

**Building Pathways to Success for Low-Skill
Adult Students: Lessons for Community
College Policy and Practice from a
Statewide Longitudinal Tracking Study**

David Prince

Washington State Board for
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Davis Jenkins

CCRC, Teachers College, Columbia University
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David Prince

Senior Research Manager

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Senior Research Associate, Community College Research Center

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For additional copies, please contact:
Community College Research Center
Teachers College, Columbia University
439 Thorndike Building
525 W. 120th Street, Box 174
New York, NY 10027
212-678-3091 (telephone)
212-678-3699 (fax)

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Table of Contents

INTRODUCTION	1
DATA AND METHODS.....	7
FINDINGS.....	13
EDUCATIONAL ATTAINMENT AND EARNINGS AFTER FIVE YEARS	13
GOING BEYOND ENGLISH AS A SECOND LANGUAGE	17
BEYOND ADULT BASIC EDUCATION.....	19
IMPLICATIONS FOR POLICY AND PRACTICE.....	21
DIRECTIONS FOR FUTURE RESEARCH.....	25
REFERENCES	27

Introduction

According to the U.S. Census (2000), 42 percent of adults between the ages 25 and 64 have, at most, a high school education.¹ Such widespread poor educational attainment is a problem, given that nearly two-thirds of all jobs, and the majority of jobs that pay wages sufficient to support a family, require skills associated with at least some education beyond high school (Carnevale & Derocers, 2003).

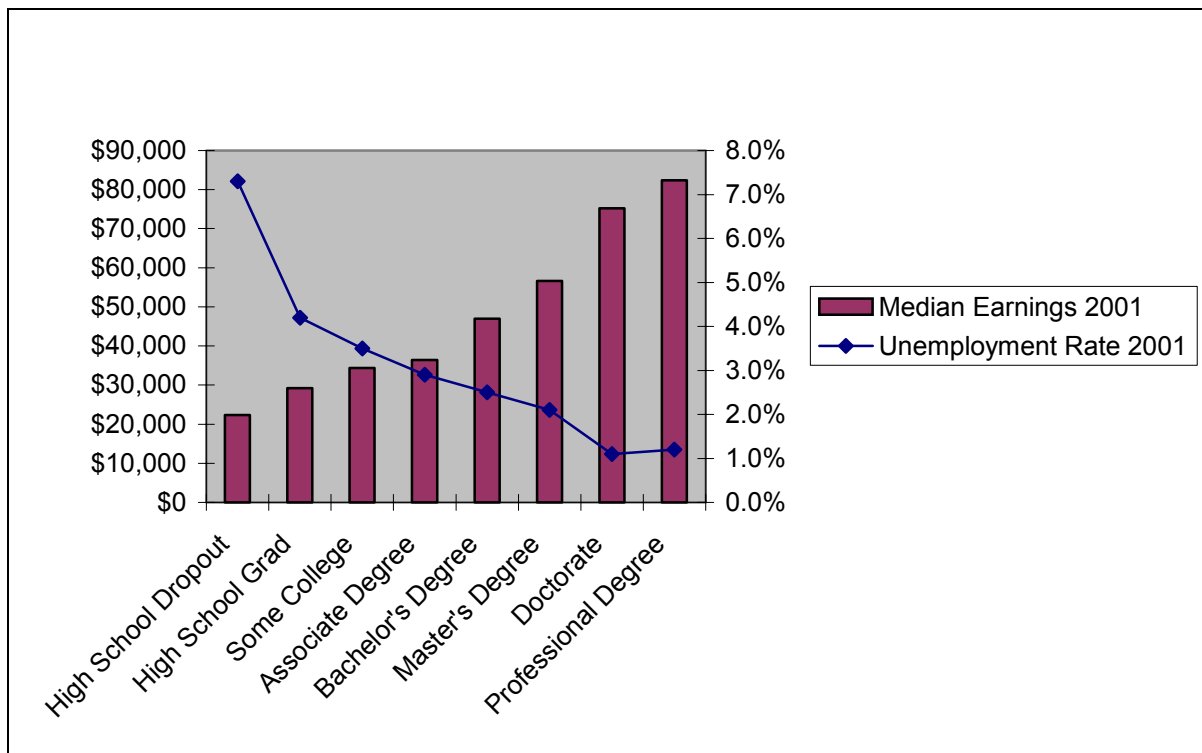
Low educational attainment is associated with high rates of unemployment and poverty. Figure 1 shows the relative wages and unemployment rates of working-age adults with different levels of education. In 2001, adults with an associate degree earned, on average, 25 percent more than did those with only a high school education. They also had an unemployment rate that was nearly one-third lower than that of workers who stopped their education after high school. Workers with a bachelor's degree earned nearly 75 percent more and had nearly a two-thirds lower unemployment rate than did those with only a high school education. Figure 2 shows that the relative wages for workers with only a high school credential or less have declined since the 1970s (U.S. Bureau of Census, 2002). The relative wages of workers with a bachelor's degree have grown substantially over the past 20 years; the greatest wage increases go to those with an advanced degree. To improve their economic prospects, and avoid falling behind, adults with a high school education or less must get at least some postsecondary education, and preferably a degree.

Community colleges are an important entry point to postsecondary education for adults with no previous college education. In Fall 2002, adults between the ages 25 and 64 represented 35 percent of full-time equivalent (FTE) enrollments at two-year public colleges, compared with

¹ Authors' calculations.

only 15 percent of FTE undergraduate enrollments at four-year public institutions (U.S. Department of Education, 2001).² Moreover, many community college students who enter postsecondary education at age 25 or older are low-income. Among first-time community college students in 1995-96, 71 percent of those between the ages of 25 and 64 were in the two lower income quartiles, compared with about half of students between 18 and 24 (U.S. Department of Education, 2003).³

