

Indicator Name	Definition	Data Source	Comments
<b><i>STUDENT PROGRESS AND ACHIEVEMENT: Degree/Certificate/Transfer</i></b>			
<b><i>College Core Indicators (reporting will be for all Colleges; calculated by System Office)</i></b>			
Student Progress and Achievement Rate	<p>Percentage of cohort of first-time students with minimum of 12 units earned who attempt a degree/certificate/transfer threshold course within six years of entry who are shown to have achieved ANY of the following outcomes or value-added measures of progress within six years of entry:</p> <ul style="list-style-type: none"> <li>• Earned any AA/AS or Certificate (18 or more units)</li> <li>• Actual transfer to a four-year institution (student shown to have enrolled at any four-year institution of higher education after enrolling at a CCC)</li> <li>• Achieved "Transfer Directed" (student successfully completed both transfer-level Math AND English courses)</li> <li>• Achieved "Transfer Prepared" (student successfully completed 56 UC/CSU transferable units with a GPA <math>\geq 2.0</math> in those transferable courses)</li> </ul> <p>-----</p> <ul style="list-style-type: none"> <li>• Earned at least 30 units while in the CCC system (value-added threshold of units earned as defined in wage studies as having a positive affect on future earnings)</li> </ul>	System Office MIS	<p>The denominator attempts to measure students who have crossed the same threshold equally at each college, regardless of institutional mission or size.</p> <p>The indicator measures what percentage of the cohort achieves any type of the aforementioned measures of success or progress. Most recent annual rate and preceding two years.</p> <p>-----</p> <p>Most recent annual rate and preceding two years.</p>
Persistence Rate	Percentage of cohort of first-time students with minimum of six units earned in a fall term who return and enroll in the subsequent fall term anywhere in the system.	System Office MIS	
<b><i>System Indicators (reporting will be at a Statewide aggregate level; calculated by System Office)</i></b>			
Annual Number of Transfers to Four-Year Institutions	Annual number of most current full-year transfer counts from CCC to other four-year institutions of higher education. Will include numbers from the past six years.	Receiving institutions; NSC	Commonly used transfer volume metric; shows how State and receiving institution admittance policies affect current year transfers between segments. Not useful to measure at a college level because of volume incomparability between colleges.
Transfer Rate to Four-Year Institutions for the Community College System	Transfer rate based on the percentage of first-time students with minimum of 12 units earned who attempted transfer-level Math OR English during enrollment and who are shown to have transferred to a four-year institution within six years.	System Office MIS	System level transfer rate is based on current transfer rate methodology. Most recent annual rate and two preceding years.
Annual Number and Percentage of Baccalaureate Students Graduating UC and CSU who Attended a Community College	Annual number and percentage of all graduating students from any CSU or UC campus that has enrolled in one or more of the community colleges prior to graduation. Will include number and rates from the past six years.	System Office MIS	This system metric will provide the state with a full picture of the extent to which baccalaureates students utilize the California community colleges to achieve their baccalaureate educational goals.

