Focus On Results

Accountability Reporting for the California Community Colleges

A Report to the Legislature, Pursuant to AB 1417
(Pacheco, Stat. 2004, Ch. 581)

California Community Colleges Chancellor's Office

Jack Scott, Chancellor

Patrick Perry, Vice Chancellor
Technology, Research, and Information Systems

March 30, 2011

California Community Colleges Chancellor's Office

Members of the Board

Manuel Baca
Isabel Barreras
Geoffrey L. Baum
Barbara Davis-Lyman
Benita D. Haley
Scott Himelstein
Lance T. Izumi
Deborah Malumed
Robert McDonald
Alice Perez
Michelle Price
Gary Reed
Tanna Thomas

Officers of the Board

Scott Himelstein
President

Alice Perez, Vice President
Vice President

Barbara Davis-Lyman
CPEC Representative

Chancellor's Office

Jack Scott
Chancellor

Steven Bruckman
Executive Vice Chancellor of Operations and General Counsel

Erik Skinner
Executive Vice Chancellor for Programs

Terri Carbaugh
Vice Chancellor for Communications

Marlene Garcia
Vice Chancellor for Governmental Relations

Linda Michalowski
Vice Chancellor for Student Services and Special Programs

Jose Millan
Vice Chancellor for Economic and Workforce Development

Patrick Perry
Vice Chancellor for Technology, Research, and Information Systems

Barry Russell
Vice Chancellor for Academic Affairs

Dan Troy
Vice Chancellor for College Finance and Facilities Planning

Executive Summary

Introduction

In 2004, Assembly Bill 1417 triggered the creation of a performance measurement system for the California Community Colleges (CCC). That legislation and ensuing budget action authorized the California Community Colleges Chancellor's Office (CCCCO) to design and implement a performance measurement system that contained performance indicators for the system and its colleges. As per legislative intent, the CCCCO collaborated with the system's colleges and advisory structure, a panel of national experts, the Legislative Analyst's Office, the Department of Finance, and the Secretary of Education to formulate this comprehensive system that has become known as "ARCC" (Accountability Reporting for the Community Colleges). In recognizing that the initial report in 2007 required the CCCCO to test innovative ideas about performance measurement and to use a massive state database, the CCCCO completed the 2007 ARCC report as a pilot report for the Legislature. The 2011 ARCC report builds upon the prior reports through various improvements in data quality and a new year of data.

Systemwide Performance

This report will benefit policy makers by detailing many of the critical contributions that the California Community Colleges have made in recent years. The most notable findings at the state level include the following:

- Community college students who earned a vocational degree or certificate in 2004-2005 saw their wages jump from $28,238 (for the last year before receipt of the award) to $56,397 three years after earning their degree (2008), an increase of almost 100 percent.

- A large number of Californians access and use the CCC system; participation rates are high, with about 84 out of every 1,000 people (ages 18 to 65) in the state enrolled in a CCC in 2009-2010.

- The system enrolls almost one-fourth of all 20 to 24-year olds in California, with participation rates of 237 per 1,000 for 2009-2010.

- In 2009-2010, the system transferred nearly 93,000 students to four-year institutions (public, private, in-state, and out-of-state). The California State University (CSU) system continues as the most frequent transfer destination for community college students with the enrollment of nearly 38,000 students from the community colleges. Nearly 15,000 community college students enrolled in the University of California (UC) system, the state's most selective public higher education system. This figure continues a four-year trend of increasing transfers to the UC system.

- Transfers during 2009-2010 to in-state-private institutions and all out-of-state institutions account for more than 23,000 and more than 17,000 transfers, respectively.

Executive Summary

- In 2009-2010, the system contributed to the state's critical health care labor force, as about 8,400 students earned degrees or certificates in nursing.

- The system's contribution in 2009-2010 to the state's workforce included nearly 64,000 associate degrees and certificates in vocational/occupational areas.

College Level Performance
The bulk of the ARCC report covers each college's performance on eight critical indicators.

The table below lists the seven indicators for which ARCC has complete data. These numbers are percentages of success among target populations that the colleges and the CCCCO jointly defined. As a quick snapshot of how the system has done on these indicators, this table displays the figures for the year in which the most recent data are available. If a person needs to analyze the performance of a specific community college, he/she should refer to the individual college rates that appear in the section for "College Level Indicators" rather than to these systemwide rates.

College Level Performance Indicator	State Rate
1. Student Progress & Achievement (2004-05 to 2009-10)	53.6%
2. Completed 30 or More Units (2004-05 to 2009-10)	72.8%
3. Fall to Fall Persistence (Fall 2008 to Fall 2009)	67.6%
4. Vocational Course Completion (2009–10)	77.0%
5. Basic Skills Course Completion (2009-10)	61.4%
6. ESL Course Improvement (2007-08 to 2009-10)	54.6%
7. Basic Skills Course Improvement (2007-08 to 2009-10)	58.6%

Because the ARCC indicators have unique definitions, we cannot compare these indicators to those generated for other states or by other studies of the California Community Colleges. The evaluation of individual college performance requires the use of the extensive tabulations that we cover next.

Each of the community colleges covered in this report has six pages of information to facilitate and stimulate discussions about college performance within each community. In these six pages per college, the report shows (1) the three-year trend for each of the

seven indicators; (2) the college profile (i.e., its enrollment demographics); (3) a comparison of its performance with a peer group (i.e., colleges that have similar environments that affect an indicator); and (4) a self-assessment by each college. Together, this information provides readers with a fair and comprehensive picture of the achievements at any community college—a picture that simple scorecards or rankings would fail to present.

The ensemble of information in the six pages must act jointly as the inputs for any evaluation of a college's performance. Each piece of information contributes something to an evaluation of performance. For example, the year-to-year information alerts us to any trends that may be occurring at a college. The peer grouping information gives us a useful base of comparison (across equally advantaged institutions) for the most recent time period. The college's self-assessment substantially enhances both the year-to-year information and the peer group information by identifying the unique factors of a college that affect its performance. The college demographic profile, in turn, supplies a unique snapshot of the college's service population, information that local officials can use to evaluate community access and the overall enrollment picture.

These six pages for each college deliver the essence of the ARCC's objective for local accountability. Ideally, each college's local governing board and local community will use this package of information for data-based policy discussions. This strategy will benefit communities throughout the state because it equips them with data to address their local priorities. To ensure that this process occurs in each community, the legislation for ARCC requires each college to submit to the CCCCO by March 14, 2011, documentation of interaction by each local board of trustees with the 2010 ARCC report.

Conclusion

This fifth year of the ARCC effort improves the annual report that provides the State Legislature and the Governor's Office an ongoing, cost-effective structure for performance improvement that respects and promotes local decision-making. All of the state's community colleges (except for Lassen College) have already shared the 2010 report with their own local board of trustees, as required by law, and many college administrations have subsequently begun analyses to leverage the data and findings in the ARCC project. As evidenced by the self-assessments within this report, the community colleges have used the ARCC report in different ways to learn how they can improve their performances. Lastly, the ARCC report for 2012 will probably capture college performances a little more precisely than the 2011 report because all of the colleges will have completed extensive data quality improvement efforts (budgets permitting).

Introduction to the 2011 ARCC Report

Background

This report on a set of performance indicators for the California Community Colleges (CCC) meets a legislative requirement that resulted from Assembly Bill 1417 (Pacheco, Statutes of 2004, Chapter 581). The details of the legislation appear in Appendix F of this report. For clarity's sake, we have named this reporting system *Accountability Reporting for the Community Colleges* (or *ARCC*). The report itself has the title of "Focus On Results." As required by the Legislature, the CCC Chancellor's Office (CCCCO) will produce this report each year and disseminate it so that each college will share the report with its local board of trustees. The Chancellor's Office will also make the report available to state government policymakers and the public at large.

The report's objectives are to make policymakers, local college officials, and elected boards aware of system and college performance in specific areas of effort and to inform the public about overall system performance. Readers will observe that the 2011 report continues to cover noncredit courses as required by Senate Bill 361 (Scott, Statutes of 2006, Chapter 631). Again, this coverage of noncredit outcomes only extends across courses designated as part of the "Enhanced Noncredit" funding. For clarity, this report refers to this group of noncredit courses as CDCP (an acronym for the objective known as Career Development and College Preparation). Readers who want additional details on CDCP performance should refer to a supplemental report that the ARCC staff produce as a follow-up to *Focus On Results*. The CCCCO will issue this supplemental report after it has released *Focus On Results* because of scheduling and resource limitations.

Focus On Results drew upon the contributions of many parties. The framework for ARCC used the expertise of a team of researchers from the Research and Planning Group for the California Community Colleges (i.e., the RP Group), a panel of nationally recognized researchers on college performance, a statewide technical advisory workgroup, and staff at the Chancellor's Office. In Appendix H we list the individuals who played important roles in producing the 2011 ARCC Report.

How to Use This Report

We acknowledge that a variety of people will see this report, and we recognize that individuals will differ widely in their reading objectives and in their familiarity with the report's topic. With this in mind, we have tried to design the report so that policy makers at both the state and local levels will have a clear presentation of essential performance indicators for the system and for each community college within it. The body of the report emphasizes tables of summary data that provide snapshots of system and college level performance. Readers should read the brief introductions to each of these sections (system and college level) to understand their contents. These introductions cover the framework for ARCC, and they should help most readers to understand the performance indicators cited in this report. Appendix E, which presents a short list of terms and abbreviations, may also help the general reader.

We recognize that researchers, analysts, and college officials will require documentation of the methodology for the performance indicators in this report. Such technical details appear in three of the appendices. Appendix B (methods for calculating the indicators), Appendix C (regression analyses for the peer grouping), and Appendix D (cluster analyses for the peer grouping) specifically address methodological issues, and they tend to require technical knowledge on the part of the reader.

The report's first section covers the system's overall performance over time, and this will help readers to see the broad context of the system's performance. The section that follows system performance presents specific information for each college. The first two pages of college-level tables display how that college performed over time on eight basic indicators. The year-to-year figures for these performance indicators should give readers a good idea of how any given college has done during the past few years, especially in terms of its progress in areas that are generally recognized as critical in community colleges.

The third and fourth pages for each college display basic demographic data for the college's enrollment. This information will help readers understand the student population served by that college. For many readers, such information can indicate relevant aspects of a college's effectiveness (i.e., who does the college serve?), plus it can provide additional context for the reported performance indicators.

The fifth page for each college shows the "peer grouping" information for the college. On this page, readers will find a comparison of a college's performance on each of the seven indicators that have adequate data for peer grouping. For each of these seven performance indicators, we have performed a statistical analysis (peer grouping) to identify other California Community Colleges that most closely resemble the college in terms of environmental factors that have linkage to (or association with) the performance indicator. Interested readers should refer to Appendix A to see the names of the colleges that comprise each peer group. We emphasize that the peer group results are rough guides for evaluating college level performance because each college may have unique local factors that we could not analyze statistically for the peer group identification. Because year-to-year stability in peer grouping facilitates local planning and analysis, the 2011 peer groups will remain the same as they were in the 2009 and 2010 ARCC reports. Also, this report will continue to omit from peer grouping the indicator for Career Development and College Preparation (CDCP, or Enhanced Noncredit) courses because the data for CDCP are still under development.

The sixth page for a college shows that college's own self-assessment. This brief statement from the college administration may note, among other things, unique factors that our statistical analysis may have missed. The self-assessment is important because it may help to explain the performance figures for a college. The ARCC staff members in the Chancellor's Office do not edit these self-assessments from the college administrators, and the only requirement for the content is that it stays within a 500-word limit. Because the

word limit forces the self-assessment to focus upon a few basic points, some readers may wish to follow-up with a college that may have other analyses or data that it could not include in the ARCC's brief self-assessment.

The best use of the ARCC Report will require the integration of information from various parts of the report. Judgments about the performance of any particular college should especially pay attention to the sections on year-to-year performance, peer group comparison, enrollment demographics, and the college self-assessment. A focus upon only one of these pieces of information will probably provide an incomplete evaluation of college performance, and this may lead one to make unfair judgments about an institution. Consequently, we hope that users of this report will maintain this multi-dimensional viewpoint (from the different report sections) as they draw their conclusions or as they communicate about the report to other people.

The 2011 report will contain numerous changes to past data as well as new data for the most recent academic year. For this reason, analysts should rely primarily upon the 2011 report instead of data from prior ARCC reports. The Chancellor's Office MIS (Management Information System) unit has continued to implement various data improvements that are virtually impossible to complete within a narrow time frame.

Additional information about ARCC is available at the following website:
http://www.cccco.edu/OurAgency/TechResearchInfo/ResearchandPlanning/ARCC/tabid/292/Default.aspx

If you have any questions or comments about the report, please e-mail them to:
arcc@cccco.edu.

ARCC 2011 Report:
An Introduction to the Systemwide Indicators

The Accountability Reporting for the Community Colleges (ARCC) framework specifies that community college performance data should be aggregated, analyzed, and reported at two levels: the individual college level (college level indicators) and across the community college system (systemwide indicators).

Tables 1 through 18 and Figures 1 through 6 in the following section of the ARCC report present results for the seven performance indicators chosen for **systemwide** accountability reporting organized into four major categories:

- Student Progress and Achievement – Degree/Certificate/Transfer
- Student Progress and Achievement – Vocational/Occupational/Workforce Development
- Pre-Collegiate Improvement – Basic Skills and ESL
- Participation Rates

The seven performance indicators presented in this section are:

1. The annual number and percentage of baccalaureate students graduating from UC and CSU who attended a California Community College
2. The annual number of Community College transfers to four-year institutions
3. The transfer rate to four-year institutions from the California Community College System
4. The annual number of degrees/certificates conferred by vocational programs
5. The increase in wages following completion of a vocational degree/certificate
6. The annual number of basic skills improvements
7. Systemwide participation rates per 1,000 population (by selected demographics).

The data sources and methodology for each of the indicators can be found in Appendix B.

The time periods and data sources differ across performance indicators so it is important to pay attention to the dates and information specified in the column headings and titles for each table or figure.

