



South Orange County Community College District

EXTERNAL SCAN 2013

DEMOGRAPHIC ANALYSIS, ENROLLMENT TRENDS
& LABOR MARKET ANALYSIS

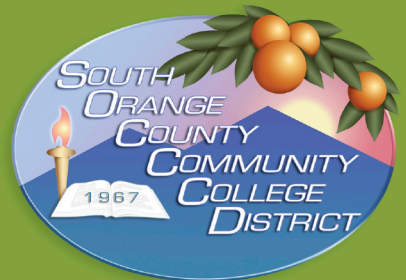


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From the Chancellor

South Orange County Community College District's External Scan 2013 is the culmination of three months of collaboration and research guided by the SOCCCD District-wide Planning Council and the College Brain Trust during spring 2013. The effort was driven by Goal 6 of the District-wide Strategic Plan 2011-2014 which identified the need to assess our communities for key issues relevant to planning and decision making.

The External Scan 2013 creates one comprehensive report that addresses both colleges' and district-wide needs. The analysis focused on 3 main areas: Demographic Analysis, Enrollment Trends, and Labor Market Analysis.

Input for the external scan was received throughout a three month process and a presentation was made to the district community on May 29th to provide a full review of the external scan. That presentation is available for viewing on the district's SharePoint site. External Scan indicators were also used in the District-wide Planning Council Retreat in June 2013 to guide goal setting for the District-wide Strategic Plan 2014-2020. The external scan is not an end but a beginning. Data and information from the external scan will be continuously reviewed and updated for planning and assessment purposes.

In a multi-college district, the task of planning is a shared one. Thank you to many faculty, staff and administrators from Saddleback College, Irvine Valley College and District Services for their contributions in this process. My hope is that this external scan will provide a strong framework as we continually strive to support the diverse needs of more than 40,000 students and nearly one million residents.

Sincerely,

A handwritten signature in blue ink, appearing to read "G. Poertner".

Gary L. Poertner
Chancellor

Background

The South Orange County Community College's **District-wide Strategic Plan 2011-2014**, Goal 6, Objective 6.3, and Action Steps 6.3.1 – 6.3.4 identifies the need to conduct an external scan.

District-wide Goal 6 SOCCCD will assess the educational needs of the communities within the District boundaries and will pursue joint venture partnerships with educational institutions and business/industry.

District-wide Objective 6.3 SOCCCD will include an analysis of external scans data in the Annual Progress Report on the SOCCCD Strategic Plan 2011- 2014 and will adjust the next year's action steps accordingly.

Action Steps for District-wide Objective 6.3.

6.3.1. Determine the components to be included in an external scan.

6.3.2. Complete the external scans regularly including an analysis of the key indicators that are relevant to planning

6.3.3. Distribute and discuss the key indicators in appropriate decision making meetings

6.3.4. Adjust action steps for the coming year as needed based on the key indicators
District-wide Planning Council

In the academic year of 2012-2013, guided by the District-wide Planning Council (DWPC)¹, SOCCCD embarked on conducting an external environmental scan. At the September 7, 2012 DWPC meeting the group reviewed and discussed the need for an external scan. The group reviewed sample environmental scans and potential consulting companies that might assist in completing this scan. The directors of research, planning and accreditation at each college with the district director of research, planning and data management were identified at the meeting as the leads on this process for their sites over the next year. In September and October of 2012 the directors met three times to discuss the needs of the colleges, and Associate Vice Chancellor Randy Peebles also joined the group as a resource. Later in the academic year, this body adopted the name of External Scan Task Force (ESTF). Over the course of two months, the directors developed a matrix to define the scope of work for a request for proposals (RFP) to hire a consultant to assist in an external scan.

At the November 2, 2012 meeting of the DWPC, the matrix and timeline to develop the RFP was discussed. Below are the approved minutes on this item from the meeting.

"Craig Hayward reported that Denice Inciong, Caroline Durdella, and he have identified criteria for the environmental scan process. They plan to finalize the scope of work in November and December, prepare the RFP by January, select a vendor by February, finalize the contract by March, develop the information by June, and finalize the report by July. Caroline Durdella asked that members review the matrix and related documents posted on SharePoint and send input to Denice Inciong. Tod Burnett requested the final report be completed by May 2013 instead so it may be used to assist with Saddleback's College's planning process; Craig Hayward stated he would meet with Denice Inciong and Caroline Durdella to determine if this would be possible."

Source: DWPC minutes November 2, 2012

¹ The District-wide Planning Council membership is provided in Appendix 4.

The ESTF had two more meetings in November and agreed that it would be a compressed schedule but would plan to complete the RFP and scan by the end of May 2013. The areas that were identified in the discussions at each campus and reviewed by the ESTF are summarized in the chart below. The ESTF gave a rating to the priority to the area that would be addressed in the RFP. Also identified was the ability or capacity to be able to complete the work internally. If the priority was high and capacity low, then this would be an important component in the RFP. The rows marked YES in the following table were chosen as the focus of the external scan RFP. The remaining areas identified would not be part of the scope of the external scan RFP and would be worked on internally by the colleges and district services.

Area for Environmental Scan	Priority (Importance)	Availability to Complete (Internal capacity to do work ourselves)	Part of RFP
Labor Market Analysis for the county job market & Labor Market Analysis for College CTE program areas	High	Low	Yes
Community College Enrollment Projections	High	High	Yes
K-12 Enrollment Projections	High	Medium	Yes
Overall Project Management Consultant who will lead our Environmental Scan for the District	High	Low	Yes
Regional Capacity as it relates to surrounding colleges	Medium	Low	Maybe
Marketing	High	Low	No
Local, State, and National Policy	High	Medium	No
Budgetary Considerations	High	Low	No
Technology – Distance Education	High	Medium	No
Demand for Degrees (Non-CTE)	Medium	Medium	No

In January of 2013 the RFP was advertised and a committee was formed to review and select a company to complete an external scan for SOCCCD. The following is an excerpt from the RFP that was advertised.

REQUEST FOR QUALIFICATION STATEMENTS AND PROPOSALS: EXTERNAL SCAN

South Orange County Community College District, Saddleback College and Irvine Valley College

Introduction

The South Orange County Community College District has a District-wide Strategic Plan 2011-2014. Additionally, Irvine Valley College and Saddleback College each develop an institutional strategic plan in concert with district-wide planning. In order to develop the next three-year strategic plan, an external scan of major factors to inform goal setting for the future is needed. The main purpose is to create a document that serves as one of the key pieces of information used to develop strategic plans 2014-2017 for the district and colleges. An important component will be the utility of the scan for each of the colleges and district.

The District is requesting qualification statements and proposals from consultants with proven experience in demographic studies, labor market analysis and enrollment projects to prepare an external scan for the district.

The selected team will work with the external scan task force, take an active leadership role in the entire process, make presentations to the Board of Trustees when scheduled, and prepare the final documents.

These documents will include at the minimum:

- Labor market analysis
- Community college enrollment projections, including primary education (K-12)
- Demographic analysis of the district and college service areas
- Electronic copies of all the above as well as data sets used for the above.

It is the intent of this Request for Qualifications and Proposals to establish the specifications, terms and conditions governing the selection process.

The following is a calendar of major events for the selection process and proposed dates for the duration:

Date in 2013	RFP process
January 18	Receipt for RFQ & P
January 22 - 30	Selection team to read proposals
February 12	Interviews – ALL DAY
Week of February 18	Contract negotiation with selected firm
March 1	Selected vendor to start work
March 1-May 30	3 months to complete work
March 30	First review of data sources
April 5 th	Outline of External Scan presented to District-wide Planning Council
May 1 st	First Draft copy of report for review
May 15 th	Second Draft with requested corrections incorporated
May 30 th	Final product delivered and presentation of results

Planning Process

In keeping with the recommendations of the SOCCCD's District-wide Planning Council, South Orange County Community College District will expect the external scan to contain the following elements to be included at a minimum:

1. Statement of purpose.
2. Description of the community and regional context.
3. Regional labor market analysis.
 - a. Identify historically and currently significant regional labor market sectors and industries as well as future regional labor market opportunities of substantive scope and impact.
 - b. Identify the location or concentrations of job occupations in Orange County and within the college service areas.
 - c. Analyze the scope, relevance, and alignment of college program offerings as they relate to the potential for program expansion and new program development.
 - d. Analysis of the regional capacity for graduates to obtain jobs.
 - e. Analyze the occupational capacity including living wage and high wage multiplier occupations, including geo-locations of occupational clusters and concentrations.
 - i. Data presented in the final report will be made available in electronic format for additional institutional use.
4. Community college enrollment projections should be based on:
 - a. Data - most recent census data (2010) and other reports.
 - i. Primary education (K-12) enrollment projections as it relates to the college enrollment.
 1. Include four major districts – Irvine, Tustin, Saddleback Valley, Capistrano
 2. Address new housing developments in our district.
 3. Include data on private, home-school, and other institutions outside of the public school realm.
 - ii. Reference the district's Education and Facilities Master Plan 2011-2031.
 - iii. Emphasize demographic changes that might impact the district's strategic planning.
 - b. The projection narrative should discuss any demographic changes that would impact planning.

5. Overall project management for the external scan.
 - a. The selected vendor may subcontract parts of this study to other specialist companies then compile that information seamlessly into the final report. Such subcontractors will be identified in your proposal along with pertinent qualifying information.
 6. Mid report outline of work to be presented to District Wide Planning Council or other group on or around April 5, 2013.
 7. Final report will be provided in digital editable format, pdf and in print.
-

The External Scan Selection Team included the members of the ESTF and two faculty representatives and two classified representatives from each college. The selection team chose the College Brain Trust (CBT) to complete the SOCCCD External Scan 2013.

The College Brain Trust's consultants who led the project were Dan Rosenberg and Julie Slark. They started work with a "kick-off" meeting of the newly named External Scan Task Force on March 8, 2013. On April 5, 2013, the consultant team met with the District-wide Planning Council, as well as other district and college groups, to provide an update of activities.

The task force created a SharePoint site to document the project. This information can be found in the District Services SharePoint site under the District-wide Planning Council area. All agendas, minutes and shared documents were collected over the three months of work with the College Brain Trust. The direct link to the site is <https://sharepoint.socccd.edu/chancellor/dp/dwpc/estf/default.aspx>

The External Scan Task Force met weekly to discuss the progress of the external scan and work on preparing for the next cycle of planning for district-wide and college strategic plans. Drafts of the scan were provided to the task force on a regular basis and ESTF members shared the drafts with their college constituents. Comments and suggestions were incorporated into the report to the extent possible.

Introduction

This external environmental scan was conducted in Spring 2013, with the purpose of informing SOCCCD's, Saddleback College's, and Irvine Valley College's strategic planning activities, which are newly being coordinated throughout the district. The External Scan Task Force, a sub-group of the District-wide Planning Council, guided the work of the consultant team in the development of the scan, with meetings and phone conferences during March, April, and May 2013. The expectation was that the external scan would include 1) a demographic description and population projections for the service areas of the district and colleges, 2) an analysis of the labor market needs relative to SOCCCD's educational programs, and 3) future high school graduate projections for the areas and enrollment projections for the colleges through the year 2020.

The context for the use of this external scan and for strategic planning is provided by the District's and colleges' mission statements:

South Orange County Community College District - *South Orange County Community College District provides a dynamic and innovative learning environment dedicated to student success and economic growth of the region.*

Irvine Valley College - *Irvine Valley College is committed to student success. The College is devoted to student learning through exemplary teaching, integrated support services, effective stewardship, and continued accessibility in a diverse community.*

Saddleback College - *Saddleback College enriches its students and the south Orange County community by providing a comprehensive array of high-quality courses and programs that foster student learning and success in the attainment of academic degrees and career technical certificates, transfer to four-year institutions, improvement of basic skills, and lifelong learning.*

The report is divided into three sections. The first section of the report is the Demographic Analysis, which contains geographic definitions of the district and colleges' services areas, and statistics and analysis about population and population growth, demographic profile, high school graduate trends, and enrollment trends and projections. The second section of the report is the Labor Market Analysis which contains the market outlook, identification of target occupations, recommended programs for consideration and a gap analysis. The last section of the report includes conclusions for consideration based on the analysis of the areas identified in the report. The summaries of key points are to be considered during the strategic planning process and beyond. The hope is that users of this report will identify additional key conclusions for the many types of planning and programming conducted throughout the district. For continuing labor market analysis considerations, college faculty and staff can query the EMSI database, to which the district subscribes, to further evaluate current and potential programs.

Even during the short time that this external environmental scan was being conducted, the communities and variables being studied changed rapidly. Consequently, the scan should be reviewed and used for planning to identify broad trends and to provide an overview, but discussion and more detailed research is needed for in depth evaluation of individual topics.

Demographic Analysis

A. Overview

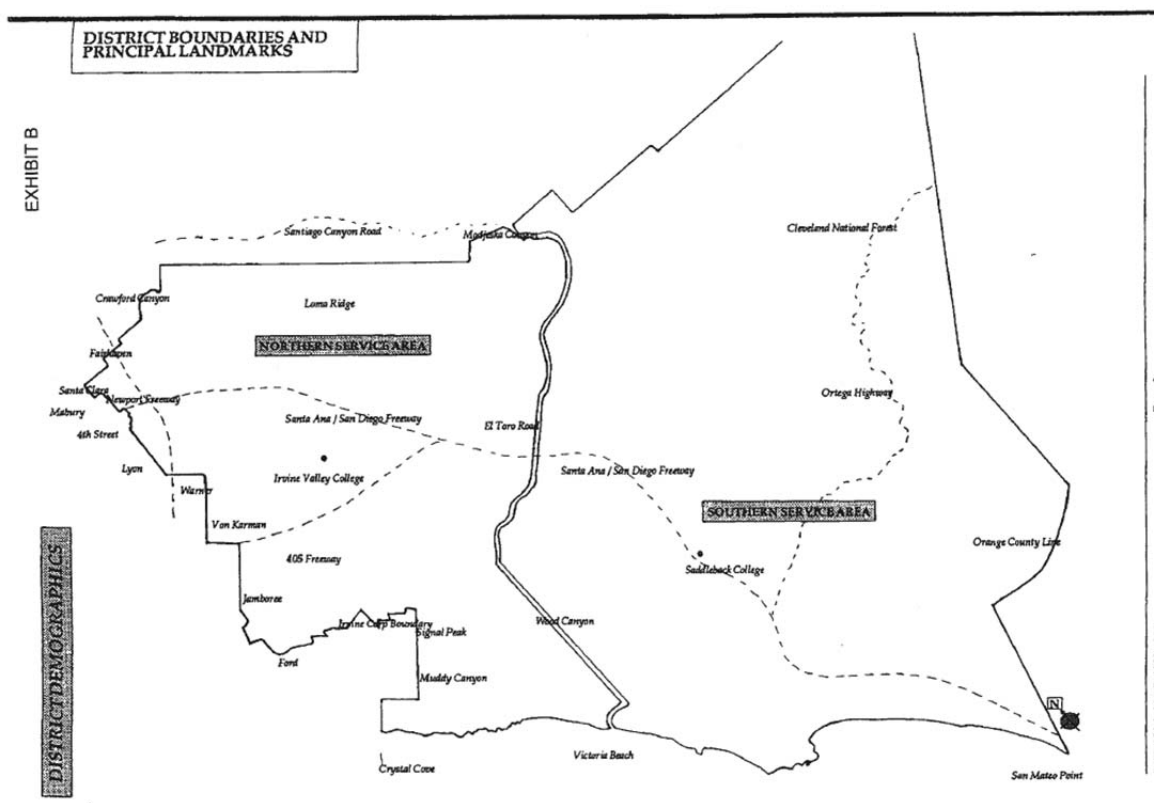
Following are the population and demographic profile statistics that provide one component for the SOCCCD external scan. The statistics, primarily from the ESRI (Economic and Social Research Institute) database, display population statistics for 2012 (in a few cases, for 2010) and projected to 2020, for the Saddleback and Irvine Valley College service areas, the entire district service area, Orange County, California, and in some cases, the U.S. These demographic measures are included:

1. Total population
2. Households, families, and housing units
3. Annual income
4. Age
5. Race and ethnicity
6. Language spoken at home
7. Educational attainment
8. Private school enrollment proportion
9. New housing

Service Areas

On January 23, 2012, the SOCCCD Board of Trustees approved Resolution #12-04. This resolution, in part, approved the boundary that divides the District service area between Saddleback and Irvine Valley Colleges. The map from the resolution follows.

Figure 1 - District Map from Board Resolution #12-04



The following site maps illustrate the service areas for the colleges and for the district, consistent with the map above. The district boundaries were obtained from GIS (geographic information systems) files produced by the State Chancellor's Office. The colleges' service areas were not available in this format, so were drawn manually, based upon the Board of Trustees approved map and accompanying descriptions. Because of the way these regions were created, the colleges' service areas will not, in aggregate, coincide exactly with the district service area. The differences, however, are minimal and do not have a significant impact on the data.

Colleges' Service Areas Site Map

Figure 2 - Colleges' Service Area Map

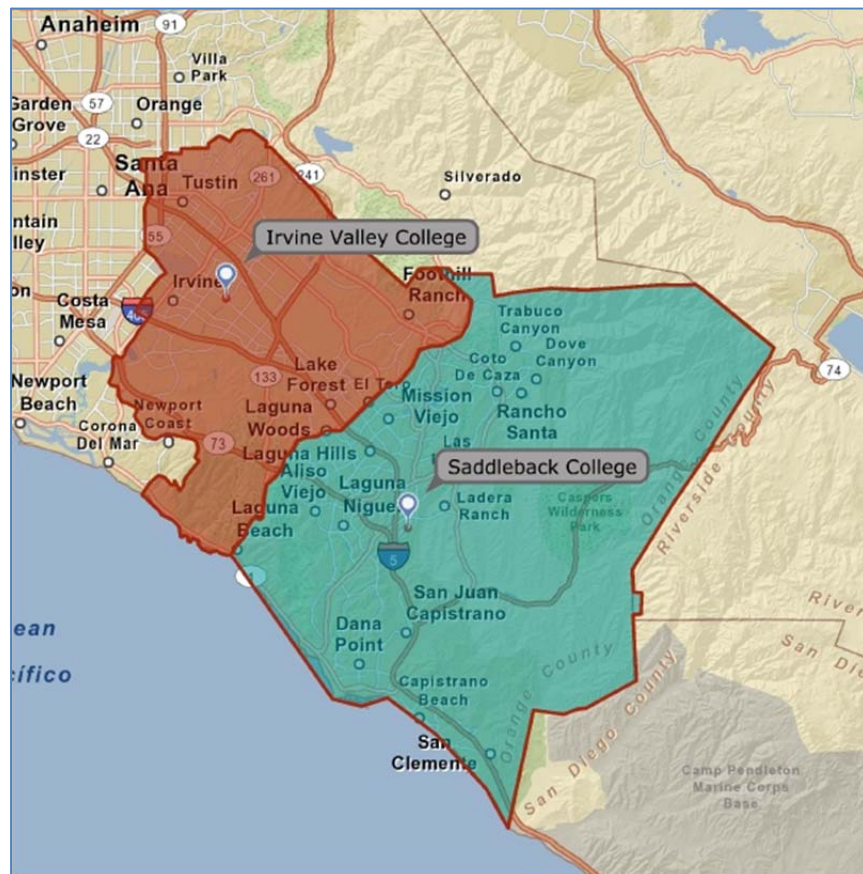
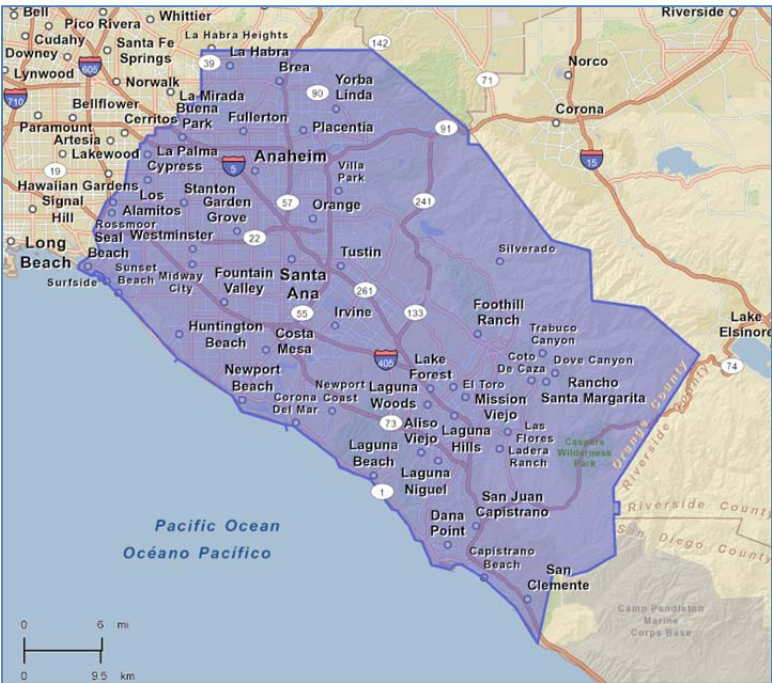


Figure 3 - SOCCCD Service Area Map



Orange County Map

Figure 4 - Orange County Map



B. Population and Population Growth

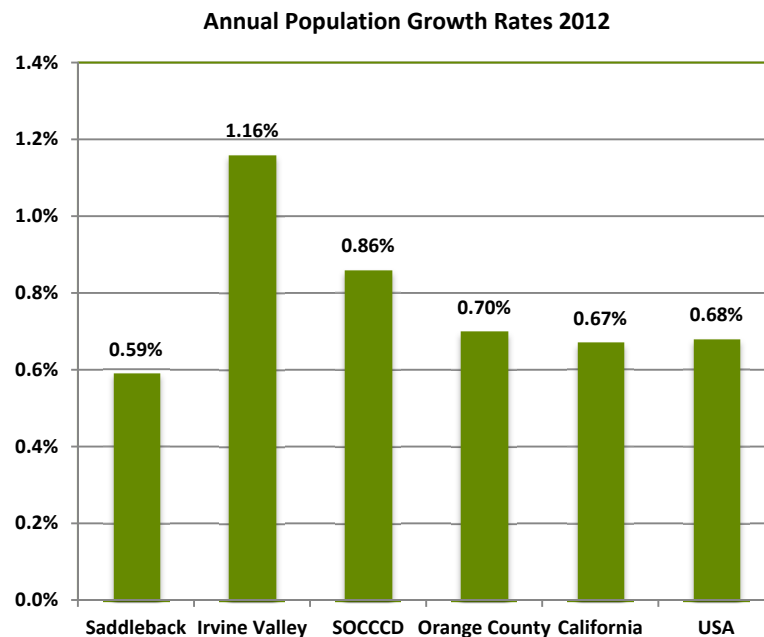
The table below sets the stage for the demographic statistics that follow by displaying population sizes of the colleges' service areas, the county, the state and the country. It shows that the population of the SOCCCD service area consists of almost one third of the population of the County in which it resides, and that the services area populations of the two colleges are similar in population size, with Irvine Valley's population being slightly smaller.

The graph shows the annual population growth rates for the geographic regions. SOCCCD's service area has grown .86% per year and at a greater rate than the county's or the State's. While the differences in population growth rates for the various geographic regions are not great, the fact that IVC's service area is growing more rapidly than the State, county, and Saddleback College is a consideration.

Figure 5 - SOCCCD Service Areas Demographic Profile

SOCCCD Service Areas - Demographic Profile 2012						
	Saddleback Service Area	Irvine Valley Service Area	SOCCCD ²	Orange County	California	USA
Population	501,394	426,532	922,197	3,054,269	37,707,477	313,129,017
Households	185,319	156,290	338,385	1,006,587	12,743,499	118,208,713
Families	129,840	103,999	232,667	713,399	8,692,762	77,957,858
Average Household Size	2.7	2.7	2.7	3.0	2.9	2.6

Figure 6 - Annual Population Growth Rates 2012



² There is a small difference between the district service area totals and the sum of the two colleges' service areas. This is due to some overlap of the geographical areas.

Student Zip Code Analysis

Saddleback College

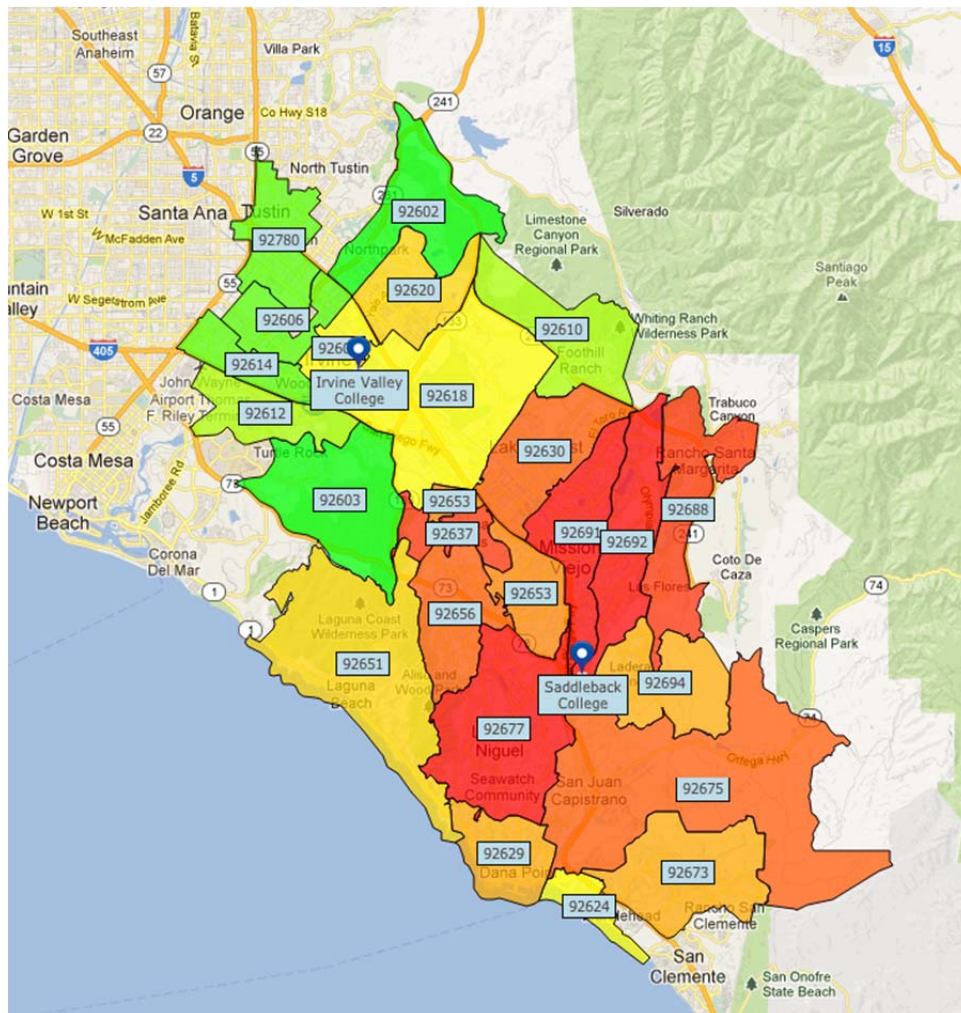
The following data shows the zip code of residence for students attending Saddleback College for fall semesters from 2008-2012. The data includes students enrolled in at least one credit course. The table includes the zip codes that averaged at least 100 students over the five-year time frame. For fall 2012, these 26 zip codes include 85.1% of the college's credit enrollments. The column labeled "Distance" shows the mileage from the college to the epicenter of each zip code.

Figure 7 - Saddleback College Student Zip Code of Residence

Saddleback College – Student Zip Code of Residence							
Zip Code	Distance (Miles)	Fall 2008	Fall 2009	Fall 2010	Fall 2011	Fall 2012	Average Headcount
92677	4	10.0%	10.1%	9.3%	9.6%	9.4%	2,219
92691	6	8.5%	8.6%	8.2%	8.4%	8.6%	1,938
92692	6	8.1%	7.7%	8.7%	8.0%	7.8%	1,849
92688	9	6.3%	6.7%	6.3%	6.9%	6.8%	1,513
92630	11	6.2%	6.3%	5.8%	6.3%	6.2%	1,414
92656	7	6.0%	5.7%	5.5%	5.8%	5.6%	1,305
92675	11	5.2%	5.5%	5.5%	5.3%	5.7%	1,254
92672	15	5.1%	5.2%	4.7%	4.8%	5.2%	1,150
92679	11	4.1%	4.3%	4.0%	4.3%	4.1%	958
92653	6	4.3%	4.0%	4.6%	3.8%	4.0%	954
92629	9	4.2%	4.0%	3.7%	3.7%	3.8%	891
92673	10	3.8%	3.8%	3.6%	3.9%	4.0%	868
92694	4	2.6%	2.5%	2.2%	2.3%	2.5%	552
92651	11	1.4%	1.4%	1.4%	1.4%	1.5%	328
92637	8	1.3%	0.7%	3.9%	0.4%	0.3%	314
92620	14	1.3%	1.3%	1.2%	1.5%	1.5%	312
92624	9	1.2%	1.2%	1.1%	1.2%	1.2%	269
92610	16	1.0%	1.0%	0.9%	0.9%	0.9%	219
92604	17	0.8%	0.8%	0.7%	0.9%	1.0%	193
92614	17	0.7%	0.8%	0.8%	0.9%	0.8%	182
92618	12	0.7%	0.7%	0.7%	0.8%	1.0%	181
92612	16	0.8%	0.8%	0.7%	0.7%	0.8%	179
92606	20	0.6%	0.7%	0.7%	0.6%	0.7%	152
92780	17	0.6%	0.6%	0.5%	0.6%	0.7%	136
92602	18	0.4%	0.6%	0.4%	0.6%	0.5%	117
92603	14	0.4%	0.5%	0.5%	0.5%	0.5%	105

The following map shows the fall 2012 data from the table above. Red shows the highest number of students, green shows the lowest.

