GEORGETOWN UNIVERSITY

Center *on* Education *and the* Workforce

McCourt School of Public Policy

The Role of Certificates and Certifications in Attainment

SHEEO Communities of Practice
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Key take aways

- **Certificates, sub-baccalaureate degrees and awards, and certifications have quickly become important to state policy.**

- **‘Good enough’ solutions are needed because data has not kept up with demand to set baselines while the most pressing challenge is to create progress metrics.**

CEW had developed certificate counts by state for Lumina's Stronger Nation report.

We are currently aiming to update these.

So what the heck did we do?

We started with the Survey of Income Program Participation(SIPP 2008) wave 12 (2012) data to determine, by major and sex, how many certificates holders there are.

We then determine how many of these certificates holders earn 20% or more above the sex specific high school median earning.

Then we aggregate these estimates to meta major (roughly 20 majors)

These percentages are multiplied by the certificate production in each states IPEDS reporting post stratified to meet the known national totals by major.

Yep, pretty back of the napkin

Because we don’t have rich data on the full scope of certificates nor do we have good guidance on how many certificates are valued in the labor market we sought assurance that the data are reasonable.

To do this, we worked from the prior that stand-alone certificates are commonly reported as some college, no degree in the Currently Population Survey.

So we looked at the percentage of the some college, no degree workforce that earns a premium (20%) over high school median.

This comparison between our ‘good’ certificates estimate and how many people with some college earn a wage premium shows that our estimate fall well within range of believability.

We do not have a comparable technique to check on good certificates among the full population (working, unemployed, not in the labor force).

States have the ground level intelligence to ensure that the numbers make sense. We provide a good starting point.

What would we do better?

CEW can create a more analytically sophisticated methodology but sample size of national estimates are small implying the estimates needed to generate more sophistication come with the cost of much less reliability.

Even if each component piece of a 5-factor model are 90% accurate then in the multiplicative case may results are 59% reliable (.9*.9*.9*.9*.9).

State administrative data and qualitative insight on non-credit production by comparable field will be key to improvements.

What would do better?

States can delve into ideas, like our original methodology which took into account the interactions between certificate field, occupation, and industry; as well as earning comparisons by sex. **I believe that licensing agencies might be key.** CTE reporting and qualitative assessment of non-credit activities also might help.

I am fine with small sample estimates if they are consistent with other data. CEW is not in the position to know whether a statistically weak estimate is bad while states can figure out if an estimate based on weaker data is truly reflective of the state or not.

There is also a serious question about whether a 20% premium is appropriate for determining that short-term (one –year or less) are valuable?

Human capital theory would suggest 7%-10% for these shorter period certificates.

So why didn't we try to refine our estimates?

Given the myriad of data complications we determined that conservative estimates do the least harm.

We set out to establish a baseline.

We believe that the variation in state needs diminish the value of intricate estimations that might suit one state and not another.

We believe that states are the ultimate authority on whether the estimates pass a smell test – especially given we are forced to use IPEDs or other administrative data to corral non-credit and non-accredited certificate value.

States will likely define 'good' by their 50 different standards (e.g. 10% return for 1 year certificates) which we can not predict.

Where now, Columbus?

We need to ask ourselves why we are doing this.

My perspective is that most states are tasked with measuring progress.

Our baseline estimates are **stock** figures that include a fair number of certificates that are either unmeasured (non-credit) or out of the state purview.

Connecticut report suggests only 51% of certificates are covered by state reporting system.

Measuring progress is a **Flow** issue.

It is my recommendation that states investigate what CEW and your peer states have done.

Determine whether the baseline figure is reasonable to and start thinking about how to measure progress.

This will be difficult enough

We make this recommendation for a number of reasons.

- **First**, owning a method – even if borrowed means that you will understand it and can explain it - simple helps in this regard.

- **Second**, at the end of the day –if you need to estimate a baseline – it'll be just that – an estimate while measuring progress gains importance.

- **Third**, there are a number of upcoming surveys that will help narrow in on better estimates, just not right now.

