

EXECUTIVE SUMMARY

CERTIFICATES:

Gateway to Gainful
Employment and
College Degrees



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Executive Summary

In America, the postsecondary certificate has become a cost-effective tool for increasing postsecondary educational attainment and gainful employment. Certificates are a homegrown American invention and are expanding rapidly in response to a wide range of educational and labor market demands.

Certificates vary widely in their benefits, but have the capacity to raise the country's global educational standing by both encouraging further education and degree completion as well as by providing gainful employment. Two out of every three workers who have a certificate and a college degree earned the certificate first, an indication that certificates can serve as a stepping stone on the way to a college degree.

Even if only certificates with demonstrated value were included among America's postsecondary credentials, the United States would move from 15th to 10th in postsecondary completions among Organization for Economic Cooperation and Development (OECD) countries for those 25- to 34-years-old.¹ Despite the growing importance of certificates — one million are awarded each year — only one of the major government socioeconomic surveys has information on certificate holding. Consequently, there are very few studies or reports focused on this education/training option.

Certificates tend to be occupationally focused and rely on training in specific fields as opposed to the broader general education approach of two- and four-year degrees. There is wide variation in the economic returns to certificates based on field of study, sex,



Certificates can also serve as the first rung on the ladder to a college degree

1. This calculation is based on metrics in the OECD's 2011 report, Education at a Glance, using "post-secondary, non-tertiary education" to correspond to certificates programs (see Table A1.1a for national estimates). Because we only count certificates with significant payoffs, we believe this is a conservative estimate. (<http://www.oecd.org/dataoecd/61/47/48630299.pdf>)
2. Certificates in this report refer to awards from business, vocational, trade, and technical schools, and technical and non-degree degree awards from two- and four-year colleges. Baccalaureate and graduate certificates are not included in this report.



Certificates are relatively cheap, can be completed quickly

and ability to get a job related to one's training.² At a time when 36 million American workers who attended college did not complete a degree, certificates are piecemeal, attainable, bite-sized educational awards that can add substantially to postsecondary completion.

The extraordinary growth in certificates has coincided with increased public scrutiny of the economic value of postsecondary gainful employment programs, especially those offered by for-profit colleges. Thus far, the result has been an expansion in public regulation intended to make certain that postsecondary programs supported by public grants and federally subsidized loans lead to gainful employment.

Certificates are not currently counted in some metrics as the country pushes toward greater postsecondary attainment. But many certificates do count when it comes to economic value. For example, even if we only counted certificates with clear and demonstrable economic value over high school diplomas, the postsecondary attainment rate among American workers would increase by roughly five percentage points from 41 to percent to 46 percent.

Even more high school graduates, particularly those from low-income families, have the academic potential to complete certificates but currently are not doing so. Other high school graduates are completing certificate programs, but working outside their field of study or in low-paying fields. These groups represent "low-hanging fruit" that would move us beyond 46 percent toward the national goal of 60 percent of the workforce with a postsecondary credential.³

Certificates with economic value are cost-effective, partly because they are the quickest education and job training awards offered by American higher education. Certificates almost always take less than two years to complete, and more than half take less than one year. They also often pay off more than two-year degrees and sometimes pay off more than four-year degrees.

These bite-sized educational awards also provide the on-ramp to college education and middle-class jobs for low-income, minority and immigrant Americans who are often the first in their families to attend college. For incumbent workers, certificates can be the most

“ For the unemployed and underemployed, certificates can offer a jumpstart in the labor market. ”