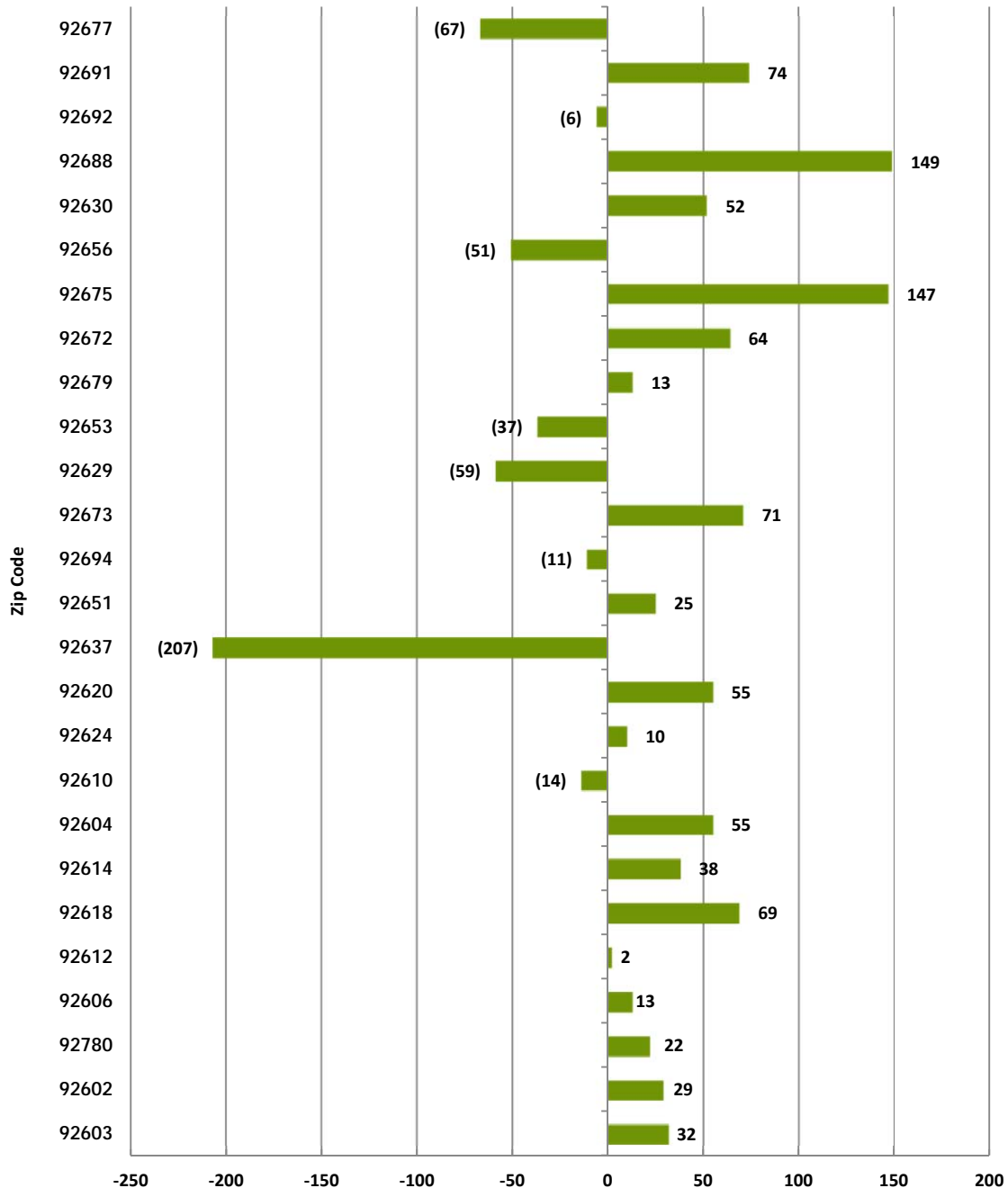
Figure 8 - Saddleback College Enrollments by Zip Code



The following chart shows the **net change** in headcount by zip code over the five-year time frame. The numbers include all students enrolled at the college in at least one credit course. The zip codes are shown in descending order of average fall term enrollment over the five-year period. The zip codes with the highest enrollments are at the top. These changes in headcount by zip code will not be analyzed in the external scan project but might be considered for analysis in a future internal scan.

Figure 9 - Saddleback College Change in Headcount by Zip Code

Saddleback College - Net Change in Headcount by Zip Code
2008-2012 (Fall Semesters)



Irvine Valley College

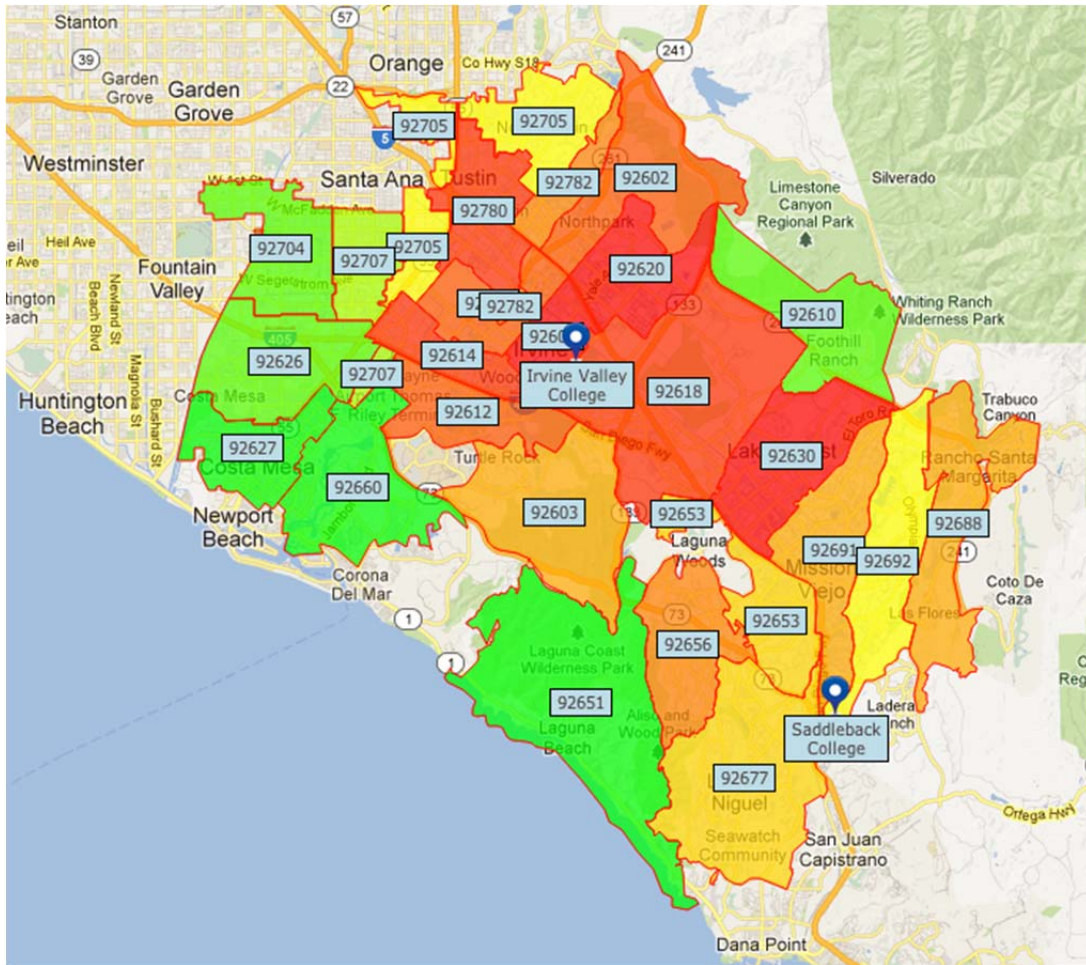
The following data shows the zip code of residence for students attending Irvine Valley College for fall semesters from 2008-2012. The data includes zip codes that averaged at least 100 students over the five year time frame. For fall 2012, these 26 zip codes include 76.6% of the college's enrolled students. The column labeled "Distance" shows the mileage from the college to the epicenter of each zip code.

Figure 10 - Irvine Valley College Student Zip Code of Residence

Irvine Valley College - Student Zip Code of Residence							
Zip Code	Distance (Miles)	Fall 2008	Fall 2009	Fall 2010	Fall 2011	Fall 2012	Average Headcount
92620	4	8.0%	8.4%	8.1%	8.4%	8.6%	1,123
92604	2	7.2%	7.3%	7.1%	6.8%	7.0%	957
92630	7	6.7%	6.5%	6.9%	7.0%	6.6%	912
92614	7	5.2%	5.0%	4.8%	4.7%	4.9%	667
92780	7	4.3%	4.5%	4.5%	4.5%	5.2%	620
92606	6	4.8%	5.0%	4.5%	4.4%	4.1%	617
92612	5	4.5%	4.3%	4.3%	4.2%	4.1%	576
92618	3	3.5%	3.5%	3.8%	4.2%	4.4%	527
92602	7	3.4%	3.4%	3.5%	3.5%	3.4%	466
92782	6	2.8%	3.1%	2.9%	2.7%	2.7%	381
92656	12	3.0%	2.6%	2.8%	2.7%	2.8%	375
92603	4	2.6%	2.6%	2.7%	2.6%	2.2%	345
92691	10	2.6%	2.5%	2.5%	2.8%	2.4%	345
92677	15	2.2%	2.3%	2.4%	2.1%	1.9%	297
92688	14	2.4%	2.1%	2.1%	2.2%	2.1%	293
92692	12	2.4%	2.1%	2.1%	2.0%	1.8%	278
92653	9	2.0%	2.0%	1.7%	1.7%	1.8%	251
92679	19	1.5%	1.5%	1.8%	1.7%	1.7%	223
92705	8	1.5%	1.6%	1.6%	1.4%	1.6%	206
92707	10	0.7%	0.9%	1.0%	1.5%	1.3%	146
92610	10	1.0%	1.0%	1.0%	0.9%	1.0%	135
92660	10	1.1%	1.1%	0.8%	0.9%	1.0%	133
92651	11	1.1%	1.1%	1.1%	0.9%	0.8%	131
92626	11	1.0%	0.9%	0.8%	0.9%	1.0%	127
92704	12	0.6%	0.7%	0.9%	1.0%	1.1%	117
92627	13	0.7%	0.7%	0.9%	0.9%	0.9%	114

The following map shows the fall 2012 data from the table above. Red shows the highest number of students, green shows the lowest.

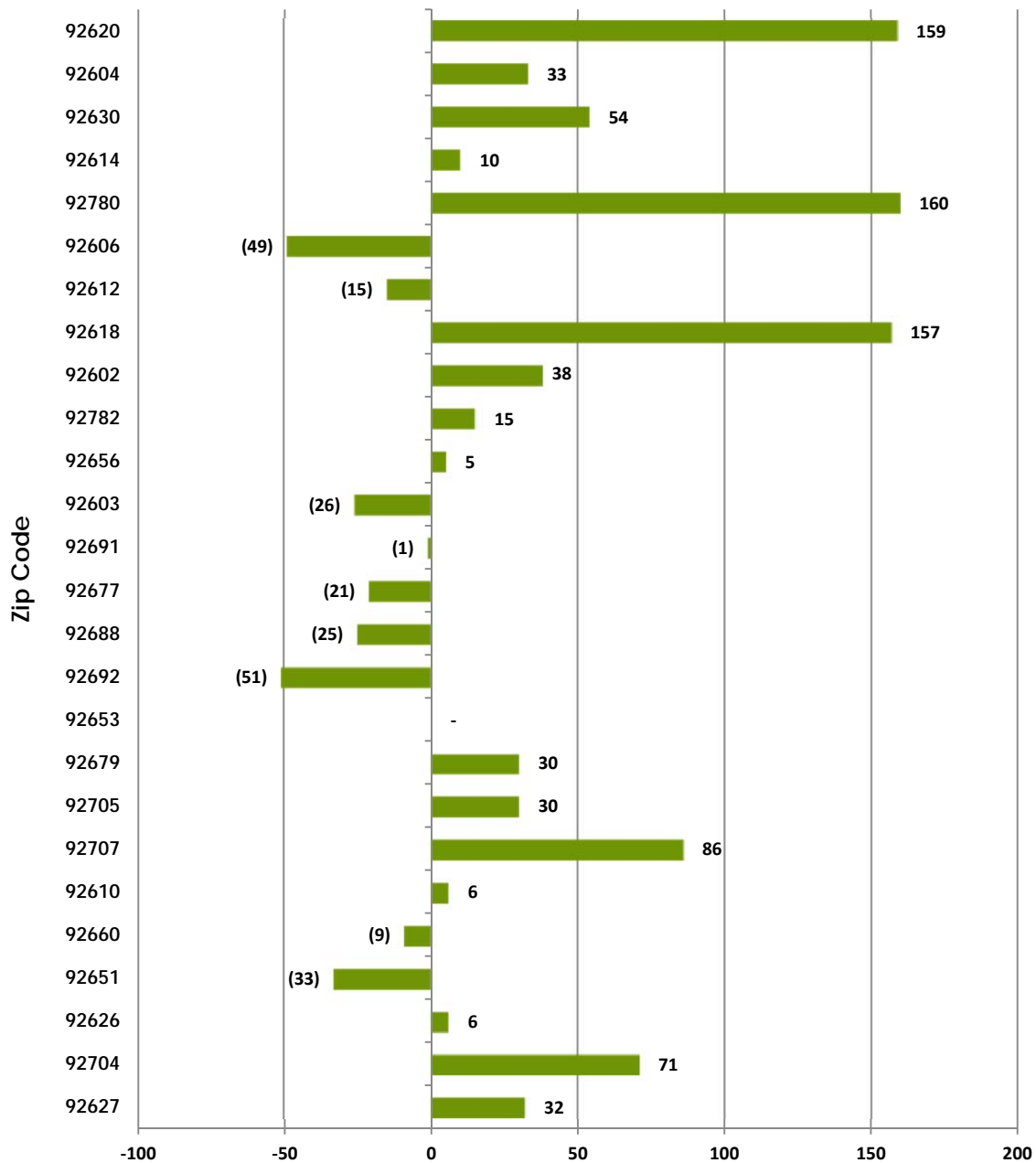
Figure 11 - Irvine Valley College Zip Code Analysis



The following chart shows the **net change** in headcount by zip code over the five-year time frame. The numbers include all students enrolled at the college in at least one credit course. The zip codes are shown in descending order of average fall term enrollment over the five-year period. The zip codes with the highest enrollments are at the top. These changes in headcount by zip code will not be analyzed in the external scan project but might be considered for analysis in a future internal scan.

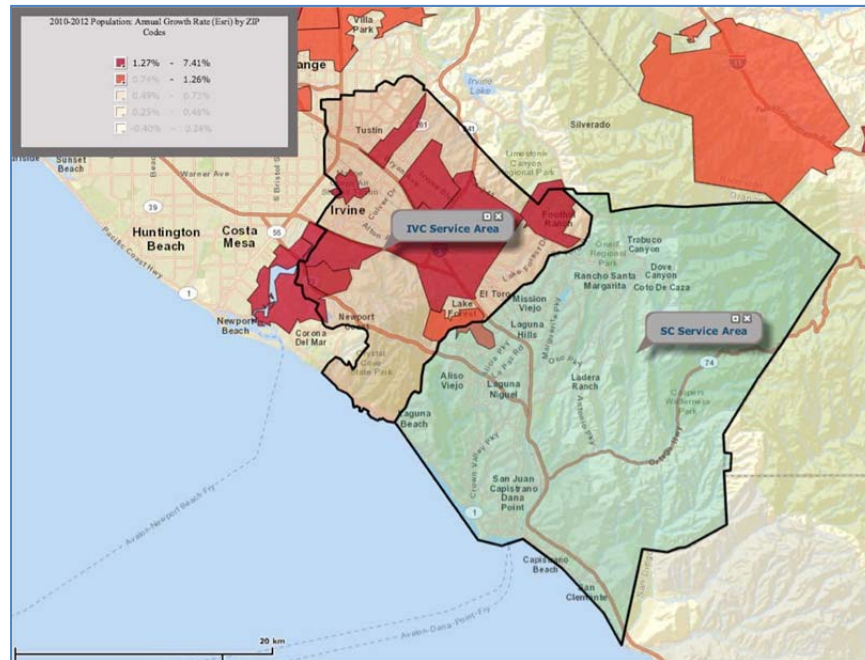
Figure 12 - Irvine Valley College Change in Headcount by Zip Code

Irvine Valley College - Net Change in Headcount by Zip Code
2008-2012 (Fall Semesters)



The following map shows the fastest growing zip codes in the district service area. The shaded zip code areas are the zip codes with populations growing at an annual rate greater than or equal to 1%. The map shows in more detail, that the Irvine Valley College service area is growing at a faster rate than that of Saddleback College.

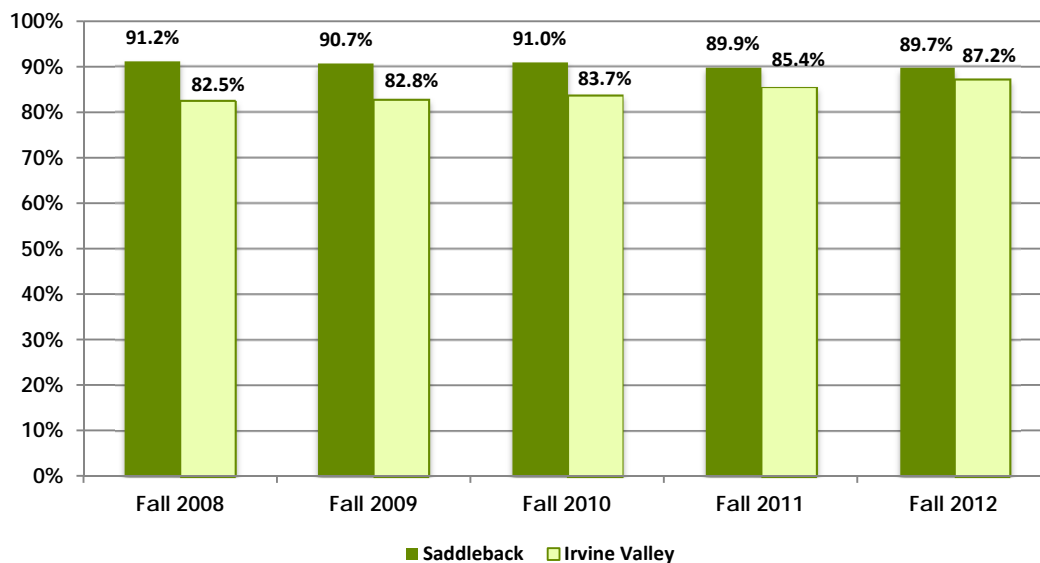
Figure 13 - Service Area Zip Codes with Highest Population Growth



The following chart shows for each college, the percentage of headcount that lists that college as College of Record. For example, in fall 2012, 89.7% of students taking at least one credit class at Saddleback College, listed Saddleback College as their college of record.

Figure 14 - Headcount Distribution by College of Record

Percentage of Headcount Listing that College as College of Record



C. Service Area Demographic Profile

Income

By both measures of income studied, the service areas of SOCCCD have greater annual incomes for 2012 and projected for 2020 than the State and Orange County, although the income levels are lower for Irvine Valley's service area than for Saddleback College's. While 17.8% of Orange County's population has an annual income of \$150,000 or greater, this percentage is much greater in the SOCCCD service at 25.3%. Nonetheless, the 15% of the district population that earns less than \$35,000 annually represents an important **special population** of economically disadvantaged individuals. This range of income across the District's population is a phenomenon to consider for workforce development and strategic planning.

Figure15 - Service Area Income Profile

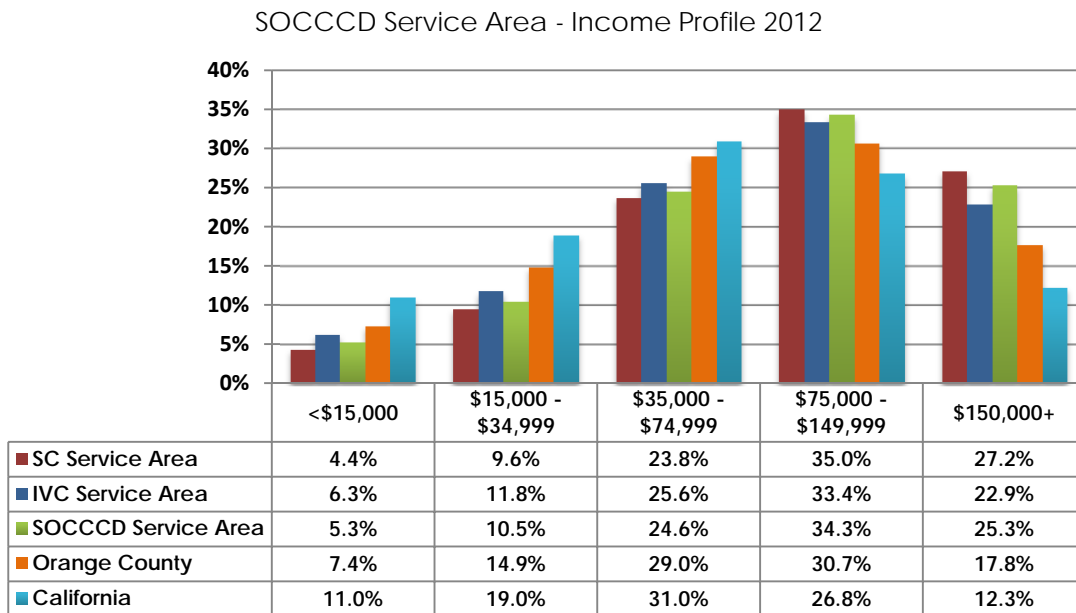
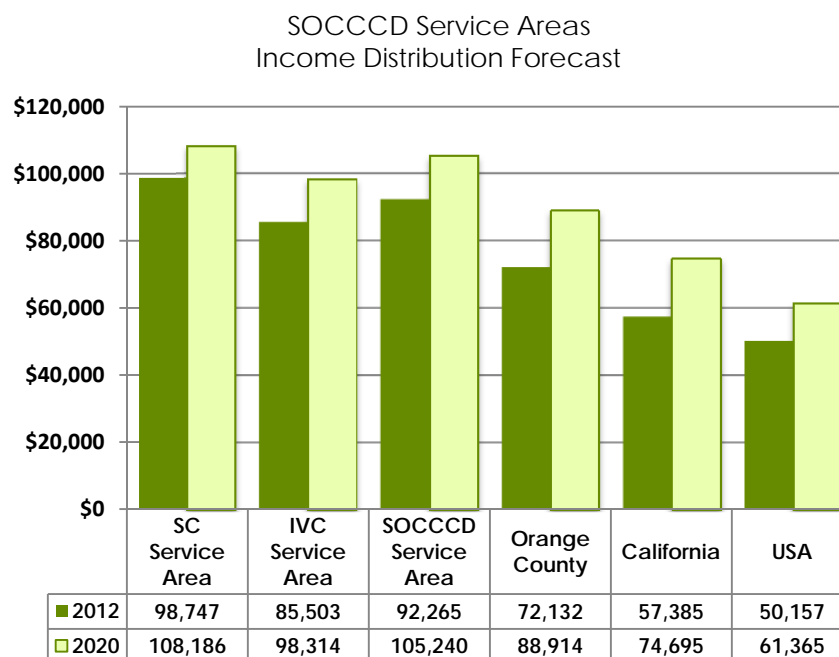


Figure 16 - Service Area Income Distribution



Age Profile

As is the case for most geographic regions in the country, the SOCCCD population is aging, according to most measures. Age trends of the population need careful consideration for projecting enrollments and planning for future educational programs.

The median age of the service area of Saddleback College, 40.5 years, is older than that for any comparison group. Further, the median age of both of the college service areas will increase between 2012 and 2020. The Irvine Valley College service area has a significantly lower median age, 35.9, than that of Saddleback College, however.

The numbers of the population in the 10-14 age group will increase slightly between 2012 and 2020 even though those in the 15-19 and 20-24 age groups will decline. This trend of relative increases and decreases is most significant in the Saddleback College service area. The greater increase in numbers, between 2012 and 2020, of those over 55 years of age is most significant, however. For the entire district service area, while those below 14 years of age will increase by **14,201** persons, the number of those over 55 years of age will increase by **46,138**.