California Community Colleges--Student Achievement and Progress Rates (Fall, 1998 Cohort)												
Completed Degree or Certificate or Transfer or Transfer Prepared or Transfer Directed by 2004 (6 years)												
College	Prog & Ach. Rate	30 Unit Rate Only	Original + 30PlusUnits	Transfer Rate Only	Student Count		College	Prog & Ach. Rate	30 Unit Rate Only	Original + 30PlusUnits	Transfer Rate Only	Student Count
De	67.80	78.94	85.50	44.80	3,366		Sa	51.14	59.56	73.77	32.40	2,364
We	64.84	74.09	82.53	42.70	2,227		Cy	51.10	70.84	76.04	31.14	2,325
Fe	64.13	70.85	79.37	37.67	223		Ca	50.80	63.50	72.41	29.93	685
Di	63.61	70.14	80.30	44.85	3,523		Ba	50.78	52.85	69.26	25.91	579
Sa	63.23	72.09	81.59	42.41	1,738		Co	50.60	66.33	73.56	29.68	2,409
Fo	63.21	69.72	79.78	40.49	1,998		Ch	50.22	65.63	72.71	28.09	3,122
Sa	62.60	73.54	80.93	41.28	2,139		Ev	50.17	65.97	74.51	31.37	1,734
Oh	62.09	68.96	81.21	44.78	1,820		Lo	49.96	74.41	80.47	24.46	2,294
Ir	62.05	69.31	80.66	43.96	1,515		Re	49.82	67.91	72.40	30.13	1,935
Mo	61.47	73.21	80.47	40.69	2,878		Ea	49.82	74.31	79.20	24.74	2,437
La	60.60	69.40	78.12	37.89	1,193		Ve	49.66	67.84	72.47	27.94	2,183
Or	60.57	76.04	80.77	37.92	3,447		El	49.53	65.99	73.23	31.21	4,117
Lo	58.95	73.93	80.92	40.57	2,275		Sa	49.47	65.85	73.67	28.46	1,599
Sa	58.80	64.51	76.95	38.78	3,097		Ba	49.44	69.99	74.39	30.34	2,409
Sa	58.44	73.66	79.11	38.01	2,623		Mo	49.21	68.89	73.49	30.37	2,674
Pa	58.25	77.02	81.73	36.27	4,400		De	49.13	67.74	74.40	25.60	1,488
Na	58.14	66.53	76.56	30.91	977		Mo	49.06	70.98	76.11	30.13	4,700
Mo	57.88	65.56	76.46	31.41	990		Fr	48.85	69.05	73.48	27.90	3,183
Sk	57.09	65.04	75.36	38.83	1,396		So	48.85	71.33	75.80	24.82	2,905
Bu	56.43	71.63	79.21	29.79	1,967		An	48.74	66.47	72.29	25.19	2,064
Sa	56.37	70.27	77.11	34.98	3,862		Co	48.35	56.16	75.20	26.88	666
Si	56.35	68.94	75.20	35.44	3,081		Lo	48.02	71.94	79.05	26.89	1,112
Cu	56.27	71.23	77.25	35.71	1,644		Cu	47.99	63.21	69.84	23.25	1,071
Mi	56.16	69.02	77.52	33.62	1,517		Sh	47.80	66.23	70.62	26.41	1,753
Go	55.78	72.48	78.92	32.22	1,893		Yu	47.72	64.24	73.61	24.23	1,622
Gl	55.67	75.31	80.49	33.53	2,353		Ca	47.41	68.69	72.65	16.04	1,795
Gr	55.22	68.56	74.90	30.98	3,044		Al	47.35	67.33	71.48	24.43	1,662
Ma	55.21	69.14	77.30	33.95	969		Co	47.33	66.26	72.41	22.98	1,236
Ca	55.14	73.05	79.72	36.44	1,770		Lo	47.23	72.48	77.00	26.61	3,957
Sa	55.11	69.64	75.92	31.48	5,925		Vi	46.87	64.82	71.07	23.32	1,694
Sa	54.76	66.46	77.55	35.67	2,624		Se	46.68	69.24	72.77	18.03	2,185
Cr	54.61	67.06	74.71	33.33	1,020		Ga	46.21	65.51	69.77	17.18	751
Fu	54.45	70.10	75.82	32.09	3,023		Po	46.20	69.15	72.28	21.61	671
Me	54.34	70.21	76.43	28.81	611		We	46.06	63.80	74.01	25.91	1,370
Mi	54.04	68.84	77.94	30.79	1,088		Ce	45.95	56.56	67.88	26.40	716
Al	53.67	64.13	75.95	34.38	736		Ri	44.77	62.97	68.64	24.72	4,248
Sa	53.05	73.12	76.28	19.59	2,905		Sa	44.22	71.74	74.75	22.05	2,657
La	53.00	63.31	74.85	32.57	1,698		Mo	44.07	59.85	67.10	23.85	2,067
Sa	52.94	69.06	74.92	32.40	3,281		Me	44.06	69.14	74.11	24.56	2,113
Ch	52.71	66.50	74.13	32.86	2,176		Co	43.35	64.91	69.04	22.02	436
Ox	52.47	73.40	78.34	26.60	1,094		Lo	43.31	66.88	74.52	24.33	785
Sa	52.44	64.01	73.33	31.19	1,106		Lo	43.11	60.25	66.97	20.90	1,220
Pa	52.23	66.23	73.65	31.14	4,300		Ce	43.06	66.03	72.25	24.66	3,597
Am	52.15	67.87	74.38	30.86	3,321		Lo	42.88	70.73	74.42	14.29	1,763
So	52.05	64.95	73.98	32.00	1,906		We	42.74	61.78	67.52	21.49	819
Re	51.75	69.97	77.05	30.12	1,059		Sa	42.32	61.98	68.20	23.05	1,978
Si	51.70	67.74	74.91	23.96	530		Ri	41.80	61.69	67.74	22.22	2,232
Ci	51.69	72.17	76.98	27.23	2,016		Ta	40.11	59.34	63.74	12.09	364
Lo	51.44	70.63	78.05	31.06	2,601		La	39.23	64.83	67.94	10.53	418
La	51.34	70.33	79.23	28.49	337		Sa	38.94	55.29	58.93	23.97	1,456
Lo	51.28	69.16	78.70	30.27	1,404		Im	35.87	73.17	75.81	18.24	1,327
Vi	51.27	60.05	71.13	32.56	433		Co	29.60	54.45	61.23	10.93	1,135
Me	51.27	61.93	73.73	31.09	788		Pa	23.56	52.87	56.90	6.90	174
Ha	51.23	67.95	74.22	26.28	1,579		AVG	52.11	68.67	75.43	30.43	209,742
COHORT DENOMINATOR: All first time freshmen in Fall 1998 who completed any 12 CCC units anywhere in system within 6 years AND must have attempted transfer-level OR non-transferable, degree-applicable math OR English in academic history												
OUTCOMES MEASURED: Within 6 years of student entering, did student achieve ANY of the following outcomes (at any institution(s) combined):												
--earn any AA or AS degree;												
--earn any certificate (must be State approved certificate of 18 units or above);												
--shown to have enrolled at any 4-yr in-state public, in-state private, or out of state institution after they left the CCC system;												
--become "Transfer Prepared" (earn 56 UC or CSU transferrable units);												
--become "Transfer Directed" (successfully complete with grade "C" or better BOTH transfer-level math AND English)												
THIRTY UNIT THRESHHOLD: Percentage of students in the cohort whop successfully completed a minimum of 30 units anywhere in the CCC system within 6 years. 30 unit threshold denotes eventual wage gains in the workforce, regardless of other outcome above.												

## CA Comm. Colleges: 2003-04 Transfers to In-State Private/Out-of-State Institutions

IN-STATE PRIVATE/FOR PROFIT/PROP. INST.	Count
UNIVERSITY OF PHOENIX	5,871
UNIVERSITY OF SOUTHERN CALIFORNIA	897
NATIONAL UNIVERSITY	785
CHAPMAN UNIVERSITY	779
DEVRY UNIVERSITY-CALIFORNIA	583
AZUSA PACIFIC UNIVERSITY	411
ACADEMY OF ART UNIVERSITY	383
CALIFORNIA BAPTIST UNIVERSITY	336
UNIVERSITY OF SAN FRANCISCO	320
UNIVERSITY OF REDLANDS	290
UNIVERSITY OF THE PACIFIC	284
SANTA CLARA UNIVERSITY	280
OTIS COLLEGE OF ART AND DESIGN	256
BIOLA UNIVERSITY	242
LOYOLA MARYMOUNT UNIVERSITY	185
CALIFORNIA LUTHERAN UNIVERSITY	182
PEPPERDINE UNIVERSITY	177
WOODBURY UNIVERSITY	155
LOMA LINDA UNIVERSITY	152
SIMPSON UNIVERSITY	142
MOUNT ST MARY'S COLLEGE	126
SAINT MARYS COLLEGE OF CALIFORNIA	125
STANFORD UNIVERSITY	118
GOLDEN GATE UNIVERSITY-SAN FRANCISCO	110
CONCORDIA UNIVERSITY	109
FRESNO PACIFIC UNIVERSITY	106
DOMINICAN UNIVERSITY OF CALIFORNIA	103
LA SIERRA UNIVERSITY	97
HOLY NAMES UNIVERSITY	92
SAMUEL MERRITT COLLEGE	86
PACIFIC UNION COLLEGE	82
NOTRE DAME DE NAMUR UNIVERSITY	80
UNION INSTITUTE & UNIVERSITY	70
CALIFORNIA INSTITUTE OF THE ARTS	70
MILLS COLLEGE	70
ARGOSY UNIVERSITY-ORANGE CAMPUS	65
HUMPHREYS COLLEGE-STOCKTON	61
ANTIOCH UNIVERSITY-SANTA BARBARA BRANCH	51
THE MASTER'S COLLEGE AND SEMINARY	49
ALLIANT INTERNATIONAL UNIVERSITY-SAN DIEGO	48
WHITTIER COLLEGE	48
WESTMONT COLLEGE	42
JOHN F KENNEDY UNIVERSITY	41
CLEVELAND CHIROPRACTIC COLLEGE OF LA	32
PITZER COLLEGE	30
OCCIDENTAL COLLEGE	26
WESTERN UNIVERSITY OF HEALTH SCIENCES	24