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Table 1.

Percentage With Alternative Credentials by Regular Education Level for the Population Aged 18 and Older: 2012

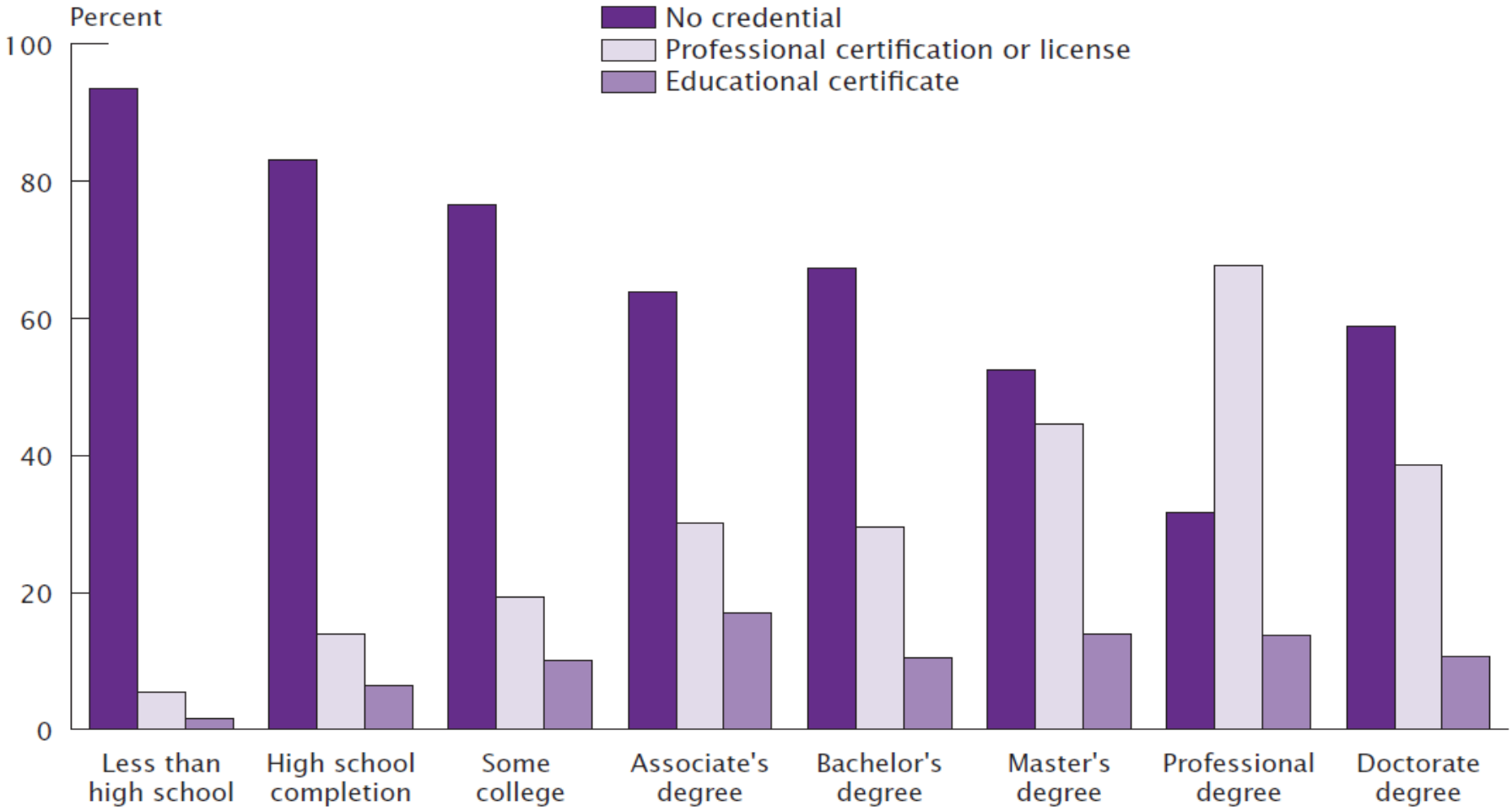
(Weighted, numbers in thousands)

