

Growth in Short-Term Certificates at Washington's Community and Technical Colleges

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In 2008-09, all credentials awarded by Washington's community and technical colleges increased by ten percent over the previous year. More than half of that growth can be attributed to increases in short-term (less than one year) certificates designed for two purposes--to help students gain immediate employment, and to serve as building blocks that can be stacked on the pathway to a longer term certificate or degree. The State Board for Community and Technical Colleges (SBCTC) wants to increase attainment of awards that fully count toward long-term certificates and degrees. It is therefore important to understand whether short-term certificate growth is contributing to that goal. The purpose of this paper is to examine that growth in more detail.

Key Findings

- Short-term certificates provide short-term training for immediate employment for students who need to find jobs immediately, and provide incremental steps along a pathway toward a longer-term certificate or degree. Because they allow students to stop out for work while building a longer-term credential, they help make longer-term credentials more accessible to disadvantaged segments of the population.
- Short-term (less than one year) certificates increased by 47 percent at Washington's community and technical colleges between 2005-06 and 2008-09, well ahead of any other credentials colleges awarded, and coinciding with the implementation of the Student Achievement Initiative. The trend follows but outpaces a similar national trend.
- Recent growth in short-term certificates is concentrated in a small number of programs. Sixteen (16) programs account for 94 percent of the 2-year growth and constitute more than half of all certificates awarded in 2008-09.
- Overall, growth of short-term certificates in higher wage programs exceeded growth in both middle- and lower-wage programs. Increasing certificates in Information Technology programs, Industrial Technology programs, Construction Trades and Welding programs were the primary areas of the higher wage category driving that growth.
- The single program with the highest nominal short-term certificate growth was in the Nursing Assistant program, driving the overall growth in lower-wage programs. Middle-wage program growth was driven by Accounting, aviation-related programs, and Medical Assisting.



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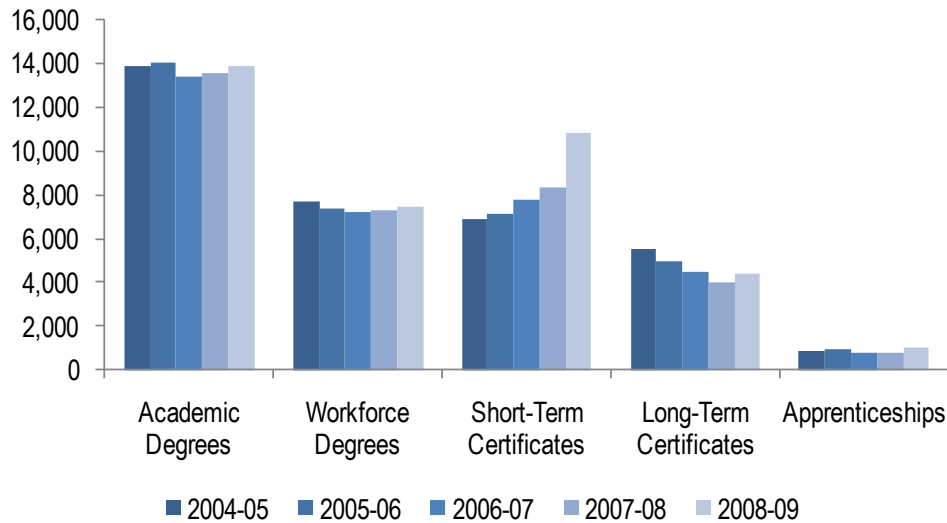
- On average, students earning short-term certificates are more likely to be male, full-time students and unemployed than students earning long-term certificates or degrees, suggesting that most of these students are seeking training for immediate employment. They are also more likely to be students of color. As data become available, it will be important to track whether students of color are equally likely to stack these certificates for longer-term credentials.
- Nearly half (45 percent) of students who received short-term certificates in 2007-08 returned to college the following year, suggesting that many of these certificates represent modules along the pathway to longer term credentials.
- While low SES students are less likely to return to college after receiving a short-term certificate than students overall, I-BEST students and those receiving Opportunity Grants are more likely to return. Both I-BEST and Opportunity Grants were designed to help low-income, low-skill students pursue and persist on pathways leading to higher levels of attainment.
- Of students who earn short-term certificates, those who stop out are more likely to be unemployed, part-time male students than those who return. There is no significant difference in the proportion of students of color. Nearly half of students who stop out or return come from the two lowest socioeconomic status quintiles. Data are not currently available to track their employment outcomes, but it will be important to assess them as data become available.
- Sixty-one (61) percent of students earning a Nursing Assistant certificate were applicants for a Nursing program, and 60 percent returned the following year primarily in Nursing. Those who stopped out for work after receiving a Nursing Assistant certificate were more likely to be low income, unemployed and part-time students, suggesting that this program is less likely to provide a pathway for lower income students.
- Colleges indicated that short-term certificates are growing as they modularize their longer term programs, allowing students to stop out for work with a credential. The biggest reason certificates have grown, colleges indicated, is that they are taking steps to ensure that students who earn short certificates, apply and receive them. In the past, students who could have earned short certificates on the way to longer-term credentials did not apply for or receive them.
- Some colleges have created modules to accommodate regional needs or particular skill sets.
- One third of the short-term certificates awarded in 2008-09 were accompanied by a "tipping point" for the purposes of Student Achievement. These students are more likely to return along a pathway than students receiving short-term certificates overall. This trend is expected to continue as colleges continue to modularize their programs.

