![Riverside ABout Students — Regional Consortium for Adult Education logo]

Riverside ABout Students

January 2019

[bw] RESEARCH PARTNERSHIP

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INTRODUCTION

BW Research Partnership Inc. (BW Research), an independent research firm, was commissioned by Riverside's ABout Students, Regional Consortium for Adult Education, to complete research that supports the consortium strategic planning efforts. The purpose of this research is to accomplish the following objectives:

- Examine current economic and labor market data in the Riverside Adult Education Service Area to better understand employment and educational opportunities for adult education students. This examination will include analyses of regional industry clusters, job quality, occupation segments, and an initial identification of potential career pathways for adult education students.
- Develop a comprehensive demographic profile of the region's potential adult education students and assess how they could benefit from Adult Education programs.
- Conduct a preliminary assessment of current educational and training offerings in the region and evaluate opportunities to better connect adult education to future employment and educational opportunities.

WHAT WE LEARNED FROM THE ANALYSIS

The following key findings from the demographic and economic profile research, include;

Overall Economy

1. **Since 2012, the number of jobs in the Riverside ABout Students region have increased at a faster rate than the state and national averages, yet average wages per job in Riverside ABout Students region are below average.** The Riverside ABout Students region experienced a strong 28% growth in employment since 2012—higher than the 12% state average and the 9% national average experienced during the same time. Despite this strong growth, jobs in Riverside pay less on average than the state and national averages, while costs of living are 27% above the national average. This means residents may have to work at more than one job to afford living in the area, which can further limit the ability to get additional education and/or training for higher paying employment opportunities.

2. **Unemployment rates vary considerably among Riverside's sub regions, with the unemployment rate being higher in the Riverside ABout Students region than in California or the country**. While the West sub-region has a very low unemployment rate of 3.7%, the South and East sub-regions have higher unemployment rates of 6.7% and 6.6%, respectively. Thus, the West sub-region

shows signs of a tight labor market where there are more job opportunities than the workforce can fill, and the South and East sub-regions show signs of a looser labor market where there are more members of the workforce than there are job opportunities.

Population

1. **Educational attainment varies among the different Riverside sub-regions, although the Riverside ABout Students region on average is still lower than the state and national averages.** Almost half (46%) of all adults 25 years and older in the Riverside ABout Students region have only a high school diploma or less, compared to 39% in the state and 41% in the country. Looking at Riverside's sub-regions, educational attainment is lower in the South sub-region, with almost two-thirds (63%) of adults having attained only a high school diploma or less, and is higher in the West sub-region where the proportion is much lower at 40%.

Job Quality

1. **While the Riverside ABout Students region has experienced strong job growth since 2012, job quality is lower in the area than in the country and the state.** Most occupations can be divided into 3 tiers; tier 1 occupations are higher-skill, higher-paying occupations, tier 2 occupations are middle-skill, middle-wage occupations, and tier 3 occupations are lower-skill, lower-paying occupations. Riverside has a larger proportion of lower-paying tier 3 jobs (52%) and a smaller proportion of higher-paying tier 1 jobs (14%) than the state and national averages. This can be troublesome as tier 3 employment does not typically provide enough income to allow families to afford living in the area; specifically, a family of 2 adults (one working) and 2 children would need two tier 3 jobs to be self-sufficient in Riverside County. Thus, to improve quality of life through job quality in the area, it is important to increase the number of higher-paying, tier 1 & 2 jobs, as well as provide students stronger pathways to this type of employment.

2. **Low-wage, tier 3 jobs have seen the largest increase among the three occupational tiers and have contributed most to the job growth experienced since 2012.** Tier 3 jobs increased by 32% since 2012 and account for over half (56%) of all jobs created since then. Even though overall growth rates in Riverside were higher than the state and national averages, most of this growth has been in tier 3 occupations. Conversely, tier 1 jobs experienced the largest growth rates in California and the country. If the trend in Riverside is ongoing, job quality in the area will continue to deteriorate.

3. **Overall, the Riverside ABout Students region is a net-exporter of talent, meaning residents need to leave the area to go to work.** There are more residents in the workforce in nearly all occupational segments than available jobs, resulting in residents having to leave the Riverside ABout Students region to go to work. The

largest gap is in the higher-paying management, business, science, and arts occupations, with almost twice the number of resident workers compared to the number of local jobs. The exception to this trend is lower-paying service occupations, where workers from outside the area are coming to Riverside to fill jobs that are available in excess of the residential workforce. This finding is aligned with the high concentration of lower-paying, tier 3 jobs in the Riverside ABout Students region and the shrinking proportion of higher-paying tier 1 jobs.

Industry Clusters

1. **Logistics, Healthcare, Building & Design, Finance, Insurance & Real Estate (FIRE), Energy, and Information & Communication Technologies (ICT) offer strong career pathways with opportunities for new skills and salaries in the area.** All of these industry clusters experienced growth since 2012 and together they account for 39% of all jobs in the region. While logistics and healthcare have grown significantly and provide the largest number of jobs among all industry clusters, building & design, FIRE, energy, and ICT provide above average wages, with at least 72% of jobs being tier 1 or tier 2 occupations. Together, these industry clusters provide sustainable career pathways with opportunities for training and workforce development for tier 1 and tier 2 employment.

The Key findings from the **potential adult education population segment** analysis include:

1. **The Adult Education (AE) population segments with the largest number of potential students include CTE,[1] basic skills,[2] adults with English as the second language (ESL), and adults with a disability**. Larger numbers indicate that more people could benefit from AE classes specifically targeted at these population segments. When developing programs, AE schools can look at these numbers when prioritizing the types of programs and classes to offer.

2. **The South sub-region has the largest proportion of adults that could benefit from basic skills, ESL, independent living, and CTE classes**. Although the North sub-region has the largest number of all AE population segments (it also accounts for 33% of the Riverside ABout Students region's total population), the South sub-region has the highest proportion of adults with less than a high school diploma, ESL, adults with a disability, and adults with a high school diploma or with some college, no degree. As such, a large proportion of the adult population in this sub-

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[1] The CTE population consists of two segments: adults (18 years and older) with a high school diploma and adults (18 years and older) with some college, no degree.
[2] The basic skills population segment includes adults (18 years and older) with less than a high school diploma who could benefit from basic skills training and high school diploma or equivalency.

region can greatly benefit from additional AE classes. The Northwest sub-region also has a relatively large proportions of potential students relative to current students, particularly in Basic Skills and CTE.

3. **The North sub-region has a large number of residents that could benefit from basic skills and CTE classes.** The North sub-region has at least 32% of the entire ABout Students region's adults with less than a high school diploma, adults with a high school diploma, and adults with some college, no degree. AE schools located in this sub-region can prioritize these types of classes as a large number of adult residents could benefit from it.

4. **The Jurupa Adult School and Val-Verde Adult School are in close proximity to a number of regions identified as the most under-served in the gap analysis**. New or enhanced programs in Basic skills, ESL, and CTE at the Jurupa Adult School and Val-Verde Adult School could help bolster educational attainment rates in the region and serve a relatively large population that could benefit but are not currently taking adult education courses.

Challenges to the Riverside ABout Students Region

1. **Job volatility due to automation and technological advancements is likely to impact Riverside's economy in the next 5 to 10 years given the high concentration of jobs in volatile industries such as Logistics and Tourism, Hospitality, and Recreation.** The Riverside ABout Students region has a higher percentage of highly volatile jobs (26%) compared the national average (21%). These findings indicate that approximately one-out-of-four jobs in the Riverside ABout Students region will likely be impacted by automation and technology in the next 5 to 10 years, changing the skills and training required for the position or changing the position and title altogether. This is important to consider as the resident workforce responds to changes in the world of work and new skills and training are needed. Students, job-seekers, and current workers should recognize the need for foundational, technical, and non-technical skills to adapt and respond to the expected changes in the world of work and develop the ability to transfer to in-demand and higher paying career pathways.

    The logistics industry in particular has both a high concentration of employment in the region and is likely to be impacted by job volatility and automation over the next 5 to 10 years.

2. **Low average wages combined with growing low-paying tier 3 jobs pose a challenge to job quality and economic growth in the area**. With low average wages, a

growing proportion of low-paying tier 3 jobs, and a lack of tier 1 employment, high-skilled resident workers will continue to seek employment outside the Riverside ABout Students region, keeping this area as a net exporter of talent. To improve job quality and sustainable economic growth in Riverside, it is important to support the creation of higher-paying tier 1 and tier 2 jobs with sustainable career pathways and opportunities for higher salaries and skills.

WHAT ARE THE RECOMMENDATIONS FOR ADULT EDUCATION IN RIVERSIDE

The following conclusions and recommendations for Riverside ABout Students is based on BW Research's assessment of the research findings, are as follows:

Recommendation #1: For CTE programs, emphasize technical skills in industry and occupational clusters with greater Tier 1 and Tier 2 employment opportunities.
Geographic Area: Across the ABout Students Region with an emphasis in the Western subregion which has a high number of potential CTE students.

1. The employment picture for the Riverside ABout Students region is challenging in that overall employment has increased significantly, but the overall quality of jobs has generally declined. For some adult education students, steady employment in any occupation is valuable, but for other students, particularly those looking to benefit from CTE courses, connecting to employment that is the opportunity for higher pay and higher skills should be a priority.

   Adult education providers in the region can begin to implement this recommendation by identifying and informing students of the current courses that prepare students for entry and mid-level employment opportunities in Tier 1 and Tier 2 employment. For more information on higher paying industry clusters and employment opportunities, please see page 47 of the report.

Recommendation #2: Educate current and potential Adult Education students on career pathways in key industry clusters such Finance, Insurance & Real Estate (FIRE), Healthcare, Information & Communication Technologies (ICT), and Building & Design.
Geographic Area: Across the ABout Students region with industry priorities in different areas within the County

2. Information and education on **career pathways** should provide three key components;

a. Expose students and job-seekers to the employment opportunities that are available in the region and how they are connected to other employment opportunities in the region.

b. Educate students on the skills and education they need to move forward in career pathways by connecting the dots between employment pathways and employers' educational expectations.

c. Empower students to manage the development of their technical and non-technical skills to qualify for dynamic career pathways and potentially connect to other industry clusters or occupational segments with comparable skills and abilities.

The quality of a career pathway is often dependent on the industry it is in. This report provides career pathways across several key industries that offer strong potential growth and sustainable wages. The following are highlighted career pathways in some of the most promising industries in the Riverside ABout Students Region. For more information on career pathways in these industry clusters, please see page 54 of the report.

Recommendation #3: Examine and potentially expand offerings for Adults with Disabilities. **Geographic Area**: East and North subregions

3. There is a relatively high concentration of adults with disabilities in the East sub-region. This concentration is particularly high in one zip code, 92518, where 16% of adults between the ages of 18-64 have a disability. The East sub-region also has a relatively large population (11,398) of potential students with a disability. The North sub-region has the largest population of potential students with a disability; more than 19,300 potential students reside in this sub-region. Adults with disabilities were a demographic not covered by our gap analyses but the three schools surrounding the zip code—Moreno Valley Adult School, School of Career Education, and Moreno Valley College—are ideally situated to provide access to programming for these individuals.

Recommendation #4: Expand or consider adding new Basic Skills, CTE, and ESL programs in those communities with low educational attainment and relatively low participation rates **Geographic Area**: Northwest, North, and South subregion

4. This recommendation is focused on increasing adult education investment and resources in those areas of the region that showed considerable need. The North, Northwest, and South sub-regions are those most in need of additional services

and programs. The North sub-region has the largest population of potential Basic Skills and ESL Students, with 54,063 and 19,208 potential students respectively. The zip code 92503 tends to have among the highest populations of potential students in the North sub-region. It is also where the Alvord Continuation High School can be found. Basic Skills and CTE programming should focus specifically on four zip codes: 92509 and 91752 in the Northwest sub-region, and 92570 and 92571 in the South sub-region. The closest AE institution to the 92509 and 91752 zip codes is the Jurupa Adult School, while the Val-Verde Adult School is closest to the zip codes 92570 and 92571. Enhanced ESL programs would be particularly effective in the two zip codes of the South sub-region (92570 and 92571) as well, as these two zip codes have significantly larger gaps between current and potential students than any other zip codes in the region.

For more information on sub-regional gap analyses, please see page 34 of the report.

Recommendation #5: Examine and consider additional support services, such as childcare, transportation and financial aid, for those communities with low educational attainment and low income.
Geographic Area: South subregion

5. For many of the most economically distressed households, education and training costs are too great, even when there are not direct fees or costs for entering a program. Transportation, childcare and the lost income from work are too great of a burden to enroll and complete additional education and training, which is often a critical component in moving to a better career pathway with higher pay and more robust opportunities. In the Riverside ABout Students service area, the southern subregion has the lowest educational attainment and median income of the five subregions, while almost three out of five (59%) of residents in the subregion are 34 years old or younger. The South is also the subregion that generally has the widest gap between potential and current adult education students, in both Basic Skills and English as a Second Language.

    If there was a pilot program to support economically distressed students or additional funding available to support current and potential AE students, the Southern subregion would be a good place to begin.

Riverside ABout Students Service Area
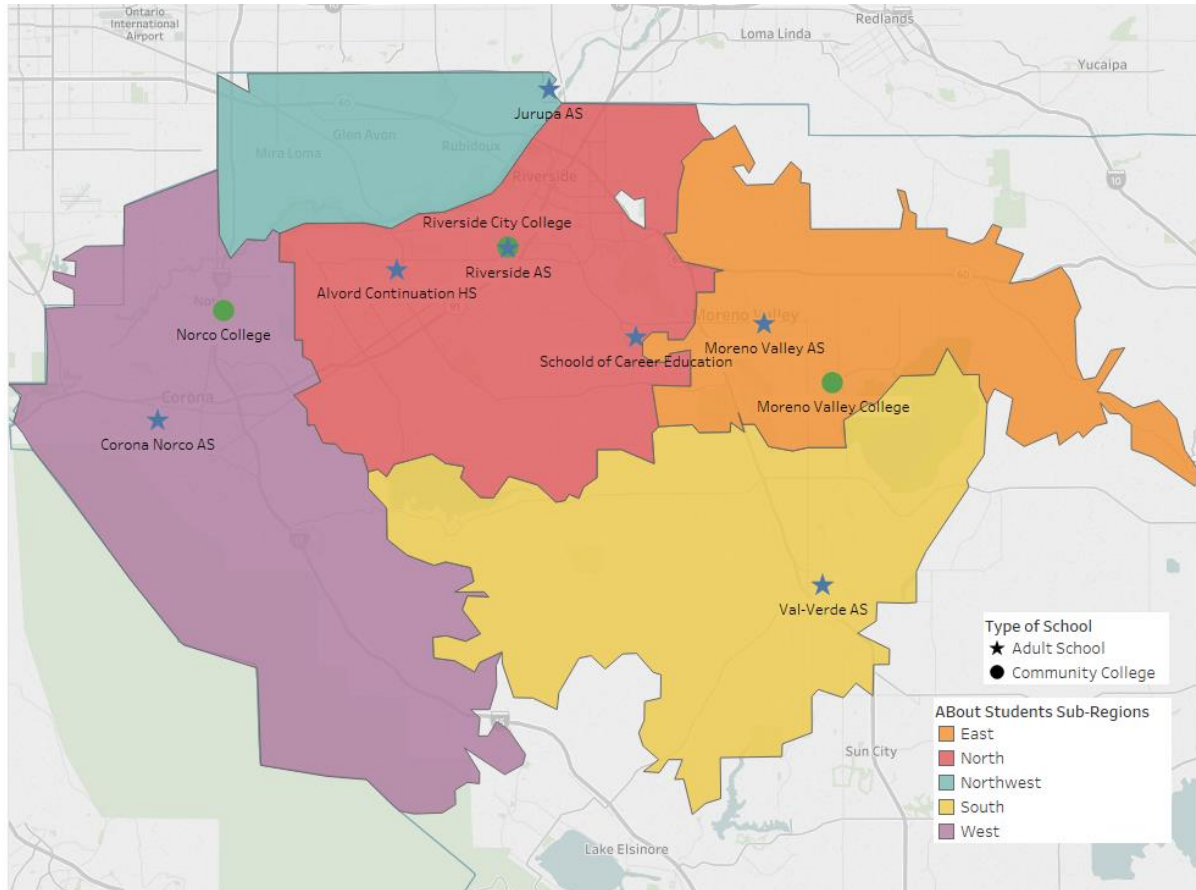
For this report, the Riverside ABout Students Service Area[3] was divided into five sub-regions:

North	Northwest	East	South	West
92501, 92502, 92503, 92504, 92505, 92506, 92507, 92508, 92513, 92514, 92515, 92516, 92517	91752, 92509, 92519	92518, 92551 92552, 92553 92554, 92555 92556, 92557	92570, 92571 92572	92860, 92877 92878, 92879 92880, 92881 92882, 92883

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[3] Riverside ABout Students Service Area, Riverside ABout Students region, or just Riverside will be used interchangeably throughout this report.

REGIONAL ECONOMIC & WORKFORCE PROFILE

1. EMPLOYMENT & ECONOMIC ACTIVITY

There are a total **371,804 jobs** in the Riverside Adult Education (AE) region.[4] Since 2012, the number of jobs in the region has increased 28%, or by an additional **82,402 jobs**. Despite significant job growth, average wages per job in Riverside ($57,803) are below the state and national average, while the cost of living is 26.9% above the national average.

Since 2012, employment in the Riverside ABout Students region has increased more than state (12%) and national (9%) averages, and more than in the neighboring San Bernardino (16%) and Orange (12%) counties (Figure 1). The industries with the largest job creation since 2012 include general warehousing and storage (16,212 jobs created), services for the elderly and persons with disabilities (+13,059 jobs), elementary and secondary schools (+4,689 jobs), limited-service restaurants (+4,017 jobs), and temporary help services (+3,424 jobs).

Economic Profile Analysis Summary

With a total of **371,804 jobs** in 2017, the Riverside ABout Students region has grown at a **faster rate** than the state and national averages and as well as the neighboring counties of Orange and San Bernardino since 2012. Despite its job growth, average wages per job are still below the state and national average, while cost of living is 26.9% above the national average.

Why is this Important?

Overall employment growth is a general indicator of the economic health of a region. Understanding the region's employment trends can help support efforts to effectively grow the economy.

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[4] Riverside ABout Students Service Area, Riverside ABout Students region, or just Riverside will be used interchangeably throughout this report.