OUT OF STATE INSTITUTION	Count
UNIVERSITY OF NEVADA-LAS VEGAS	410
ARIZONA STATE UNIVERSITY	258
EMBRY RIDDLE AERONAUTICAL UNIVERSITY	221
BRIGHAM YOUNG UNIVERSITY	216
UNIVERSITY OF NEVADA - RENO	192
UNIVERSITY OF HAWAII AT MANOA	183
PARK UNIVERSITY	182
COLUMBIA COLLEGE	159
PORTLAND STATE UNIVERSITY	143
UTAH VALLEY STATE COLLEGE	128
UNIVERSITY OF MARYLAND	125
UNIVERSITY OF OREGON	100
PURDUE UNIVERSITY-MAIN CAMPUS	98
EASTERN OREGON UNIVERSITY	98
UNIVERSITY OF UTAH	93
BRIGHAM YOUNG UNIVERSITY-IDAHO	91
BOISE STATE UNIVERSITY	84
UNIVERSITY OF COLORADO AT BOULDER	83
OREGON INSTITUTE OF TECHNOLOGY	82
SOUTHERN OREGON UNIVERSITY	79
NEW YORK UNIVERSITY	77
NORTHERN ARIZONA UNIVERSITY	75
WASHINGTON STATE UNIVERSITY-TRI CITIES	72
SOUTHERN ILLINOIS UNIVERSITY CARBONDALE	72
PRINCE WILLIAM SOUND COMMUNITY COLLEGE	70
UNIVERSITY OF WASHINGTON-TACOMA CAMPUS	67
TROY STATE UNIVERSITY-MAIN CAMPUS	59
LIBERTY UNIVERSITY	58
TOURO COLLEGE	58
UNIVERSITY OF NEW MEXICO-TAOS BRANCH	58
SPRINGFIELD COLLEGE	57
UNIVERSITY OF HAWAII AT HILO	55
HARVARD UNIVERSITY	50
PIERCE COLLEGE AT PUYALLUP	47
GEORGE WASHINGTON UNIVERSITY	45
CAPELLA UNIVERSITY	45
OREGON STATE UNIVERSITY-CASCADES CAMPUS	44
UNIVERSITY OF HOUSTON-UNIVERSITY PARK	43
METROPOLITAN STATE COLLEGE OF DENVER	43
MIAMI DADE COLLEGE	38
UNIVERSITY OF MICHIGAN-ANN ARBOR	37
COLORADO STATE UNIVERSITY	37
BENEDICTINE COLLEGE	37
DEVRY UNIVERSITY-NORTH CAROLINA	37
UNIVERSITY OF IDAHO	37
HOWARD UNIVERSITY	37
MONTANA STATE UNIVERSITY-BOZEMAN	36

**METHODOLOGY:**

--All first-time freshman cohorts from 92-93 to present were created and sent to National Student Clearinghouse (NSC) then cut where date of first enrollment outside the CCC system was between 7/1/03-6/30/04.

**System Indicator: First-time Freshman Transfer Rate within 6 Years**

The overall transfer rate (38.0) is based on first-time freshman cohort, no prior college experience, (1998-99) with a minimum of 12 units completed and who attempted transfer level Math or English (N=159,096) and who achieved the outcome of transfer within 6 years (2004-05) of entry (N=60,419). Transfers are based on matches with NSC, CSU and UC.

Table 1: Transfer Rate by Gender

	Rate
Female	37.6
Male	38.4
Unknown	35.2
Total	38.0

Table 2: Transfer Rate by Race/Ethnicity

	Rate
White Non-Hispanic	39.4
Hispanic	28.2
Asian	52.0
African-American	31.3
Unknown	38.7
Filipino	39.3
Other Non-White	41.8
American Indian/Alaskan Native	28.2
Pacific Islander	23.3
Total	38.0

Table 3: Transfer Rate by Age Group (Age at Enrollment)

	Rate
Under 17	43.0 <sup>1</sup>
17 to 19	41.5 <sup>2</sup>
20 to 24	31.1
25 to 29	27.1
30 to 34	24.2
35 to 39	23.2
40 to 49	23.0
Over 49	17.6
Total	38.0

<sup>1</sup> 90.8% of the transfers were Special Admissions

<sup>2</sup> 17.4% of the transfers were Special Admissions

Indicator Name	Definition	Data Source	Comments
<b><i>STUDENT PROGRESS &amp; ACHIEVEMENT: Vocational/Occupational/Workforce Development</i></b>			
<b><i>College Core Indicators (reporting will be for all Colleges; calculated by System Office)</i></b>			
Annual Successful Course Completion Rate (VOCATIONAL COURSES)	Most recent annual rate and two preceding years of successful course completion in VOCATIONAL courses. Successful is defined as having been retained to end of term with a final course grade of A, B, C, or CR. SAM A, B, and C ONLY.	System Office MIS	Specifically for Vocational Courses, as these are a priority area for the State.
<b><i>System Indicators (reporting will be at a Statewide aggregate level; calculated by System Office)</i></b>			
Annual Number of Degrees/Certificates Conferred by Program	Number of most current full year and two preceding years of AA/AS/Certificates conferred, broken down by degree type and program (major TOP code).	System Office MIS	Commonly used degree/certificate volume metric; shows annual system production of award recipients by program subject area (nursing, accounting, auto mechanics, etc.). Not useful to measure at a college level because of volume incomparability between colleges; not all colleges offer all types of programs.
Increase in total personal income as a result of receiving degree/certificate	Statewide increase in median personal income of AA/AS/Certificate students taken at one, three, and five years after award conferral. Students shown to be still enrolled or who have transferred will be taken out of the calculation.	System Office MIS; Employment Development Department base wage file	System level degree and certificate attainment rate combined with available income data.