Overview of Growth In Short-Term Certificates

Figure 1 shows a five-year trend in all credentials awarded by Washington's community and technical colleges system wide. The chart illustrates that short-term certificates, awarded to students who complete workforce programs less than one year in length, are growing dramatically, particularly in recent years. That growth coincides with the implementation of the Student Achievement Initiative, Washington's new performance funding system for community and technical colleges.

Short certificates increased from 7,396 in 2005-06 to 10,839, or by 47 percent, by 2008-09. They increased by 25 percent in the two most recent years. The trend in Washington’s short-term certificate growth is outpacing a similar national trend. A November 2009 Institute of Education Sciences (IES) study estimates that short-term certificates have grown nationally by more than 35 percent from 1997 to 2007.¹ In Washington, the growth over the same period exceeds 350 percent. In 2007, Washington’s short certificates accounted for 2 percent of the national total, up from slightly more than a half a percent in 1997.

Figure 1. CTC Degrees and Certificates



This paper examines Washington’s short-term certificate growth in more detail. The sections that follow examine specific areas of study where short-term certificates are growing, identify the characteristics of students who are earning the short certificates, and look at some of the reasons for the growth.

In What Programs are Short-Term Certificates Growing?

While short certificates have grown in all programs, the most recent growth (over the past two years) is concentrated in only a small number of the more than 1,000 programs that colleges currently offer. Table 1 shows the 16 programs with the highest nominal growth (60 or more certificates system wide) since 2006-07. These programs account for 94 percent of the 2-year growth in all short certificates. The sum of the certificates awarded in 2008-09 in these 16 programs constitutes more than half (54 percent) of all certificates awarded in that year. It is specifically these 16 high-certificate growth programs that are the focus of more detailed analysis in this report.

The highest short certificate growth was in the Nursing Assistant program, followed by Microcomputer Applications. In percentage terms, however, nursing assistant grew by a third, while microcomputer applications nearly doubled over the two-year period. In some cases, such as Industrial Technology and

¹ D’Amico, Aurora, *Changes in Postsecondary Awards Below the Bachelor’s Degree: 1997 to 2007*, Institute of Education Sciences, National Center for Education Statistics, NCES 2010-167, November 2009.

CAD Drafting, short-term certificates have grown from very low levels, and that growth is being driven by one or two colleges, as will be discussed later in the paper.