Figure 17 - Service Area Population Median Age Profile

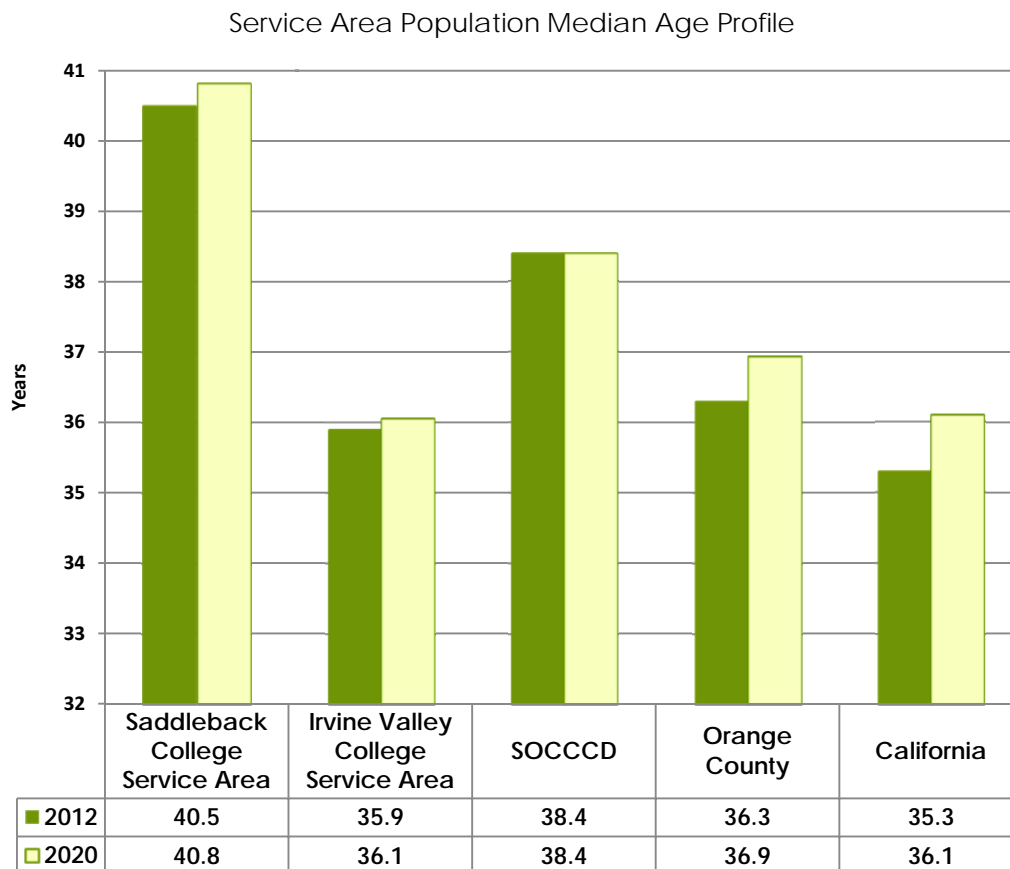


Figure 18 - Service Area Population Age Profile

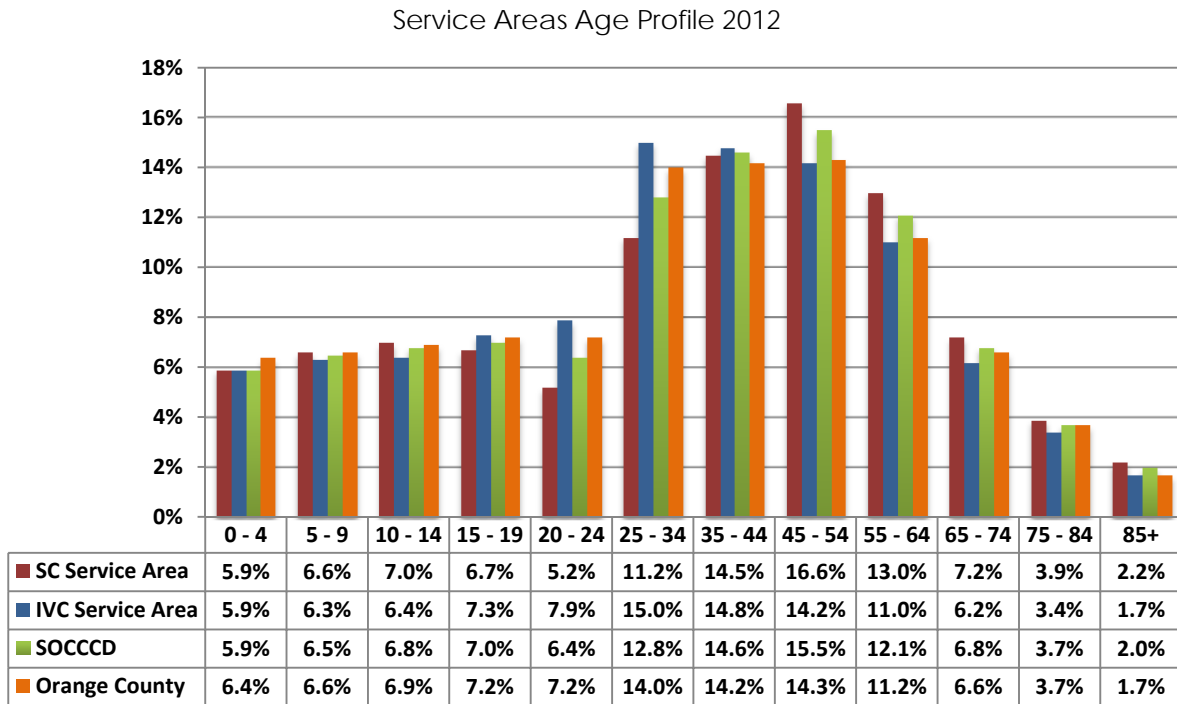


Figure 19 - Saddleback College Service Area Population Age Profile

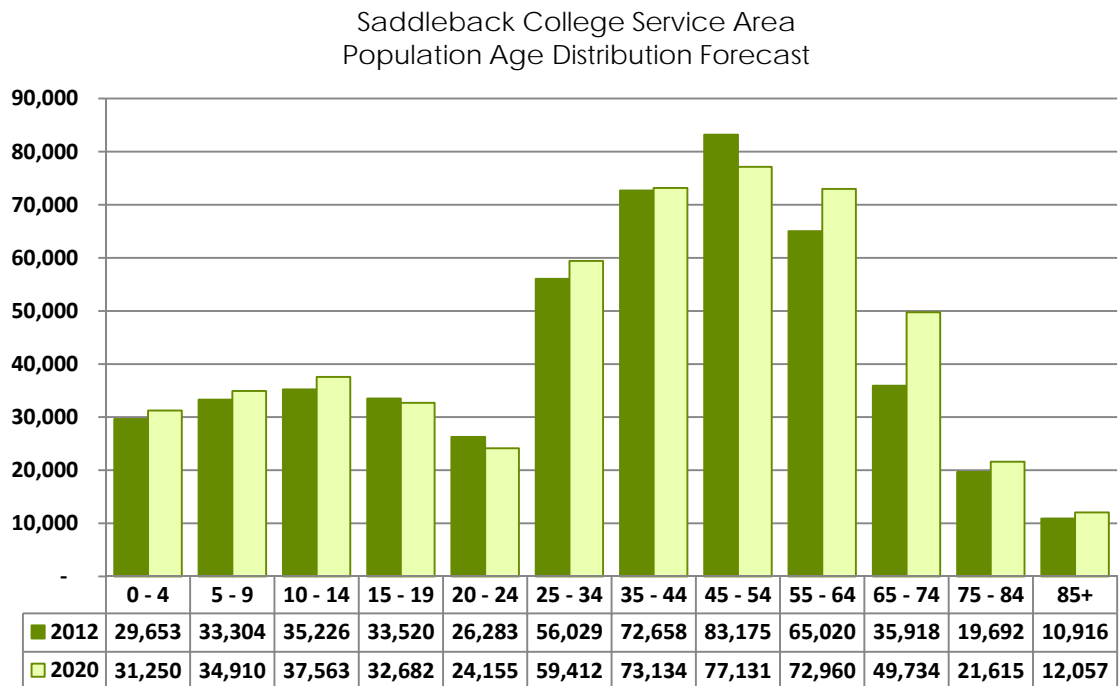


Figure 20 - Irvine Valley College Service Area Population Age Profile

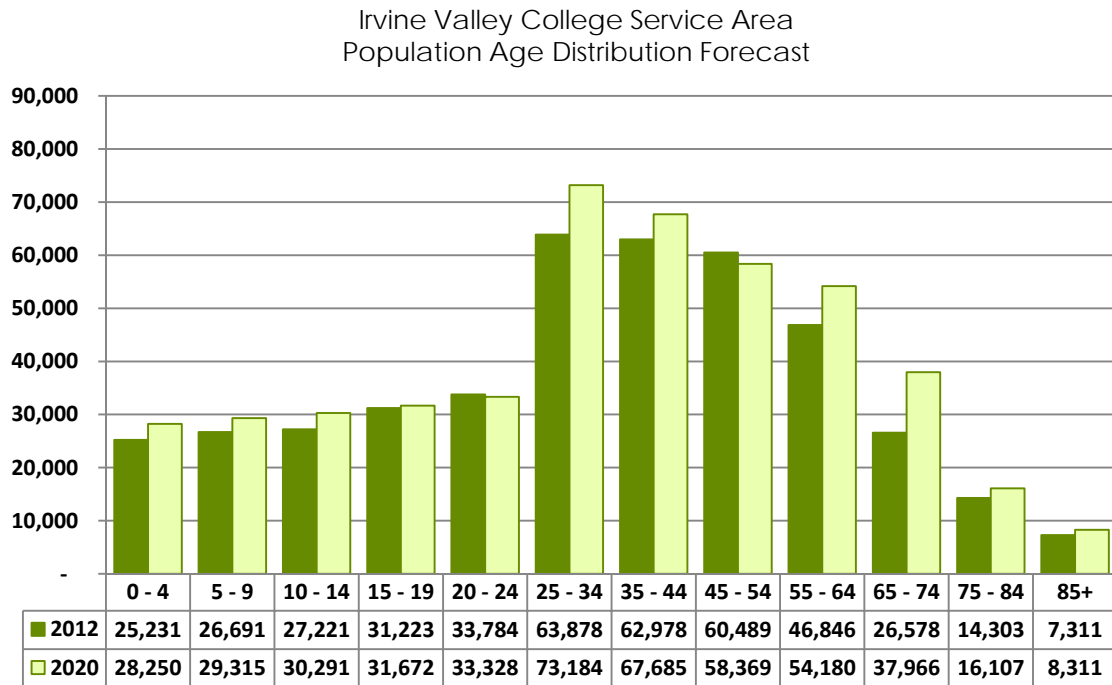


Figure 21 - SOCCCD Service Area Population Age Profile

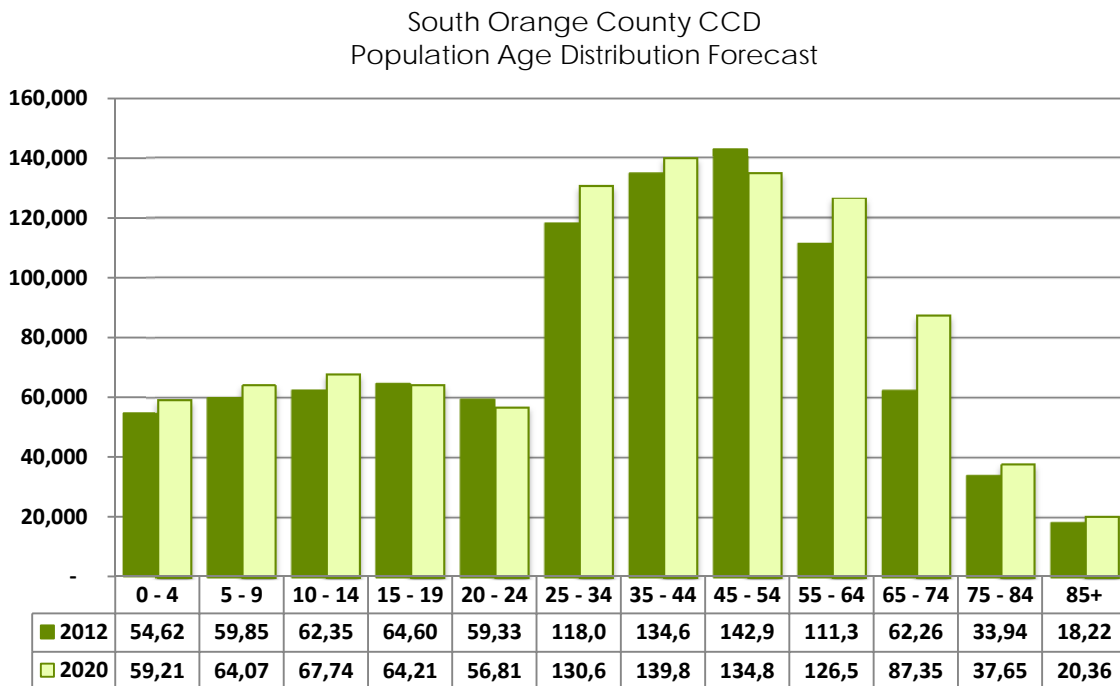
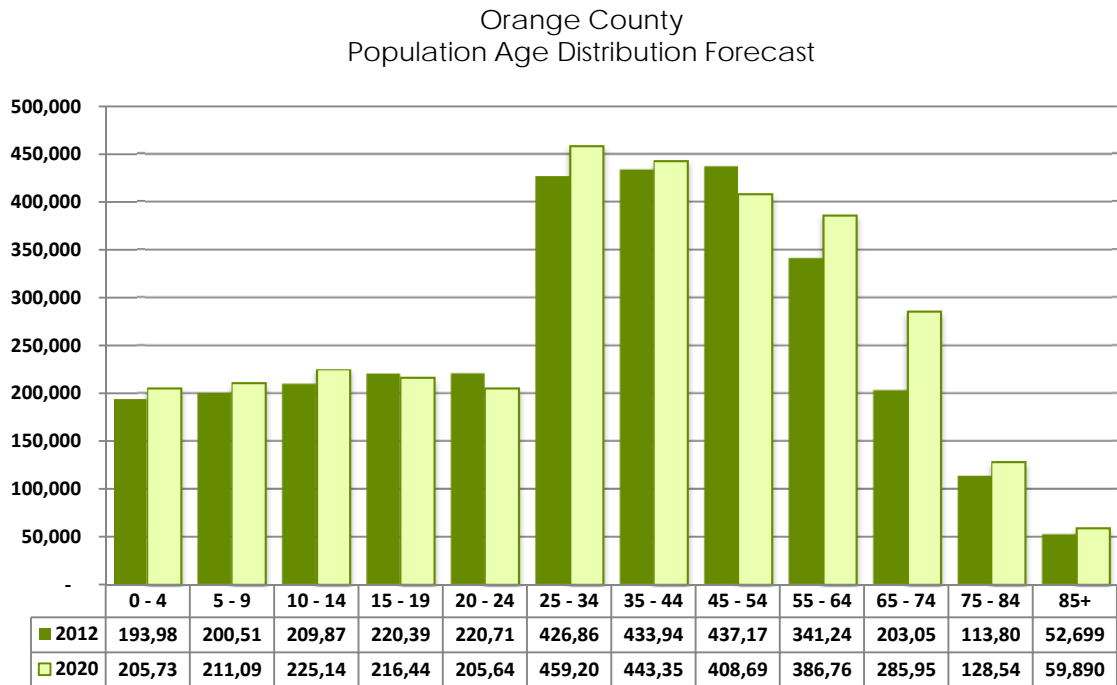


Figure 22 - Orange County Population Age Profile



The following table shows the population 18 years of age and older for the College service areas, the district, the County and the State.

Figure 23 - SOCCCD Service Area Population 18 Years and Older

SOCCCD Service Area - Population 18 Years of Age or Older					
Year	Saddleback Service Area	Irvine Valley Service Area	SOCCCD ³	Orange County	California
2012	381,561	330,990	707,325	2,318,190	28,431,438
2020	400,760	363,051	758,916	2,461,797	30,125,477

³ There is a small difference between the district service area totals and the sum of the two colleges' service areas. This is due to some overlap of the geographical areas.

Race and Ethnicity Profile

The SOCCCD service area is predominantly white, with 68.8% of the population in that racial category. However, IVC's service area includes a significantly large Asian population, 27.8% in 2012, and both college services areas include 19% Hispanic populations. The Asian and Hispanic populations are growing, so that in 2020 it is projected that 22.1% of the district service area population will be Hispanic, and 36% will be of a non-white race.

Figure 24 - Race and Ethnicity Profile 2012

Race and Ethnicity Profile 2012					
	Saddleback Service Area	Irvine Valley Service Area	SOCCCD	Orange County	California
White Alone	78.8%	56.9%	68.8%	59.8%	56.9%
Black Alone	1.4%	1.9%	1.6%	1.9%	6.1%
American Indian Alone	0.5%	0.3%	0.4%	0.6%	1.0%
Asian Alone	8.5%	27.8%	17.3%	18.2%	13.2%
Pacific Islander Alone	0.2%	0.2%	0.2%	0.3%	0.4%
Some Other Race Alone	6.1%	7.7%	6.9%	14.9%	17.3%
Two or More Races	4.5%	5.1%	4.8%	4.4%	5.0%
Hispanic Origin (Any Race)	19.0%	19.1%	19.1%	34.5%	38.4%

Figure 25 - Saddleback College Service Area Race/Ethnicity Profile

Saddleback College Service Area
Race / Ethnicity Distribution Forecast

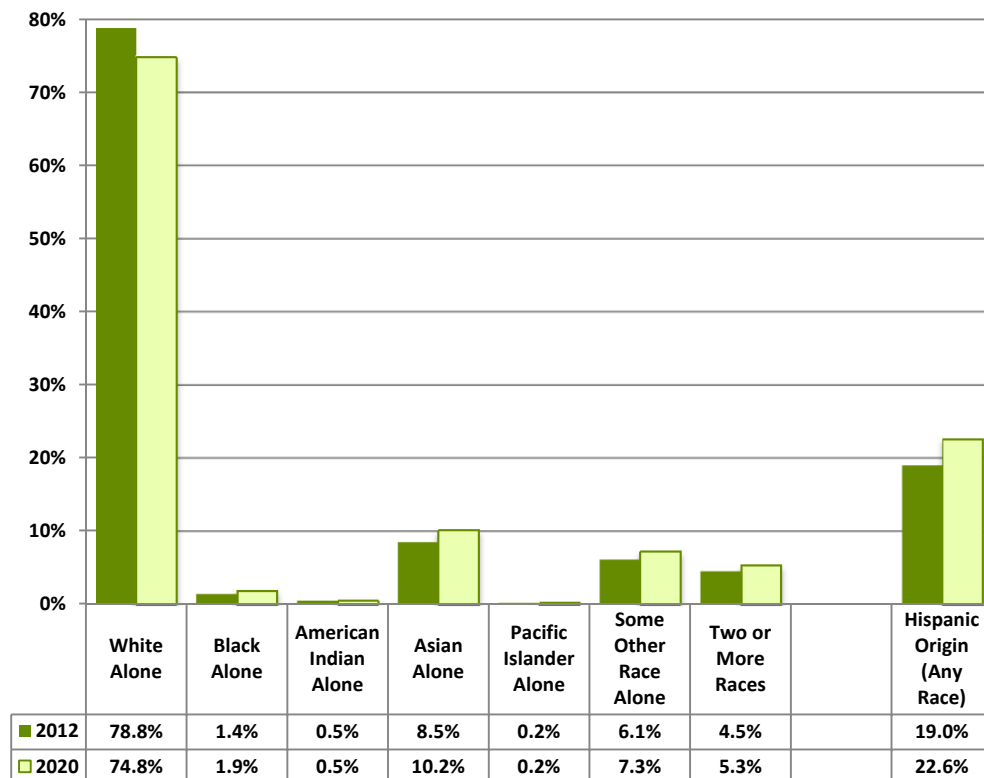


Figure 26 - Irvine Valley College Service Area Race/Ethnicity Profile

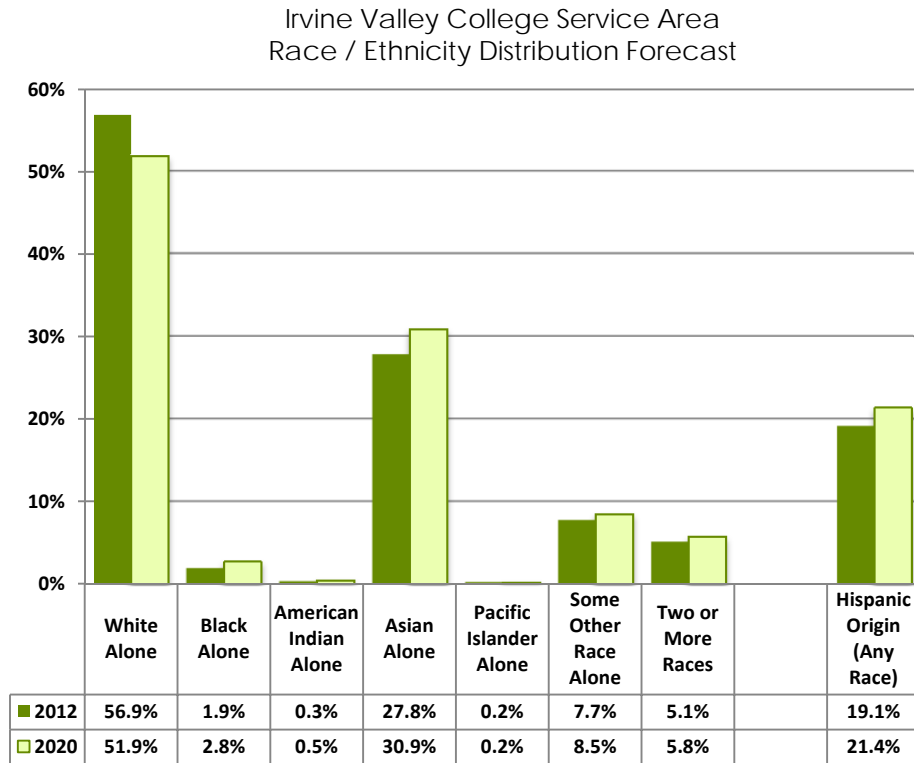


Figure 27 - SOCCCD Service Area Race/Ethnicity Profile

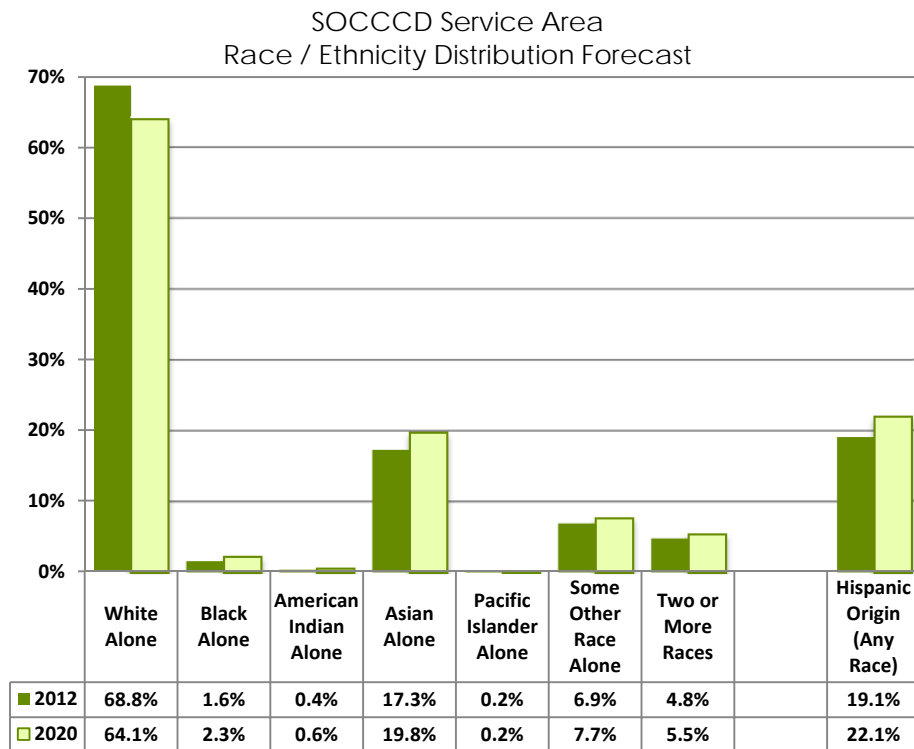
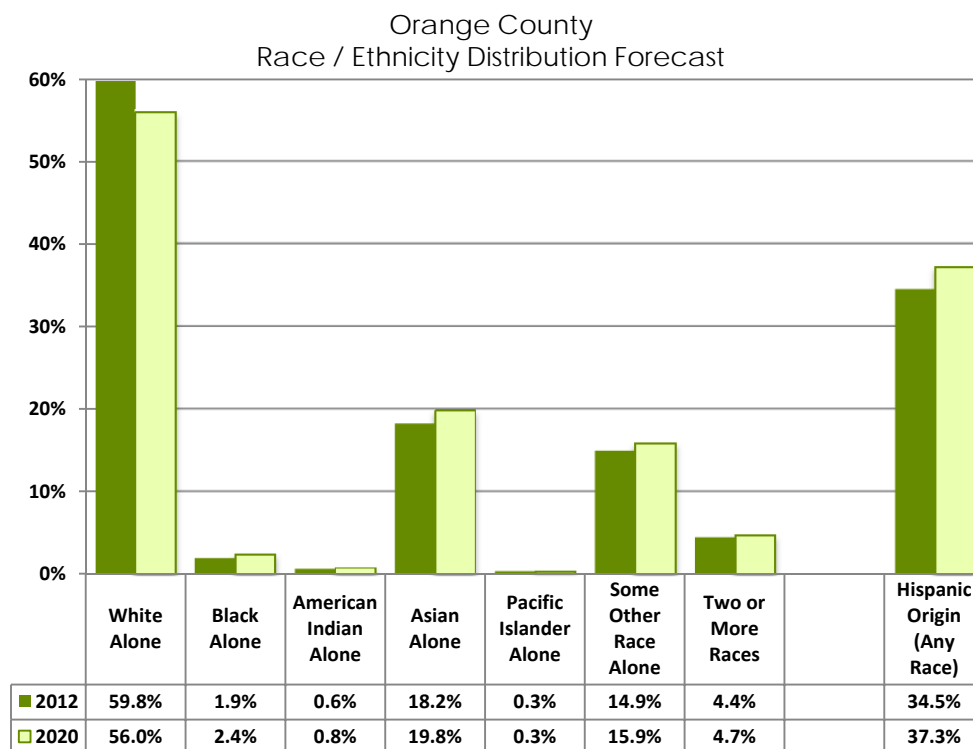


Figure 28- Orange County Race/Ethnicity Profile



Race/Ethnicity Profile – Adult Population

The following data shows the 2012 race/ethnicity profile of the adult population (age 18 years and older) only. There are slight differences between the adult population ethnic distributions and total population distribution. Those differences indicate that the population 18 years of age and over is slightly less diverse than the total population in the categories of “Hispanic”, “two or more races”, and “some other race alone”. This indicates that the younger population includes larger percentages of “Hispanic”, “two or more races”, and “some other race alone”.

Figure 29 - Race/Ethnicity Profile Population 18 Years of Age and Older

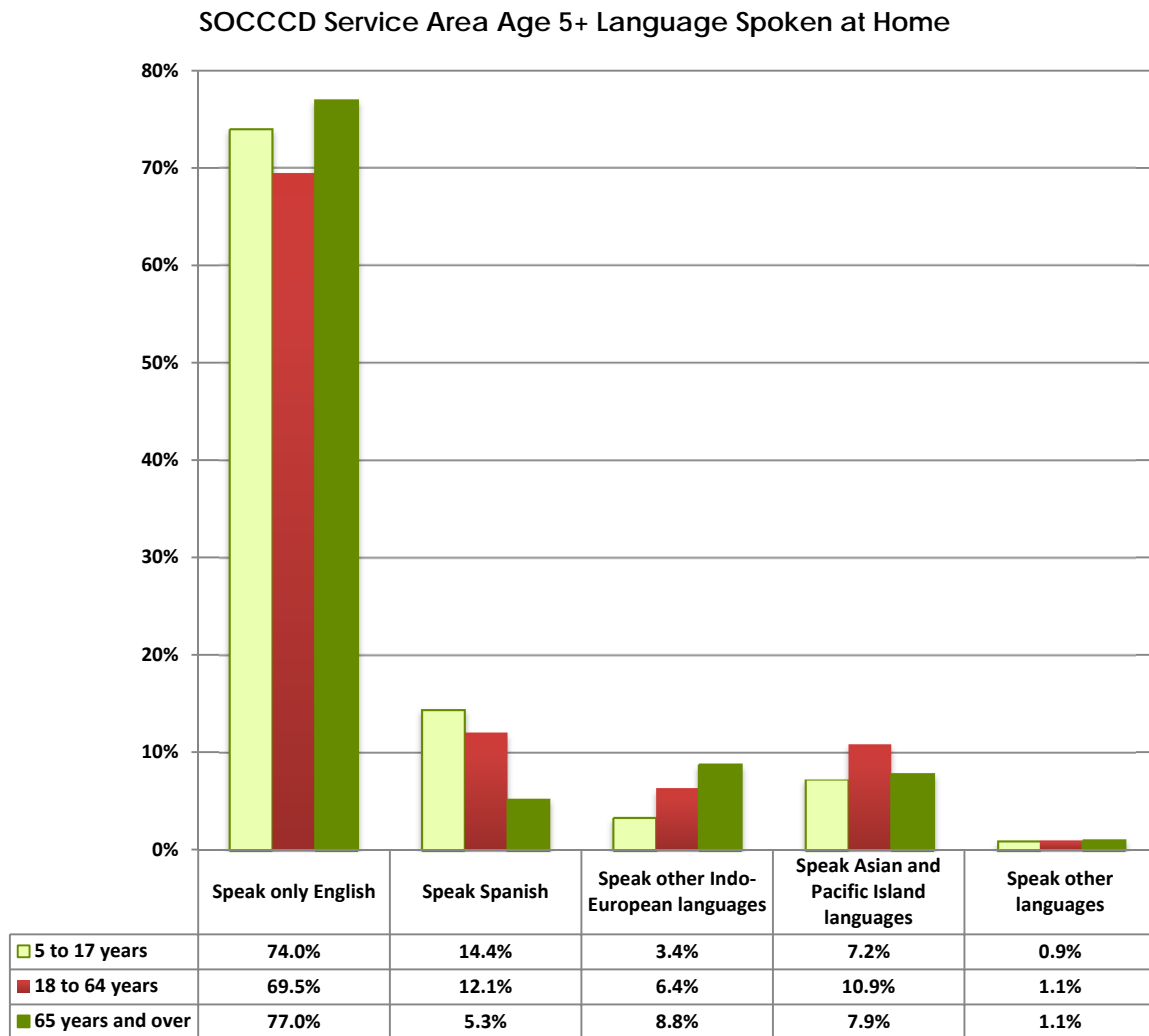
Race/Ethnicity Profile 2012 for Population 18 Years and Older						
Race/Ethnicity	SC Service Area		IVC Service Area		SOCCCD Service Area	
Hispanic	63,869	16.7%	55,065	16.6%	118,514	16.8%
White	308,183	80.8%	194,781	58.8%	499,952	70.7%
African American	5,461	1.4%	6,434	1.9%	11,842	1.7%
Amer. Indian	1,798	0.5%	1,096	0.3%	2,970	0.4%
Asian	34,310	9.0%	91,195	27.6%	124,060	17.5%
Pacific Islander	621	0.2%	674	0.2%	1,373	0.2%
Some Other Race	20,958	5.5%	22,145	6.7%	43,077	6.1%
Multiple Races	11,767	3.1%	12,334	3.7%	23,879	3.4%
Total ⁴	381,561	100.0%	330,990	100.0%	707,325	100.0%

⁴ The amount in the “Total” row does not equal the sum of the figures in the column. This is because people of Hispanic origin may be of any race.

Language Spoken at Home

“Language spoken at home” is a helpful measure for understanding a population’s diversity and educational and cultural preferences. The data below is for residents 5 years of age and older. It is notable that 25% to 30% of the SOCCCD service area speaks a language other than English at home. Those in younger and older age categories more often “speak English only”. The portion of this large group of non-English-at-home speakers that is limited-English speaking is a **special population** for the colleges to consider programmatically.

Figure 30 - SOCCCD Service Area Language Spoken at Home

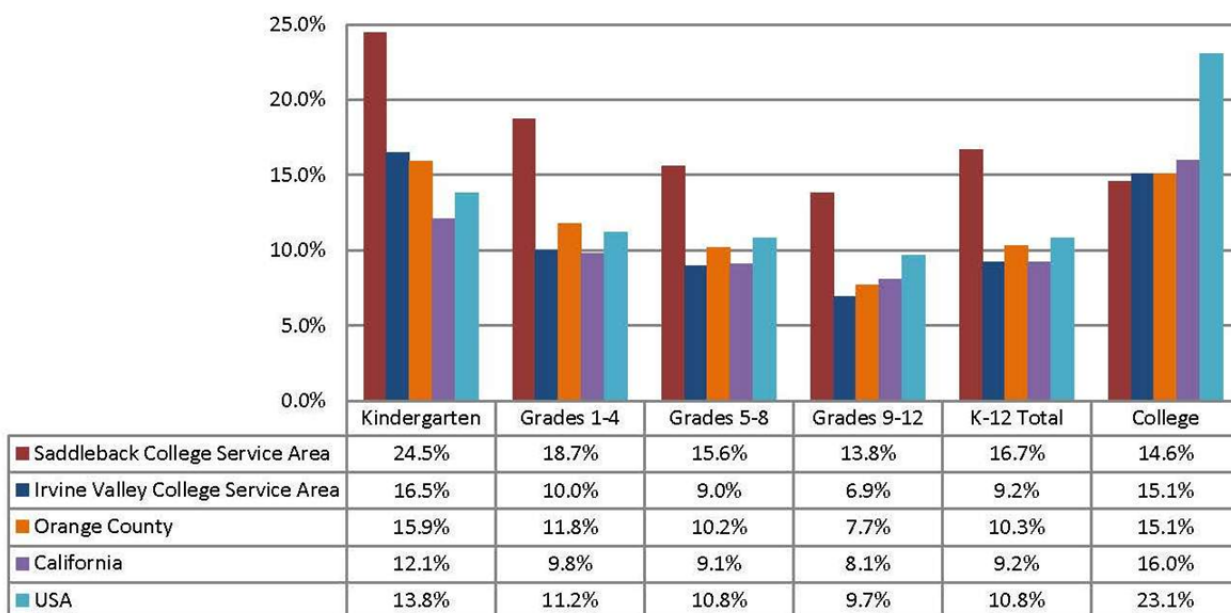


Private School Enrollments

The Saddleback College service area is remarkable for the percentage of K-12 students that are enrolled in private schools, 16.7%, a rate that is significantly greater than that for the other geographic regions studied. However, for college-level enrollments, the rate of private school enrollment is similar to that of the county and the State.

Figure 31 - Private School Enrollment by Grade Level

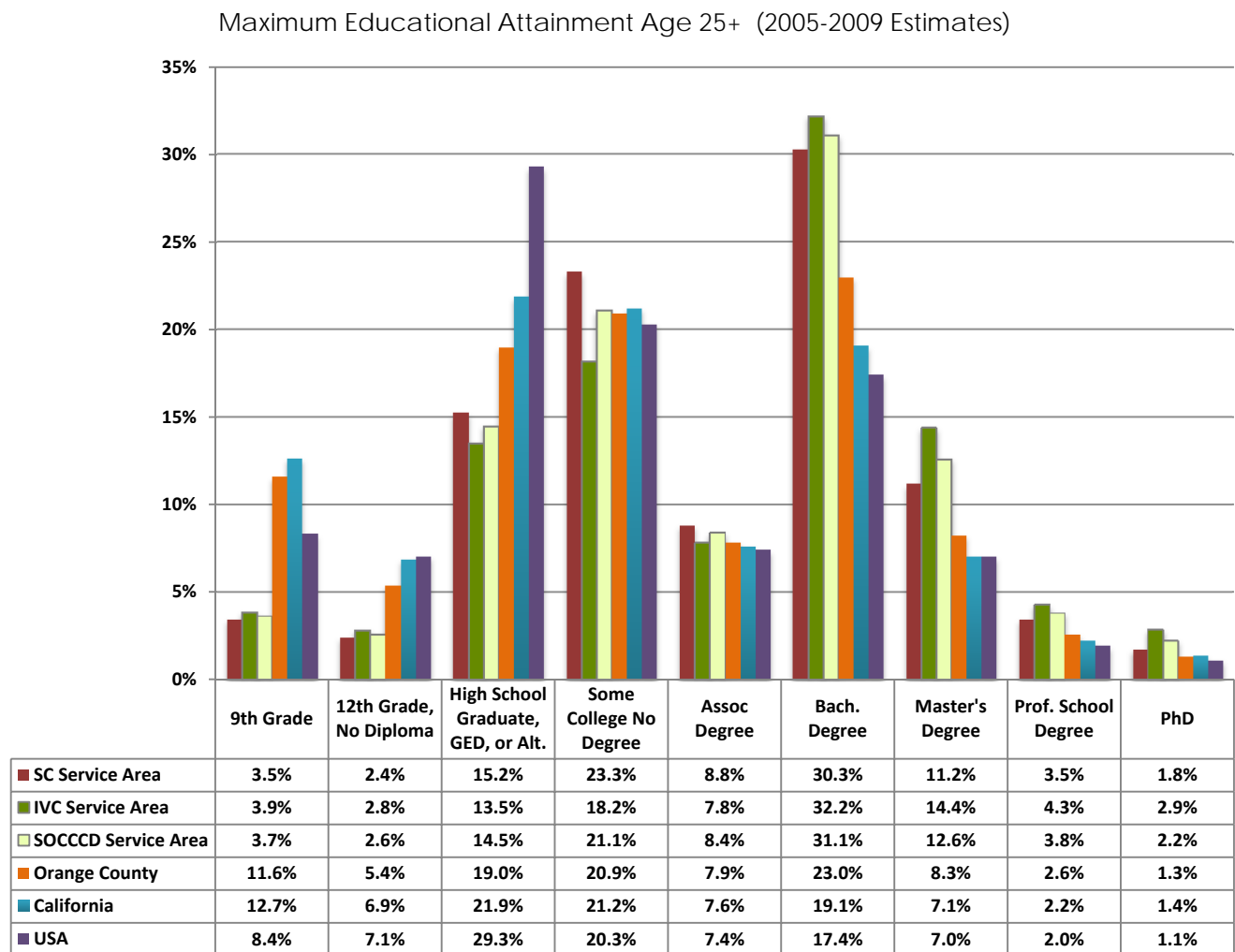
Private School Enrollment by Grade Level (2005-2009 Estimates)



Educational Attainment

The populations in the services areas for SOCCCD are highly educated relative to the county and state populations. Nearly half of the SOCCCD population 25 years of age or older has a bachelor's degree or higher, compared to 35% for the county and 30% for the state. This fact may indicate, among other relevant considerations, that many of the parents in the service areas strive for college educations for their children and that there will be fewer first-generation college students enrolled in SOCCCD colleges than in some community colleges. The IVC service area, home to the University of California at Irvine, has larger percentages of those with baccalaureate and higher degrees than Saddleback's. With this in mind, however, it is still incumbent upon all community colleges to address the educational needs of those adults who are less prepared academically.