# **Effects of Community College Degree/Certificate Completion On Post-Attainment Wage Progression**

California Community Colleges System Office Research and Planning Unit  
January 9, 2006

## **Introduction**

How does attaining a degree or certificate from a California Community College affect wages earned? What happens to wages for those who complete degrees or certificates in various community college programs? As part of the accountability project mandated by AB 1417 (Pacheco), researchers from the California Community Colleges System Office's Research and Planning Unit (R&P) have begun the analyses to answer these questions. The methodology and results for an initial look at the impact of degree or certificate completion on wages are presented below.

## **Method**

For the following analyses, R&P researchers used a "Completers Cohort File," created from the System Office MIS, with these specifications:

1. Non-special-admit Students enrolled with STD7= A, B, C, F (credit students) who received any award during 2000-2001 (completers), AND
2. No longer enrolled in the next two years (01-02 and 02-03), AND
3. Not transferred out to four-year institution after 07/01/1999 (to exclude concurrent enrollments and later transfers) AND
4. On the Employment Development Department's (EDD's) wage file (even if zero wages were reported).

The file used in the analysis contained the following variables:

1. Cohort Year (2000-2001)
2. College ID Number
3. SSN
4. Age (At the first term of attendance during the year: 00-01)
5. Gender (At the first term of attendance during the year: 00-01)
6. Ethnicity (At the first term of attendance during the year: 00-01)
7. Award type (any award, a student can have multiple awards)
8. Taxonomy of Programs (TOP) Code associated with each award
9. Number of Units attempted in SAM A, B, C courses at all colleges during and prior to 00-01
10. Number of Units earned in SAM A, B, C courses at all colleges during and prior to 00-01
11. Wages in 2001-2002
12. Wages in 2002-2003
13. Wages in 2003-2004

We presume that these students represent a subset of the workforce. We also understand that the lack of pre-degree/pre-enrollment wage data limits the conclusions we can draw about the effects of degree or certificate attainment on wage progression. We plan to include pre-enrollment wage data in a future analysis.

Data for these analyses were imported into SPSS from the System Office MIS.

## Results

The 2000-2001 “Completers Cohort” included 14,516 students. Of these, 12,105 students attained one award (i.e., degree or certificate), while 2,411 students received more than one award. Most students in the cohort (78.7%) had wage data for all three years.

The analysis below is limited to students who attained only one award and whose employers reported wages to the EDD in all three years following completion (N = 9,490). The wage data in Tables 1 through 3 below were not adjusted for inflation.

**Table 1: Median and Mean Wages for Single Award Completers with Wages in All Three Years**

	<b>Wages 01-02</b>	<b>Wages 02-03</b>	<b>Wages 03-04</b>
Median	31515.55	35279.78	37174.00
Mean	35244.22	39491.59	41444.57
Std. Deviation	24302.05	26396.57	28206.88

The data in Table 1 indicate an overall increase in median wages for the 9,490 students in the 2000-2001 cohort across the three years following award. The median wage for this cohort increased 11.9 percent from 01-02 to 02-03 and 5.4 percent from 02-03 to 03-04. The means and standard deviations indicate considerable variation in wages for the cohort.

Table 2 presents median wage data by TOP Title (alphabetically) for programs for which we have data for 10 or more students. We used the 10-student minimum to ensure a degree of stability in the wage data for analysis.

**Table 2: Wages by TOP Title for  
Single Award Completers with Wages in All Three Years**

<b>TOP Title</b>	<b>Median Wages 01-02</b>	<b>Median Wages 02-03</b>	<b>Median Wages 03-04</b>	<b>N</b>
Accounting	28227.53	30747.06	32257.00	213
<b>Administration of Justice</b>	<b>54158.41</b>	<b>53278.60</b>	<b>54866.00</b>	<b>762</b>
Aeronautical and Aviation Technology	29744.45	36450.73	39202.00	36
Agricultural Power Equipment Technology	24397.22	26904.56	26058.00	166
Alcohol and Controlled Substances	25379.68	25756.13	26553.50	80
Animal Science	14086.13	15369.50	30544.50	10
Art	20074.66	21079.65	27205.00	28
Automotive Collision Repair	18504.97	21348.42	24129.00	11
Automotive Technology	26009.58	28112.00	34086.00	137
Aviation Airframe Mechanics	36225.10	37741.65	31640.50	14
Aviation Powerplant Mechanics	46363.02	42319.00	32410.00	11
Biological and Physical Sciences (and Mathematics)	23305.03	21383.74	23636.50	60
Biology, General	21474.52	18994.22	26754.00	16
Business and Commerce, General	31084.27	36961.46	35926.50	224
Business Management	33288.00	34978.45	38144.00	115
Cardiovascular Technician	41765.38	53732.22	57821.50	28
Carpentry	48381.77	40781.18	51616.50	20
Certified Nurse Assistant	16370.69	16552.72	16136.50	52
Child Development/Early Care and Education	18262.92	19643.00	18803.50	264
Computer Graphics	21572.85	27354.60	25748.00	15
Computer Programming	32542.04	44216.70	51160.50	38
Construction Crafts Technology	29113.37	30446.66	33228.50	12
Construction Inspection	51012.00	57064.00	55377.00	23
<b>Corrections</b>	<b>62414.24</b>	<b>66421.60</b>	<b>67295.00</b>	<b>20</b>
Cosmetology and Barbering	11616.81	14712.09	16086.00	175
Culinary Arts	16822.93	17230.26	20086.00	62

