



The Economic Benefits of Multilingual Learning

October 2022

Executive Summary

California is home to nearly a quarter of the nation's foreign-born population, and multilingual children represent 40% of the state's public-school enrollment, a number that only continues to grow among the state's youngest children. Unlike programs that have traditionally pushed students to learn English above all else, programs designed to support students' home languages in addition to English – also known as multilingual programs – are increasingly gaining support. Here, we find that supporting multilingual learning among California's youngest children can improve educational outcomes, boost household incomes, and give California companies the edge needed to compete on the world stage.

Key findings include:

- In California, nearly 60% of children under the age of five have at least one parent who speaks a language other than English.
- Those same children are 160% more likely to live under the poverty level than peers with English-only speaking parents.
- Non-English speaking households in California would collectively earn \$30 billion more, or \$15,519 more per household if they earned as much as their bilingual counterparts.

Once viewed as a deficiency, bilingualism is increasingly treated as an asset in the national job market. From 2010 to 2020, job postings in California requesting applicants with bilingual skills nearly quadrupled, with bilingual postings as a share of total postings increasing nearly 2%, a faster rate than the United States as a whole. The value of investing in multilingual childhood education to increase lifetime earning potential is also

clear: as households move up the earning spectrum, median earnings for bilingual households are \$100,000 higher than households that do not speak English. This gap represents a rough estimate of a multilingual learner's earning potential when given the opportunity to reach English fluency, as well as maintain a non-English speaking home language.

California has the unique opportunity to foster early language skills in its 2.4 million multilingual children by implementing more multilingual programs across the state. Critics cite early evidence of multilingual instruction as detrimental to academic success, but there is increasing evidence that these essential programs do not come at the cost of academic performance in other subjects. Multilingual instruction allows students to celebrate their home language while achieving English proficiency, ideally at a young age. This principal benefit is lacking in traditional bilingual programs, which prevents true multilingualism, a skill increasingly in demand across multiple industry sectors and regions.





Introduction

California has a rich cultural history molded by people of all ethnicities and backgrounds who settled in the state in search of educational, economic, and social opportunity. Today, California is home to more immigrants than any other state in the country, approximately 11 million in total, accounting for almost a quarter of the nation's foreign-born population. Many immigrants are bilingual: approximately 70% report speaking English proficiently, while only 10% report speaking no English. Nearly half of K-12 students enrolled in California public schools reside in a home where a language other than English is spoken and nearly 60 percent of children under five live in such households.¹ Multilingual programs – or those that educate students in English and one or more other languages – offer an incredible opportunity to catalyze California's future economic growth by meeting a growing economic need for bilingualism and providing economic opportunity for immigrant and first-generation children statewide.

This study aims to fill a gap in the literature that would provide a connection between multilingual programs and the economy. This project will attempt to fill these gaps by comparing linguistically isolated households (households where no person above the age of 14 speaks English "very well") to similar non-linguistically isolated households in California to understand the economic characteristics of both groups and how bilingualism may aid in improving the economic situations of English learners and the California economy over time. By making the economic case for

bilingualism and in turn multilingual programs, this analysis can be used alongside previous analyses to advocate for an increased focus on the importance of educational outcomes for not just English proficiency but multilingual learning.