Figure 1. Total Employment Growth, 2012-2017[5]

Legend: Riverside ABout Students Region — California — U.S. — Riverside County

Data labels: Riverside ABout Students Region 28%; Riverside County 23%; California 12%; U.S. 9%
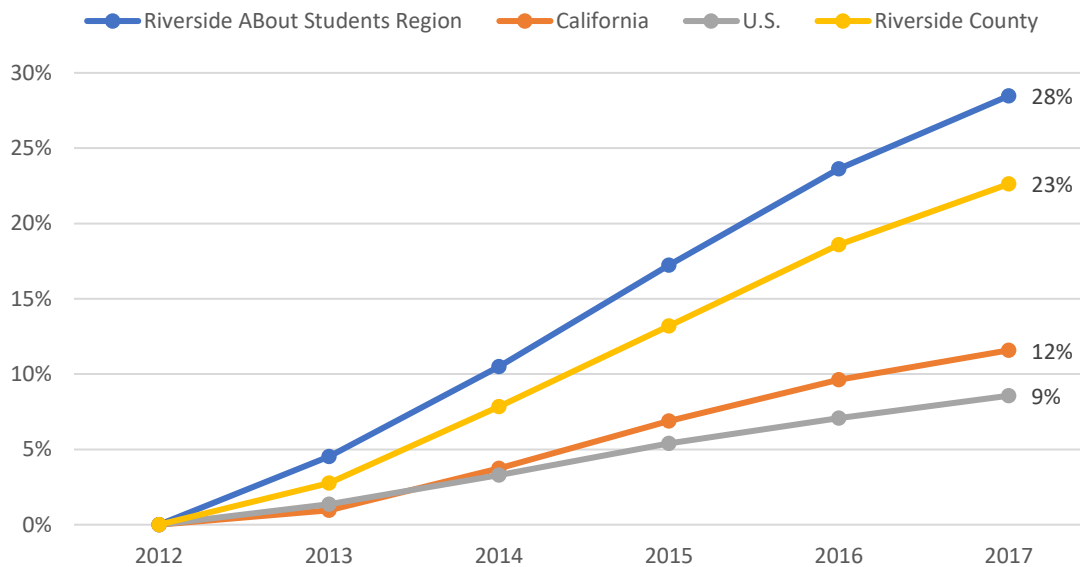
Unemployment

There are 549,001 people in the labor force[6], or approximately 63% of the population 16 years and older. While labor force participation is the same as in California, the **unemployment rate** in the Riverside ABout Students region is **5.5%**, which is higher than the state (4.7%) and national rates (4.3%)[7] (Table 1).

Economic Profile Analysis Summary

The unemployment rate in the Riverside ABout Students region (5.5%) is higher than the national (4.3%) and state (4.7%) unemployment rates, with the rates varying considerably among Riverside's sub-regions. While the West sub-region has a very low unemployment rate of 3.7%, the South and East sub-regions have higher unemployment rates at 6.7% and 6.6% respectively. This means the job and workforce needs vary greatly among these sub-regions.

Why is this Important?

Just like with overall employment growth, unemployment rate is another way to measure the economic health of a region. A low unemployment rate is a sign of a tight labor market, which means more job opportunities than available workforce.

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[5] EMSI 2018 Q4, Class of Worker.
[6] U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates.
[7] CA Employment Development Department, Labor Force and Unemployment Rate, Annual average 2017.

Table 1: Labor Force Participation (2016)[8] and Unemployment Rate (2017)[9] by Region[10]

Region	In labor force	In labor force - Unemployed
Riverside ABout Students	63%	5.5%
North	64%	5.1%
Northwest	64%	5.9%
East	63%	6.6%
South	60%	6.7%
West	64%	3.7%
California	63%	4.7%
U.S.	63%	4.3%

Resident Workforce vs. Local Workforce

The Riverside ABout Students region's workforce includes all residents in the labor force 16 years and older who may work in or outside the region. In this workforce analysis, the research team assessed how the region's workforce intersects with the local availability of jobs. To do so, the research team compared the number of people in the residential workforce to the number of local jobs in the same occupational clusters.

In the Riverside ABout Students region there are approximately **457,976 people** in the resident workforce and only **371,583 jobs** in the region (armed forces jobs not included). This means that there is a net surplus of approximately 86,393 people who need to leave the Riverside ABout Students region to go to work. This resident workforce surplus exists across all occupation segments except for service occupations, such as healthcare and protective services (Figure 2). In this occupation segment, there are more jobs than

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[8] Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates.

[9] Unemployment Rates: Unemployment Rates for California: California Economic Development Department, 2017 Annual Average Revised. Extracted August 2018; Data for Cities and Census Designated Places (CDP) were used as a proxy for the sub-region's unemployment rates. **North sub-region**: Riverside city. **Northwestern sub-region**: Jurupa Valley city. **East sub-region**: March AFB and Moreno Valley. **South sub-region**: Perris city. **West sub-region**: Corona city and Norco.

[10] Note: Data for city and census designated places were used as a proxy for the Riverside ABout Students and its sub-regions' unemployment rates, since unemployment rates are not provided at zip code level.

residents in the workforce, meaning workers from outside the Riverside ABout Students region are coming to the area to fill available jobs. This provides an opportunity for local educational institutions to train students in these service occupations and provide employers with a more local and skilled-workforce.

The occupational segment with the largest number of residents who must leave the region for employment are the management, business, science, and arts occupations (Figure 2). 55,777 residents in these occupations alone must leave the region for work.

Workforce Analysis Summary

The Riverside ABout Students region is a net-exporter of talent for **ALL** but one occupational segment. The largest gap occurs within higher-paying occupations such as management, business, science, and arts occupations. This means that in most occupational segments there are not enough jobs in the area to meet the needs of the resident workforce.

The exception to this is service occupations, where there are more job opportunities than residents able to fill-in positions. This provides an opportunity for local educational institutions to train students in these occupations, as graduates would be met with available, local jobs.

Why is this Important?

In addition to the overall economic and workforce analysis, this analysis is important as it has significant implications for transportation and commuting, housing, and employment opportunities. The fact that the Riverside ABout Students region is a **net-exporter** of talent in all but one occupational cluster illustrates the availability of talent in the region and the opportunity for further economic development.

Figure 2: Riverside ABout Students Region Workforce[11] vs. People Working in the Riverside ABout Students Region[12]
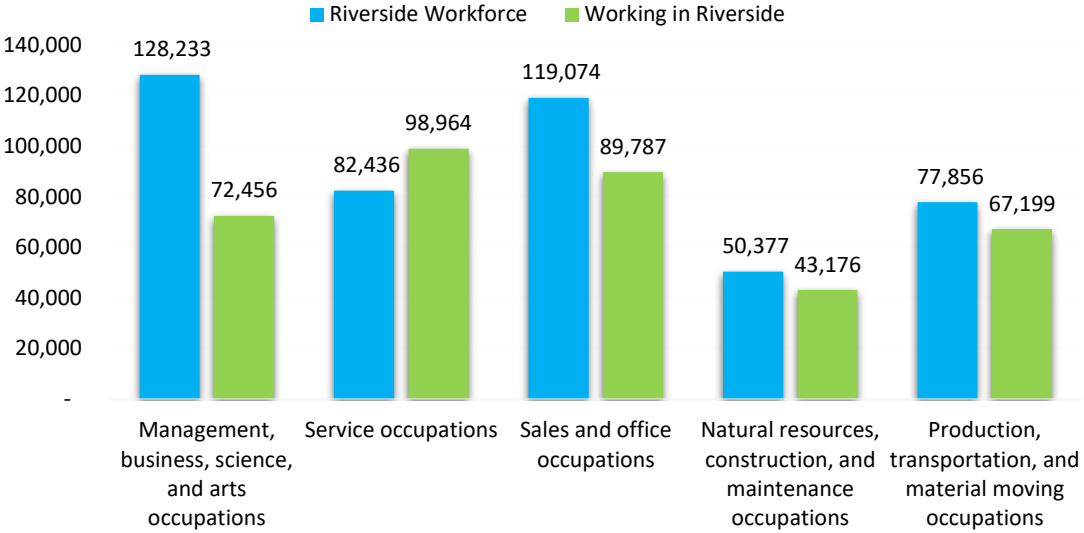
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2. REGIONAL DEMOGRAPHIC OVERVIEW

Total Population

The Riverside ABout Students region area has a total population of nearly **1.12 million** people. This represents an increase of 5.5% since 2012, which amounts to 47,096 more people. This growth rate is about one percentage point greater than California's population growth rate of 4.2% during the same time.

Population Analysis Summary

Total population in the Riverside ABout Students region service area is over **1.12 million people**, a 5.5% increase since 2012 - or a total of 58,980 more people - which is slightly greater than the 4.2% growth rate experienced in California.

The North sub-region accounts for the largest portion of the area's population (34%), while the Northwest sub-region accounts for 10%, the West sub-region accounts for about 26%, the East 19%, and the South sub-region for about 11% (Figure 3).

Figure 3: Riverside ABout Students Region Total Population, 2016[13]

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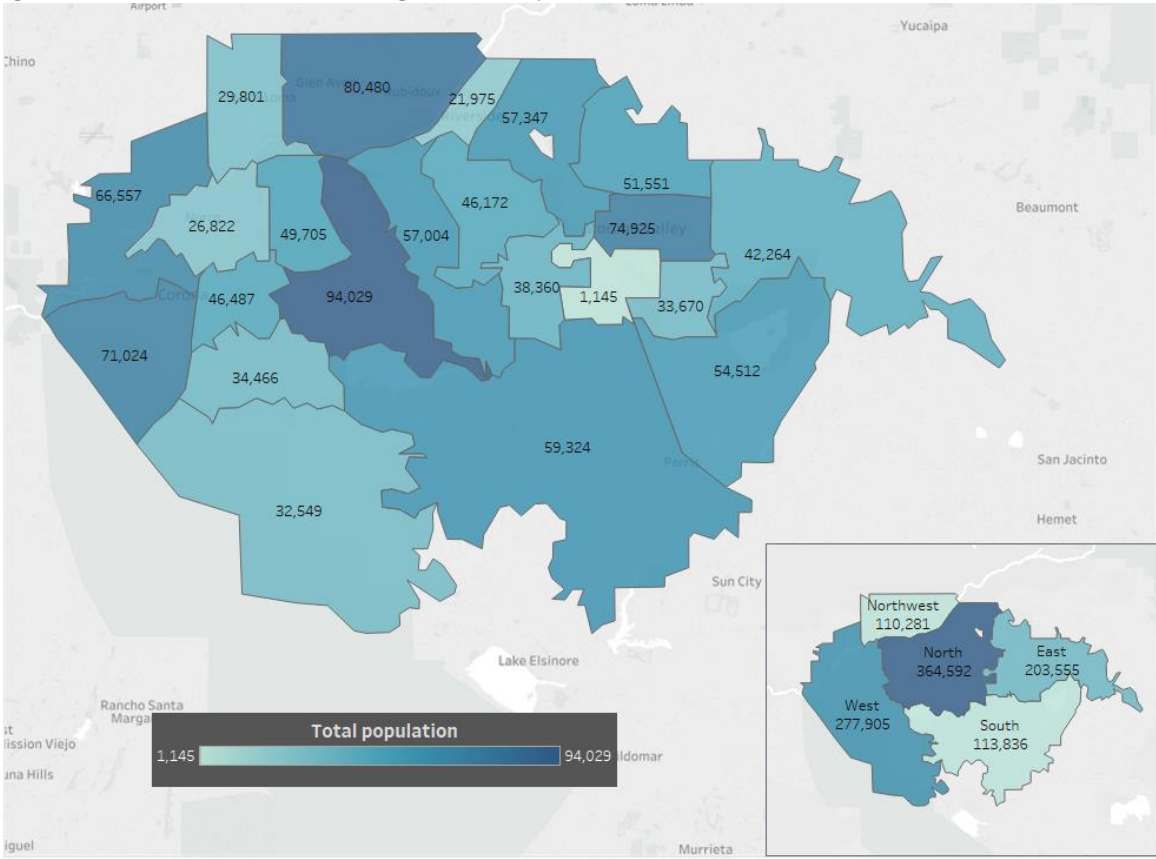
[13] Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates.

Educational Attainment

Educational attainment in the Riverside ABout Students region is lower than in statewide and national rates. While close to a third of adults in California (32%) and in the country (30%) have a bachelor's degree or higher, less than one-fourth (22%) of the population in the Riverside ABout Students region has the same educational level. On the other hand, almost half of the adult population (25 years and older) in the Riverside ABout Students region has a high school diploma or less (46%), compared to 41% in the U.S. and 39% in California (Figure 4).

Educational Attainment Summary

Educational attainment is lower in Riverside than in California and the U.S., with a lower portion of people in Riverside with an associate degree, a bachelor's degree, or higher and a higher portion of adults with less than a high school diploma.

Why is this Important?

Metrics such as population growth, income, and educational attainment provide a better understanding of the region's potential workforce and talent pipeline. These population characteristics have an impact on the regional workforce availability and help us understand where education and training resources can be focused.

Figure 4: Educational Attainment by Region, 2016[14]
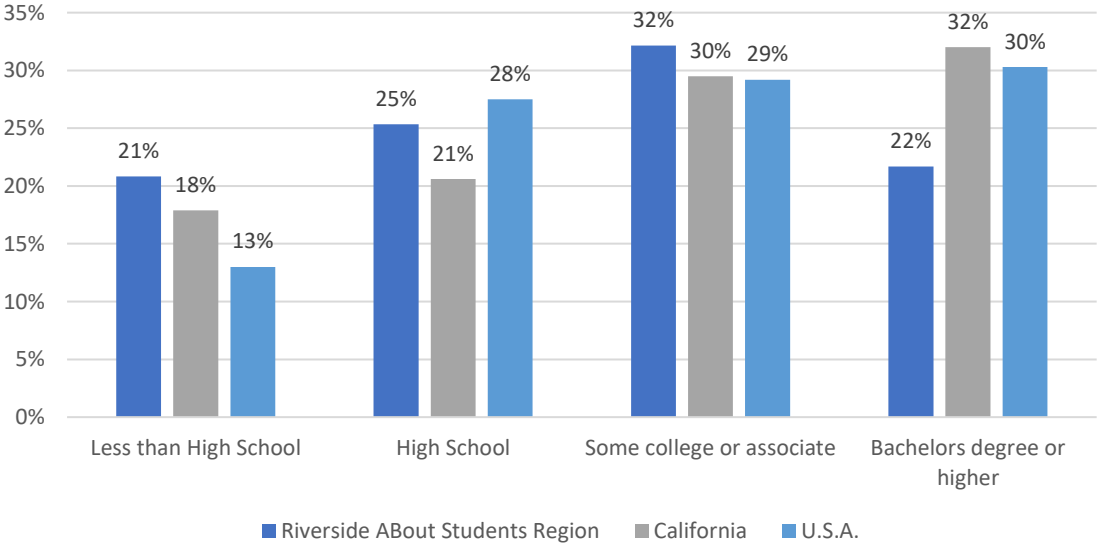
[14] Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates.

Educational attainment is higher in the North, East, and West and lower in the South and Northwest sub-regions. While one-third (33%) of the population 18 years and older in the West sub-region holds an associate degree, bachelor's degree, or higher, in the South sub-region this percentage falls to 14%. Conversely, in the South sub-region almost one-third (31%) of the population 18 years and older has less than a high school diploma, while in the West sub-region the percentage goes down to 14%. The Northwest sub-region also has a relatively large population of residents with a high school diploma or less (56%) (Figure 5).

Figure 5: Educational Attainment by Sub-Region, 2016[15]

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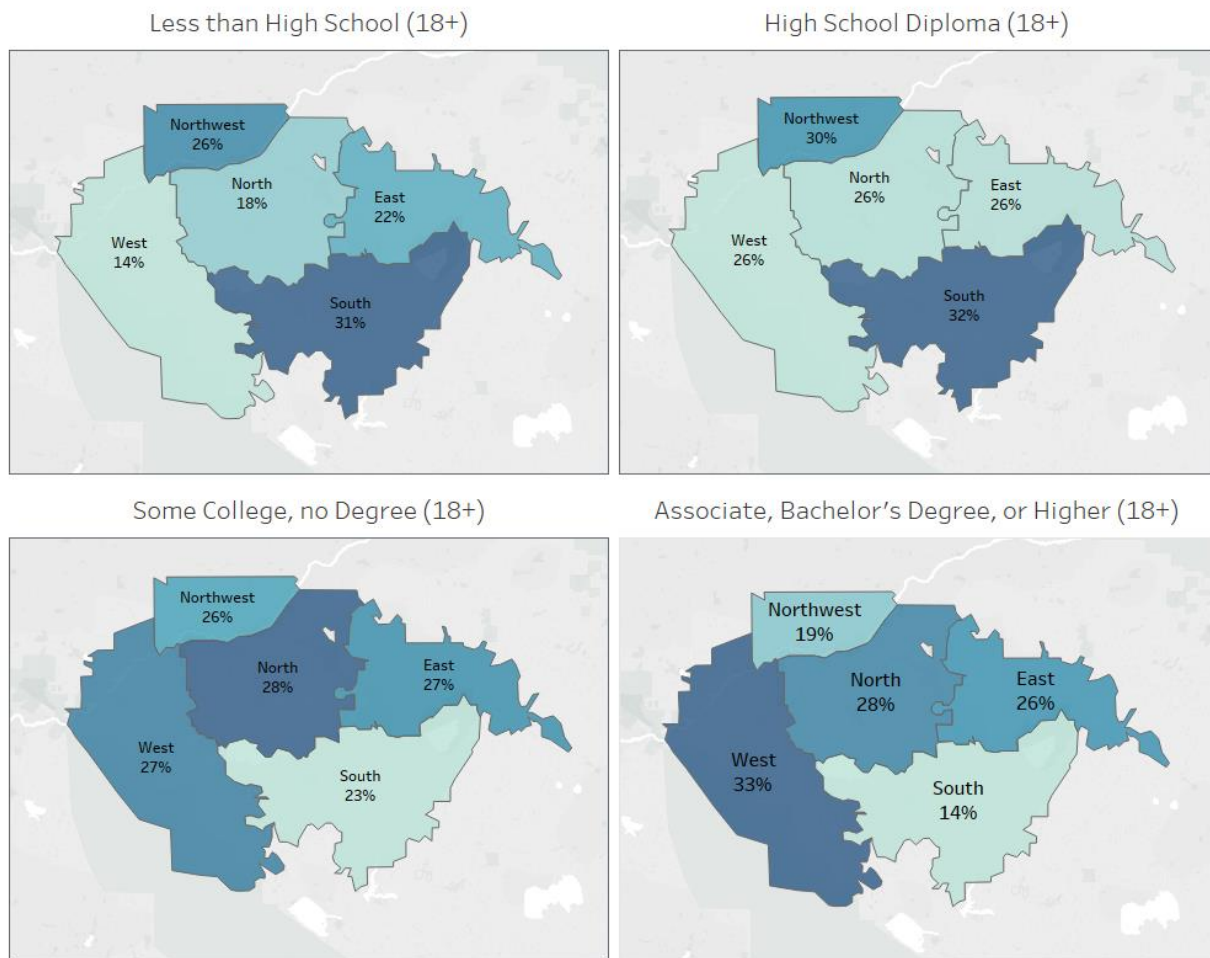
[15] Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates.

Income

Median household income in the Riverside ABout Students region is $55,407.[16] Less than one-fifth of households (18%) have an income of less than $25,000, over half (54%) have an income between $25,000 and $99,999, and 28% have an income of $100,000 or higher (Figure 6). Average household income in the Riverside ABout Students region is similar to that of the state, though a larger portion of households in California having an income of $200,000 or more.

Income

Median household income in the Riverside ABout Students region varies by sub-region. Similar to trends in educational attainment, household income is higher in the West and lower in the South sub-region (Figure 7).