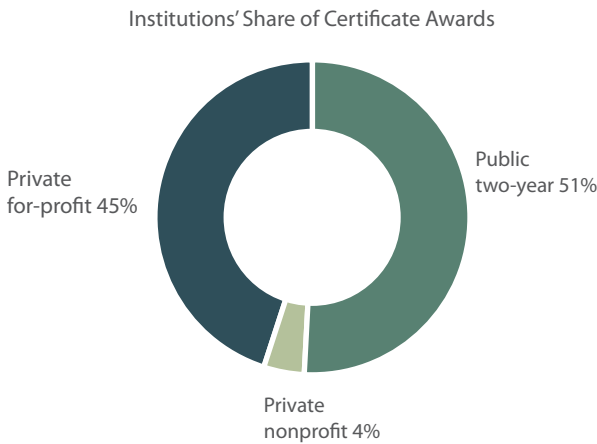
3. In this calculation, "high economic value" is defined as any certificate with returns 20 percent above the earnings of an average high school graduate.
4. In 2008, the Lumina Foundation for Education announced a single, overarching goal of 60 percent of the American workforce with a high-quality postsecondary credential by the year 2025. In 2009, the Obama administration embraced this goal shortly after President Barack Obama's inauguration. It is now broadly considered the benchmark against which progress in higher education is measured.

effective way to catch up, keep up and get ahead in their chosen field. For the unemployed and underemployed, certificates can offer a jumpstart in the labor market.

Certificates are relatively cheap, can be completed quickly, sometimes lead to industry-based certifications (occupational licensing), and are the fastest-growing postsecondary credential awarded over the past several decades:

- Over 1 million certificates were awarded in 2010; up from 300,000 in 1994.⁴
- Certificates have grown from 6 percent of postsecondary awards in 1980 to 22 percent of awards today.
- Certificates have superseded Associate’s and Master’s degrees as the second most common award in the American postsecondary education and career training system.
- Only 2 percent of workers reported a vocational certificate as their highest educational attainment in 1984. Today, that figure stands at 11 percent.⁵

Figure 1. Certificate programs are based predominantly in two-year public and private for-profit schools.



Source: Integrated Postsecondary Education Data System (IPEDS)

- Public two-year colleges award 52 percent of certificates.⁶
- Private for-profit technical, vocational, business, and trade schools award 44 percent.
- Private nonprofit schools award 4 percent of certificates.

5. Source: Integrated Postsecondary Education Data System (IPEDS).

6. Source: Survey of Income and Program Participation (SIPP).

7. Source: Integrated Postsecondary Education Data System (IPEDS), 2010.

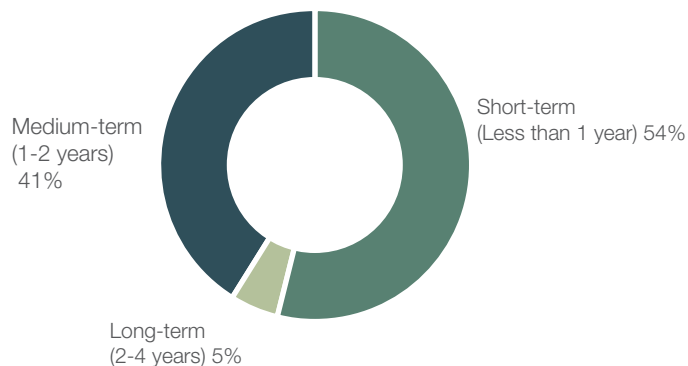
With few exceptions, these programs function as occupationally oriented classroom learning in trade, vocational, technical, and business fields.

The hallmark of the postsecondary certificate is its diversity. The crucial question in describing certificates and their effects is: Which one? There is no common brand:

- Class time varies from a few months to four years⁷ (See Figure 2). In 2010, 54 percent of certificates awarded were short-term, while 41 percent of certificates were medium-term, and 5 percent were long-term.
- Although the vast majority of certificates are occupationally based, some, such as certificates in liberal studies, have little market value alone but encourage further education.
- Many—such as phlebotomy, diesel mechanics, and driver’s education—have economic value but do not naturally lead to a further degree.

Figure 2. The majority of certificates take less than a year of instructional time.