**Table 2 (Continued)**

<b>TOP Title</b>	<b>Median Wages 01-02</b>	<b>Median Wages 02-03</b>	<b>Median Wages 03-04</b>	<b>N</b>
Dental Assistant	21007.78	24727.50	25126.50	84
Dental Hygienist	37900.00	58116.63	50791.50	40
Dental Laboratory Technician	19584.11	24265.59	24092.00	11
Diagnostic Medical Sonography	53484.48	58763.54	63467.00	39
Dietetic Services and Management	26396.77	29822.69	34726.00	26
Drafting Technology	27904.79	33505.66	34625.00	44
Electrical	50374.25	51481.64	51886.00	141
Electrical Systems and Power Transmission	31586.64	39471.79	35867.50	10
Electronics and Electric Technology	35139.28	34435.00	37686.00	143
Emergency Medical Services	45831.65	49863.29	49586.00	290
Environmental Control Technology	41878.72	44439.00	44696.00	69
Environmental Technology	42621.13	44606.08	47333.00	42
Fashion Design	16206.15	16662.14	23187.00	20
Fire Academy	23436.65	36573.38	38611.00	19
Fire Technology	49444.44	50359.00	51874.00	113
Graphic Art and Design	24301.29	29590.00	30100.00	31
Health Information Technology	33667.11	36131.79	38396.50	34
Home Health Aide	14081.88	15143.00	18795.00	11
Horticulture	17222.30	21395.28	33349.00	18
Hospitality	23315.66	16901.86	17638.50	12
Human Services	22645.76	30448.00	30935.00	30
Industrial Electronics	40619.80	39527.08	45650.00	14
Industrial Systems Technology and Maintenance	50693.39	50415.27	56727.00	11
Information Technology, General	26603.76	30222.00	32264.00	167
Interior Design and Merchandising	26687.25	30609.16	30031.00	21
Landscape Design and Maintenance	28000.45	19900.13	24920.50	10
Legal Office Technology	31453.32	33651.53	30361.00	10

**Table 2 (Continued)**

<b>TOP Title</b>	<b>Median Wages 01-02</b>	<b>Median Wages 02-03</b>	<b>Median Wages 03-04</b>	<b>N</b>
Liberal Arts and Sciences, General	24870.78	27790.00	29580.00	1905
Library Technician (Aide)	23525.62	23053.16	24799.50	58
Licensed Vocational Nursing	26617.17	32015.76	34525.00	187
Machining and Machine Tools	28421.31	27742.31	31183.50	46
Management Development and Supervision	45747.15	46575.19	43951.00	24
Medical Assisting	17963.00	20931.54	23496.00	98
Medical Office Technology	17627.96	23695.01	28672.00	19
Mortuary Science	27123.89	28675.02	28807.00	11
Occupational Therapy Technology	39441.42	39047.00	44193.00	11
Office Technology/Office Computer Applications	16590.02	21018.36	23610.00	150
Other Education	26087.67	23704.76	22053.00	20
Other Engineering and Related Industrial Technology	40346.74	45122.76	41065.50	26
Other Health Occupations	25041.09	30261.99	31046.00	22
Other Information Technology	38066.90	39385.25	42221.00	61
Other Interdisciplinary Studies	25204.59	24469.16	29540.00	35
Paralegal	33640.80	36621.96	39141.00	105
Pharmacy Technology	17690.09	23315.38	22002.00	15
Physical Therapist Assistant	31227.15	36734.02	38081.00	41
<b>Physicians Assistant</b>	<b>64658.41</b>	<b>71365.20</b>	<b>82890.50</b>	<b>22</b>
<b>Plumbing, Pipefitting and Steamfitting</b>	<b>56628.38</b>	<b>55988.26</b>	<b>60122.00</b>	<b>53</b>
Police Academy	35541.01	41692.19	44135.50	130
Psychiatric Technician	37058.61	41774.27	45705.00	147
Psychology, General	24497.79	24610.69	27602.00	15
Purchasing	48674.24	52749.28	36913.00	17
Radio, Motion Picture and Television	18244.18	20652.14	21663.00	20
Radiologic Technology	44879.02	53027.19	56680.00	136
Real Estate	32775.95	35856.98	35245.50	20

TOP Title	Median Wages 01-02	Median Wages 02-03	Median Wages 03-04	N
Registered Nursing	44455.76	54899.24	58834.00	1353
Respiratory Care/Therapy	38931.32	45998.50	51326.00	58
Restaurant and Food Services and Management	16487.02	21153.11	21057.00	21
Sheet Metal and Structural Metal	46842.07	45238.27	50034.00	20
Social Sciences, General	22338.22	27053.00	30500.00	101
Spanish	9307.74	15967.00	13804.00	11
<b>Surveying</b>	<b>70626.44</b>	<b>69629.50</b>	<b>74199.00</b>	<b>10</b>
Technical Communication	52859.37	49322.09	46762.50	20
Travel Services and Tourism	20863.64	24089.43	25954.50	28
Veterinary Technician (Licensed)	23361.15	24568.07	29026.00	58
Water and Wastewater Technology	52771.38	57934.69	61834.50	20
Welding Technology	21356.41	20224.42	24915.00	17

Further interpretation of the data in Table 2 indicates that the highest first-year median wages occurred for the following TOP Titles (in bold font in Table 2): Surveying; Physicians Assistant; Corrections; Plumbing, Pipefitting and Steamfitting; and Administration of Justice. The lowest wages occurred for the following TOP Titles: Spanish, Cosmetology and Barbering, Home Health Aide, Animal Science, and Fashion Design.

The following five TOP Titles showed the greatest percent increases in median wages from the first to second year: Spanish, Fire Academy, Dental Hygienist, Computer Programming, and Human Services. The five TOP Titles that showed the largest percent decline in median wages from the first year to the second were: Landscape Design and Maintenance; Hospitality; Carpentry; Biology (General); and Other Education.

Table 3 presents median wages by type of award.

**Table 3: Median Wages by Type of Award for  
Single Award Completers with Wages in All Three Years**

<b>Award Type</b>	<b>Wages 01-02</b>	<b>Wages 02-03</b>	<b>Wages 03-04</b>
Associate of Arts Degree	25741.58	29215.93	30679.00
Certificate requiring 6 to fewer than 18 semester units	24504.38	26267.00	27384.00
Certificate requiring 60 or more semester units	36696.20	40687.55	44049.00
Certificate requiring 18 to fewer than 30 semester units	30447.70	33297.39	35252.00
<b>Other credit award, under 6 semester units</b>	<b>46460.99</b>	<b>48110.67</b>	<b>48603.50</b>
Associate of Science Degree	38498.02	46002.00	48942.00
Certificate requiring 30 to fewer than 60 semester units	30419.15	33369.50	34520.50
<b>Total</b>	<b>31515.55</b>	<b>35279.78</b>	<b>37174.00</b>