Table 1. Growth in Short-Certificates at Washington’s Community and Technical Colleges

Program Title	2004-05	2005-06	2006-07	2007-08	2008-09	2-Year Change
Nursing Assistant/Aide	1,096	899	1,182	1,305	1,570	388
Microcomputer Applications	265	294	367	339	706	339
Industrial Tech	35	68	---	63	219	219
Accounting Tech and Bookkeeping	257	271	295	313	480	185
Phlebotomy	431	565	464	521	637	173
CAD drafting/design tech	83	11	7	57	161	154
Human Services Training	81	58	29	82	154	125
Welding Tech	304	391	424	453	542	118
Business Administration and Management	86	72	58	137	174	116
Airline/Commercial/Professional Pilot	90	51	91	121	193	102
Air Traffic Control	49	41	45	75	145	100
Zero Energy Building Practices	---	---	---	19	77	77
Office Management and Supervision	15	16	26	42	94	68
Stationary Engineer	3	70	25	72	90	65
Auto Mechanics	301	245	319	264	383	64
Truck and Bus Driver	165	135	204	239	268	64
Total All Short-Term Certificates	7,201	7,396	8,325	8,774	10,839	2,514

Wage Levels of High Certificate Growth Programs

In an effort to track outcomes (wages and earnings) of its workforce students over time, SBCTC categorizes workforce education programs into higher-wage, middle-wage, and lower-wage programs based on the actual earnings nine months after college for the typical graduate. Table 2 below shows short certificate growth based on those wage level categories. Between 2006-07 and 2008-09, when short certificate growth accelerated, higher wage programs grew faster (36 percent) than either middle- or low-wage programs (27 percent each).

Table 2. Short Certificate Growth in Washington State by Wage Grouping

Program Grouping by Median Wages	2004-05	2005-06	2006-07	2007-08	2008-09	2-Year Change	2-Yr % Change
Total Higher Wage Programs	2,380	2,660	2,958	3,192	4,018	1,060	36%
Total Middle Wage Programs	2,121	2,247	2,592	2,717	3,301	709	27%
Total Lower Wage Programs	2,699	2,447	2,724	2,845	3,456	732	27%
Other ¹	1	42	51	20	64	13	25%

¹ Includes Parent Education Courses and programs in Energy Auditing that are too new to have wage data available

The higher-wage increases were driven by growth in information technology programs, industrial technology programs, welding and construction trades. Middle wage increases were driven primarily by

growth in aviation-related programs, Accounting, and Medical Assisting (such as Phlebotomy). Lower wage growth was primarily driven by the increase in Nursing Assistant programs, and to a lesser degree, growth in Administrative Support programs. Many students receiving Nursing Assistant certificates go on to get degrees in Nursing, as will be discussed in a later section.

What are the Demographics and Program Characteristics of Students Earning Short-Term Certificates?

Short-term certificates serve two policy purposes. They provide short-term training for immediate employment for students who need to find jobs immediately, and they also provide incremental steps along a pathway to a longer-term credential. Those incremental steps allow students to stop out for work if necessary while building a longer-term degree or certificate, making longer credentials more accessible to disadvantaged segments of the population.

Table 3 summarizes the characteristics of students who earned short-term certificates in 2008-09 and compares them to students who earned longer-term certificates and degrees. On average, students earning short-term certificates are more likely to be male, full-time students and unemployed than workforce students who earn long-term certificates or degrees. That suggests that the average student earning a short-term certificate may be more likely to be in college to gain training for immediate employment.

The demographics among the three wage categories of short-term certificate earners sheds light on some interesting differences between them.

Table 3. Characteristics of Students Earning Short Term Certificates in 2008-09

	-----Students Earning Short Certificates-----				Workforce Students Earning Long Term Credentials
	Higher Wage	Middle Wage	Lower Wage	All Short Certificates	
% Female	28%	62%	87%	40%	64%
% Full-Time Students	47%	50%	58%	52%	61%
% Working	40%	43%	38%	40%	51%
Median Age	30	30	29	30	29
Race/Ethnicity					
Asian/Pacific Islander				11%	10%
African American				9%	5%
Native American				3%	2%
Hispanic				9%	7%
Other				2%	2%
White				69%	77%