Figure 32 - Maximum Educational Attainment Age 25 Years of Age and Older



New Housing

It is important to consider that many new housing projects are in the midst of development and construction, and/or are in the planning stages for the near future. According to an Orange County Business Council (OCBC) report (www.ocbc.org/research/workforce-housing-scorecard), a "turning point" in the housing market from the Great Recession is occurring. The report indicates that new housing starts for the city of Irvine are increasing at a faster rate than for any other city in the county, and the rate for San Clemente is the second highest in the county. **The new housing forecasted by OCBC (in the above-mentioned report) and the responding cities (noted below) are consistent with the population forecasts provided by ESRI above.**

District staff provided the following table that lists several of the new housing developments within the district service area:

Figure 33 - Orange County Proposed New Housing Developments

Examples of Proposed New Housing Developments in Orange County			
Name	Developer	Description	Location
Agave at Portola Springs	William Lyon Homes	Single Family Detached	Irvine
Madison at Central Park West	Lennar Homes	Condominium/ Town Homes	Irvine
Manhattans	Lennar Homes	Condominium/ Town Homes	Irvine
Soho at Central Park West	Lennar Homes	Condominium/ Town Homes	Irvine
The Branches	William Lyon Homes	Single Family Detached	Irvine
Willow Bend	William Lyon Homes	Single Family Detached	Irvine
Lyon Villas at Rancho Mission	William Lyon Homes	Condominium/ Town Homes	Mission Viejo
Standard Pacific Bungalows	Standard Pacific Homes	Single Family Detached	Mission Viejo
Meritage Homes at Sendero	Meritage Homes	Single Family Detached	Rancho Mission Viejo
Sendero	Shea Homes	Condominium/ Town Homes	Rancho Mission Viejo
Tustin Legacy	Augusta, Mirabella & Ainsley Prk	Apartments/Town Homes	Tustin

The new housing literature referenced in this table was evaluated, and representatives from city planning departments were contacted for this external scan. Spokespersons for the cities of Irvine and Tustin responded. Irvine is anticipating approximately 2000 new housing starts between 2012 and 2020, some of which are apartments, and Tustin 1400 new housing starts between 2010 and 2020. Construction is starting this year in the Great Park in Irvine for the first development of 726 new homes, named, "Pavilion Park". Some of the new developments, such as half of the Rancho Mission Viejo project in the San Juan Capistrano area, are intended for senior living. Others, including Madison, Manhattans, Soho, and Willow Bend, represent small developments with fewer than 100 housing units planned. Populations for the new developments do not always include in-migrations, or incremental population size. All in all, these findings are positive reflections of the economy and of the long-term health and vibrancy of South Orange County.

D. High School Graduate Trends

One goal of this external scan project is to present high school graduate trends of the colleges' service areas, with the aim that the numbers of high school graduates, and thus enrollment for the colleges, can be estimated for 2020. The only high school graduate projection available for the year 2020 from an official education or state agency is a projection for the entire Orange County; this Department of Finance projection, below, estimates a decline from 2010 to 2020 of -1.5% in the number of graduates for the entire county.

When contacted, the spokesperson for the largest feeder private high school, Santa Margarita's, indicated that their enrollments and graduates will remain stable in size and will not increase.

Figure 34 - Orange County High School Graduates

Orange County High School Graduates 2010-11 & 2020-21 Projected			
	2010-11	2020-21 Projected	% Change
Graduates	37,234	36,687	-1.5%

Source: CA Department of Finance

Next, this external scan provides the trends for numbers of graduates for each high school in the colleges' service areas for the past five years. It can be seen that for the high schools in the Saddleback College service area, the numbers of graduates increased 21.6% and for Irvine Valley, 15.9% from 2006-07 to 2010-11, the most recent year for which statistics are available at this time. Almost all high schools demonstrated an increase in graduates, and a new high school, San Juan Hills High with 493 2010-11 graduates, opened in the Saddleback College service area.

Figure 35 - SOCCCD Feeder High School Graduate Trends

SOCCCD Feeder High School Graduate Trends								
College	District	High School	06-07	07-08	08-09	09-10	10-11	% 06-07 to 10-11
Saddleback	Capistrano USD	Aliso Niguel	689	723	731	784	729	5.8
	Capistrano USD	Capistrano Connections Academy Chrtr	0	0	19	51	75	na
	Capistrano USD	Capistrano Valley	527	620	690	736	655	24.3
	Capistrano USD	Dana Hills	629	789	674	749	660	4.9
	Capistrano USD	Junipero Serra High	83	81	91	117	142	71.1
	Capistrano USD	Opportunities For Learning	12	13	23	26	34	183.3
	Capistrano USD	San Clemente	604	696	724	712	746	23.5
	Capistrano USD	San Juan Hills	0	0	0	0	493	na
	Capistrano USD	Tesoro	654	684	696	663	645	-1.4
	Laguna Beach USD	Laguna Beach	224	249	270	251	244	8.9
	Saddleback valley USD	El Toro	599	564	605	675	624	4.2
	Saddleback valley USD	Laguna Hills	421	409	441	414	404	-4.0
	Saddleback valley USD	Mira Monte (Alternative)	38	38	60	37	44	15.8
	Saddleback valley USD	Mission Viejo	623	720	621	639	723	16.1
	Saddleback valley USD	Silverado (Cont.)	44	53	77	123	116	163.6
	Saddleback valley USD	Trabuco Hills	693	690	736	688	767	10.7
Subtotal, Saddleback			5,840	6,329	6,458	6,665	7,101	21.6
IVC	Irvine USD	Alternative Education-San Joaquin	46	33	48	42	32	-30.4
	Irvine USD	Creekside	86	101	81	66	84	-2.3
	Irvine USD	Irvine	398	468	428	459	474	19.1
	Irvine USD	Northwood	499	561	518	524	504	1.0
	Irvine USD	University	490	527	520	595	552	12.7
	Irvine USD	Woodbridge	519	469	548	494	477	-8.1
	Tustin USD	Beckman (Arnold O.)	293	453	421	483	525	79.2
	Tustin USD	Foothill	397	397	476	492	485	22.2
	Tustin USD	Hillview (Cont.)	48	58	64	73	76	58.3
	Tustin USD	Sycamore(Alternative)	6	14	9	13	11	83.3
	Tustin USD	Tustin	391	298	355	414	457	16.9
Subtotal, IVC			3,173	3,379	3,468	3,655	3,677	15.9
Privates	Private Feeder	Capistrano Valley Christian Schools	55	55	46	53	61	10.9
	Private Feeder	Halstrom	40	50	58	50	52	30.0
	Private Feeder	Horizon Charter						na
	Private Feeder	Jserra Catholic	106	143	na	262	220	107.5
	Private Feeder	Saddleback Christian Academy	13	12	20	15	22	69.2
	Private Feeder	Saddleback Valley Christian	52	57	57	77	59	13.5
	Private Feeder	Santa Margarita Catholic	333	417	367	408	368	10.5
	Private Feeder	St. Margaret's Episcopal	85	100	87	95	na	na
	Private Feeder	Tarbut V'torah Community Day	30	0	32	42	29	-3.3
Subtotal, Private Schools			714	834	667	1,002	811	13.6
All SOCCCD	Total, SOCCCD Feeder Public High Schools		9,727	10,542	10,593	11,322	11,589	19.1
Other/Private Feeder		Mater Dei - Santa Ana	525	568	534	525	513	-2.3
	Orange County DOE	Access Juvenile Hall	60	99	44	108	161	168.3
	Orange County DOE	Occa:Chep/Pchs (Home School)	106	90	107	100	125	17.9

If a high school graduate projection for 2020 were to rely on past trends, the number of graduates would be projected to increase. However, the age distributions of the service areas, displayed above in the demographic profile section of this report, indicate that the numbers of those in the service area populations reaching traditional college age in 2020 will decrease in that year from the numbers in 2012.

Consequently, this study examined the numbers of students enrolled currently in the 5th grade in the service areas' unified school districts, and compared those numbers to the numbers of students enrolled in the 12th grade currently. The number of those currently enrolled in the 5th grade approximates the number that will be graduating in 2020. For Saddleback College's service area, there is an -8.8% difference in the number of current 5th graders to 12th graders, and for Irvine Valley College's, there is a +14% difference. However, the number of students graduating from private schools in the Saddleback College service area, specifically from Santa Margarita (368 in 2010-11), will add to the number represented in the table below and result in an estimate of little change for the number of graduates for that service area in 2020.

Figure 36 - SOCCCD Feeder School Enrollments

SOCCCD Feeder School Enrollments 12 th Grade & 5 th Grade 2012-13			
Enrollment	12 th Grade	5 th Grade	% Difference
Saddleback College Unified Districts	7,149	6,517	- 8.8%
Irvine Valley College Unified Districts	3,993	4,551	14.0%
Total SOCCCD Public Feeder Unified Districts	11,142	11,068	- 0.7%

Source: CA Department of Education, Data Quest

Evaluating age distributions of the populations and 5th grade enrollments, therefore, one could predict that the number of Saddleback College service area high school graduates will remain approximately the same; and the number of Irvine Valley College service area high graduates will increase approximately 14% from the 2010-11 level.

E. Enrollment Trends and Projections

Enrollment and "Participation Rates"

The entire district enrolled 40,486 students in Fall 2012, per the California Community Colleges Chancellor's Office Data Mart, with 26,090 enrolled at Saddleback College and 14,396 at Irvine Valley College. (See the table below.) Headcount enrollment at the colleges is remaining relatively constant, with a 2% increase for Saddleback College between Fall semesters 2008 and 2012 and barely 1% increase for Irvine Valley College. Between 2008 and 2012, however, enrollments had slightly increased before decreasing in 2012.

The "participation rate", the number of students enrolled in one of the colleges per 1000 adult population within the boundaries of the district service area, was .057 for Fall 2012. That is, for every 1000 adults, 57 were enrolled at an SOCCCD college. This is a high rate of participation, considering that the same rate for the entire state of California was .035. This rate fluctuated only slightly over the past five years with a high of .062 in Fall 2009. Saddleback College's overall 2012 participation rate is .068 and IVC's rate is .043.

Enrollment Projections

For this external scan, variations of the participation rate calculation were used to provide a range of projected enrollments for Fall 2020 for the colleges and for the entire district. Because California community colleges are "open door" institutions with the mission to serve the educational communities of their service areas, the evaluation of participation rates has served as a reasonable means to project and plan for future enrollments. Statistical models, however, do not reflect all of the variables, conditions, and practices that need to be considered for setting enrollment goals. Consequently, a range of potential enrollment projections is provided, and college and district leadership need to subsequently evaluate the range of projections along with programmatic, capacity, fiscal, environmental, regulatory, and vision considerations.

Projected enrollments for Fall 2020 are calculated by the following methods:

1. The **average participation rate** for the past five fall semesters, applied to the projected adult population in 2020;
2. The **maximum participation rate** of the last three fall semesters, applied to the projected adult population in 2020;
3. The participation **rates by age category** for Fall 2012, applied to the projected populations in 2020 of those age categories, and combined.

The adult populations of the service areas for 2008 through 2012 and projected for 2020 are provided in the table below. The projected growth rates from to 2020 amount to 5% for the Saddleback College service area, 9.9% for Irvine Valley College's, and 7.3% for the entire district's service area

Average and Maximum Participation Rate Projections

The average participation rate for the past five fall semesters for the entire district was .060. The average rate for Saddleback College was .070 and for Irvine Valley College, .047. Applying those rates to projected adult populations of service areas in 2020 results in an enrollment projection of 45,238 for the entire district, 28,083 for Saddleback College and 16,900 for Irvine Valley College.

An enrollment projection using the maximum participation rate for the past three fall semesters results in slightly higher projections: 46,294, 28,454, and 17,789, respectively.

Figure 37 - SOCCCD Enrollment Trends and Projections

SOCCCD Enrollment Trends, and 2020 Enrollment Projections Using Five-Year Average Participation Rate and Using Maximum Participation Rate of Three Years									
	Saddleback College			Irvine Valley			SOCCCD		
	Adult Pop.	Enrollment	Part. Rate	Adult Pop.	Enrollment	Part. Rate	Adult Pop.	Enrollment	Part. Rate
2012	381,561	26,090	0.068	330,990	14,396	0.043	707,325	40,486	0.057
2011	378,811	26,740	0.071	324,620	14,629	0.045	699,414	41,369	0.059
2010	376,576	26,401	0.070	320,854	15,850	0.049	693,399	42,251	0.061
2009	374,354	27,178	0.073	317,132	15,416	0.049	687,435	42,594	0.062
2008	372,146	25,573	0.069	313,454	14,516	0.046	681,523	40,089	0.059
5-Year Average Rate			0.070			0.047			0.060
% Enrollment Change 2008 - 2012		2.02%			-0.83%			0.99%	
5-year Average Rate 2020 Projection	400,760	28,083		363,051	16,900		758,916	45,238	
3-Year Maximum Rate 2020 Projection	400,760	28,454	0.071	363,051	17,789	0.049	758,916	46,294	0.061

Age Category Participation Rate Projection

As can be expected, the participation rate is greatest for students under 24 years of age, after which age there is a steep decline in rates. However, using this projection method shows that most of the increases in enrollment will result from enrollment of students over 25 years of age and primarily from those over 45 years of age, if the same enrollment patterns continue. At Saddleback College, the 17-24 age group is projected to decline in enrollment in 2020, if the overall participation rate remains the same.

Note that enrollments in Fall 2012 were the lowest of the past five fall semesters, and that consequently these age category participation rates will be lower than those calculated by other methods.

Figure 38 - SOCCCD Participation Rate by Age

SOCCCD Participation Rate by Age					
	2012			2020 Projected	
Saddleback College					
Age	Population	Enrollment	Participation Rate	Population	Enrollment
17-19 (estimated)	20,112	6,411	0.32	19,609	6,251
20 - 24	26,283	7,633	0.29	24,155	7,015
25 - 34	56,029	4,026	0.07	59,412	4,269
35 - 44	72,658	1,771	0.02	73,134	1,783
45 - 64	148,195	3,074	0.02	150,091	3,113
65+	66,526	4,368	0.07	83,046	5,453
	389,803	27,283	.	409,447	27,883
Irvine Valley College					
Age	Population	Enrollment	Participation Rate	Population	Enrollment
17-19 (estimated)	18,734	4,821	0.26	19,003	4,890
20 - 24	33,784	4,504	0.13	33,328	4,443
25 - 34	63,878	2,219	0.03	73,184	2,542
35 - 44	62,978	984	0.02	67,685	1,058
45 - 64	107,335	1,252	0.01	112,549	1,313
65+	48,192	1,083	0.02	62,384	1,402
	334,901	14,863	.	368,133	15,648
SOCCCD					
Age	Population	Enrollment	Participation Rate	Population	Enrollment
17-19 (estimated)	38,760	10,519	0.27	38,527	10,456
20 - 24	59,335	11,072	0.19	56,818	10,602
25 - 34	118,023	5,835	0.05	130,625	6,458
35 - 44	134,688	2,634	0.02	139,830	2,735
45 - 64	254,284	4,200	0.02	261,501	4,319
65+	114,435	5,375	0.05	145,381	6,829
	719,525	39,635	.	772,682	41,398

Source: South Orange County Community College District Office of Research, Planning & Data Management

Enrollment Projections Summary

Enrollment projections for the two colleges and for the district, using the three different participation rate calculations, are shown concisely in the table below. With all participation rate projection methods, enrollments are not projected to grow significantly. The lowest 2020 enrollment projections result from the age rate categories method. The range of 2020 projections using the three projections methods is small for Saddleback College, from 27,883 students to 28,454, and greater for Irvine Valley College, from 15,648 students to 17,789.

Figure 39- Enrollment Projections Using Participation Rates

Summary of 2020 Enrollment Projections Using Participation Rates			
Participation Rate Calculations Type	2020 Enrollment		
	Saddleback College	Irvine Valley College	SOCCCD
5-Year Average	28,083	16,900	45,238
3-Year Average	28,454	17,789	46,294
Age Rate Categories Combined	27,883	15,648	41,398

These enrollment projection options are provided for college and district leadership to consider, along with a variety of possibilities, variables, and plans.

Given that the high school graduate numbers are expected to remain the same in 2020 as in 2012, that the age ranges of the service area populations are uneven, and that the sensitivity of the age rate category projection method may thus be helpful, the lower enrollment projections may be the most realistic. On the other hand, because, at the present time, university enrollments are at maximum capacity, new freshmen may matriculate to community colleges at higher rates than in the past.

Future funding allocations from the State for enrollment is one of greatest variables in determining future enrollments.

Distribution of enrollments between the two colleges may shift in 2020, with greater annual population growth and thus enrollment occurring in the Irvine Valley College service area, even though the participation rates at the college are lower.

Enrollment plans for the colleges' International Student programs is another one of the many variables related to enrollment projecting. Whether the colleges plan to downsize, upsize, or maintain their current enrollment, to what degree, and within the framework of overall enrollment planning, is a topic potentially to be included in the strategic planning discussion.

Another consideration for enrollment projecting is the FUSION database provided by California Community Colleges' Chancellor's Office (CCCCO). This tool provides projected WSCH and enrollment for colleges' facilities planning. For the SOCCCD, enrollment between 2013 and 2020 is projected to grow 14.8%, and 2020 enrollment for the total district is projected to be 48,733. Additionally, the FUSION database projects that the distribution of [on-site] WSCH between the two colleges will change slightly, from 35% for Irvine Valley and 65% for Saddleback in 2013, to 35.8% for Irvine Valley College and 64.2% for Saddleback College in 2020. This slight change coincides with this external scan's finding that population, new housing and enrollment will increase at greater rates for Irvine Valley College. The projected growth for SOCCCD of the FUSION database suggests that district and college leadership may select one of the greater enrollment projections provided above. However, it is important to note that the CCCCCO projected enrollments are not necessarily "funded", as funded enrollment is dependent upon the State budget at the time.

Labor Market Analysis

A. Overview

The labor market analysis examines Orange County industries and occupations. The data is provided to identify target occupations that offer high wages and have significant numbers of job openings annually and that require skills and training that the Colleges can or do offer. Through a “data crosswalk”, the analysis will show the educational programs that train students for these target occupations. The subsequent gap analysis compares the educational programs offered at Saddleback and Irvine Valley Colleges to those identified in the previous analysis. For the programs offered at the colleges, this will identify those that are training students for the target occupations and those that are training students for other occupations. Additionally, the gap analysis will identify target occupations for which the colleges are not currently training students. College and district staff can use this analysis to make decisions regarding new program development and existing program modification.

Note: The consulting team utilized the EMSI⁵ database as the primary source for labor market data. EMSI pulls together from numerous outside sources to provide a comprehensive and integrated resource. See list of data sources in the appendix on page 90.

With any data of this type, it is impossible to make *exact* forecasts. The forecasts are based on past experience, EMSI’s in-house experts and the departments and other agencies providing the data. The purpose is not to have an exact prediction of how many future jobs there will be in each occupation. Rather, it provides some framework for consideration and further investigation. The EMSI specialists indicated that the data is generally quite accurate and is updated quarterly to take into account recent changes in the economy.

B. Market Outlook

Summary

The following information provides an overview of the Orange County economy. The consulting team wrote this summary of a document published by the Orange County Business Council entitled, 2012-13 Orange County Workforce Indicators Report.⁶

Though the Great Recession hit Orange County hard, there are currently many opportunities for economic growth. The county must build on its advantages. Orange County is home to many high-tech industries. It is a leader in several emerging technologies including advanced transportation, alternative fuels, medical devices and computer gaming. The workforce is IT savvy and there are large concentrations of colleges and universities, business incubators and venture capital investment firms.

A recent U.S. Department of Labor Workforce Innovation Fund grant was awarded to Orange County for an Information Technology Cluster Competitiveness Project. This helped establish a three-year partnership between industry, and the education and workforce training system. The partnership will engage business and education leaders in collaborative planning to help address the training needs of Orange County businesses.

Though the economy appears to be slowly turning the corner, unemployment remains high and consumer and business spending has been slow to improve. Many older workers have been forced into early retirement with others working longer than expected due to losses in retirement accounts and home values.

⁵ Economic Modeling Specialists, Int’l

⁶ Downloaded from <http://www.ocbc.org/wp-content/uploads/2012-Workforce-Indicators-Report.pdf> on April 26, 2013.

From 2007-2010, Orange County lost approximately 162,000 jobs or 10.7% of its payroll employment. The largest decline was in the construction industry, 28.6%. There has been some recent job growth but not rapid. The two industry sectors that suffered the least amount of decline are also those recovering the quickest. These include health services and tourism. The unemployment rate is projected to stay above 7% through 2013.

There are two components to "job openings", new jobs and replacement jobs. Replacement jobs are openings created when workers retire or permanently leave an occupation. These types of openings are not being seen in large numbers because many older workers are pushing back retirement. Though baby boomers are typically well educated, they currently occupy many jobs traditionally considered workforce starter jobs. They are using them as survival jobs. This is making it difficult for young graduates to find work in their fields of study. Some continue their education, but this involves taking on more debt.

The job openings that are being seen are primarily concentrated in lower wage, entry-level jobs in office and admin support, sales and related occupations, and food prep and serving. These occupations have median wages of \$35,922, \$30,659 and \$19,406 respectively.

As the population becomes more ethnically diversified, and the education system faces increasing financial pressures, Orange County will have difficulty providing a well-prepared workforce for industry. Increased college tuition exacerbates this problem.

The Future

Many high wage jobs of the past disappeared during the great recession and will not be coming back. Future growth will be in the areas of international trade, IT, creativity and green/cleantech. These cross over many traditional clusters. Orange County is committed to increasing college and university level educational attainment as well as adult education. Eligibility rates for UC and CSU among high school graduates are increasing but for Latinos and African Americans they are still low relative to statewide levels.

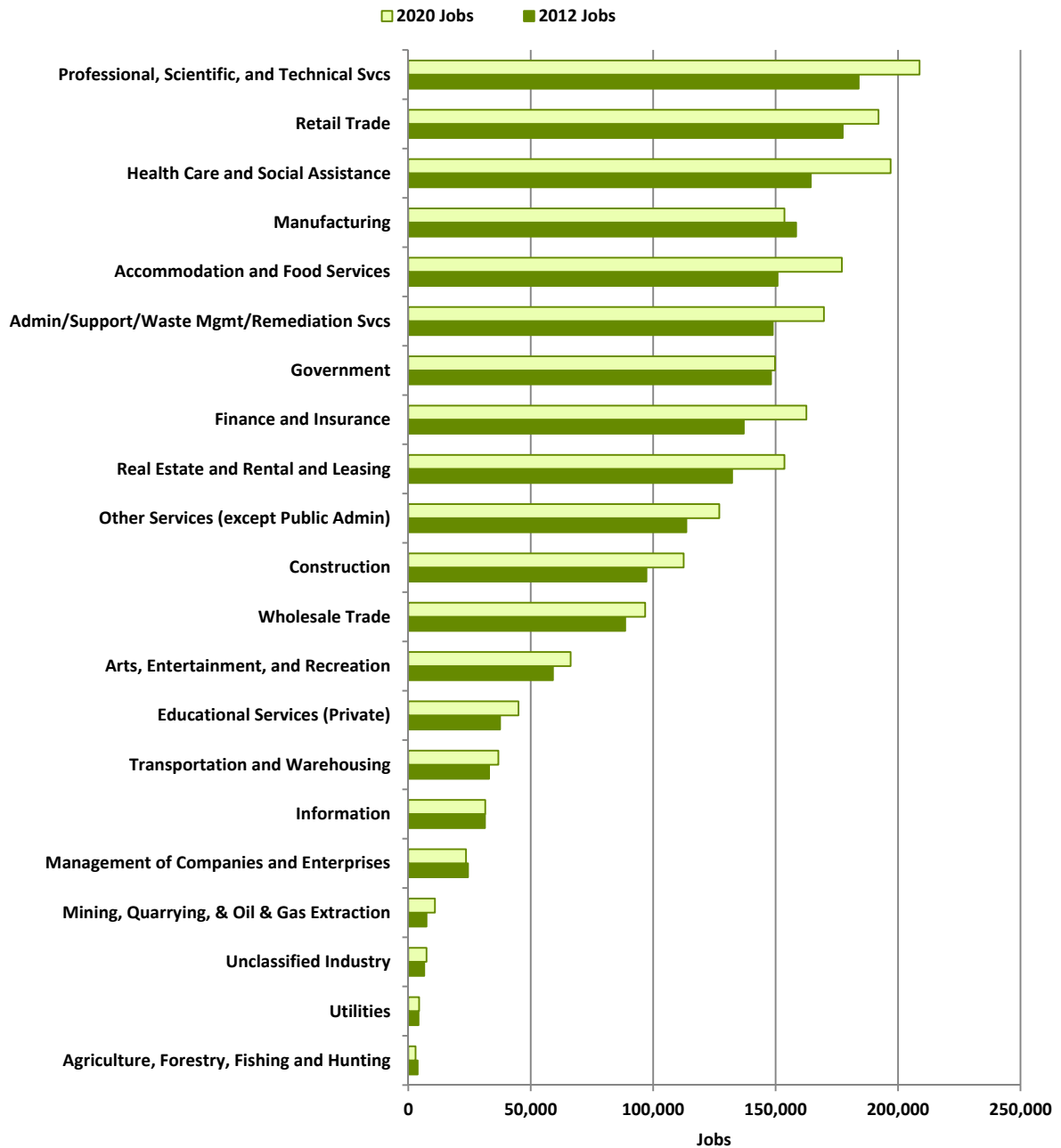
The report did not contain any information addressing community college education or those underprepared for college.

Employment

This section provides some vital employment statistics relative to Orange County and the nation. In terms of numbers of jobs, the largest industry sectors are professional, scientific and technical services, retail trade, health occupations and manufacturing.

Figure 40 - Orange County Employment by Industry Forecast

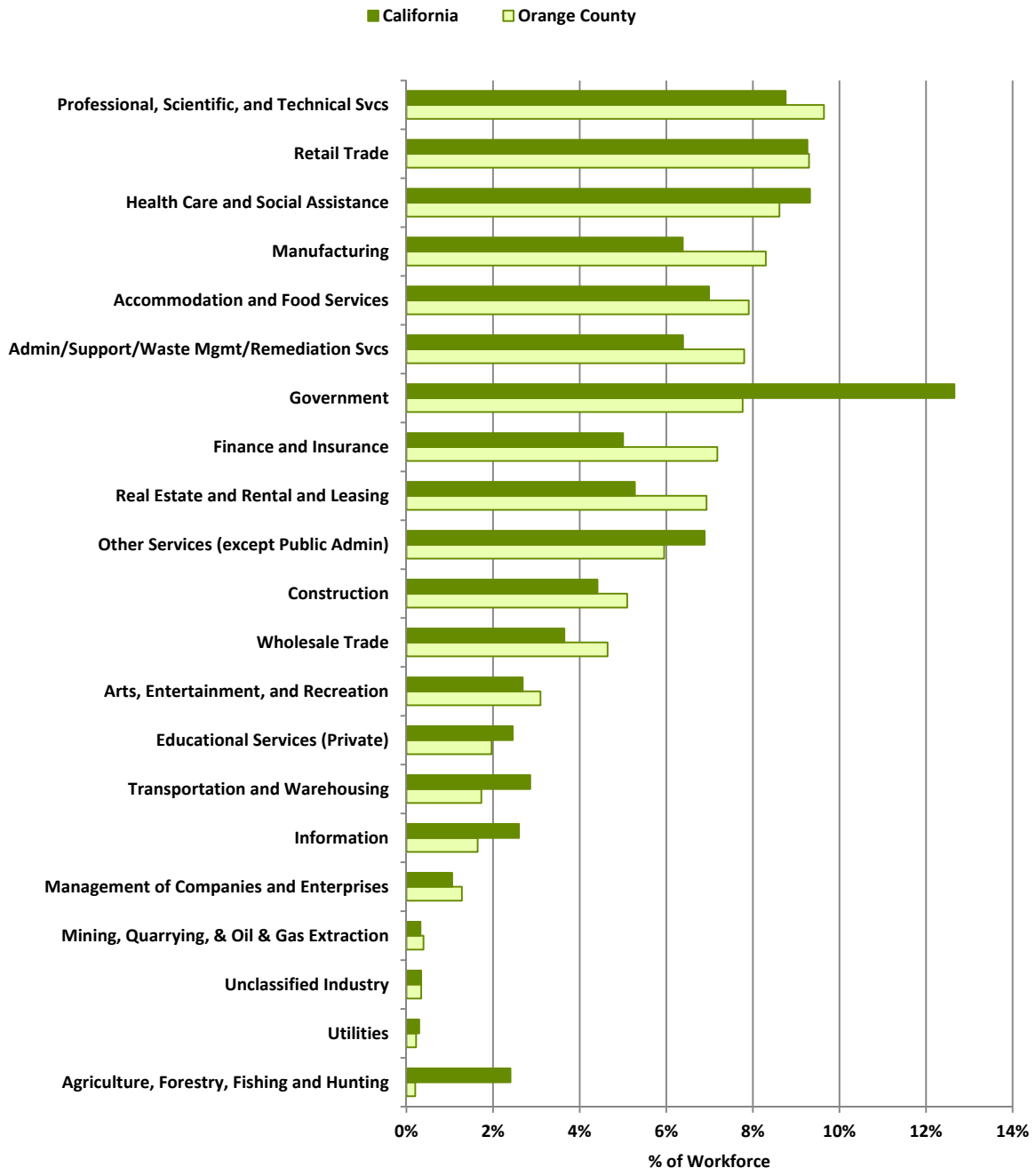
Orange County Employment by Industry Forecast 2012-2020



The following chart shows the percentage of the Orange County workforce in each industry sector relative to the State of California. The four sectors in which the county has greater concentrations of workers than the State are: finance and insurance, manufacturing, real estate and administrative/support/waste management remediation.

Figure 41 - Orange County Employment by Industry 2012-2020

Orange County Employment by Industry 2012-2020



Key Industry Clusters in Orange County

According to a report⁷ published by the Orange County Workforce Investment Board (OCWIB), the strongest Orange County industry clusters measured by location quotient⁸ are as follows:

Figure 42 - Orange County Industry Clusters

Industry Cluster	Location Quotient (LQ)
Analytical Instruments	3.1
Sporting, Recreational and Children's Goods	2.9
Biomedical	2.6
Information Technology	2.5
Hospitality and Tourism	2.0
Aerospace	1.9
Fashion	1.6
Power Generation and Transmission	1.6
Communication Equipment	1.5

The report also indicates that the County's strongest high-tech sectors are:

Figure 43 - Orange County High-Tech Sectors

Key OC High-Tech Sector	LQ	Employment Multiplier
Audio and Video Equipment	1.96	5.07
Medical Equipment and Supplies Manufacturing	1.37	4.30
Semiconductor and electronic Component Manufacturing	1.37	3.05
Computer and Peripheral Equipment Manufacturing	2.41	2.78
Electronic Instrument Manufacturing	2.67	1.67
Telecommunications (Other)	2.43	2.20
Medical and Diagnostic Laboratories	2.25	1.48
Commercial and Service Industry Machinery	1.61	2.03

According to the same report, the OCWIB has conducted several previous cluster projects. These include:

- Tourism and Hospitality – Harbor Boulevard Improvement project in the City of Garden Grove (CEDs)
- Energy & Environmental – ARFVTP (CleanTech, SAE, Cypress College); Green Jobs
- Healthcare – Technology Based Learning Project for Nurses
- IT – C3 Computer Cluster Collaborative Forum 2007
- Manufacturing – CMTC Special Project
- Biotech – High Growth Workforce Development Partnership (Biotech Project)

⁷ OC Regional Workforce & Economic Development Network report by OCWIB, downloaded on April 26, 2013 from <http://www.ocwib.org>.