For the 2011 report, systemwide participation rates per 1,000 population reflect community college participation by individuals ages 18 to 65 only, based on data from the Chancellor's Office Management Information System (COMIS) and the California Department of Finance (DOF). For a few demographic categories the participation rate per 1,000 exceeds 1,000. Possible reasons for these higher rates are as follows. Self-reporting of demographics (e.g., student ethnicity) leads to higher community college counts for a particular group relative to DOF's Census-based projections. This is

especially true for population groups with relatively small DOF counts. In addition, absence of a unique identifier (e.g., Social Security Number) for some students at the systemwide level might produce duplicate student counts thus increasing the systemwide numbers for certain demographics relative to DOF counts.

Note that these systemwide indicators are not simply statewide aggregations of the college level indicators presented elsewhere in this report. Some systemwide indicators cannot be broken down to a college level or do not make sense when evaluated on a college level. For example, students may transfer or attend courses across multiple community colleges during their period of enrollment and their performance outcomes must be analyzed using data from several community colleges rather than from an individual college.

Beginning with the 2010 ARCC report, additional analysis revealed that a data-reporting artifact may occur for the year that an institution joins the National Student Clearinghouse (NSC). All of the matches that occur for that institution from previous years (a cumulative count that spans pre-NSC membership years) would be reported by the NSC as transfers for that first year. To eliminate this artifact from the ARCC report, we zero out the transfer count for the first year that an institution joins the NSC. Therefore, the volume of transfer counts for Tables 4, 5 and 8 (ISP and OOS) is lower for the same years from ARCC reports prior to 2010.

Student Progress and Achievement: Degree/Certificate/Transfer

Figure 1:
Annual Number of California State University (CSU) and University of California (UC) Baccalaureate Students from 2004-2005 to 2009-2010 Who Attended a California Community College (CCC)

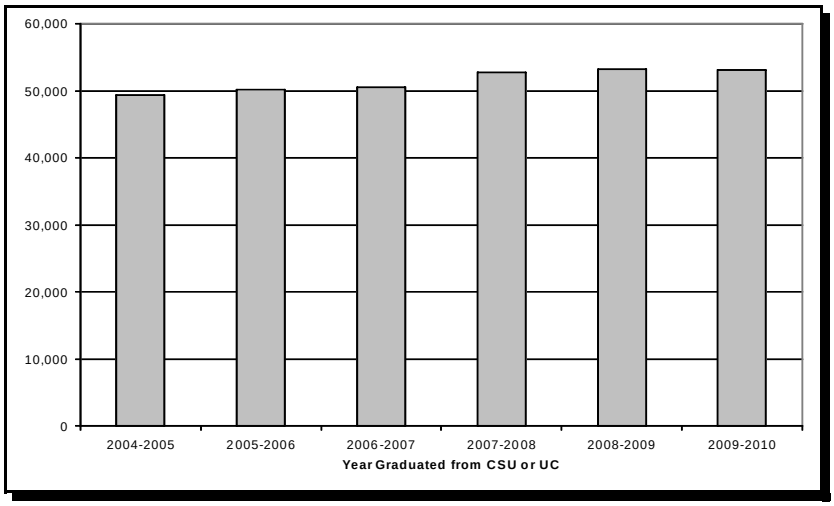


Table 1:
Annual Number of California State University (CSU) and University of California (UC) Baccalaureate Students from 2004-2005 to 2009-2010 Who Attended a California Community College (CCC)

Year Graduated From CSU or UC

	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Total BA/BS (CSU & UC)	107,630	110,990	112,474	115,548	117,309	120,274
Total Who Attended CCC	49,439	50,248	50,611	52,825	53,238	53,124
CSU and UC Percent	45.9%	45.3%	45.0%	45.7%	45.4%	44.2%

Table 2:
Annual Number and Percentage of CSU Baccalaureate Students from 2004-2005 to 2009-2010 Who Attended a CCC

Year Graduated From CSU

	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Total BA/BS from CSU	66,768	69,350	70,887	73,132	74,643	75,418
Total Who Attended CCC	37,316	38,365	38,827	40,337	40,968	40,606
CSU Percent	55.9%	55.3%	54.8%	55.2%	54.9%	53.8%

Table 3:
Annual Number and Percentage of UC Baccalaureate Students from 2004-2005 to 2009-2010 Who Attended a CCC

Year Graduated From UC

	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Total BA/BS from UC	40,862	41,640	41,587	42,416	42,666	44,856
Total Who Attended CCC	12,123	11,883	11,784	12,488	12,270	12,518
UC Percent	29.7%	28.5%	28.3%	29.4%	28.8%	27.9%

Results:

Figure 1 presents a slight decrease in 2009-2010 of the annual number of California State University (CSU) and University of California (UC) baccalaureate degree recipients who attended a California Community College (CCC). Table 1 shows an increasing six-year trend in the number of CSU and UC baccalaureate students but a small decrease in the total who attended a CCC. The table therefore reflects a decrease in the percentage of graduates who originally attended a CCC for 2009-2010. Table 2 displays the annual number and percentage of CSU students and Table 3 portrays the UC students. For methodology and data source, see Appendix B.

Student Progress and Achievement: Degree/Certificate/Transfer

Figure 2:
Annual Number of California Community College Transfers to Baccalaureate Granting Institutions from 2004-2005 to 2009-2010

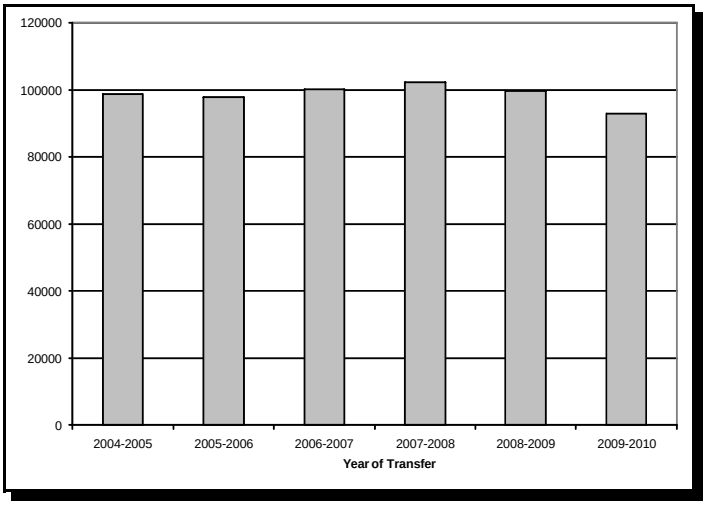


Table 4:
Annual Number of California Community College Transfers to Baccalaureate Granting Institutions from 2004-2005 to 2009-2010

Year of Transfer

	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Total Transfers	98,721	97,888	100,314	102,335	99,837	92,985

Table 5:
Annual Number of California Community College Transfers to California State University (CSU), University of California (UC), In-State Private (ISP) and Out-of-State (OOS) Baccalaureate Granting Institutions

Year of Transfer

	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
CSU Transfers	53,695	52,641	54,391	54,971	49,770	37,674
UC Transfers	13,114	13,510	13,871	13,909	14,059	14,702
ISP Transfers	19,771	19,291	19,182	19,860	20,819	23,584
OOS Transfers	12,141	12,446	12,870	13,595	15,189	17,025

Results:

Figure 2 and Table 4 feature the annual number of California Community College (CCC) transfers to four-year institutions across six years. Although there is a general increase over time, the overall number of transfers begins to decline in 2008-09. Table 5 displays the annual number of transfers for four segments, California State University (CSU); University of California (UC); In-State Private (ISP); and Out-of-State (OOS) four-year institutions. For methodology and data source, see Appendix B.

Student Progress and Achievement: Degree/Certificate/Transfer

Figure 3:
Annual Number of California Community College Transfers to California State University (CSU) from 2004-2005 to 2009-2010

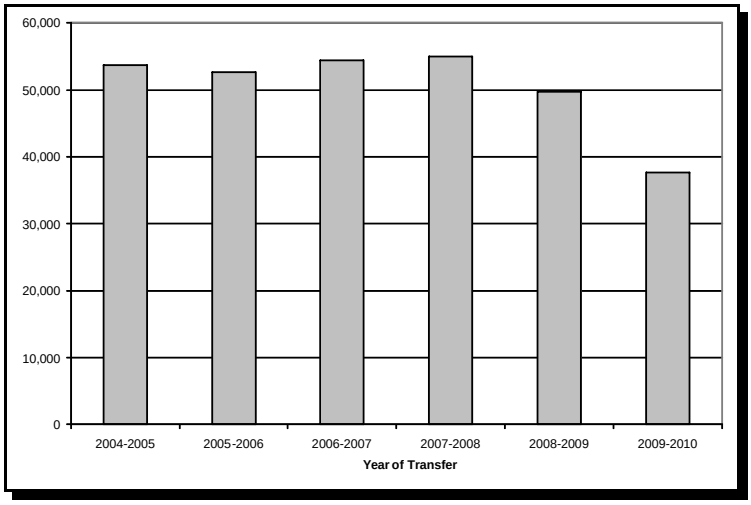


Table 6:
Annual Number of California Community College Transfers to California State University (CSU) from 2004-2005 to 2009-2010

	Year of Transfer					
	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
CSU Transfers	53,695	52,641	54,391	54,971	49,770	37,674

Results:

Figure 3 and Table 6 display the annual number of California Community College (CCC) transfers to California State University (CSU). The number of transfers decreases in 2005-2006 but increases the subsequent two years (2006-2007 and 2007-2008) before decreasing again in 2008-2009 and 2009-2010. For methodology and data source, see Appendix B.

Student Progress and Achievement: Degree/Certificate/Transfer

Figure 4:
Annual Number of California Community College Transfers to the University of California (UC) from 2004-2005 to 2009-2010

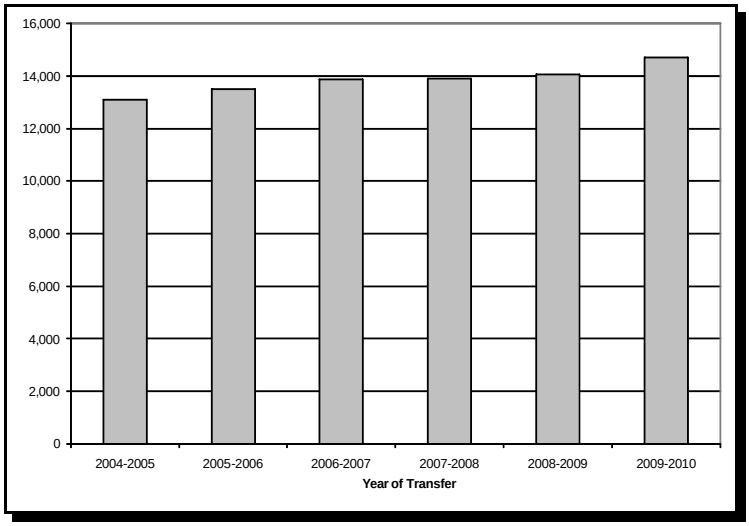


Table 7:
Annual Number of California Community College Transfers to the University of California (UC) from 2004-2005 to 2009-2010

Year of Transfer

	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
UC Transfers	13,114	13,510	13,871	13,909	14,059	14,702

Results:

Figure 4 and Table 7 illustrate the annual number of California Community College (CCC) transfers to University of California (UC). The number of transfers increases across the six-year period. For methodology and data source, see Appendix B.

Student Progress and Achievement: Degree/Certificate/Transfer

Figure 5:
Annual Number of California Community College Transfers to In-State Private (ISP) and Out-of-State (OOS) Baccalaureate Granting Institutions from 2004-2005 to 2009-2010

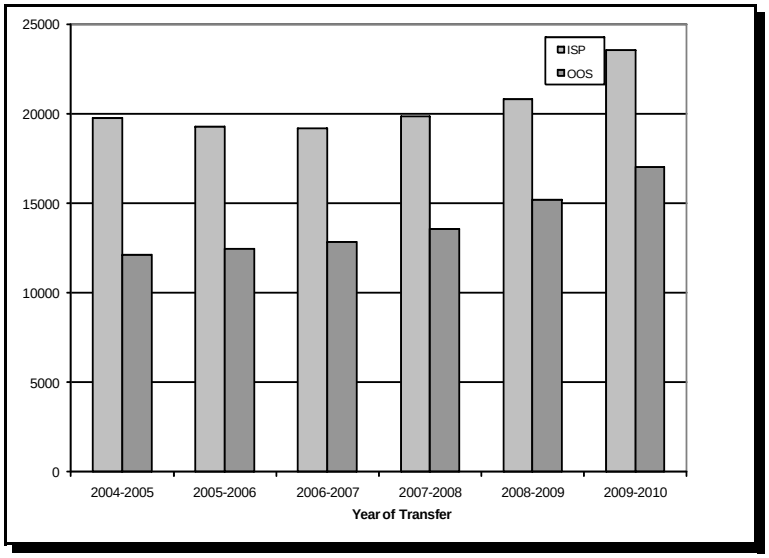


Table 8:
Annual Number of California Community College Transfers to In-State Private (ISP) and Out-of-State (OOS) Baccalaureate Granting Institutions from 2004-2005 to 2009-2010

Year of Transfer

	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
ISP Transfers	19,771	19,291	19,182	19,860	20,819	23,584
OOS Transfers	12,141	12,446	12,870	13,595	15,189	17,025

Results:

The annual number of California Community College (CCC) transfers to In-State Private (ISP) and Out-of-State (OOS) four-year institutions is displayed in Figure 5 and Table 8. The transfer volume for ISP four-year institutions (for-profit and non-profit) and OOS four-year institutions (public and private) has been steadily increasing since 2006-07. For methodology and data source, see Appendix B.

Student Progress and Achievement: Degree/Certificate/Transfer

Table 9:
Transfer Rate to Baccalaureate Granting Institutions

Percentage of first-time students with a minimum of 12 units earned who attempted transfer-level Math or English during enrollment who transferred to a Baccalaureate granting institution within six years.

	2002-2003 to 2007-2008	2003-2004 to 2008-2009	2004-2005 to 2009-2010
Transfer Rate	40.3%	40.8%	40.8%

Results:

Table 9 reflects the statewide transfer rate to four-year institutions for three different cohorts of first-time students. The cohorts include students who earned at least 12 units and who attempted transfer-level Math or English during the six-year enrollment period. The transfer rate increases from the 2002-03 to the 2003-04 cohort but remains the same to four-year institutions for the 2004-2005 cohort at 40.8%. For methodology and data source, see Appendix B.