Figure 6: Median Household Income Distribution, 2016[17]
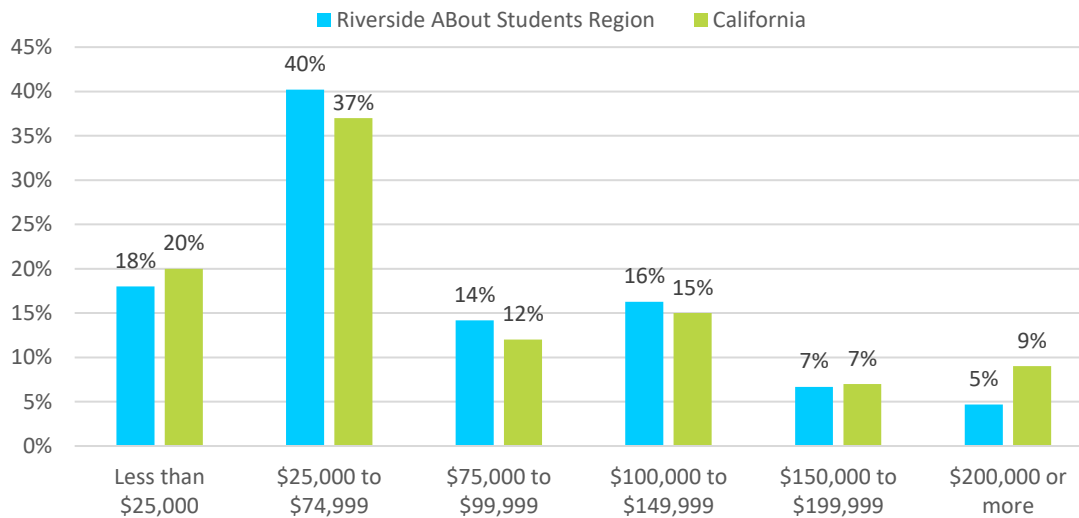
Note: Individual percentages may not perfectly sum up to 100% due to fraction rounding.

Similar to trends observed with educational attainment, median household income is highest in the West sub-region, followed by the East, Northwest and the North, and, lastly, the South sub-region (Figure 7). Median household income in the West sub-region is notably higher than any of the other sub-regions; the West median household income exceeds the next-highest sub-region median household income by more than $25,000. Conversely, the South sub-region has a median household income that is nearly $10,000 lower than the next-lowest sub-region.

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[16] Household income refers to the income of those workers living in the Riverside ABout Students region, regardless of where they work. This differs from the average wage per job, which refers to the income of those working in the Riverside ABout Students region, regardless of where they live.
[17] Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates.

Figure 7: Median Household Income by Sub-Region, 2016[18]
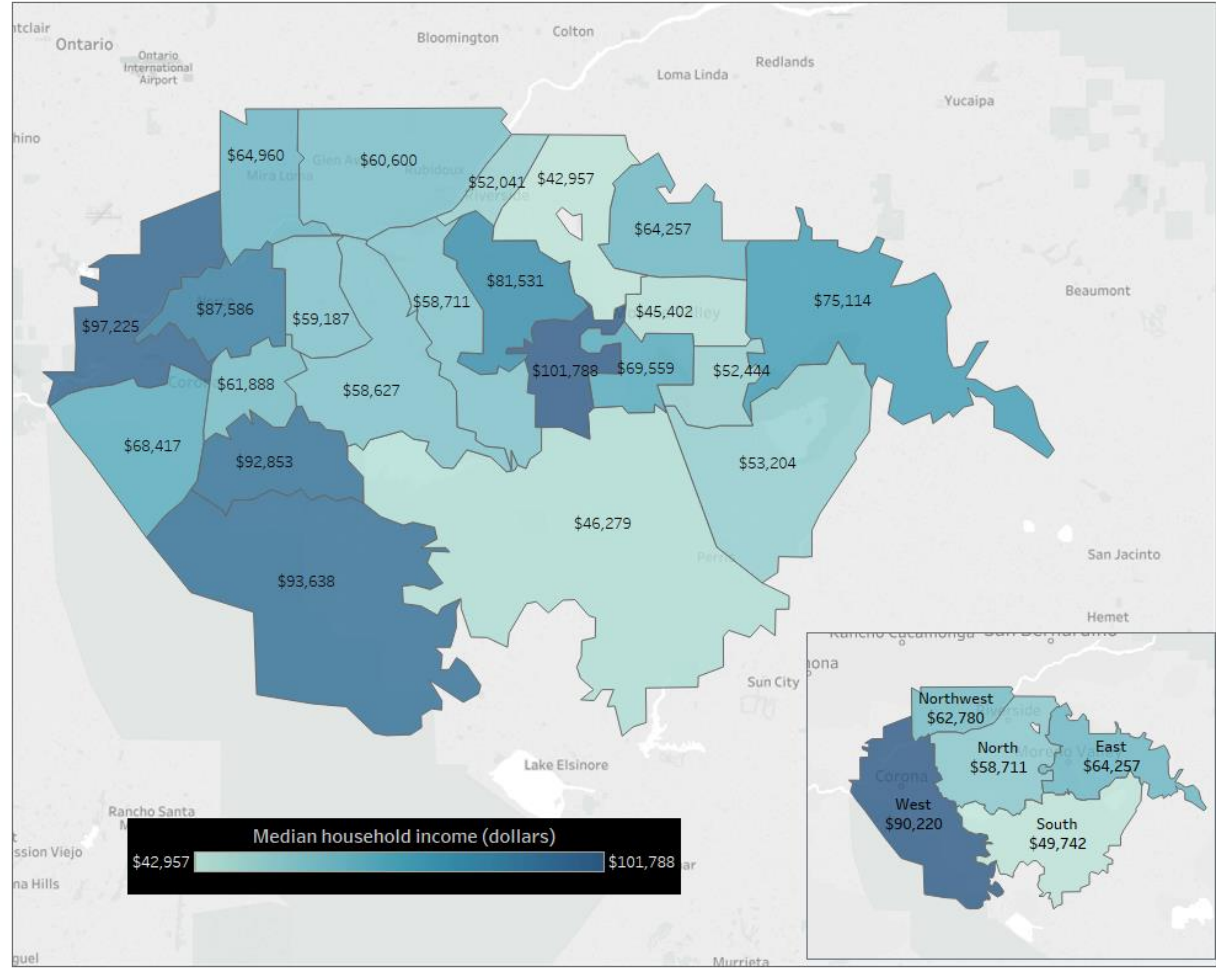
RIVERSIDE ADULT EDUCATION STUDENT ANALYSIS

3. CURRENT STUDENT ASSESSMENT

In this section of the report, we look at the total number of adult education students by zip code, sub-region, and program. Data for this analysis were provided by the different adult education schools and community colleges shown in the map below and represent the total number of adult education students by zip code of residence.

The zip codes 92509 in Jurupa Valley, 92882 in Corona, 92503 in Riverside, and 92553 in Moreno Valley have the largest number of current adult education students. The

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[18] Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates.

Northwest sub-region has the majority of adult education students, followed by the North, West, East, and South sub-regions (Figure 8).

Figure 8: Total Number of Adult Education Students by Residence
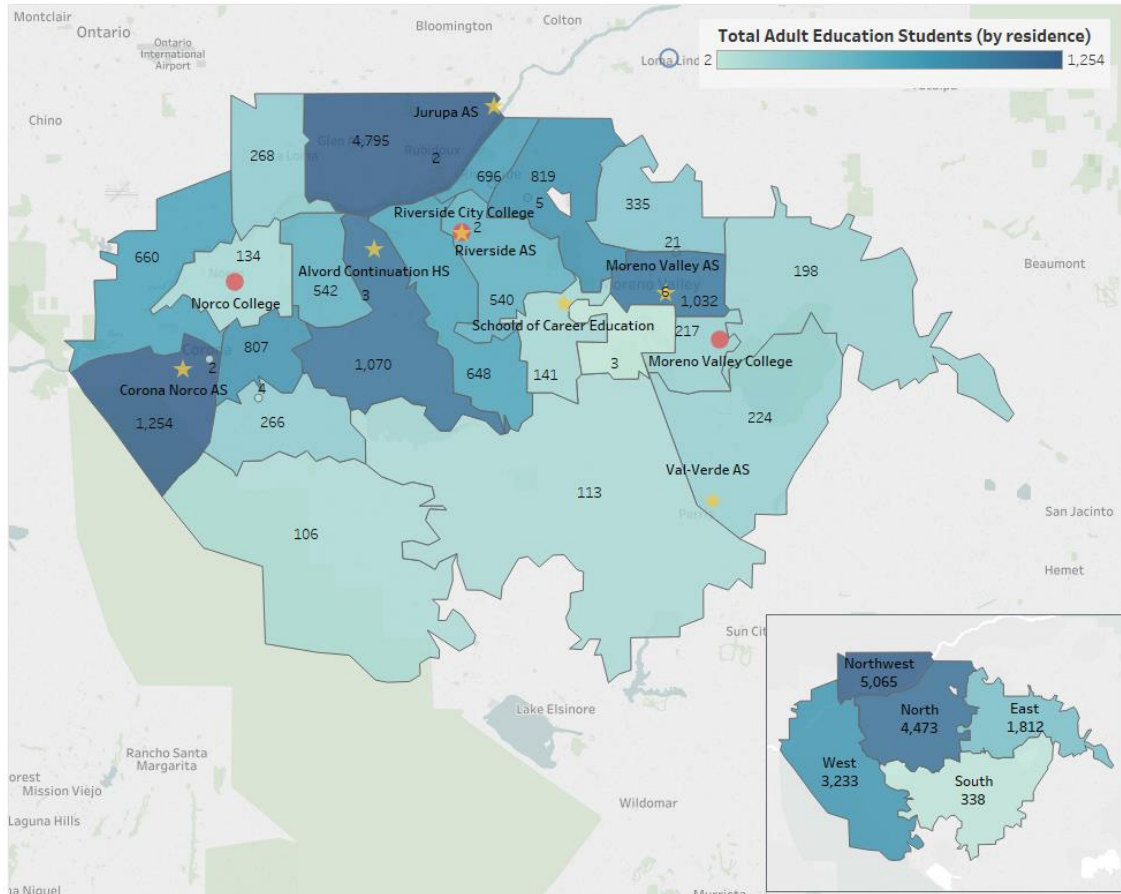
1. *Basic Skills Programs*

Basic skills programs are meant for students with less than a high-school diploma seeking to build a solid foundation of vocabulary, reading, and writing skills, and to complete their high-school diploma or equivalency.

The North sub-region has the largest number of basic skills students, followed by the East, West, South, and Northwest sub-regions. The zip codes with the largest number of these students include 92553 in Moreno Valley, 92507 and 92501 in Riverside, and 92882 in Corona (Figure 9).

Figure 9: Total Number of Basic Skills Adult Education Students by Residence
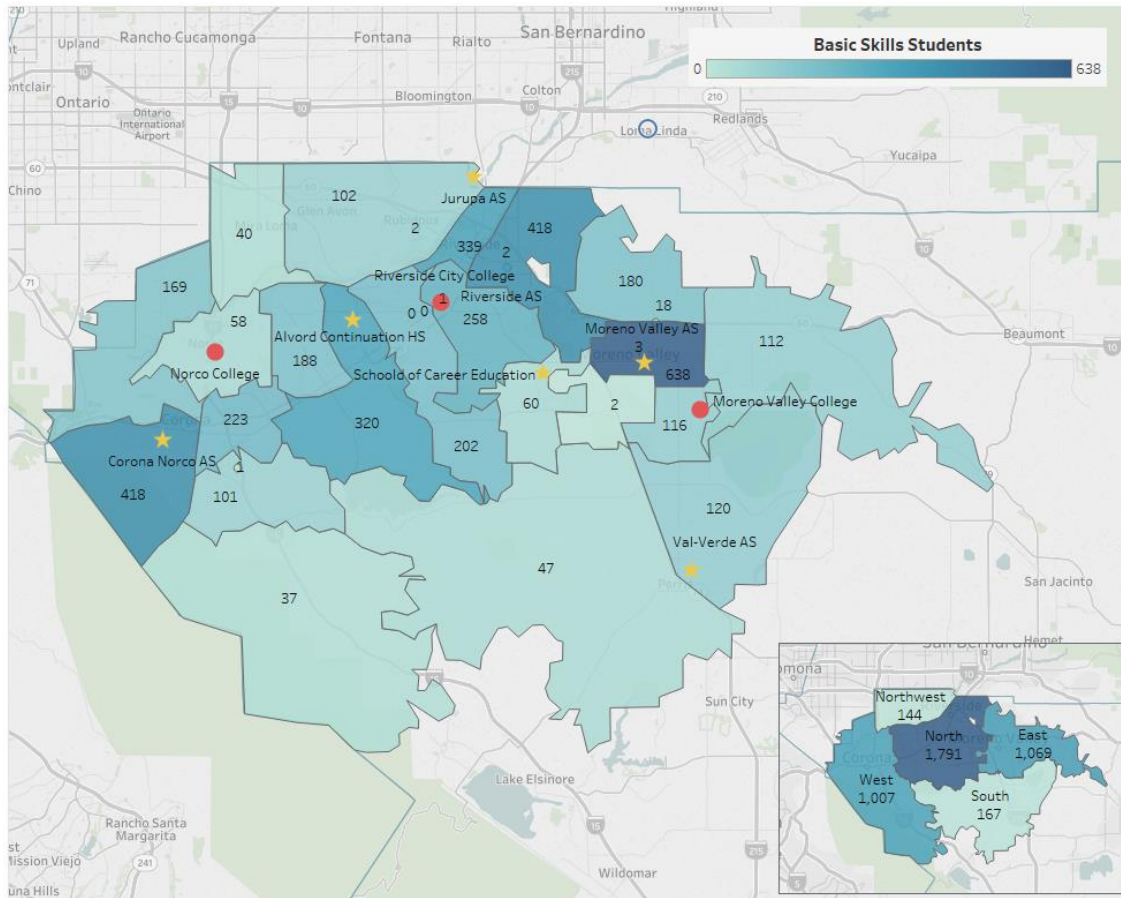
2. English Second Language (ESL) and Citizenship Programs

English Second Language (ESL) courses help adult participants learn or improve their English. These courses are often oriented for the workplace or in the context of immigration and citizenship.

The Northwest sub-region has the most current English Second Language Students, followed by the West, North, East, and South sub-regions, respectively. The zip code 92509 in the Northwest sub-region has the most ESL students, with more than 2,688 students. 92882 in the West sub-region is the next-most ESL current student-populated zip code, with 831 current students (Figure 10).

Figure 10. Total Number of English Second Language (ESL) Students by Residence

Current English Second Language Students
0 — 1,000
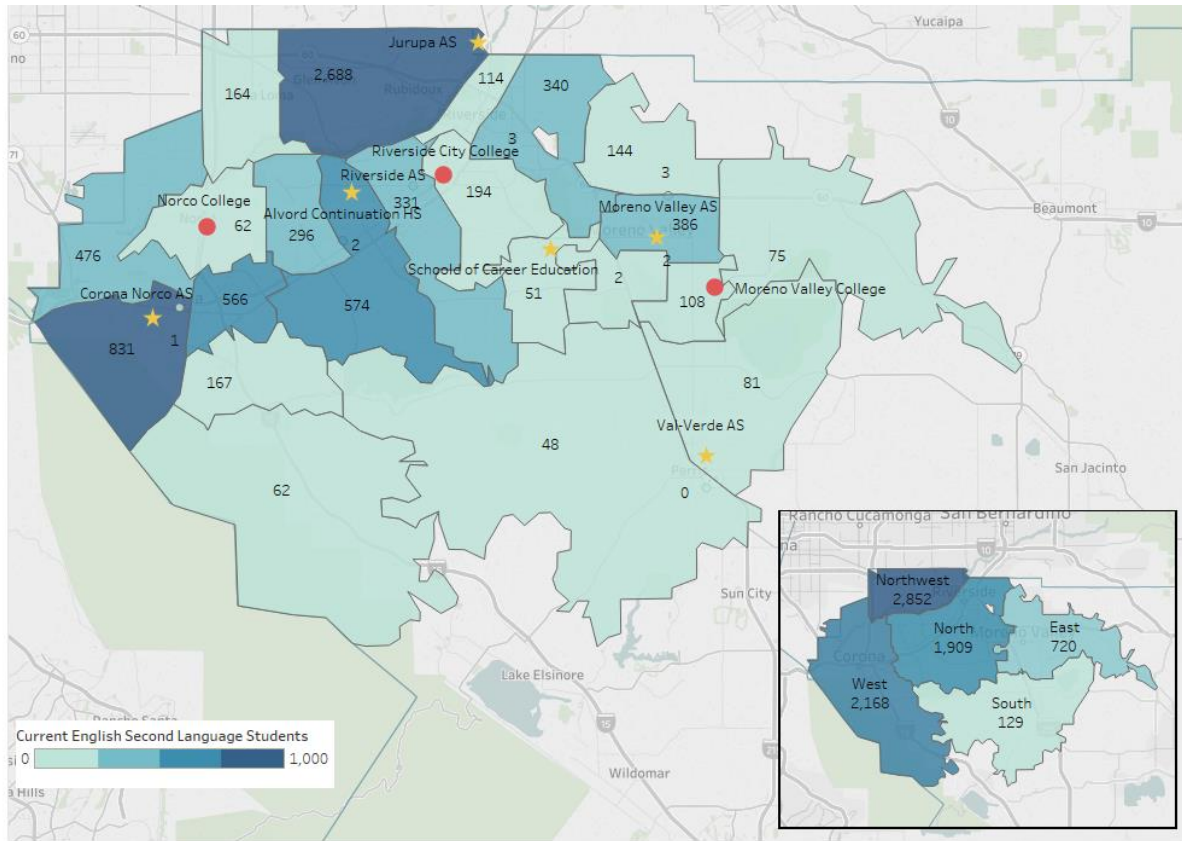
3. Career Training Education (CTE) Programs

Career Training Education programs are for students who have at least a high school diploma or equivalent, or some college but no degree. These programs are designed to provide students with technical and skills training to enhance employment opportunities, assist in the completion of a college degree, or prepare students for a specific career pathway.

The North sub-region has the largest number of current CTE students. Specifically, the zip codes of 92553 and 92501 have the highest populations with 328 and 300 students respectively. The zip code 92882, with 234 students, in the West sub-region also has a relatively large number of CTE students (Figure 11).