⁸ Location quotient is a commonly used measure in labor market analyses. It is a ratio that compares the concentration of an industry or activity in an area, relative to a larger area.

Present projects include the following:

- The Employment and Training Administration (ETA), U.S. Department of Labor (DOL), recently awarded Orange County a \$3,000,000 Workforce Innovation Fund grant for the Information Technology Cluster Competitiveness Project. The Workforce Innovation Fund (WIF) allows an opportunity for business and educators to work together in new ways.
- The "Information Technology Cluster Competitiveness Project" will implement a new approach for engaging business and education stakeholders in an intensive planning process concerning the education and training needs of companies in Information Technology (IT) across Orange County.

These projects hold out the potential for the colleges to work closely with the Workforce Investment Board and the County to better prepare workers for jobs within these high growth clusters.

The following table shows the largest employers in Orange County according to the California Employment Development Department.

Figure 44 - Largest Employers in Orange County

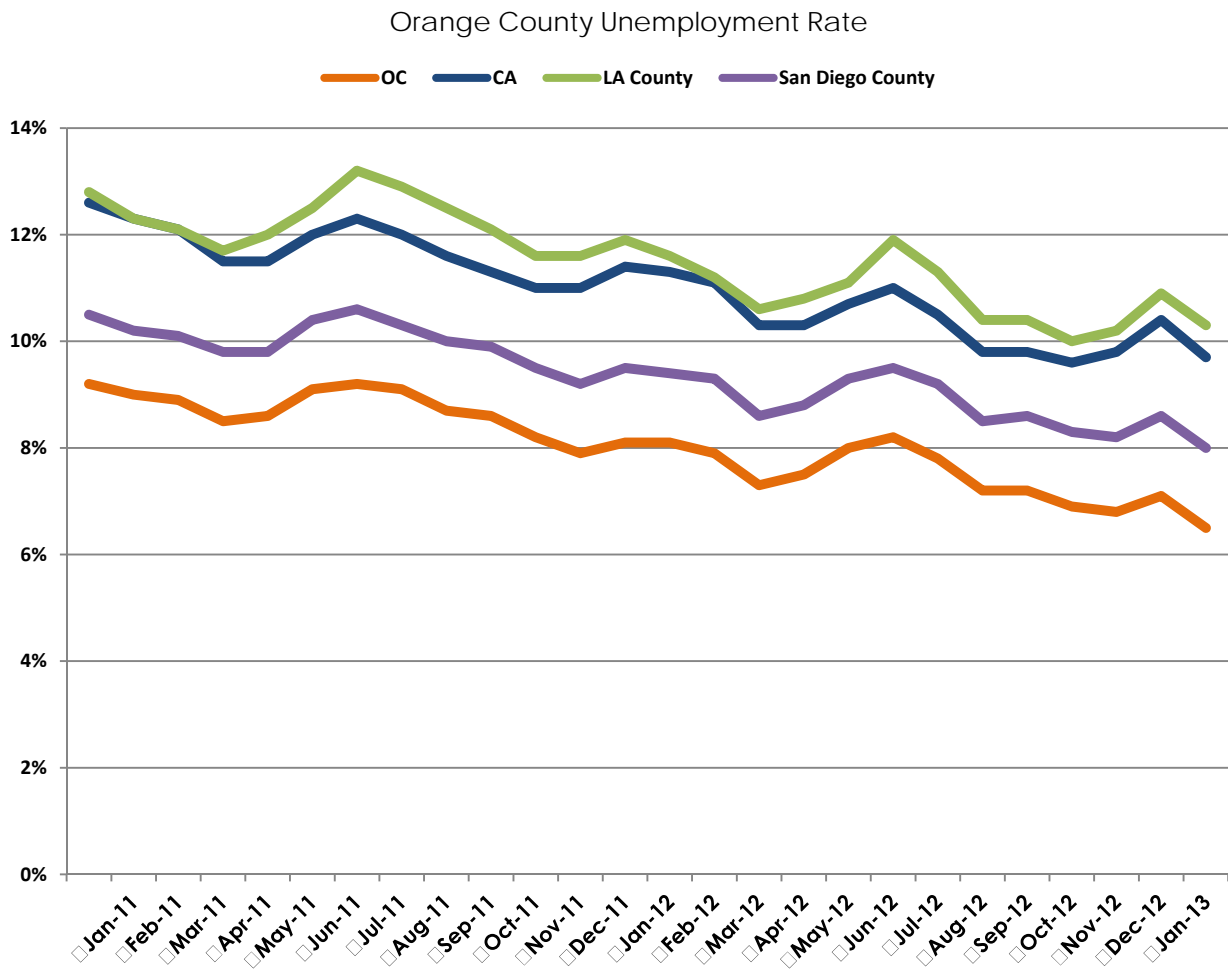
Largest Employers in Orange County		
Employer Name	Location	Industry
Allergan Inc	Irvine	Drug Millers (Mfrs)
Anaheim City Hall	Anaheim	City Government-Executive Offices
Blogtagon Social Media	Fountain Valley	Internet Service
Boeing Co	Huntington Beach	Aircraft-Manufacturers
Boeing Co	Seal Beach	Aerospace Industries (Mfrs)
Broadcom Corp	Irvine	Semiconductors & Related Devices (Mfrs)
California State-Fullerton	Fullerton	Schools-Universities & Colleges Academic
Disneyland Resort Anaheim	Anaheim	Amusement & Theme Parks
Emplicity	Irvine	Employment Contractors-Temporary Help
Fairview Developmental Ctr	Costa Mesa	Hospitals
First American Title Ins Co	Santa Ana	Title Companies
First Team Real Estate	San Clemente	Real Estate
Hoag Hospital	Newport Beach	Alcoholism Information & Treatment Ctrs
Jones Lang La Salle	Brea	Real Estate Management
Pacifi Care	Cypress	Health Plans
Puro Clean	Anaheim	Water Damage Restoration-Residential
Quiksilver Eyeware USA	Huntington Beach	Optical Goods-Retail
Saddleback Memorial Hospital	Laguna Hills	Hospitals
St John Knits Intl Inc	Irvine	Women's Apparel-Retail
St Jude Medical Ctr	Fullerton	Hospitals
St Jude Medical Ctr	Brea	Hospitals
Tenet Healthcare	Fountain Valley	Hospitals
UC Irvine Healthcare	Orange	Hospitals
University of CA-Irvine	Irvine	Schools-Universities & Colleges Academic
Walt Disney Parks & Resorts	Anaheim	Amusement & Theme Parks

Source: State of California Employment Development Department, downloaded from <http://www.labormarketinfo.edd.ca.gov/> on May 17, 2013

Unemployment

Unemployment rates have been trending downward in Orange County over the past two years.

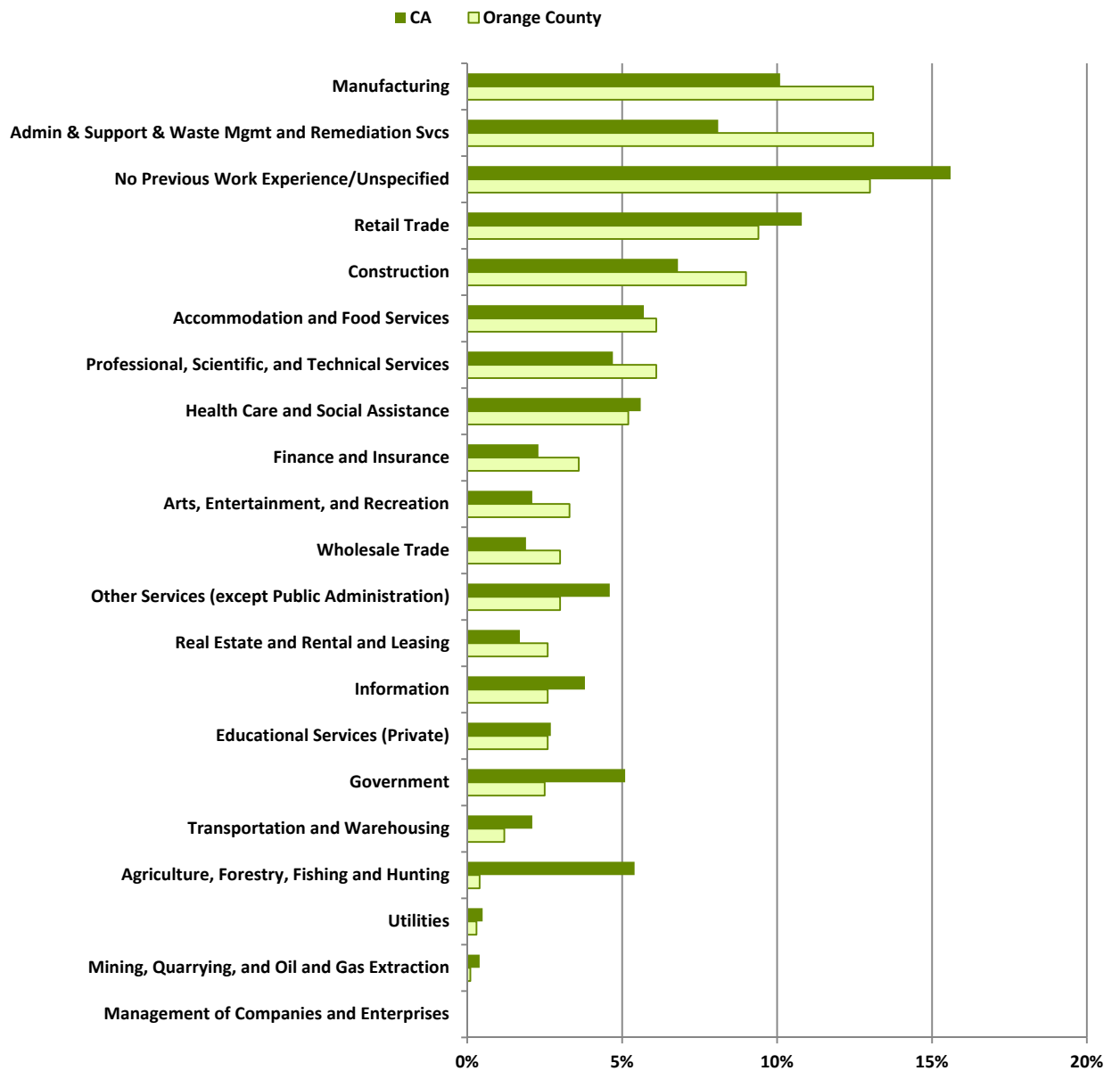
Figure 45 - Orange County Unemployment Rate



The following chart shows the unemployment rates by industry for February 2013. The data is presented for Orange County and for the State as a whole.

Figure 46 - Unemployment by Industry - February 2013

Unemployment by Industry - February 2013



Earnings

The following table shows the number of jobs in 2012 and projected for 2020 by industry. It also provides the average annual earnings per job from the same year. The industries with the largest forecasted job growth are at the top of the list.

Figure 47 - Orange County Average Earnings by Industry

Orange County - Average Earnings by Industry 2012				
Description	2012 Jobs	2020 Jobs	Change	2012 Avg. Annual Earnings Per Job
Health Care and Social Assistance	164,408	196,993	32,585	\$62,102
Accommodation and Food Services	150,813	177,071	26,258	\$23,904
Finance and Insurance	137,000	162,560	25,560	\$90,203
Professional, Scientific, and Technical Services	183,964	208,803	24,839	\$73,409
Real Estate and Rental and Leasing	132,242	153,627	21,385	\$38,930
Administrative and Support and Waste Management and Remediation Services	148,839	169,722	20,883	\$40,465
Construction	97,288	112,458	15,170	\$62,640
Retail Trade	177,429	192,055	14,626	\$38,469
Other Services (except Public Administration)	113,548	126,991	13,443	\$26,012
Wholesale Trade	88,605	96,764	8,159	\$85,683
Educational Services (Private)	37,511	45,011	7,500	\$33,179
Arts, Entertainment, and Recreation	59,068	66,319	7,251	\$29,578
Transportation and Warehousing	32,997	36,778	3,781	\$49,773
Mining, Quarrying, and Oil and Gas Extraction	7,464	10,893	3,429	\$25,869
Government	148,123	149,756	1,633	\$73,073
Unclassified Industry	6,507	7,456	949	\$75,490
Utilities	4,219	4,429	210	\$149,529
Information	31,334	31,427	93	\$82,201
Management of Companies and Enterprises	24,392	23,572	(820)	\$102,429
Agriculture, Forestry, Fishing and Hunting	3,868	3,000	(868)	\$33,560
Manufacturing	158,388	153,622	(4,766)	\$84,128
Total	1,908,007	2,129,305	221,298	\$57,450

Source: EMSI Complete Employment - 2013.1

Analysis of commute patterns into and out of Orange County

What is the appropriate geographic area to analyze for job openings that are relevant to students and alumni of the South Orange County Community College District? While this question is multi-faceted, the American Community Survey provides information on commute patterns into and out of Orange County. The following table shows that the vast majority (84%) of Orange County residents work within Orange County, while a sizeable minority (13%) commutes to Los Angeles County.

Figure 48 - Commute Patterns of Orange County Residents

Commute of Orange County Residents				
Number	Percent	Margin of Error	County of Residence	County of Workplace
1,181,354	84%	5,739	Orange County	Orange County
178,681	13%	2,768	Orange County	Los Angeles County
15,242	1%	1,020	Orange County	Riverside County
13,904	1%	816	Orange County	San Diego County
12,106	1%	892	Orange County	San Bernardino County

Flipping the direction of the commute and looking at the residence county of just those workers who work in Orange County reveals that most Orange County workers reside in Orange County (79%). However, Orange County acts as a magnet, pulling in appreciable numbers of workers from Los Angeles County (181,744), Riverside County (67,180) and to a less extent San Bernardino County (34,997). Only 18,788 workers commute into Orange County from San Diego County.

Figure 49 - Commute Patterns of Orange County Residents

Commute Patterns of Orange County Employees				
Number	Percent	Margin of Error	County of Residence	County of Workplace
1,181,354	79%	5,739	Orange County	Orange County
178,681	12%	2,842	Los Angeles County	Orange County
15,242	4%	2,219	Riverside County	Orange County
13,904	2%	1,360	San Bernardino County	Orange County
12,106	1%	947	San Diego County	Orange County

Program Completions

The following table shows the completers at all two-year and four-year higher education institutions in Orange County for the 20 TOP Codes with the most completers during 2011.

Figure 50 - Orange County Completers

Orange County Completers 2011		
TOP Code	Title	Total
4901.0	Liberal Arts and Sciences, General	47,565
0505.0	Business Administration	39,864
1208.0	Medical Assisting	15,363
1230.1	Registered Nursing	13,648
2001.0	Psychology, General	13,134
3007.0	Cosmetology and Barbering	7,857
0401.0	Biology, General	7,294
2208.0	Sociology	6,473
1501.0	English	6,033
2201.0	Social Sciences, General	5,652
2105.0	Administration of Justice	5,509
2207.0	Political Science	5,456
2205.0	History	4,696
2204.0	Economics	4,417
4902.0	Biological and Physical Sciences (and Mathematics)	4,331
0948.0	Automotive Technology	4,151
0408.0	Natural History	3,922
1002.0	Art (Painting, Drawing, and Sculpture)	2,934
0706.0	Computer Science (transfer)	2,822
0835.0	Physical Education	2,716

C. Target Occupations

Orange County

One of the goals of this report is to identify high wage, high skill jobs in Orange County. The consulting team developed a set of criteria with which to create a list of such “target” occupations in the county. The definition of high wage is certainly subjective. It also varies according to geographic region. A job paying \$30/hour would offer an employee a very different lifestyle in New York City or San Francisco than it would in Orange County. The following data, from a study at the Massachusetts Institute of Technology, shows what is considered a “living wage” in Orange County

Figure 51- Orange County Living Wage

Living Wage - Orange County			
Hourly Wages	Living Wage	Poverty Wage	Minimum Wage
1 Adult	\$13.12	\$5.21	\$8.00
1 Adult, 1 Child	\$24.81	\$7.00	\$8.00
1 Adult, 2 Children	\$28.43	\$8.80	\$8.00
1 Adult, 3 Children	\$36.52	\$10.60	\$8.00
2 Adults	\$18.66	\$7.00	\$8.00
2 Adults, 1 Child	\$22.90	\$8.80	\$8.00
2 Adults, 2 Children	\$24.23	\$10.60	\$8.00
2 Adults, 3 Children	\$30.52	\$12.40	\$8.00

Source: Downloaded from <http://livingwage.mit.edu/counties/06059> on April 5, 2013 Massachusetts Institute of Technology

In generating the “target” occupation list, there are a few points that must be taken into consideration:

1. Some occupations will serve as entry-level jobs,
2. Most jobs offer a range of pay. Successful workers will have an opportunity for future pay increases; and
3. Many graduates will live in households with multiple wage earners.

Given these considerations and the living wage data, the consulting team selected a threshold wage of \$20/hour for the purposes of this analysis.

To generate the list of target occupations, there were three criteria used:

- Median hourly wage greater than or equal to \$20
- Annual openings greater than or equal to 50
- Required education level less than or equal to an Associate’s Degree

There were 56 occupations in the County that met all three of these criteria. They are shown in the following table sorted by SOC code and will be referred to from this point forward as the **Target Occupations**.

Figure 52 - Orange County Target Occupations

Orange County Target Occupation						
SOC Code	Description	2012 Jobs	2020 Jobs	Annual Openings	2012 Median Hourly Wage	Education Level
11-3011	Administrative Services Managers	3,863	4,174	134	\$44.31	Work experience in a related occupation
11-9141	Property, Real Estate, and Community Association Managers	20,696	24,556	918	\$21.35	Work experience in a related occupation
11-9199	Managers, All Other	17,946	20,203	681	\$25.40	Work experience in a related occupation
13-1022	Wholesale and Retail Buyers, Except Farm Products	2,222	2,345	72	\$25.96	Long-term on-the-job training
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	4,108	4,500	159	\$28.57	Long-term on-the-job training
13-1031	Claims Adjusters, Examiners, and Investigators	4,487	4,468	125	\$28.40	Long-term on-the-job training
13-1199	Business Operations Specialists, All Other	12,363	13,440	372	\$34.14	Long-term on-the-job training
13-2021	Appraisers and Assessors of Real Estate	6,573	7,185	216	\$24.12	Associate's degree
13-2072	Loan Officers	7,606	7,946	242	\$31.38	Moderate-term on-the-job training
13-2082	Tax Preparers	2,363	2,664	91	\$22.72	Moderate-term on-the-job training
15-1159	Computer Support Specialists	8,500	9,281	321	\$27.85	Associate's degree
17-3023	Electrical and Electronics Engineering Technicians	2,036	2,155	56	\$24.67	Associate's degree
23-2011	Paralegals and Legal Assistants	3,739	4,549	155	\$24.26	Associate's degree
29-1111	Registered Nurses	19,383	23,338	845	\$39.61	Associate's degree
29-1126	Respiratory Therapists	1,398	1,708	65	\$33.78	Associate's degree
29-2021	Dental Hygienists	2,125	2,546	95	\$48.24	Associate's degree
29-2037	Radiologic Technologists and Technicians	1,671	2,047	73	\$30.23	Associate's degree
29-2061	Licensed Practical and Licensed Vocational Nurses	6,043	7,190	305	\$24.06	Postsecondary non-degree award
31-2021	Physical Therapist Assistants	1,014	1,307	52	\$28.98	Associate's degree
33-2011	Firefighters	1,733	1,782	54	\$31.79	Postsecondary non-degree award
33-3051	Police and Sheriff's Patrol Officers	4,332	4,497	148	\$41.91	Moderate-term on-the-job training
41-1012	First-Line Supervisors of Non-Retail Sales Workers	11,570	12,361	390	\$23.06	Work experience in a related occupation
41-3011	Advertising Sales Agents	3,066	2,638	94	\$25.06	Moderate-term on-the-job training
41-3021	Insurance Sales Agents	12,990	15,051	555	\$25.95	Moderate-term on-the-job training
41-3099	Sales Representatives, Services, All Other	14,111	15,295	563	\$26.78	Short-term on-the-job training
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	18,865	20,751	680	\$26.78	Moderate-term on-the-job training
41-9021	Real Estate Brokers	10,884	12,849	491	\$29.28	Work experience in a related occupation
41-9799	Sales and Related Workers, All Other	4,803	5,317	186	\$23.17	Moderate-term on-the-job training
43-1011	First-Line Supervisors of Office and Administrative Support Workers	18,746	20,278	693	\$26.75	Work experience in a related occupation
43-3051	Payroll and Timekeeping Clerks	2,315	2,524	74	\$21.53	Moderate-term on-the-job training

Orange County Target Occupation						
SOC Code	Description	2012 Jobs	2020 Jobs	Annual Openings	2012 Median Hourly Wage	Education Level
43-4131	Loan Interviewers and Clerks	4,243	4,345	100	\$22.27	Short-term on-the-job training
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	1,719	1,867	67	\$20.78	Short-term on-the-job training
43-4199	Information and Record Clerks, All Other	1,895	1,998	66	\$20.40	Short-term on-the-job training
43-5052	Postal Service Mail Carriers	2,801	2,551	91	\$26.69	Short-term on-the-job training
43-5061	Production, Planning, and Expediting Clerks	4,620	4,670	142	\$22.84	Moderate-term on-the-job training
43-6011	Executive Secretaries and Executive Administrative Assistants	16,564	17,952	396	\$24.69	Work experience in a related occupation
43-6012	Legal Secretaries	3,131	3,507	89	\$21.90	Postsecondary non-degree award
43-9041	Insurance Claims and Policy Processing Clerks	3,055	3,221	114	\$20.84	Moderate-term on-the-job training
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	7,152	8,466	329	\$27.70	Work experience in a related occupation
47-2031	Carpenters	13,421	14,884	467	\$22.65	Long-term on-the-job training
47-2073	Operating Engineers and Other Construction Equipment Operators	2,658	3,007	105	\$29.81	Moderate-term on-the-job training
47-2081	Drywall and Ceiling Tile Installers	3,100	3,503	137	\$24.10	Moderate-term on-the-job training
47-2111	Electricians	5,746	6,926	302	\$25.70	Long-term on-the-job training
47-2152	Plumbers, Pipefitters, and Steamfitters	4,115	4,756	199	\$24.45	Long-term on-the-job training
47-2181	Roofers	1,762	2,113	80	\$20.12	Moderate-term on-the-job training
47-4011	Construction and Building Inspectors	1,282	1,480	63	\$28.98	Work experience in a related occupation
47-4799	Construction and Related Workers, All Other	1,388	1,483	59	\$21.86	Moderate-term on-the-job training
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	3,958	4,588	183	\$31.56	Work experience in a related occupation
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	2,585	2,419	52	\$30.79	Postsecondary non-degree award
49-2098	Security and Fire Alarm Systems Installers	1,331	1,556	61	\$22.19	Moderate-term on-the-job training
49-3021	Automotive Body and Related Repairers	1,450	1,613	56	\$20.40	Moderate-term on-the-job training
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	2,729	3,244	113	\$21.51	Postsecondary non-degree award
49-9041	Industrial Machinery Mechanics	2,122	2,671	109	\$22.88	Long-term on-the-job training
51-1011	First-Line Supervisors of Production and Operating Workers	6,228	6,098	105	\$25.94	Work experience in a related occupation
53-1021	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	1,872	2,147	73	\$20.91	Work experience in a related occupation
53-3021	Bus Drivers, Transit and Intercity	2,785	2,838	65	\$20.20	Moderate-term on-the-job training
Grand Total		335,263	372,848	12,528	\$26.65	

Source: EMSI 2013.1, analysis by College Brain Trust

The following table shows the openings to completions gap for the same list of target occupations. All data is for the year 2011. The table shows the total program completions for each SOC code within the SOCCCD and within Orange County. The difference between the annual openings and completions indicates whether there are more annual completers than the number of openings in the occupation. The data shows that for many of the target occupations, there are more completions from all educational institutions in Orange County than there are annual openings. In these cases, some students will have to look outside of the county for jobs in their field of study. *It is important to keep in mind, however, that in some cases, the completions noted in the data, will track to more than one possible occupation.*

Figure 53 - Target Occupations Openings to Completions Gap

Target Occupations - Openings to Completions Gap in Orange County 2011				
SOC Code	Description	OC Annual Openings	OC Completions	OC Openings to Completions Gap
11-9141	Property, Real Estate, and Community Association Managers	918	21	897
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	680	65	615
43-1011	First-Line Supervisors of Office and Administrative Support Workers	693	130	563
41-3021	Insurance Sales Agents	555	-	555
41-3099	Sales Representatives, Services, All Other	563	21	542
41-9021	Real Estate Brokers	491	21	470
47-2031	Carpenters	467	1	466
41-1012	First-Line Supervisors of Non-Retail Sales Workers	390	18	372
13-1199	Business Operations Specialists, All Other	372	17	355
43-6011	Executive Secretaries and Executive Administrative Assistants	396	94	302
13-2072	Loan Officers	242	8	234
47-2152	Plumbers, Pipefitters, and Steamfitters	199	-	199
13-2021	Appraisers and Assessors of Real Estate	216	21	195
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	183	-	183
41-9799	Sales and Related Workers, All Other	186	4	182
43-5061	Production, Planning, and Expediting Clerks	142	-	142
47-2081	Drywall and Ceiling Tile Installers	137	-	137
13-1031	Claims Adjusters, Examiners, and Investigators	125	-	125
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	159	38	121
49-9041	Industrial Machinery Mechanics	109	-	109
47-2073	Operating Engineers and Other Construction Equipment Operators	105	-	105
51-1011	First-Line Supervisors of Production and Operating Workers	105	-	105
43-4131	Loan Interviewers and Clerks	100	-	100
43-6012	Legal Secretaries	89	7	82
47-2181	Roofers	80	-	80
53-1021	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	73	-	73
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	113	47	66
43-9041	Insurance Claims and Policy Processing Clerks	114	49	65
41-3011	Advertising Sales Agents	94	30	64
47-4799	Construction and Related Workers, All Other	59	3	56
33-2011	Firefighters	54	-	54
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	52	-	52
49-3021	Automotive Body and Related Repairers	56	11	45
43-5052	Postal Service Mail Carriers	91	49	42
47-4011	Construction and Building Inspectors	63	36	27
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	67	49	18
43-4199	Information and Record Clerks, All Other	66	49	17
17-3023	Electrical and Electronics Engineering Technicians	56	50	6
13-1022	Wholesale and Retail Buyers, Except Farm Products	72	90	(18)
47-2111	Electricians	302	322	(20)
53-3021	Bus Drivers, Transit and Intercity	65	162	(97)
23-2011	Paralegals and Legal Assistants	155	255	(100)
29-2037	Radiologic Technologists and Technicians	73	178	(105)

Target Occupations - Openings to Completions Gap in Orange County 2011				
SOC Code	Description	OC Annual Openings	OC Completions	OC Openings to Completions Gap
33-3051	Police and Sheriff's Patrol Officers	148	298	(150)
15-1159	Computer Support Specialists	321	505	(184)
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	329	533	(204)
49-2098	Security and Fire Alarm Systems Installers	61	322	(261)
43-3051	Payroll and Timekeeping Clerks	74	367	(293)
13-2082	Tax Preparers	91	403	(312)
31-2021	Physical Therapist Assistants	52	1,237	(1,185)
29-2021	Dental Hygienists	95	1,341	(1,246)
29-1126	Respiratory Therapists	65	1,345	(1,280)
29-2061	Licensed Practical and Licensed Vocational Nurses	305	1,688	(1,383)
29-1111	Registered Nurses	845	3,388	(2,543)
11-9199	Managers, All Other	681	7,063	(6,382)
11-3011	Administrative Services Managers	134	6,891	(6,757)
Grand Total		12,528	27,227	(14,699)

Source: EMSI 2013, analysis by College Brain Trust

Note: EMSI updates their labor market data quarterly. The most recent update was released near the end of this project. It was not possible, with the time remaining, to recreate all of the data in the report. The consulting team reviewed the new data to determine what differences existed as compared to the data used in the analysis. The following table summarizes the changes. There were 11 occupations on the Target Occupation List above that now fail to meet the target criteria. In most cases, the Annual openings or Median Hourly Earnings fell slightly below the target criteria (50 jobs and \$20 respectively). There are three occupations that did not meet the criteria for the Target Occupations that, in the new data, do meet the criteria.

Going forward, the College researchers, Deans and faculty should be encouraged to access EMSI to gather data to help guide discussions regarding existing program assessment, and possible new program development.

Figure 54 - Occupations Adjustment with Revised EMSI Data

Occupations that no longer meet the target criteria	
13-1022	Wholesale and Retail Buyers, Except Farm Products
13-2021	Appraisers and Assessors of Real Estate
13-2082	Tax Preparers
17-3023	Electrical and Electronics Engineering Technicians
41-3011	Advertising Sales Agents
41-9021	Real Estate Brokers
47-4011	Construction and Building Inspectors
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers
49-3021	Automotive Body and Related Repairers
53-3021	Bus Drivers, Transit and Intercity
41-9799	Sales and Related Workers, All Other
Occupations that now meet the target criteria	
11-9051	Food Service Managers
47-2051	Cement Masons and Concrete Finishers
53-3032	Heavy and Tractor-Trailer Truck Drivers

Regional Target Occupations

Overview

This section analyzes the job market in the region surrounding Orange County. For this analysis "Regional" refers to a three-county area including Los Angeles, Riverside and San Diego Counties. The commuting data analyzed by the consulting team, indicated that these counties are the most likely work locations for residents of Orange County. The following table shows the target occupations with the highest openings in this three-county region. All occupations were extracted, that met the same three criteria used for the Orange County analysis in the previous section. Those criteria are:

- Median hourly wage greater than or equal to \$20
- Annual openings greater than or equal to 50
- Required education level less than or equal to an Associate's Degree

There were 178 Regional Target Occupations in this region that met all three of these criteria. In total, these occupations provide 48,736 annual openings and have an average mean hourly wage of \$27.53.⁹ These occupations were not used in the Orange County gap analysis that investigates the intersection and divergence of the Colleges' programs and the job market. Only Orange County occupations were used in that analysis.

The following table shows the 20 regional occupations with the largest numbers of annual openings. The entire list of 178 occupations is included in the Appendices (page 80). The regional completions data shows the number of completions from all post-secondary institutions located in the three-county region.