Student Progress and Achievement: Vocational / Occupational / Workforce Development

Table 10: Annual Number of Vocational Awards by Program from 2007-2008 to 2009-2010
(Program Title based on four-digit TOP Code, Alphabetical Order)

Includes Certificates Requiring Fewer Than 18 Units

Program Title	Total Credit Awards			AA/AS Degrees			Certificates (Credit)		
	2007-2008	2008-2009	2009-2010	2007-2008	2008-2009	2009-2010	2007-2008	2008-2009	2009-2010
Accounting	2,431	2,553	2,669	1,018	1,042	1,086	1,413	1,511	1,583
Administration of Justice	6,415	6,191	5,542	1,801	2,084	2,322	4,614	4,107	3,220
Aeronautical and Aviation Technology	311	332	387	68	51	48	243	281	339
Agricultural Power Equipment Technology	87	97	80	7	14	11	80	83	69
Agriculture Business, Sales and Service	62	98	73	53	63	64	9	35	9
Agriculture Technology and Sciences, General	29	50	29	17	26	22	12	24	7
Animal Science	467	495	477	288	324	286	179	171	191
Applied Design	12	21	9	7	5	7	5	16	2
Applied Photography	215	148	211	80	66	97	135	82	114
Architecture and Architectural Technology	460	444	400	198	212	196	262	232	204
Athletic Training and Sports Medicine	15	21	16	15	17	16	0	4	0
Automotive Collision Repair	114	173	139	22	27	26	92	146	113
Automotive Technology	2,187	1,889	2,044	304	328	307	1,883	1,561	1,737
Aviation and Airport Management and Services	209	173	212	144	116	119	65	57	93
Banking and Finance	53	57	67	20	34	25	33	23	42
Biotechnology and Biomedical Technology	173	101	188	35	27	46	138	74	142
Business Administration	2,653	2,703	3,180	2,285	2,360	2,746	368	343	434
Business and Commerce, General	1,433	1,459	1,646	1,195	1,296	1,462	238	163	184
Business Management	1,519	2,096	1,510	822	884	846	697	1,212	664
Cardiovascular Technician	119	142	159	47	62	54	72	80	105
Chemical Technology	15	5	10	2	3	5	13	2	5
Child Development/Early Care and Education	7,103	7,142	5,990	1,832	1,897	1,795	5,271	5,245	4,195
Civil and Construction Management Technology	410	552	515	117	120	123	293	432	392
Commercial Art	80	55	56	64	39	31	16	16	25
Commercial Music	229	312	241	54	56	66	175	256	175
Community Health Care Worker	7	8	17	1	3	3	6	5	14
Computer Information Systems	593	576	567	311	314	312	282	262	255
Computer Infrastructure and Support	663	561	677	172	201	245	491	360	432
Computer Software Development	309	357	285	115	92	121	194	265	164

Table 10 *(continued)*

Program Title	Total Credit Awards			AA/AS Degrees			Certificates (Credit)		
	2007-2008	2008-2009	2009-2010	2007-2008	2008-2009	2009-2010	2007-2008	2008-2009	2009-2010
Construction Crafts Technology	1,155	1,168	948	107	130	117	1,048	1,038	831
Cosmetology and Barbering	1,595	1,538	1,552	89	91	108	1,506	1,447	1,444
Customer Service	2	5	8	0	1	0	2	4	8
Dental Occupations	802	927	1,021	368	426	417	434	501	604
Diagnostic Medical Sonography	64	74	71	35	47	25	29	27	46
Diesel Technology	279	261	248	45	49	36	234	212	212
Digital Media	529	558	614	205	241	220	324	317	394
Drafting Technology	540	528	575	178	174	194	362	354	381
Educational Aide (Teacher Assistant)	58	103	49	12	22	27	46	81	22
Educational Technology	3	2	3	2	1	1	1	1	2
Electro-Mechanical Technology	46	28	45	12	6	10	34	22	35
Electro-Neurodiagnostic Technology	15		19	15		19	0		0
Electrocardiography	19	20	20	0	0	0	19	20	20
Electronics and Electric Technology	893	956	938	239	232	216	654	724	722
Emergency Medical Services	1,347	1,934	1,534	4	6	2	1,343	1,928	1,532
Engineering Technology, General (requires Trigonom	16	20	25	10	12	14	6	8	11
Environmental Control Technology	423	479	533	51	56	73	372	423	460
Environmental Technology	183	120	206	35	10	22	148	110	184
Family and Consumer Sciences, General	110	116	91	107	115	89	3	1	2
Family Studies	42	43	9	39	42	8	3	1	1
Fashion	379	406	339	152	120	138	227	286	201
Fire Technology	3,102	2,786	2,921	942	883	985	2,160	1,903	1,936
Food Processing and Related Technologies			1			1			0
Forestry	54	50	29	26	21	12	28	29	17
Gerontology	38	75	98	19	16	16	19	59	82
Graphic Art and Design	353	350	447	162	160	213	191	190	234
Health Information Technology	301	175	297	92	49	99	209	126	198
Health Occupations, General	33	59	66	4	46	42	29	13	24
Health Professions, Transfer Core Curriculum	199	291	323	195	286	321	4	5	2
Horticulture	357	346	405	111	121	129	246	225	276
Hospital and Health Care Administration	2		2	1		1	1		1

Table 10 *(continued)*

Program Title	Total Credit Awards			AA/AS Degrees			Certificates (Credit)		
	2007-2008	2008-2009	2009-2010	2007-2008	2008-2009	2009-2010	2007-2008	2008-2009	2009-2010
Hospital Central Service Technician	17	36	43	0	0	0	17	36	43
Hospitality	380	403	344	101	116	112	279	287	232
Human Services	1,547	1,479	1,747	452	441	557	1,095	1,038	1,190
Industrial Systems Technology and Maintenance	81	91	121	9	8	21	72	83	100
Information Technology, General	116	156	136	9	2	1	107	154	135
Instrumentation Technology	5	2	2	1	1	1	4	1	1
Insurance	1	7	3	0	2	0	1	5	3
Interior Design and Merchandising	564	415	427	188	161	144	376	254	283
International Business and Trade	164	296	143	56	47	46	108	249	97
Journalism	85	90	108	67	66	80	18	24	28
Labor and Industrial Relations	24	11	22	2	3	2	22	8	20
Laboratory Science Technology	28	15	19	10	7	6	18	8	13
Legal and Community Interpretation	20	50	67	5	9	14	15	41	53
Library Technician (Aide)	155	143	173	36	32	33	119	111	140
Logistics and Materials Transportation	51	37	57	0	3	4	51	34	53
Manufacturing and Industrial Technology	776	889	793	126	146	149	650	743	644
Marine Technology	31		23	1		7	30		16
Marketing and Distribution	268	228	309	103	103	145	165	125	164
Mass Communications	4	5	2	2	4	1	2	1	1
Massage Therapy	31	40	42	9	9	8	22	31	34
Medical Assisting	868	922	1,025	146	130	175	722	792	850
Medical Laboratory Technology	123	126	110	20	16	20	103	110	90
Mortuary Science	47	51	55	47	51	55	0	0	0
Natural Resources	62	63	63	44	38	32	18	25	31
Nursing	8,261	8,519	8,388	5,742	5,974	6,233	2,519	2,545	2,155
Nutrition, Foods, and Culinary Arts	1,341	1,228	1,447	193	157	203	1,148	1,071	1,244
Occupational Therapy Technology	43	66	68	43	65	68	0	1	0
Ocean Technology	15	6	10	2	4	3	13	2	7
Office Technology/Office Computer Applications	1,747	1,548	1,463	482	428	431	1,265	1,120	1,032
Orthopedic Assistant	9	12	8	5	5	4	4	7	4
Other Agriculture and Natural Resources	5	11	13	2	7	8	3	4	5

Table 10 *(continued)*

Program Title	Total Credit Awards			AA/AS Degrees			Certificates (Credit)		
	2007-2008	2008-2009	2009-2010	2007-2008	2008-2009	2009-2010	2007-2008	2008-2009	2009-2010
Other Architecture and Environmental Design	1	2	2	1	0	0	0	2	2
Other Business and Management	330	290	298	237	258	270	93	32	28
Other Commercial Services	0	0	0	0	0	0	0	0	0
Other Education	1			0			1		
Other Engineering and Related Industrial Technolog	56	111	99	25	39	52	31	72	47
Other Family and Consumer Sciences		1			0			1	
Other Fine and Applied Arts	12	6	4	2	2	2	10	4	2
Other Health Occupations	93	89	99	0	0	0	93	89	99
Other Information Technology	86	126	65	1	0	2	85	126	63
Other Media and Communications	4	4	10	0	0	0	4	4	10
Other Public and Protective Services	53	95	58	0	2	0	53	93	58
Paralegal	911	841	928	389	357	404	522	484	524
Paramedic	450	439	395	95	73	80	355	366	315
Pharmacy Technology	163	188	234	46	53	72	117	135	162
Physical Therapist Assistant	116	103	83	116	103	83	0	0	0
Physicians Assistant	73	69	68	9	10	4	64	59	64
Plant Science	14	36	21	10	14	16	4	22	5
Polysomnography	2	8	1	2	8	1	0	0	0
Printing and Lithography	73	47	54	15	9	9	58	38	45
Psychiatric Technician	431	562	525	45	55	110	386	507	415
Public Administration	30	34	81	9	14	12	21	20	69
Public Relations	5	3	3	1	1	1	4	2	2
Radiation Therapy Technician	14	9	3	13	7	0	1	2	3
Radio and Television	242	243	281	127	106	147	115	137	134
Radio, Motion Picture and Television	8	1		6	0		2	1	
Radiologic Technology	622	577	555	427	390	378	195	187	177
Real Estate	567	444	391	224	180	152	343	264	239
Respiratory Care/Therapy	528	588	550	411	424	426	117	164	124
Special Education	42	35	33	11	20	20	31	15	13
Speech/Language Pathology and Audiology	79	126	191	59	82	123	20	44	68
Surgical Technician	40	49	43	14	10	11	26	39	32

Table 10 *(continued)*

Program Title	Total Credit Awards			AA/AS Degrees			Certificates (Credit)		
	2007-2008	2008-2009	2009-2010	2007-2008	2008-2009	2009-2010	2007-2008	2008-2009	2009-2010
Technical Communication	14	14	34	2	3	5	12	11	29
Technical Theater	20	34	41	8	8	23	12	26	18
Travel Services and Tourism	240	156	160	34	45	43	206	111	117
Viticulture, Enology, and Wine Business	22	29	38	13	18	14	9	11	24
Vocational ESL		0	0		0	0		0	0
Water and Wastewater Technology	159	225	275	52	70	76	107	155	199
World Wide Web Administration	49	42	60	6	7	10	43	35	50
Total	63,731	64,800	63,747	24,664	25,529	27,151	39,067	39,271	36,596

Results:

Table 10 shows the numbers of awards issued by 129 vocational programs across the three most recent academic years, organized alphabetically by program title. The columns under "Total Credit Awards" (i.e., columns 2, 3, and 4) are the sums of degrees plus certificates for the specified years. Totals for all programs are presented in the last row of the table. Degrees make up about 39 to 43 percent of the credit awards issued, with certificates making up 57 to 61 percent. For methodology and data source, see Appendix B.

Student Progress and Achievement: Vocational / Occupational / Workforce Development

Table 11: "Top 25" Vocational Programs in 2009-2010, by Volume of Total Awards (Program Title based on four-digit TOP Code)

Includes Certificates Requiring Fewer Than 18 Units

	Program Title	Total Credit Awards 2009-2010	AA/AS Degrees 2009-2010	All Certificates (Credit) 2009-2010
1	Nursing	8,388	6,233	2,155
2	Child Development/Early Care and Education	5,990	1,795	4,195
3	Administration of Justice	5,542	2,322	3,220
4	Business Administration	3,180	2,746	434
5	Fire Technology	2,921	985	1,936
6	Accounting	2,669	1,086	1,583
7	Automotive Technology	2,044	307	1,737
8	Human Services	1,747	557	1,190
9	Business and Commerce, General	1,646	1,462	184
10	Cosmetology and Barbering	1,552	108	1,444
11	Emergency Medical Services	1,534	2	1,532
12	Business Management	1,510	846	664
13	Office Technology/Office Computer Applications	1,463	431	1,032
14	Nutrition, Foods, and Culinary Arts	1,447	203	1,244
15	Medical Assisting	1,025	175	850
16	Dental Occupations	1,021	417	604
17	Construction Crafts Technology	948	117	831
18	Electronics and Electric Technology	938	216	722
19	Paralegal	928	404	524
20	Manufacturing and Industrial Technology	793	149	644
21	Computer Infrastructure and Support	677	245	432
22	Digital Media	614	220	394
23	Drafting Technology	575	194	381
24	Computer Information Systems	567	312	255
25	Radiologic Technology	555	378	177

Results:

As shown in Table 11, Nursing programs issued the highest total number of awards in 2009-2010 (i.e., degrees plus certificates), primarily in the form of AA/AS degrees. Child Development/Early Care and Education programs issued the second highest total number of awards, primarily certificates, followed by Administration of Justice programs. The highest number of AA/AS degrees was issued in Nursing, followed by Business Administration. For methodology and data source, see Appendix B.