Share of Certificates by Program Length



“ Short-term certificates (of less than one year) have value. ”

Source: Integrated Postsecondary Education Data System (IPEDS)

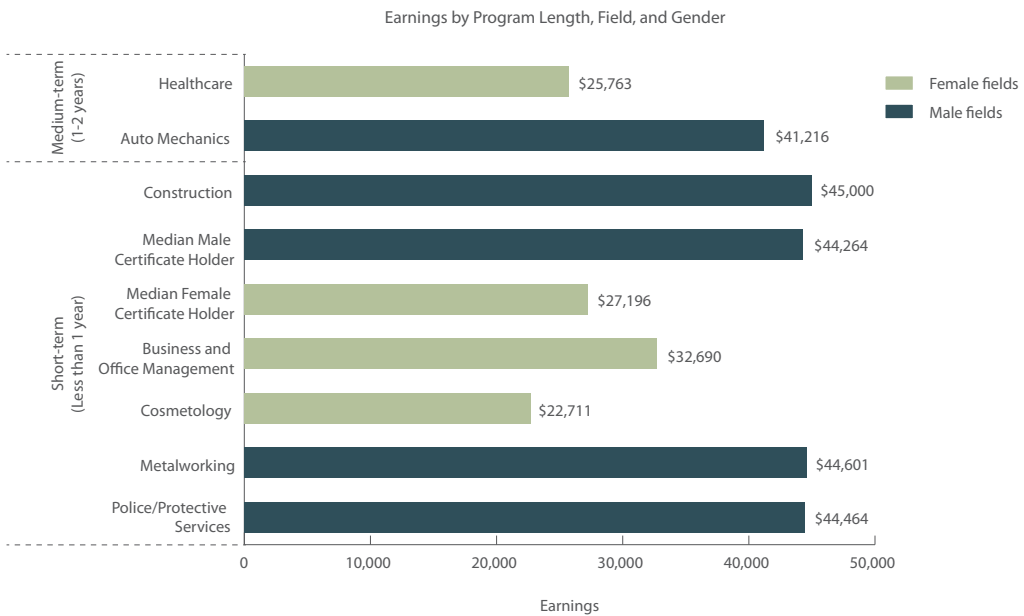
There is a growing sense that short-term certificates of less than one year have little economic payoff. This view is based on the intuition that more instruction is needed for the variety and depth of general and occupational skills rewarded by the labor market. Indeed, Jepsen, Troske, and Coomes (2009) found by studying certificates

8. All class time refers to full-time equivalent hours (FTE).

in Kentucky’s labor market that certificates of at least one year provided a wage premium identical to Associate’s degrees—almost 40 percent for women and around 20 percent for men. However, short-term certificates resulted in a much smaller premium. Men who completed certificate programs of less than one year earned roughly 10 percent more than those who do not have such certificates, while the wage premium for women was only about 3 percent.

However, even short-term certificates (of less than one year) have value in some cases. In other words, program length is not the best variable to evaluate the effectiveness of certificates. For example, police and protective services certificates are predominantly short-term and earned by men, but exceed the average 27 percent wage premium for male certificate holders. Certificates in business and office management are predominantly short-term and earned by women, but exceed the earnings of the median female certificate holder.

Figure 3. The relationship between program length and earnings is not clear.



Source: Survey of Income and Program Participation (SIPP)

Just as there is wide variation in the payoff to certificates, there is wide variation in what students pay for the same certificates, depending on the kind of institution they attend. Attending a two-year

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for-profit institution costs⁸ nearly three times more (\$19,635 per year) than attending a public two-year college (\$6,780 per year).⁹ However, certificate students, including the least advantaged students, tend to finish their programs at for-profit institutions more quickly.

In an economy in which the lockstep march from school to work has been replaced by lifelong learning, certificates provide flexible learning modules that fit wherever necessary in an increasingly nonlinear education and training system. The lifelong value of certificates is evident in the age distribution of certificate earners. While 66 percent of certificate holders earn their certificates before age 30, 18 percent are in their 30s and 16 percent are 40 or older.

Certificates count when it comes to leveraging gainful employment in a variety of ways. On average, certificate holders earn 20 percent more than high school-educated workers – about \$240,000 over a high school diploma in lifetime earnings. More than 60 percent of certificates have a clearly demonstrated economic payoff over high school diplomas—i.e., earnings 10 percent higher than the median high school graduate. Moreover, even when certificates don’t provide much of an earnings boost, they can make individuals more employable, giving them access to valuable learning on the job.