Figure 1. Economic Returns to Education

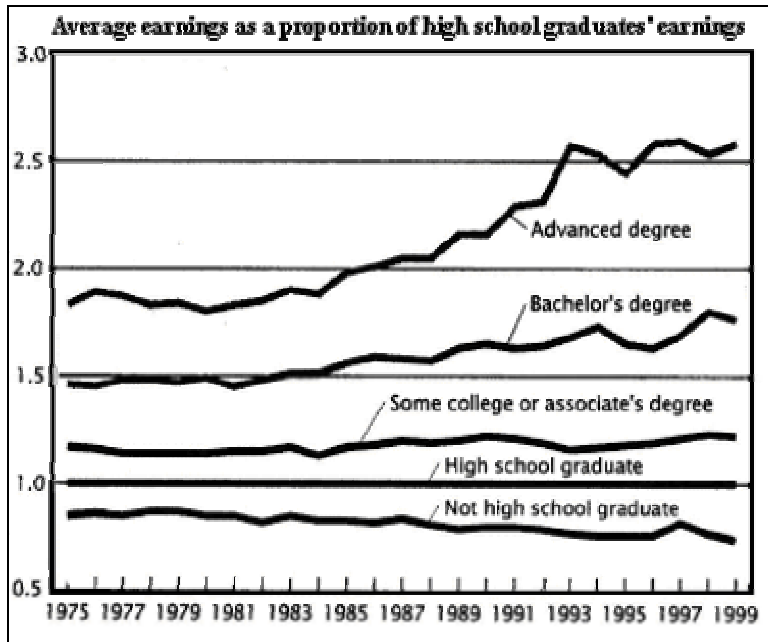


Source: Adapted from *Postsecondary Opportunity* (<http://www.postsecondary.org>).

² Authors' calculations.

³ Authors' calculations. This is the latest available nationally representative data on community college student income by age.

Figure 2. Average Earnings of Full-Time, Year-Round Workers as a Proportion of the Average Earnings of High School Graduates by Educational Attainment: 1975 to 1999



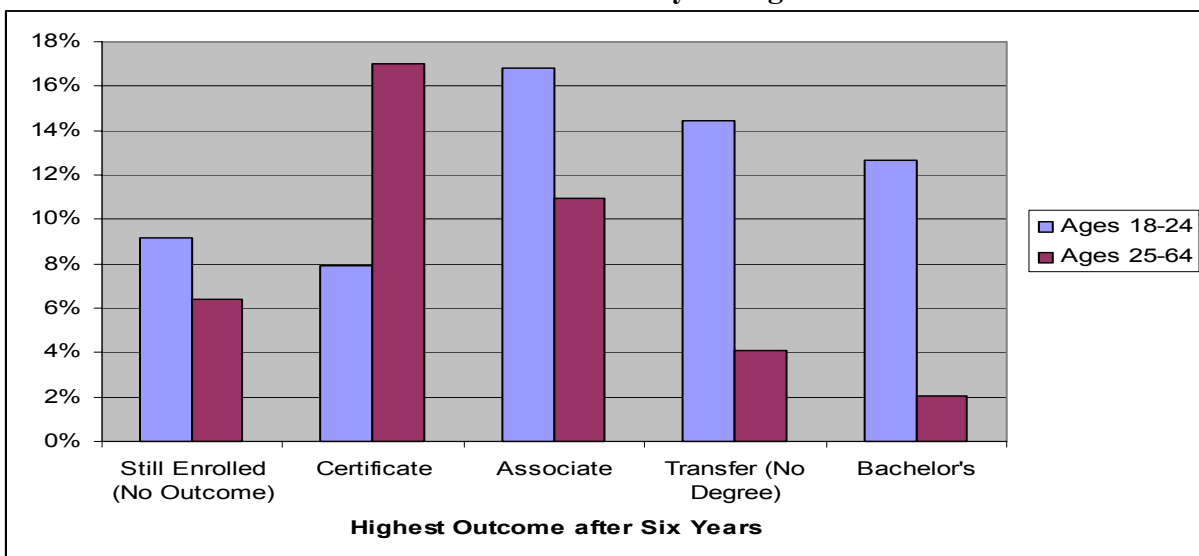
Source: U.S. Census Bureau, Current Population Surveys, March 1976-2000.

National foundations recognize the potential of community colleges to serve as “pathways” for low-skill adults to college and career-path employment, and are funding efforts to develop policies and practices supportive of this role. The Ford Foundation’s *Bridges to Opportunity* initiative is supporting community college policy work in six states (Colorado, Kentucky, Louisiana, New Mexico, Ohio, and Washington State) with the goal of promoting state policies that strengthen the capacity of community colleges, working with other partners, to improve educational and economic opportunities for low-income adults. The Lumina Foundation for Education is spearheading the *Achieving the Dream: Community Colleges Count* initiative, which is seeking to strengthen the work of community colleges with low-income and minority students in five states (Florida, New Mexico, North Carolina, Texas, and Virginia). The *Pathways to Advancement* project of the National Governor’s Association, also funded by the

Lumina Foundation, is supporting interagency teams from ten states to produce policy agendas that promote degree attainment by low-income adult students.

Despite this interest, relatively little is known about what happens to adults with limited education who enter community college and how their educational attainment and labor market outcomes differ from those of traditional college-age students. Figure 3 presents the six-year highest outcomes for a nationally representative sample of first-time college students who enrolled in college-credit courses at community colleges in 1995-96. It shows that, compared with students who started college soon after high school (at ages 18-24), those who started college later (at ages 25-64) were more likely to earn a certificate, but less likely to earn an associate degree and far less likely to transfer to a four-year institution and earn a bachelor's degree. Further, 60 percent of older first-time students did not earn any credential or transfer after six years, compared with 40 percent of younger first-time students. These findings raise the question of how the educational experience of older community college students differs from that of younger students and what this difference means for their relative economic outcomes.

Figure 3. Six-Year Highest Educational Attainment of Beginning Postsecondary Students Who Started at a Community College in 1995-96



Source: Beginning Postsecondary Student (BPS:96-01). Authors' calculations.

