonworking dropouts* to be employed at age 25.<sup>6</sup> Likewise, *working graduates* were over 90 percent more likely than *nonworking graduates* to be employed at age 25.

FIGURE 3

Adult Employment, by High School Graduation and Adolescent Worker Status



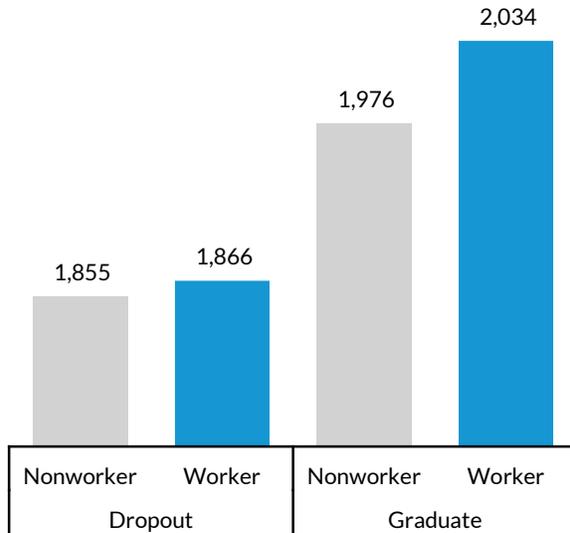
Source: US Department of Labor, Bureau of Labor Statistics. National Longitudinal Survey of Youth 1997 cohort, 1997–2011 (rounds 1–15).

The positive relationship between early labor market involvement and adult employment rates would suggest that early work experience may improve other employment outcomes for high school dropouts throughout their lives. Looking more closely at adult labor market outcomes, however, we find that *working dropouts* fared no better than *nonworking dropouts* in hours worked and average earnings.

On average, the respondents in our sample who were employed at 25 worked just under 2,000 hours during that year, which corresponds to about 38 hours a week. As seen in figure 4, there seems to be little difference by early work experiences in the average number of hours worked among *dropouts* in our sample, and only a moderate difference among *graduates*. As with college experience, the biggest difference appears to be between *dropouts* and *graduates*.<sup>7</sup>

FIGURE 4

Annual Hours Worked among Employed Adults, by High School Graduation and Adolescent Worker Status



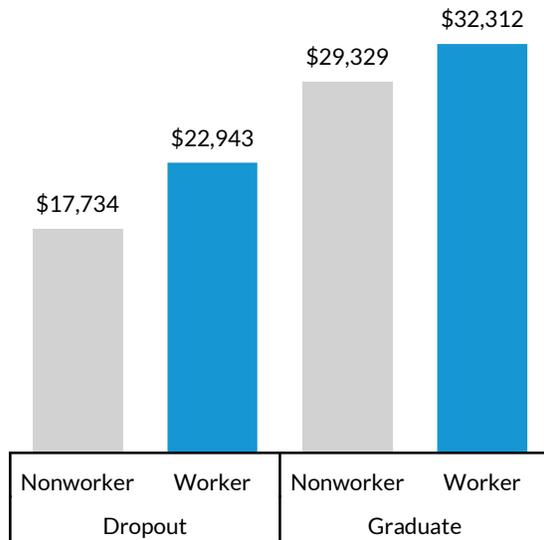
Source: US Department of Labor, Bureau of Labor Statistics, National Longitudinal Survey of Youth 1997 cohort, 1997–2011 (rounds 1–15).

At age 25, employed workers from our sample earned just over \$30,000 a year on average. Figure 5 shows the differences in average annual earnings at age 25 by early labor market behavior and high school graduation status. *Working dropouts* appeared to earn around \$5,000 a year more than *nonworking dropouts*. However, even *graduates* who did not work early earned at least \$6,000 more on average than both *dropout* groups. This trend may reflect a return on *graduates'* greater propensity to continue their postsecondary education, as shown in figure 2. The difference between *working graduates* and *nonworking graduates* narrowed to only about \$3,000 a year, suggesting that returns on early work may be smaller for *graduates* and more critical for *dropouts*.

Controlling for observable individual differences, we find that the difference in earnings between *working dropouts* and *nonworking dropouts* was not statistically significant.<sup>8</sup> The same regression shows that *graduates*, including both early workers and their nonworking peers, earned over \$6,000 more a year on average than dropouts.

FIGURE 5

Annual Earnings among Employed Adults, by High School Graduation and Adolescent Worker Status



Source: US Department of Labor, Bureau of Labor Statistics. National Longitudinal Survey of Youth 1997 cohort, 1997–2011 (rounds 1–15).

## Discussion

Our analyses reveal few practical differences between *working dropouts* and *nonworking dropouts*. Both largely come from low-income families and have parents who often barely graduated from high school themselves. In addition to these challenges, all *dropouts* struggle academically more than other students, and they are perhaps more vulnerable to getting pulled away from school than their peers.