After adjusting for academic preparation/skill, certificates look even better. According to the 2003 National Assessment of Adult Learning (NAAL), certificate holders scored just slightly higher than high school graduates with no postsecondary education and lower than those with some college but no degree.¹⁰ The fact that certificate holders have less academic preparation/skill than those with some college but make roughly the same money suggests that the more specific and applied occupational learning typical of certificate programs can make up for the effects of a lack of general academic preparation. In a sense these findings suggest that, in economic terms, training can substitute for education. It also suggests that there is merit in current practices and proposals that integrate developmental education into certificate training curricula through, for example, work-integrated learning initiatives.

9. This statistics refer to “net cost”: the cost after student aid, including grants and scholarships has been applied.

10. Source: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Fall 2009, Institutional Characteristics component and Spring 2010, Student Financial Aid component.

11. On a scoring scale from 0 to 500, the prose “literacy” of those with a high school diploma and no postsecondary education was 262 versus a score of 268 for those with a certificate and no college degree. By contrast, those with an Associate’s degree had a score of 298. Those with some college, but no degree, scored 287.

Despite the fact that students with low academic preparation/skill successfully complete certificate programs, students from low-income families aren't fulfilling their potential. Among adults with similar academic preparation who do not enroll in college degree programs, students from high-income families earn certificates at a higher rate. Of those with the highest academic preparation/skill, for example, 84 percent of students from high-income families complete certificates, while only 50 percent of students from low-income families do. This suggests enormous potential to achieve 60 percent postsecondary completion, especially considering the relatively low level of academic preparation/skill required to complete many certificate programs.

Certificates are also flexible: They can serve as a stepping stone to further education and training or as a supplement to workers who already have a college degree. Today, one-third of certificate holders also have an Associate's, Bachelor's, or Master's degree. Of these workers, two out of three earned their certificates first, while one in three earned a degree first.

Certificates add value to degrees. The combination of a certificate and a degree has a measurable positive effect: a 6 percent premium at the Associate's degree level, 3 percent at the Bachelor's degree level.

On average, college degree holders earn more than workers with certificates; but many certificate holders earn more than workers with Associate's degrees and some earn more than workers with Bachelor's degrees. The median male certificate holder earns more than 40 percent of the men with Associate's degrees and 24 percent of men with Bachelor's degrees, while the median female certificate holder earns more than 34 percent of the women with Associate's degrees and 24 percent of women with Bachelor's degrees.

There are some cases in which specific certificate holders who are employed in their field of study have earnings substantially greater than many with college degrees:

- In computer/information services, men who work in field earn \$72,498 per year, which is more than 72 percent of men with an Associate's degree and 54 percent of men with Bachelor's degrees. Women with certificates in this field and in a related occupation earn \$56,664, which is greater than 75 percent of females with an Associate's degree and 64 percent of women with a Bachelor's degree.

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- In electronics, men earn \$64,700, more than 65 percent of the men with Associate’s degrees and 48 percent of men with a Bachelor’s degree.
- In business/office work, women earn \$38,204, which is more than 54 percent of women Associate’s degrees and 41 percent of women with Bachelor’s degrees.

However, these high-earning cases depend on certificate holders working in their field of study: Only 24 percent of men and 7 percent of women with certificates in computer/information services, for example, work in field. By contrast, 43 percent of men with electronics certificates and 67 percent of women with certificates in business/office work or electronics work in field.

Much of the value of the certificate is tied to being in the right field and working in that field:

- Almost half (44 percent) of certificate holders work in a field related to their certificate training.
- The earnings of the median certificate holder who works outside his or her field of study are only 1 percent higher than the median high school-educated worker.
- Certificate holders who work in field, by contrast, earn 37 percent more than those who work out of field—only 4 percent less than the median worker with an Associate’s degree.
- The median certificate holder in aviation (the highest-paid field) makes nearly \$65,642, nearly four times what the median certificate holder in food service (the lowest-paid field) makes: \$17,600.
- The most common occupations of certificate holders working in field include: business/office work (62 percent), transportation (56 percent), healthcare (54 percent), and metalworking (50 percent).