⁹ This is an un-weighted average.

Figure 55 – Target Occupations (Top 20) in Los Angeles, Riverside & San Diego Counties

Surrounding Counties Target Occupations (Los Angeles, Riverside & San Diego Counties)						
SOC	Description	Annual Openings	Median Hourly Earnings	Regional Completions (2011)	Openings to Completions Gap	Education Level
29-1111	Registered Nurses	4,087	\$39.97	6,851	(2,764)	Associate's degree
11-9199	Managers, All Other	3,195	\$25.60	21,697	(18,502)	Work experience in a related occupation
43-1011	First-Line Supervisors of Office and Administrative Support Workers	2,757	\$25.91	253	2,504	Work experience in a related occupation
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	2,487	\$25.06	1,716	771	Moderate-term on-the-job training
41-3021	Insurance Sales Agents	1,842	\$23.71	1	1,841	Moderate-term on-the-job training
41-3099	Sales Representatives, Services, All Other	1,826	\$25.25	1,925	(99)	Short-term on-the-job training
41-9021	Real Estate Brokers	1,687	\$27.24	332	1,355	Work experience in a related occupation
43-6011	Executive Secretaries and Executive Administrative Assistants	1,507	\$23.19	987	520	Work experience in a related occupation
29-2061	Licensed Practical and Licensed Vocational Nurses	1,441	\$23.45	3,393	(1,952)	Postsecondary non-degree award
13-1199	Business Operations Specialists, All Other	1,435	\$31.13	265	1,170	Long-term on-the-job training
27-2042	Musicians and Singers	1,347	\$21.90	1,605	(258)	Long-term on-the-job training
33-3051	Police and Sheriff's Patrol Officers	1,105	\$38.89	2,010	(905)	Moderate-term on-the-job training
15-1159	Computer Support Specialists	1,034	\$24.33	3,213	(2,179)	Associate's degree
27-2011	Actors	893	\$29.20	970	(77)	Long-term on-the-job training
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	867	\$24.98	1,803	(936)	Work experience in a related occupation
47-2111	Electricians	837	\$25.10	844	(7)	Long-term on-the-job training
13-2021	Appraisers and Assessors of Real Estate	704	\$21.92	332	372	Associate's degree
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	674	\$32.29	3	671	Work experience in a related occupation
47-2152	Plumbers, Pipefitters, and Steamfitters	628	\$23.24	195	433	Long-term on-the-job training
43-5061	Production, Planning, and Expediting Clerks	587	\$23.01	0	587	Moderate-term on-the-job training

Source: EMSI Complete Employment - 2013.1, analysis by College Brain Trust

Regional Target Occupations by Sector

The following table shows the 178 regional target occupations organized by sector and sorted by annual openings. Once again, this data is for the three-county region including Los Angeles, Riverside and San Diego Counties.

Figure 56 - Annual Openings by Industry (Los Angeles, Riverside & San Diego Counties)

Regional Annual Openings by Industry Sector (Los Angeles, Riverside and San Diego Counties)			
Sector	# of Occupations	Annual Openings	Average Median Hourly Wage ¹⁰
Sales and Related Occupations	6	8,379	\$24.30
Healthcare Practitioners and Technical Occupations	14	7,037	\$31.01
Office and Administrative Support Occupations	15	6,560	\$23.46
Business and Financial Operations Occupations	9	4,090	\$26.94
Management Occupations	4	3,852	\$36.08
Construction and Extraction Occupations	22	3,794	\$26.26
Arts, Design, Entertainment, Sports, and Media Occupations	11	3,579	\$27.86
Installation, Maintenance, and Repair Occupations	24	3,550	\$26.20
Protective Service Occupations	13	2,511	\$31.59
Transportation and Material Moving Occupations	15	1,199	\$28.69
Computer and Mathematical Occupations	1	1,034	\$24.33
Architecture and Engineering Occupations	13	827	\$26.56
Production Occupations	13	814	\$29.97
Legal Occupations	4	672	\$27.26
Life, Physical, and Social Science Occupations	6	479	\$25.96
Personal Care and Service Occupations	6	224	\$24.41
Healthcare Support Occupations	2	135	\$29.09
Sales and Related Occupations	6	8,379	\$24.30
Grand Total	178	48,736	\$27.53

Source: EMSI Complete Employment - 2013.1, analysis by College Brain Trust

Telecommuting and Traveling Occupations

There are a growing number of jobs that do not involve working in a traditional fixed workplace. Many such occupations, such as truck drivers and home appliance repairers, involve travel. Higher bandwidth Internet connections and widely affordable communication technology, allow employees in a growing number of occupations to telecommute, working from a home-based office. These occupations include medical transcriptionists, customer service representatives, insurance sales agents and many others.

The U.S. Bureau of Labor Statistics lists many such occupations. Following is a partial list with data for Orange County. The occupations are sorted by education level. For informational purposes, the list includes some occupations requiring Bachelor or higher degrees. The items highlighted in red fall outside of the benchmark criteria used in this report (i.e., median hourly wage below \$20, annual openings below 50 and education level above Associate's degree). The "Openings to Completions Gap" shows the difference between annual openings and Orange County completions. A negative number in this column indicates that in the county, there are fewer annual openings than the number of completions.

¹⁰ This is not a weighted average.

Figure 57 - Telecommuting and Traveling Occupations

Telecommuting and Traveling Occupations - Orange County							
SOC	Description	2012 Jobs	Annual Openings	Median Hourly Earnings	O.C Completions (2011)	Openings to Completions Gap	Education Level
43-4051	Customer Service Representatives	27,025	1,214	\$17.87	0	1,214	Short-term OTJT ¹¹
43-4171	Receptionists and Information Clerks	12,479	590	\$13.88	49	541	Short-term OTJT
53-3032	Heavy and Tractor-Trailer Truck Drivers	9,992	348	\$19.03	162	186	Short-term OTJT
53-3033	Light Truck or Delivery Services Drivers	9,469	261	\$14.78	162	99	Short-term OTJT
41-3021	Insurance Sales Agents	12,990	555	\$25.95	0	555	Moderate-term OTJT
43-3031	Bookkeeping, Accounting, and Auditing Clerks	23,182	593	\$19.83	367	226	Moderate-term OTJT
43-9021	Data Entry Keyers	3,087	54	\$18.95	19	35	Moderate-term OTJT
43-9041	Insurance Claims and Policy Processing Clerks	3,055	114	\$20.84	49	65	Moderate-term OTJT
49-9031	Home Appliance Repairers	625	12	\$16.34	0	12	Moderate-term OTJT
53-2031	Flight Attendants	49	1	\$19.45	72	(71)	Moderate-term OTJT
13-1031	Claims Adjusters, Examiners, and Investigators	4,487	125	\$28.40	0	125	Long-term OTJT
33-2021	Fire Inspectors and Investigators	35	1	\$39.05	146	(145)	Work experience in a related occupation
33-3021	Detectives and Criminal Investigators	683	18	\$43.82	298	(280)	Work experience in a related occupation
33-9021	Private Detectives and Investigators	1,007	49	\$23.65	295	(246)	Work experience in a related occupation
41-9021	Real Estate Brokers	10,884	491	\$29.28	21	470	Work experience in a related occupation
43-6011	Executive Secretaries and Executive Administrative Assistants	16,564	396	\$24.69	94	302	Work experience in a related occupation
13-1032	Insurance Appraisers, Auto Damage	147	4	\$29.34	0	4	Postsecondary non-degree award
23-2091	Court Reporters	696	13	\$33.67	50	(37)	Postsecondary non-degree award
31-9094	Medical Transcriptionists	912	40	\$17.93	1,237	(1,197)	Postsecondary non-degree award
41-9022	Real Estate Sales Agents	54,620	2,519	\$17.03	21	2,498	Postsecondary non-degree award
51-9071	Jewelers and Precious Stone and Metal Workers	832	20	\$17.70	0	20	Postsecondary non-degree award
53-2012	Commercial Pilots	540	28	\$31.50	8	20	Postsecondary non-degree award
23-2011	Paralegals and Legal Assistants	3,739	155	\$24.26	255	(100)	Associate's degree
13-2021	Appraisers and Assessors of Real Estate	6,573	216	\$24.12	21	195	Associate's degree
15-1159	Computer Support Specialists	8,500	321	\$27.85	505	(184)	Associate's degree

¹¹ OTJT is an abbreviation for on-the-job training

Telecommuting and Traveling Occupations - Orange County

SOC	Description	2012 Jobs	Annual Openings	Median Hourly Earnings	O.C Completions (2011)	Openings to Completions Gap	Education Level
27-1014	Multimedia Artists and Animators	1,610	47	\$17.73	267	(220)	Bachelor's degree
27-1024	Graphic Designers	6,054	226	\$21.99	404	(178)	Bachelor's degree
27-1025	Interior Designers	2,214	86	\$23.31	418	(332)	Bachelor's degree
27-3041	Editors	1,954	75	\$25.48	273	(198)	Bachelor's degree
27-3042	Technical Writers	757	26	\$33.30	0	26	Bachelor's degree
27-3043	Writers and Authors	4,103	167	\$21.02	1,380	(1,213)	Bachelor's degree
27-3091	Interpreters and Translators	4,048	167	\$24.16	309	(142)	Bachelor's degree
27-4032	Film and Video Editors	293	10	\$21.88	554	(544)	Bachelor's degree
53-2011	Airline Pilots, Copilots, and Flight Engineers	126	9	\$65.62	8	1	Bachelor's degree
53-5021	Captains, Mates, and Pilots of Water Vessels	247	16	\$24.94	20	(4)	Bachelor's degree
Total		233,578	8,967	\$20.60	7,464	1,503	

Source: EMSI Complete Employment - 2013.1

Ladder Occupations

Many students attend community college in order to progress on to complete a four-year degree. Ideally, this analysis would show the path for these "ladder" programs. However, it is difficult to determine all of the pathways. To help facilitate this kind of analysis for college and district staff, the following table has been provided. It shows the 38 occupations in Orange County that include the following criteria:

- Education Level is equal to Bachelor's Degree
- Annual Openings is greater than or equal to 50
- Median Annual Wage is greater than or equal to \$20

Figure 58 - Orange County Occupations Requiring a Bachelor's Degree

Orange County Target Occupations Requiring a Bachelor's Degree							
SOC	Description	2012 Jobs	2017 Jobs	Change	Annual Openings	Median Hourly Earnings	Regional Completions (2011)
11-9021	Construction Managers	3,165	3,475	310	84	\$47.04	6,858
11-9111	Medical and Health Services Managers	2,050	2,337	287	112	\$47.66	578
13-1041	Compliance Officers	2,567	2,773	206	74	\$33.01	3
13-1051	Cost Estimators	2,886	3,244	358	131	\$31.79	7,099
13-1078	Human Resources, Training, and Labor Relations Specialists, All Other	4,606	5,202	596	204	\$30.54	433
13-1081	Logisticians	1,611	1,784	173	68	\$35.18	3
13-1151	Training and Development Specialists	2,169	2,442	273	94	\$29.82	125
13-1161	Market Research Analysts and Marketing Specialists	6,390	7,361	971	381	\$30.21	41
13-2011	Accountants and Auditors	14,567	15,948	1,381	609	\$31.82	261
13-2051	Financial Analysts	2,510	2,842	332	124	\$37.27	130
13-2052	Personal Financial Advisors	2,860	3,434	574	152	\$28.33	8
13-2053	Insurance Underwriters	1,482	1,445	(37)	53	\$30.16	0
13-2099	Financial Specialists, All Other	2,235	2,317	82	66	\$27.02	8
15-1121	Computer Systems Analysts	4,798	5,145	347	164	\$40.04	623
15-1131	Computer Programmers	3,656	3,724	68	102	\$36.14	484
15-1132	Software Developers, Applications	8,054	8,725	671	223	\$46.23	775
15-1133	Software Developers, Systems Software	8,067	8,741	674	223	\$51.80	817
15-1142	Network and Computer Systems Administrators	4,126	4,470	344	142	\$36.58	194
15-1179	Information Security Analysts, Web Developers, and Computer Network Arch.	3,122	3,302	180	84	\$36.94	1,118
17-2031	Biomedical Engineers	596	788	192	54	\$44.63	108
17-2051	Civil Engineers	3,529	3,923	394	155	\$43.17	244
17-2061	Computer Hardware Engineers	2,449	2,497	48	69	\$49.91	64
17-2071	Electrical Engineers	1,710	1,773	63	55	\$46.31	236
17-2072	Electronics Engineers, Except Computer	4,283	4,179	(104)	103	\$47.97	236
17-2112	Industrial Engineers	2,429	2,498	69	70	\$43.35	7
17-2141	Mechanical Engineers	2,198	2,324	126	99	\$41.83	221
19-2041	Environmental Scientists and Specialists, Including Health	1,375	1,553	178	80	\$35.05	26
21-1798	Community and Social Service Specialists, All Other	1,570	1,648	78	51	\$30.34	793
25-2021	Elementary School Teachers, Except Special Education	10,930	11,288	358	316	\$34.94	1,045
25-2022	Middle School Teachers, Except Special and Career/Technical Education	3,723	3,848	125	108	\$36.03	698
25-2031	Secondary School Teachers, Except Special and Career/Technical Education	6,257	6,189	(68)	170	\$35.99	1,076
25-2041	Special Education Teachers, Preschool, Kindergarten, and Elementary School	1,321	1,399	78	56	\$35.37	131
27-1024	Graphic Designers	2,818	2,674	(144)	84	\$24.36	404
27-3031	Public Relations Specialists	1,851	1,943	92	69	\$30.39	1,187
29-2011	Medical and Clinical Laboratory Technologists	1,890	2,058	168	73	\$37.30	1,237
41-3031	Securities, Commodities, and Financial Services Sales Agents	4,151	4,519	368	195	\$30.10	0
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	7,737	8,158	421	273	\$40.16	21
41-9031	Sales Engineers	1,771	1,736	(35)	61	\$43.78	4
Total		143,510	153,703	10,193	5,229	\$37.49	

Source: QCEW Employees - EMSI 2013.2 Class of Worker

Doing What Matters for Jobs and the Economy

Following is a description of Doing What Matters for Jobs and the Economy, a program spearheaded by the California Community College Chancellor's Office.¹²

Among the activities of the California Community Colleges Chancellor's Office, the programs of the Division of Workforce and Economic Development bridge the skills and jobs mismatch and prepare California's workforce for 21st century careers. The Division serves as administrator for several streams of state and federal funds, including Governor's Career Technical Education Pathways Initiative (SB70), Carl D. Perkins Career and Technical Education Act of 2006, and Proposition 98 dollars for Apprenticeship, Economic & Workforce Development (EWD), and Career Technical Education (CTE).

The Division collaborates with employers, organized labor, local communities, and their community colleges through programming supported by these funds to close the skills gap and to foster successful student completion.

The Opportunity

The opportunity exists for community colleges to become essential catalysts in California's economic recovery and jobs creation at the local, regional and state levels.

The Strategy

Doing What Matters for jobs and the economy is a four-pronged framework to respond to the call of our nation, state, and regions to close the skills gap. The four prongs are:

- ***Give Priority for jobs and the economy***
- ***Make Room for jobs and the economy***
- ***Promote Student Success***
- ***Innovate for jobs and the economy***

Goals

The goals of Doing What Matters for Jobs and the Economy are to supply in-demand skills for employers, create relevant career pathways and stackable credentials, promote student success and get Californians into open jobs.

The program developed a document called "Regional Labor Market Profile" for each region, including Orange County.¹³ This document lays out sectors with high forecasted growth and large numbers of openings. They include some of the occupations within these sectors that will have the highest growth rates in total jobs. These sectors include:

- Healthcare
- Professional, Scientific and Technical Services
- Recreation and Tourism

The criteria for determining these sectors seems to have forecasted growth in the number of job openings. This external scan document used additional criteria including target wages and education level required.

¹² Downloaded from <http://doingwhatmatters.cccco.edu/Objective.aspx> on May 15, 2013.

¹³ Downloaded from http://www.coeccc.net/documents/dwm_profile_orc_12.pdf on May 15, 2013

D. Recommended Programs for Consideration

The previous sections of the plan identified Occupations for Further Consideration from several sources. In total, there were 56 occupations that met the criteria for wages, openings and education level in Orange County. For each of these occupations, the consulting team identified the educational programs that typically prepare students for employability. This information was obtained from the EMSI database, which aggregates information from the U.S. Bureau of Labor Statistics, IPEDS and other information sources.

The following table provides a list of these 56 target occupations. To the right are the educational programs that typically train students for the given occupation. There are several caveats to keep in mind when using this data:

- A given educational program will often be linked to more than one occupation.
- Some educational training programs may not be listed on the CIP code taxonomy.
- This data simply points out some of the occupational opportunities in the marketplace now and in the near future. Faculty and staff should use this data as a guide but must do their own research in the field to determine the best way to train students for a particular occupation.

Occupation to Educational Program "Crosswalk"

The following table shows each of the occupations identified in the previous section and identifies the educational programs that typically train individuals for them. It is important to keep in mind that in many cases the educational programs will provide training for more than one occupation. This is particularly true with programs in business, the arts, general studies, construction trades, etc. There are also some occupations for which a specific educational program in the CIP taxonomy does not exist. These are listed at the end of the table. These occupations provide an opportunity for the SOCCCD colleges. Although there may not be a specific training program in the CIP code index, the colleges can be creative and develop their own programs to prepare students for these occupations. Some examples might include: insurance sales agents, real estate appraisers and real estate sales agents and brokers. When available, TOP Code is also provided.

Figure 59 - Target Occupations to Programs Crosswalk

Target Occupations to Programs Crosswalk				
SOC	Occupation Description	CIP	Program Description	TOP Code
11-3011	Administrative Services Managers	44.0401	Public Administration	2102.00
		52.0101	Business/Commerce, General	0501.00
		52.0201	Business Administration & Management, General	0505.00
		52.0202	Purchasing, Procurement/Acquisitions & Contracts Management	0509.20
11-9141	Property, Real Estate, and Community Association Managers	52.0501	Business/Corporate Communications	n/a
11-9199	Managers, All Other	31.0302	Golf Course Operation and Grounds Management	n/a
		42.2813	Applied Psychology	n/a
		42.2899	Clinical, Counseling and Applied Psychology, Other	n/a
		43.0301	Homeland Security	2105.30
		43.0304	Terrorism and Counterterrorism Operations	n/a
		44.0401	Public Administration	2102.00
		44.9999	Public Administration & Social Service Professions, Other	2104.50
		52.0101	Business/Commerce, General	0501.00
		52.0201	Business Administration & Management, General	0505.00
		52.0206	Non-Profit/Public/Organizational Management	n/a
		52.0211	Project Management	n/a
		52.0408	General Office Occupations & Clerical Services	n/a
		52.0701	Entrepreneurship/Entrepreneurial Studies	n/a
		52.0703	Small Business Administration/Management	0506.40
		52.9999	Business, Management, Marketing & Related Support Services, Other	0599.00

Target Occupations to Programs Crosswalk				
SOC	Occupation Description	CIP	Program Description	TOP Code
13-1022	Wholesale and Retail Buyers, Except Farm Products	19.0905	Apparel & Textile Marketing Management	1303.20
		52.1801	Sales, Distribution & Marketing Operations, General	0509.00
		52.1904	Apparel & Accessories Marketing Operations	n/a
		52.1802	Merchandising & Buying Operations	n/a
		52.1902	Fashion Merchandising	n/a
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	52.1801	Sales, Distribution & Marketing Operations, General	0509.00
13-1199	Business Operations Specialists, All Other	52.9999	Business, Management, Marketing & Related Support Services, Other	0599.00
13-2021	Appraisers and Assessors of Real Estate	52.1501	Real Estate	0511.00
13-2072	Loan Officers	52.0801	Finance, General	n/a
		52.0809	Credit Management	n/a
13-2082	Tax Preparers	52.0302	Accounting Technology/Technician & Bookkeeping	0502.00
		52.1601	Taxation	0502.10
15-1159	Computer Support Specialists	11.0201	Computer Programming/Programmer, General	0707.00
		11.0701	Computer Science	0706.00
		11.0901	Computer Systems Networking & Telecommunications	0708.10
		11.1002	System, Networking & LAN/WAN Management/Manager	n/a
		11.1006	Computer Support Specialist	0708.20
17-3023	Electrical and Electronics Engineering Technicians	15.0000	Engineering Technology, General	0924.00
		15.0303	Electrical, Electronic & Communications Engineering Tech.	n/a
		15.0399	Electrical & Electronic Engineering Technologies/Technicians, Other	n/a
		15.1201	Computer Engineering Technology/Technician	n/a
		15.1202	Computer Technology/Computer Systems Technology	n/a
23-2011	Paralegals and Legal Assistants	22.0000	Legal Studies, General	1401.00
		22.0302	Legal Assistant/Paralegal	1402.00
		22.0399	Legal Support Services, Other	n/a
29-1111	Registered Nurses	51.0000	Health Services/Allied Health/Health Sciences, General	1201.00
		51.3801	Registered Nursing/Registered Nurse	1230.00
		51.3805	Family Practice Nurse/Nursing	n/a
		51.3808	Nursing Science	n/a
		51.3999	Practical Nursing, Vocational Nursing and Nursing Assistants, Other	n/a
29-1126	Respiratory Therapists	51.0000	Health Services/Allied Health/Health Sciences, General	1201.00
		51.0908	Respiratory Care Therapy/Therapist	1210.00
29-2021	Dental Hygienists	51.0000	Health Services/Allied Health/Health Sciences, General	1201.00
		51.0602	Dental Hygiene/Hygienist	1240.20
		51.0699	Dental Services & Allied Professions, Other	1240.00
29-2037	Radiologic Technologists and Technicians	51.0907	Medical Radiologic Technology/Science - Radiation Therapist	1226.00
		51.0911	Radiologic Technology/Science - Radiographer	1225.00
29-2061	Licensed Practical and Licensed Vocational Nurses	51.0000	Health Services/Allied Health/Health Sciences, General	1201.00
		51.3901	Licensed Practical /Vocational Nurse Training	1230.20
31-2021	Physical Therapist Assistants	51.0000	Health Services/Allied Health/Health Sciences, General	1201.00
		51.0806	Physical Therapy Technician/Assistant	1222.00
33-2011	Firefighters	43.0203	Fire Science/Firefighting	2133.50
33-3051	Police and Sheriff's Patrol Officers	43.0107	Criminal Justice/Police Science	2105.00
		43.0114	Law Enforcement Investigation and Interviewing	n/a

Target Occupations to Programs Crosswalk				
SOC	Occupation Description	CIP	Program Description	TOP Code
41-1012	First-Line Supervisors of Non-Retail Sales Workers	52.1899	General Merchandising, Sales & Related Mktg Operations, Other	0509.60
		52.1909	Special Products Marketing Operations	n/a
		52.9999	Business, Management, Marketing & Related Support Services, Other	0599.00
41-3011	Advertising Sales Agents	09.0903	Advertising	0509.10
41-3099	Sales Representatives, Services, All Other	52.1803	Retailing & Retail Operations	n/a
		52.1804	Selling Skills & Sales Operations	0509.40
		52.9999	Business, Management, Marketing & Related Support Services, Other	0599.00
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	52.1801	Sales, Distribution & Marketing Operations, General	0509.00
		52.1899	General Merchandising, Sales & Related Mktg Operations, Other	0509.60
		52.1902	Fashion Merchandising	n/a
		52.1904	Apparel & Accessories Marketing Operations	n/a
		52.9999	Business, Management, Marketing & Related Support Services, Other	0599.00
41-9021	Real Estate Brokers	52.1501	Real Estate	0511.00
41-9799	Sales and Related Workers, All Other	52.1803	Retailing & Retail Operations	n/a
		52.1804	Selling Skills & Sales Operations	0509.40
		52.1909	Special Products Marketing Operations	n/a
43-1011	First-Line Supervisors of Office and Administrative Support Workers	52.0204	Office Management & Supervision	0506.30
43-3051	Payroll and Timekeeping Clerks	52.0302	Accounting Technology/Technician & Bookkeeping	0502.00
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	52.0408	General Office Occupations & Clerical Services	n/a
43-4199	Information and Record Clerks, All Other	52.0408	General Office Occupations & Clerical Services	n/a
43-5052	Postal Service Mail Carriers	52.0408	General Office Occupations & Clerical Services	n/a
43-6011	Executive Secretaries and Executive Administrative Assistants	51.0716	Medical Administrative/Executive Assistant & Medical Secretary	0514.20
		52.0401	Administrative Assistant & Secretarial Science, General	0514.00
43-6012	Legal Secretaries	22.0301	Legal Administrative Assistant/Secretary	0514.10
43-9041	Insurance Claims and Policy Processing Clerks	52.0408	General Office Occupations & Clerical Services	n/a
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	46.0301	Electrical & Power Transmission Installation/Installer, General	0934.40
		46.0302	Electrician	0952.20
		46.0403	Building/Home/Construction Inspection/Inspector	0957.20
		46.0415	Building Construction Technology	0952.00
		46.9999	Construction Trades, Other	2102.10
47-2031	Carpenters	46.0000	Construction Trades, General	n/a
		46.0201	Carpentry/Carpenter	0952.10
47-2073	Operating Engineers and Other Construction Equipment Operators	46.0000	Construction Trades, General	n/a
		49.0202	Construction/Heavy Equipment/Earthmoving Equipment Operation	0947.30
47-2081	Drywall and Ceiling Tile Installers	46.0000	Construction Trades, General	n/a
47-2111	Electricians	46.0000	Construction Trades, General	n/a
		46.0302	Electrician	0952.20
47-2152	Plumbers, Pipefitters, and Steamfitters	46.0000	Construction Trades, General	n/a
47-2181	Roofers	46.0000	Construction Trades, General	n/a
47-4011	Construction and Building Inspectors	46.0403	Building/Home/Construction Inspection/Inspector	0957.20
47-4799	Construction and Related Workers, All Other	15.0505	Solar Energy Technology/Technician	n/a
		46.0403	Building/Home/Construction Inspection/Inspector	0957.20
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	47.0103	Communications Systems Installation & Repair Technology	n/a

Target Occupations to Programs Crosswalk				
SOC	Occupation Description	CIP	Program Description	TOP Code
49-2098	Security and Fire Alarm Systems Installers	46.0302	Electrician	0952.20
49-3021	Automotive Body and Related Repairers	47.0603	Autobody/Collision & Repair Technology/Technician	0949.00
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	15.0501	Heating, Ventilation, Air Conditioning and Refrigeration Engineering Technology/Technician	0946.00
		15.0505	Solar Energy Technology/Technician	n/a
		47.0201	Heating, A/C, Ventilation & Refrigeration Maint. Technology	n/a
53-3021	Bus Drivers, Transit and Intercity	49.0205	Truck and Bus Driver/Commercial Vehicle Operator and Instructor	0947.50
13-1031	Claims Adjusters, Examiners, and Investigators	n/a		
41-3021	Insurance Sales Agents	n/a		
43-4131	Loan Interviewers and Clerks	n/a		
43-5061	Production, Planning, and Expediting Clerks	n/a		
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	n/a		
49-9041	Industrial Machinery Mechanics	n/a		
51-1011	First-Line Supervisors of Production and Operating Workers	n/a		
53-1021	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	n/a		

Source: EMSI Complete Employment - 2013.1, analysis by College Brain Trust

Potential Future Programs

The following table contains all 78 of the educational programs from the previous table, organized by CIP code. These are the educational programs that train students for the target occupations. The table includes the number of completions in 2011 for Saddleback and Irvine Valley Colleges, the district total and total other completions within Orange County. The list starts with the 18 programs for which the district had at least one completion in 2011. The remaining 60 programs had no SOCCCD completions that year. Faculty and staff may want to examine these for possible additions to the program of instruction. Some of these programs may already exist at the colleges but simply had no 2011 completions.

Figure 60 - SOCCCD Completions for Target Occupation Programs

SOCCCD Completions 2011 - Programs from Target Occupations List					
CIP Code	Description	SC	IVC	SOCCCD	Other O.C.
11.0201	Computer Programming/Programmer, General	3	11	14	30
11.0701	Computer Science	4	-	4	276
11.0901	Computer Systems Networking & Telecommunications	9	7	16	101
19.0905	Apparel & Textile Marketing Management	17	-	17	26
22.0302	Legal Assistant/Paralegal	-	1	1	225
43.0107	Criminal Justice/Police Science	-	12	12	283
46.0403	Building/Home/Construction Inspection/Inspector	3	-	3	33
51.0000	Health Services/Allied Health/Health Sciences, General	64	-	64	1,173
51.3801	Registered Nursing/Registered Nurse	236	-	236	1,235
52.0101	Business/Commerce, General	3	-	3	110
52.0201	Business Administration & Management, General	129	107	236	6,475
52.0204	Office Management & Supervision	5	3	8	122
52.0302	Accounting Technology/Technician & Bookkeeping	23	52	75	292
52.0401	Administrative Assistant & Secretarial Science, General	5	9	14	38
52.0703	Small Business Administration/Management	2	-	2	22
52.1501	Real Estate	8	3	11	10
52.1601	Taxation	8	-	8	28
52.1801	Sales, Distribution & Marketing Operations, General	8	-	8	30
09.0903	Advertising	-	-	-	30
11.1002	System, Networking & LAN/WAN Management/Manager	-	-	-	17
11.1006	Computer Support Specialist	-	-	-	17
15.0000	Engineering Technology, General	-	-	-	4
15.0303	Electrical, Electronic & Communications Engineering Tech.	-	-	-	44
15.0399	Electrical & Electronic Engineering Technologies/Technicians, Other	-	-	-	2
15.0501	Heating, Ventilation, Air Conditioning and Refrigeration Engineering Technology/Technician	-	-	-	25
15.0505	Solar Energy Technology/Technician	-	-	-	3
15.1201	Computer Engineering Technology/Technician	-	-	-	-
15.1202	Computer Technology/Computer Systems Technology	-	-	-	-
22.0000	Legal Studies, General	-	-	-	25
22.0301	Legal Administrative Assistant/Secretary	-	-	-	7
22.0399	Legal Support Services, Other	-	-	-	4
31.0302	Golf Course Operation and Grounds Management	-	-	-	4
42.2813	Applied Psychology	-	-	-	19
42.2899	Clinical, Counseling and Applied Psychology, Other	-	-	-	93
43.0114	Law Enforcement Investigation and Interviewing	-	-	-	3
43.0203	Fire Science/Firefighting	-	-	-	-
43.0301	Homeland Security	-	-	-	7
43.0304	Terrorism and Counterterrorism Operations	-	-	-	2
44.0401	Public Administration	-	-	-	67
44.9999	Public Administration & Social Service Professions, Other	-	-	-	-
46.0000	Construction Trades, General	-	-	-	-
46.0201	Carpentry/Carpenter	-	-	-	1
46.0301	Electrical & Power Transmission Installation/Installer, General	-	-	-	74
46.0302	Electrician	-	-	-	322
46.0415	Building Construction Technology	-	-	-	38

SOCCCD Completions 2011 - Programs from Target Occupations List

CIP Code	Description	SC	IVC	SOCCCD	Other O.C.
46.9999	Construction Trades, Other	-	-	-	59
47.0103	Communications Systems Installation & Repair Technology	-	-	-	-
47.0201	Heating, A/C, Ventilation & Refrigeration Maint. Technology	-	-	-	19
47.0603	Autobody/Collision & Repair Technology/Technician	-	-	-	11
49.0202	Construction/Heavy Equipment/Earthmoving Equipment Operation	-	-	-	-
49.0205	Truck and Bus Driver/Commercial Vehicle Operator and Instructor	-	-	-	162
51.0602	Dental Hygiene/Hygienist	-	-	-	44
51.0699	Dental Services & Allied Professions, Other	-	-	-	60
51.0716	Medical Administrative/Executive Assistant & Medical Secretary	-	-	-	42
51.0806	Physical Therapy Technician/Assistant	-	-	-	-
51.0907	Medical Radiologic Technology/Science - Radiation Therapist	-	-	-	95
51.0908	Respiratory Care Therapy/Therapist	-	-	-	108
51.0911	Radiologic Technology/Science - Radiographer	-	-	-	83
51.3805	Family Practice Nurse/Nursing	-	-	-	48
51.3808	Nursing Science	-	-	-	53
51.3901	Licensed Practical /Vocational Nurse Training	-	-	-	451
51.3999	Practical Nursing, Vocational Nursing and Nursing Assistants, Other	-	-	-	515
52.0202	Purchasing, Procurement/Acquisitions & Contracts Management	-	-	-	-
52.0206	Non-Profit/Public/Organizational Management	-	-	-	5
52.0211	Project Management	-	-	-	1
52.0408	General Office Occupations & Clerical Services	-	-	-	49
52.0501	Business/Corporate Communications	-	-	-	-
52.0701	Entrepreneurship/Entrepreneurial Studies	-	-	-	-
52.0801	Finance, General	-	-	-	8
52.0809	Credit Management	-	-	-	-
52.1802	Merchandising & Buying Operations	-	-	-	-
52.1803	Retailing & Retail Operations	-	-	-	-
52.1804	Selling Skills & Sales Operations	-	-	-	4
52.1899	General Merchandising, Sales & Related Mktg Operations, Other	-	-	-	1
52.1902	Fashion Merchandising	-	-	-	-
52.1904	Apparel & Accessories Marketing Operations	-	-	-	9
52.1909	Special Products Marketing Operations	-	-	-	-
52.9999	Business, Management, Marketing & Related Support Services, Other	-	-	-	17
Total		527	205	732	13,161

Source: EMSI Complete Employment - 2013.1, analysis by College Brain Trust

The following table lists the target occupations that do not have CIP Code programs associated with them. These are occupations that meet the threshold criteria for wages opening and required education level but have no linked programs via the “crosswalk”. These are additional areas in which faculty might consider developing training programs (if they do not currently exist). This research should include collaboration with other college departments and with workforce development and industry partners.

