GUIDELINES FOR MEASURING DISPROPORTIONATE IMPACT IN EQUITY PLANS

INTRODUCTION AND BACKGROUND

This document presents two methodologies to measure disproportional impact for disaggregated subgroups within the California Community Colleges (CCC) student population. The two methodologies will be demonstrated using cohorts and outcomes from the California Community Colleges Chancellor's Office (CCCCO) Scorecard and DataMart.

Disproportionate impact occurs when "the percentage of persons from a particular racial, ethnic, gender, age or disability group who are directed to a particular service or placement based on an assessment instrument, method, or procedure is significantly different from the representation of that group in the population of persons being assessed, and that discrepancy is not justified by empirical evidence demonstrating that the assessment instrument, method or procedure is a valid and reliable predictor of performance in the relevant educational setting." [Title 5 Section 55502(d)]

Colleges are directed to establish a program of institutional research for ongoing evaluation of its matriculation process to ensure compliance. Title 5 states that: " As part of this evaluation, all assessment instruments, methods or procedures shall be evaluated to ensure that they minimize or eliminate cultural or linguistic bias and are being used in a valid manner. Based on this evaluation, districts shall determine whether any assessment instrument, method or procedure has a disproportionate impact on particular groups of students described in terms of ethnicity, gender, age or disability, as defined by the Chancellor. When there is a disproportionate impact on any such group of students, the district shall, in consultation with the Chancellor, develop and implement a plan setting forth the steps the district will take to correct the disproportionate impact." [Title 5 Section 55512(a)]

The California Community Colleges Student Success Task Force "recommends that system-wide accountability efforts be updated to include the collecting and reporting of both the outcomes and the progression measures for the system, and for each college. These measures will be disaggregated by race/ethnicity to aid the system in understanding how well it is performing in educating those historically disadvantaged populations whose educational success is vital to the future of the state." (California Community Colleges Student Success Task Force, 2012, p. 7)

The Board of Governors established Title 5 regulations [Section 54220] directing districts to develop a student equity plan and submit it to the Chancellor's Office. The legislation states that:

(a) In order to promote student success for all students, regardless of race, gender, age, disability, or economic circumstances, the governing board of each community college district shall maintain a student equity plan which includes for each college in the district.

(d) For the purposes of this section, "each population group of students" means American Indians or Alaskan natives, Asians or Pacific Islanders, Blacks, Hispanics, Whites, men, women, and persons with disabilities.

METHODOLOGY

There are five success indicators outlined in the CCCCO Equity Plan with which to assess disproportionate impact:
1. Access;
2. Course completion;
3. ESL and Basic Skills Completion;
4. Degree and Certificate Completion; and
5. Transfer.

To assess equity, analyses should use one or more of the following five disaggregated subgroups:
1. Gender ;
2. Ethnicity;
3. Age;
4. Disability status; and
5. Economically disadvantaged.

Two methodologies to measure disproportionate impact – proportionality and the "80-Percent Rule" – will be demonstrated with one of the success indicators: transfer rate. Both methodologies compare a disaggregated subgroup's presence in a cohort to its corresponding presence in its related outcome group.

Data for analyses are available from two sources: The CCCCO Data Mart and Data on Demand. The Data Mart is fully available to the public and provides information about students, courses, student services, outcomes and faculty and staff. The purpose of the Data Mart is to answer the questions of administrators, educators, parents, students, state leaders, and professional organizations. Data on Demand provides data sets for researchers at the colleges and is password-protected. Specific steps to access data from the Data Mart and Data on Demand are contained in the Appendix.

Table One lists the success metrics available in the two data sources as well as the disaggregated subgroups associated with each metric. Six of the nine success indicators detailed below are contained in the CCCCO Scorecard. The Scorecard is the latest version of the Accountability Reporting for the Community Colleges (ARCC), the annual report produced by the California Community Colleges Chancellor's office to meet the requirements of Assembly Bill (AB) 1417. This performance measurement system contains a set of success indicators for the system and its colleges. Scorecard success indicators (Table One) include ESL, Remedial English, Remedial Math, 30-Units, Persistence, and Completion (SPAR).   The remaining three success indicators – Access, Course Completion, and Transfer – are systemwide indicators available from the Data Mart.