Much of the value of the certificate is tied to being in the right field.

Certificates provide more bang for the buck for men than women. Men who earn certificates earn 27 percent more than high school-educated men. Women with a certificate, by comparison, only receive an average 16 percent increase in earnings over women with a high school diploma.

For perspective, consider that, among men and women who are 23- to 64-years-old, men earn 42 percent more on average.¹¹ For certificate holders, the gender gap is even starker at 59 percent—\$44,191 for men compared to \$35,546 for women. In fact, on average, the median male certificate holder’s earnings are almost exactly the same as the median female Bachelor’s degree holder (\$44,672)!

The gender gap exists partly because men and women enter different fields of study, which have varied earnings returns. Of the 14 different certificate fields identified, 12 are extremely sex segregated—at least 75 percent of certificate holders in a field are either men or women.¹²

- Women with certificates are concentrated in three fields: health-care (38 percent), business/office work (27 percent), and cosmetology (20 percent).
- By contrast, men earn certificates in a wider range of areas: auto mechanics, construction, electronics, transportation, and refrigeration, heating and air conditioning. Certificates in refrigeration, heating and air conditioning, , drafting, aviation, and electronics provide the greatest return for men.

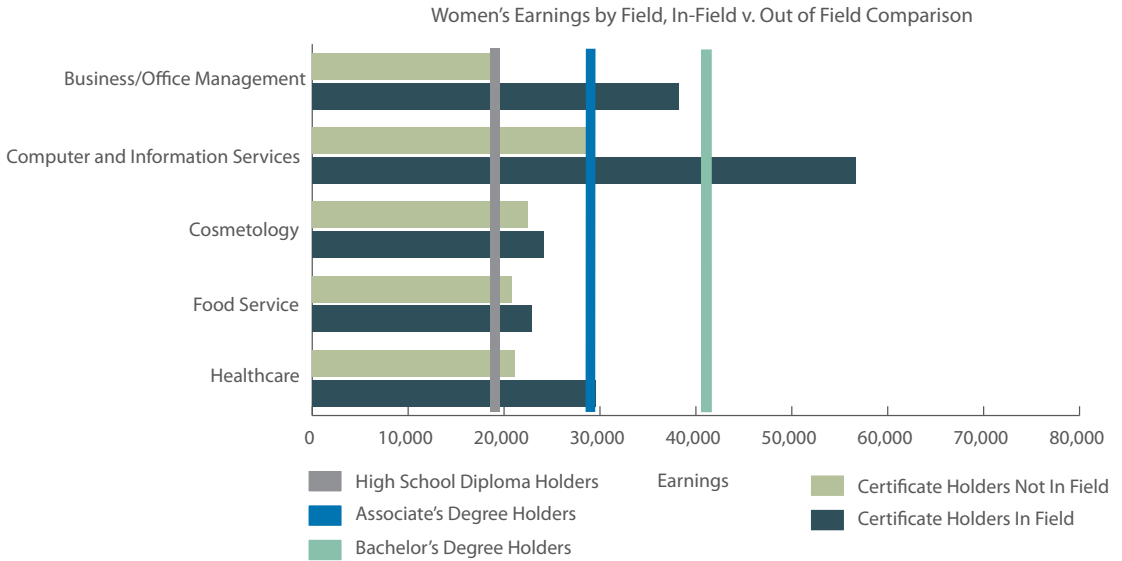
For women, fields connected to business/office work offer the highest earnings. Women with certificates that go into healthcare make slightly more than the median female certificate holder, while those that go into cosmetology make less (\$22,711) than the median high school-educated woman. While this anomaly may suggest that added training leads to lower earnings, it shows that simple comparisons of certificate earnings with high school diplomas often do not capture the whole picture. It is unlikely that these women are following a counterproductive strategy. Instead, either because of poor academic preparation or family responsibilities, women may seek certificates because they allow them more flexible work options, greater employability, or higher pay than other options.

“Men who earn certificates earn 27 percent more than high school-educated men.”