A recent study by the Center for Law and Social Policy (Mathur, Reichle, Strawn, & Wisely, 2004) tracked the educational outcomes, employment rates and earnings of participants in California's welfare program (called CalWorks) who were enrolled in a California community college and left the community college system in 1999-2000. It compares CalWorks recipients' education and economic outcomes to those of all women leaving the California community colleges in the same period. The study found that CalWorks students were twice as likely to work year-round after attending community college as before enrolling. Earnings increased substantially for CalWorks students after college, even for those who entered community college without a high school diploma. CalWorks students who completed a vocational certificate or an associate degree tended to have higher earnings and higher employment than did those who completed non-vocational programs. Among vocational program enrollees, the longer the program, the greater the economic payoff. Interviews with CalWorks students indicated that the targeted support and employment services offered by the California community colleges (such as on-campus child care, work-study, and academic advising) were often the key factors in their academic success. While the Center for Law and Social Policy (CLASP) study provides important insights into the economic impact of community college education for welfare recipients and other women students, it does not separately examine the experiences and outcomes of the much larger numbers of low-skill adults who attend community colleges and do not receive welfare benefits.

The CLASP study also focuses on the outcomes of students enrolled in college-credit courses and not students in adult basic education programs.⁴ In fact, very little is known about what happens to adults who go through such programs, which, in many states, are provided by

⁴ This term is generally used to refer to adult basic education (ABE), adult secondary education or GED preparation, and English as a Second Language (ESL).

community colleges. A number of recent reports have described exemplary efforts to help adults make the transition from basic skills to college-level training in occupational fields (Chisman, 2004; Jenkins, 2003; Jobs for the Future, 2004; Morest, 2004; Walker & Strawn, 2004), but they rely on case studies and provide little evidence of program outcomes. The few rigorous studies that have examined outcomes indicate that earning a general equivalency diploma (GED) may increase somewhat the chances that an individual will go on for further education or training, but generally provides little benefit in terms of employment and earnings (Beder, 1999; Bos, 1996; Bos, Scrivener, Snipes, & Hamilton, 2002; D'Amico, 1997; D'Amico 1999; Strawn, 1998). Much of what is known about the educational and labor market impacts of adult basic education is based on research on the welfare population. Yet, findings with respect to welfare participants may not be applicable to other adults with limited basic skills, for example, immigrants who are not on welfare. There have been no rigorous experimental or longitudinal studies on the impact of English as a Second Language (ESL) programs (Van Duzer, Peyton, & Comings, 1998). Most studies of the outcomes of adult basic education do not examine the impact of the type of provider, whether a community college, secondary school, community organization, or some other entity.

This paper seeks to fill gaps in the literature by presenting findings from a study of the experiences and outcomes of low-skill adults in community colleges. It uses student record information from the Washington State Community and Technical College System to track the progress of two cohorts of adult students 25 or older with, at most, a high school education who entered one of the state's community or technical colleges for the first time in 1996-97 or 1997-98. The cohorts include adults who enrolled in adult basic skills programs, which in Washington State are provided by the community and technical colleges, as well as those who enrolled

directly in college-credit courses. The study examines the educational attainment of the students in both cohorts as well as their earnings five years after they first enrolled.

Research staff at the Washington State Board of Community and Technical Colleges (SBCTC) conducted the study, with assistance from the Community College Research Center, as part of the previously described *Bridges to Opportunity* initiative funded by the Ford Foundation. The study was designed to give educators throughout Washington's community and technical college system a more detailed profile of their low-skill adult students, who make up about one-third of the approximately 300,000 students served by the system each year. The study also seeks to identify the critical filter points or roadblocks at which adult students drop out or fail to advance to the next level. The SBCTC staff is using the findings of the study to stimulate reflection and discussion among educators throughout the system on how they can better serve low-skill adult students.

The next section of this report describes the data and analytical methods used in the study. The section that follows presents the main findings. The final section explores the implications of the findings for community college policy and practice.

Data and Methods

The data used in this analysis are taken from the system that the Washington State Board of Community and Technical Colleges (SBCTC) uses to track students in its 34 community and technical colleges. The database contains complete transcript information on every student who enrolls in college-credit or non-credit courses, including college remedial or developmental and "basic skills," the term Washington State uses for adult basic education programs: adult basic

education (ABE), English as a Second Language (ESL), and general equivalency diploma (GED).

To examine the experiences and outcomes of low-skill adults in Washington's community and technical colleges, we identified from SBCTC's tracking system two cohorts consisting of first-time college students who were adults age 25 or older with a high school education or less and who started in 1996-97 or 1997-98. Also included in these cohorts were 18- to 24-year-old, first-time students who lacked a high school diploma or GED and first enrolled in the same two years. These high school dropouts were included because by not graduating high school and enrolling at a community college, they had in effect entered the adult labor market, whether or not they were employed. Together these two cohorts totaled 34,956 students – about one-third of all students who entered a community or technical college for the first time in Washington State in the two baseline years.

Table 1 shows the demographic characteristics of the students in the two cohorts examined here. The largest share of students in the two cohorts was comprised of females, reflecting a common pattern among students in community colleges. Whites made up about half of the sample, and Latinos comprised just over one quarter. The largest group of students in the sample was between the ages 25 and 29. (As mentioned, the students under age 25 were first-time students with no high school credential.) Over 70 percent had children, and nearly one-quarter percent of them were single parents. Most of the students were working or were seeking work. A little more than one-third (38 percent) were not in the labor force.

Table 1. Demographic Characteristics and Gender of Washington State Community and Technical College First-Time College Students Ages 25+ Who Started with a High School Education or Less* in 1996-97 or 1997-98

Student Characteristics	% Of Total	% Of Females	% Of Males
Number of Students	34,956	18,173	15,717
<i>Race/Ethnicity</i>			
African American	7%	7%	7%
Asian/Pacific Islander	9%	11%	7%
Latino/Hispanic	27%	24%	30%
Native American	3%	3%	3%
Other Race	2%	2%	2%
White	52%	53%	51%
<i>Age</i>			
Under 20	5%	6%	3%
20-24	10%	12%	7%
25-29	27%	25%	30%
30-34	22%	21%	23%
35-39	17%	17%	18%
40-44	12%	12%	12%
45-49	7%	8%	7%
<i>Family Status</i>			
Couple with Children or Other Dependents	43%	42%	44%
Single Parent with Children or Other Dependents	24%	34%	12%
Without Children or Other Dependents	19%	15%	25%
Other	14%	10%	19%
<i>Employment Status</i>			
Full-Time Work	28%	20%	38%
Part-Time Work	9%	9%	8%
Seeking Employment	25%	23%	27%
Not in Labor Force	38%	48%	27%

Source: Washington State Board for Community and Technical Colleges. Authors' calculations.