Student Progress and Achievement: Vocational / Occupational / Workforce Development

Fig. 6a: Wages for Students Attaining Award in 2002-2003

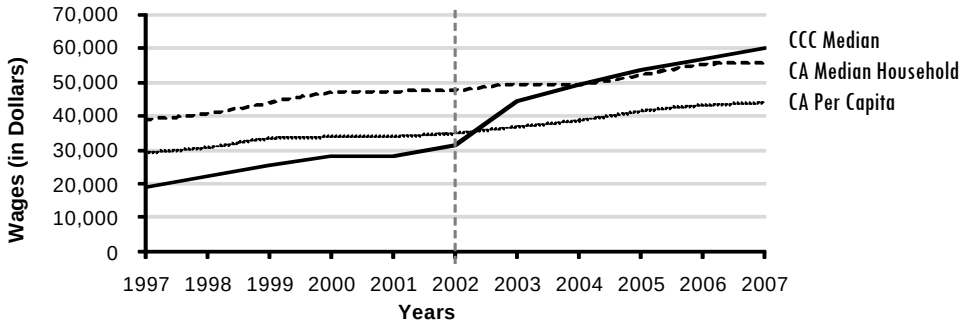


Fig. 6b: Wages for Students Attaining Award in 2003-2004

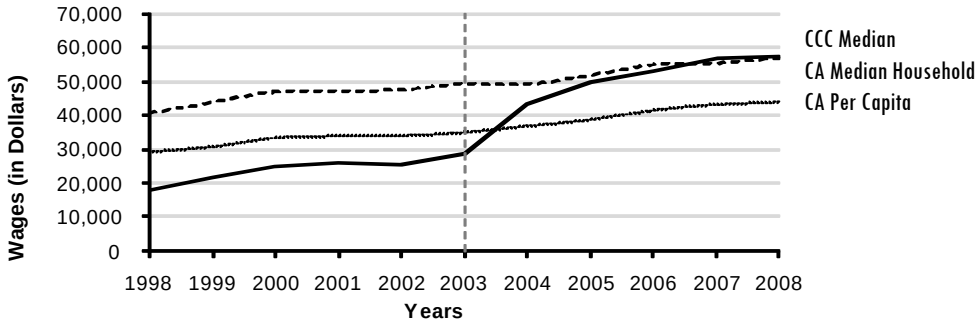
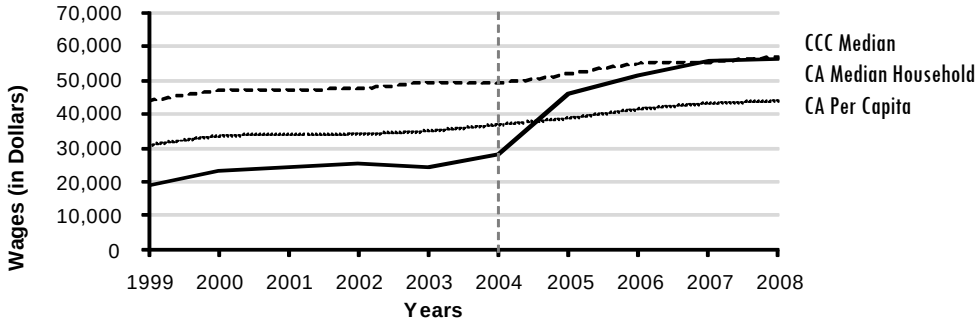


Fig. 6c: Wages for Students Attaining Award in 2004-2005



Results:

Figures 6a, 6b, and 6c represent wage trends for students attaining a vocational degree or certificate in (a) 2002-2003, (b) 2003-2004, and (c) 2004-2005. The dashed vertical line in each figure signifies the award year for each cohort. The trend lines for CCC Median Wages in Figure 6 (solid line) suggest that students receiving vocational awards from community college programs generally experience wage gains in the years following award attainment for which wage data are available. We include trend lines for California Median Household Income (dashed line) and California Per Capita Income (dotted line) to provide additional perspective.

While there are several important caveats to the CCC Median Wage trends shown in these figures, the lines indicate a noticeable "jump" in median wages that occurs following receipt of an award. This jump takes place for all three wage cohorts (2002-2003, 2003-2004, and 2004-2005). The wage trends continue at that higher level across the years for which we have post-award wage data. For methodology and data source, see Appendix B.

Table 12a: Wages for Students Attaining a Degree or Certificate in 2002-2003

(N = 5,954)

(Data for Figure 6a)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
CA Median Household Income	39,000	40,600	43,800	46,900	47,177	47,500	49,320	49,185	51,831	55,000	55,450
CA Per Capita Income	29,195	30,679	33,398	33,890	34,045	34,977	36,903	38,767	41,567	43,291	44,038
CCC Median Wages	18,765	22,091	25,521	28,261	28,285	31,173	44,610	49,260	53,758	56,866	60,320

Table 12b: Wages for Students Attaining a Degree or Certificate in 2003-2004

(N = 5,151)

(Data for Figure 6b)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CA Median Household Income	40,600	43,800	46,900	47,177	47,500	49,320	49,185	51,831	55,000	55,450	57,014
CA Per Capita Income	29,195	30,679	33,398	33,890	34,045	34,977	36,903	38,767	41,567	43,291	44,038
CCC Median Wages	17,788	21,655	24,900	25,890	25,574	28,454	43,494	49,658	52,803	56,711	57,186

Table 12c: Wages for Students Attaining a Degree or Certificate in 2004-2005

(N = 5,457)

(Data for Figure 6c)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CA Median Household Income	43,800	46,900	47,177	47,500	49,320	49,185	51,831	55,000	55,450	57,014
CA Per Capita Income	30,679	33,398	33,890	34,045	34,977	36,903	38,767	41,567	43,291	44,038
CCC Median Wages	18,976	23,090	24,220	25,307	24,469	28,238	45,886	51,541	55,495	56,397

Results:

The data in Tables 12a, 12b, and 12c above were used to develop the trend lines depicted in Figures 6a, 6b, and 6c of this report. The last data row of each table, CCC Median Wage, contains the annual median wages for a cohort of students who received any vocational award during a particular cohort year (2002-2003, 2003-2004, 2004-2005). Data on California Median Household Income and Per Capita Income are included to provide additional perspective on the income trends. For methodology and data source, see Appendix B.

Pre-Collegiate Improvement: Basic Skills and ESL

Table 13:
Annual Number of Credit Basic Skills Improvements

The number of students completing coursework at least one level above their prior basic skills enrollment within the three-year cohort period.

	2005-2006 to 2007-2008	2006-2007 to 2008-2009	2007-2008 to 2009-2010
Number of Students	99,703	103,220	110,517

Results:

As Table 13 indicates, the statewide annual number of students completing coursework at least one level above their prior credit basic skills enrollment coursework increased moderately from the first cohort (2005-2006 to 2007-2008) to the second cohort (2006-2007 to 2008-2009), with a considerably larger increase from the second cohort to the most recent cohort (2007-2008 to 2009-2010). Note that, as of 2010, changes in coding for Basic Skills courses (Course Prior to College Level, "CB21") in the Chancellor's Office Management Information System (MIS) and changes in the Taxonomy of Programs (TOP) codes for Basic Skills might have contributed to the marked changes in the numbers of basic skills improvements. For methodology and data source, see Appendix B.

Participation Rates

Table 14:
Systemwide Participation Rate Per 1,000 Population

	2007-2008	2008-2009	2009-2010
Systemwide Participation Rate	87.4	89.8	84.2

Table 15:
Participation Rates by Age Group Per 1,000 Population

	2007-2008	2008-2009	2009-2010
18 to 19	332.3	339.8	317.8
20 to 24	235.1	243.1	236.6
25 to 29	121.2	124.9	116.8
30 to 34	75.5	78.7	73.9
35 to 39	55.1	55.9	50.3
40 to 49	42.4	42.4	37.8
50 to 65	29.4	28.8	24.5

Table 16:
Participation Rates by Gender Per 1,000 Population

	2007-2008	2008-2009	2009-2010
Female	96.7	98.2	91.4
Male	78.4	81.6	77.2

Table 17:
Participation Rates by Ethnicity Per 1,000 Population

	2007-2008	2008-2009	2009-2010
Asian	116.1	116.0	104.9
Black/African American	122.8	128.3	117.1
Hispanic	90.8	92.9	89.0
Native American	134.7	137.6	100.1
Pacific Islander	191.5	210.7	161.7
White	73.6	76.0	69.3
Multirace	0.0	2.3	78.7

Results:

Tables 14 to 18 show how the community colleges provide access to higher education for all segments of the state's population. The participants include substantial numbers from all categories of age, gender, and race/ethnicity. In 2009-2010 participation fell regardless of age group, gender, or ethnicity. For an explanation of population rates exceeding 1,000, see the Introduction to the Systemwide Indicators. For methodology and data source, see Appendix B.

Participation Rates

Table 18: Participation Rates by Age, Gender, and Ethnicity Per 1,000 Population

Age	Gender	Ethnicity	2007-2008	2008-2009	2009-2010
18 to 19	Female	Asian	508.5	506.0	461.4
18 to 19	Female	Black/African American	410.1	418.0	346.6
18 to 19	Female	Hispanic	344.2	352.6	336.4
18 to 19	Female	Native American	487.7	507.6	338.7
18 to 19	Female	Pacific Islander	934.0	1,028.5	667.2
18 to 19	Female	White	321.1	328.7	297.5
18 to 19	Female	Multirace	0.0	10.8	327.3
18 to 19	Male	Asian	495.5	499.0	459.5
18 to 19	Male	Black/African American	371.4	383.9	316.0
18 to 19	Male	Hispanic	288.6	298.2	284.4
18 to 19	Male	Native American	406.9	431.2	274.3
18 to 19	Male	Pacific Islander	983.6	1,028.0	683.7
18 to 19	Male	White	290.5	299.1	269.6
18 to 19	Male	Multirace	0.0	8.5	283.0
20 to 24	Female	Asian	388.6	393.9	369.8
20 to 24	Female	Black/African American	301.0	315.9	289.4
20 to 24	Female	Hispanic	240.5	244.5	243.0
20 to 24	Female	Native American	345.3	351.3	264.8
20 to 24	Female	Pacific Islander	591.2	652.7	515.0
20 to 24	Female	White	232.3	238.5	224.3
20 to 24	Female	Multirace	0.0	5.2	169.9
20 to 24	Male	Asian	353.8	368.4	354.6
20 to 24	Male	Black/African American	237.7	255.3	240.6
20 to 24	Male	Hispanic	192.4	200.8	198.3
20 to 24	Male	Native American	258.4	274.4	215.0
20 to 24	Male	Pacific Islander	533.0	610.8	521.3
20 to 24	Male	White	206.0	216.0	206.2
20 to 24	Male	Multirace	0.0	5.0	142.3

Table 18 *(continued)*

Age	Gender	Ethnicity	2007-2008	2008-2009	2009-2010
25 to 29	Female	Asian	184.2	187.7	168.8
25 to 29	Female	Black/African American	188.9	191.1	176.3
25 to 29	Female	Hispanic	125.0	126.7	118.7
25 to 29	Female	Native American	209.0	215.7	155.1
25 to 29	Female	Pacific Islander	226.4	262.5	202.5
25 to 29	Female	White	127.7	131.4	118.1
25 to 29	Female	Multirace	0.0	2.3	93.7
25 to 29	Male	Asian	142.6	147.3	136.3
25 to 29	Male	Black/African American	129.2	138.1	129.8
25 to 29	Male	Hispanic	93.2	96.0	91.1
25 to 29	Male	Native American	164.8	174.7	122.6
25 to 29	Male	Pacific Islander	195.1	229.1	184.2
25 to 29	Male	White	111.2	117.0	108.7
25 to 29	Male	Multirace	0.0	2.0	77.7
30 to 34	Female	Asian	106.4	106.5	96.3
30 to 34	Female	Black/African American	141.4	143.6	131.1
30 to 34	Female	Hispanic	81.9	82.5	76.9
30 to 34	Female	Native American	160.0	153.5	114.8
30 to 34	Female	Pacific Islander	124.3	135.6	118.0
30 to 34	Female	White	73.7	79.4	74.2
30 to 34	Female	Multirace	0.0	1.4	63.2
30 to 34	Male	Asian	75.6	76.6	69.1
30 to 34	Male	Black/African American	96.8	105.5	102.0
30 to 34	Male	Hispanic	60.1	62.2	57.6
30 to 34	Male	Native American	132.5	139.3	103.2
30 to 34	Male	Pacific Islander	115.6	121.9	102.6
30 to 34	Male	White	65.1	72.0	68.7
30 to 34	Male	Multirace	0.0	0.8	49.4

Table 18 *(continued)*

Age	Gender	Ethnicity	2007-2008	2008-2009	2009-2010
35 to 39	Female	Asian	81.2	78.3	68.2
35 to 39	Female	Black/African American	108.0	108.7	98.6
35 to 39	Female	Hispanic	61.2	60.4	54.7
35 to 39	Female	Native American	118.4	115.8	81.2
35 to 39	Female	Pacific Islander	88.0	98.9	72.3
35 to 39	Female	White	54.4	54.9	48.2
35 to 39	Female	Multirace	0.0	1.1	38.8
35 to 39	Male	Asian	52.5	52.1	45.6
35 to 39	Male	Black/African American	76.4	82.8	78.1
35 to 39	Male	Hispanic	41.5	43.0	38.8
35 to 39	Male	Native American	94.6	101.8	72.0
35 to 39	Male	Pacific Islander	89.9	93.7	79.0
35 to 39	Male	White	46.4	48.8	43.8
35 to 39	Male	Multirace	0.0	0.6	27.6
40 to 49	Female	Asian	62.4	61.0	52.2
40 to 49	Female	Black/African American	83.1	82.7	75.7
40 to 49	Female	Hispanic	48.3	47.5	42.0
40 to 49	Female	Native American	84.9	83.1	65.8
40 to 49	Female	Pacific Islander	69.2	74.4	56.7
40 to 49	Female	White	46.0	45.6	39.5
40 to 49	Female	Multirace	0.0	0.7	25.6
40 to 49	Male	Asian	36.8	36.3	32.0
40 to 49	Male	Black/African American	57.6	61.5	58.3
40 to 49	Male	Hispanic	30.6	30.2	27.4
40 to 49	Male	Native American	71.4	74.8	55.4
40 to 49	Male	Pacific Islander	61.6	66.3	55.2
40 to 49	Male	White	32.8	33.9	30.6
40 to 49	Male	Multirace	0.0	0.5	16.3

Table 18 *(continued)*

Age	Gender	Ethnicity	2007-2008	2008-2009	2009-2010
50 to 65	Female	Asian	40.6	40.0	33.8
50 to 65	Female	Black/African American	47.2	46.9	42.5
50 to 65	Female	Hispanic	30.0	28.9	25.0
50 to 65	Female	Native American	58.3	53.4	38.0
50 to 65	Female	Pacific Islander	41.6	46.5	35.1
50 to 65	Female	White	36.3	35.5	29.1
50 to 65	Female	Multirace	0.0	0.6	12.8
50 to 65	Male	Asian	25.4	25.1	22.0
50 to 65	Male	Black/African American	35.0	35.7	32.4
50 to 65	Male	Hispanic	18.8	18.6	16.9
50 to 65	Male	Native American	44.0	43.2	30.9
50 to 65	Male	Pacific Islander	33.4	33.3	27.0
50 to 65	Male	White	22.6	22.2	18.6
50 to 65	Male	Multirace	0.0	0.1	8.2

Results:

Table 18: For an explanation of population rates exceeding 1,000, see the Introduction to the Systemwide Indicators. For methodology and data source, see Appendix B.