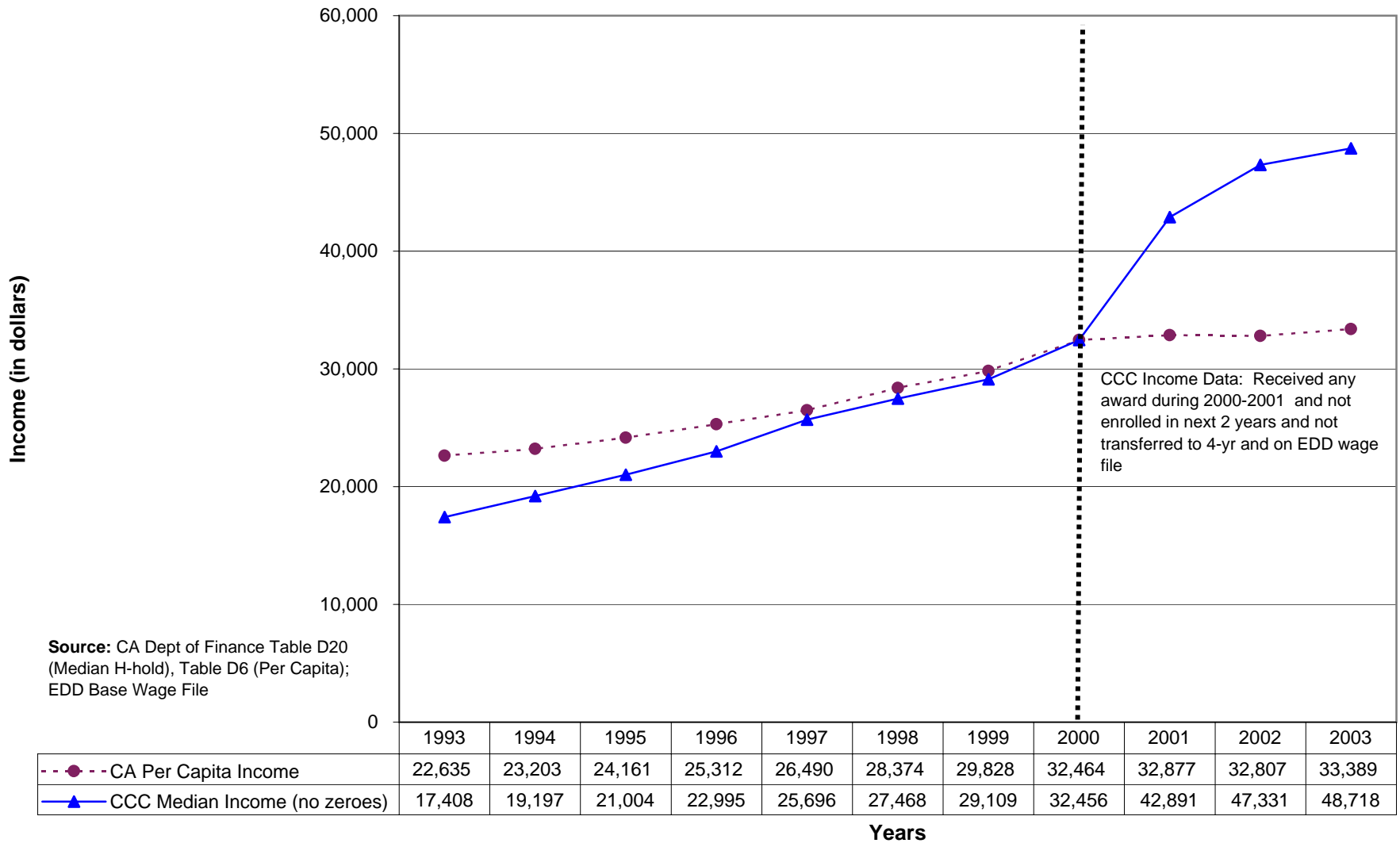
As the data in Table 3 indicate, median wages tended to be highest for students in the “Other credit award, under 6 semester units” category (974 of 9,490 students). Although we have not yet analyzed the pre-enrollment data that could lend support, it is possible that students receiving such awards were already in relatively high-earning professions compared with other students in this cohort. The largest percentages of those receiving “Other credit” came under the following TOP Titles: Administration of Justice (38.7%), Emergency Medical Services (22.9%), Agricultural Power Equipment Technology (16.3%) and Fire Technology (7.1%).

Within the limitations of these data, we tentatively conclude that students receiving awards from community college programs generally experienced wage gains in the three years following award attainment. As stated previously, we plan additional analyses that include pre-enrollment wage data where available. These pre/post data should allow us to more accurately assess the effects of community college attendance on wage progression. Note that the data used in the above analyses reflect only students who earned awards. We have not yet assessed the effects of course attendance on wage

progression in the absence of an award, although other research literature indicates that course completion (as compared with award/degree attainment) may also affect wages.

For additional information or questions about the data, contact:  
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### Income Increase from Attaining CCC Degree or Certificate (DRAFT March 28, 2006)



Indicator Name	Definition	Data Source	Comments
<b><i>PRE-COLLEGIATE IMPROVEMENT - BASIC SKILLS - ESL</i></b>			
<b><i>College Core Indicators (reporting will be for all Colleges; calculated by System Office)</i></b>			
Annual Successful Course Completion Rate (Basic Skills Courses)	Most recent annual rate and two preceding years of successful course completion in basic skills courses. Successful is defined as having been retained to end of term with a final course grade of A, B, C, or CR.	System Office MIS	Specifically for basic skills courses, as these are a priority area for the State.
ESL Improvement Rate	Percent of students who successfully completed at least one credit ESL course in a term who successfully completed a higher level ESL course or a college level course within two years of taking the first ESL course (a three-year cohort examination). Only students starting at two or more levels below college level/transfer level will be counted.	System Office MIS	Shows progress through basic skills curriculum. Colleges without ESL programs would be waived from this indicator. Noncredit ESL is still pending.
Basic Skills Improvement Rate	Percent of students who successfully completed at least one credit or noncredit basic skills course in a term who successfully completed a higher level basic skills course in the same discipline (reading, writing, math, respectively) or a college level course within two years of taking the first basic skills course (a three-year cohort examination). Only students starting at two or more levels below college level/transfer level will be counted.	System Office MIS	Shows progress through basic skills curriculum.
<b><i>System Indicators (reporting will be at a Statewide aggregate level; derived by System Office)</i></b>			
Annual Number of Basic Skills Improvements	The most recent annual number of students completing coursework at least one level above their prior basic skills enrollment. Will include numbers for two preceding years as well.	System Office MIS	Methodology similar to PFE metric #5.