Figure 11. Total Current Career Training Education (CTE) Program Students by Residence
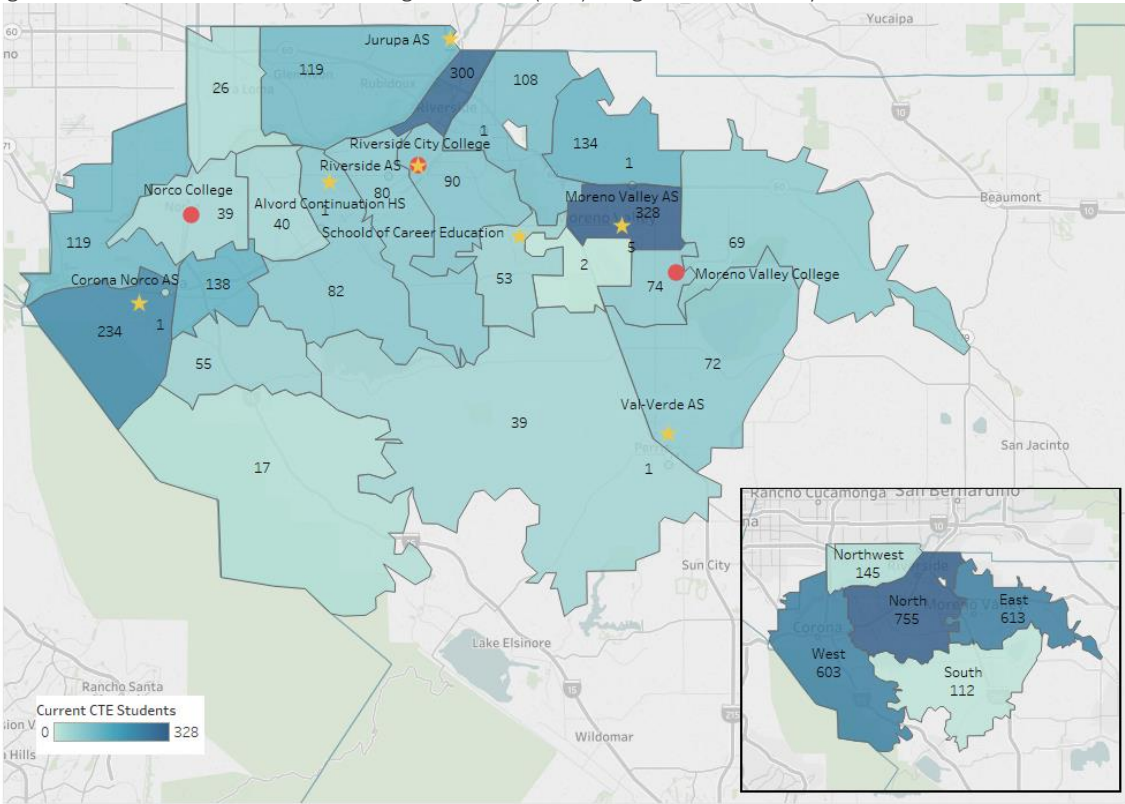
4. POTENTIAL STUDENT ASSESSMENT

The potential Riverside adult education student population is delineated into four categories:

Students Needing Elementary & Secondary Basic Skills
These potential students have a less than a high school diploma (or high school equivalency). Adult education courses targeting these students are meant to build a solid foundation of vocabulary, reading, and writing skills, and/or assist students in completing their high school diploma or equivalency.

English as Second Language (ESL)
This includes the population 18 years and older who speak English "less than very well." Adult education courses targeting this population will offer classes for adult English language learners, vocational English as a Second Language (ESL), and citizenship courses.

Adult with Disabilities
Includes the population 18 to 64 years old with a verified disability such as: hearing, vision, or cognitive disability, self-care difficulty, or independent living difficulty. Adult education courses targeting this population offer services and programs that are meant to support educational goals and increase independence.

Career & Technical Education (CTE):
These adult education courses are meant to provide specific training and education to expand and improve employment opportunities, to assist students in completing their college degree, or to help them move into a career pathway.

The following population segments were selected for further emphasis as these programs and courses are the foundation of adult education. The following sections and maps illustrate the geographic spread of the potential adult education student population (Figure 12- Figure 16).

Why is this Important?

Adult schools and community colleges in the different sub-regions should develop classes and programs that respond to the needs and characteristics of its adult population. Looking at different population sectors and understanding where they are located geographically can help schools develop programs and classes that better fit its students' needs.

1. Students Needing Elementary & Secondary Basic Skills

These potential adult education students include adults 18 years and older with less than a high school diploma (or equivalency). While the South sub-region has the highest concentration of adults with less than a high school diploma (or equivalent), the North sub-region has the largest number of these adults. The zip codes with the largest concentration include 92509 in the Northwest and 92570 and 92571 in the South sub-region and the largest populations of potential basic skills students can be found in 92503 in the North and 92509 in the Northwest sub-region (Figure 12).

Figure 12: Population 18 Years Old and Older with Less than a High School Diploma (or equivalent)[19]
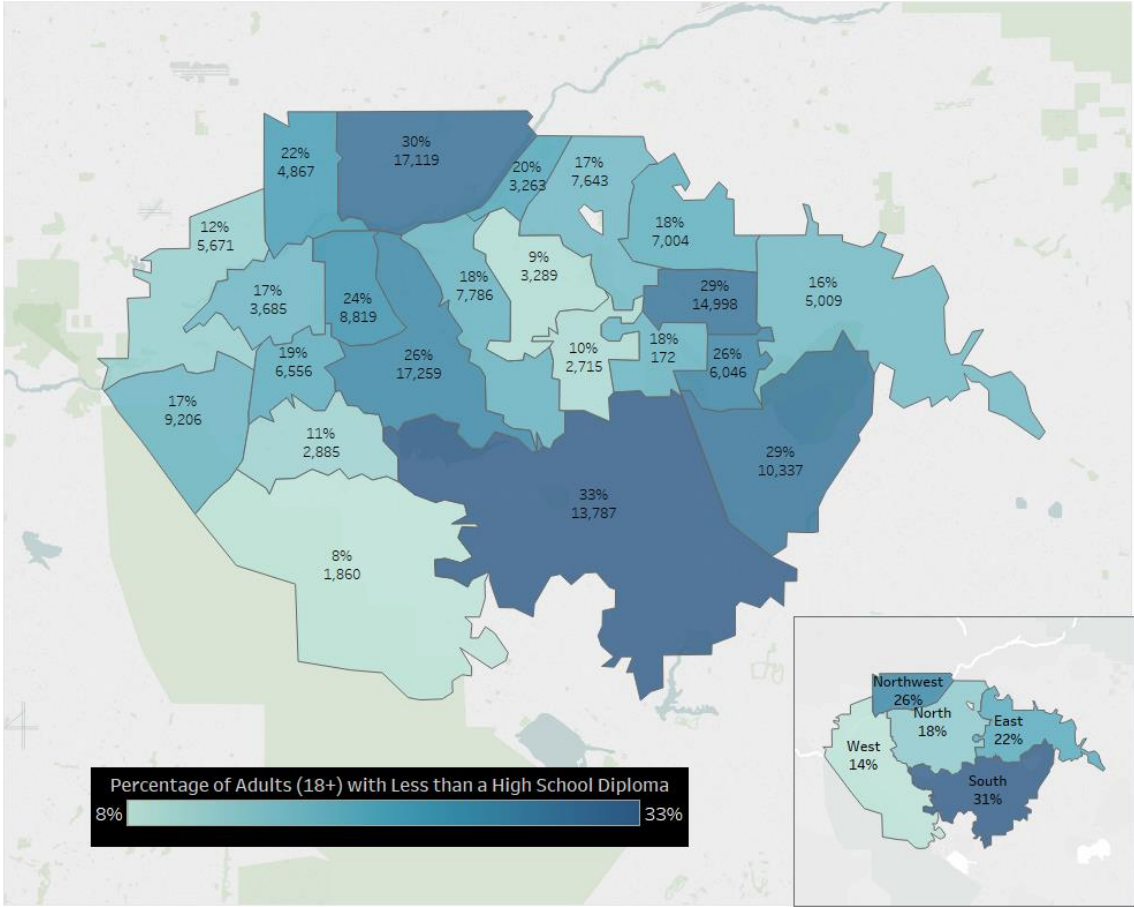
2. *English as a Second Language*

This population includes adults 18 years and older who speak English less than "very well." The greatest concentration of this population is in the South sub-region, while the largest number is found in the North sub-region. The zip code with the greatest concentration of potential ESL students is 92571 in the South sub-region and the zip codes with the largest number of this AE population segment include 92503 in the Central, 92509 in the Northwest, and 92880 in the West sub-region (Figure 13).

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[19] Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates.

Figure 13: Adults 18 Years Old and Older, Speaking English Less than "Very Well"[20]
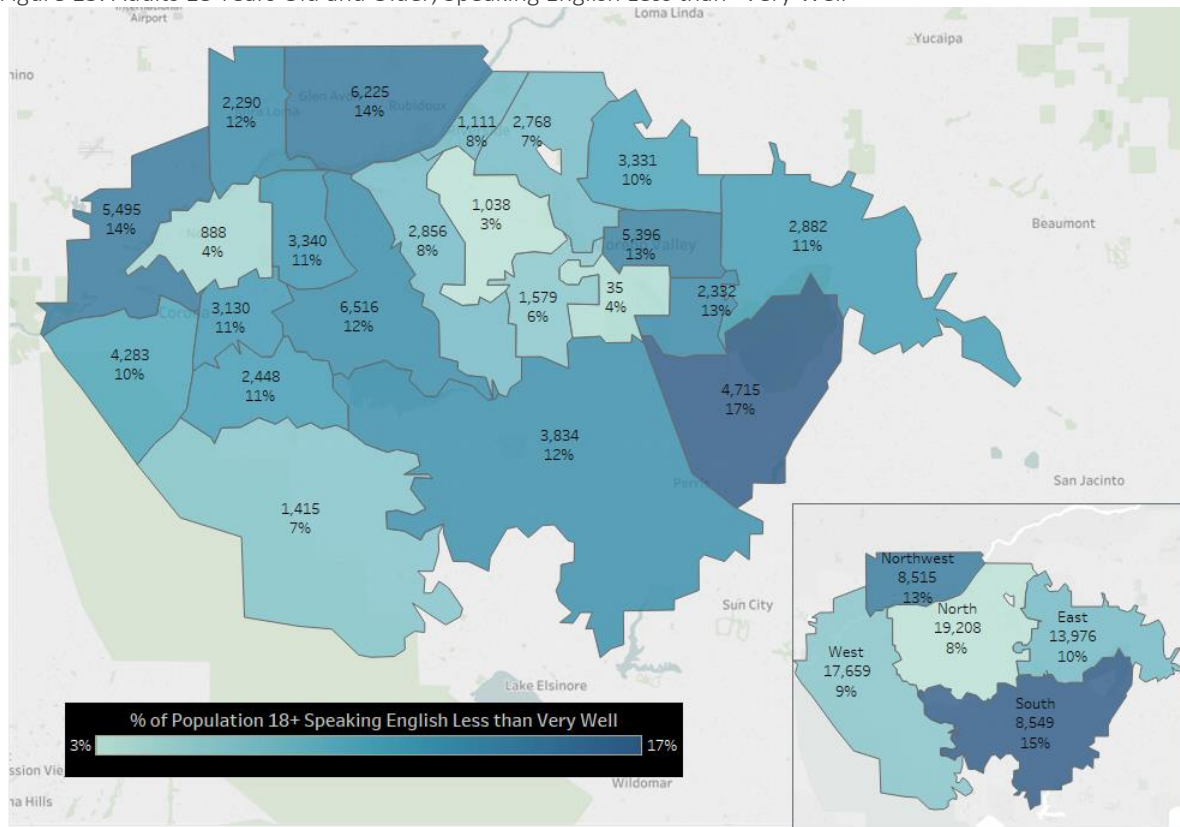
3. Adults with a Disability

This population segment includes adults 18 to 64 years old with a verified disability such as hearing, vision, or cognitive disability, self-care difficulty, or independent living difficulty. The North sub-region has the largest number of adults with a disability, although the concentration is similar among the South, East, and Northwest sub-regions. The zip codes with the highest concentration include 92518 in the East and 92570 in the South sub-region. Particular emphasis should be placed on the zip code 92518, where the rate exceeds that of any other zip code by at least 5 percentage points. The largest number of these adults can be found in 92509 in the Northwest, 92503 in the Central sub-region, and 92553 in the East sub-region (Figure 14).

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[20] Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates.

Figure 14: Adults 18 to 64 Years Old with a Disability[21]
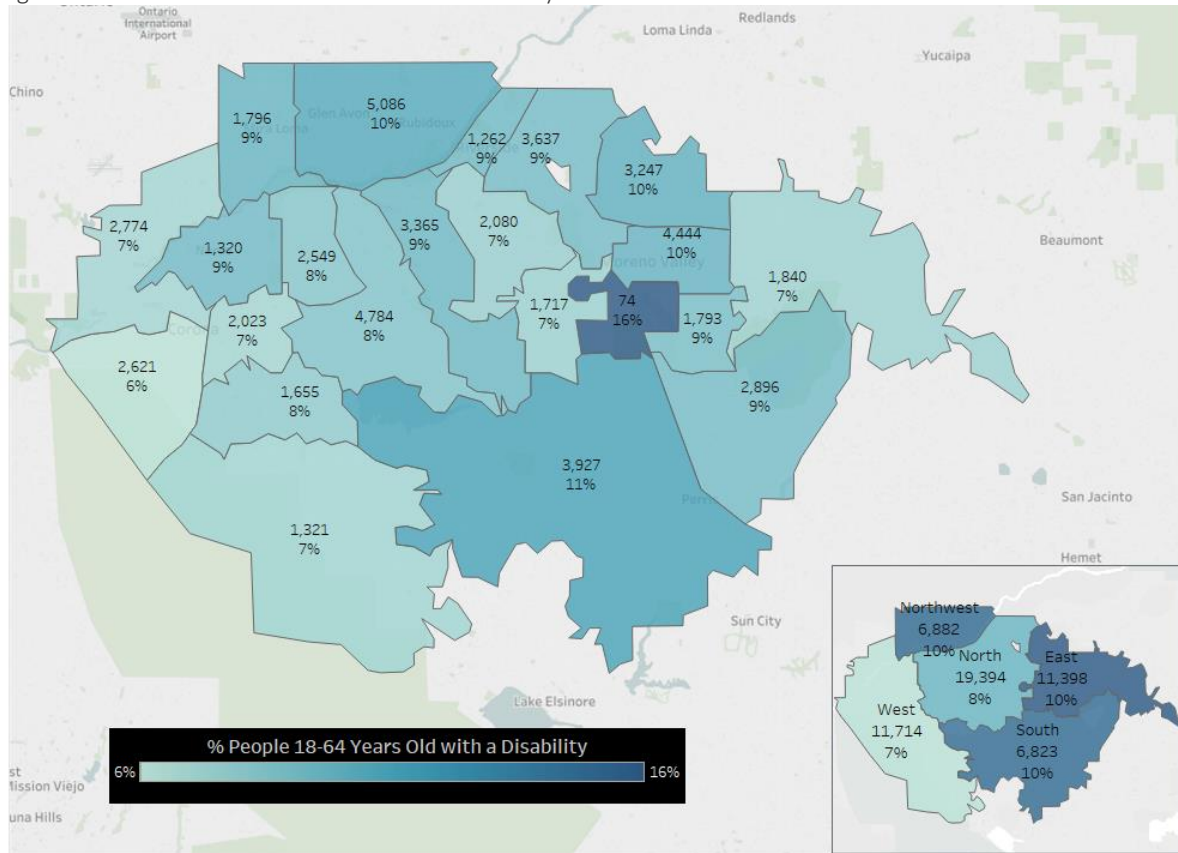
4. *Career & Technical Education (CTE)*

Career & Technical Education courses are meant to provide specific training and education to expand and improve employment opportunities and move student into career pathways. These potential students include workers trying to get a degree or certificate, get a job, get a better job, or get promoted with their current employer. Developing strong CTE classes and programs will include identifying technical and non-technical skills demanded in growing industry clusters to better prepare students to complete a degree, enter the workforce, select career pathways, and/or move up in the career lattice. For these classes, two population segments were identified: (1) adults with a high school diploma and (2) adults with some college, no degree.

a. Adults with a High School Diploma (or equivalent)

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[21] A verified disability includes hearing, vision, or cognitive disability, self-care difficulty, or independent living difficulty. Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates.

While the South sub-region has the largest proportion of this adult population (32%), the North sub-region has the largest number of adults with a high school diploma. The zip codes with the largest proportion of adults with a high school diploma (or equivalent) include 92570 and 92571 in the South and 92504 in the North sub-region. The zip codes with the largest populations include 92509 in the Northwest and 92504 in the North, 92553 in the East, and 92570 in the South sub-regions (Figure 15).

Figure 15: Population 18 Years and Older with a High School Diploma (or equivalent)
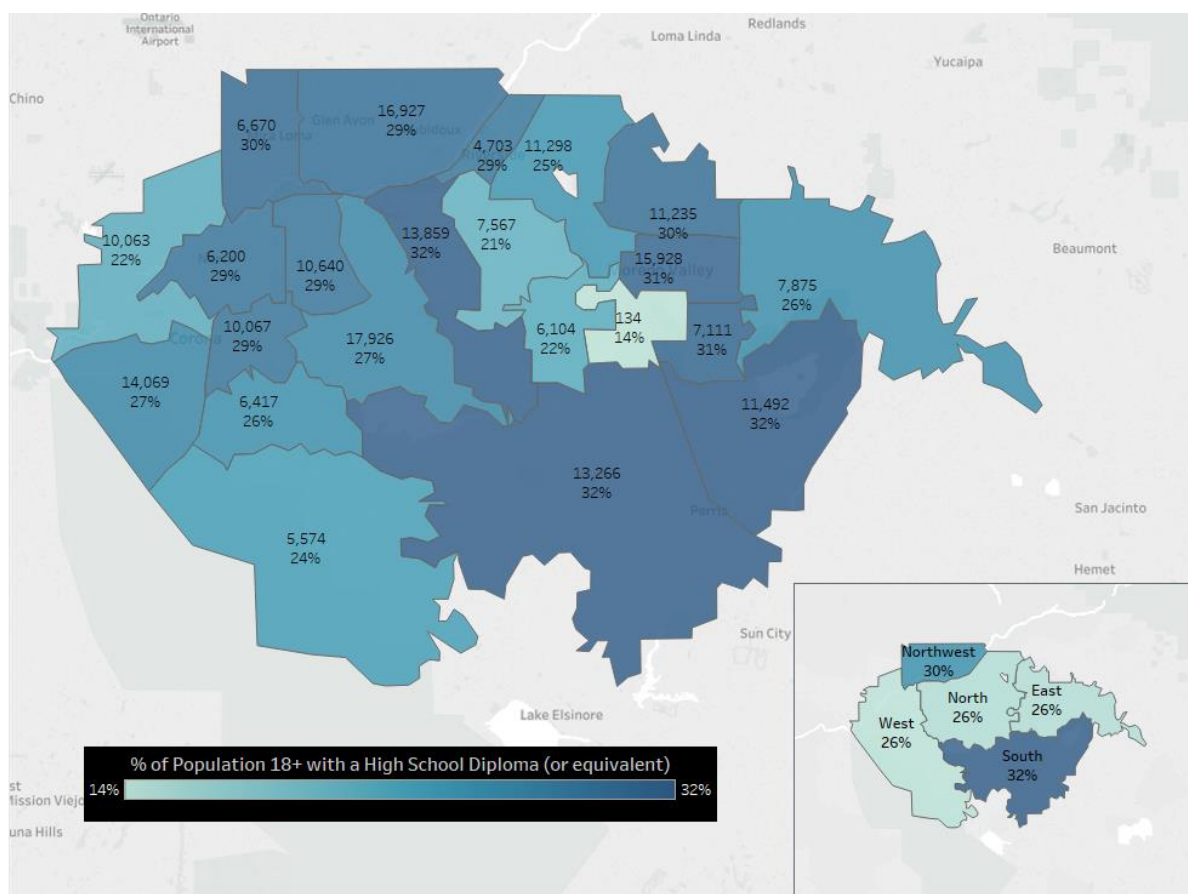
b.   Adults with some College, no Degree

Adults with some college, no degree can be primarily found in the North sub-region, followed by the West, East, and lastly the South sub-region. The highest concentration of these potential students is found in the zip codes 92507 and 92555 and the largest populations are found in 92503, 92507, and 92509; all are in the North or Northwest sub-regions (Figure 16).