Figure 61- Target Occupations without Associated Programs

Target Occupations without Associated Educational Programs	
SOC Code	Occupation
13-1031	Claims Adjusters, Examiners, and Investigators
41-3021	Insurance Sales Agents
43-4131	Loan Interviewers and Clerks
43-5061	Production, Planning, and Expediting Clerks
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers
49-9041	Industrial Machinery Mechanics
51-1011	First-Line Supervisors of Production and Operating Workers
53-1021	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand

Source: Source: EMSI Complete Employment - 2013.1, analysis by the College Brain Trust

E. Gap Analysis

Overview

The gap analysis identifies gaps between the current program of instruction at the colleges and the educational needs for present and future workers in the district and the region. The basis of this analysis is the labor market study described in the previous sections of this report. It is important to make a few observations before continuing.

1. The district will not be able to train students for all of the target occupations in the region. Decisions must be made based on data, budgetary considerations, staffing requirements, etc.
2. The analysis is limited by the taxonomies used for occupations (SOC codes) and educational programs (CIP codes). Furthermore, the “crosswalk” that links educational programs to occupations, is at best an inexact science. Faculty should be creative in designing curriculum that may not fall exactly within a particular CIP code category.
3. Many occupations require skills in a variety of disciplines. The colleges’ departments must therefore cooperate to offer complementary courses to complete a student’s program of study.
4. There are often multiple paths to a given occupation. As can be seen in the occupation reports in the previous section, the degree or certificate requirements for a given occupation do not follow a one-to-one relationship. There will be a percentage of workers in an occupation that have post-secondary degrees and some that do not. In many cases, workers in a given occupation will have arrived via different educational paths. Faculty should be creative in designing programs that prepare graduates for real world jobs. Collaborating with advisory boards and industry leaders will help in this process.
5. Analysis and discussion must take place among all stakeholders at the college. Though this report presents some findings and recommendations, success will only come from robust and ongoing discussion among faculty and staff. The data should inform these discussions but additional considerations will factor into decisions regarding the addition of new programs or the expansion or retooling of existing programs.

The following sections compare the current program of instruction at the district with the identified labor market data. The goal is to:

- Identify existing programs that are (and are not) preparing students for the Target Occupations.
- Identify programs not currently offered at the college that train students for the Target Occupations.

Current Program Analysis

The following table contains a list of all programs at the colleges with 2011 completions. They are organized by CIP code and include completions during 2011 at each of the colleges. The programs that are highlighted in orange are those that train students for any of the target occupations. It is important to note that simply completing a degree or certificate does not mean that a student is ready for these jobs. Some require on-the-job-training, work experience and other skills.

Several of the programs in the table train students for jobs that pay well and have large numbers of annual openings, but typically require a Bachelor's or higher degree. This does not mean that all workers in these jobs have a Bachelor's degree.

Figure 62 - SOCCCD Program Completions

SOCCCD Program Completions 2011					
CIP	Program	IVC 2011	SC 2011	SOCCCD 2011	Trains for Target Occupation?
01.0601	Applied Horticulture/Horticulture Operations, General	-	10	10	
01.0605	Landscaping and Groundskeeping	-	11	11	
03.0101	Natural Resources/Conservation, General	-	2	2	
03.0103	Environmental Studies	-	5	5	
04.0901	Architectural Technology/Technician	-	14	14	
05.0200	Ethnic Studies	-	4	4	
05.0207	Women's Studies	-	1	1	
09.0101	Speech Communication and Rhetoric	2	1	3	
09.0401	Journalism	-	3	3	
09.0701	Radio and Television	-	15	15	
10.0303	Prepress/Desktop Publishing and Digital Imaging Design	2	-	2	
11.0201	Computer Programming/Programmer, General	11	3	14	Yes
11.0501	Computer Systems Analysis/Analyst	1	-	1	
11.0601	Data Entry/Microcomputer Applications, General	-	9	9	
11.0701	Computer Science	-	4	4	Yes
11.0801	Web Pg, Digital/Multimedia and Information Resources Design	5	19	24	
11.0803	Computer Graphics	3	11	14	
11.0901	Computer Systems Networking and Telecommunications	7	9	16	Yes
11.1004	Web/Multimedia Management and Webmaster	-	3	3	
12.0401	Cosmetology/Cosmetologist, General	-	38	38	
12.0500	Cooking and Related Culinary Arts, General	-	14	14	
13.1501	Teacher Assistant/Aide	-	1	1	
14.0102	Pre-Engineering	-	5	5	
15.0613	Manufacturing Engineering Technology/Technician	2	-	2	
15.1301	Drafting and Design Technology/Technician, General	6	2	8	
16.0101	Foreign Languages and Literatures, General	-	1	1	
16.0302	Japanese Language and Literature	3	-	3	
16.0501	German Language and Literature	-	2	2	
16.0901	French Language and Literature	-	1	1	
16.0905	Spanish Language and Literature	2	10	12	
16.1603	Sign Language Interpretation and Translation	-	3	3	
19.0501	Foods, Nutrition, and Wellness Studies, General	-	13	13	
19.0701	Human Development and Family Studies, General	-	2	2	
19.0709	Child Care Provider/Assistant	28	28	56	
19.0901	Apparel and Textiles, General	-	4	4	
19.0905	Apparel and Textile Marketing Management	-	17	17	Yes
22.0302	Legal Assistant/Paralegal	1	-	1	Yes
23.0101	English Language and Literature, General	-	17	17	
24.0101	Liberal Arts and Sciences/Liberal Studies	1,086	1,516	2,602	
24.0103	Humanities/Humanistic Studies	28	3	31	
26.0101	Biology/Biological Sciences, General	17	17	34	
27.0101	Mathematics, General	11	9	20	

SOCCCD Program Completions 2011					
CIP	Program	IVC 2011	SC 2011	SOCCCD 2011	Trains for Target Occupation?
30.0101	Biological and Physical Sciences	34	3	37	
30.9999	Multi-/Interdisciplinary Studies, Other	8	-	8	
31.0501	Health and Physical Education/Fitness, General	2	9	11	
31.0507	Physical Fitness Technician	6	-	6	
38.0101	Philosophy	-	4	4	
40.0101	Physical Sciences	4	4	8	
40.0501	Chemistry, General	11	15	26	
40.0601	Geology/Earth Science, General	-	1	1	
40.0801	Physics, General	-	6	6	
41.9999	Science Technologies/Technicians, Other	-	3	3	
42.0101	Psychology, General	29	126	155	
43.0102	Corrections	-	8	8	
43.0107	Criminal Justice/Police Science	12	-	12	Yes
44.0000	Human Services, General	-	5	5	
45.0101	Social Sciences, General	-	5	5	
45.0201	Anthropology	1	9	10	
45.0601	Economics, General	2	10	12	
45.0701	Geography	2	1	3	
45.1001	Political Science and Government, General	2	14	16	
45.1101	Sociology	3	11	14	
46.0403	Building/Home/Construction Inspection/Inspector		3	3	Yes
47.0101	Electrical/Electronics Equipment Installation and Repair, General	9	2	11	
47.0104	Computer Installation and Repair Technology/Technician	-	9	9	
47.0604	Automobile/Automotive Mechanics Technology/Technician	-	29	29	
49.0399	Marine Transportation, Other	-	6	6	
50.0101	Visual and Performing Arts, General	-	15	15	
50.0301	Dance, General	1	1	2	
50.0408	Interior Design	-	23	23	
50.0409	Graphic Design	17	-	17	
50.0501	Drama and Dramatics/Theatre Arts, General	1	5	6	
50.0605	Photography	-	1	1	
50.0701	Art/Art Studies, General	5	11	16	
50.0901	Music, General	-	5	5	
51.0000	Health Services/Allied Health/Health Sciences, General	-	64	64	Yes
51.0801	Medical/Clinical Assistant	-	64	64	
51.0904	Emergency Medical Technology/Technician (EMT Paramedic)	-	8	8	
51.1501	Substance Abuse/Addiction Counseling	-	33	33	
51.3801	Registered Nursing/Registered Nurse	-	236	236	Yes
52.0101	Business/Commerce, General	-	3	3	Yes
52.0201	Business Administration and Management, General	107	129	236	Yes
52.0204	Office Management and Supervision	3	5	8	Yes
52.0208	E-Commerce/Electronic Commerce	-	1	1	
52.0212	Retail Management	-	1	1	
52.0302	Accounting Technology/Technician and Bookkeeping	52	23	75	Yes
52.0401	Administrative Assistant and Secretarial Science, General	9	5	14	Yes
52.0703	Small Business Administration/Management	-	2	2	Yes
52.1101	International Business/Trade/Commerce	-	3	3	
52.1501	Real Estate	3	8	11	Yes
52.1601	Taxation	-	8	8	Yes
52.1801	Sales, Distribution, and Marketing Operations, General	-	8	8	Yes
52.1905	Tourism and Travel Services Marketing Operations	-	12	12	
54.0101	History, General	5	16	21	
Total		1,543	2,800	4,343	

Source: EMSI Complete Employment - 2013.1, analysis by College Brain Trust

Both of the colleges offer certificates requiring fewer units than a degree or traditional certificate program. At Irvine Valley College they are called Low Unit Certificates. At Saddleback College, they are referred to as Occupational Skills Awards or OSAs. They are offered in a wide variety of subjects. The following table shows the completions of these Low Unit Certificates for Irvine Valley College. The programs highlighted in orange are those with CIP codes that map to occupations on the target occupation list. Income Tax (CIP code 52.0399) does not map via the crosswalk to a target occupation, but Taxation (CIP Code 52.1601) does. This program likely provides a “ladder” opportunity for students to move into the more intensive taxation degree program.

Figure 63 - Irvine Valley College Production of Low Unit Certificates

Irvine Valley College - Production of Low Unit Certificates				
5-year average	5-year total	Certificate of Proficiency Name	TOP	CIP
32.4	162	Financial/Managerial Accounting	0505.00	52.0301
27.8	139	Financial Accounting	0502.00	52.0304
22	110	Income Tax	0502.10	52.0399
20.2	101	Computerized Accounting	0502.00	52.0302
14.6	73	Payroll	0506.00	52.0399
7	35	Recycling and Zero Waste	0301.00	15.0508
3	15	Spreadsheet	0702.10	52.0408
2.6	13	Electronics Aide	0934.00	47.0101
2.2	11	Web Page Authoring	0614.30	11.0801
1.2	6	2D Animation	0614.40	10.0304
1	5	Database	0707.20	n/a
1	5	Digital Graphics Applications	0614.60	10.0304
0.8	4	Digital Publishing	0934.00	10.0303
0.6	3	Dance Technique	1008.00	50.0301
0.4	2	Entrepreneurship	0506.40	n/a
0.2	1	Digital Photography	1030.00	50.0605
0.2	1	Real Estate Sales	0511.00	52.1501

Source: Irvine Valley College Office of Research, Planning and Accreditation

The following table shows the Occupational Skills Awards (OSAs) for Saddleback College.

Figure 64 - Saddleback College Occupational Skills Awards

Saddleback College Production of Occupation Skills Award				
5-year average	5-Year total	Skills Award Name	TOP	CIP
49.6	248	Emergency Medical Technician	1251.00	51.0904
46.6	233	Medical Insurance Coding	1208.20	51.0801
31.6	158	Cosmetician	3007.00	12.0401
25.8	129	Associate Teacher	0802.00	13.1501
6.2	31	Online Educator	0860.00	13.0501
2.8	14	Human Resources Management	0501.00	52.0101
2.6	13	General Landscape Design	0109.10	01.0605
2.2	11	Aquarium Technician	1920.00	41.9999
2	10	General Horticulture	0109.00	01.0601
1.6	8	Aquaculture Technician	1920.00	41.9999
1.6	8	Office and Computer Skills	0514.00	52.0401
1.4	7	Basic Costume Construction and Sourcing	1303.10	19.0201
1.2	6	Instructional Assistant	0802.00	13.1501
1.2	6	Project Management	0501.00	52.0101
1	5	Plant Identification	0109.00	01.0601
1	5	Scenic Art and Painting	1006.00	50.0502
1	5	Cinema Production	0612.10	50.0601
0.8	4	Phlebotomist	1205.00	51.1004
0.4	2	Post Production	0612.10	50.0601
0.4	2	Television Production	0612.10	50.0601
0.2	1	Screen Acting and Voice Performance	0604.00	09.0701
0.2	1	Sustainable Fashion and Social Entrepreneurship	1303.10	19.0201
0.2	1	CTVR Critical Studies	0612.10	50.0601
0.2	1	Radio	0612.10	50.0601
0.2	1	Television	0612.10	50.0601

Source: Saddleback Office of Planning, Research and Accreditation

The following table presents the target occupations for Orange County with the openings to completions gap analysis. Those occupations requiring some postsecondary education are highlighted and are listed first.

Figure 65- Target Occupations Gap Analysis

Target Occupations Gap Analysis - Orange County								
SOC Code	Description	OC Annual Openings	OC Completions 2011	Openings to Completions Gap	2012 Jobs	2020 Jobs	2012 Median Hourly Wage	Education Level ¹⁴
13-2021	Appraisers and Assessors of Real Estate	216	21	195	6,573	7,185	\$24.12	Associate's Degree
15-1159	Computer Support Specialists	321	505	-184	8,500	9,281	\$27.85	Associate's Degree
17-3023	Electrical and Electronics Engineering Technicians	56	50	6	2,036	2,155	\$24.67	Associate's Degree
23-2011	Paralegals and Legal Assistants	155	255	-100	3,739	4,549	\$24.26	Associate's Degree
29-1111	Registered Nurses	845	3,388	-2,543	19,383	23,338	\$39.61	Associate's Degree
29-1126	Respiratory Therapists	65	1,345	-1,280	1,398	1,708	\$33.78	Associate's Degree
29-2021	Dental Hygienists	95	1,341	-1,246	2,125	2,546	\$48.24	Associate's Degree
29-2037	Radiologic Technologists and Technicians	73	178	-105	1,671	2,047	\$30.23	Associate's Degree
31-2021	Physical Therapist Assistants	52	1,237	-1,185	1,014	1,307	\$28.98	Associate's Degree
29-2061	Licensed Practical and Licensed Vocational Nurses	305	1,688	-1,383	6,043	7,190	\$24.06	Postsecondary non-degree award
33-2011	Firefighters	54	-	54	1,733	1,782	\$31.79	Postsecondary non-degree award
43-6012	Legal Secretaries	89	7	82	3,131	3,507	\$21.90	Postsecondary non-degree award
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	52	-	52	2,585	2,419	\$30.79	Postsecondary non-degree award
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	113	47	66	2,729	3,244	\$21.51	Postsecondary non-degree award
13-1022	Wholesale and Retail Buyers, Except Farm Products	72	90	-18	2,222	2,345	\$25.96	Long-term OTJT
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	159	38	121	4,108	4,500	\$28.57	Long-term OTJT
13-1031	Claims Adjusters, Examiners, and Investigators	125	-	125	4,487	4,468	\$28.40	Long-term OTJT
13-1199	Business Operations Specialists, All Other	372	17	355	12,363	13,440	\$34.14	Long-term OTJT
47-2031	Carpenters	467	1	466	13,421	14,884	\$22.65	Long-term OTJT
47-2111	Electricians	302	322	-20	5,746	6,926	\$25.70	Long-term OTJT
47-2152	Plumbers, Pipefitters, and Steamfitters	199	-	199	4,115	4,756	\$24.45	Long-term OTJT
49-9041	Industrial Machinery Mechanics	109	-	109	2,122	2,671	\$22.88	Long-term OTJT
13-2082	Tax Preparers	91	403	-312	2,363	2,664	\$22.72	Moderate-term OTJT
13-2072	Loan Officers	242	8	234	7,606	7,946	\$31.38	Moderate-term OTJT
33-3051	Police and Sheriff's Patrol Officers	148	298	-150	4,332	4,497	\$41.91	Moderate-term OTJT
41-3011	Advertising Sales Agents	94	30	64	3,066	2,638	\$25.06	Moderate-term OTJT

¹⁴ OTJT is an abbreviation for on-the-job training

Target Occupations Gap Analysis - Orange County

SOC Code	Description	OC Annual Openings	OC Completions 2011	Openings to Completions Gap	2012 Jobs	2020 Jobs	2012 Median Hourly Wage	Education Level ¹⁴
41-3021	Insurance Sales Agents	555	-	555	12,990	15,051	\$25.95	Moderate-term OTJT
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	680	65	615	18,865	20,751	\$26.78	Moderate-term OTJT
41-9799	Sales and Related Workers, All Other	186	4	182	4,803	5,317	\$23.17	Moderate-term OTJT
43-3051	Payroll and Timekeeping Clerks	74	367	-293	2,315	2,524	\$21.53	Moderate-term OTJT
43-5061	Production, Planning, and Expediting Clerks	142	-	142	4,620	4,670	\$22.84	Moderate-term OTJT
43-9041	Insurance Claims and Policy Processing Clerks	114	49	65	3,055	3,221	\$20.84	Moderate-term OTJT
47-2073	Operating Engineers and Other Construction Equipment Operators	105	-	105	2,658	3,007	\$29.81	Moderate-term OTJT
47-2081	Drywall and Ceiling Tile Installers	137	-	137	3,100	3,503	\$24.10	Moderate-term OTJT
47-2181	Roofers	80	-	80	1,762	2,113	\$20.12	Moderate-term OTJT
47-4799	Construction and Related Workers, All Other	59	3	56	1,388	1,483	\$21.86	Moderate-term OTJT
49-2098	Security and Fire Alarm Systems Installers	61	322	-261	1,331	1,556	\$22.19	Moderate-term OTJT
49-3021	Automotive Body and Related Repairers	56	11	45	1,450	1,613	\$20.40	Moderate-term OTJT
53-3021	Bus Drivers, Transit and Intercity	65	162	-97	2,785	2,838	\$20.20	Moderate-term OTJT
41-3099	Sales Representatives, Services, All Other	563	21	542	14,111	15,295	\$26.78	Short-term OTJT
43-4131	Loan Interviewers and Clerks	100	-	100	4,243	4,345	\$22.27	Short-term OTJT
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	67	49	18	1,719	1,867	\$20.78	Short-term OTJT
43-4199	Information and Record Clerks, All Other	66	49	17	1,895	1,998	\$20.40	Short-term OTJT
43-5052	Postal Service Mail Carriers	91	49	42	2,801	2,551	\$26.69	Short-term OTJT
11-3011	Administrative Services Managers	134	6,891	-6,757	3,863	4,174	\$44.31	Work experience in a related occupation
11-9141	Property, Real Estate, and Community Association Managers	918	21	897	20,696	24,556	\$21.35	Work experience in a related occupation
11-9199	Managers, All Other	681	7,063	-6,382	17,946	20,203	\$25.40	Work experience in a related occupation
41-1012	First-Line Supervisors of Non-Retail Sales Workers	390	18	372	11,570	12,361	\$23.06	Work experience in a related occupation
41-9021	Real Estate Brokers	491	21	470	10,884	12,849	\$29.28	Work experience in a related occupation
43-1011	First-Line Supervisors of Office and Administrative Support Workers	693	130	563	18,746	20,278	\$26.75	Work experience in a related occupation
43-6011	Executive Secretaries and Executive Administrative Assistants	396	94	302	16,564	17,952	\$24.69	Work experience in a related occupation

Target Occupations Gap Analysis - Orange County								
SOC Code	Description	OC Annual Openings	OC Completions 2011	Openings to Completions Gap	2012 Jobs	2020 Jobs	2012 Median Hourly Wage	Education Level ¹⁴
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	329	533	-204	7,152	8,466	\$27.70	Work experience in a related occupation
47-4011	Construction and Building Inspectors	63	36	27	1,282	1,480	\$28.98	Work experience in a related occupation
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	183	-	183	3,958	4,588	\$31.56	Work experience in a related occupation
51-1011	First-Line Supervisors of Production and Operating Workers	105	-	105	6,228	6,098	\$25.94	Work experience in a related occupation
53-1021	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	73	-	73	1,872	2,147	\$20.91	Work experience in a related occupation
Grand Total		12,528	27,227	-14,699	335,263	372,848	\$26.65	

Source: EMSI Complete Employment - 2013.1, analysis by College Brain Trust

Note: The openings to completions gap data should be used carefully. There are occupations that have a one-to-one correlation with an educational program (e.g., registered nurse, firefighter or dental hygienist). There are other occupations that have a one-to-many or many-to-one relationship. The first category would be occupations for which there are several educational paths (e.g., retail or business managers). The other category includes occupations where a given program prepares students for a number of possible occupations (e.g., marketing, liberal arts, English, etc.).

It is important to keep this in mind when considering the gap data. If there is a gap in an occupation with a one-to-one relationship with an educational program, the gap data is quite relevant. An example from the data below is for registered nurses. There were 2,543 more completions in 2011 than there are expected openings. This means that graduates are likely to have to look outside of Orange County for employment.

In an occupation with a many-to-one or one-to-many relationship with an educational program(s), the gap data must be considered in a broader context. An example from the data below would be administrative services managers. The data indicates a significant oversupply of such individuals relative to job openings. However, the programs that lead to this occupation might also prepare students for other occupations.

In all cases, faculty and deans should consult with industry leaders to gain first-hand information about the job market in a particular field. The data may help guide the process but it is no substitute for real world expertise and experience.

Possible Future Programs

The following table contains a list of educational programs that prepare students for occupations that meet the wage, openings and education level criteria set forth in the **report**, but had no SOCCCD completions in 2011. The table lists the programs in order by CIP Code and provides the number of County completions. These programs provide a list that should be reviewed by faculty and administrators as possibilities for expansion or addition. Staff must consider each program independently, in consultation with employers in the field.

Figure 66 - Programs from Target Occupation List with no 2011 SOCCCD Completions

Possible Future Programs from Target Occupations List with no 2011 SOCCCD Completions		
CIP Code	Description	O.C. 2011
09.0903	Advertising	30
11.1002	System, Networking & LAN/WAN Management/Manager	17
11.1006	Computer Support Specialist	17
15.0000	Engineering Technology, General	4
15.0303	Electrical, Electronic & Communications Engineering Tech.	44
15.0399	Electrical & Electronic Engineering Technologies/Technicians, Other	2
15.0501	Heating, Ventilation, Air Conditioning and Refrigeration Engineering Technology/Technician	25
15.0505	Solar Energy Technology/Technician	3
15.1201	Computer Engineering Technology/Technician	0
15.1202	Computer Technology/Computer Systems Technology	0
22.0000	Legal Studies, General	25
22.0301	Legal Administrative Assistant/Secretary	7
22.0399	Legal Support Services, Other	4
31.0302	Golf Course Operation and Grounds Management	4
42.2813	Applied Psychology	19
42.2899	Clinical, Counseling and Applied Psychology, Other	93
43.0114	Law Enforcement Investigation and Interviewing	3
43.0203	Fire Science/ fighting	0
43.0301	Homeland Security	7
43.0304	Terrorism and Counterterrorism Operations	2
44.0401	Public Administration	67
44.9999	Public Administration & Social Service Professions, Other	0
46.0000	Construction Trades, General	0
46.0201	Carpentry/Carpenter	1
46.0301	Electrical & Power Transmission Installation/Installer, General	74
46.0302	Electrician	322
46.0415	Building Construction Technology	38
46.9999	Construction Trades, Other	59
47.0103	Communications Systems Installation & Repair Technology	0
47.0201	Heating, A/C, Ventilation & Refrigeration Maint. Technology	19
47.0603	Autobody/Collision & Repair Technology/Technician	11
49.0202	Construction/Heavy Equipment/Earthmoving Equipment Operation	0
49.0205	Truck and Bus Driver/Commercial Vehicle Operator and Instructor	162
51.0602	Dental Hygiene/Hygienist	44
51.0699	Dental Services & Allied Professions, Other	60
51.0716	Medical Administrative/Executive Assistant & Medical Secretary	42
51.0806	Physical Therapy Technician/Assistant	0
51.0907	Medical Radiologic Technology/Science - Radiation Therapist	95
51.0908	Respiratory Care Therapy/Therapist	108
51.0911	Radiologic Technology/Science - Radiographer	83
51.3805	Family Practice Nurse/Nursing	48
51.3808	Nursing Science	53
51.3901	Licensed Practical /Vocational Nurse Training	451
51.3999	Practical Nursing, Vocational Nursing and Nursing Assistants, Other	515
52.0202	Purchasing, Procurement/Acquisitions & Contracts Management	0
52.0206	Non-Profit/Public/Organizational Management	5
52.0211	Project Management	1
52.0408	General Office Occupations & Clerical Services	49
52.0501	Business/Corporate Communications	0
52.0701	Entrepreneurship/Entrepreneurial Studies	0
52.0801	Finance, General	8

Possible Future Programs from Target Occupations List with no 2011 SOCCCD Completions		
CIP Code	Description	O.C. 2011
52.0809	Credit Management	0
52.1802	Merchandising & Buying Operations	0
52.1803	Retailing & Retail Operations	0
52.1804	Selling Skills & Sales Operations	4
52.1899	General Merchandising, Sales & Related Mktg Operations, Other	1
52.1902	Fashion Merchandising	0
52.1904	Apparel & Accessories Marketing Operations	9
52.1909	Special Products Marketing Operations	0
52.9999	Business, Management, Marketing & Related Support Services, Other	7
Total		2,652

Source: EMSI Complete Employment - 2013.1, analysis by College Brain Trust

Conclusions for Strategic Planning

Not only is the SOCCCD a very diverse area with a range of educational and socioeconomic needs, conditions at the present time are historically dynamic with incredibly rapid change. There are many perspectives from which to examine the data presented in the external scan. From the multitude of facts described, a few key points have been revealed from analysis and are provided for consideration in planning.

A. Demographic Profile of Service Areas

The district's service areas are home to distinctive populations, whose ethnicity and age distributions, and cultural characteristics provide critical considerations for strategic planning.

1. **Socioeconomic characteristics** – Overall, the district and college service areas have a high socioeconomic profile in that the percentages of those with annual incomes over \$150,000, and over \$75,000, are significantly greater than those for the county and State. Likewise, educational attainment levels are relatively high, with almost half of the population having a B.A. degree or higher. And, private school K-12 enrollment in the Saddleback College service area is higher than for the county and State. Education is likely a high priority for the families and population of the area, and university enrollments will be impacted, making it more reasonable that SOCCCD should plan on the most generous enrollment projection possibilities. Lifelong learning may also become more and more important to the already-highly educated, aging communities.

At the same time, there are **special populations** to address in strategic planning, including those with no high school diploma, 15% of the population who earn less than \$35,000 per year, and those who may be limited English speaking, given that 25% to 30% of the population speak a language other than English at home.

2. **Diversity** – Ethnic diversity for the Saddleback College service area is represented by a 19% Hispanic population, which is projected to increase slightly to 22.6% in 2020. Irvine Valley College's service area is highly diverse, with only 57% white and 27.8% Asian and also 19% Hispanic. The colleges successfully represent the diversity of the community in their enrollment distributions by ethnicity. As mentioned above, the languages spoken at home also demonstrate the diversity of the population. A consideration for strategic planning is how the colleges' address the diversity of their communities programmatically.
3. **Age** – Throughout the country and for the past century, the baby boom phenomenon has impacted age distributions in that a swell of births occurred from 1946 to 1964, and the children of the "baby boomers" are now within the last edge of the age range of traditional college age enrollment. That is, for the past 15+ years, colleges have experienced a swell of enrollments from this "baby boomlet" age group, and that swell will slightly dissipate for a few years locally until the baby boomer's grandchildren become college aged. This phenomenon is more apparent for the county of Orange and slightly for Saddleback College's service area, and not so much for Irvine Valley College's service area.

Specifically, in the year 2020, the 15-19 year-old age range, the traditional college age population, will slightly decline in the Saddleback College service area and will increase only very slightly in the Irvine Valley College service area. These projections could influence the numbers of incoming freshmen for 2020 and enrollment projections. However, the swell of college age population will occur again shortly after the year 2020.

On the other hand, the populations of those over 55 years of age for all service areas considered will increase significantly, and community colleges with a mission of serving the educational needs of their community will be challenged to adjust to the needs of an aging community. Saddleback College has provided a role model with its Emeritus program. Colleges will want to consider career technical needs of an older population, as well.

B. High School Graduate Projections

The 2020 projections for high school graduates reflect the projections for the age distributions of the communities. While graduate projections for the year 2020 for the specific service areas within SOCCCD are not available from State agencies or the unified school districts, enrollments by grade and projected age distributions of the population indicate the number of graduates for the Saddleback College service area will remain approximately the same, and for Irvine Valley College will increase at least approximately 14%. After the year 2020, however, the number of high school graduates may increase markedly for both service areas, as the 0-14 year old age groups will increase in 2020 and later be at traditional college age.