Note: * Also includes first-time students ages 18-24 who lacked a high school credential.

The SBCTC student tracking system contains income information for only a subset of students. Using this and other information, we were able to establish that the majority of the individuals in each cohort were low income. Table 2 shows the percentage breakdown of the sample (or parts of it) by three different measures of income.

Table 2. Washington State Community and Technical College First-Time College Students Ages 25+ Who Started with a High School Education or Less* in 1996-97 or 1997-98 and Who Were in a Low-Income Category

Starting Education Level	Low-wage Earner – Pre-College Earnings ^a	Recent or Current Welfare Recipient	Resident of Low-Income Zip Code ^b
Number of Students	16,809	31,889	34,567
ESL	87%	21%	79%
< HS	82%	31%	67%
GED	73%	20%	59%
HS Diploma	62%	11%	58%

Sources: Washington State Employment Security Department (pre-college earnings), Washington State Department of Social and Health Services (welfare participation), U.S. Census (poverty levels).

Notes: * Also includes first-time students ages 18-24 who lacked a high school credential.

^a Pre-college earnings for the year 30 to 18 months prior to initial enrollment.

^b A zip code area is defined as low income if the percentage of population living below 200% of poverty in the zip area is equal to or greater than the percentage of the population below 200% of poverty in the surrounding county. Washington State Office of Fiscal Management uses 200% of poverty as a threshold for defining “working poor.”

The students in the cohort also varied in their level of education when they entered the community and technical college system. We refer to this as the “starting education level” of students when they first enrolled in college. The following table shows the distribution of students in the two cohorts by starting education level and gender.

Table 3. Starting Education Level and Gender of Washington State Community and Technical Colleges First-Time College Students Ages 25+ Who Started with a High School Education or Less* in 1996-97 or 1997-98

Starting Education Level	% Of Total	% Of Females	% Of Males
Number of Students	34,956	18,173	15,717
ESL	35%	35%	35%
Less than HS	40%	41%	38%
GED	6%	6%	7%
HS Diploma	18%	18%	20%

Source: Washington State Board for Community and Technical Colleges. Authors’ calculations.

Note: * Also includes first-time students ages 18-24 who lacked a high school credential.

The “ESL” category on Tables 2 and 3 includes all first-time students who enrolled in English as a Second Language courses in one of the two base years. Those classified as “Less than HS” were students who enrolled in adult basic education or GED programs. Interestingly,

one-third of the ESL group and 27 percent of the ABE/GED group had a high school credential when they entered a Washington community or technical college. Students classified as “GED” or “HS Graduate” had the credential indicated and enrolled in either college-credit courses or non-credit offerings, including developmental courses.

Table 4 shows the percentage of each type of student who enrolled in academic transfer, workforce education, or other programs and the percentage of each of these groups who took college remedial or “developmental” courses.

Table 4. Enrollment in College-Credit Program Type and Developmental Education of Washington State Community and Technical Colleges First-Time College Students Ages 25+ Who Started with a High School Education or Less* in 1996-97 or 1997-98

Starting Education Level	College-Credit Program Type					
	Academic Transfer		Workforce Education		Other	
	%	% In Dev Ed	%	% In Dev Ed	%	% In Dev Ed
HS Diploma	24%	63%	74%	41%	2%	64%
GED	20%	70%	79%	40%	1%	50%

Source: Washington State Board for Community and Technical Colleges. Authors’ calculations.

Note: * Also includes first-time students ages 18-24 who lacked a high school credential.

Three quarters of the high school diploma holders enrolled in occupational degree programs (which in Washington State are known as “workforce education” programs), while nearly 80 percent of GED holders enrolled in such programs. These high percentages reflect the interest of adult students in occupational programs. Of those who enrolled in workforce education programs, forty percent of both diploma and GED holders took at least one developmental course. The majority of both groups who enrolled in academic transfer programs had to take at least one remedial course.

Table 5 shows the breakdown of the starting education levels of students in the combined cohorts by race and ethnicity.

Table 5. Race and Ethnicity of Washington State Community and Technical Colleges First-Time College Students Ages 25+ Who Started with a High School Education or Less* in 1996-97 or 1997-98

Starting Education Level	African American	Asian/Pacific Islander	Latino/Hispanic	Native American	Other Race	White	All Races
Number of Students	2,244	2,911	8,638	908	698	16,559	31,958
ESL	18%	69%	72%	2%	56%	12%	34%
< HS	54%	21%	24%	72%	27%	48%	40%
GED	5%	2%	1%	10%	4%	11%	7%
HS Diploma	23%	9%	3%	16%	13%	29%	19%

Source: Washington State Board for Community and Technical Colleges. Authors' calculations.

Note: * Also includes first-time students ages 18-24 who lacked a high school credential.

We used the transcript information in the SBCTC student database to track the different subgroups of each cohort (defined in terms of the students' starting education levels) five years after they entered the system. Of particular interest was the highest level of education that these students attained within five years of entering a community or technical college. We also used Unemployment Insurance wage record data from the Washington State Employment Security Department to examine the annual earnings of individuals in the cohort five years after they started.⁵

⁵ By law, all employers with employees eligible for unemployment insurance (UI) are required to report to the state, where each employee is employed and his or her quarterly earnings. States use this information to calculate unemployment insurance benefits. For the 1996-97 cohort, we obtained UI wage record data from the Washington State Employment Security Department for the last three quarters of 2001 and the first quarter of 2002. For the 1997-98 cohort, we used wage record data from the last three quarters of 2002 and the first quarter of 2003.