Figure 16: Adults 18 Years and Older with Some College, No Degree
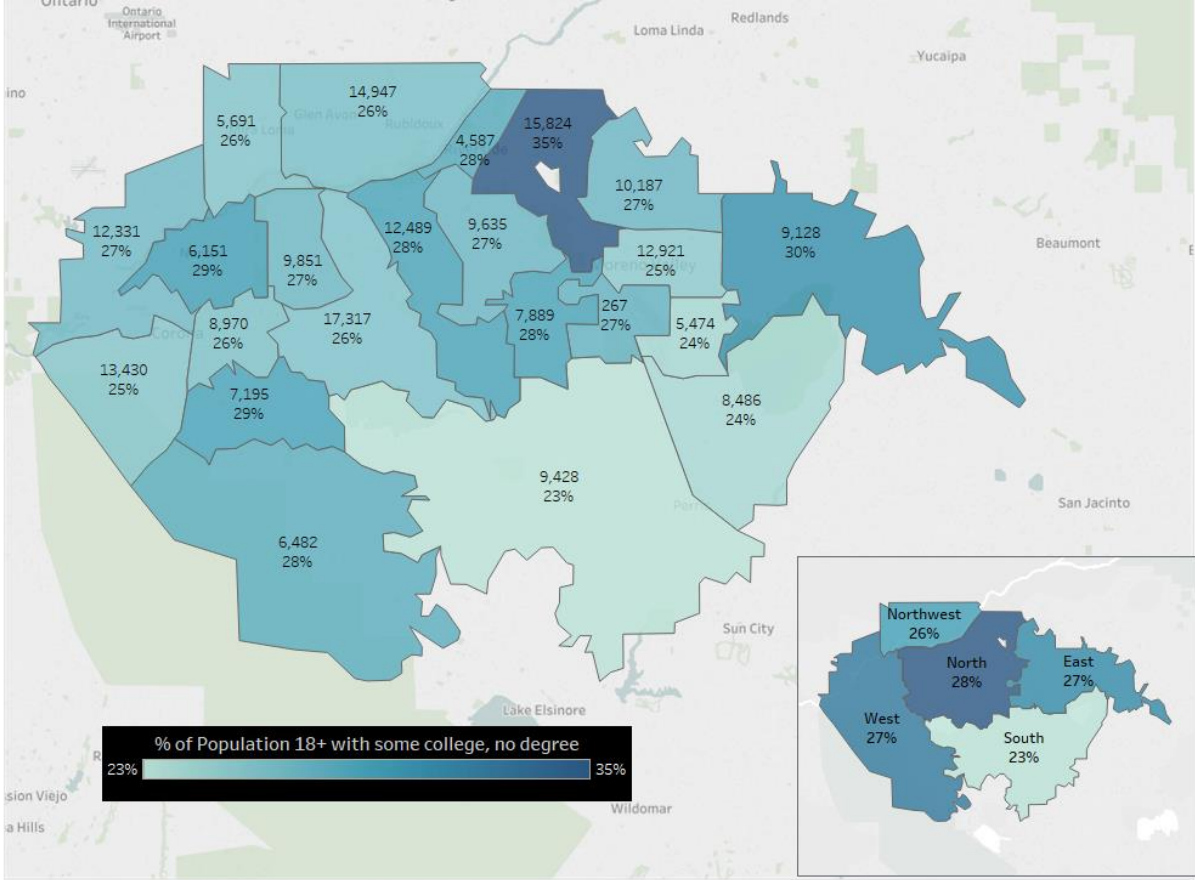
5. STUDENT ASSESSMENT GAP ANALYSIS

We conducted a gap analysis to assess how the concentration of the **targeted Adult Education (AE) population segments**[22] (e.g. *population with a high school diploma, population with English as a second language, etc.*) compares to the number of current **AE students within a program category** by zip code or sub-region.[23]

Each ratio is calculated as:

❖ Targeted Potential AE population ÷ Current AE students in the respective program (i.e. Basic Skills, ESL, etc.)

The goal of this analysis was to determine whether the targeted student population is being underserved and, if so, which zip codes and sub-regions are most affected. The maps on the following pages illustrate the gap by targeted population. *Darker colors represent larger gaps between the potential student population and current AE student population for that specific program. Consequently, the darkest zip codes/sub-regions are those deserving more attention.*

Elementary and Secondary Basic Skills

While the South sub-region has the highest average gap, the largest gaps by zip code are within the North sub-region. The zip code 92570, in the South sub-region has the largest gap, with 293 potential basic skills students for every current basic skills student. The zip code with the second largest gap, 92509, is in the Northwest sub-region and has almost 168 potential basic skills students for every current basic skills student. These two least-

Student Gap Analysis Summary

The largest gaps between the targeted AE population segments and current AE students are seen for adults with some college, no degree, and those with a high school diploma.

The largest gaps between current and potential students are consistently seen in the **South sub-region**, since this sub-region has only one Riverside ABout Students institutions between two relatively geographically expansive zip codes. In particular, the zip code 92570 generally has some of the largest gap ratios of any zip codes.

The zip codes with the consistent largest gaps include 91752 around Eastvale, 92509 around Jurupa Valley, 92883 around Corona, and 92570 near Perris.

Why is this Important?

The student gap analysis compares the number of the targeted AE population (i.e. adults with a high school diploma or less) with the current AE students by zip code or sub-region. It provides an assessment of how well the targeted population is represented in the current AE student population by sub-region and identifies which targeted AE populations are over or under represented in the current AE student population.

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[22] Source: Targeted AE population - U.S. Census Bureau, 2012-2016 American Community Survey 5-Year
[23] Data provided by Riverside ABout Students Adult Education Schools and Community Colleges

served zip codes are within relatively close proximity to the Val-Verde Adult School and the Jurupa Adult School, respectively (Figure 17).

Figure 17. Gap Analysis between Potential Basic Skills Students and Current Basic Skills Students[24]
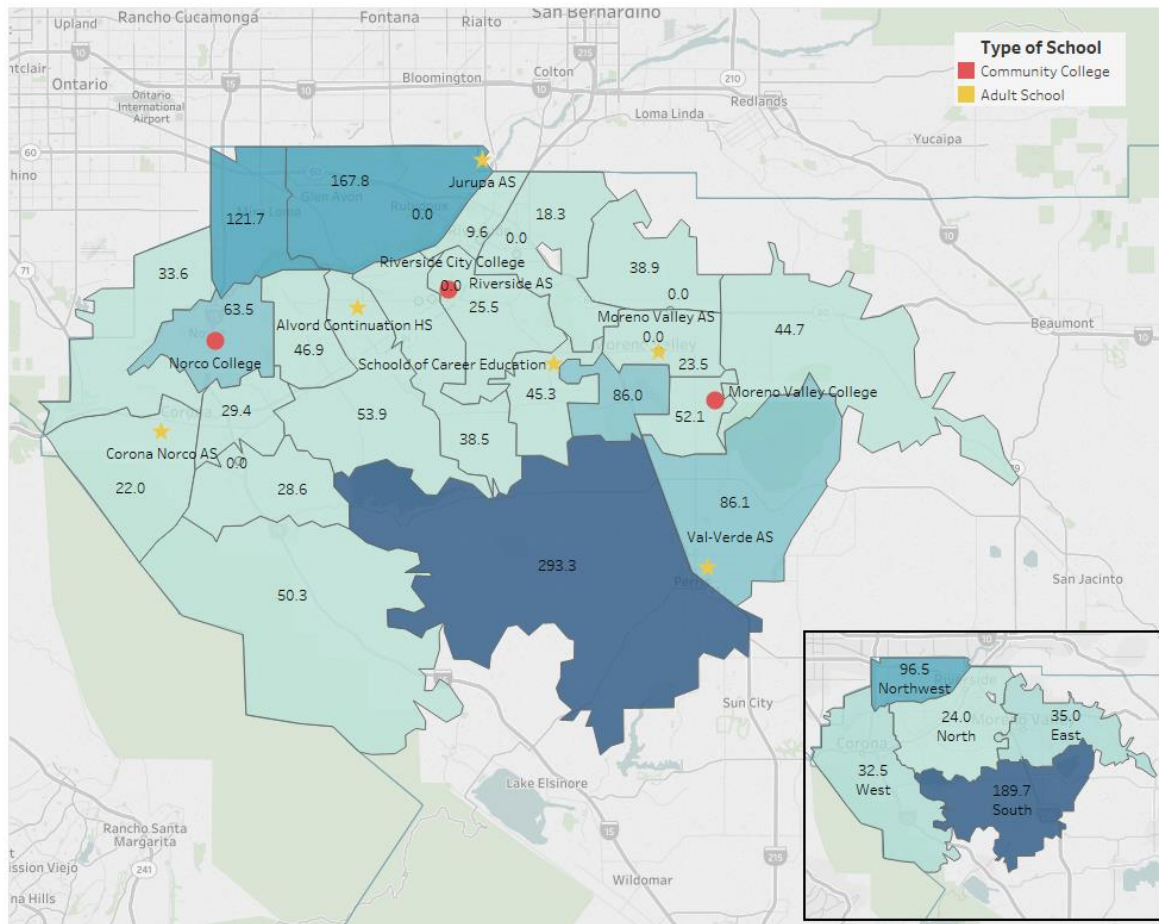
Note: A gap of 39 means that there are 39 potential basic skills students in this region for every current basic skills student.

English Second Language and Citizenship (ESL)

English Second Language programs have relatively lower average gap ratios than the other programs analyzed in this report. This suggests that the Riverside ABout Students region has succeeded in advertising and providing services to ESL students in these regions. The South sub-region has the highest average gap; there are about 69 potential students for every current student in this sub-region. The Val-Verde Adult School is the only school in this sub-region, though Moreno Valley College may be within commuting distance for some. The zip code with the most underserved population is 92570, where

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[24] Potential student data from U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates.

there are about 80 potential ESL students for every current ESL student. This zip code is in the South sub-region and is in closest proximity to the Val-Verde Adult School (Figure 18).

Figure 18. Gap Analysis between Potential ESL Students and Current ESL Students[25]
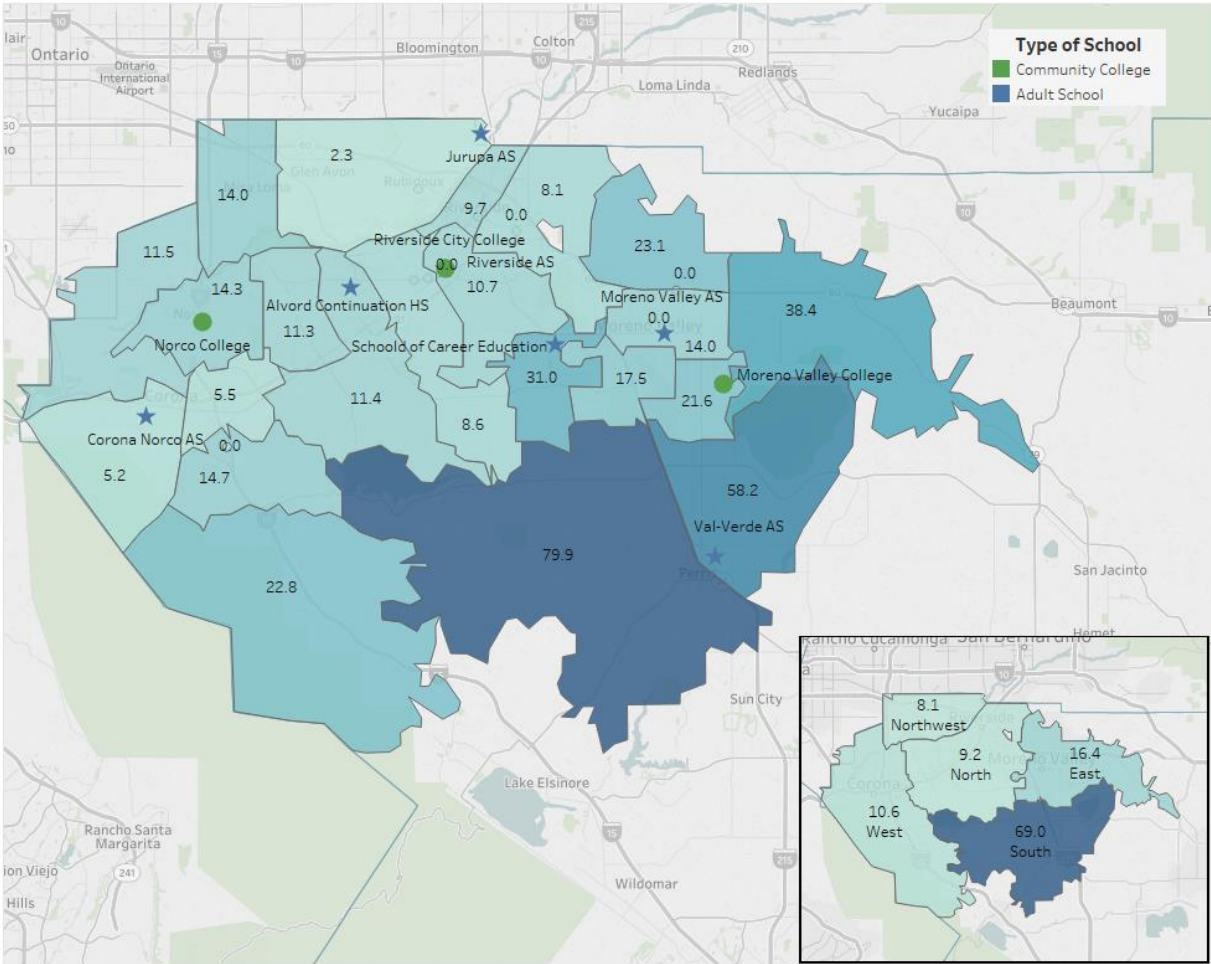
Note: A gap value of 38 means that there are 38 potential ESL students for every current ESL student residing in this zip code.

Career Technical Education

This section has two categorizations of potential students: those whose highest educational attainment is a High School Diploma (or equivalent), and those who have attended some college but have not earned a degree. These two categories allow for greater granularity and clarity in decisions involving Career Technical Education.

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[25] **Potential student data from U.S**. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates.

High School Diploma (or equivalent)

The South Sub-region has the highest average gap of all sub-regions. The two zip codes with the greatest gaps are 92570 and 92883. 92570 has 340 potential CTE students for every current CTE student in the region and 92883 has almost 328 potential CTE students per current student. These large ratios emphasize that these two regions are relatively under-served by Riverside ABout Students CTE programs. The Val-Verde Adult School is the closest institution to the 92570-zip code, though the Corona Norco Adult School may be the closest for residents in the 92883-zip code (Figure 19).

Figure 19. Gap Analysis between Potential CTE Students (those whose highest education attainment is high school (or equivalent)) and Current CTE Students[26]
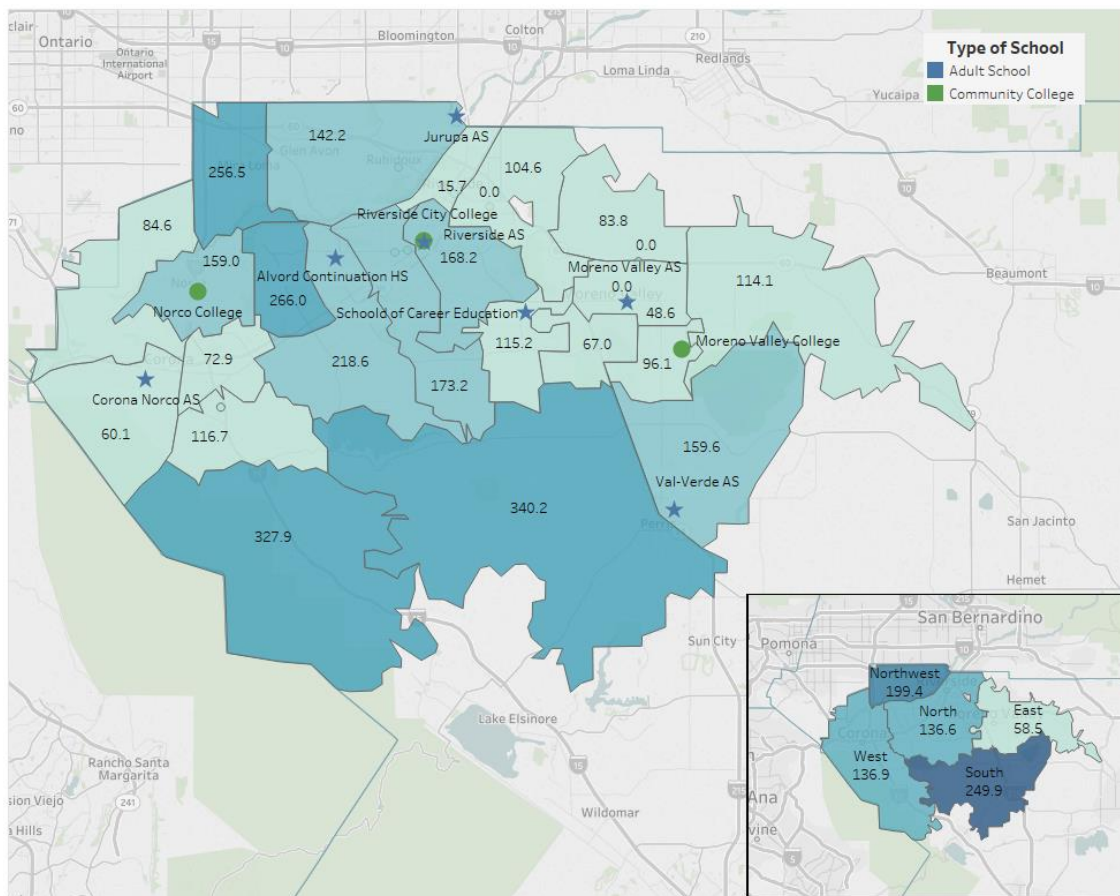
Note: A gap value of 117 means that there are 117 potential CTE students (those with highest educational attainment is high school diploma (or equivalency) for every current CTE student in that residence.

Some college, no degree

This map is relatively similar to the above CTE gap analysis map. The South sub-region is again, the most under-served. The two zip codes 92506 in the North sub-region and

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[26] Potential student data from U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates.

92883 in the West sub-region have gap ratios of 428 and 381 respectively. It is also worth noting that the central area (it looks like a darker-blue line dividing the region in two) has high gap values—ranging from 156 to 428 potential students for every current CTE student (Figure 20). These regions are within close proximity to a number of Adult Schools and Community Colleges, meaning that additional programming would likely be met with strong interest.