Table 1. Data Sources for the Success Indicators That Measure Disproportionate Impact by Disaggregated Subgroups

Success Indicators	Gender		Ethnicity		Age Group		Disability Status		Economically Disadvantaged	
	DM	DOD	DM	DOD	DM	DOD	DM	DOD	DM	DOD
Access (Under Development)	✔		✔		✔					
Course Completion	✔		✔		✔					

Success Indicators	Gender		Ethnicity		Age Group		Disability Status		Economically Disadvantaged	
	DM	DOD	DM	DOD	DM	DOD	DM	DOD	DM	DOD
ESL and Basic Skills Completion										
ESL		✓		✓		✓		✓		✓
Remedial English		✓		✓		✓		✓		✓
Remedial Math		✓		✓		✓		✓		✓
Degree and Certificate Completion										
30-Units		✓		✓		✓		✓		✓
Persistence		✓		✓		✓		✓		✓
Completion (SPAR)		✓		✓		✓		✓		✓
Transfer	✓		✓		✓		✓		✓	

DM = Data Mart

DOD = Data on Demand

For both methodologies two data sets with counts are required:
1. A disaggregated count of students in an initial cohort; and
2. A disaggregated count of students from the initial cohort attaining an educational outcome.

A cohort is a group of people who share a common characteristic or experience within a defined period. For example, the initial cohort for the Completion indicator is defined as: first-time students with a minimum of 6 units of credit who attempted any Math or English in their first three years of attendance. Some of the students in this initial cohort attained the Completion outcome by achieving one or more of the following: 1) earning an associate's degree, 2) transferring to a four-year institution, or 3) becoming transfer-prepared (successfully completed 60 UC/CSU transferable units with a GPA >= 2.0). These students are included in the group who attained the educational outcome.

Methodology #1: Proportionality Index.

The proportionality methodology **compares the percentage of a disaggregated subgroup in an initial cohort to its own percentage in the resultant outcome group.** The formula for proportionality is the percentage in the outcome group divided by the percentage in the original cohort (outcome percentage/cohort percentage). A ratio of 1.0 indicates that a subgroup is present in both conditions at the same rate. A ratio of less than 1.0 indicates that the subgroup is less prevalent in the outcome than the cohort. Conversely, a ratio greater than 1.0 indicates that the subgroup is more prevalent in the outcome than the cohort. The higher the proportionality, the higher the rate at which a subgroup has attained a desired educational outcome; the lower the proportionality index the lower the attainment rate.

Proportionality Index	Interpretation
1.0	Proportions of subgroups are equal.
Less Than 1.0	Subgroup is less prevalent in the outcome group.
More Than 1.0	Subgroup is more prevalent in the outcome group.

The proportionality methodology does not specify at which point a proportionality index should be considered as a "disproportionate impact." The designation of which disaggregated subgroups should be considered as disproportionately impacted will rely on the judgment of the analysis team based on local conditions.

Methodology #2: 80 Percent Index.

The "80% Rule" methodology **compares the percentage of each disaggregated subgroup attaining an outcome to the percentage attained by a reference subgroup**. The methodology is based on the Equal Employment Opportunity Commission (EEOC) 80% Rule, outlined in the 1978 Uniform Guidelines on Employee Selection Procedures, and was use in Title VII enforcement by the U.S. Equal Opportunity Commission, Department of Labor, and the Department of Justice.

The 80% Rule states that: "A selection rate for any race, sex, or ethnic group which is less than four-fifths (4/5) (or eighty percent) of the rate for the group with the highest rate will generally be regarded by the Federal enforcement agencies as evidence of adverse impact, while a greater than four-fifths rate will generally not be regarded by Federal enforcement agencies as evidence of adverse impact." [Section 60-3, Uniform Guidelines on Employee Selection Procedure (1978); 43 FR 38295(August 25, 1978)] Any disaggregated group that is included in a desired outcome at less than 80% when compared to a reference group is considered to have suffered an adverse – or disproportionate - impact.

Using this methodology, the percentage of each disaggregated subgroup attaining the desired outcome is calculated by dividing the outcome frequency into the cohort frequency. The second step of this methodology compares the completion rate of each non-reference disaggregated subgroup to the completion rate of a reference subgroup. The subgroup with the highest completion rate is typically chosen as the reference group. The 80 Percent Index is calculated by dividing the completion rate of a non-reference subgroup into the completion rate of the reference subgroup. A result of less than 80 percent is considered evidence of a disproportionate impact.

The advantage of the 80% Rule methodology is that it provides an historical cutoff point – 80 percent – with which to define disproportionate impact. The disadvantage is that it is not always clear that the highest performing group should be chosen as the reference group. There may be other factors – such as subgroup size – that need to be considered.