Early economic activities can make a big difference for families, and youth employment is shown to reduce family food insecurity (Hamersma and Kim 2015). However, early youth employment may negatively affect the likelihood of high school graduation, particularly if youth work more than part time during the school year (Apel et al. 2008; Oettinger 2000; Rothstein 2001; Warren and Cataldi 2006). Our further analysis aligns with literature that identifies work as posing a *greater* risk to low-income youths’ likelihood of graduation (McNeal and Ralph 2011). Despite modest differences in earnings and hours between *working dropouts* and *working graduates*, the greatest difference is in the share of income that young workers contribute to their households’ income. This may be a sign of the “expedited adulthood” phenomenon described recently in a longitudinal study of West Baltimore youth: DeLuca, Clampet-Lundquist, and Edin (2016) find these young people are more likely to get stuck in low-wage jobs and less likely to go on to receive education that provides real career ladders.

Young people in low-income families often feel a tremendous amount of responsibility to help support themselves and others. A recent Urban Institute report documenting the coping strategies of

low-income youth ages 13 to 18 in 10 communities finds that teens in households with a combination of low adult employment and inadequate federal safety net support do everything they can to contribute to making ends meet (Popkin and Scott, forthcoming). Specific strategies vary widely depending on teens' level of distress and the opportunities and resources available to them, but include everything from formal employment to the kind of under-the-table work documented by the NLSY to inappropriate sexual relationships.

In terms of long-term economic outcomes, graduating on time from high school turns out to be much more powerful than working early. Those who graduate by age 19 are not only more likely to go on to higher education, but also more likely to be employed. Moreover, graduates work more and earn more at age 25 than *all* youth who drop out of school without their high school diplomas. Over their lifetimes, high school graduates earn more than half a million dollars more than dropouts; high school graduates who go on to higher education widen this gap (Carnevale, Smith, and Strohl 2010).

Even though they are more likely to be working at 25, youth who work early and drop out of high school do not work more hours or earn more money at that age than other dropouts. This may reflect the changing structure and nature of the American economy. Before the contraction of the manufacturing sector, young people with little education could reasonably expect early employment experiences to serve as a gateway to a middle-class standard of living (Kalleberg 2011). In recent decades, these jobs have grown more and more scarce, leaving in their place low-paying service-sector jobs and contingent employment with little chance for increased earnings or opportunities.

## Implications for Research and Policy

High school graduation is an important intermediary outcome. The benefits of a high school diploma exceed the benefits of early labor market experience in both adult employment and earnings. Barring a dramatic shift in the types of labor in high demand, policies that encourage and enable working youth to stay in school and graduate from high school could make a difference in the long term. Locally, many school districts are already implementing early warning systems to identify youth at risk of dropping out based on their academic performance (Carl et al. 2013; Heppen and Therriault 2008; Pinkus 2008). These systems are well-equipped to identify potential dropouts who work because they tend to have lower than average GPAs before leaving high school; however, school counselors would find value in asking students about work and economic responsibilities at home. In addition to providing resources for academic support, schools can gather information on youths' economic roles in their households. With this knowledge, schools could help students develop strategies for finding quality paid work experiences and for balancing work and school while planning for a high-return postsecondary education that will provide a meaningful career ladder.

School districts could provide options for alternative high school degree programs to simplify the task of balancing work and school for working students and their counselors, particularly if the programs systematically integrate students' academic curricula with their other obligations. For instance, school-to-work programs expose high school students to the labor market and thereby ease

the transition between school and employment. Studies show that these programs increase the likelihood of obtaining a high school diploma and improve participants' employment rates and earnings, but they affect certain groups differently in terms of postsecondary education. Young men who are unlikely to attend college based on their backgrounds and characteristics are more likely to pursue postsecondary education if they have access to school-to-work programs. Young men who are more likely to attend college (and all young women) do not experience similar postsecondary education gains (Neumark and Joyce 2001; Neumark and Rothstein 2007). Just staying on track to complete high school can make a big difference for high-risk youth, but opening the door to postsecondary education can further expand opportunities for young men from disadvantaged backgrounds.

That said, post-dropout interventions will remain an important resource for young people who are unable to complete their high school education on schedule. Jobs for the Future's Back on Track model provides a different framework for engaging students at risk of dropping out before graduation and for reengaging those who have already dropped out. The model is broken into three phases: enriched preparation for either postsecondary education or a career track; postsecondary bridging, which provides personalized guidance during transition after graduation; and first-year support to mitigate the stresses students encounter in college or the workplace. Like school-to-work programs, Back on Track demonstrates a tangible link between education and employment; it goes beyond school-to-work programs by providing individualized support for low-income and other at-risk students.<sup>9</sup>

The flexibility of models such as Back on Track allows them to be tailored to the unique needs of specific at-risk populations. The Annie E. Casey Foundation's Learn and Earn to Achieve Potential initiative has adapted Back on Track and a similar model, Jobs for America's Graduates, to serve young people who are in foster care, in the juvenile justice system, or homeless. In the coming years, these programs will help young people graduate from high school, pursue postsecondary education, and begin their careers. Though programs designed to assist working students are a good first step toward accommodating competing academic and economic obligations, specialized programs like Learn and Earn to Achieve Potential address the more nuanced needs of especially vulnerable youth.