Students earning certificates in the lower-wage programs are much more likely to be female (87%), full-time students who are not working than students earning certificates in middle- and higher-wage

programs, as the growth is being driven largely by the Nursing Assistant program. Students earning certificates in higher wage programs, where the growth is being driven by information technology, industrial technology, welding and construction, are more likely to be male and part-time and slightly more likely to be working. Students earning certificates in middle wage programs, such as in aviation-related programs, Accounting and Phlebotomy, fall in between the other two wage categories in terms of percentage that are female and the percentage that are full-time students. Those students are most likely, however, to be working while in school. The median age of students in short certificate programs is only slightly higher than for students in programs leading to longer term credentials.

Students earning short certificates are much more likely to be students of color than workforce students earning long-term certificates or degrees. Over time, it will be important to track whether students of color who receive short-term certificates go on to complete longer term credentials.

Are Students Who Receive Short-Term Certificates Staying Enrolled in College?

Although the rapid growth in short-term certificates is a recent phenomenon and more time will be needed to accurately and comprehensively track whether students use these certificates in combination to earn longer-term certificates and degrees, some information is currently available to look at the students who received short-term certificates in 2007-08 to see whether they returned to college the following year, and if so, who they are and in what programs they are enrolled.

Forty-five (45) percent of the students who received short-term certificates in 2007-08 returned to college in 2008-09, suggesting that many of these certificates represent modules along the pathway to longer-term degrees and certificates.

Table 4, on the following page, shows the percentage of students returning in the year following completion of a short-term certificate in the highest certificate-growth programs. The percentages are shown for all students completing certificates, for students in the lowest socioeconomic status (SES) who have completed certificates, for I-BEST students and for students who received an Opportunity Grant at any time during the year they completed a short-term certificate. Both the I-BEST program and Opportunity Grants were both designed to help low-income, low-skill students pursue and persist on pathways that can lead them to higher levels of attainment.

For students earning certificates in the 16 high-certificate growth programs examined in this report, the percentage of students returning to college is considerably higher, on average, than for students completing short certificates overall. That suggests that in many of these high growth fields, colleges are building pathways that allow students to stack certificates on the way to longer-term credentials.

While low SES students are less likely overall to return to college than students overall, those receiving Opportunity Grants and those in I-BEST programs are more likely, particularly for those receiving Opportunity Grants. The percentages of returning students give some indication of where pathways are present versus a short-term certificate with high labor market value. In some cases, such as Industrial Tech, Auto Mechanics and Airline Pilot, the programs have been modularized so that clear pathways exist in the colleges that are driving the growth. In others, such as Phlebotomy and Stationary Engineer,

Table 4. Continuation Rates of Students in High Growth Short-Term Certificates

Program Title	-----All Students-----		-----IBEST Students-----		-----Low SES Students-----		---Opportunity Grant Students---	
	# of Students Completing Short-Term Certificates in 2007-08	% of Students Completing Certificates in 2007-08 Still Enrolled in 2008-09	# of Students Completing Short-Term Certificates in 2007-08	% of Students Completing Certificates in 2007-08 Still Enrolled in 2008-09	Number of Students Completing Short-Term Certificates in 2007-08	% of Students Completing Certificates in 2007-08 Still Enrolled in 2008-09	Number of Students Completing Short-Term Certificates in 2007-08	% of Students Completing Certificates in 2007-08 Still Enrolled in 2008-09
Nursing Assistant/Aide	1,305	60%	187	56%	305	59%	177	65%
Microcomputer Applications	281	51%	11	64%	---	---	8	50%
Industrial Tech	63	92%	---	---	10	100%	---	---
Accounting Tech and Bookkeeping	267	59%	19	95%	40	63%	21	90%
Phlebotomy	517	32%	16	38%	106	33%	20	55%
CAD drafting/design tech	56	66%	---	---	9	60%	---	---
Human Services Training	73	47%	---	---	19	63%	2	100%
Welding Tech	312	57%	47	43%	71	54%	46	57%
Business Administration and Mgmt	130	52%	---	---	11	55%	---	---
Airline/Commercial/Professional Pilot	76	70%	---	---	---	---	12	67%
Air Traffic Control	32	63%	---	---	---	---	5	80%
Zero Energy Building Practices	19	63%	---	---	---	---	---	---
Office Management and Supervision	41	68%	---	---	---	---	---	---
Stationary Engineer	72	29%	---	---	23	43%	---	---
Auto Mechanics	111	66%	33	76%	21	71%	10	80%
Truck and Bus Driver	213	10%	10	0%	53	13%	22	18%
Total All Short Certificates	7,256	45%	651	47%	1,588	37%	471	61%