Examining Disproportionate Impact for Disaggregated Subgroups Using the Transfer Rate.

Gender. This section compares the statewide transfer rate between female and male students. Table Two presents the counts and percentages of the initial student cohort and those obtaining transfer, disaggregated by gender.

Table 2. Cohort and Completion Counts and Percentages of the Transfer Rate by Gender

Gender	Cohort Count	Cohort Percentage	Completion Count	Completion Percentage
Female	74,032	0.538	29,889	0.536
Male	62,247	0.453	25,306	0.454
Unknown	1,231	0.009	540	0.010
Total	137,510	1.000	55,735	1.000

Table Three presents the results of a proportionality analysis. The results indicate there is no disparity between female and male students in terms of obtaining transfer. The figures in the "Proportionality Index" column are calculated by dividing the completion percentage into the cohort percentage. For example, for the female subgroup, the formula is 0.536/0.538 = 0.996; indicating no disproportionate impact.

Table 3. Proportionality Index of the Transfer Rates by Gender

Gender	Cohort Percentage	Completion Percentage	Proportionality Index
Female	0.538	0.536	0.996
Male	0.453	0.454	1.003
Unknown	0.009	0.010	1.082

The results from the 80-Percent methodology are presented in Table Four. The percentages in the "Completion Rate" column are calculated by dividing the "Completion Count" figure into the "Cohort Count" figure. For the Female subgroup, the formula is 29,889/74,032 = 0.40. The completion rate percentages are calculated in this manner for all subgroups.

In the second portion of the 80-Percent calculation, the completion rate percentages of the subgroups are compared. The subgroup with the highest completion rate is designated as the reference group and all other subgroup completion rates are compared against it. In this instance, the "Unknown" gender subgroup is the reference group. The completion percentages of the other subgroups are divided into the reference group completion rate. For example, the "Female" subgroup completion rate percentage is divided in the "Unknown" subgroup completion rate to obtain the 80-Percent Index: 0.40/0.44 =0.920. The index of 0.920 is above the 0.80 cutoff, therefore there is no disproportionate impact in evidence.

The reference group for the 80 Percent Index was the "Unknown" subgroup since they had the highest completion rate (Table Four). The other two subgroups – "Female" and "Male" – had indices of 0.920 and .927, respectively. Since neither figure is below 0.80 there is no disparity reflected in this subgroup.

Table 4. Transfer Rates and 80 Percent Index by Gender

Gender	Cohort Count	Completion Count	Completion Rate	80-Percent Index
Female	74,032	29,889	0.40	0.909
Male	62,247	25,306	0.41	0.932
Unknown	**1,231**	**540**	**0.44**	**1.000**

All of the following subgroup indices are calculated using the same procedures.

Ethnicity.   This section compares the transfer rates among student ethnic subgroups. Table Five presents the counts and percentages of the initial student cohort and those obtaining transfer, disaggregated by ethnicity.

Table 5. Transfer Cohort and Completion by Ethnicity

Ethnicity	Cohort Count	Cohort Percentage	Completion Count	Completion Percentage
African-American	8,060	0.059	2,817	0.051
American Indian/Alaskan Native	1,125	0.008	312	0.006
Asian	24,069	0.175	12,451	0.223
Hispanic	39,821	0.290	12,503	0.224
Pacific Islander	1,234	0.009	426	0.008
Unknown	12,658	0.092	5,434	0.097
White Non-Hispanic	50,543	0.368	21,792	0.391
Total	137,510	1.001	55,735	1.000

There is significant disproportionality in transfer rate among ethnic subgroups (Table Six). Three subgroups transferred at higher rates: Asian, Unknown, and White. Conversely, the African-American, Pacific Islander, and especially the American Indian/Alaskan Native subgroups transferred at lower rates.

Table 6. Transfer Ethnic Percentages and Proportionality By Ethnicity[a]

Ethnicity	Enrolled Percentage	Transfer Percentage	Proportionality Index
African-American	0.059	0.051	0.862
American Indian/Alaskan Native	0.008	0.006	0.684
Asian	0.175	0.223	1.276
Hispanic	0.290	0.224	0.775
Pacific Islander	0.009	0.008	0.852
Unknown	0.092	0.097	1.059
White	0.368	0.391	1.064

The 80-percent calculation produce similar results. With the Asian subgroup used as the reference group, there were four subgroups with disproportionate impact – African-American, American Indian/Alaskan Native , Hispanic, and Pacific Islander.