Indicator Name	Definition	Data Source	Comments
<b><i>PARTICIPATION</i></b>			
<b><i>College Core Indicators (reporting will be for all Colleges; calculated by System Office)</i></b>			
None.			
<b><i>System Indicators (reporting will be at a Statewide aggregate level; calculated by System Office)</i></b>			
Statewide Participation Rate (by selected demographics)	Statewide aggregated participation rates by various demographic elements, including ethnicity, age group, and gender. Participation rates determined by unduplicated annual headcount attending divided by adult population (18-64) in California, as per census and DOF estimates.	System Office MIS; census; DOF	Measures what percentage of students (by demographic) attends CCC's statewide. This metric is best measured at a statewide level due to inability to centrally define college/service area boundaries and because of students attending across college boundaries.

## Exogenous Factors that Affect Student Progress & Achievement Rate Used to Create Peer Groupings

College Name	Index of FTF Academic Preparedness	Economic Service Area Index (ESAI)	Percent of Students Over Age 30	Miles to Nearest 4-year Public University
ALAMEDA	40.89	\$47,461	10.9%	8.1
ALLAN HANCOCK	50.04	\$41,583	7.9%	33.6
AMERICAN RIVER	52.67	\$45,071	10.9%	9.5
ANTELOPE VALLEY	49.96	\$45,145	12.4%	54.0
BAKERSFIELD	45.65	\$36,756	9.6%	20.0
BARSTOW	46.54	\$36,718	20.3%	80.3
BUTTE	49.92	\$32,123	7.0%	23.0
CABRILLO	48.40	\$52,726	8.4%	8.3
CANADA	44.62	\$67,997	13.6%	24.8
CANYONS	49.50	\$62,683	5.8%	17.5
CERRITOS	42.82	\$44,184	7.7%	10.5
CERRO COSO	52.30	\$39,137	21.6%	126.6
CHABOT	46.14	\$55,032	12.2%	4.0
CHAFFEY	44.59	\$50,288	10.7%	21.0
CITRUS	47.20	\$51,399	7.3%	11.6
COASTLINE	46.53	\$55,930	32.8%	11.9
COLUMBIA	50.44	\$38,606	9.9%	86.2
COMPTON	30.88	\$33,788	21.8%	1.6
CONTRA COSTA	40.12	\$50,285	9.8%	11.4
COSUMNES RIVER	50.25	\$52,116	12.8%	13.2
CRAFTON HILLS	49.96	\$41,402	8.1%	20.9
CUESTA	54.97	\$38,408	6.2%	5.0
CUYAMACA	51.20	\$43,783	11.5%	9.8
CYPRESS	47.45	\$52,289	8.9%	9.7
DE ANZA	52.09	\$75,566	5.9%	10.5
DESERT	42.50	\$37,652	13.7%	64.5
DIABLO VALLEY	54.40	\$67,846	6.3%	19.6
EAST L.A.	39.46	\$35,956	11.9%	4.0
EL CAMINO	45.71	\$48,091	8.1%	6.0
EVERGREEN VALLE	48.73	\$68,422	9.4%	9.0
FEATHER RIVER	45.82	\$38,644	6.3%	86.4
FOOTHILL	52.66	\$78,758	5.6%	16.0
FRESNO CITY	47.56	\$36,423	11.6%	6.6
FULLERTON	49.54	\$55,233	7.6%	1.0
GAVILAN	43.90	\$60,459	7.5%	35.3
GLENDALE	47.44	\$42,722	16.8%	23.0
GOLDEN WEST	48.72	\$54,461	7.0%	11.0
GROSSMONT	53.23	\$46,731	7.1%	6.7
HARTNELL	40.66	\$46,590	10.5%	15.2
IMPERIAL VALLEY	41.31	\$32,736	22.5%	112.2
IRVINE VALLEY	54.74	\$65,125	7.1%	1.1
L.A. CITY	40.27	\$30,351	17.5%	8.2
L.A. HARBOR	42.76	\$45,290	16.4%	9.1
L.A. MISSION	41.31	\$45,202	13.7%	11.9
L.A. PIERCE	48.86	\$52,745	15.3%	6.1
L.A. SOUTHWEST	35.98	\$31,071	29.8%	7.9
L.A. TRADE-TECH	36.86	\$34,010	17.2%	7.6
L.A. VALLEY	44.18	\$40,954	15.4%	10.4
LAKE TAHOE	50.10	\$41,292	8.3%	117.2
LANEY	42.03	\$43,284	10.4%	7.1
LAS POSITAS	56.10	\$70,121	13.1%	19.0
LASSEN	51.97	\$36,210	5.6%	101.7
LONG BEACH CITY	43.54	\$41,864	9.6%	4.1
LOS MEDANOS	47.74	\$57,247	11.3%	31.6