those pathways are not as clear. More detail about these pathways is described in a later section summarizing colleges' feedback.

What Are the Characteristics of Students Earning Short-Term Certificates and Returning to College Versus Students Who Stop Out?

Table 5 compares demographics and characteristics of students who earned short-term certificates in 2007-08 and did not return to college the following year with students who did return in 2008-09. Of the students who earn short-term certificates, those who stop out are more likely to be unemployed, part-time male students on average than those who return to college. A higher percentage of those students come to college with at least an Associates' degree. Those students are more likely to be earning certificates to gain immediate employment. Students who return, on average, are typically younger, female, full-time students who are working while in college. Many of these students earned certificates in Nursing Assistant, and are working toward their nursing degree. There is no substantial difference in the proportion of students of color between those who return and those who stop out.

In both cases, nearly a quarter of the students come from the lowest socioeconomic status (SES) quintile. In fact, nearly half of these students, whether they stop out or return along a pathway, are from the lowest two SES quintiles. While data are not currently available to track the employment outcomes of those students, employment analysis will be critical in the future to ensure that short certificates are serving this population as they were designed to do.

Table 5. Characteristics of Students Earning Short-Term Certificates in 2007-08

	Students Receiving a Short-Term Certificate in 2007-08 and <u>Not</u> Returning in 2008-09	Students Receiving a Short-Term Certificate in 2007-08 and Returning in 2008-09
% Female	59%	64%
% Full-Time Students	46%	55%
% With Prior Education of at Least an AA	15%	12%
% Working	44%	50%
% in Lowest Socioeconomic Status Quintile	23%	23%
Median Age	30	27
Race/Ethnicity		
Asian/Pacific Islander	9%	10%
African American	8%	8%
Native American	3%	3%
Hispanic	9%	9%
Other	2%	2%
White	71%	70%

A Closer Look at the Nursing Assistant Program

The Nursing Assistant program, while the program with the highest growth in short certificates in recent years, is unique. Growth in the program is widespread, and not concentrated in one or two colleges. Nursing Assistant programs are typically between 7 and 20 credits, but a few specialized programs are longer in length. Many students earning a Nursing Assistant certificate go on to study Nursing. In fact, 61 percent of students who received a short-term Nursing Assistant certificate in 2007-08 were applicants for a Nursing program. Sixty (60) percent returned the following year, and the great majority of those (92 percent) were enrolled in Nursing programs. In some cases, the Nursing Assistant courses are requirements for Nursing majors. High numbers of Nursing Assistant certificates have been awarded historically, but with the implementation of the Student Achievement Initiative, the numbers have grown considerably.

Table 6 shows the characteristics of students who return after receiving short-term certificates in Nursing Assistant, as compared to those who stop out for work. Those who receive a short-term certificate and stop out for work are much more likely to be low income, not working and part-time students. They are also more likely to be students of color. For these students, Nursing Assistant does not appear to be a building block upon which they can pursue a longer-term credential; however, since Nursing Assistant courses are required in most Nursing programs, the students could return at a later time. For some students, the Nursing Assistant certificate provides a credential allowing a student to work and gain experience necessary to be accepted into a nursing program. Unfortunately, Nursing Assistant appears less likely to provide a pathway for lower income students than for those students with a higher SES.