Table 7. Transfer Rates By Ethnicity and 80 Percent Calculation[a]

Ethnicity	Enrollment Count	Transfer Count	Transfer Rate	80 Percent Index
African-American	8,060	2,817	0.350	0.676
American Indian/Alaskan Native	1,125	312	0.277	0.536
Asian	**24,069**	**12,451**	**0.517**	**1.000**

Hispanic	39,821	12,503	0.314	0.607
Pacific Islander	1,234	426	0.345	0.667
Unknown	12,658	5,434	0.429	0.830
White Non-Hispanic	50,543	21,792	0.431	0.833

Age. This section compares the transfer rates among student age subgroups. Table Eight presents the counts and percentages of the initial student cohort and those obtaining transfer, disaggregated by age group.

Table 8. Transfer Cohort and Completion by Age Group

Age Group	Cohort Count	Cohort Percentage	Transfer Count	Transfer Percentage
17 or Less	42,188	0.3068	20,352	0.3652
18 & 19	75,184	0.5468	29,941	0.5372
20 to 24	10,264	0.0746	3,344	0.0600
25 to 29	3,356	0.0244	844	0.0151
30 to 34	1,768	0.0129	364	0.0065
35 to 39	1,655	0.0120	337	0.0060
40 to 49	2,235	0.0163	407	0.0073
50 +	802	0.0058	126	0.0023
Unknown	58	0.0004	20	0.0004
Total	137,510	1.000	55,735	1.000

There is a clear relation between age and transfer rate; the lower the age the higher the transfer rate. Table Nine shows that the students aged 17 or less transferred at the highest rate. The rate of transfer decreases consistently with increasing age.

Table 9. Transfer Percentages and Proportionality Index By Age Group

Age Group	Cohort Percentage	Completion Percentage	Proportionality Index
17 or Less	0.3068	0.3652	1.190
18 & 19	0.5468	0.5372	0.983
20 to 24	0.0746	0.0600	0.804
25 to 29	0.0244	0.0151	0.620
30 to 34	0.0129	0.0065	0.508
35 to 39	0.0120	0.0060	0.502
40 to 49	0.0163	0.0073	0.449
50 +	0.0058	0.0023	0.388
Unknown	0.0004	0.0004	0.851

The 80-percent calculation (Table 10) shows all age groups from "20 to 24" and up as having a disproportionate impact. The "18 and 19" age group transfer rate was lower but remained above the 80 percent cutoff.

Table 10. Transfer Rates and 80 Percent Index by Age Group

Age Group	Cohort Count	Completion Count	Completion Rate	80 Percent Index
17 or Less	**42,188**	**20,352**	**0.48**	**1.000**
18 and 19	75,184	29,941	0.40	0.826
20 to 24	10,264	3,344	0.33	0.675
25 to 29	3,356	844	0.25	0.521
30 to 34	1,768	364	0.21	0.427
35 to 39	1,655	337	0.20	0.422
40 to 49	2,235	407	0.18	0.377
50 +	802	126	0.16	0.326
Unknown	58	20	0.34	0.715

Disability Status. This section compares the transfer rates among student disability status subgroups. Table 11 presents the counts and percentages of the initial student cohort and those obtaining transfer, disaggregated by disability status.

Table 11. Transfer Cohort and Completion by Disability Status

Disability Status	Cohort Count	Cohort Percentage	Completion Count	Completion Percentage
No	131,551	0.957	54,056	0.970
Yes	5,959	0.043	1,679	0.030
Total	137,510	1.000	55,735	1.000

Students with a disability were at a clear disadvantage regarding their transfer rates (Table 12) with a proportionality index of 0.695.

Table 12. Transfer Percentages and Proportionality Index By Disability Status

Disability Status	Cohort Percentage	Completion Percentage	Proportionality Index
No	0.957	0.970	1.014
Yes	0.043	0.030	0.695

Similarly, the disabled student subgroup was below the cutoff point in the 80-percent calculation (Table 13).

Table 13. Transfer Rates and 80 Percent Index by Disability Status

Disability Status	Cohort Count	Completion Count	Completion Rate	80 Percent Index
No	**131,551**	**54,056**	**0.41**	**1.000**
Yes	5,959	1,679	0.28	0.686

Economically Disadvantaged. This section compares the transfer rates among student economic status subgroups. Table Two presents the counts and percentages of the initial student cohort and those obtaining transfer, disaggregated by economic status. The economically disadvantaged subgroup was defined as those students receiving CalWORKs services.