12. The more common 27 percent gender gap is based on comparing full-time, full-year workers. Since women workers are much more likely to be part-time and part-year, the gender gap here is much larger.

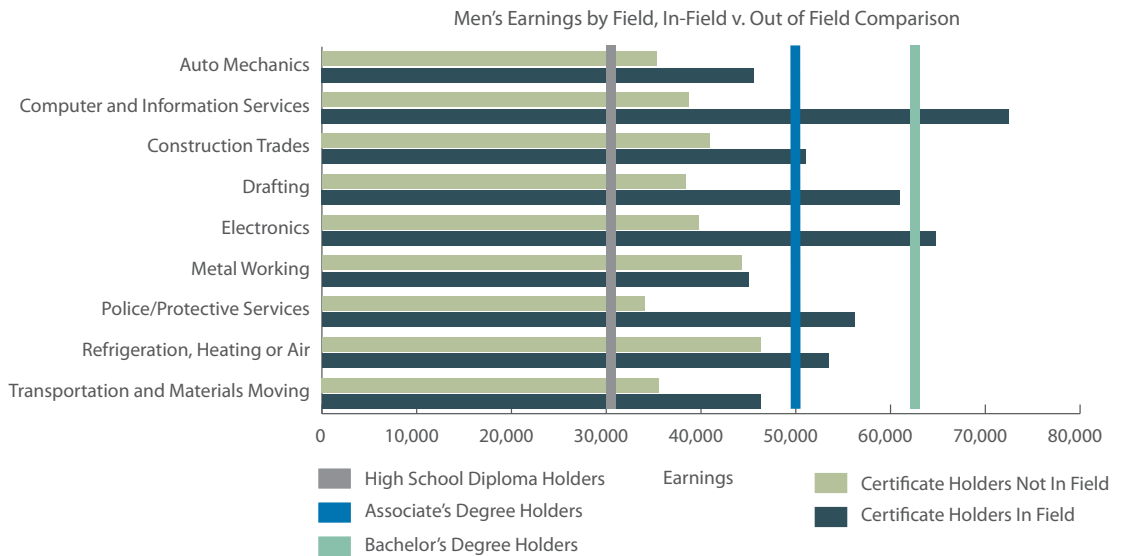
13. The SIPP actually has 18 possible fields, but four of the fields had very few cases and were combined with certificates in other fields of study.

Figure 4. Female certificate holders get a large in-field earnings premium in business/office work, computer/information services, and healthcare.¹³



Source: Survey of Income and Program Participation (SIPP)

Figure 5. Male certificate holders working in their field of study earn more than those who work out of field.



Source: Survey of Income and Program Participation (SIPP)

14. Only fields with shares of certificates greater than 3 percent were included in this figure.

Certificate holding exhibits a clear racial and ethnic profile. Hispanics who earn certificates get the biggest earnings boost over Hispanic high school graduates. Because high school-educated Hispanics' wages are very low, they get a big boost—over 40 percent—from certificates. Conversely, because white high school graduates do relatively well—particularly white men—they only receive a 20 percent earnings increase in spite of the fact that their certificate earnings are consistently higher than African-Americans and Hispanics.

Certificates are more concentrated among African-Americans than other racial and ethnic groups. One out of every six African-Americans reports a certificate as their highest level of education. For Hispanic, Asian, and white Americans, only one in nine reports a certificate as their highest level of attainment.

Despite certificates being concentrated among African-Americans, they get the smallest earnings boost. For example, African-American women with certificates receive only an 11 percent increase over workers with only a high school diploma.

Because of differences in state economies, labor markets, and postsecondary institutional makeup, states vary in their production of certificates, share of workers with certificates, and the extent that certificates provide a valuable return. Certificates are most prevalent in the Southern and Western regions of the country.