Table 6. Characteristics of Students Earning Nursing Assistant Certificates in 2007-08

	Students Receiving a Nursing Assistant Certificate in 2007-08 and <u>Not</u> Returning in 2008-09	Students Receiving a Nursing Assistant Certificate in 2007-08 and Returning in 2008-09
% in Lowest Socioeconomic Status Quintile	29%	24%
% Full-Time Students	40%	45%
% With Prior Education of at Least an AA	10%	14%
% Working	48%	53%
Race/Ethnicity		
Asian/Pacific Islander	9%	9%
African American	7%	6%
Native American	3%	3%
Hispanic	13%	11%
Other	2%	2%
White	68%	72%

What do Colleges Say is Driving the Growth in Short Certificates?

Colleges have been adding short certificate programs for a number of years, primarily in an attempt to “modularize” their longer term programs, allowing students to stop out for work with a credential. Students are able to stack short certificates for a longer credential only when the programs are designed to allow them to do that. Over time, we will be able to examine how well students do that in those programs that have been modularized, but since these chunked programs are fairly new, data are not currently available to look at that issue in any meaningful way right now.

In addition, in the past, students who could have received short certificates on their way to longer certificates or degrees didn't ever actually apply for or receive those certificates. However, with the implementation of the Student Achievement Initiative, nearly all of the colleges have become more assiduous in ensuring that students who complete short certificates actually receive them, so that colleges get credit for awarding those credentials. With the Student Achievement Initiative, colleges are rewarded for students who reach the tipping point, a credential backed by at least a year of college.

Olympic College, as one example, is the primary college driving short-term growth in the Industrial Tech program. Olympic modularized its Industrial Trades and CAD Drafting programs several years ago. However, completions did not increase until faculty became involved in ensuring that students who earn certificates, receive them. With those certificates, students are able to stop out and work for Naval Shipyard contractors, all of whom require credentials. Olympic College is also driving growth in Welding, as the program has been substantially expanded to accommodate rapidly growing demand.

Edmonds College has created career ladders in a number of its programs by modularizing them. Edmonds is helping to drive growth in Microcomputer Applications and Business Administration programs, both of which are made up of short-term certificates that combine with additional classes to allow students to earn longer-term credentials, all the way to Associates' Degrees.

Highline College, a key college in driving growth in Human Services short certificates, indicated that the certifications were created to accommodate requests for particular specialties from local community service organizations. Each of those certifications works seamlessly toward an Associates' Degree in Human Services.

Peninsula College has also turned its Associates' Degrees into short-term modules, based on skill sets needed that allow students to stop out for work.

These are just a few of the examples of the activities of colleges that are helping to drive growth in short-term certificates.

Tipping Point Growth Resulting from Growth in Short-Term Certificates

In 2008-09, one-third of the short-term certificates awarded were accompanied by a tipping point for the purposes of Student Achievement. Table 7 shows the number of students awarded a short-term certificate as their highest attainment for the year in 2007-08 and 2008-09. There were very few recorded tipping points prior to 2007-08, so the one-year growth is shown for the certificates with the

highest nominal growth. In addition, the table shows the percent of those students who reached the tipping point in 2007-08 and returned in 2008-09.

The percentage of students who reached the tipping point in 2007-08 and returned the following year is higher for all certificates than for students earning short-term certificates overall. The individual programs are comparable, with the exception of Accounting Tech and Phlebotomy. A higher percentage of students who reach the tipping point return to college students overall, suggesting that in these programs, students are gaining skill sets for existing career pathways.

As colleges continue to modularize their programs and ensure that students who earn short-term certificates receive them, the trend is expected to continue.

Table 7. Students Earning Short Certificates Who Reach the Tipping Point

Program Title	2007-08	2008-09	1-Year Change	% of Students Completing Certificates in 2007-08 Still Enrolled in 2008-09
Nursing Assistant/Aide	562	672	110	62%
Industrial Tech	62	167	105	95%
Auto Mechanics	61	121	60	70%
Welding Tech	144	204	60	56%
Accounting Tech and Bookkeeping	100	154	54	74%
Phlebotomy	136	187	51	49%
Total Short-Term Certificates	2,735	3,615	880	56%