Table 14. Transfer Cohort and Completion by CalWORKs Recipient

CalWORKS Recipient	Cohort Count	Cohort Percentage	Completion Count	Completion Percentage
No	135,411	0.985	55,330	0.993
Yes	2,099	0.015	405	0.007
Total	137,510	1.000	55,735	1.000

Table 15 shows that students enrolled in CalWORKS attained transfer at a much lower rate than students not enrolled in CalWORKS.

Table 15. Transfer Completion Percentages and Proportionality Index By CalWORKS Recipient

CalWORKS Recipient	Cohort Percentage	Completion Percentage	Proportionality Index
No	0.985	0.993	1.008
Yes	0.015	0.007	0.476

The students enrolled in CalWORKs had an 80-percent index that was well below the cutoff, indicating a marked disproportionality.

Table 16. Transfer Completion Rates and 80 Percent Index by CalWORKS Recipient

CalWORKS Recipient	Cohort Count	Completion Count	Completion Rate	80 Percent Index
No	**135,411**	**55,330**	**0.41**	**1.000**
Yes	2,099	405	0.19	0.472

REFERENCES

California Community Colleges Student Support Task Force (2012). *Advancing student success in the California Community Colleges: Recommendations of the California Community Colleges Student Success Task Force*.

Uniform Guidelines on Employee Selection Procedures (1978); 43 FR 38295, (August 25,1978); 29 CFR Part 1607.

APPENDIX
DATA PROCEDURES

Access (Enrollment)

Course Completion

1. Access the CCCCO Data Mart.
2. Under the "Outcomes" heading, click on "Enrollment Retention and Success Rate."
3. From the "Select State-District-College" drop down list, select "Districtwide Search."
4. From the "Select District-College" drop down list, select your district.
5. From the "Select Term" drop down list, select a term. Often, the most recent fall term is selected as a representative term.
6. From the "Select Program Type drop down list, select "All TOP Codes."
7. From the "Select Instruction Method" drop down list, select "All."
8. Click the "View Report" button.
9. Under the "Report Format Selection Area" heading toward the bottom of the web page, select the "Course Status" most applicable to your analysis. It is recommended that you select only one type of course status to simplify the subsequent processing. You may select one or more of the course statuses and report them separately or combine them into one cohort.
10. Also under the "Report Format Selection Area" heading, check the "Gender" option under the "Demographic Options" heading.
11. Click the "Update Report" button to the lower right of the web page.
12. Once the report is completed, select the "Excel" radio button and click the "Export To" button.
13. Open the Excel file when completed to examine, and save as an Excel file.
14. Deselect the "Gender" option under the "Demographic Options" heading.
15. Check the "Age Group" option under the "Demographic Options" heading.
16. Click the "Update Report" button.
17. Once the report is completed, select the "Excel" radio button and click the "Export To" button.
18. Open the Excel file when completed to examine, and save as an Excel file.
19. Deselect the "Age Group" option under the "Demographic Options" heading.
20. Check the "Ethnicity" option under the "Demographic Options" heading.
21. Click the "Update Report" button.
22. Once the report is completed, select the "Excel" radio button and click the "Export To" button.
23. Open the Excel file when completed to examine, and save as an Excel file.
24. For each of the saved files, calculate the percentages of each subgroup in the original cohort and the percentages of each subgroup in the outcome group.
25. Use these percentages to calculate proportionality and the 80-percent rule as outlined in this document.

ESL

1. Access the Research, Analysis & Accountability web page.
2. Click the "Data on Demand" button on the lower left of the web page.