States vary significantly in their level of certificate production, share of workers with certificates, institutional makeup, and the extent to which certificates pay off:

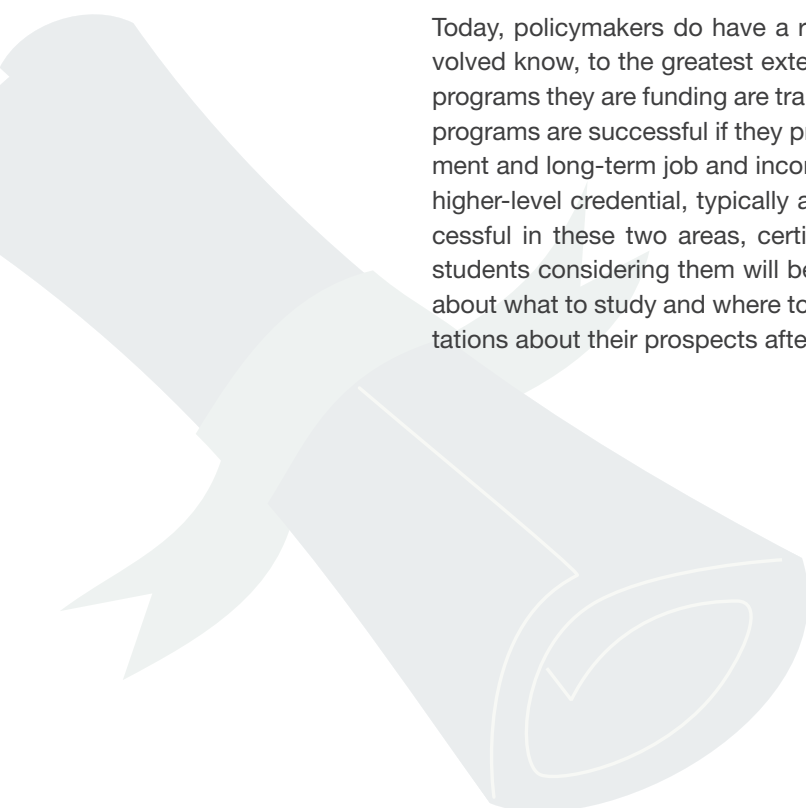
- *Production.* Kentucky, Arizona, Georgia, Louisiana, and Florida produce the most certificates per population. Hawaii, Vermont, Montana, Maine, and New Hampshire produce the fewest.
- *Institutional Makeup.* In New Jersey, for-profit institutions award 87 percent of certificates; in Wisconsin, community colleges award 84 percent of certificates.
- *Payoff.* In North Dakota, 65 percent of certificates offer significant earnings returns; in South Carolina, only 38 percent pay off.
- *Certificate holding.* In Oklahoma, 18 percent of workers have certificates as their highest level of education; in Nebraska, only 6 percent do.

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States—principally in the South and West—that use certificates effectively add appreciably to their postsecondary attainment. About half of certificates are in fields and occupations that have expected earnings at the level of a typical Associate’s degree. States with the highest concentration of certificates with high returns include: North Dakota, Montana, Rhode Island, South Dakota, and Idaho.

In an American economy where the advancement of technology and globalization means that a high school diploma alone is no longer able to provide family-sustaining earnings to many, certificates represent one piece of a multi-pronged solution on the road to a workforce with 60 percent postsecondary attainment. Though certificates currently aren’t counted in many measures of postsecondary attainment, often they provide the outcomes that degree-seeking students are looking for: gainful employment. Certificates can also serve as the first rung on the ladder to a college degree or as training for workers with degrees engaged in the process of lifelong learning and career advancement. The rapid growth of certificates over the past 30 years is a promising signal that students and institutions are recognizing the value of certificates at an increasing rate.

Today, policymakers do have a role: to ensure that all parties involved know, to the greatest extent possible, that the value of the programs they are funding are transparent for all to see. Certificate programs are successful if they promote either: (1) gainful employment and long-term job and income security or (2) the pursuit of a higher-level credential, typically a college degree. If they are successful in these two areas, certificate programs will ensure that students considering them will be able to make informed choices about what to study and where to study it, with reasonable expectations about their prospects after graduation.





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Certificates: Gateway To Gainful Employment and College Degrees
comprises a full report and executive summary.
Both can be accessed at cew.georgetown.edu/certificates

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