Figure 20. Gap Analysis between Potential CTE Students (those whose highest education attainment is some college but no degree) and Current CTE Students[27]
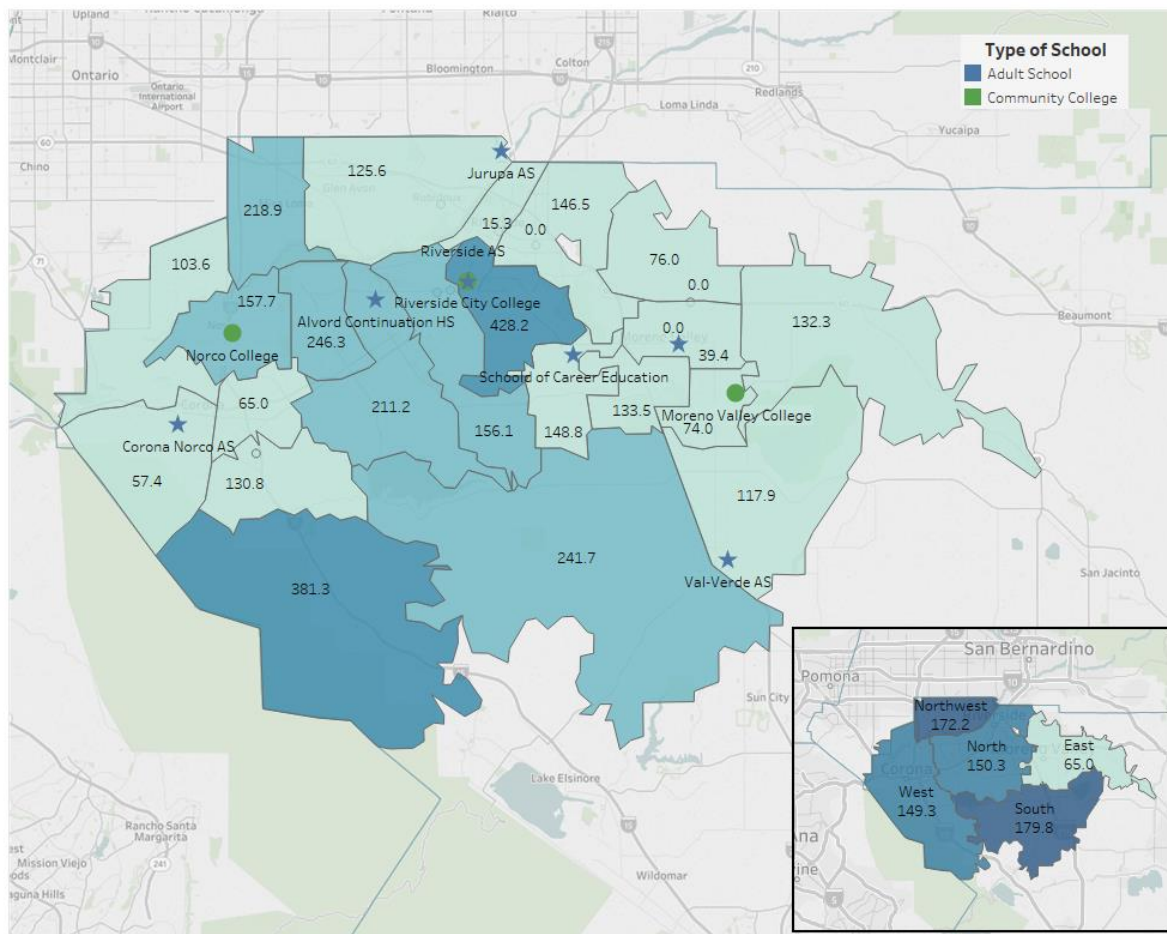
Note: A gap value of 57 means that there are 57 potential CTE students (those who have attended some college but have not received a degree).

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[27] Potential student data from U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates.

REGIONAL JOB QUALITY ANALYSIS

Employment trends and economic snapshots are important in analyzing job quantity but they fall short in analyzing job quality. Educational attainment, training, and experience are often associated with employment opportunity, career growth, and potential earnings. Based on these elements, most occupations can be categorized into one of three occupational tiers that will provide more insight into job quality.

The three-tiered system used in this study is largely defined by current wage data, general educational attainment, and skills requirements. They are as follows:

Job Quality Analysis Summary

While the Riverside ABout Students region has experienced strong job growth since 2012, job quality is lower in the area than in the country and the state, with a smaller proportion of tier 1 jobs and a larger proportion of tier 3 jobs in Riverside ABout Students than in the other two regions.

Additionally, while higher-paying, tier 1 jobs have increased the most since 2012 in California and across the United States, in the Riverside ABout Students region lower-paying, tier 3 jobs have experienced the largest growth. This has led the job quality in Riverside ABout Students to effectively decline during this timeframe.

Why is this Important?

Job quality represents a critical metric in understanding economic sustainability. Since tier 3 employment does not typically provide enough income for people to afford to live in the area, to improve job and life quality, the number of tier 1 and tier 2 jobs should increase so that more people are able to live and work in the Riverside ABout Students region.

Tier 1 Occupations are typically the highest-paying, highest-skilled occupations in the economy. The median annual wage for Tier 1 occupations in the Riverside ABout Students Region is approximately $85,544 a year. This occupational category includes positions such as managers (e.g., Chief Executives and Sales Managers), professional positions (e.g., Lawyers and Physicians) and highly-skilled technology occupations, such as scientists, engineers, computer programmers, and software developers.

Tier 2 Occupations are typically the middle-skill, middle-wage occupations. The median annual wage for Tier 2 occupations in the Riverside ABout Students Region is approximately $50,397 a year. This occupational category includes positions such as technicians, teachers, office and administrative positions (e.g., Accounting Clerks and Secretaries), and manufacturing, operations, and production positions (e.g., Assemblers, Electricians, and Machinists).

Tier 3 Occupations are typically the lowest-paying, lowest-skilled occupations that have historically provided the largest portion of employment in the region. The median annual wage for Tier 3 occupations in the Riverside ABout Students region is approximately $28,412 a year. These occupations include positions such as security guards, food service and retail positions, building and grounds cleaning positions (e.g., Janitors), and personal care positions (e.g., Home Health Aides and Child Care Workers).

Since 2012, about half of all jobs in the Riverside ABout Students region have been tier 3 occupations. Close to two-thirds are tier 2 jobs, and less than one-fifth are tier 1 jobs (Table 2). During the same period, while the proportion of tier 3 jobs increased by 1.4 percentage points, the proportion of tier 1 and tier 2 jobs decreased by less than a percentage point each. (Table 2).

Table 2: Occupational Tier Share of Jobs in Riverside ABout Students Region, 2012-2017[28]

Tiers	2012	2013	2014	2015	2016	2017
Tier 1	14.6%	14.5%	14.4%	14.2%	14.1%	13.9%
Tier 2	35.6%	35.7%	35.7%	35.5%	35.4%	35.0%
Tier 3	49.8%	49.8%	49.9%	50.4%	50.5%	51.2%

Compared to other regions, job quality in the Riverside ABout Students region is lower than the state and national averages, with a smaller proportion of tier 1 jobs and larger proportion of tier 3 jobs in the Riverside ABout Students region, than in California and the U.S. (Figure 21).

Figure 21: Job Composition by Region[29]
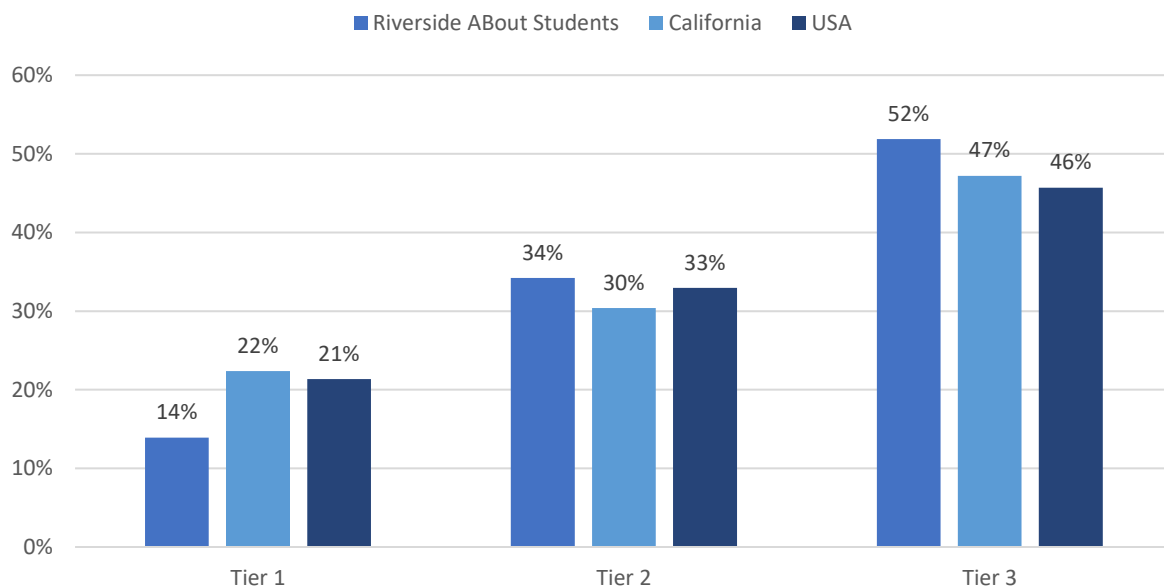
Tier 1 jobs are critical to increase job and life quality in the area, as tier 3 employment does not typically provide enough income for families to be able to afford living in the area. For example, a family of 2 adults (one working) and 2 children in Riverside County[30] need 1.13 tier 2 jobs and 2.00 tier 3 jobs to meet self-sufficiency (Table 3).

[28] Source: EMSI 2018 Q4, Class of Worker.
[29] Ibid.
[30] Self-sufficiency data could only be found at the county level.

Table 3: Number of Jobs a Family of 2 Adults (One Working) and 2 Children Need to Meet Self-Sufficiency in Riverside County[31]

	Median Annual Wage	Number of Jobs to Meet Family Self-Sufficiency
Tier 1	$85,544	0.67
Tier 2	$50,397	1.13
Tier 3	$28,412	2.00

Looking at job growth overtime, all occupational tiers increased by 22% or more since 2012. Tier 3 jobs increased the most with a 32% growth rate since 2012, tier 2 jobs increased by 26%, and tier 1 jobs have the lowest growth rate with a 22% increase since 2012 (Figure 22). Looking at specific occupations, tier 3 job growth was particularly strong among material moving workers (+13,176 jobs), other personal care and services workers (+9,698 jobs), and material recording, scheduling, and distributing workers (+4,727 jobs). The highest growth Tier 2 occupations include construction trade workers (+9,168 jobs) and motor vehicle operators (+3,611). Tier 1 occupations experiencing the largest increase in workers include health diagnosing and treating practitioners (+1,996 jobs) and business operations specialists (1,880).

Figure 22: Employment Growth in the Riverside ABout Students Region by Occupational Tier, 2012-2017[32]
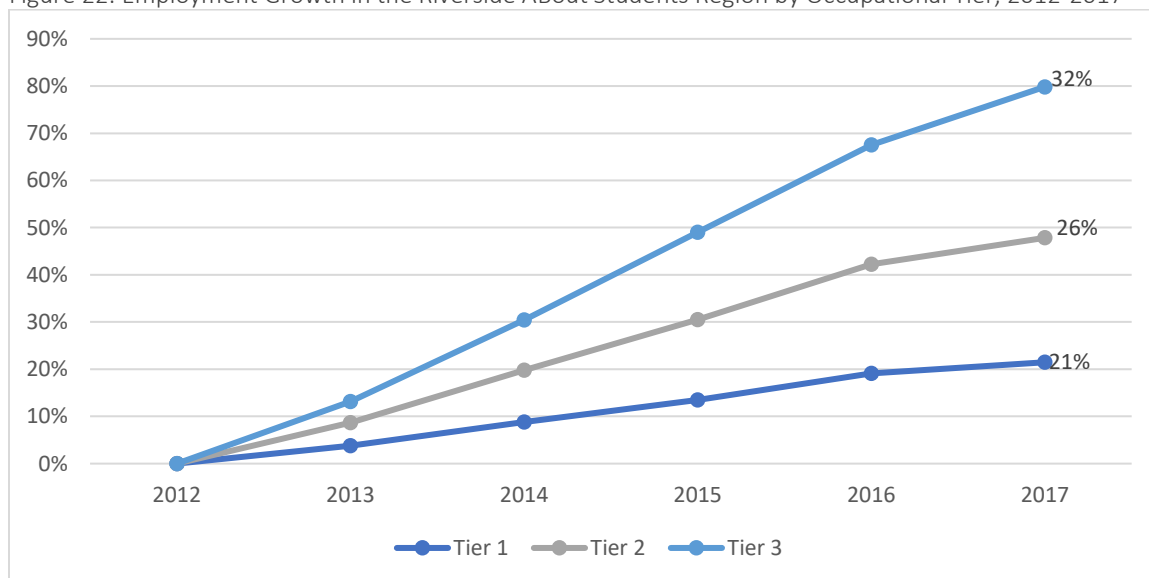
Compared to other regions, occupational employment in the Riverside ABout Students region increased at a significantly higher rate than in both California and the country (Figure 23). Nonetheless, while the other regions' tier 1 employment increased at a higher rate than tier 2 and tier 3 jobs, Riverside ABout Students tier 3 jobs experienced the largest growth, followed by tier 2 and tier 1 jobs. As mentioned previously, tier 3 employment is associated with lower job quality. Thus, it is important for Riverside ABout Students to support the growth of the more sustainable tier 1 and tier 2 jobs.

Figure 23: Employment Growth by Occupational Tiers and Region, 2012-2017[33]
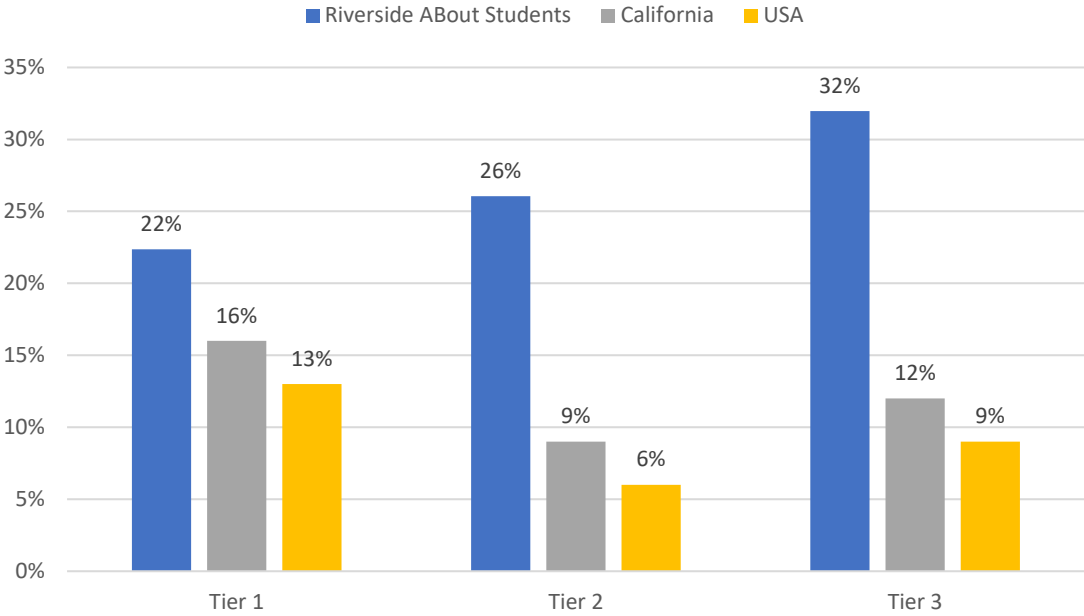
RIVERSIDE INDUSTRY CLUSTER PROFILE

INDUSTRY CLUSTERS

Industry clusters are geographic concentrations of labor and capital that share a common market and exchange supporting goods and services. Unlike the classical industry sectors, clusters are comprised of interrelated industries complementing various elements of the supply chain and create a local ecosystem of industries. Industry clusters are also a useful framework for identifying relevant focal points for workforce development, outlining local economic drivers, and emphasizing job growth and quality.

The research team analyzed 18 standardized industry clusters for consideration for adult education students in the Riverside ABout Students region. Overall, these clusters account for **368,970 jobs in Riverside ABout Students**. The industry clusters with the largest number of jobs include logistics, healthcare, retail, and building & design, with logistics, healthcare, and building & design (Table 4).

Industry Clusters Analysis Summary

Six regional industry clusters were analyzed including energy, information & communication technologies (ICT), financial & banking, insurance, real estate (FIRE), building & design, logistics, and healthcare. Employment in all of these industry clusters has increased since 2012. Energy, ICT, and FIRE provide the highest average wages per job, while logistics, healthcare, and building & design provide the largest number of jobs (36% of all jobs in the area). Together, these industry clusters provide strong career pathways with opportunities for new skills and salaries.

Why is this Important?

These industry clusters offer opportunities for training and workforce development as we look for economic and workforce opportunities in the region.

Table 4: Traditional Industry Cluster Profiles for the Riverside ABout Students Region[34]

Industry Clusters	Total Employment 2017	Change 2012-2017	% Change 2012-2017	Average Wage 2017	Locatio Quotient (LQ) 2017
Logistics	43,354	21,282	96%	$57,924	1.28
Healthcare	47,206	17,397	58%	$53,653	0.84
Retail	39,378	4,441	13%	$39,533	0.85
Building & Design	39,306	15,069	62%	$63,366	1.82
Education & Knowledge Creation	40,824	5,035	14%	$69,861	0.69
Tourism, Hospitality & Recreation	32,963	7,601	30%	$24,768	0.36
Public Services & Infrastructure	32,254	2,301	8%	$99,752	1.56
Professional & Business Services	32,719	6,921	27%	$42,866	0.78
Other Manufacturing	16,240	3,587	28%	$63,813	1.04
Other Services	12,996	-3,260	-20%	$38,529	0.76
Financial & Banking, Insurance, Real Estate (FIRE)	9,953	1,006	11%	$72,773	0.44
Defense, Aerospace & Transportation Manufacturing (DATM)	4,918	661	16%	$56,914	0.77
Agriculture & Food	4,301	811	23%	$57,939	0.45
Biotechnology & Biomedical Devices (B&BD)	3,514	-2,586	-42%	$113,894	0.51
Energy	2,826	1,316	87%	$90,950	0.53
Information & Communication Technologies (ICT)	3,258	62	2%	$83,920	0.50
Information & Communications	1,831	-10	-1%	$45,116	1.41
Water	1,129	232	26%	$94,237	0.82

[34] Source: EMSI 2018 Q4, Class of Worker.
Note: Location Quotient (LQ) is a way of quantifying how concentrated a particular industry or industry cluster is in a region as compared to the nation. An LQ of 1 means the concentration of jobs in the region is equal to the national average, higher than 1 means the job concentration is higher than the national average, and an LQ of less than 1 means the job concentration in the region is below the national average.

Tourism, Hospitality and Recreation

While the Tourism, Hospitality, and Recreation industry sector provides a large and growing number of jobs in the Riverside ABout Students region, it is not profiled in this report because of the lack of sustainable career pathways it offers.