3. Enter your "User Name" and "Password" and click "LOGIN." (Personnel in the research unit at each college have these. The Chief Information Systems Officer designates staff with access to Data on Demand.)
4. Click the "Accountability" tab.
5. Click the "ARCC" option on the selection bar.
6. From the "Select College" drop down list, select the college of your choice. If your district has more than one college, you can combine the counts in the initial cohorts and outcome groups to calculate districtwide percentages.
7. From the "Select File Type" drop down list select "Basic Skills Improvement for ESL."
8. In the "Select Report Year" drop down list the system defaults to "2013."
9. Click the "Create Text File" button.
10. Open the file to examine and save as a text file.
11. Import the text file into Excel, SPSS, SAS or other application for analysis.
12. Select records with a Cohort_Year of '2006-2007';
13. Define the disaggregated subgroups:
    a. To define the gender subgroup, use the "GENDER" data element:
        i. "F' = 'Female';
        ii. 'M' = 'Male; and
        iii. 'X' = 'Unknown.
    b. For age groups, use the "AGE_AT_TERM" data element and divide the ages into these subgroups:
        i. '20 Or less';
        ii. '20 To 24';
        iii. '25 To 49';
        iv. '50 Or More'; and
        v. 'Unknown'.
    c. To create the ethnicity subgroup, use the "RACE" data element with the following labels:
        i. 'A' = 'Asian';
        ii. 'F' = 'Filipino';
        iii. 'B' = 'African American';
        iv. 'H' = 'Hispanic';
        v. 'N' = 'American Indian/Alaskan Native';
        vi. 'P' = 'Pacific Islander';
        vii. 'T' = 'Two Or More Races';
        viii. 'W' = 'White'; and
        ix. 'X' = 'Unknown';
    d. For the disabled subgroup, use the "DSPS" data element:
        i. 'Y' = 'Yes'; and
        ii. 'N' = 'No.'
    e. To create the economically disadvantaged subgroup, use the "ECON_DIS" data element:
        i. 'Y' = 'Yes'; and
        ii. 'N' = 'No.'
14. Crosstabulate each of the disaggregated subgroups with the data element "DEGREE_APP."
    a. If the crosstabulated cell sizes are too small for reliable conclusions, you can combine cohort_years into one sample. All cohort_years track outcomes to the same year so they can be combined.

15. Calculate the percentages:
    a. Calculate the percentages of each subgroup (i.e., gender, age group, and ethnicity) in the initial cohort.
    b. Select the students in the initial cohort who achieved the outcome; these students constitute the "Outcome" group.
    c. Calculate the percentages of each subgroup in the "Outcome" group.
16. Use these percentages to calculate proportionality and the 80-percent rule as outlined in this document.

Remedial English

1. Access the Research, Analysis & Accountability web page.
2. Click the "Data on Demand" button on the lower left of the web page.
3. Enter your "User Name" and "Password" and click "LOGIN." (Personnel in the research unit at each college have these. The Chief Information Systems Officer designates staff with access to Data on Demand.)
4. Click the "Accountability" tab.
5. Click the "ARCC" option on the selection bar.
6. From the "Select College" drop down list, select the college of your choice. If your district has more than one college, you can combine the counts in the initial cohorts and outcome groups to calculate districtwide percentages.
7. From the "Select File Type" drop down list select "Basic Skills Improvement for English."
8. In the "Select Report Year" drop down list the system defaults to "2013."
9. Click the "Create Text File" button.
10. Open the file to examine and save as a text file.
11. Import the text file into Excel, SPSS, SAS or other application for analysis.
12. Select records with a Cohort_Year of '2006-2007';
13. Define the disaggregated subgroups:
    a. To define the gender subgroup, use the "GENDER" data element:
        i. "F' = 'Female';
        ii. 'M' = 'Male; and
        iii. 'X' = 'Unknown.
    b. For age groups, use the "AGE_AT_TERM" data element and divide the ages into these subgroups:
        i. '20 Or less';
        ii. '20 To 24';
        iii. '25 To 49';
        iv. '50 Or More'; and
        v. 'Unknown'.
    c. To create the ethnicity subgroup, use the "RACE" data element with the following labels:
        i. 'A' = 'Asian';
        ii. 'F' = 'Filipino';
        iii. 'B' = 'African American';
        iv. 'H' = 'Hispanic';
        v. 'N' = 'American Indian/Alaskan Native';
        vi. 'P' = 'Pacific Islander';

      vii.   'T' = 'Two Or More Races';

     viii.   'W' = 'White'; and

      ix.   'X' = 'Unknown';

  d. For the disabled subgroup, use the "DSPS" data element:

       i.   'Y' = 'Yes'; and

      ii.   'N' = 'No.'

  e. To create the economically disadvantaged subgroup, use the "ECON_DIS" data element:

       i.   'Y' = 'Yes'; and

      ii.   'N' = 'No.'

14. Crosstabulate each of the disaggregated subgroups with the data element "DEGREE_APP."

  a. If the crosstabulated cell sizes are too small for reliable conclusions, you can combine cohort_years into one sample. All cohort_years track outcomes to the same year so they can be combined.