C. Population and Enrollment Projections

Enrollment projections are provided using three different methods, all based upon a "participation rate" methodology of evaluating the number of students enrolling per 1000 adult population within a geographic area. Enrollments and adult populations were studied by age group and for 2008 through 2012 and projected for 2020. The current fall 2012 participation rate for the district is .057, that is, 57 people enrolled in a district college per 1,000 adult population of the district service area; the rate for Saddleback College is .068 and for Irvine Valley College, .043. Compared to the total for all of California's public community colleges, SOCCCD's participation rates are high, and the rates for the population under 24 years of age are greater than the average rate.

Adult population projections indicate that from 2012 to 2020 the Irvine Valley College service area adult population will increase 9.9%, the Saddleback College service area will increase 5%, and the entire district population by 7.3%. With the population in the age group under 24 years of age projected to decline or stabilize in the year 2020, however, enrollments will not grow proportionately to those for the entire adult population. After the year 2020, traditional college age populations will increase again. Consequently, enrollment plans need to remain flexible.

Using the three different projection methods, a range of enrollment projections for 2020 is provided:

- SOCCCD 41,398 to 46,294
- Saddleback 27,883 to 28,454
- Irvine Valley 15,648 to 17,789

District and college leadership are encouraged to select their target, projected enrollment from the above ranges, keeping the following, among other, variables in mind:

1. Available State funding and other categorical funding.
2. Academic program balance.
3. Available facilities and scheduling options vis a vis programs.
4. Available faculty vis a vis programs.
5. Good practice, regulations, codes, and faculty/staff contractual agreements.
6. Evaluation of the appropriateness of each projection method.
7. The amount of growth, overall, that the district wants to accommodate.
8. Planned international student program size.
9. The extent to which programs will suit the educational needs of an older population.

District and college leadership are encouraged to select the most ambitious projections because of the following factors:

1. University enrollments will likely be at capacity.
2. Aggressive new home building may increase population projections in the future.
3. The service areas are high educational attainment communities.
4. The CCCCO FUSION database projects higher WSCH for the district than represented in this scan's enrollment projections.
5. While State funding has been very limited during the recent Great Recession, that funding may improve.

The balance of future enrollments between the colleges, if planned with service area growth patterns in mind, will change so that Irvine Valley College's enrollments comprise a larger proportion of the total district enrollment. This results from slightly greater growth rates of that college's service area, as well as the slightly younger overall age distribution there.

D. Internal Scan Needs

Throughout the external scanning processes, questions were raised that could be answered with an internal research scan to compliment facts from this external scan in the strategic planning process. The following topics of interest were among several identified:

1. A comparison of student demographic characteristic distributions to population/service area distributions, such as for ethnicity, age, and participation rate (location of residence compared to population size of geographic areas) and data about such changes and trends over time.
2. An evaluation of previous school of attendance for students, including high schools, private schools, ROP participation—especially as related to CTE course/program enrollment patterns---and other colleges.
3. Student success, and course, program and sequence taking and completion patterns.
4. Follow-up of students, particularly for CTE students in order to assess program design and health.
5. Evaluation of out-of-district students and programs of enrollment.
6. Program review results as they relate to external scan information specifically for career technical programs.
7. International student program history.

It is also important that the quantitative data in this scan be combined with qualitative information and input from stakeholders throughout the district. It's also likely that the data provided within will provoke more questions and require more analysis and follow up.

E. Using labor market data

This scan identifies projected high growth industries, related occupations for which there will be significant demand, the numbers and "gaps" of educational "completers" in the county for those occupations, and educational programs that will address the skills for the occupations in demand. The extensive labor market data provided requires in-depth analysis by program faculty, advisory committee members, college career technical committees, and the district and college planning groups. The data is intended to assist in evaluating the labor market's need for existing and new programs. In many cases, as faculty and staff know, the findings are complex for using in that the "mapping" among high growth industries, educational requirements and programs, and careers/jobs is not straightforward. Further, for some jobs incumbents are trained on-the-job (even though the skills of an Associate's Degree or higher are needed for the job), many are "laddered" from entry levels to advanced levels within the same field, some are found in multiple industries, and many are best addressed by cross-disciplinary educational programs. The EMSI database is available to faculty and staff for further labor market analysis.

Appendix 1 – Regional Target Occupations

Target occupations below are for the three-county region (Los Angeles, Riverside and San Diego Counties). These are all of the occupations that meet the three selection criteria. The openings-to-completions gap shows the difference between the number of annual openings and the number of completions in 2011. A negative number in this column indicates that in the county, there are fewer annual openings than the number of completions. For example, in 2011, in the three county region, there were 6,851 completions in registered nursing. However, in the same region, there are only 4,087 annual openings in that occupation).

Figure 67 - Target Occupations Los Angeles, Riverside & San Diego Counties

Regional Target Occupations (Los Angeles, Riverside & San Diego Counties)						
SOC	Description	Annual Openings	Median Hourly Earnings	Regional Completions (2011)	Openings to Completions Gap	Education Level ¹⁵
29-1111	Registered Nurses	4,087	\$39.97	6,851	(2,764)	Associate's degree
11-9199	Managers, All Other	3,195	\$25.60	21,697	(18,502)	Work experience in a related occupation
43-1011	First-Line Supervisors of Office and Administrative Support Workers	2,757	\$25.91	253	2,504	Work experience in a related occupation
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	2,487	\$25.06	1,716	771	Moderate-term OTJT
41-3021	Insurance Sales Agents	1,842	\$23.71	1	1,841	Moderate-term OTJT
41-3099	Sales Representatives, Services, All Other	1,826	\$25.25	1,925	(99)	Short-term OTJT
41-9021	Real Estate Brokers	1,687	\$27.24	332	1,355	Work experience in a related occupation
43-6011	Executive Secretaries and Executive Administrative Assistants	1,507	\$23.19	987	520	Work experience in a related occupation
29-2061	Licensed Practical and Licensed Vocational Nurses	1,441	\$23.45	3,393	(1,952)	Postsecondary non-degree award
13-1199	Business Operations Specialists, All Other	1,435	\$31.13	265	1,170	Long-term OTJT
27-2042	Musicians and Singers	1,347	\$21.90	1,605	(258)	Long-term OTJT
33-3051	Police and Sheriff's Patrol Officers	1,105	\$38.89	2,010	(905)	Moderate-term OTJT
15-1159	Computer Support Specialists	1,034	\$24.33	3,213	(2,179)	Associate's degree
27-2011	Actors	893	\$29.20	970	(77)	Long-term OTJT
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	867	\$24.98	1,803	(936)	Work experience in a related occupation
47-2111	Electricians	837	\$25.10	844	(7)	Long-term OTJT
13-2021	Appraisers and Assessors of Real Estate	704	\$21.92	332	372	Associate's degree
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	674	\$32.29	3	671	Work experience in a related occupation
47-2152	Plumbers, Pipefitters, and Steamfitters	628	\$23.24	195	433	Long-term OTJT
43-5061	Production, Planning, and Expediting Clerks	587	\$23.01	0	587	Moderate-term OTJT
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	552	\$28.42	108	444	Long-term OTJT
41-3011	Advertising Sales Agents	494	\$23.97	112	382	Moderate-term OTJT
11-3011	Administrative Services Managers	448	\$41.82	19,641	(19,193)	Work experience in a related occupation
13-2072	Loan Officers	434	\$31.66	689	(255)	Moderate-term OTJT

¹⁵ OTJT is an abbreviation for on-the-job training

Regional Target Occupations (Los Angeles, Riverside & San Diego Counties)						
SOC	Description	Annual Openings	Median Hourly Earnings	Regional Completions (2011)	Openings to Completions Gap	Education Level ¹⁵
33-2011	Firefighters	429	\$28.10	79	350	Postsecondary non-degree award
53-1021	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	429	\$21.27	3	426	Work experience in a related occupation
43-5052	Postal Service Mail Carriers	405	\$26.74	12	393	Short-term OTJT
23-2011	Paralegals and Legal Assistants	396	\$27.94	1,078	(682)	Associate's degree
13-1031	Claims Adjusters, Examiners, and Investigators	388	\$28.81	20	368	Long-term OTJT
51-1011	First-Line Supervisors of Production and Operating Workers	387	\$24.02	3	384	Work experience in a related occupation
49-9041	Industrial Machinery Mechanics	368	\$24.01	0	368	Long-term OTJT
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	361	\$25.71	46	315	Postsecondary non-degree award
49-9052	Telecommunications Line Installers and Repairers	329	\$24.87	46	283	Long-term OTJT
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	317	\$23.85	6	311	Long-term OTJT
47-2073	Operating Engineers and Other Construction Equipment Operators	311	\$30.93	45	266	Moderate-term OTJT
53-1031	First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	308	\$26.93	3	305	Work experience in a related occupation
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	303	\$21.29	788	(485)	Postsecondary non-degree award
13-1022	Wholesale and Retail Buyers, Except Farm Products	296	\$23.59	1,151	(855)	Long-term OTJT
29-2037	Radiologic Technologists and Technicians	295	\$31.48	444	(149)	Associate's degree
29-2021	Dental Hygienists	294	\$46.55	1,165	(871)	Associate's degree
43-3051	Payroll and Timekeeping Clerks	263	\$20.58	1,312	(1,049)	Moderate-term OTJT
43-6012	Legal Secretaries	257	\$23.38	60	197	Postsecondary non-degree award
13-2082	Tax Preparers	255	\$21.47	1,477	(1,222)	Moderate-term OTJT
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	255	\$21.54	80	175	Postsecondary non-degree award
43-4061	Eligibility Interviewers, Government Programs	253	\$21.20	0	253	Moderate-term OTJT
27-3099	Media and Communication Workers, All Other	246	\$25.79	353	(107)	Short-term OTJT
27-4011	Audio and Video Equipment Technicians	237	\$22.32	483	(246)	Postsecondary non-degree award
33-3012	Correctional Officers and Jailers	233	\$29.35	103	130	Moderate-term OTJT
29-2799	Health Technologists and Technicians, All Other	228	\$20.63	0	228	Postsecondary non-degree award
29-1126	Respiratory Therapists	227	\$31.73	1,053	(826)	Associate's degree
47-4011	Construction and Building Inspectors	223	\$29.73	101	122	Work experience in a related occupation
27-3012	Public Address System and Other Announcers	213	\$20.74	1,378	(1,165)	Short-term OTJT
19-4099	Life, Physical, and Social Science Technicians, All Other	203	\$24.57	2	201	Associate's degree
17-3023	Electrical and Electronics Engineering Technicians	202	\$29.26	1,531	(1,329)	Associate's degree
11-3071	Transportation, Storage, and Distribution Managers	198	\$37.10	19,635	(19,437)	Work experience in a related occupation
49-3011	Aircraft Mechanics and Service Technicians	195	\$27.51	426	(231)	Postsecondary non-degree award

Regional Target Occupations (Los Angeles, Riverside & San Diego Counties)						
SOC	Description	Annual Openings	Median Hourly Earnings	Regional Completions (2011)	Openings to Completions Gap	Education Level ¹⁵
43-4031	Court, Municipal, and License Clerks	192	\$21.36	12	180	Moderate-term OTJT
33-9021	Private Detectives and Investigators	172	\$23.93	2,010	(1,838)	Work experience in a related occupation
27-4012	Broadcast Technicians	171	\$21.00	393	(222)	Associate's degree
47-2051	Cement Masons and Concrete Finishers	161	\$21.62	45	116	Moderate-term OTJT
49-9051	Electrical Power-Line Installers and Repairers	161	\$40.21	350	(189)	Long-term OTJT
33-1099	First-Line Supervisors of Protective Service Workers, All Other	137	\$21.00	537	(400)	Work experience in a related occupation
33-3021	Detectives and Criminal Investigators	136	\$38.87	1,952	(1,816)	Work experience in a related occupation
47-2211	Sheet Metal Workers	135	\$23.36	76	59	Long-term OTJT
27-1022	Fashion Designers	127	\$31.59	722	(595)	Associate's degree
23-2093	Title Examiners, Abstractors, and Searchers	125	\$21.84	1,078	(953)	Short-term OTJT
29-2032	Diagnostic Medical Sonographers	121	\$36.98	1,261	(1,140)	Associate's degree
29-2055	Surgical Technologists	119	\$22.55	1,093	(974)	Postsecondary non-degree award
33-1012	First-Line Supervisors of Police and Detectives	113	\$49.60	3,045	(2,932)	Work experience in a related occupation
53-2012	Commercial Pilots	111	\$38.89	36	75	Postsecondary non-degree award
27-4014	Sound Engineering Technicians	109	\$29.63	453	(344)	Postsecondary non-degree award
47-2121	Glaziers	107	\$21.90	45	62	Long-term OTJT
51-8031	Water and Wastewater Treatment Plant and System Operators	105	\$33.32	179	(74)	Long-term OTJT
49-2098	Security and Fire Alarm Systems Installers	102	\$20.82	799	(697)	Moderate-term OTJT
17-3011	Architectural and Civil Drafters	101	\$23.79	584	(483)	Associate's degree
47-4051	Highway Maintenance Workers	100	\$21.88	0	100	Moderate-term OTJT
19-4091	Environmental Science and Protection Technicians, Including Health	96	\$23.75	371	(275)	Associate's degree
17-3029	Engineering Technicians, Except Drafters, All Other	95	\$30.39	160	(65)	Associate's degree
31-2021	Physical Therapist Assistants	93	\$26.64	822	(729)	Associate's degree
27-4099	Media and Communication Equipment Workers, All Other	92	\$37.61	239	(147)	Moderate-term OTJT
19-4031	Chemical Technicians	89	\$21.66	27	62	Associate's degree
33-1021	First-Line Supervisors of Fire Fighting and Prevention Workers	84	\$43.88	728	(644)	Postsecondary non-degree award
17-3022	Civil Engineering Technicians	83	\$29.47	383	(300)	Associate's degree
23-2099	Legal Support Workers, All Other	83	\$27.78	1,049	(966)	Short-term OTJT
49-9094	Locksmiths and Safe Repairers	80	\$20.86	0	80	Long-term OTJT
29-2053	Psychiatric Technicians	79	\$23.37	679	(600)	Postsecondary non-degree award
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	78	\$25.97	67	11	Postsecondary non-degree award
43-5031	Police, Fire, and Ambulance Dispatchers	77	\$24.71	0	77	Moderate-term OTJT
47-2221	Structural Iron and Steel Workers	76	\$26.03	68	8	Long-term OTJT
27-2032	Choreographers	74	\$24.73	191	(117)	Work experience in a related occupation
51-8013	Power Plant Operators	72	\$41.86	3	69	Long-term OTJT
27-2021	Athletes and Sports Competitors	70	\$41.96	1,369	(1,299)	Long-term OTJT
49-9062	Medical Equipment Repairers	69	\$22.61	81	(12)	Associate's degree

Regional Target Occupations (Los Angeles, Riverside & San Diego Counties)						
SOC	Description	Annual Openings	Median Hourly Earnings	Regional Completions (2011)	Openings to Completions Gap	Education Level ¹⁵
23-2091	Court Reporters	68	\$31.47	142	(74)	Postsecondary non-degree award
29-2031	Cardiovascular Technologists and Technicians	67	\$27.03	995	(928)	Associate's degree
47-2071	Paving, Surfacing, and Tamping Equipment Operators	65	\$27.60	45	20	Moderate-term OTJT
53-7021	Crane and Tower Operators	65	\$37.55	0	65	Long-term OTJT
17-3026	Industrial Engineering Technicians	64	\$23.41	292	(228)	Associate's degree
43-5051	Postal Service Clerks	58	\$25.58	12	46	Short-term OTJT
17-3013	Mechanical Drafters	57	\$24.84	41	16	Associate's degree
39-5091	Makeup Artists, Theatrical and Performance	57	\$33.47	5,980	(5,923)	Postsecondary non-degree award
43-4011	Brokerage Clerks	55	\$22.33	1,312	(1,257)	Moderate-term OTJT
19-4061	Social Science Research Assistants	53	\$21.22	2,627	(2,574)	Associate's degree
39-3092	Costume Attendants	53	\$22.23	0	53	Short-term OTJT
51-8093	Petroleum Pump System Operators, Refinery Operators, and Gaugers	51	\$35.09	3	48	Long-term OTJT
47-2082	Tapers	50	\$20.13	68	(18)	Moderate-term OTJT
49-9012	Control and Valve Installers and Repairers, Except Mechanical Door	49	\$30.57	0	49	Moderate-term OTJT
43-9011	Computer Operators	48	\$22.19	7	41	Moderate-term OTJT
53-2021	Air Traffic Controllers	48	\$60.87	75	(27)	Associate's degree
39-4831	Funeral Service Managers, Directors, Morticians, and Undertakers	44	\$27.54	0	44	Associate's degree
41-9012	Models	43	\$20.57	0	43	Short-term OTJT
43-9081	Proofreaders and Copy Markers	43	\$21.17	22	21	Moderate-term OTJT
47-5071	Roustabouts, Oil and Gas	43	\$20.96	0	43	Moderate-term OTJT
31-2011	Occupational Therapy Assistants	42	\$31.53	553	(511)	Associate's degree
17-3027	Mechanical Engineering Technicians	40	\$24.97	78	(38)	Associate's degree
53-4011	Locomotive Engineers	40	\$23.54	0	40	Moderate-term OTJT
53-4031	Railroad Conductors and Yardmasters	40	\$25.86	0	40	Moderate-term OTJT
17-3025	Environmental Engineering Technicians	39	\$28.40	64	(25)	Associate's degree
17-3012	Electrical and Electronics Drafters	38	\$25.91	1	37	Associate's degree
53-6051	Transportation Inspectors	37	\$30.06	0	37	Short-term OTJT
39-1011	Gaming Supervisors	36	\$21.00	18,115	(18,079)	Work experience in a related occupation
53-7199	Material Moving Workers, All Other	36	\$20.34	0	36	Short-term OTJT
49-2021	Radio, Cellular, and Tower Equipment Installers and Repairs	35	\$21.30	46	(11)	Associate's degree
17-3031	Surveying and Mapping Technicians	34	\$23.43	73	(39)	Moderate-term OTJT
33-9011	Animal Control Workers	34	\$21.41	427	(393)	Moderate-term OTJT
49-9069	Precision Instrument and Equipment Repairers, All Other	34	\$28.32	34	0	Long-term OTJT
43-5053	Postal Service Mail Sorters, Processors, and Processing Machine Operators	31	\$25.55	12	19	Short-term OTJT
51-4012	Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	31	\$25.59	231	(200)	Moderate-term OTJT
51-8021	Stationary Engineers and Boiler Operators	31	\$28.94	1,311	(1,280)	Long-term OTJT
33-1011	First-Line Supervisors of Correctional Officers	30	\$31.86	102	(72)	Work experience in a related occupation
47-5013	Service Unit Operators, Oil, Gas, and Mining	30	\$28.95	0	30	Moderate-term OTJT

Regional Target Occupations (Los Angeles, Riverside & San Diego Counties)						
SOC	Description	Annual Openings	Median Hourly Earnings	Regional Completions (2011)	Openings to Completions Gap	Education Level ¹⁵
49-2095	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	30	\$40.19	1,158	(1,128)	Postsecondary non-degree award
51-8012	Power Distributors and Dispatchers	30	\$36.45	3	27	Long-term OTJT
17-3024	Electro-Mechanical Technicians	29	\$25.51	62	(33)	Associate's degree
47-2171	Reinforcing Iron and Rebar Workers	29	\$25.96	68	(39)	Long-term OTJT
43-9031	Desktop Publishers	27	\$25.01	65	(38)	Associate's degree
51-6092	Fabric and Apparel Patternmakers	27	\$22.46	24	3	Moderate-term OTJT
29-1124	Radiation Therapists	26	\$42.81	652	(626)	Associate's degree
39-7012	Travel Guides	26	\$21.78	0	26	Moderate-term OTJT
47-2132	Insulation Workers, Mechanical	26	\$20.66	68	(42)	Moderate-term OTJT
51-8091	Chemical Plant and System Operators	26	\$23.37	16	10	Long-term OTJT
47-4021	Elevator Installers and Repairers	25	\$49.63	0	25	Long-term OTJT
17-3019	Drafters, All Other	24	\$24.69	155	(131)	Associate's degree
49-2091	Avionics Technicians	24	\$28.01	345	(321)	Postsecondary non-degree award
29-2033	Nuclear Medicine Technologists	23	\$41.66	560	(537)	Associate's degree
29-9012	Occupational Health and Safety Technicians	22	\$23.06	627	(605)	Moderate-term OTJT
47-2011	Boilermakers	22	\$35.38	45	(23)	Long-term OTJT
17-3021	Aerospace Engineering and Operations Technicians	21	\$31.17	54	(33)	Associate's degree
47-5012	Rotary Drill Operators, Oil and Gas	21	\$25.22	0	21	Moderate-term OTJT
19-4051	Nuclear Technicians	20	\$37.35	0	20	Associate's degree
33-2021	Fire Inspectors and Investigators	19	\$34.91	779	(760)	Work experience in a related occupation
49-9011	Mechanical Door Repairers	19	\$23.26	184	(165)	Moderate-term OTJT
53-1011	Aircraft Cargo Handling Supervisors	19	\$24.66	3	16	Work experience in a related occupation
53-4021	Railroad Brake, Signal, and Switch Operators	19	\$27.09	0	19	Moderate-term OTJT
53-7072	Pump Operators, Except Wellhead Pumpers	19	\$21.00	0	19	Moderate-term OTJT
19-4041	Geological and Petroleum Technicians	18	\$27.19	0	18	Associate's degree
49-3092	Recreational Vehicle Service Technicians	18	\$20.64	0	18	Long-term OTJT
51-8099	Plant and System Operators, All Other	18	\$27.60	3	15	Long-term OTJT
49-2093	Electrical and Electronics Installers and Repairers, Transportation Equipment	17	\$30.57	1,167	(1,150)	Postsecondary non-degree award
47-5011	Derrick Operators, Oil and Gas	16	\$30.79	0	16	Short-term OTJT
51-4111	Tool and Die Makers	16	\$22.81	0	16	Long-term OTJT
13-1032	Insurance Appraisers, Auto Damage	15	\$26.85	1	14	Postsecondary non-degree award
47-5021	Earth Drillers, Except Oil and Gas	13	\$20.56	0	13	Moderate-term OTJT
49-9044	Millwrights	13	\$22.51	0	13	Long-term OTJT
49-9096	Riggers	13	\$26.55	0	13	Short-term OTJT
53-2022	Airfield Operations Specialists	12	\$26.17	75	(63)	Long-term OTJT
11-9131	Postmasters and Mail Superintendents	11	\$39.79	1,120	(1,109)	Work experience in a related occupation
13-1021	Buyers and Purchasing Agents, Farm Products	11	\$28.63	0	11	Long-term OTJT
33-3011	Bailiffs	11	\$22.06	1,952	(1,941)	Moderate-term OTJT
51-8011	Nuclear Power Reactor Operators	11	\$35.59	0	11	Long-term OTJT
53-5022	Motorboat Operators	10	\$20.06	0	10	Short-term OTJT
47-4061	Rail-Track Laying and Maintenance Equipment Operators	9	\$23.11	0	9	Moderate-term OTJT
51-8092	Gas Plant Operators	9	\$32.55	19	(10)	Long-term OTJT

Regional Target Occupations (Los Angeles, Riverside & San Diego Counties)						
SOC	Description	Annual Openings	Median Hourly Earnings	Regional Completions (2011)	Openings to Completions Gap	Education Level ¹⁵
29-2054	Respiratory Therapy Technicians	8	\$22.85	1,053	(1,045)	Associate's degree
33-3052	Transit and Railroad Police	8	\$26.76	443	(435)	Short-term OTJT
39-4011	Embalmers	8	\$20.45	0	8	Postsecondary non-degree award
49-9097	Signal and Track Switch Repairers	6	\$25.22	799	(793)	Postsecondary non-degree award
53-4041	Subway and Streetcar Operators	6	\$26.08	0	6	Moderate-term OTJT
Grand Total		48,736	\$27.53	166,903	(118,167)	

Source: EMSI Complete Employment - 2013.1, analysis by College Brain Trust

Appendix 2 – Definitions

Most of the labor market data was obtained through EMSI¹⁶. Following are the definitions of some key terms. These definitions come from EMSI directly.

Annual Openings Data - Annual openings refers to the sum of new and replacement jobs in the occupation over the given timeframe, divided by the number of years in the timeframe.

Completers Data - The completers data is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

Educational Attainment Data - EMSI's educational attainment numbers are based on Census 1990, Census 2000, the Current Population Survey, and EMSI's demographic data. By combining these sources, EMSI interpolates for missing years and projects data at the county level. Educational attainment data cover only the population aged 25 years or more and indicate the highest level achieved.

Industry Data - In order to capture a complete picture of industry employment, EMSI basically combines covered employment data from Quarterly Census of Employment and Wages (QCEW) produced by the Department of Labor with total employment data in Regional Economic Information System (REIS) published by the Bureau of Economic Analysis (BEA), augmented with County Business Patterns (CBP) and Nonemployer Statistics (NES) published by the U.S. Census Bureau. Projections are based on the latest available EMSI industry data, 15-year past local trends in each industry, growth rates in statewide and (where available) sub-state area industry projections published by individual state agencies, and (in part) growth rates in national projections from the Bureau of Labor Statistics.

Institution Data - The institution data is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

Location Quotient - Location quotient (LQ) is a way of quantifying how concentrated a particular industry, cluster, occupation, or demographic group is in a region as compared to the nation. It can reveal what makes a particular region unique in comparison to the national average.

Occupational Data - Organizing regional employment information by occupation provides a workforce-oriented view of the regional economy. EMSI's occupation data are based on EMSI's industry data and regional staffing patterns taken from the Occupational Employment Statistics program (U.S. Bureau of Labor Statistics). Wage information is partially derived from the American Community Survey. The occupation-to-program (SOC-to-CIP) crosswalk is based on one from the U.S. Department of Education, with customizations by EMSI.

Staffing Patterns Data - The staffing patterns data is compiled from several sources using a specialized process. Sources include Occupational Employment Statistics, and the National Occupation Matrix. EMSI uses ratios from the national matrix and inputs regional jobs by industry, converting these to jobs by occupation. The ratios derived from this are adjusted to equal actual regional data, resulting in a unique regional staffing pattern.

¹⁶ www.economicmodeling.com

Appendix 3 – EMSI Data Sources

Following is the list of data sources used by EMSI. As stated on their website, they use more than 90 Federal, State, and Private Sources.¹⁷

U.S. Department of Commerce - Bureau of Economic Analysis

- State Personal Income and Employment (SPI)
- Local Area Personal Income and Employment (LPI)
- National Income and Product Accounts (NIPA)
- Annual Input-Output (I-O) Accounts
- Benchmark Input-Output (I-O) Accounts
- GDP by State

U.S. Census Bureau

- American Community Survey (ACS)
- County Business Patterns (CBP)
- ZIP Code Business Patterns (ZBP)
- Nonemployer Statistics (NES)
- Quarterly Workforce Indicators (QWI)
- OnTheMap (OTM)
- TIGER/Line File (with additions by DM Solutions Group)
- Population Estimates
- U.S. National and State Population Projections
- Census 2000 & 2010 Summary Files
- Census of Government -- State and Local Government Finances by State
- Journey-to-Work (JtW)
- Consumer Expenditures Survey (CEX)

U.S. Department of Labor - Bureau of Labor Statistics

- Quarterly Census of Employment and Wages (QCEW)
- Current Employment Statistics (CES)
- Current Population Survey (CPS)
- Local Area Unemployment Statistics (LAUS)
- National Compensation Survey
- National Industry-Occupation Employment Matrix (10-year, current/projected)
- Occupational Employment Statistics (OES)
- Occupational Education and Training Projections

Employment and Training Administration (ETA)

- Characteristics of the Insured Unemployed
- National O*NET Consortium, O*NET Production Database

U.S. Department of Education, National Center for Education Statistics

- Integrated Postsecondary Education Data System (IPEDS)
- Office of Educational Research and Improvement for the CIP, 2000 Standard Occupational Classification Crosswalk to 2000 Classification of Instructional Programs

U.S. Department of Health and Human Services - National Center for Health Statistics

- Health, United States

U.S. Postal Service

- Address Information Systems (AIS) Products, Delivery Statistics
- AIS Products, 5-Digit ZIP Product
- AIS Products, City State Product

Internal Revenue Service

- Statistics of Income Division, County-to-County Migration Data

¹⁷ Downloaded from <http://www.economicmodeling.com/data/emsi-data-sources/> on May 17, 2013.

U.S. Railroad Retirement Board

- Annual Railroad Retirement Act and Railroad Unemployment Insurance Act Statistical Tables

Oak Ridge National Laboratory

- County-to-County Distance Matrix (Skim Tree)

Private sources

- Indeed.com job-posting search engine
- Equifax business-level data

Note: In addition to our federal sources, we use state and (where available) sub-state industry projections produced by all 50 individual states.

Appendix 4 – District-wide Planning Council (DWPC) Membership 2012-2013

District-wide Planning Council Membership 2012-2013		
Name	Area	Title and/or Representative
Juan Avalos	Saddleback College	Vice President of Student Services
Robert Bramucci	District	Vice Chancellor of Technology & Learning Services
David Bugay	District	Vice Chancellor of HR & Employer-Employee Relations
Tod Burnett	Saddleback College	College President
Donald Busche	Saddleback College	Vice President of Instruction
Claire Cesareo-Silva	Saddleback College	Faculty Representative
Dennis Gordon	Irvine Valley College	Classified Staff Representative
Bob Cosgrove	Saddleback College	Academic Senate President
Lisa Davis Allen	Irvine Valley College	Faculty Representative
Brandye D'Lena	District	Executive Director, Facilities Planning, Purchasing & Materials Management
Caroline Durdella	Saddleback College	Director of Research, Planning & Accreditation
Debra Fitzsimons	District	Vice Chancellor, Business Services
Patricia Flanigan Chapin	Saddleback College	Dean
Tere Fluegeman	District	District Director, Public Affairs & Government Relations
Linda Fontanilla	Irvine Valley College	Vice President of Student Services
Craig Hayward	Irvine Valley College	Director of Research, Planning & Accreditation
Carol Hilton	Saddleback College	Vice President, College Administrative Services
Denice Inciong	District	District Director of Research, Planning and Data Management and Co-Chair of DWPC
Craig Justice	Irvine Valley College	Vice President of Instruction
Davit Khachatryan	Irvine Valley College	Director of Fiscal Services
Teddi Lorch	District	Executive Director of HR & Employer-Employee Relations
Kim McCord	District	Executive Director of Fiscal Services/Comptroller
Donald Mineo	Saddleback College	Classified Staff Representative
Randy Peebles	District	Associate Vice chancellor of Economic Development
Gary Poertner	District	Chancellor and Co-Chair of DWPC
Glenn Roquemore	Irvine Valley College	College President
Kathy Schmeidler	Irvine Valley College	Academic Senate President
Kathleen Werle	Irvine Valley College	Dean
Jacqueline Zimbalist	District	Classified Staff Representative



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