ARCC 2011 Report:
An Introduction to the College Level Indicators

The Accountability Reporting for the Community Colleges (ARCC) framework specifies that community college performance data should be aggregated, analyzed, and reported at two levels: the individual college level (college level indicators) and across the community college system (systemwide indicators).

The following section of the 2011 ARCC report presents results for the performance indicators chosen for **college level** accountability reporting. Colleges and schools of continuing education are organized alphabetically (by college name). However, colleges that have "College of the…" in their titles will be found under "C."

Results for each college are presented in Tables 1.1 to 1.11. The methodology for performance indicators and college profile demographics is found in Appendix B. Tables 1.1 to 1.11 are organized under three main categories: College Performance Indicators, College Profiles, and College Peer Groups.

As in the previous year, we extracted demographic data for the college profiles from the Chancellor's Office Data Mart. Therefore, the labels for Table 1.10 match the Data Mart's labels.

College Performance Indicators are further categorized as Degree/Certificate/Transfer, Vocational/Occupational/Workforce Development, and Pre-Collegiate Improvement (Basic Skills, ESL, and Career Development and College Preparation).

The tables present the following data for each college:

1. Student Progress and Achievement Rate
2. Percent of Students Who Earned at Least 30 Units
3. Persistence Rate
4. Annual Successful Course Completion Rate for Credit Vocational Courses
5. Annual Successful Course Completion Rate for Credit Basic Skills Courses
6. Improvement Rates for Credit ESL Courses
7. Improvement Rates for Credit Basic Skills Courses
8. Career Development and College Preparation Progress and Achievement Rate

9. College profile summaries, (e.g., headcounts, percentages of student enrollments by various demographics) obtained from the CCCCO Data Mart.
10. Summary of the college's peer groups for each indicator

This college level section includes data for each of the colleges in the system at the time of this report, although data for some earlier time periods may be missing for the newer colleges. Most of the college level tables include data for the most recent academic years; however, the time periods may differ for a few of the indicators. Thus, it is important to note the years specified in the titles or column headings for the tables.

Because analysts of state level policy often need to know how the entire system has performed on specific indicators, we report the total system rates on the ARCC college level indicators in the table below.

College Level Performance Indicator	State Rate
1. Student Progress & Achievement (2004-05 to 2009-10)	53.6%
2. Completed 30 or More Units (2004-05 to 2009-10)	72.8%
3. Fall to Fall Persistence (Fall 2008 to Fall 2009)	67.6%
4. Vocational Course Completion (2009–10)	77.0%
5. Basic Skills Course Completion (2009-10)	61.4%
6. ESL Course Improvement (2007-08 to 2009-10)	54.6%
7. Basic Skills Course Improvement (2007-08 to 2009-10)	58.6%

The rates in this table use the total number of students in the state that qualified for a specific cohort as the denominator. The numerator likewise uses the total number of outcomes in the state. Analysts should avoid using the rates in this table to evaluate the performance of an individual college because these overall rates ignore the local contexts that differentiate the community colleges. Evaluation of individual college performance should focus upon the college level information that appears on the separate pages that follow. On those pages, Tables 1.1 to 1.11 for each college explicitly enable analysts to evaluate a college in an equitable manner.

A Note About The Career Development and College Preparation Progress and Achievement Rate (CDCP)

The Career Development and College Preparation Progress and Achievement Rate (Table 1.6) was added to the ARCC report in 2008 as a result of legislation (SB 361, Scott, Chapter 631, Statutes of 2006) that increased funding for specific noncredit courses (see Appendix F).

As of this report, we have partial or complete CDCP data for 37 community colleges/schools of continuing education. See Appendix B for a description of the methodology used to obtain data and calculate progress rates for the CDCP indicator and a list of the colleges with CDCP data available for this report.

Given that the CDCP data collection is still in its early stages, there will be no peer grouping for this indicator in the 2011 ARCC. However, colleges with CDCP funding should consider CDCP performance when they prepare their self-assessments for the final ARCC report.

Adding the CDCP Progress and Achievement Rate to the ARCC report also meant adding CDCP performance data and demographic data for schools of continuing education (e.g., Marin Community Education, San Francisco Continuing Education, San Diego Continuing Education, etc.). Because they do not offer programs measured by the other ARCC indicators, Tables 1.1 through 1.5 and Table 1.11 are marked with "NA" (Not Applicable) for schools of continuing education. We have included demographic data for these schools, where available, in Tables 1.7 through 1.10.

A Note About Peer Groups in the 2011 ARCC Report

The 2011 ARCC report uses the same peer groups identified for the 2009 and 2010 ARCC reports. That is, unlike the first three ARCC reports, the 2011 report has omitted the *cluster analysis* step that used the most recent data available to identify and cluster new peer institutions for each performance indicator. The Chancellor's Office has decided to stabilize the peer groups by continuing to foregoe new peer group formation for this year's ARCC report. Table 1.11 in the 2011 ARCC report retains the peer groups identified for the 2010 report. **However, the data in columns 3 through 6 of Table 1.11 have been updated to reflect the most recent performance data for the members of each peer group.**

The peer group comparison for basic skills improvement, as shown in the 2011 ARCC report, appears with the following special warning. The Chancellor's Office notes that the peer groups for this performance indicator will probably change substantially the next time that the Chancellor's Office calculates the peer groupings, and college administrators presenting to their trustees may choose to note the tentative nature of the peer group comparison for basic skills improvement in the 2011 ARCC report.

A complete explanation of this year's strategy can be found in the Introduction to Appendix A.

Southwestern College

Southwestern Community College District

College Performance Indicators

Student Progress and Achievement: Degree/Certificate/Transfer

Table 1.1: Student Progress and Achievement Rate

Percentage of first-time students who showed intent to complete and who achieved any of the following outcomes within six years: Transferred to a four-year college; or earned an AA/AS; or earned a Certificate (18 units or more); or achieved "Transfer Directed" status; or achieved "Transfer Prepared" status. (See explanation in Appendix B.)

	2002-2003 to 2007-2008	2003-2004 to 2008-2009	2004-2005 to 2009-2010
Student Progress and Achievement Rate	49.6%	49.4%	51.6%

Table 1.1a: Percent of Students Who Earned at Least 30 Units

Percentage of first-time students who showed intent to complete and who earned at least 30 units while in the California Community College System. (See explanation in Appendix B.)

	2002-2003 to 2007-2008	2003-2004 to 2008-2009	2004-2005 to 2009-2010
Percent of Students Who Earned at Least 30 Units	75.1%	75.2%	74.8%

Table 1.2: Persistence Rate

Percentage of first-time students with a minimum of six units earned in a Fall term and who returned and enrolled in the subsequent Fall term anywhere in the system. (See explanation in Appendix B.)

	Fall 2006 to Fall 2007	Fall 2007 to Fall 2008	Fall 2008 to Fall 2009
Persistence Rate	70.3%	69.0%	74.3%

Southwestern College

Southwestern Community College District

College Performance Indicators

Student Progress and Achievement: Vocational/Occupational/Workforce Development

Table 1.3: Annual Successful Course Completion Rate for Credit Vocational Courses

See explanation in Appendix B.

	2007-2008	2008-2009	2009-2010
Annual Successful Course Completion Rate for Vocational Courses	73.6%	77.8%	74.6%

Pre-Collegiate Improvement: Basic Skills, ESL, and Enhanced Noncredit

Table 1.4: Annual Successful Course Completion Rate for Credit Basic Skills Courses

See explanation in Appendix B.

	2007-2008	2008-2009	2009-2010
Annual Successful Course Completion Rate for Basic Skills Courses	55.0%	61.7%	59.4%

Table 1.5: Improvement Rates for ESL and Credit Basic Skills Courses

See explanation in Appendix B.

	2005-2006 to 2007-2008	2006-2007 to 2008-2009	2007-2008 to 2009-2010
ESL Improvement Rate	55.9%	58.4%	52.2%
Basic Skills Improvement Rate	43.0%	46.7%	48.9%

Table 1.6: Career Development and College Preparation (CDCP) Progress and Achievement Rate

See explanation in Appendix B.

	2005-2006 to 2007-2008	2006-2007 to 2008-2009	2007-2008 to 2009-2010
CDCP Progress and Achievement Rate	8.7%	10.2%	11.3%

Southwestern College

Southwestern Community College District

College Profile

Table 1.7:
Annual Unduplicated Headcount and Full-Time Equivalent Students (FTES)

	2007-2008	2008-2009	2009-2010
Annual Unduplicated Headcount	32,030	29,620	30,478
Full-Time Equivalent Students (FTES)*	15,829	16,178	16,107

Source: The annual unduplicated headcount data are produced by the Chancellor's Office, Management Information System. The FTES data are produced from the Chancellor's Office, Fiscal Services 320 Report.

*FTES data for 2007-2008 and 2008-2009 are based on the FTES recalculation. FTES data for 2009-2010 are based on the FTES annual data.

Table 1.8:
Age of Students at Enrollment

	2007-2008	2008-2009	2009-2010
19 or less	30.1%	29.5%	31.5%
20 - 24	29.8%	31.2%	31.8%
25 - 49	31.7%	31.1%	30.2%
Over 49	8.5%	8.2%	6.5%
Unknown	0.0%	.%	0.0%

Source: Chancellor's Office, Management Information System

Table 1.9:
Gender of Students

	2007-2008	2008-2009	2009-2010
Female	57.3%	56.7%	54.5%
Male	42.7%	43.3%	45.4%
Unknown	0.0%	0.0%	0.1%

Source: Chancellor's Office, Management Information System

Southwestern College

Southwestern Community College District

College Profile

Table 1.10:
Ethnicity of Students

	2007-2008	2008-2009	2009-2010
African American	5.5%	5.2%	5.2%
American Indian/Alaskan Native	0.5%	0.5%	0.6%
Asian	2.7%	2.7%	2.8%
Filipino	12.2%	11.5%	11.1%
Hispanic	57.6%	60.3%	59.4%
Pacific Islander	1.0%	0.9%	1.0%
Two or More Races	.%	.%	.%
Unknown/Non-Respondent	5.3%	5.4%	6.4%
White Non-Hispanic	15.2%	13.5%	13.6%

Source: Chancellor's Office, Management Information System

Southwestern College

Southwestern Community College District

College Peer Grouping

Table 1.11: Peer Grouping

	Indicator	College's Rate	Peer Group Average	Peer Group Low	Peer Group High	Peer Group
A	Student Progress and Achievement Rate	51.6	46.8	36.2	51.6	*A3*
B	Percent of Students Who Earned at Least 30 Units	74.8	72.4	57.8	80.3	*B2*
C	Persistence Rate	74.3	70.8	56.2	79.2	*C3*
D	Annual Successful Course Completion Rate for Credit Vocational Courses	74.6	73.8	63.7	80.8	*D2*
E	Annual Successful Course Completion Rate for Credit Basic Skills Courses	59.4	64.4	57.6	80.7	*E3*
F	Improvement Rate for Credit Basic Skills Courses	48.9	57.6	39.5	76.0	*F2*
G	Improvement Rate for Credit ESL Courses	52.2	58.7	48.9	69.2	*G5*

Note: Please refer to Appendices A and B for more information on these rates. The technical details of the peer grouping process are available in Appendix D.

Southwestern College

Southwestern Community College District

College Self-Assessment

Southwestern College (SWC) has served the educational needs of the South Bay in San Diego county region for 50 years. The college's educational program includes lower-division course work, vocational courses, and occupational programs designed to prepare students for entry into the workforce.

The college continues to improve its services for the immediate communities. Many facility projects have been completed and new buildings will be added in the next few years. A new Sustainable Energy Studies curriculum was recently approved as the college positions itself for the evolving green economy.

Combined efforts in both instructional and student services have resulted in a steady increase in student retention and progress rate. Improvement is also evident in the student persistence rate. Compared to its peer institutions, Southwestern College was the group high.

The college's completion rate for vocational courses has remained relatively stable. Above the peer group average, the college places in the top third of this peer group metric. Efforts underway to improve the success rate include integrating basic skills throughout the vocational curriculum, coordinating with local high schools to get the students engaged earlier in the program, and coordinating with employers to encourage their employees to complete courses taken.

The successful course completion rate in credit basic skills courses also remains relatively stable. The improvement rate for ESL courses has decreased; however, it is higher than the metric for our credit basic skills improvement rate. A follow up by the college to discern credit basic skills improvement rates with the disciplines within this aggregate -- to include, ESL, Reading, Math, and English will be in order. This can provide information on the improvement rates for each and appropriate follow up.

A partial explanation for the change in the ESL improvement rate may be the redesign to this program. Adherence to recommended levels as reflected in student placement assessment scores was not required. Hard prerequisites and corequisites have since been written into the new curriculum of the new ESL courses. As such, students who moved from the old program to the new may not have shown improvement, especially those who were placed in lower levels within the new program. An analysis of data over the next few years will help to determine if the new curriculum will have an impact on increased student success.

SWC is pleased with the improvements made in its programs and services, but recognizes that focused efforts are needed to improve credit basic skills development and help under-prepared students succeed in higher education. These efforts should result in improved performance indicators in the areas that are below the peer group average.

Appendix A: Peer Groups

Introduction

The 2011 ARCC report uses the same peer groups that appeared in the 2010 and 2009 ARCC reports. That is, unlike the initial ARCC reports, the 2011 report has omitted the *cluster analysis* step that used the most recent data available to identify peer institutions by each performance indicator. The Chancellor's Office has decided to maintain stability in the peer groups by foregoing new peer group formation for this year's ARCC report. For example, in Appendix A, the colleges in peer group A1 will be exactly the same colleges for the 2009, 2010, and 2011 reports.