15. Calculate the percentages:

  a. Calculate the percentages of each subgroup (i.e., gender, age group, and ethnicity) in the initial cohort.

  b. Select the students in the initial cohort who achieved the outcome; these students constitute the "Outcome" group.

  c. Calculate the percentages of each subgroup in the "Outcome" group.

16. Use these percentages to calculate proportionality and the 80-percent rule as outlined in this document.

Remedial Math

1. Access the Research, Analysis & Accountability web page.
2. Click the "Data on Demand" button on the lower left of the web page.
3. Enter your "User Name" and "Password" and click "LOGIN." (Personnel in the research unit at each college have these. The Chief Information Systems Officer designates staff with access to Data on Demand.)
4. Click the "Accountability" tab.
5. Click the "ARCC" option on the selection bar.
6. From the "Select College" drop down list, select the college of your choice. If your district has more than one college, you can combine the counts in the initial cohorts and outcome groups to calculate districtwide percentages.
7. From the "Select File Type" drop down list select "Basic Skills Improvement for Math."
8. In the "Select Report Year" drop down list the system defaults to "2013."
9. Click the "Create Text File" button.
10. Open the file to examine and save as a text file.
11. Import the text file into Excel, SPSS, SAS or other application for analysis.
12. Select records with a Cohort_Year of '2006-2007';
13. Define the disaggregated subgroups:

  a. To define the gender subgroup, use the "GENDER" data element:

       i.   "F' = 'Female';

      ii.   'M' = 'Male; and

     iii.   'X' = 'Unknown.'

b. For age groups, use the "AGE_AT_TERM" data element and divide the ages into these subgroups:
  i. '20 Or less';
  ii. '20 To 24';
  iii. '25 To 49';
  iv. '50 Or More'; and
  v. 'Unknown'.
c. To create the ethnicity subgroup, use the "RACE" data element with the following labels:
  i. 'A' = 'Asian';
  ii. 'F' = 'Filipino';
  iii. 'B' = 'African American';
  iv. 'H' = 'Hispanic';
  v. 'N' = 'American Indian/Alaskan Native';
  vi. 'P' = 'Pacific Islander';
  vii. 'T' = 'Two Or More Races';
  viii. 'W' = 'White'; and
  ix. 'X' = 'Unknown';
d. For the disabled subgroup, use the "DSPS" data element:
  i. 'Y' = 'Yes'; and
  ii. 'N' = 'No.'
e. To create the economically disadvantaged subgroup, use the "ECON_DIS" data element:
  i. 'Y' = 'Yes'; and
  ii. 'N' = 'No.'

14. Crosstabulate each of the disaggregated subgroups with the data element "DEGREE_APP."
  a. If the crosstabulated cell sizes are too small for reliable conclusions, you can combine cohort_years into one sample. All cohort_years track outcomes to the same year so they can be combined.

15. Calculate the percentages:
  a. Calculate the percentages of each subgroup (i.e., gender, age group, and ethnicity) in the initial cohort.
  b. Select the students in the initial cohort who achieved the outcome; these students constitute the "Outcome" group.
  c. Calculate the percentages of each subgroup in the "Outcome" group.

16. Use these percentages to calculate proportionality and the 80-percent rule as outlined in this document.

30-Units, Persistence, and SPAR

1. Access the Research, Analysis & Accountability web page.
2. Click the "Data on Demand" button on the lower left of the page.
3. Enter your "User Name" and "Password" and click "LOGIN." (Personnel in the research unit at each college have these. The Chief Information Systems Officer designates staff with access to Data on Demand.)
4. Click the "Accountability" tab.
5. Click the "ARCC" option on the selection bar.

