CERTIFICATES OF VALUE

Certificates are the fastest-growing postsecondary credential in the country, demonstrating that many institutions and prospective job candidates find them valuable. Between 1984 and 2009, the share of American workers who report a certificate as their highest level of educational attainment grew six-fold from 2 percent to 12 percent.[1] On average, certificate holders earn more than high school graduates do, but not all certificates are created equal. Some certificates provide little if any value while others promote gainful employment and upward career mobility.

What we know about certificates nationally:

- Five percent of workers have certificates that provide substantial labor market value – the lead to wages at least 20 percent higher than the average worker with a high school education.

- A commonly held notion that certificates should be evaluated by their duration is flawed. Whether a certificate leads to a job in a field related to the certificate is a better proxy for its value. On average, certificate holders who work in an occupation related to their certificate earn 37 percent more than those who work in an unrelated field.

- The most common certificate fields of study include healthcare (15 percent of certificate holders), business and office management (11 percent of certificate holders), and cosmetology (7 percent of certificates holders).

- Certificates that provide the most economic value are those that provide workers with technical skills they can leverage to jobs in blue-collar or office support occupations. These certificates are associated with careers with high concentrations of men, both historically and presently. As a result, male certificate holders earn more than female certificate holders, and men also receive a larger benefit from a certificate than women do.

- On average, college degrees are worth more than certificates, but some certificates are worth more than Associate and Bachelor's degrees: 39 percent of male certificate holders earn more than the average male Associate degree holder and 24 percent earn more than the average male Bachelor's degree holder. Men who earned an electronics certificate, for example, earn $70,300 annually, while the average male Bachelor's degree holder earns $68,400 annually.[2]

For men, six kinds of certificate programs stand out as both above average wages and having a high concentration of men, five of which are in blue-collar and technical fields that do not require a Bachelor's degree (Table 1):

- Construction;
- Aviation;

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[1] Carnevale, Rose and Hanson, *Certificates*, 2012.

[2] Wage data based on analysis in Carnevale, Rose, and Hanson, *Certificates*, 2012 of full-time, full-year workers between the ages of 23 and 64 reported in 2013 dollars.

- Business and office management;
- Transportation and materials moving;
- Refrigeration, heating, and air conditioning; and
- Metalworking.

However, one-third of men are in other fields that provide above average wages ($52,600 annually).

Table 1. For men, certificates in blue-collar and technical fields of study provide the highest value.

Field of study	Share of male workers (ages 23-64)	Median annual wages (2013$)
Refrigeration, heating, or air conditioning	**5%**	**$53,900**
Drafting	3	52,200
Aviation	**8**	**51,600**
Electronics	1	50,700
Agriculture, forestry, and horticulture	1	49,400
Computer and information services	2	48,900
Construction trades	**10**	**48,400**
Metalworking	**5**	**48,300**
Police and protective services	2	47,900
Business and office management	**6**	**47,400**
Transportation and materials moving	**5**	**46,300**
Healthcare	4	45,100
Auto mechanics	2	44,700
Cosmetology	2	37,900
Food service	12	34,600
Other fields, not specified	32	52,600
All	100	47,600

Source: Georgetown University Center on Education and the Workforce analysis based on Carnevale, Rose and Hanson, *Certificates*, 2012.
Note: Data are from combined 2004 and 2008 panels of the Survey of Income and Program Participation converted into 2013 dollars. Data does not sum to 100 due to rounding.

For women, only two fields stand out as offering above average wages and having a high wages and a high concentration of female certificate holders: business and office management and computer and information services. Fourteen percent of female

certificate holders studied cosmetology, a field where the average wages for a certificate holder are less than the wages of an average female high school graduate.

Table 2. For women, certificates in business/office management provide the highest value.

Field of study	Share of female workers with certificates (ages 23-64)	Median annual wages (2013$)
Business and office management	**19%**	**$35,500**
Computer and information services	**6**	**32,600**
Police and protective services	1	30,100
Healthcare	28	28,000
Transportation and materials moving	1	27,900
Cosmetology	14	24,700
Food service	1	22,800
Other fields, not specified	30	29,300
All	100	29,500

Source: Georgetown University Center on Education and the Workforce analysis based on Carnevale, Rose and Hanson, *Certificates*, 2012.
Note: Data are from combined 2004 and 2008 panels of the Survey of Income and Program Participation converted into 2013 dollars.