Findings

Educational Attainment and Earnings After Five Years

Table 6 shows the highest educational attainment of the two first-time student cohorts combined by starting education level five years after they first enrolled at a Washington State community or technical college.⁶

Table 6. Highest Educational Attainment after Five Years of Washington State Community and Technical Colleges First-Time College Students Ages 25+ Who Started with a High School Education or Less* in 1996-97 or 1997-98

Five-Year Highest Attainment	Starting Education Level			
	ESL	Less Than HS	GED	HS Diploma
Number of Students	12,396	13,925	2,199	6,438
No Credits ^a	87%	61%	13%	11%
GED	0%	8%	--	--
Plan ^b	1%	1%	3%	3%
< 10 College Credits	7%	16%	28%	19%
10 – 44 College Credits	2%	7%	26%	32%
45+ College Credits	1%	2%	12%	13%
Less Than 1 Year Certificate	1%	1%	3%	4%
Certificate of 1 Year or More	1%	2%	5%	6%
Associate Degree	1%	1%	9%	12%

Source: Washington State Board for Community and Technical Colleges. Authors' calculations.

Notes: * Also includes first-time students ages 18-24 who lacked a high school credential.

^a“No credits” means that the students did not advance beyond non-credit courses such as ABE, ESL, GED, developmental (i.e., college remedial), or other not-for-credit programs.

^b“Plan” refers to students who completed a typically short-term course of training or education prescribed by another state agency such as the Department of Social and Health Services or a One-Stop Center.

Only 13 percent of students who started in ESL programs went on to earn at least some college credits. Less than one-third (30 percent) of adult basic education (ABE/GED) students

⁶ The Washington State community and technical colleges are on a quarter system, so 45 credits are equivalent to one year of full-time study. The SBCTC considers students who take fewer than 10 credits to be “dabblers,” based on Adelman’s (1999) definition of an “incidental student” who is just taking a few courses to improve job skills or satisfy an interest, but does not intend to pursue a credential.

made the transition to college-level courses. Four to six percent of either group ended up getting 45 or more college credits or earning a certificate or degree within five years.

Twenty nine percent of students who started with a GED and 35 percent of those who started with a high school diploma earned at least 45 credits or a credential in five years.

Fourteen percent of students who started with a GED and 18 percent of students who started with a high school diploma earned an advanced certificate or an associate degree in five years.

Not surprisingly, the higher students' educational attainment after five years, the higher the wages they were able to earn on average. Table 7 shows the average annual earnings of students in the two cohorts combined with their starting education levels cross-tabulated with their level of educational attainment five years after enrolling.

Table 7. Annual Earnings after Five Years of Washington State Community and Technical Colleges First-Time College Students Ages 25+ Who Started with a High School Education or Less* in 1996-97 or 1997-98

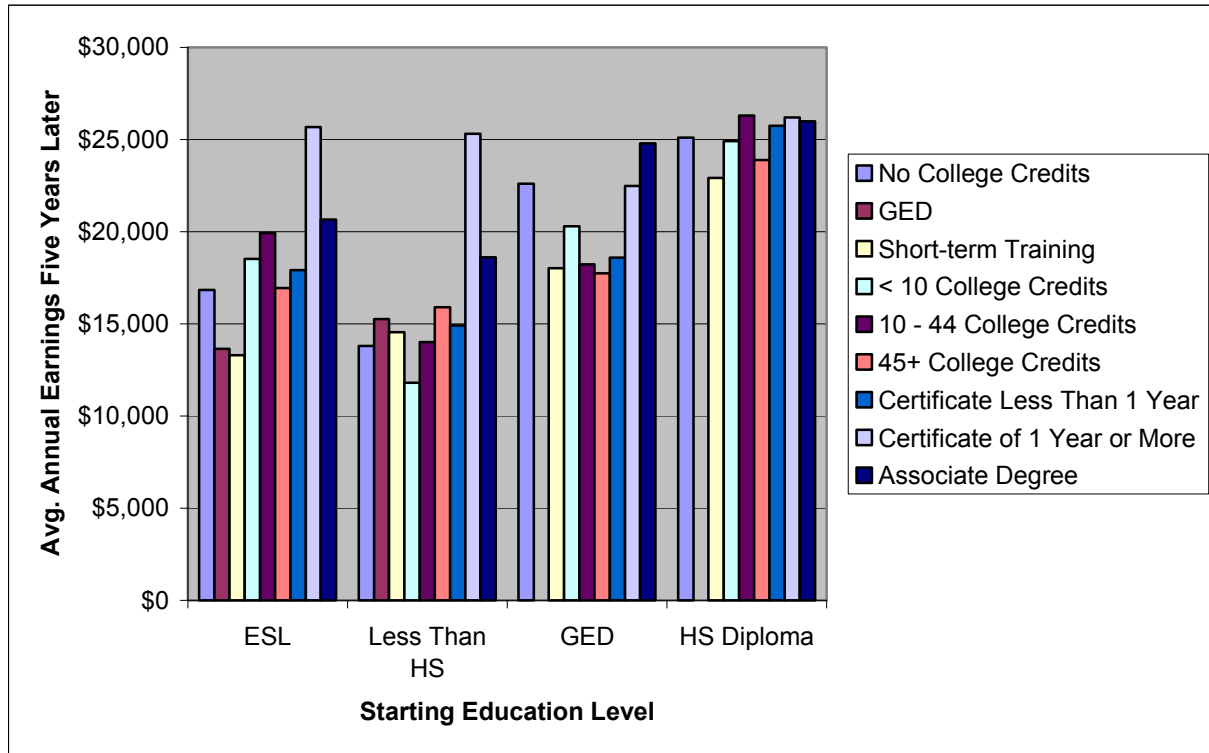
Five-Year Highest Attainment	Starting Education Level			
	ESL	Less Than HS	GED	HS Diploma
No credits ^a	\$16,835	\$13,795	\$22,609	\$25,113
GED	\$13,651	\$15,268	NA	NA
Plan ^b	\$13,298	\$14,555	\$18,026	\$22,918
< 10 College Credits	\$18,517	\$11,801	\$20,290	\$24,918
10 - 44 College Credits	\$19,925	\$14,003	\$18,224	\$26,305
45+ College Credits	\$16,940	\$15,899	\$17,740	\$23,886
Less Than 1 Year Certificate	\$17,912	\$14,922	\$18,591	\$25,755
Certificate of 1 Year or More	\$25,673	\$25,312	\$22,483	\$26,203
Associate Degree	\$20,655	\$18,607	\$24,800	\$25,989

Source: Washington State Board for Community and Technical Colleges. Authors' calculations.