There are several reasons why the Chancellor's Office has retained the 2010 peer groupings for the 2011 report. An analysis by the Chancellor's Office indicates that the data related to each performance indicator reflect considerable changes, presumably from re-submission and recoding of data by colleges to remedy past shortcomings. When substantial changes in data arose, the peer grouping analysis of prior ARCC reports would use statistical analyses to adjust the peer groups to match the new data. The instability of these peer groups for some institutions has meant that some colleges have faced a "moving target" in terms of performance evaluation. Some colleges that experienced year-to-year shifts in their peer groups noted that the shifts complicated their local analyses and planning processes. The change in peer institutions could produce an above-average performance one year but a below-average performance the next year even though the performance of the college on a specific indicator had not changed that much over the two years. In order to minimize this problem of the "moving target" with unstable peer groups, the Chancellor's Office has stabilized the peer groups by retaining the 2009/2010 report peer groupings for the 2011 report.

The Chancellor's Office will still need to update the peer groupings in either the 2012 report or the 2013 report despite the importance of providing stability in the peer groupings. Such updating will probably occur to capture two events that we expect to substantially influence the statistical models behind the peer groupings. The first event is the completion of the statewide effort by the State Academic Senate to standardize the coding of the course-type variable known as "course prior to college level" (data element CB21). This standardization process is expected to alter the data for some performance indicators, and this in turn could result in a new set of environmental factors that ARCC will use to form peer groups for some performance indicators. We note that the effort to upgrade the CB21 element included changes in TOP codes (taxonomy of programs), and these additional changes in the data can also trigger shifts for peer groups and for specific college performance in the affected time period. A second event that will justify peer group updating will be the release of new data from the U.S. Census. Because ARCC peer grouping models use U.S. Census data for a number of important environmental factors, the Chancellor's Office will take advantage of the new Census data to update its environmental factors.

Appendix A: Peer Groups

Because the Chancellor's Office values equity in between-college comparisons, the Chancellor's Office will continue to work on this important element of the ARCC report. We will continue to test for improvements in peer grouping methodology and to use the most appropriate data that are available.

The following paragraphs of this appendix describe the composition of the peer groups that the main report cites in the college level analysis (Table 1.11: Peer Grouping). There is one table for each of the seven performance indicators (excluding the CDCP indicator). For information about the peer grouping methodology, we refer readers to Appendix D, which gives the essential statistical specifications for the ARCC peer grouping. For information about the analysis that preceded and supported the peer grouping process, we refer readers to Appendix C, which documents the regression analyses that the Chancellor's Office research staff used for the 2009 ARCC report.

Appendix A should help readers by presenting them with four types of information. The first type of information is the average value for each of the uncontrollable factors (labeled as "Means of Predictors") that theoretically influence a given performance indicator in the ARCC. We show these averages for each peer group in the second, third, and fourth columns (reading from the left) of each of the seven tables in this appendix. These data have not changed from ARCC 2010 to ARCC 2011.

The second type of information is the basic statistical summary of the performance indicator (the lowest rate, the highest rate, and the average rate) within each peer group. These figures appear in the three columns to the right of the shaded vertical border in each table. In the 2011 report, we have updated these figures to reflect the latest ARCC performance data for each peer group.

The third type of information concerns the composition of each peer group. The two rightmost columns of each table display the number of colleges within each peer group as well as the names of the colleges within each peer group. These data remain the same as in the 2010 ARCC report.

Finally, the fourth type of data is the state level figure for each of the uncontrollable factors and performance indicators. These state level figures appear in the last row of each of the tables in this appendix. Each statewide average in the last row is calculated as the sum of individual college values for that predictor or for that performance indicator (as specified by the column heading) divided by the number of colleges for which data were available for that predictor or performance indicator. For example, looking at Table A4, the statewide average for the predictor "Pct Male Fall 2007" is the sum of the percentage of males at each college in Fall 2007 divided by 110, where 110 represents the number of colleges for which those data were available. Similarly, the statewide average for Vocational Course Completion Rate in Table A4 is the sum of the Vocational Course Completion Rate for each college divided by the 110 colleges for which this rate was available. For the 2011 report, only the statewide average for the performance indicator

Appendix A: Peer Groups

(e.g., Vocational Course Completion Rate in Table A4) has changed. Statewide averages for the predictors have not changed from 2010.

We follow the approach described above primarily to facilitate any local efforts to compare peer group performances in the 2010 ARCC report to those in the 2011 edition.

The statewide averages reported in Appendix A differ from the system averages that we present in the Introduction to the College Level Indicators because the averages in the Introduction use student-level data rather than college-level data. For reporting how the system has performed on an indicator, analysts should use the system averages that appear in the Introduction to the College Level Indicators. For comparing how a peer group has done with respect to all of the colleges in the state, analysts should use the statewide averages that appear in Appendix A.

Users of this report may use these four types of information to help them establish a context for interpreting the peer group results in the main body of the report. The information about the uncontrollable factors, the performance indicators, and the peer group composition allows the user to weigh these different aspects of the peer grouping as they try to evaluate college performances.

Finally, we note some specific details for clarity's sake. The leftmost column of each table displays codes such as "A1" or "E5." These codes signify only a different peer group for each performance indicator. The letter in the code (A through G) denotes the specific performance indicator, and the number in the code (1 through 6) denotes a specific group of colleges for a specific performance indicator. Users should avoid attaching any further meaning to these codes. That is, the colleges in group "A1" are not higher or better than the colleges in group "A2" (and vice versa). For the 2011 report, the codes are comparable to those in the 2010 ARCC report because we have not conducted any new peer grouping. However, this is not necessarily the case for other previous reports. For example, group "B4" in this report differs from group "B4" in the 2008 ARCC report. We used this coding convention to facilitate the cross-referencing of results in the main report's college pages to this appendix and nothing more.

Users should also remember that the composition of each peer group resulted only from our statistical analysis of the available uncontrollable factors related to each outcome. Therefore, the peer groupings may list some colleges as peers when we customarily would consider them as quite dissimilar. For example, we often consider geographic location and level of population density as factors that distinguish colleges as different (or similar). So, in Table A1 users may note that our peer grouping for Student Progress

Appendix A: Peer Groups

and Achievement classifies Shasta as a peer for San Jose City, and this tends to clash with our knowledge of the high density setting of the Bay Area and the rural northern California setting of Shasta. However, population density and geographic location within the state are not predictors of this outcome in our statistical analyses (see Appendix C). Furthermore, our historical perception of similar colleges tends to rely upon many controllable factors (which we do not consider in our peer grouping procedure), and this perception can also make the reported peer groups seem counter-intuitive.

For some performance indicators, a few colleges will lack a peer group. This is indicated by missing values in Table 1.11. Also, for some colleges, there may be a peer group but no figure for a particular indicator. Both situations occurred in the ARCC peer grouping analysis as a result of insufficient data at the time of analysis. Naturally, some of these situations relate to newly established colleges that lack the operating history to produce sufficient data for the ARCC analyses.

Appendix A: Peer Groups

Table A1: Student Progress & Achievement: Degree/Certificate/Transfer

Student Progress and Achievement Rate Peer Group

	Means of Predictors				Student Progress and Achievement Rate*			Peer Group Colleges
Peer Group Number	Pct Students Age 25+ Fall 2005	Pct Basic Skills Fall 2005	Bachelor Plus Index	Lowest Peer	Highest Peer	Average	Number of Peers	Colleges in the Peer Group
A1	42%	15%	0.19	43.0	58.0	49.4	35	Antelope Valley; Bakersfield; Butte; Cerritos; Chaffey; Citrus; Contra Costa; Cosumnes River; Cuyamaca; Cypress; East L. A.; El Camino; Evergreen Valley; Fresno City; L.A. Harbor; L.A. Mission; L.A. Valley; Long Beach City; Los Medanos; Modesto; Mt. San Antonio; Mt. San Jacinto; Oxnard; Porterville; Reedley; Riverside; San Joaquin Delta; San Jose City; Santiago Canyon; Sequoias, Shasta; Solano; Victor Valley; West Hills Coalinga; Yuba.
A2	36%	10%	0.30	48.0	72.8	60.7	19	Crafton Hills; Cuesta; De Anza; Diablo Valley; Fullerton; Golden West; Grossmont; L.A. Pierce; Las Positas; Moorpark; Orange Coast; Pasadena City; Sacramento City; San Diego Mesa; Santa Barbara City; Santa Monica City; Sierra; Skyline; Ventura.
A3	44%	31%	0.18	36.2	51.6	46.8	7	Chabot; Copper Mountain; Desert; Gavilan; Imperial Valley; Redwoods; Southwestern.
A4	53%	11%	0.34	44.3	66.1	56.8	23	Alameda; American River; Berkeley City College; Cabrillo; Canyons; Foothill; Glendale; Irvine Valley; Laney; Marin; Merritt; MiraCosta; Monterey; Ohlone; Palomar; Saddleback; San Diego City; San Diego Miramar; San Francisco City; San Mateo; Santa Rosa; West L.A.; West Valley.
A5	62%	9%	0.18	37.8	69.0	48.7	15	Allan Hancock; Barstow; Cerro Coso; Coastline; Columbia; Feather River; Hartnell; Lake Tahoe; Lassen; Mendocino; Napa Valley; Palo Verde; Santa Bernardino; Siskiyous; Taft.
A6	57%	23%	0.20	30.3	57.3	43.9	9	Canada; Compton; L.A. City; L.A. Trade-Tech; Merced; Mission; Rio Hondo; Santa Ana; Southwest L.A.
Statewide Average	**47%**	**14%**	**0.24**			**52.2**	**N = 108**	

*** Student Progress and Achievement Rates reported for 2004-05 to 2009-10**

Appendix A: Peer Groups
Table A2: Student Progress & Achievement: Degree/Certificate/Transfer
Students Who Earned at Least 30 Units Rate Peer Group

	Means of Predictors				Students Who Earned at Least 30 Units Rate*			Peer Group Colleges
Peer Group Number	Student Count Fall 2005	Average Unit Load Fall 2004	ESAI Per Capita Income	Lowest Peer	Highest Peer	Average	Number of Peers	Colleges in the Peer Group
B1	8,212	7.2	$22,057	57.8	80.0	70.2	32	Alameda; Allan Hancock; Barstow; Berkeley City College; Cerro Coso; Columbia; Contra Costa; Cuyamaca; Evergreen Valley; Gavilan; Hartnell; Irvine Valley; L.A. Mission; Laney; Las Positas; Lassen; Los Medanos; Mendocino; Merritt; Mission; Monterey; Napa Valley; Ohlone; Oxnard; San Diego City; San Diego Miramar; San Jose City; Santiago Canyon; Siskiyous; Skyline; Southwest L.A.; West L.A
B2	15,849	8.4	$19,869	57.8	80.3	72.4	38	Antelope Valley; Bakersfield; Cabrillo; Canyons; Cerritos; Chabot; Chaffey; Citrus; Cosumnes River; Cuesta; Cypress; Desert; East L.A.; Fresno City; Fullerton; Glendale; Golden West; Grossmont; L.A. City; L.A. Harbor; L.A. Pierce; L.A. Trade-Tech; L.A. Valley; Merced; Mira Costa; Modesto; Mt. San Jacinto; Reedley; Rio Hondo; San Bernardino; San Diego Mesa; San Joaquin Delta; Santa Barbara City; Sierra; Solano; Southwestern; Ventura; Victor Valley
B3	6,763	9.2	$15,728	56.3	76.4	69.2	12	Butte; Compton; Copper Mountain; Crafton Hills; Feather River; Imperial Valley; Porterville; Redwoods; Sequoias; Shasta; West Hills Coalinga; Yuba
B4	26,521	8.1	$24,895	69.4	83.8	75.1	17	American River; De Anza; Diablo Valley; El Camino; Long Beach City; Moorpark; Mt. San Antonio; Orange Coast; Palomar; Pasadena City; Riverside; Sacramento City; Saddleback; San Francisco City; Santa Ana; Santa Monica City; Santa Rosa
B5	6,609	4.7	$20,031	63.9	72.4	68.3	4	Coastline; Lake Tahoe; Palo Verde; Taft
B6	10,758	7.2	$37,321	70.4	80.5	74.9	5	Canada; Foothill; Marin; San Mateo; West Valley.
Statewide Average	**13,613**	**7.9**	**$21,662**			**71.8**	**N = 108**	

*** Students Who Earned at Least 30 Units Rates reported for 2004-05 to 2009-10**

Appendix A: Peer Groups
Table A3: Student Progress & Achievement: Degree/Certificate/Transfer Persistence Rate Peer Group

	Means of Predictors				Persistence Rate*			Peer Group Colleges	
Peer Group Number	Pct Students Age 25+ Fall 2006	Student Count Fall 2006	ESAI Household Income	Low est Peer	Highest Peer	Average	Number of Peers	Colleges in the Peer Group
C1	54%	7,534	$37,027	47.7	74.3	61.0	22	Alameda; Allan Hancock; Barstow; Columbia; Compton; Contra Costa; Copper Mountain; Cuyamaca; Feather River; Hartnell; L.A. City; L.A. Trade-Tech; Laney; Lassen; Mendocino; Merced; Porterville; Redwoods; San Bernardino; Siskiyous; Southwest L.A.; West L.A.
C2	48%	31,304	$49,184	52.7	80.8	70.7	9	American River; Mt. San Antonio; Palomar; Pasadena City; Riverside; San Francisco City; Santa Ana; Santa Monica City; Santa Rosa
C3	40%	20,026	$44,891	56.2	79.2	70.8	24	Antelope Valley; Bakersfield; Cerritos; Chaffey; East L.A.; El Camino; Fresno City; Fullerton; Glendale; Grossmont; L.A. Pierce; L.A. Valley; Long Beach City; Modesto; Mt. San Jacinto; Orange Coast; Rio Hondo; Sacramento City; San Diego City; San Diego Mesa; San Joaquin Delta; Santa Barbara City; Sierra; Southwestern
C4	69%	7,589	$44,878	29.3	75.6	56.0	9	Berkeley City College; Cerro Coso; Coastline; Lake Tahoe; Merritt; Monterey; Napa Valley; Palo Verde; Taft
C5	41%	10,547	$45,974	57.2	80.7	69.2	27	Butte; Cabrillo; Chabot; Citrus; Cosumnes River; Crafton Hills; Cuesta; Cypress; Desert; Golden West; Imperial Valley; L.A. Harbor; L.A. Mission; Los Medanos; Mira Costa; Oxnard; Reedley; San Diego Miramar; Santiago Canyon; Sequoias; Shasta; Skyline; Solano; Ventura; Victor Valley; West Hills Coalinga; Yuba
C6	48%	13,196	$69,469	59.6	80.1	73.1	17	Canada; Canyons; De Anza; Diablo Valley; Evergreen Valley; Foothill; Gavilan; Irvine Valley; Las Positas; Marin; Mission; Moorpark; Ohlone; Saddleback; San Jose City, San Mateo, West Valley
Statewide Average	**47%**	**13,788**	**$ 47,786**			**67.5**	**N = 108**	