Though these programs may make it easier for working students to graduate high school, it remains highly unlikely that all young people will earn their high school diplomas. This reality necessitates complementary programs that expand economic opportunities for high school dropouts.

The recent Workforce Innovation and Opportunity Act (WIOA) includes several measures to enhance supports for high school dropouts. WIOA now requires the youth formula program to spend at least 75 percent of funds on out-of-school youth, compared with 30 percent under its predecessor, the Workforce Investment Act.<sup>10</sup> WIOA's structure also expands eligibility for dropouts, raising the age to 24 and eliminating income thresholds. Some state initiatives have expanded their focuses from being exclusive to disconnected youth to including all youth ages 16 to 24 who are either out of school or not working. However, many initiatives across the country limit their support to youth who are out of school and not working. Inclusiveness is critical to ensuring that all low- and moderate-income youth who leave high school before graduation get the support they need to improve their adult labor market outcomes.

For dropouts who do not return to school, employee training programs are a practical way to improve their marketable skills while earning income. These opportunities are particularly useful for youth who drop out because of economic necessity and cannot afford to pursue further education at the expense of forgone earnings. The Department of Labor encourages employers to develop training programs through the ApprenticeshipUSA grant program. Employee training programs allow employers to organically develop the types of skilled labor they need, and they benefit workers by increasing their productivity and earning potential.

Real change must also come from substantive transformation of the opportunities available to youth as they grow into adults. Jobs that provide real career ladders are especially valuable to workers with limited academic qualifications, but these workers pose a considerable up-front cost (and potential risk) to employers. Tax and regulatory policies can mitigate these costs by rewarding employers who invest in workers with low levels of education through training, wages, and benefits. Over time, expanding on-the-job training and career ladders in this way will increase the return on investment for early work experiences.

## Notes

1. These 1,900 observations represent roughly 20 percent of the entire NLSY97 sample of 8,984. Our subsample of youth differs from the full sample in a few notable ways: it is more white, female, affluent, and academically successful.
2. Work includes any paid employee-type job, freelance work, or self-employment.
3. The NLSY asks respondents whether they have engaged in income-related crimes, to include theft, selling drugs, or other property crimes. Respondents are also asked to report their annual earnings from each of these activities. *Working dropouts* appear more likely to engage in these activities.
4. In addition to worker status at age 17, covariates used in the model predicting high school graduation by age 19 include indicator variables for whether the respondent was female, non-Hispanic black, Hispanic, or foreign born; Armed Services Vocational Aptitude Battery score; high school GPA; whether the respondent had biological children by age 19; whether the respondent had committed income-related crime at age 17; average weekly hours worked during the school year; parents' highest level of educational attainment; household income relative to the federal poverty level during adolescence; and birth year. Using a logit model, the regression explained 38 percent of variation in respondents' educational attainment at age 19. Regression results are available in appendix table A.1.
5. In addition to worker status at age 17, covariates used in the model predicting educational attainment by age 25 include indicator variables for whether the respondent was female, non-Hispanic black, Hispanic, or foreign born; Armed Services Vocational Aptitude Battery score; high school GPA; whether the respondent had biological children by age 22; whether the respondent had committed income-related crime at age 17; parents' highest level of educational attainment; household income relative to the federal poverty level during adolescence; and birth year. Using a logit model, the regression explained 32 percent of variation in respondents' graduation status at age 19. Regression results are available in appendix table A.2.
6. All regressions predicting labor market outcomes at age 25 include indicator variables for whether the respondent was female, non-Hispanic black, Hispanic, or foreign born; Armed Services Vocational Aptitude Battery score; high school GPA; the respondent's educational attainment at age 25; whether the respondent had biological children by age 22; whether the respondent had committed income-related crime at age 17; parents' highest level of educational attainment; household income relative to the federal poverty level at age 17; and birth year. A logit regression model explained 12 percent of variation in employment at age 25. Regression results are available in appendix table A.3.

7. The model estimating the effect of adolescent labor market experience on hours worked in adulthood uses the same specification as the employment model (see note 6). An ordinary least squares regression model explained 6 percent of variation in average annual hours worked at age 25. Regression results are available in appendix table A.4.
8. The model estimating the effect of adolescent labor market experience on adulthood earnings uses the same specification as the employment model (see note 6). An ordinary least squares regression model explained 17 percent of variation in average annual earnings at age 25. Regression results are available in appendix table A.5.
9. “Back on Track Designs,” Jobs for the Future, <http://www.jff.org/initiatives/back-track-designs>.
10. For more information on WIOA, see “Workforce Innovation and Opportunity Act: Frequently Asked Questions,” US Department of Labor, July 22, 2014, [https://doleta.gov/wioa/Docs/WIOA\\_FAQs\\_Acc.pdf](https://doleta.gov/wioa/Docs/WIOA_FAQs_Acc.pdf).

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