Notes: * Also includes first-time students ages 18-24 who lacked a high school credential.
 Figures adjusted for inflation using Fall 2002 as the benchmark period.

Figure 4 presents the same information on a graph:

Figure 4. Graphical Representation of Table 7: Annual Earnings after Five Years of Washington State Community and Technical Colleges First-Time College Students Ages 25+ Who Started with a High School Education or Less* in 1996-97 or 1997-98



Note: * Also includes first-time students ages 18-24 who lacked a high school credential.

Compared with those who earned fewer than 10 college credits, students who took at least one year’s worth of college credit courses and earned a credential had an average annual earnings advantage of \$7,000 for students who started in ESL, \$8,500 for those who started in ABE or GED, and \$2,700 and \$1,700 for those entering with a GED or high school diploma, respectively.

The cohorts of first-time adult students with a high school diploma or less examined here include several hundred students who were referred to a community or technical college for a specific program of training. The referring agency might be, for example, a welfare department

referring a Temporary Assistance to Needy Families (TANF) recipient or a One Stop Center referring a displaced worker seeking retraining. Typically, the training offered is short-term in nature. Of the 557 students in the cohort who completed a prescribed program of training (or what Washington's State Board of Community and Technical Colleges calls a "plan"), 463 students, or 83 percent, earned less than one year's worth of college credits in the five year study period. Students who completed a plan with less than one year of college earned substantially less than did students who completed at least one year of college and earned credentials. Table 8b shows that this difference in annual earnings averaged \$7,250 for students who started without a high school credential. For students who started with a GED or diploma, the average annual earnings advantage was \$4,150.

These findings are consistent with previous research on the economic returns to sub-baccalaureate education. Most such students find that earning an occupational certificate (equivalent to two semesters of full-time study) does provide a significant earnings advantage compared with those with just some college but no degree, although the magnitude of this advantage varies by student gender and field of study (Bailey, Kienzl, & Marcotte, in press; Grubb, 2002; Kienzl, 2004). These studies have also found that the wage gains associated with postsecondary education of less than a year are negligible.

Table 8a. Highest Level of Educational Attainment After Five Years of Washington State Community and Technical Colleges First-Time College Students Ages 25+ Who Started with a High School Education or Less* in 1996-97 or 1997-98 and Who Completed a Prescribed Course of Training or “Plan”

Five-Year Highest Attainment	Starting Education Level			
	ESL	Less Than HS	GED	HS Diploma
Number of Students	104	189	62	202
Plan + Less than 45 Credits or No Credits	90%	89%	73%	76%
Plan + More than 45 Credits	10%	11%	27%	24%

Source: Washington State Board for Community and Technical Colleges. Authors’ calculations.

Note: *Also includes first-time students ages 18-24 who lacked a high school credential.

Table 8b. Annual Earnings after Five Years of Washington State Community and Technical Colleges First-Time College Students Ages 25+ Who Started with a High School Education or Less* in 1996-97 or 1997-98 and Who Followed a Prescribed Course of Training or “Plan”

Five-Year Highest Attainment	Starting Education Level	
	Less than HS	HS or GED
Plan + Less than 45 Credits or No Credits	\$14,529	\$21,898
45 Credits or More + Credential	\$21,782	\$26,049
Earnings Difference (5 Years After Start)	\$7,252	\$4,151

Source: Washington State Board for Community and Technical Colleges. Authors’ calculations.

Note: *Also includes first-time students ages 18-24 who lacked a high school credential.

Figures adjusted for inflation using Fall 2002 as the benchmark period.

Going Beyond English as a Second Language

As mentioned, one-third of all ESL students in the two cohorts had a high school diploma, in most cases from their native countries. Table 9 shows the five-year educational attainment for students who started in ESL courses by the type of credential they had upon entering.

Table 9. Highest Level of Educational Attainment After Five Years of Washington State Community and Technical College First-Time College Students Ages 25+ Who Started with a High School Education or Less* in 1996-97 or 1997-98 and Who Started in ESL

Five-Year Highest Attainment	No HS			All
	Credential to Start	Credential to Start / Earned During	HS Credential to Start	
Number of Students	5,464	102	4,195	9,761
No Credits	93%	--	81%	87%
GED	--	60%	--	1%
Plan	1%	0%	1%	1%
< 10 College Credits	5%	18%	9%	7%
10 - 44 College Credits	1%	15%	3%	2%
45+ College Credits	0%	2%	1%	1%
Less Than 1 Year Certificate	0%	1%	2%	1%
Certificate of 1 Year or More	0%	2%	2%	1%
Associate Degree	0%	3%	1%	1%

Source: Washington State Board for Community and Technical Colleges. Authors' calculations.

Note: * Also includes first-time students ages 18-24 who lacked a high school credential.

Only a handful (less than 1 percent) of ESL students who started with less than a high school education earned a GED or high school diploma in five years. Twelve percent of ESL students went beyond ESL and enrolled in college-credit courses. Of these, nearly two-thirds (63 percent) had a high school credential when they started in ESL. A much larger group of ESL students had a high school credential upon enrollment, but went no further than ESL. Latino ESL students with a high school diploma were less than half as likely as other ESL students to advance beyond basic skills. Males who earned a GED (particularly Latinos) were less likely than women to go further in their education. Part of this gender difference may be because, on average, men earn more than women do, and have to forgo more wages when they attend school.

Beyond Adult Basic Education

Table 10 shows the five-year educational outcomes for students who started in ABE or GED courses.