College Name	Index of FTF Academic Preparedness	Economic Service Area Index (ESAI)	Percent of Students Over Age 30	Miles to Nearest 4-year Public University
LOS MEDANOS	47.74	\$57,247	11.3%	31.6
MARIN	54.16	\$66,387	12.9%	17.9
MENDOCINO	48.52	\$35,149	8.8%	71.8
MERCED	42.84	\$34,007	8.7%	30.8
MERRITT	40.15	\$46,751	16.4%	8.7
MIRA COSTA	53.66	\$54,617	10.4%	11.1
MISSION	45.60	\$69,961	15.1%	6.8
MODESTO	49.85	\$40,848	9.4%	14.5
MONTEREY	46.35	\$48,322	11.6%	4.9
MOORPARK	55.15	\$69,956	5.7%	22.6
MT. SAN ANTONIO	46.81	\$53,038	7.6%	1.9
MT. SAN JACINTO	51.45	\$43,349	14.2%	41.2
NAPA VALLEY	47.97	\$50,011	8.4%	35.8
OHLONE	52.13	\$75,647	5.8%	13.5
ORANGE COAST	51.86	\$59,294	4.3%	11.3
OXNARD	43.97	\$48,450	11.8%	46.9
PALO VERDE	43.75	\$41,590	12.8%	168.1
PALOMAR	59.62	\$50,533	7.9%	1.6
PASADENA CITY	46.72	\$44,806	5.9%	9.2
PORTERVILLE	43.02	\$29,577	17.8%	62.2
REDWOODS	53.04	\$29,674	10.0%	8
REEDLEY	46.56	\$37,795	11.9%	32.1
RIO HONDO	41.05	\$43,536	7.5%	11.2
RIVERSIDE	46.15	\$46,709	9.2%	3.6
SACRAMENTO CITY	54.05	\$42,692	9.8%	6.2
SADDLBACK	55.68	\$70,073	6.6%	12.8
SAN BERNARDINO	43.15	\$37,166	17.1%	7.7
SAN DIEGO CITY	49.02	\$38,478	16.2%	10.4
SAN DIEGO MESA	52.17	\$47,644	5.9%	8.5
SAN DIEGO MIRAMA	53.07	\$55,898	13.3%	8.6
SAN FRANCISCO CI	51.00	\$53,839	11.2%	3
SAN JOAQUIN DELT	46.35	\$40,662	11.9%	49.2
SAN JOSE CITY	48.65	\$65,656	9.9%	4
SAN MATEO	51.43	\$66,997	6.6%	19.4
SANTA ANA	42.12	\$51,072	6.4%	10.4
SANTA BARBARA CI	53.51	\$48,288	2.4%	10.5
SANTA MONICA CITY	48.07	\$46,787	7.5%	6.6
SANTA ROSA	51.70	\$50,800	8.3%	10.1
SEQUOIAS	44.92	\$35,677	7.9%	49.2
SHASTA	52.01	\$33,053	10.3%	73.5
SIERRA	54.30	\$52,998	8.1%	20.5
SISKIYOU	51.65	\$30,668	7.5%	140.7
SKYLINE	50.75	\$59,258	6.5%	7.6
SOLANO	50.87	\$54,585	13.3%	32.9
SOUTHWESTERN	42.67	\$42,514	8.3%	17
TAFT	40.57	\$33,814	8.3%	24.9
VENTURA	48.47	\$50,103	7.7%	41
VICTOR VALLEY	49.84	\$37,605	16.9%	28.7
VISTA	47.04	\$47,063	22.3%	1.2
WEST HILLS	39.98	\$34,007	13.6%	77.1
WEST L.A.	42.17	\$37,461	22.1%	8.9
WEST VALLEY	51.99	\$79,326	6.9%	13.1
YUBA	46.53	\$35,794	12.4%	47.1
Medians	48.02	\$46,649	9.8%	11.75

**NOTES**

- ESAI Index created by mapping student zipcode to Census 2000 Median Household Income for associated zipcode and weighted by # of students in each zipcode.
- Index of Academic Preparedness created by matching HS SAT-9 and CAT-6 test scores in math/English with incoming freshman student records (unitary, fuzzy-match).
- Percent of students over age 30 in cohort of first-time freshmen.
- Miles to nearest public 4-yr institution as per Yahoo Maps.

Example of Peer Grouping Based on Predictors of an Indicator:  
 Student Progress & Achievement Rate

Peer Group Number	Means of Predictors				METRIC: Student Progress & Ach. Rate		Peer Group Information		
	Index of Academic Prep.	Economic Service Area Index	Pct.Students> 30	Distance to Public 4-yr	Range for Peer Group	Average for Peer Group	Number of Peers	Colleges in the Peer Group	Group Description
A	50.9	\$44,304	21.0	13.5	44.1 to 56.4	50.5	9	Cuyamaca; San Diego City; San Diego Miramar; Redwoods; American River; Vista; San Francisco; Allan Hancock; and Mt.San Jacinto	average academic preparation, average income, close to transfer colleges, with older students
B	54.0	\$49,459	11.6	10.4	52.2 to 62.6	57.0	11	Grossmont; MiraCosta; Palomar; San Diego Mesa; Sacramento City; Santa Rosa; Sierra; Cuesta; Santa Barbara; Moorpark; and Orange Coast.	above average academic preparation, average income, with younger students, and close to a transfer college
C	48.0	\$36,905	18.5	106.0	23.6 to 64.1	46.3	9	Imperial Valley; Feather River; Lassen; Mendocino; Siskiyou; Lake Tahoe; Cerro Coso; Barstow; and Palo Verde.	most rural (furthest from a Calif. public 4-year) colleges with average academic preparation and low income
D	41.7	\$42,936	16.9	9.3	41.8 to 53.7	48.3	17	Southwestern; Contra Costa; Alameda; Laney; Merritt; Hartnell; LA City; LA Harbor; LA Mission; LA Valley; East LA; West LA; Cerritos; Long Beach City; Santa Ana; Rio Hondo; and San Bernardino Valley.	below average academic preparation, economically disadvantaged, average aged students, with below average distance to a transfer college
E	46.9	\$36,830	15.0	34.7	42.7 to 56.4	49.1	20	Butte; Shasta; Yuba; Bakersfield; Porterville; Merced; San Joaquin Delta; Sequoias; Fresno City; Reedley; West Hills; Columbia; Modesto; Antelope Valley; Oxnard; Ventura; Glendale; Desert; Crafton Hills; and Victor Valley.	average academic preparation, most economically disadvantaged, with above average distance to a transfer college
F	47.3	\$54,089	14.1	12.9	43.1 to 59.0	51.9	22	Cosumnes River; Napa Valley; Solano; Los Medanos; Canada; Cabrillo; Gavilan; Monterey Peninsula; San Jose City; Chabot; Mission; El Camino; LA Pierce; Pasadena City; Santa Monica City; Citrus; Golden West; Mt. San Antonio; Cypress; Fullerton; Chaffey; and Riverside City.	average academic preparation, above average income, close to a transfer college
G	52.6	\$69,708	11.3	14.7	50.2 to 67.8	60.3	11	Diablo Valley; Marin; San Mateo; Skyline; De Anza; Foothill; Ohlone; Evergreen Valley; Las Positas; West Valley; and Canyons.	most affluent and most academically prepared students with fewest older students, but close to a transfer college
H	38.2	\$37,723	32.3	11.7	29.6 to 48.4	40.9	5	Taft; Compton; LA Southwest; LA Trade & Tech; and Coastline.	least academically prepared, oldest, and very economically disadvantaged students, but close to a transfer college