It is important to note that this industry sector provides numerous opportunities for entry-level workers to gain **on-the-job training and experience** and to enhance important skillsets—customer service and communication skills—that transfer into nearly all other industry clusters.

Career Lattice is a framework in which employees can move through a variety of positions across different industries, provided they acquire the appropriate, transferable skillsets. A lattice allows for more flexibility and growth, as individuals are not simply moving upward, but instead can move outward and design their own pathways based on the skills they have gained in previous positions.

Building upon these areas of expertise provides entry-level workers with greater opportunity to transition into more sustainable careers. With almost 33,000 workers in Riverside ABout Students and a 30% employment growth since 2012, this industry sector could be seen as a useful stepping stone or **career lattice** into other industry clusters.

Regional Clusters Analysis

From the 18 standard industry clusters, **six** were selected because of their overall employment, job concentration, growth potential, provision of sustainable wages, and strong career pathways opportunities in the area. These regional industry clusters include: logistics, healthcare, building and design, finance and banking, Insurance, and Real Estate (FIRE), Information & Communication Technologies (ICT), and Energy (Figure 24).

Figure 24: Selected Industry Clusters in the Riverside ABout Students region[35]
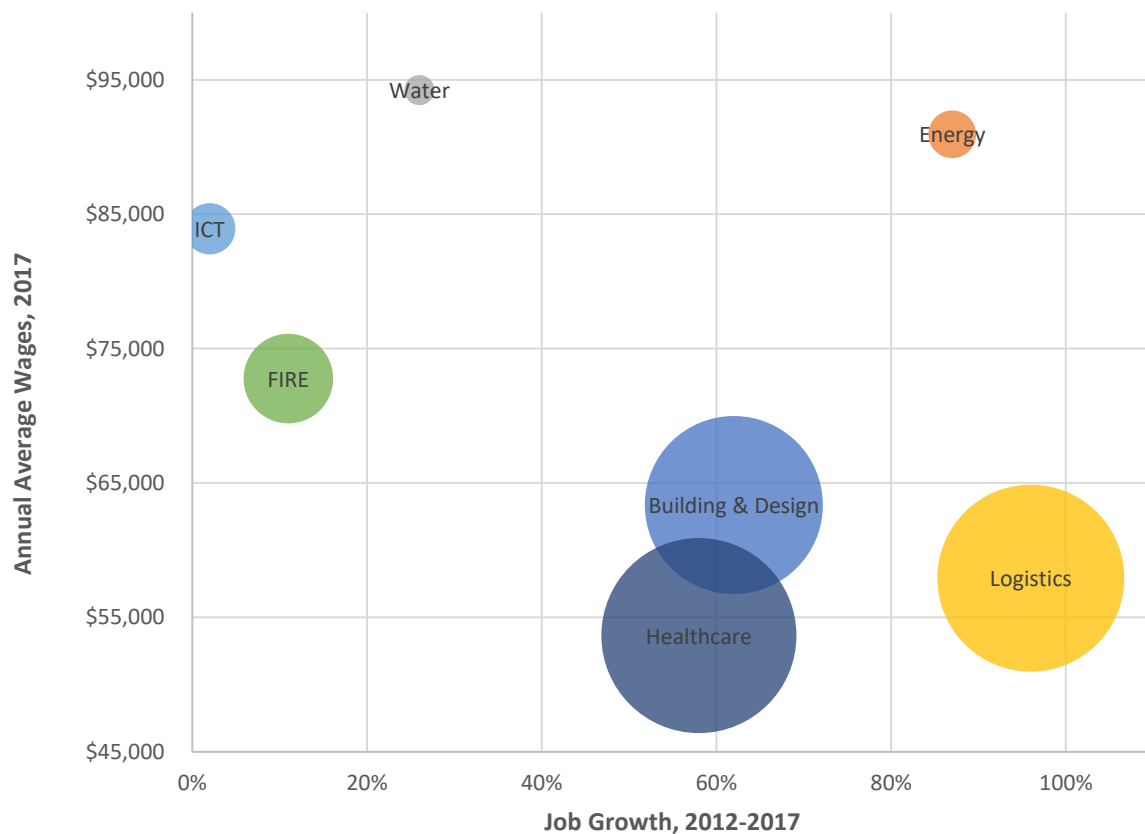
*The size of each bubble is relative to the number of jobs in the given industry.

Clusters with Above Average Wages

Energy

The Energy industry cluster provides the highest average wages among all seven clusters, or approximately $90,950. With a total of **2,826 jobs** in the Riverside ABout Students region, the job concentration for this clusters is 47% below the national average. Since

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[35] Source: EMSI 2018 Q4, Class of Worker.

2012, total employment increased by 87% – or a total of 1,316 jobs created. The top five occupations in this cluster have increased significantly since 2012, with growth rates varying between 232-347% (Table 5). Typical educational requirements for these occupations are between no formal education or a high school diploma.

Table 5: Top Five Energy Occupations in the Riverside ABout Students region[36]

Occupations	2017 Jobs	% Change 2017-2012	Median Hourly Earnings
Construction Laborers	337	279%	$17.98
Electrical Power-Line Installers and Repairers	252	232%	$37.13
Telecommunications Line Installers and Repairers	176	283%	$21.13
Operating Engineers and Other Construction Equipment Operators	143	347%	$33.48
First-Line Supervisors of Construction Trades and Extraction Workers	92	254%	$32.66

More than eight-in-ten jobs (82%) in the energy industry cluster are either tier 2 jobs (62%) or tier 1 (20%), with tier 3 jobs representing approximately 18% of all energy jobs (Table 6).

Table 6: Occupation Tier Distribution in Energy[37]

Industry Cluster	Tier 1	Tier 2	Tier 3
Energy	20%	62%	18%

Information & Communication Technologies (ICT)

ICT accounts for **3,258 jobs** in the Riverside ABout Students region, with a modest increase of 62 additional jobs since 2012. Job concentration in the area is 50% below national average and average annual wages per job are approximately $83,920. Since 2012, four of the top five occupations in terms of employment grew by 4-47% and one decreased by 3% (Table 7). Typical educational requirements for these occupations are between a high school diploma and a bachelor's degree.

[36] Source: EMSI 2018 Q4, Class of Worker.
[37] Ibid.

Table 7: Top ICT Occupations in the Riverside ABout Students region

Occupations	2017 Jobs	% Change 2017-2012	Median Hourly Earnings
Telecommunications Equipment Installers and Repairers, Except Line Installers	495	47%	$23.16
Sales Representatives, Services, All Other	202	24%	$22.10
Customer Service Representatives	158	4%	$17.12
Software Developers, Applications	111	29%	$46.11
Telecommunications Line Installers and Repairers	104	(3%)	$21.13

The largest proportion of tier 1 jobs among all clusters in ICT, where over 4-in-10 jobs are tier 1 occupations, followed by tier 2 jobs (40%), and lastly tier 3 jobs (19%). As such, job quality in this cluster is among the highest in all selected industry clusters (Table 8).

Table 8: Occupational Tier Distribution in ICT

Industry Cluster	Tier 1	Tier 2	Tier 3
ICT	41%	40%	19%

Finance and Banking, Insurance, and Real Estate (FIRE)

Finance, Banking, Insurance and Real Estate (F.I.R.E.) firms employ about **9,953 workers** in the Riverside ABout Students region, or about 3% of the region's total employment. This industry cluster has seen employment grow by 11% since 2012, while providing above average wages of about $72,773 per job. The top five F.I.R.E. occupations require between a high school diploma and a bachelor's degree as the typical entry-level education level and have seen variable growth, with tellers declining by 20% and insurance claims and policy processing clerks growing by 34% since 2012 (Table 9).

Table 9: Top Five FIRE Occupations in the Riverside ABout Students region

Occupations	2017 Jobs	% Change 2017-2012	Median Hourly Earnings
Insurance Sales Agents	1,140	22%	$18.97
Tellers	804	(20%)	$14.25
Claims Adjusters, Examiners, and Investigators	680	10%	$14.66
Securities, Commodities, and Financial Services Sales Agents	555	32%	$19.96
Insurance Claims and Policy Processing Clerks	494	33%	$18.54

Given the above average wages in this cluster, it is not surprising that tier 3 jobs account for only 28% of all F.I.R.E. jobs, while tier 2 occupations represent 43% and tier 1 occupations account for 29% of all F.I.R.E. jobs in the area (Table 10).

Table 10: Occupational Tier Distribution in F.I.R.E.

Industry Cluster	Tier 1	Tier 2	Tier 3
FIRE	29%	43%	28%

Medium Wages

Building and Design

The region's Building and Design cluster employs over **39,300 workers** and has grown by 62% since 2012. Building and Design firms support nearly 11% of the area's overall employment, with average annual wages of about $63,366 and a job concentration that is 82% above the national average. This means Building and Design is the industry cluster with the greatest concentration of jobs in the Riverside ABout Students region. Each of the top five occupations has grown by at least 74% since 2012, with the typical entry-level education for these occupations being a high school diploma or less (Table 11).

Table 11: Top Five Building and Design Occupations in the Riverside ABout Students region

Occupations	2017 Jobs	% Change 2017-2012	Median Hourly Earnings
Carpenters	4,183	90%	$21.57
Construction Laborers	2,855	75%	$17.98
Drywall and Ceiling Tile Installers	2,033	77%	$23.44
Electricians	1,636	74%	$23.53
Plumbers, Pipefitters, and Steamfitters	1,510	90%	$22.78

Seven-in-ten jobs in building & design are tier 2 jobs (70%), 15% are tier 1 jobs, and another 15% are tier 3 jobs (Table 12).

Table 12: Occupational Tier Distribution in Building & Design

Industry Cluster	Tier 1	Tier 2	Tier 3
Building & Design	15%	70%	15%

Logistics

Logistics is the industry cluster with the second highest job concentration in the Riverside ABout Students region, with 28% more jobs than the national average. This cluster is responsible for over **43,300 jobs** and it has experienced an impressive 96% job growth since 2012 – or a total of 21,282 jobs created. Logistics firms support about 13% of the region's overall employment and provide average annual wages of about $57,924, which is slightly higher than the region's average of $58,048.

Four of the top five Logistics occupations have grown by at least 130% since 2012, with the typical entry-level education for these occupations being between no formal education and a postsecondary nondegree award (Table 13).

Table 13: Top Five Logistics Occupations in the Riverside ABout Students region[38]

Occupations	2017 Jobs	% Change 2017-2012	Median Hourly Earnings
Hand Laborers and Freight, Stock, and Material Movers	9,985	154%	$13.50
Heavy and Tractor-Trailer Truck Drivers	4,563	73%	$22.18
Industrial Truck and Tractor Operators	4,051	209%	$15.43
Stock Clerks and Order Fillers	2,763	130%	$12.12
Packers and Packagers, Hand	2,261	169%	$12.12

More than six-in-ten (62%) logistics jobs are tier 3, three out of every ten are tier 2, and only 7% are tier 1 occupations (Table 14).

Table 14: Occupational Tier Distribution in Logistics

Industry Cluster	Tier 1	Tier 2	Tier 3
Logistics	8%	30%	62%

Healthcare

The Healthcare industry cluster employs about **47,206 workers** in the Riverside ABout Students region, which represent almost 13% of all jobs in the area. Since 2012, healthcare has grown by 58%, or 17,397 jobs created. This job concentration is 16% below the national average and average annual wages are about $53,653 per job.

The five most prevalent healthcare occupations have grown by at least 14% since 2012, with personal care aides growing by an impressive 584% during the same time (Table 15). The typical education level required for the top five occupations is between a high school diploma and a bachelor's degree.

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[38] Source: EMSI 2018 Q4, Class of Worker.

Table 15: Top Five Occupations in Healthcare in the Riverside **ABout Students** region

Occupations	2017 Jobs	% Change 2017-2012	Median Hourly Earnings
Personal Care Aides	13,977	584%	$11.32
Registered Nurses	5,125	31%	$46.09
Medical Assistants	1,801	33%	$13.75
Medical Secretaries	1,423	20%	$16.13
Nursing Assistants	1,414	13%	$14.72

Even though healthcare has the third highest concentrations of tier 1 jobs among all regional clusters (22%), it has also the second highest concentration of tier 3 jobs (53%), bringing the average wages per job to $53,653, the lowest among all highlighted regional clusters.

Table 16: Occupational Tier Distribution in Healthcare

Industry Cluster	Tier 1	Tier 2	Tier 3
Healthcare	22%	25%	53%

CAREER PATHWAYS

Based on the six regional industry clusters, the infographics below highlight the potential career pathway progressions for each industry cluster in the Riverside ABout Students region. The pathway depicted is meant to be a "sample" path, with other occupations not included in the graphics falling under the different experience levels. The occupations highlighted for each experience level were selected based on the number of jobs, the 2012-2017 growth rate, and the employment opportunity in the area.

Why is this Important?

Career pathways are intended to help develop students' core academic, technical, and employability skills. By focusing on the following six industry clusters, community colleges can design strong programs that will help students develop their technical and employability skills and increase their chances of finding sustainable and high-paying jobs.

Figure 25: Energy Career Pathway

Energy

Entry-level

Construction Laborers

Electrical and Electronic Assemblers

Office Clerks

$14.96
Median Hourly Wage, 2017

89%
Growth, 2012-2017

High School diploma or less & short-term or moderate on-the-job training

Mid-level

Electrical Power-Line Installers and Repairers

Operating Engineers and other Construction Equipment Operators

Supervisors of Construction Trades and Extraction Workers

$33.52
Median Hourly Wage, 2017

184%
Growth, 2012-2017

High school diploma & long-term to no on-the-job training

Senior-level

General and Operations Managers

Electrical Engineers

Civil Engineers

$47.42
Median Hourly Wage, 2017

79%
Growth, 2012-2017

Bachelor's degree and 5 years of experience or less

Figure 26: Information & Communication Technologies (ICT) Career Pathway

Information & Communication Technologies

Entry-level

Customer Service Representatives

Electrical and Electronic Assemblers and Finishers

General Office Clerks

$16.34

Median Hourly Wage, 2017

-7%

Growth, 2012-2017

High school diploma & short- to moderate-term on-the-job training

Mid-level

Sales Representatives

Telecommunications Line/Equipment Installers and Repairers

Computer User Support Specialists

$22.67

Median Hourly Wage, 2017

29%

Growth, 2012-2017

High school or more & moderate- to long-term on-the-job training

Senior-level

General and Operations Managers

Electronics Engineers

Applications Software Developers

$47.42

Median Hourly Wage, 2017

14%

Growth, 2012-2017

Bachelor's degree & five years or less work experience

Figure 27: Finance & Banking, Insurance, Real Estate (FIRE) Career Pathway

Finance & Banking, Insurance, Real Estate

Entry-level

Claim Adjusters, Investigators

Tellers

Counter and Rental Clerks

$14.23
Median Hourly Wage, 2017

-1%
Growth, 2012-2017

High school diploma or less & short- to long-term on-the-job training

Mid-level

Insurance Sales Agents

Loan Officers

Securities, Commodities, and Financial Services Sales Agents

$20.02
Median Hourly Wage, 2017

18%
Growth, 2012-2017

High school diploma or Bachelor's & moderate-term on-the-job training

Senior-level

Financial Managers

General and Operations Managers

Personal Financial Advisors

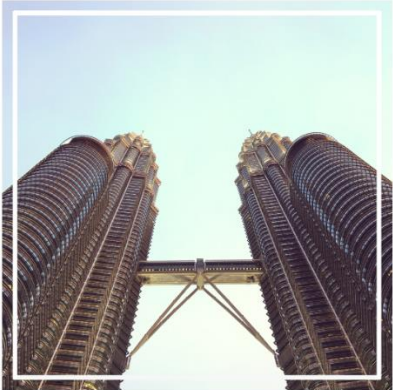### $47.87
Median Hourly Wage, 2017

18%
Growth, 2012-2017

Bachelor's degree & long-term to no on-the-job training

Figure 28. Building and Design Career Pathway

Building and Design

Entry-level	**Mid-level**	**Senior-level**
Construction Laborers	Carpenters	Civil Engineers
Office Clerks	Electricians	Mechanical Engineers
Hand Laborers and Material Movers	Supervisors of Construction Trades and Extraction Workers	Sales Managers
$16.34	$23.79	$42.34
Median Hourly Wage, 2017	**Median Hourly Wage, 2017**	**Median Hourly Wage, 2017**
72%	79%	54%
Growth, 2012-2017	**Growth, 2012-2017**	**Growth, 2012-2017**
High school or less & short-term on-the-job training	High school diploma, apprenticeship or no on-the-job training	Bachelor's degree & no on-the-job training

Figure 29. Logistics Career Pathway

Logistics

Entry-level

Industrial Truck and Tractor Operators

Hand Laborers and Freight, Stock, and Material Movers

Stock Clerks and Order Fillers

$13.5

Median Hourly Wage, 2017

151%

Growth, 2012-2017

High school or less & short-term on-the-job training

Mid-level

Sales Representatives

First-line Supervisors of Transportation

Customer Service Representatives

$26.48

Median Hourly Wage, 2017

48%

Growth, 2012-2017

High school & none to to moderate on-the-job training

Senior-level

Chief Executives

General and Operations Managers

Sales Managers

$55.04

Median Hourly Wage, 2017

54%

Growth, 2012-2017

Bachelor's degree, about five years work experience, & no on-the-job training

Figure 30. Healthcare Career Pathway

Healthcare

Entry-level

Personal Care Aides

Medical Secretaries

Medical Assistants

$13.87
Median Hourly Wage, 2017

259%
Growth, 2012-2017

Post-secondary nondegree or less & moderate-term or no on-the-job training

Mid-level

Licensed Practical and Licenses Vocational Nurses

Health Technologists and Technicians

Supervisors of Office and Administrative Support Workers

$23.07
Median Hourly Wage, 2017

37%
Growth, 2012-2017

High-School to Post-secondary non-degree & no on-the-job training

Senior-level

Physicians and Surgeons

Dentists

Physical Therapists

$59.32
Median Hourly Wage, 2017

23%
Growth, 2012-2017

Doctoral or professional degree and internship/residency or less

JOB VOLATILITY

The world of work is continually changing and many of the jobs of today will not look the same as the jobs of tomorrow. BW Research recently (2017 data) completed a national analysis of job volatility by occupational segment and industry cluster to better understand how the employment landscape could change over the next three to ten years. The analysis focused more specifically on the impact that technology and automation is likely to have on employment opportunities into the future. The examination of occupational skills was built upon an assessment of the likelihood of that skill being automated and its relative importance for the position.[39] The analysis looked to:

o   Assess occupations and industry employment patterns based on current job skills and the likelihood that those skills could be replaced by technology or some related advancement in automation;
o   Evaluate and better understand the magnitude of change that is likely to occur in employment composition by industry and occupational segment over the next three to ten years; and,
o   Measure the potential job volatility within a given region, such as Riverside ABout Students region, and the impact it could have on the region's industry clusters.

From an occupational perspective, Riverside ABout Students region has a greater percentage of volatile jobs than the national average. Nationally, 21% of employment currently falls under the five most volatile industries according to our analysis. Approximately 26% of current Riverside ABout Students region employment falls into the same five most volatile industries. These findings indicate that nearly one-in-four jobs in the area will likely be impacted by automation and technology in the next 5 to 10 years, changing the skills and training required for the position or changing the position and title altogether.