Table 10. Highest Level of Educational Attainment After Five Years of Washington State Community and Technical Colleges First-Time College Students Ages 25+ Who Started with High School Education* in 1996-97 or 1997-98 and Who Started in ABE

Five-Year Highest Attainment	No HS Credential to Start	No HS Credential to Start / Earned During	HS Credential to Start	All HS Status Determinable
Number of Students	6,326	2,193	3,696	12,215
No college credits	82%	1%	56%	60%
GED	--	52%	--	9%
Plan	1%	2%	2%	1%
< 10 College Credits	13%	21%	18%	16%
10 - 44 College Credits	3%	13%	12%	7%
45+ College Credits	1%	4%	4%	2%
Less Than 1 Year Certificate	1%	2%	2%	1%
Certificate of 1 Year or More	0%	2%	3%	1%
Associate Degree	0%	3%	3%	1%

Source: Washington State Board for Community and Technical Colleges. Authors' calculations.

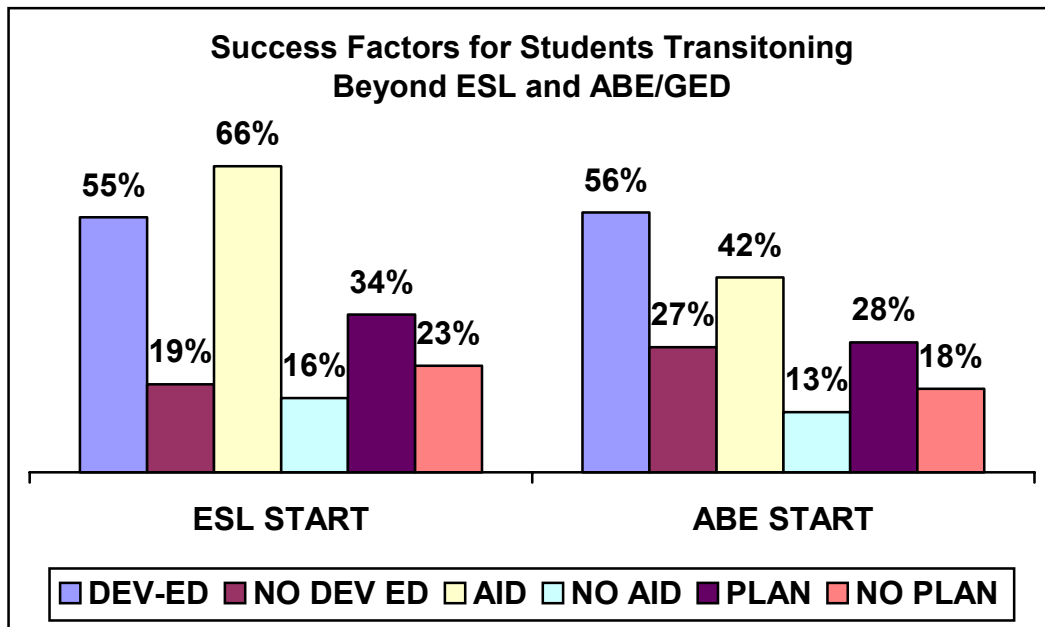
Note: * Also includes first-time students ages 18-24 who lacked a high school credential.

Thirty-one percent of students who started in ABE or GED courses went on to enroll in at least one college-level course. Of these, 70 percent, or 2,543 students, had a high school credential. A larger group (3,245) also had high school credentials but went no further than basic skills. This included 1,147 students who earned their GED or diploma and left.

A number of factors seem to be associated with a greater likelihood that students who start in ESL or ABE/GED will go on to succeed in college-level courses. Figure 5 compares ESL and ABE/GED students who not only went on to enroll in college-level courses, but who earned a credential or completed a year of college with 45 or more credits, with students who did not attain either level of achievement. A higher percentage of students who succeeded in earning a

credential or completing at least 45 credits received financial aid than did students who did not do either. Similarly, students who took developmental education after taking ESL or ABE/GED were more likely to earn a credential or at least 45 credits than were those who did not. Students who expected upfront that they would attend a year or longer were more successful than were students who did not know upon enrollment how long they would attend or for whom information on their expectations for college was not available.

Figure 5. Success Factors for Washington State Community and Technical College First-Time College Students Ages 25+ Who Started with a High School Education or Less* in 1996-97 or 1997-98 and Who Are Transitioning Beyond ESL or ABE/GED



Source: Washington State Board for Community and Technical Colleges.
 Note: * Also includes first-time students ages 18-24 who lacked a high school credential.

Although financial aid and developmental education are associated with a higher chance of success, many students who go beyond ESL or ABE/GED do not receive these services. Only about 18 percent of students who transitioned from ESL and 28 percent of those who transitioned from ABE received financial aid when they enrolled in college-level courses. Twenty-eight

percent of ESL students who transitioned and 33 percent of transitioning ABE students enrolled in developmental courses. Finally, a little over one-fourth (26%) of ESL and one-third (34%) of ABE/GED students expected to attend college for a year or more. About half (54%) of ESL students and 47 percent of ABE/GED students did not have clear plans or their intent was not determined.

Implications for Policy and Practice

This study finds evidence that attending college for at least one year and earning a credential provides a substantial boost in earnings for adults with a high school diploma or less who enter higher education through a community college. As mentioned, this is consistent with the findings of other studies of the labor market returns to community college education that use data on nationally representative samples of community college students (Bailey, Kienzl, & Marcotte, in press; Grubb, 2002; Kienzl, 2004). Short-term training such as that often provided to welfare recipients may help individuals get into the labor market, but it usually does not help them advance beyond low-paying jobs. Neither adult basic skills education by itself nor a limited number of college-level courses provides much benefit in terms of either employment or earnings.