Regular education level	No alternative credential		Professional certification, license		Educational certificate	
	Number	Percent	Number	Percent	Number	Percent
Total	**161,557**	**75.2**	**46,326**	**21.6**	**19,113**	**8.9**
Less than high school	22,240	93.6	1,315	5.5	411	1.7
High school completion	59,056	83.1	9,891	13.9	4,482	6.4
Some college	32,134	76.5	8,064	19.3	4,243	10.2
Associate's degree	11,457	63.8	5,409	30.2	3,059	17.1
Bachelor's degree	26,196	67.3	11,447	29.5	4,027	10.4
Master's degree	8,291	52.5	7,018	44.6	2,180	13.9
Professional degree	1,015	31.6	2,178	67.7	436	13.7
Doctorate degree	1,531	58.8	1,004	38.7	274	10.6

Note: Nonrespondents are not included in estimates of alternative credentials.
Source: U.S. Census Bureau, Survey of Income and Program Participation, 2008 Panel, Wave 13.

Figure 1.

Alternative Credential Status by Regular Education Level: 2012



Note: Nonrespondents are not included in estimates of alternative credentials.
Source: U.S. Census Bureau, Survey of Income and Program Participation, 2008 Panel, Wave 13.

Table 4.

Percentage With Alternative Credentials by Detailed Employment Status for the Population Aged 18 and Older: 2012

(Weighted, numbers in thousands)

Detailed employment	Total	No alternative credential	With professional certification, license	With educational certificate
All persons	**235,455**	**75.2**	**21.6**	**8.9**
Employed full-time all 4 months	92,716	67.7	29.4	10.4
Employed all 4 months part-time or a combination of part- and full-time	36,229	70.2	26.4	10.3
Employed sometime during 4 months	19,832	71.9	24.9	10.8
Unemployed	9,045	84.2	12.6	7.2
Not in the labor force	77,634	86.5	10.1	6.2

Note: Nonrespondents are not included in estimates of alternative credentials.
Source: U.S. Census Bureau, Survey of Income and Program Participation, 2008 Panel, Wave 13.

Table 5.

Median Monthly Earnings by Regular Education Level and Alternative Credentials for the Population Aged 18 and Older: 2012

(Weighted, numbers in thousands. Earnings in dollars. Earners employed full-time for the 4 months before the survey)

Regular education level	Total	Neither		Professional certification, license only		Educational certificate only		Both	
		Median earnings	Standard error[1]	Median earnings	Standard error[1]	Median earnings	Standard error[1]	Median earnings	Standard error[1]
Total	**90,490**	**3,110**	**34**	***4,167**	**54**	***3,433**	**104**	***3,920**	**105**
Less than high school	5,665	1,920	40	*2,419	181	*3,291	701	*4,088	1,020
High school completion	26,343	2,500	17	*3,053	72	*2,917	146	*3,200	165
Some college	16,667	2,947	65	*3,333	57	*3,333	211	3,200	169
Associate's degree	8,890	3,240	96	*3,810	146	3,200	146	3,533	189
Bachelor's degree	20,941	4,417	117	4,583	89	*3,775	152	4,320	201
Master's degree	8,460	6,000	229	5,600	136	5,500	362	*4,752	251
Professional degree	1,983	6,250	666	*8,750	1,022	X	X	6,500	1,650
Doctorate degree	1,540	7,083	316	7,083	707	6,250	870	*5,400	903

*Denotes significant difference from having neither alternative credential at the .10 level.

X No respondents had a professional degree and an educational certificate only.

[1] Data are based on a sample and are subject to sampling variability. The standard error is a measure of an estimate's variability. It is a measure of the deviation of a sample estimate from the average of all possible samples.

Notes: Earnings analyses only include workers with positive earnings in the 4-month reference period. Nonrespondents are not included in estimates of alternative credentials.

Source: U.S. Census Bureau, Survey of Income and Program Participation, 2008 Panel, Wave 13.