UNDERSTANDING RETURN ON INVESTMENTS FOR NONCREDIT COURSE CLUSTERS

Noncredit education remains one of the most widely used and least-understood forms of workforce skills development available today. Currently, the Georgetown Center on Education and the Workforce (Georgetown CEW) is working to evaluate noncredit workforce-oriented training through state-level transcript and wage analysis in several states. Measuring the impact of noncredit education is critical for several reasons - such programs are often more appealing to nontraditional groups, who may have time or resource constraints that limit their desire or ability to participate in more traditional educational pathways. What's more, students who accumulate significant noncredit coursework in workforce oriented fields are likely to build competencies and skills through these programs - as such, establishing the labor market returns to these courses is important in evaluating the efficacy of noncredit as a delivery model. Data limitations are particularly pervasive in the noncredit realm, posing a considerable challenge to such analysis – interviews with state officials will help illuminate areas where quantitative analysis is not possible, and will provide context to emerging findings.

A few key studies of for-credit pathways have informed Georgetown CEW's research on noncredit education. First, a cluster analysis of students in California's Community College System[3] has been able to identify groups of similar students based on variables such as the number of terms enrolled, course grades, and the number of credits attempted each term. This process divides students into multiple pathways to completion. Notably, this work identifies a cluster known as "skill builders," or students who typically enroll in one or two workforce-oriented courses, gain skills with substantial labor market value, and experience wage gains as high as 5 to 30% for a single course or a group of courses. Further analysis indicates particular fields in which wage returns are the highest, even in the absence of a formal credential: Water and Wastewater Technology, Administration of Justice, and Electronics and Electric Technology yield the largest gains.[4] Understanding the labor market outcomes for these students allows for a more accurate understanding of success in the community college sphere.

Similar work has been summarized in a working paper by the Center for Analysis of Postsecondary Education and Employment (CAPSEE) using longitudinal data from the North Carolina Community Colleges.[5] This work assess these students' labor market outcomes, using an associate's degree as the relevant comparison point: not

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[3] Bahr, Peter. *The Bird's Eye View of Community Colleges: A Behavioral Typology of First-Time Students Based on Cluster Analytic Classification*. 2010.

[4] Booth, Kathy and Peter Bahr. *The Missing Piece: Quantifying Non-completion Pathways to Success*. 2013.

[5] Zeidenberg, Matt, Marc Scott, and Clive Belfield. *What About the Non-Completers? The Labor Market Returns to Progress in Community College*. 2015.

surprisingly, they find that non-completers have lower earnings outcomes than those who complete degrees in similar fields. However, progression towards a degree and credit accumulation are both shown to be connected to higher earnings, which may indicate that specific courses or skills gained in community colleges have labor market value independent of a credential itself.

These studies point to two related conclusions: some college is better than none at all, and the specific courses a student takes will impact the return that student sees. Georgetown CEW hopes to extend this analysis to recognize the relationship between career and technical noncredit coursework and individual labor market outcomes of students. Working in partnership with several states, CEW aims to better understand the characteristics of students who utilize noncredit workforce training, how success should be defined for those students, and what the labor market impact of such courses may be.

Exploratory work in one selected state has used data on students' reported intentions at the time of enrollment, showing that while many intend to complete a formal credential, still others are looking for workforce development or job re-training experiences. However, outcomes data on related employment experiences and continued education are tracked only for students who complete a certificate. Anecdotally, school officials have suggested that many students leave the system without completing a certificate because they've found employment opportunities that are more appealing. However, unless all students are tracked in the same way as completers these claims are extremely hard to verify. Analyzing wage data associated with individual courses will shed light on the relationship of particular courses to labor market success– it's likely that there are significant gains for particular clusters in specific fields. Acquiring workforce and transcript data from additional states will enables robust identification of courses and course clusters that have labor market consequences for students – discovering such pathways may also help colleges and employers direct individuals to courses that may be beneficial to their particular career, and will also allow insight into the extent to which these relationships vary across states. Third party credentials are an additional area of interest for this work: if students are able to obtain a third party credential or a state-issued license as a result of the coursework in question, this should impact their return on investment. Unfortunately, data on industry credentials is often disconnected from the colleges themselves, making it difficult or impossible for community colleges to understand and take ownership of these successes.

Meeting the needs of students is a complex endeavor that requires developing tools for understanding individual students' intentions and multiple yardsticks for success. Emphasizing completion as the key metric may minimize or even ignore excellence in other areas critical to a school's mission. Students who gain valuable skills that lead to demonstrable labor market gains should be included among the success stories of community colleges, even if they do not complete a formal credential. Likewise, identifying and understanding students who exit the system without accomplishing their goals or accumulating marketable skills could be useful for policymakers and

community college officials to develop and implement interventions to encourage success among these students.