Hollenbeck and Huang (2003) conducted a study of the net impact on employment and quarterly earnings of nine programs in the Washington State's education and training system during the late 1990s. They found that community college adult basic skills programs did not have a positive impact on wages either in the short-term (three quarters after leaving the program) or in the long term (eight to eleven quarters after exit). Additionally, such programs had only modest impact on average rates of employment in the long term (but not the short

term). In contrast, individuals who went through community college occupational degree programs were eight percent more likely to be employed and earned over \$1,100 per quarter more on average than did similar individuals in Washington's labor force who did not enroll in any training program. Only when individuals took basic skills courses concurrently with vocational training did they enjoy a significant benefit in average rates of employment and quarterly earnings.⁷

Other research shows that not only do workers with at least a year of college and a credential earn substantially more than do those with just some or no college, but they are in higher demand among employers. In an April 2003 report, Washington State's Workforce Training and Education Coordinating Board (WTECB) drew on occupational forecasts by the state's Employment Security Department to estimate that the largest number of job openings between 2000 and 2008 would be in occupations that require a high school credential at most. However, the report also pointed out that these jobs "won't be the kinds of jobs that helped loggers and production workers prosper;" rather "they will be low-wage jobs serving food, cleaning offices, and unloading trucks" (WTECB, 2003, April, p. 6). According to the report, the greatest number of openings for "family-wage jobs" (i.e., those paying wages sufficient to support a family) will be in fields that require more than one year of postsecondary education, although not a bachelor's degree. The projected demand for these jobs exceeds the number for jobs requiring at least a bachelor's degree and is nearly twice the number of jobs requiring one to twelve months of postsecondary education. In a more recent report on the results of a survey of employer demand, the WTECB found that over half (53 percent) of the employers trying to hire workers with a vocational certificate reported having difficulty finding qualified applicants,

⁷ For a summary report on these findings, see WTECB (2003, March), particularly pp. 54-55.

compared with less than one quarter (24 percent) of employers seeking to hire workers with a high school diploma or GED (WTECB, 2004).⁸

The findings from our study, which are supported by other research, suggest that community and technical colleges ought to make taking at least one year of college-level courses *and* earning a credential a minimum goal for the many low-skill adults they serve.

Hundreds of low-skill adult students in our sample from Washington State's community and technical colleges were able to achieve this threshold level of attainment in five years. Many more did not. They include the nearly eight out of ten students in ABE or ESL who were able to make modest skill gains, at best earning a GED, but did not advance beyond to college-level courses. They also include the seven out of ten students who entered workforce and academic courses with a GED, and the more than two out of three students who entered these courses with a high school diploma but who left with less (and often a lot less) than a year of college credit and no credential.

To enable low-skill adults to achieve the threshold level of at least one year of college plus a credential or more, community colleges in Washington State and elsewhere should rethink, and in some cases redesign, programs and services. For example, this study finds that there are students in Washington State's community and technical college system who are poised to benefit immediately from essential support services, but who do not receive them. They include the 69 percent of ABE and ESL students who make the transition to college-level work with a high school diploma or GED in hand. The students are eligible to receive financial aid and developmental education – services that make it two or three times more likely that they will earn a credential. Yet, at best, only one-third of them receive these services (with former ESL

⁸ Employers had most trouble finding qualified workers with a vocational associate, bachelor's, master's, professional, or doctoral degree – about two-thirds of employers seeking to hire for positions requiring these levels of education had difficulty finding qualified workers.

students receiving them less frequently than students transitioning from adult basic education). Basic skills and developmental education faculty could work together to help students in need take advantage of developmental courses, and work with counseling and student services staff to ensure that those students apply for financial aid.

Students in our sample who never go beyond basic skills comprise a far larger group who are seemingly equally prepared to benefit. This group includes the nearly six out of ten adult basic education students, and the eight out of ten ESL students, who have or earn a high school diploma or GED, but who go no further than a basic skills education in community college. More aggressive efforts to educate these students about the college education opportunities for individuals with high school credentials, combined with “bridge programs” that support students in making the transition to college, might help to increase the number of basic skills students who not only enroll in college-level programs but thrive in them.

Finally, our findings indicate that short-term training that is focused on getting a job for low-skilled adults, with little attention to educational advancement, results in lower future earnings when students do not return to college for more education – and they often do not. Colleges could help students avoid dead-end starts by ensuring that they have short-term options that lead to real attainment in the long term.

A commuter transit system that is run on the schedule of working adults and that can accommodate lots of on-and-off traffic, but still makes connections to long-term destinations, may be an apt metaphor for an education system effective in serving low-skill adults. Such a system would provide a clear map of the educational pathways that adult students can follow to advance in their jobs and pursue further education, indicating where they can “stop out” of education for a time and reenter as their circumstances and resources permit. It would be

designed to give students lots of guidance and support so they do not get lost as they leave and re-enter college. In such an educational “transit” system, there would be many relatively short trips, all of them leading to meaningful stops, but the system would be designed so that adults could go farther and faster than they do in the conventional system.

Rethinking existing community college programs to create more of an educational transit system has to be done collaboratively, involving faculty and staff from across the academic and administrative divisions or “silos” that characterize most community colleges and higher education institutions generally. The Washington State Community and Technical College System is taking steps to break down those silos by sharing the results of this study widely among faculty, staff, and administrators within its member colleges. The staff of Washington’s State Board of Community and Technical Colleges (SBCTC) has invited colleges interested in improving outcomes for low-skill adult students to organize teams from across their various divisions – basic skills, academic transfer (where developmental education is typically housed), workforce education, and student services – to reflect on the state-level data from this study and on similar data from their own colleges. The aim is to encourage these cross-divisional teams to figure out how to eliminate roadblocks to advancement and create pathways to educational and economic success for their many low-skill adult students.

Directions for Future Research

Much of the analysis in this paper focuses on the extent to which students in adult basic education transition to college-credit courses and go on to earn credentials. In future research, the SBCTC research staff and the Community College Research Center will examine in greater depth the experience of adult students who arrive at college with a high school diploma or GED.

This group is important because it comprises about one-third of low-skill adult students. The experience of these students is also significant because the barriers to success they face in college will likely also confront adult basic education students who transition to college-level programs.

We will also study in more detail the various paths that low-skill adults take in community and technical college in order to identify additional roadblocks, such as particular “gatekeeper” courses, and, also, programs and services that are associated with a higher probability of student success.

Finally, we plan to investigate further the economic impact that community and technical colleges have on low-skill adults first by comparing wages of students before and after they enroll and attempting to estimate the costs and benefits to low-income communities of efforts to promote college access and attainment by low-skill adults.

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