6. From the "Select File Type" drop down list select "Student Progress and Achievement Report (SPAR)."
7. In the "Select Report Year" drop down list the system defaults to "2013."
8. Click the "Create Text File" button.
9. Open the file to examine and save as a text file.
10. Import the text file into Excel, SPSS, SAS or other application for analysis.
11. Select records with a Cohort_Year of "2006-2007."
12. Define the disaggregated subgroups:
    a. To define the gender subgroup, use the "GENDER" data element:
        i.   "F' = 'Female';
        ii. 'M' = 'Male; and
        iii. 'X' = 'Unknown.
    b. For age groups, use the "AGE_AT_TERM" data element and divide the ages into these subgroups:
        i.   '20 Or less';
        ii. '20 To 24';
        iii. '25 To 49';
        iv. '50 Or More'; and
        v.   'Unknown'.
    c. To create the ethnicity subgroup, use the "RACE" data element with the following labels:
        i.   'A' = 'Asian';
        ii.   'F' = 'Filipino';
        iii. 'B' = 'African American';
        iv.   'H' = 'Hispanic';
        v.   'N' = 'American Indian/Alaskan Native';
        vi.   'P' = 'Pacific Islander';
        vii. 'T' = 'Two Or More Races';
        viii. 'W' = 'White'; and
        ix.   'X' = 'Unknown';
    d. For the disabled subgroup, use the "DSPS" data element:
        i.   'Y' = 'Yes'; and
        ii. 'N' = 'No.'
    e. To create the economically disadvantaged subgroup, use the "ECON_DIS" data element:
        i.   'Y' = 'Yes'; and
        ii. 'N' = 'No.'
13. Using the Scorecard methodology specifications, create Yes/No data elements designate which students in the initial cohort who attained the outcomes in:
    a. Persistence;
    b. 30-Units; and
    c. Completion.
14. Crosstabulate each of the disaggregated subgroups with the three scorecard metrics.
    a. If the crosstabulated cell sizes are too small for reliable conclusions, you can combine cohort_years into one sample. All cohort_years track outcomes to the same year so they can be combined.
15. Calculate the percentages:

a. Calculate the percentages of each subgroup (i.e., gender, age group, and ethnicity) in the initial cohort.

b. Select the students in the initial cohort who achieved the outcome; these students constitute the "Outcome" group.

c. Calculate the percentages of each subgroup in the "Outcome" group.

16. Use these percentages to calculate proportionality and the 80-percent rule as outlined in this document.

Transfer

1. Access the CCCCO Data Mart.
2. Under the "Outcomes" heading, click on "Transfer Velocity."
3. From the "Select State-District-College" drop down list, select "Districtwide Search."
4. From the "Select District-College" drop down list, select your district.
5. From the "Select Term" drop down list, select "2006-2007."
6. From the "Select Years to Transfer" drop down list, select "6 Years."
7. Click the "View Report" button.
8. Under the "Report Format Selection Area" toward the bottom of the web page, check the "Gender" option under the "Demographic Options" heading.
9. Click the "Update Report" button to the lower right of the web page.
10. Once the report is completed, select the "Excel" radio button and click the "Export To" button.
11. Open the Excel file when completed to examine, and save as an Excel file.
12. Deselect the "Gender" option under the "Demographic Options" heading.
13. Check the "Age Group" option under the "Demographic Options" heading.
14. Click the "Update Report" button.
15. Once the report is completed, select the "Excel" radio button and click the "Export To" button.
16. Open the Excel file when completed to examine, and save as an Excel file.
17. Deselect the "Age Group" option under the "Demographic Options" heading.
18. Check the "Ethnicity" option under the "Demographic Options" heading.
19. Click the "Update Report" button.
20. Once the report is completed, select the "Excel" radio button and click the "Export To" button.
21. Open the Excel file when completed to examine, and save as an Excel file.
22. Deselect the "Ethnicity" option under the "Demographic Options" heading.
23. Under the "Special Category" heading select the "California Work Opportunity & Responsibility to Kids (CalWORKs)" option.
24. Click the "Update Report" button .
25. Once the report is completed, select the "Excel" radio button and click the "Export To" button.
26. Open the Excel file when completed to examine, and save as an Excel file.
27. Deselect the "CalWORKs" option under the "Special Category" heading.
28. Under the "Special Category" heading select the "Disabled Students Programs & Services (DSPS)" option.
29. Click the "Update Report" button .
30. Once the report is completed, select the "Excel" radio button and click the "Export To" button.
31. Open the Excel file when completed to examine, and save as an Excel file.
32. For each of the saved files, calculate the percentages of each subgroup in the original cohort and the percentages of each subgroup in the outcome group:
    a. For the CalWORKs output, collapse the counts into two groups:

        i.   "Not a CalWORKs Participant" as a "No" subgroup; and

        ii.   All other rows combined into the "Yes" subgroup.

    b.   For the DSPS output, collapse the counts into two groups:

        i.   "None" as a "No" subgroup; and

        ii.   All other rows combined into the "Yes" subgroup.

33. Use these percentages to calculate proportionality and the 80-percent rule as outlined in this document.