Occupationally, the Riverside ABout Students region has a relatively low concentration (about 55% fewer occupations than the national average for a territory the same size) of Agriculture and Food industry positions, which is the most volatile industry according to our analysis. However, the Riverside ABout Students region does have a relatively high concentration of occupations in "Logistics", "Water", and "Other Manufacturing," which have the second, third, and fourth highest job volatility scores in our analysis, respectively.

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[39] Automation assessment included information and analysis from the following study: https://www.oxfordmartin.ox.ac.uk/downloads/academic/The_Future_of_Employment.pdf

The Logistics industry cluster is the second largest in the region, accounting for more than 43,300 jobs (11.7% the workforce) within the area (Figure 27). Occupations in Logistics are also 82% more concentrated in the Riverside ABout Students region than the national average. These occupations face considerable risk in both the near and long term. While self-driving cars and trucks may be a decade or more away from crowding streets, automated transportation has already arrived in warehouses and loading docks. As warehouses and supply chains become increasingly automated, the least impacted positions will be managerial ones, though these occupations will likely be required to adapt to new technologies, software, and procedures.

Table 17: Five Industries Most Likely to Experience Volatility

Five Most Volatile Industries	2017 Jobs in Riverside ABout Students Region	Percent of Total Jobs in Riverside ABout Students Region
Agriculture & Food	4,301	1.2%
Logistics	43,354	11.7%
Water	1,129	0.3%
Other Manufacturing	16,240	4.4%
Tourism, Hospitality, and Recreation	32,963	8.9%
Total	**97,987**	**26.4%**

While the Water industry cluster makes up a small percentage of the regional workforce (about 1,100 workers, or 0.3%), these workers face considerable volatility due to high average wages ($94,237). Other Manufacturing is another industry which presents significant volatility to the regional workforce. Occupations in this cluster are 4% more concentrated in the area than the national average and include over 16,200 workers (4.4% of the workforce). As the cost of automation continues to decline, the most repetitive and dangerous tasks will be the first to be replaced by automated machines. The price point for when automation becomes a cheaper alternative for human labor will arrive considerably sooner for this industry as the average wage in the region is more than $63,813. Lastly, the Tourism, Hospitality, and Recreation industry also presents a risk of volatility to the workforce, as the industry employs nearly 33,000 workers (8.9% of the workforce) and ranks the fifth highest in our volatility analysis.

[bw] RESEARCH PARTNERSHIP

Table 18: High Risk Occupations:

High Risk Occupations	2017 Jobs in Riverside ABout Students Region
Packing and Filling Machine Operators and Tenders	895
Laborers and Freight, Stock, and Material Movers, Hand	16,580
Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	234
Stock Clerks and Order Fillers	8,319
Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	656

The Healthcare industry is the largest industry in the Riverside ABout Students region, employing more than 47,200 people (12.7% of the workforce). It is also the third least volatile industry overall according to our analysis. Technological advancement is likely to help this industry, as developments in imaging and predictive healthcare benefit patients and practitioners alike. Given the levels of complex problem solving and emotional intelligence required for many Healthcare occupations, it is more likely that healthcare practitioners will work more effectively with the help of robots rather than be replaced by them. The seventh and eighth largest industries in the Riverside ABout Students region are the Public Services and Infrastructure industry and Professional and Business Services, accounting for more than 64,973 employees (17.5% of the workforce). These industries are less likely to experience volatility due to automation, ranking in the mid-to low levels of volatility according to our analysis.

Figure 31: Five Industries Least Likely to Experience Volatility

Top Five Industries Least Likely to Experience Volatility	2017 Jobs in Riverside ABout Students Region	Percent of Total Jobs in Riverside ABout Students Region
Healthcare	47,206	12.7%
Education and Knowledge Creation	40,824	11.0%
Information and Communication Technologies	3,258	0.9%
Finance, Insurance, and Real Estate	9,953	2.7%
Information and Communication	1,831	0.5%
Total	**103,072**	**27.7%**

APPENDIX A: METHODOLOGY

Prior to beginning the project, BW Research met with About Students Regional Consortium's Director to determine the research objectives for this study.

BW Research conducted secondary data analysis using data sources such as EMSI and the American Community Survey to understand the regional labor market and population demographics.

RESEARCH OBJECTIVES

Prior to beginning the project, BW Research Partnership met with About Students Regional Consortium's Director to determine the research objectives for the study. They included:

- Develop a comprehensive profile of the region's current and potential adult education students and assess how they could benefit from current or potential Adult Education programs.
- Evaluate the current economic profile in the Riverside Adult Education Service Area including an examination of industry clusters, job quality, occupation segments, and an initial identification of potential career pathways for adult education students.
- Conduct a preliminary assessment of current educational and training offerings in the region.

SECONDARY DATA COLLECTION

Employment, population, workforce, income, and educational attainment data for the Riverside ABout Students region were defined by Zip codes. Industry clusters were defined using the North American Industry Classification System (NAICS) codes.

Employment data were compiled from the Economic Modelling Specialists Intl. (Emsi) 2018.3 Class of Worker for the Riverside ABout Students Service Area Zip Codes. Additional employment datasets were also extracted from the Bureau of Labor Statistics (BLS), California Economic Development Department, and regional living income from the Living Wage Calculator. Population and workforce statistics were compiled from the Census Bureau's American Community Survey (ACS), 2016 5-year estimate.

APPENDIX B: SUPPLEMENTARY DATA

The following data provides a deeper-dive into the data provided in earlier sections of the report. Examining data through a number of demographics simultaneously often provides insights into trends that are otherwise obscured in more general data. All data provided in this section was collected and compiled by the United States Census Bureau's American Community Survey (ACS), 2016 5-year estimate.

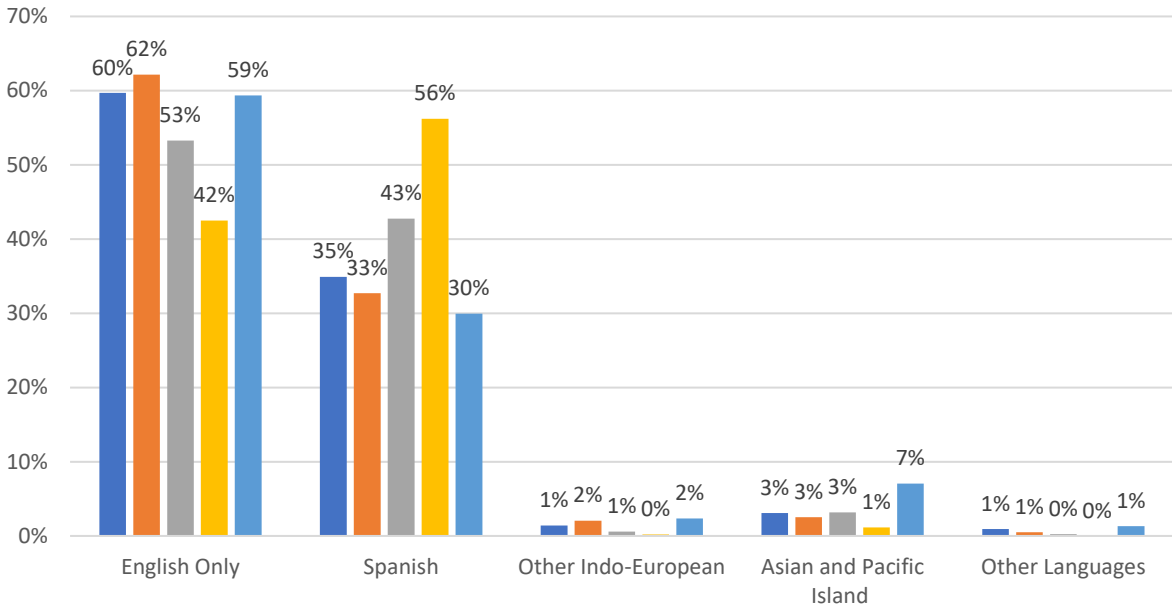### *Educational Attainment and Language Spoken at Home*

Spanish-speakers make up a majority of potential students who have less than a high school diploma in the Riverside ABout Student's region. Across the entire ABout Students region, 65% of those without a high-school diploma speak Spanish at home. Nearly three-in-ten of those without a high-school diploma speak English-only (Figure 32).

Figure 32. Languages spoken at home among those with less than a high school diploma, 2016.
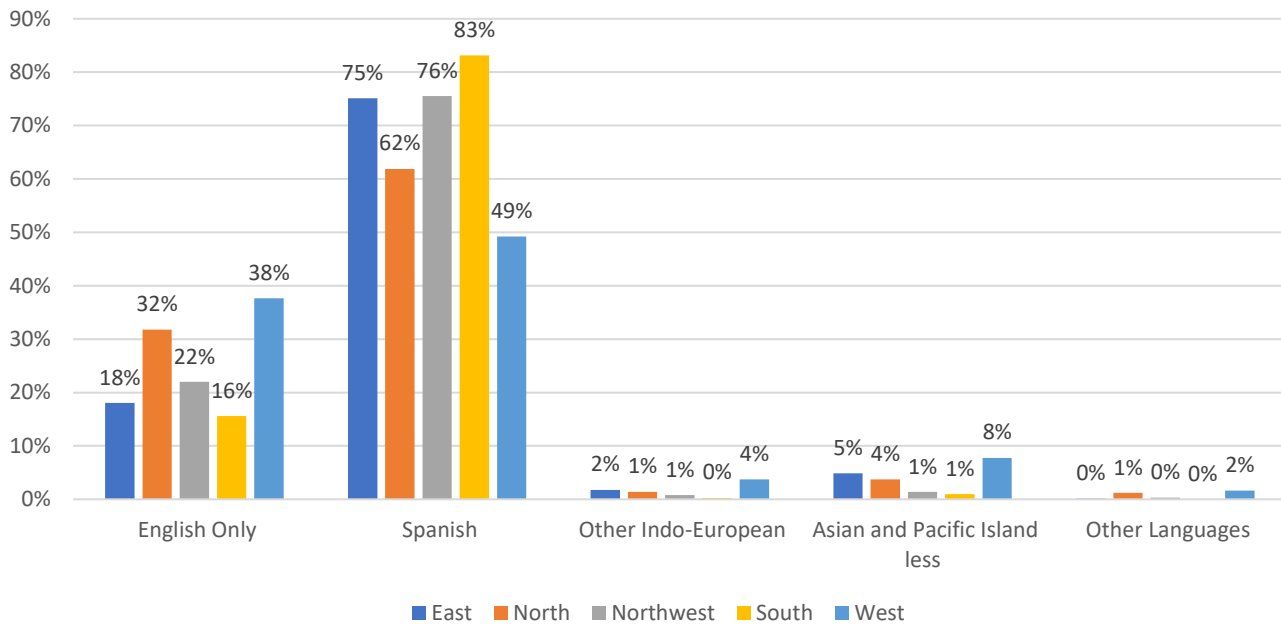

Conversely, English is the most common language spoken at home among those whose highest level of education is a high school diploma or equivalent (GED). Across the Riverside ABout Students region, 58% of those who's highest level of education is a high school diploma or equivalent speak English only at home, while nearly 36% speak Spanish at home (Figure 33).

Figure 33. Languages spoken at home among those who's highest educational attainment is a high school diploma or equivalent, 2016.

Among those whose highest level of educational attainment is some college, no degree or an Associate degree, English is the most common language spoken at home; 69% of those who's highest educational attainment is some college, no degree, or an Associate degree speak English at home.

Figure 34. Languages spoken at home among those who's highest educational attainment is some college, no degree, 2016.
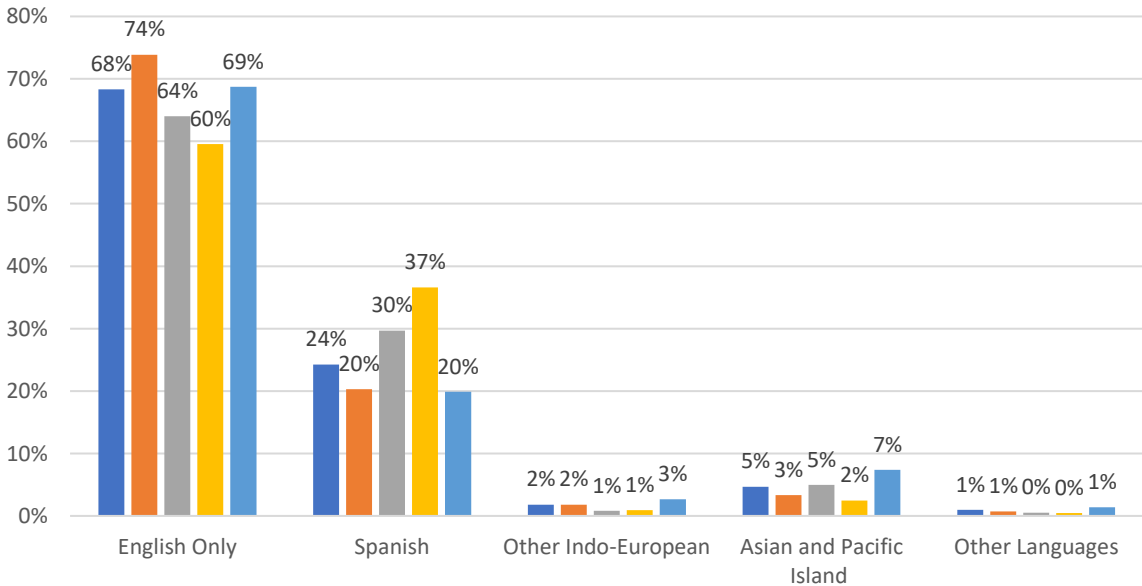
Educational Attainment and Age

Educational attainment across age categories is relatively uniform in the overall Riverside ABout Students region. While the age category of 18-24 years old shows large percentages around "high school diploma" and "some college", this is likely due to the fact that many in this age category would not have had the time to pursue higher levels of education. In general, it appears that the age categories of those 18-24 and 25-34 years old are among the better-educated; both have considerably lower rates of individuals with less than a high school diploma (Figure 35).

Figure 35. Highest educational attainment by age bracket, 2016.
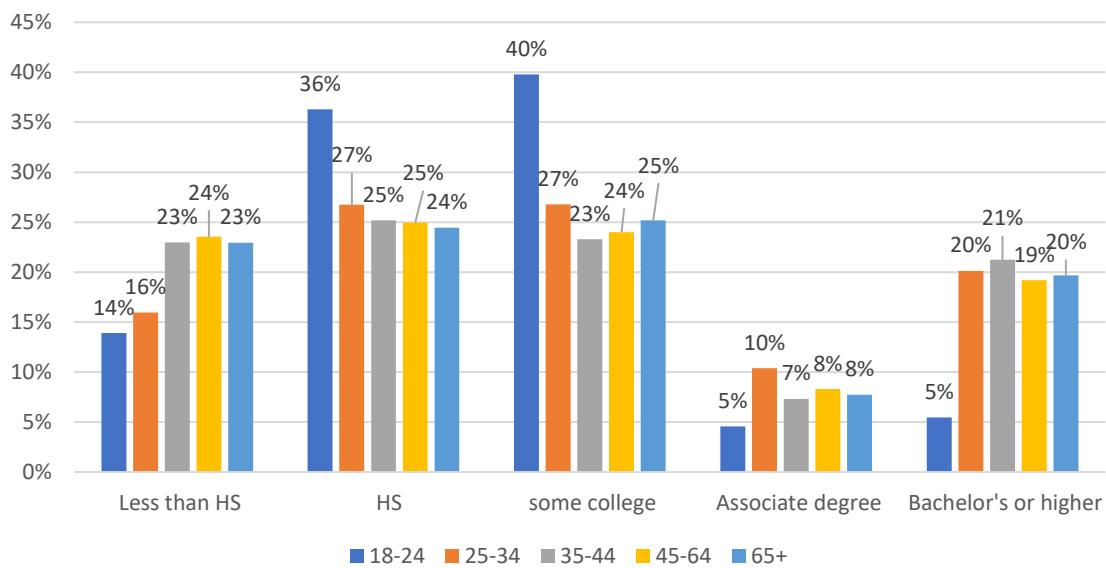
Educational Attainment by Sex

Male educational attainment in the Riverside ABout Students region is somewhat lower on average than their female counter parts. Males had greater rates of having a high school diploma or less, by four percentage points. Conversely, females were generally better educated than males; females had greater percentages of those who attended some college but received no degree, those with associate degrees, and a slightly larger percentage of those with Bachelor's degrees or more (Figure 36).

Figure 36. Educational attainment by sex, 2016.
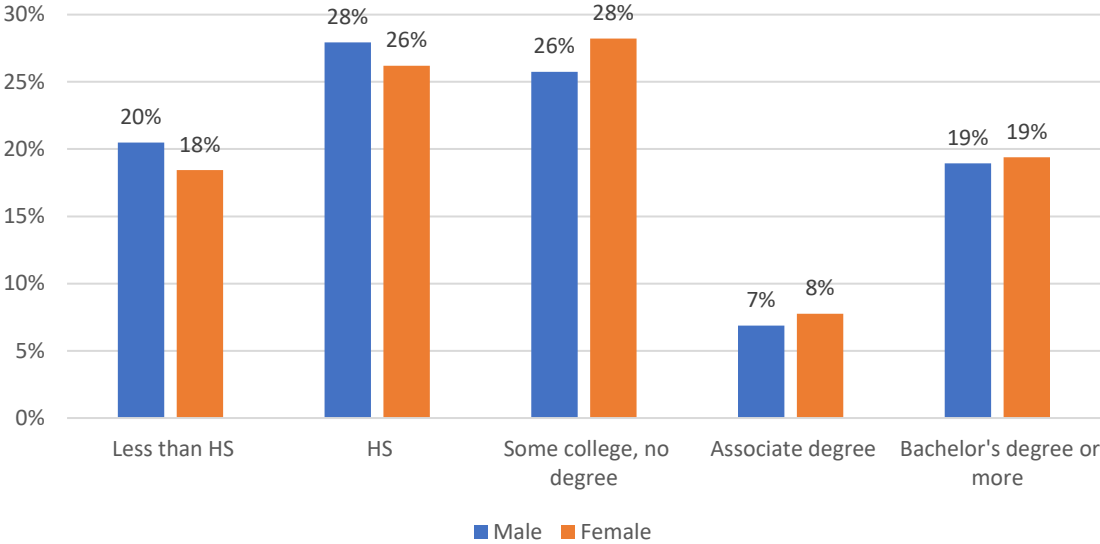
Age and English as a Second Language

Of those that speak English as a Second Language, it appears that those who are younger generally have stronger abilities to speak English very well. On average across the ABout Students region, those ages 5-17 speak English very well by 29 to 52 percentage points greater than their counterparts ages 65 or above. This discrepancy highlights that youth in the region speak English "very well" in notably greater proportion than older individuals. This suggests that while the education system has done a better job at teaching English to younger individuals, there are notably greater proportions of the adult population that still speak English less than "very well" (Figure 37).

Figure 37. Percentage of those who speak English less than "very well" among those who speak English as a second language by age, 2016.