*** Persistence Rates reported for Fall 2008 to Fall 2009**

Appendix A: Peer Groups

Table A4: Student Progress & Achievement: Vocational/Occupational/Workforce Development Vocational Course Completion Rate Peer Group

	Means of Predictors				Vocational Course Completion Rate*			Peer Group Colleges	
Peer Group Number	Pct Male Fall 2007	Pct Students Age 30+ Fall 2007	Miles to Nearest UC		Lowest Peer	Highest Peer	Average	Number of Peers	Colleges in the Peer Group
D1	40%	46%	43.2		59.7	89.8	73.8	27	Allan Hancock, Barstow, Berkeley City College, Canada, Cerro Coso, Coastline, Columbia, Contra Costa, Cuyamaca, Feather River, Gavilan, Irvine Valley, L.A. City, Lake Tahoe, Laney, Marin, Mendocino, Merced, Merritt, Mission, Monterey, Napa Valley, Saddleback, Santa Rosa, Southwest L.A., West L.A., West Valley
D2	42%	26%	30.5		63.7	80.8	73.8	41	Antelope Valley, Chaffey, Citrus, Compton, Copper Mountain, Crafton Hills, Cypress, De Anza, Desert, Diablo Valley, El Camino, Evergreen Valley, Folsom Lake, Fresno City, Fullerton, Glendale, Golden West, Grossmont, L.A. Harbor, L.A. Mission, L.A. Pierce, L.A. Valley, Los Medanos, Modesto, Moorpark, Mt. San Jacinto, Orange Coast, Oxnard, Pasadena City, Riverside, Sacramento City, San Diego City, San Diego Mesa, San Joaquin Delta, Santa Barbara City, Santa Monica City, Solano, Southwestern, Ventura, Victor Valley, Yuba
D3	40%	28%	122.7		70.4	81.2	74.9	10	Bakersfield, Butte, Coalinga, Cuesta, Imperial Valley, Lemoore, Porterville, Reedley, Sequoias, Shasta
D4	46%	34%	25.6		61.6	88.0	75.7	23	Alameda, American River, Cabrillo, Cerritos, Chabot, Cosumnes River, East L.A., Foothill, Hartnell, L.A. Trade-Tech, Las Positas, Long Beach City, Mira Costa, Mt. San Antonio, Ohlone, Palomar, San Bernardino, San Diego Miramar, San Francisco City, San Jose City, San Mateo, Sierra, Skyline
D5	45%	46%	240.3		79.4	80.9	80.4	3	Lassen, Redwoods, Siskiyous
D6	65%	47%	60.9		83.6	96.8	89.8	6	Canyons, Palo Verde, Rio Hondo, Santa Ana, Santiago Canyon, Taft
Statewide Average	**43%**	**34%**	**48.3**				**75.3**	**N = 110**	

*** Vocational Course Completion Rates reported for 2009-10.**

Appendix A: Peer Groups
Table A5: Pre-Collegiate Improvement: Basic Skills and ESL
Basic Skills Course Completion Rate Peer Group

	Means of Predictors			Basic Skills Course Completion Rate*			Peer Group Colleges	
Peer Group Number	Student Count Fall 2007	Nearest CSU SAT Math 75th Pctl. 2007	Poverty Index	Lowest Peer	Highest Peer	Average	Number of Peers	Colleges in the Peer Group
E1	11630	569.2	0.09	49.6	72.8	63.0	36	Allan Hancock, Cabrillo, Canada, Chabot, Citrus, Coastline, Contra Costa, Cosumnes River, Cuesta, Cuyamaca, Cypress, Evergreen Valley, Gavilan, Golden West, Grossmont, Hartnell, Irvine Valley, Las Positas, Los Medanos, Marin, Mira Costa, Mission, Monterey, Moorpark, Napa Valley, Ohlone, Oxnard, San Diego Miramar, San Jose City, San Mateo, Santiago Canyon, Shasta, Skyline, Solano, Ventura, West Valley
E2	15283	545.9	0.20	45.4	71.2	59.9	17	Bakersfield, Butte, Coalinga, Fresno City, Imperial Valley, L.A. City, L.A. Trade-Tech, L.A. Valley, Long Beach City, Merced, Porterville, Reedley, Sacramento City, San Diego City, San Joaquin Delta, Sequoias, Taft
E3	26210	563.8	0.09	57.6	80.7	64.4	16	American River, Canyons, De Anza, Diablo Valley Foothill, Fullerton, Mt. San Antonio, Orange Coast Palomar, Saddleback, San Diego Mesa San Francisco City, Santa Ana, Santa Rosa Sierra, Southwestern
E4	6571	537.7	0.15	41.8	71.4	56.5	22	Alameda, Antelope Valley, Barstow, Berkeley City College, Cerro Coso, Columbia, Copper Mountain, Crafton Hills, Desert, Feather River, L.A. Mission, Lake Tahoe, Laney, Lassen, Mendocino, Merritt, Palo Verde, Redwoods, San Bernardino, Siskiyous, Victor Valley, Yuba
E5	23893	503.8	0.15	51.2	66.4	61.5	13	Cerritos, Chaffey, East L.A., El Camino, Glendale, L.A. Pierce, Modesto, Mt. San Jacinto, Pasadena City, Rio Hondo, Riverside, Santa Barbara City, Santa Monica City
E6	7707	450.0	0.22	46.4	54.4	49.1	4	Compton, L.A. Harbor, Southwest L.A., West L.A.
Statewide Average	**14512**	**546.1**	**0.13**			**60.7**	**N = 108**	

*** Basic Skills Course Completion Rates reported for 2009-10**

Appendix A: Peer Groups

Table A6: Pre-Collegiate Improvement: Basic Skills and ESL

Basic Skills Improvement Rate Peer Group

	Means of Predictors			Basic Skills Improvement Rate*			Peer Group Colleges	
Peer Group Number	Pct. on Financial Aid Fall 2006	Avg Unit Load Fall 2006	Selectivity of Nearest 4-Year 2006	Lowest Peer	Highest Peer	Average	Number of Peers	Colleges in the Peer Group
F1	8.5%	7.6	28.5	30.3	67.4	52.5	25	Alameda, Allan Hancock, American River, Berkeley City College, Cerritos, Chabot, Compton, Contra Costa, Cuesta, Cuyamaca, Diablo Valley, El Camino, Folsom Lake, L.A. Harbor, Laney, Los Medanos, Merritt, Ohlone, San Diego City, San Diego Mesa, San Diego Miramar, Santa Monica City, Southwest L.A., Ventura, West L.A.
F2	9.0%	8.4	62.0	39.5	76.0	57.6	47	Antelope Valley, Bakersfield, Barstow, Cabrillo, Canyons, Chaffey, Citrus, Columbia, Cosumnes River, Crafton Hills, Cypress, De Anza, Desert, Evergreen Valley, Fullerton, Gavilan, Golden West, Grossmont, L.A. City, L.A. Mission, L.A. Pierce, L.A. Valley, Las Positas, Lassen, Long Beach City, Mira Costa, Modesto, Moorpark, Mt. San Antonio, Mt. San Jacinto, Napa Valley, Orange Coast, Oxnard, Palo Verde, Palomar, Pasadena City, Riverside, Sacramento City, Saddleback, San Bernardino, San Francisco City, San Jose City, Santa Barbara City, Shasta, Sierra, Solano, Southwestern
F3	28.7%	12.4	43.9	59.2	59.2	59.2	1	Imperial Valley
F4	18.4%	8.9	67.1	48.1	62.8	55.2	15	Butte, Coalinga, Copper Mountain, Feather River, Fresno City, Glendale, Merced, Porterville, Redwoods, Reedley, San Joaquin Delta, Sequoias, Siskiyous, Victor Valley, Yuba
F5	6.5%	6.9	63.3	42.5	67.0	57.3	17	Canada, Cerro Coso, East L.A., Foothill, Hartnell, Irvine Valley, L.A. Trade-Tech, Marin, Mendocino, Mission, Monterey, Rio Hondo, San Mateo, Santa Rosa, Santiago Canyon, Skyline, West Valley
F6	3.7%	4.1	56.9	46.3	60.4	53.9	4	Coastline, Lake Tahoe, Santa Ana, Taft
Statewide Average	**9.8%**	**7.9**	**54.9**			**55.9**	**N = 109**	

*** Basic Skills Improvement Rates reported for 2007-08 to 2009-10**

Appendix A: Peer Groups
Table A7: Pre-Collegiate Improvement: Basic Skills and ESL
ESL Improvement Rate Peer Group

	Means of Predictors			ESL Improvement Rate*			Peer Group Colleges	
Peer Group Number	Student Count Fall 2006	Pct Students Age 30+ Fall 2006	English Not Spoken Well Index	Lowest Peer	Highest Peer	Average	Number of Peers	Colleges in the Peer Group
G1	7414.2	49.2%	0.07	0.0	67.2	43.0	25	Allan Hancock, Barstow, Berkeley City College, Canada, Cerro Coso, Coastline, Columbia, Contra Costa, Cuyamaca, Feather River, Gavilan, Irvine Valley, Lake Tahoe, Laney, Lassen, Marin, Mendocino, Merritt, Mission, Monterey, Napa Valley, Palo Verde, Siskiyous, Taft, West Valley
G2	11213.9	30.2%	0.06	9.6	83.3	49.4	29	Alameda, Antelope Valley, Butte, Cabrillo, Chabot, Copper Mountain, Cosumnes River, Crafton Hills, Cuesta, Diablo Valley, Grossmont, Las Positas, Los Medanos, Mira Costa, Moorpark, Mt. San Jacinto, Ohlone, Oxnard, Redwoods, San Bernardino, San Diego Miramar, San Mateo, Shasta, Sierra, Skyline, Solano, Ventura, Victor Valley, Yuba
G3	10769.8	31.5%	0.17	20.0	77.1	52.6	22	Citrus,Coalinga, Compton, Cypress, Desert, Evergreen Valley, Glendale, Golden West, Hartnell, Imperial Valley, L.A. Harbor, L.A. Mission, L.A. Valley, Merced, Porterville, Reedley, Rio Hondo, San Jose City, Santiago Canyon, Sequoias, Southwest L.A., West L.A.
G4	27182.8	42.2%	0.09	30.5	66.6	51.7	8	American River,Canyons, Foothill, Palomar, Saddleback, San Francisco City, Santa Ana, Santa Rosa
G5	22833.0	25.5%	0.12	48.9	69.2	58.7	21	Bakersfield, Cerritos, Chaffey, De Anza, El Camino, Fresno City, Fullerton, L.A. Pierce, Long Beach City, Modesto, Mt. San Antonio, Orange Coast, Pasadena City, Riverside, Sacramento City, San Diego City, San Diego Mesa, San Joaquin Delta, Santa Barbara City, Santa Monica City, Southwestern
G6	20357.0	40.8%	0.27	25.9	64.8	48.8	3	East L.A., L.A. City, L.A. Trade-Tech
Statewide Average	**13788.3**	**35.1%**	**0.10**			**50.8**	**N = 108**	

***ESL Improvement Rates reported for 2007-08 to 2009-10**

Appendix D: Peer Grouping Methodology

Introduction

This appendix documents the technical details of the peer grouping method used in the ARCC. Researchers and individuals with some background in statistical analysis will probably have little trouble understanding this material. We also assume that institutional researchers at each college or district will need to understand these technical details in order to help various local constituencies in their comprehension and usage of the peer group comparisons.

The Objective of Peer Grouping

To understand the methodology of the ARCC peer grouping, we should note the following objective that this analysis aimed to achieve.

> *Peer grouping will complement the other ARCC sources of information about college level performance by giving decision makers a way to compare each college's performance with the performances of other "like" colleges on each selected performance indicator (each ARCC outcome measure), in a fair and valid manner.*

General Strategy of ARCC Peer Grouping

The Chancellor's Office (CCCCO) implemented a strategy for peer grouping that used the following four basic steps in the sequence shown below.

1. For each performance indicator/outcome use prior research and input from college officials/researchers to identify those factors that affect the outcome but that lie beyond the control of each college administration. (These uncontrollable factors are often referred to as "environmental factors.")

2. For the environmental factors of each performance indicator identify a feasible data source that the CCCCO can use in its statistical analysis.

3. For each performance indicator, develop a regression model that will allow us to identify a parsimonious set of uncontrollable factors that the CCCCO can use to "level the playing field" in any between-college comparison of performances.

4. Using the parsimonious set of uncontrollable factors identified by regression modeling, use *cluster analysis* (a standard multivariate statistical tool) to identify for a college and for each performance indicator those colleges that most closely resemble it (the college of interest) in terms of these uncontrollable factors.

These four steps entailed a large amount of staff work, and in the interest of efficiency, we limit this appendix to only the fourth step, the cluster analysis. Appendix C includes a listing of the environmental factors collected and a summary of the regression models.

Appendix D: Peer Grouping Methodology

Cluster Analysis As A General Tool

Cluster analysis is a well-developed quantitative method of identifying groups of entities from a population of entities. Major references for cluster analysis became available to researchers as early as 1963 (Sokal & Sneath, 1963). This method can apply to any kind of entity, and past applications have clustered entities as diverse as colleges, states, cities, students, sports teams and players, patients, hospitals, and businesses, to mention a few. In past years, researchers have used it for developing taxonomies, especially with respect to the biological studies (i.e., horticulture, zoology, and entomology).

Depending upon the objective of the researcher, the cluster analysis chooses one or more measurements (aka "variables") of each entity in a population to produce a numerical indicator of "distance" between each entity in a given population. The researcher's objective is imperative in that this will drive the choice of measurements that more or less "determine" the eventual groupings or clusters. If the researcher chooses measurements that poorly reflect the researcher's objective, then the cluster analysis will probably produce a grouping that has marginal validity, if any.

Based upon the aforementioned inter-entity distances, cluster analysis then proceeds to identify sets of entities within a defined population by comparing sets of distances. In the vernacular of cluster analysis, these distances are also called "proximities." If the population under study contains a very unique entity in it, then the cluster analysis may produce, among its groupings, a cluster of one (i.e., a group containing only one case) to preserve the uniqueness of this one entity with respect to the population under study and the researcher's objective.

The development of computers greatly facilitated cluster analysis so that complex calculations for cluster analysis became very feasible for applied social research and evaluation. The major statistical software programs on the market today all offer routines to execute cluster analysis. In the ARCC analysis, CCCCO staff used one particular package known as *SPSS version 12*.

A procedure known as *hierarchical clustering* exploits computer power by moving through a large number of iterations to progressively "join" one college to another college that the computer finds is its "closest neighbor." The program will then join this resulting pair to the next most similar college (the next closest neighbor), and so on until no other colleges of sufficient similarity can be joined to this initial set. The procedure then repeats this "joining" process for each of the remaining colleges that the program has not already joined with some other college. Hierarchical clustering is popular among researchers because researchers can use the computer-generated record of the entire "joining" process as a tool to evaluate the quality of the cluster groupings (Everitt, Landau, & Leese, 2001). The ARCC peer grouping used this well-established procedure.

Appendix D: Peer Grouping Methodology

Cluster Analysis in the ARCC Peer Grouping

CCCCO staff reviewed the standard options for conducting a cluster analysis method and used the following four steps for the ARCC peer grouping:

1. Define a practical number of clusters to be identified.
2. Select a proximity measure that effectively captures the difference or "distance" between colleges on the basis of their levels of analyst-specified variables (the uncontrollable factors we had identified for each ARCC outcome).
3. Select and use a cluster identification algorithm that applies a specific decision rule (i.e., a type of logic) to cluster the colleges into mutually exclusive groups.
4. Prevent bias in the clustering that may result from using variables that use different scales of measurement (i.e., driving miles vs. student headcounts or percentage of students, and so forth).

The following section reports on how CCCCO implemented the four steps listed above.

1. The peer grouping identifies six distinct peer groups for all the community colleges in the system. This "target" of six groups addressed administrative concerns over the identification of too many peer groups and a plethora of single-college peer groups (that is, the finding of some colleges that lacked any statistical peers for comparison).

2. The chosen measure of distance between each community college in the system is the so-called *squared Euclidean distance*. This is the most common measure of proximity in cluster analysis. For the quantitatively inclined reader, the formula for computing the Euclidean distance is as follows:

$$d_{ij} = \left[\sum_{k=1}^{p} (x_{ik} - x_{jk})^2 \right]^{1/2}$$

   where x_{ik} and x_{jk} are, respectively, the kth variable value of the p-dimensional observations for individuals *i* and *j* (Everitt, Landau, & Leese, 2001).

3. In the peer grouping for all seven of the outcomes, CCCCO staff used *Ward's method* for clustering because staff found this method to work well with the ARCC data.

Appendix D: Peer Grouping Methodology

According to Bailey (1994), *Ward's method* "begins with each object treated as a cluster of one. Then objects are successively combined. The criterion for combination is that the within-cluster variation as measured by the sum of within-cluster deviation from cluster means (error sum of squares) is minimized. Thus, average distances among all members of the cluster are minimized." *Ward's method* has a tendency to produce clusters of approximately similar size (i.e., number of members in each cluster) (Everitt, Landau, & Leese, 2001).

1. The CCCCO staff converted the measures of the uncontrollable factors for each outcome so that their different units of measurement would have no effect upon the clustering solutions. Staff converted these measures by *standardizing the variables to unit variance* (also known as converting measurements to *z-scores*). Major statistical programs readily perform this conversion with the following formula:

z = (raw score for a case – mean of the sample) / (standard deviation of the sample)

(Snedecor & Cochran, 1980).

Concluding Thought

An excellent piece of advice that we constantly entertained during the peer group analysis covers the use of cluster analysis:

"Cluster analysis methods involve a mixture of imposing a structure on the data and revealing that structure which actually exists in the data…To a considerable extent a set of clusters reflects the degree to which the data set conforms to the structural forms embedded in the clustering algorithm…In the quest for clusters two possibilities are often overlooked…The data may contain no clusters…The data may contain only one cluster…" (Anderberg, 1973).

References

Anderberg, M.R. (1973). *Cluster analysis for applications*. New York: Academic Press.

Bailey, K.D. (1994). *Typologies and taxonomies: an introduction to classification techniques*. Thousand Oaks, CA: Sage.

Everitt, B.S., Landau, S., and Leese, M. (2001) *Cluster analysis*. New York: Oxford.

Snedecor, G.W., and Cochran, W.G. (1980). *Statistical methods*. Iowa State University Press: Ames, Iowa.

Sokal, R.R., and Sneath, P.H. (1963). *Principles of numerical taxonomy*. Freeman: London.

Appendix E: Terms and Abbreviations

Abbreviation	Definition
AA AS	Associate of Arts Degree Associate of Science Degree An associate degree shall be awarded to any student who successfully completes the prescribed course of study for the degree while maintaining the requisite grade point average, the course of study required for the student's major, and any required academic elective courses. (California Code of Regulations, Title 5, §55800.5)
AB 1417	Assembly Bill (AB) 1417 legislation sponsored by Pacheco, Chapter 581, Statutes of 2004, that established ARCC
Academic Year	For purposes of COMIS this refers to all the terms in one year beginning with the summer term and ending with the spring term (Summer, Fall, Winter, Spring).
ARCC	Accountability Reporting for the Community Colleges, initially established by AB 1417 (Pacheco, Chapter 581, Statutes of 2004)
BA Plus Index	The Bachelor of Arts/Sciences Plus Index represents the bachelor degree attainment of the population, 25 years or older in a college's service area. This index, created by CCCCO, combines the enrollment patterns (Fall 2000) of students by ZIP code of residence with educational data for ZCTA (ZIP Code Tabulation Area) codes obtained from Census 2000.

Appendix E: Terms and Abbreviations

Abbreviation	Definition
BA	Bachelor of Arts Degree For candidates electing, pursuant to Section 40401, to meet graduation requirements established prior to the 2000-01 academic year, the total semester units required for the Bachelor of Arts Degree, of which at least 40 shall be in the upper division credit, shall be 124 semester units. For candidates for the Bachelor of Arts degree who are meeting graduation requirements established during or after the 2000-01 academic year, a minimum of 120 semester units shall be required, including at least 40 semester units in upper-division courses or their equivalent. (California Code of Regulations, Title 5, §40500)
BS	Bachelor of Science Degree For candidates electing, pursuant to Section 40401, to meet graduation requirements established prior to the 2000-01 academic year, the total semester units required for the Bachelor of Science degree shall be 124 to 132 semester units, as determined by each campus, except that 140 semester units may be required in engineering. For candidates for the Bachelor of Science degree who are meeting graduation requirements established during or after the 2000-01 academic year, a minimum of 120 semester units shall be required. (California Code of Regulations, Title 5, §40501)

Appendix E: Terms and Abbreviations

Abbreviation	Definition
Basic Skills	Courses designed to develop reading or writing skills at or below the level required for enrollment in English courses one level below freshman composition, computational skills required in mathematics courses below Algebra, and ESL courses at levels consistent with those defined for English. (Based on a Basic Skills Study Session for the BOG.)
BOG	Board of Governors of the California Community Colleges
CAN	California Articulation Number: System of cross reference numbers designed to identify courses of comparable context
CDCP (Career Development and College Preparation) courses; referred to as Enhanced Noncredit courses (ENC) in the 2008 ARCC Report.	CDCP courses are noncredit courses that receive additional funding. The CDCP programs/sequences of courses are designed to achieve the following outcomes: 1. A noncredit certificate of completion leading to improved employability or job opportunities; 2. A noncredit certificate of competency in a recognized career field articulated with degree applicable coursework, completion of an associate degree, or transfer to a baccalaureate institution. (California Code of Regulations, Title 5, §55151)
CCC	California Community Colleges
CCCCO	California Community Colleges Chancellor's Office (also referred to as the System Office)
Certificate	The governing board of a community college district shall issue a certificate of achievement to any student whom the governing board determines has completed successfully any course of study or curriculum for which a certificate of achievement is offered. (California Code of Regulations, Title 5, §55808)

Appendix E: Terms and Abbreviations

Abbreviation	Definition
CCLC	Community College League of California The non-governmental, non-profit entity that serves community college districts, locally-elected governing boards, and college chief executive officers statewide.
Cohort	For the purpose of this report, we are using the MIS definition of a cohort, which refers to the establishment of a group of records based on specific criteria and tracked over time. Commonly used to refer to a specific set of students such as first-time freshmen who are tracked over a number of years, for example 6 years..
COMIS	Chancellor's Office Management Information System
Course	A series of lectures, labs, or other matter providing instruction on a specific subject
CPEC	California Postsecondary Education Commission
CSU	California State University
DED	Data Element Dictionary. The DED provides all specifications for all data elements collected by the Chancellor's Office and loaded into the COMIS database.
Degree	A degree shall be awarded to any student who successfully completes the prescribed course of study for the degree while maintaining the requisite grade point average, the course of study required for the student's major, and any required academic elective courses. (California Code of Regulations, Title 5, §55809)
Derived Data Elements	A data element that has been modified in programming to achieve some desired end
DOF	Department of Finance, State of California
Domain	The criteria describing the type of records included in a particular report or study.

Appendix E: Terms and Abbreviations

Abbreviation	Definition
EDD	Employment Development Department, State of California
Educational Needs Index (ENI)	The ENI is a county-level index representing the education, economic, and population pressures that influence education policy and planning. It uses fifteen unique indicators collapsed into three factor categories, as well as one measure of relative population size.
Enhanced noncredit courses (ENC)	See Career Development and College Preparation Definition
Enrollment	As used in our report, enrollment refers to one filled seat in a classroom per section.
ESAI	The Economic Service Area Index reflects the economic "composition" of geographic areas from which that college draws its students. This index, created by CCCCO, combines the enrollment patterns (Fall 2000) of students by ZIP code of residence with income data (1999) for ZCTA (ZIP Code Tabulation Area) codes obtained from Census 2000.
ESL	English as a Second Language
Fiscal Year	One year, beginning July 1 and ending June 30
FTES	Full-time equivalent student (FTES) is the major student workload measure, one of several, used in determining the eligibility for state funding of community colleges.
ISP	In-State Private Institution (four-year)
LAO	Legislative Analyst's Office, California's Nonpartisan Fiscal and Policy Advisor

Appendix E: Terms and Abbreviations

Abbreviation	Definition
NSC	National Student Clearinghouse
OOS	Out-of-State Institution (4-year)
Peer Group	In the ARCC, a peer group is the set of community colleges that have common characteristics with respect to a specific performance indicator. R&P staff derived a peer group for each college by indicator through a statistical method called cluster analysis. So each college will have a peer group for each performance indicator in ARCC. The basic objective of our peer grouping is to enable policy makers and administrators to make a relatively equitable and valid evaluation of a college's performance by comparing that performance to the performances of similar institutions.
RP Group	Research and Planning Group for California Community Colleges
R&P	Research and Planning Unit, CCCCO
SAAP	The Student Average Academic Preparation Index, created by CCCCO, measures the student average academic preparation for a particular college. The index was created by a match of Fall 2000 students with Stanford-9 scores from public high school students (1998-1999).
SAM Codes	Student Accountability Model: Codes reflecting the type of course
SAT	Scholastic Assessment Test Standardized test for college admissions in the United States.
Section	An offering of a course
System Office	California Community Colleges Chancellor's Office
Systemwide	All California Community Colleges

Appendix E: Terms and Abbreviations

Abbreviation	Definition
TOP Codes	Taxonomy of Programs: Used for course content as well as program identification. For further information on TOP codes, consult the most recent edition of *The California Community Colleges Taxonomy of Programs*, available at the CCCCO Web site.
Uncontrollable Factors	These are the variables in the ARCC analyses that "level the playing field" in the inter-institutional comparisons of performance (i.e., the peer group tables). People often also refer to these uncontrollable factors as "environmental factors," or "adjustment factors," or "exogenous variables." These factors are the variables that theoretically affect an outcome (i.e., a performance indicator) but fall outside of the control of college administrators. The ARCC analyses identify the most salient uncontrollable factors for each ARCC outcome, and the ARCC peer grouping uses these factors to create comparison groups of colleges that share similar environments. This process to "control" or adjust comparisons for these factors reduces the chance that a particular peer group will lead to a comparison of "apples to oranges."

Appendix E: Terms and Abbreviations

Abbreviation	Definition
Unduplicated Annual Headcount	This is the unique count of students enrolled in the California Community Colleges. Students are only counted once, even if they take courses at different colleges in the same year. (Systemwide definition). At the college level, (Table 1.7 of the College Profile) annual unduplicated headcount is based on students actively enrolled in Summer, Fall, Winter, and/or Spring terms. This headcount includes both credit and noncredit students. A student enrolled in multiple terms was counted only once for the year (i.e., not counted separately for each term). However, because this section of the ARCC report specifically addresses college level demographics, we counted the student at each college where he/she was actively enrolled during that year. For example, if a student enrolled at Yuba College in Summer and Fall 2005 and at American River College in Spring 2006, that student would be counted once at Yuba and once at American River for the 2005-2006 academic year.
UC	University of California
320 Report	Report used by districts to report FTES to CCCCO Fiscal Services