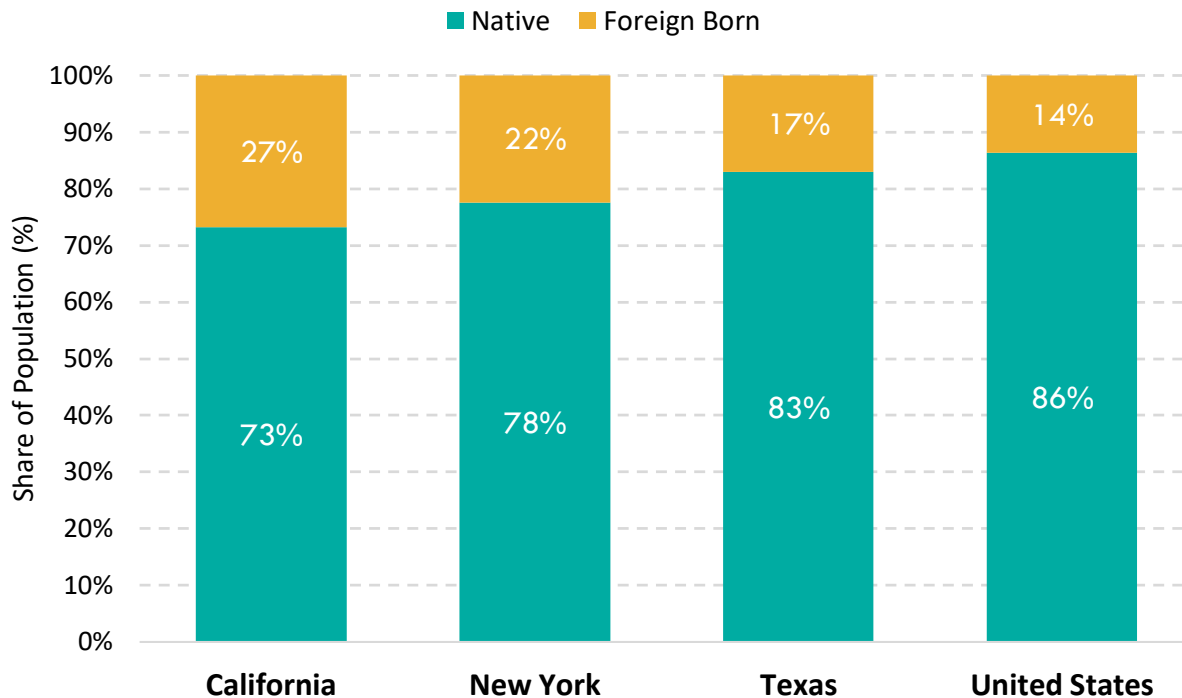
English Learners in California

California's status as an economic powerhouse and attractive destination for immigrants makes it an optimal place to implement multilingual programs to help meet a growing economic need for bilingualism in the state and provide economic opportunity for immigrant/first generation children. According to the most recent available data, 27 percent of California's population is foreign born. In addition, half of all children in the state have at least one immigrant parent. The overwhelming majority of the state's immigrants come from Latin America (50%) or Asia (39%), with the primary countries of origin being Mexico (3.9 million), the Philippines (859,000), China (796,000), Vietnam (539,000), and India (513,000). Of those who arrived between 2010 and 2019, over half (53%) came from Asia and 31% from Latin America.²

Language education in California recognizes a distinct and important difference between an "English Learner" and a "multilingual learner" (ML). The California Department of Education defines an English Learner as: a student in kindergarten through grade 12 for whom there is a report of a language other than English on the Home Language Survey (HLS) and who lacks the clearly

Figure 1. The foreign-born population is larger in California than any other state or the United States at large.

Percentage of State Population that is Native vs Foreign Born as Compared to the United States Total Population, 2019



Data Source: 2019 American Community Survey

Analysis: Bay Area Council Economic Institute

defined English language skills of listening, speaking, reading, and/or writing necessary to succeed in the school's regular instructional programs.³

Precise definitions of multilingual learners, also sometimes referred to as dual language learners (DLL), vary from entity to entity and are often based on an organization's funding mechanism. The California Department of Education defines MLs as: students who have developed or are developing proficiency in both English and one or more other languages, which may be their home language. Students may be mostly dominant in one language or proficient in both.⁴ Early Edge California, a nonprofit advocacy group dedicated to promoting quality early learning across California, defines dual language learners as: children birth to age five, who are learning two (or more) languages at the same time, or are learning a second language while continuing to develop their first (or home) language.⁵

Due to the differences between these terms, this report will utilize the term "multilingual learners" as a broader encapsulation of related subgroups of language learners. California in particular has promoted "multilingual learner" terminology because it broadly recognizes a student's multilingualism as an asset in their classrooms and communities.⁶

The prevalence of multilingual learners throughout the United States is clear: in 2019 there were 11 million multilingual learners across the country representing 32% of the nation's population aged eight or below.⁷ Demographic reports indicate that multilingual learners are also a growing population within U.S. schools.⁸ With these current and future demographics in mind, it is critical that policymakers both understand and recognize the benefits multilingual programs can have on the state's future economic health.

Multilingual Education vs. Transitional Bilingual Education

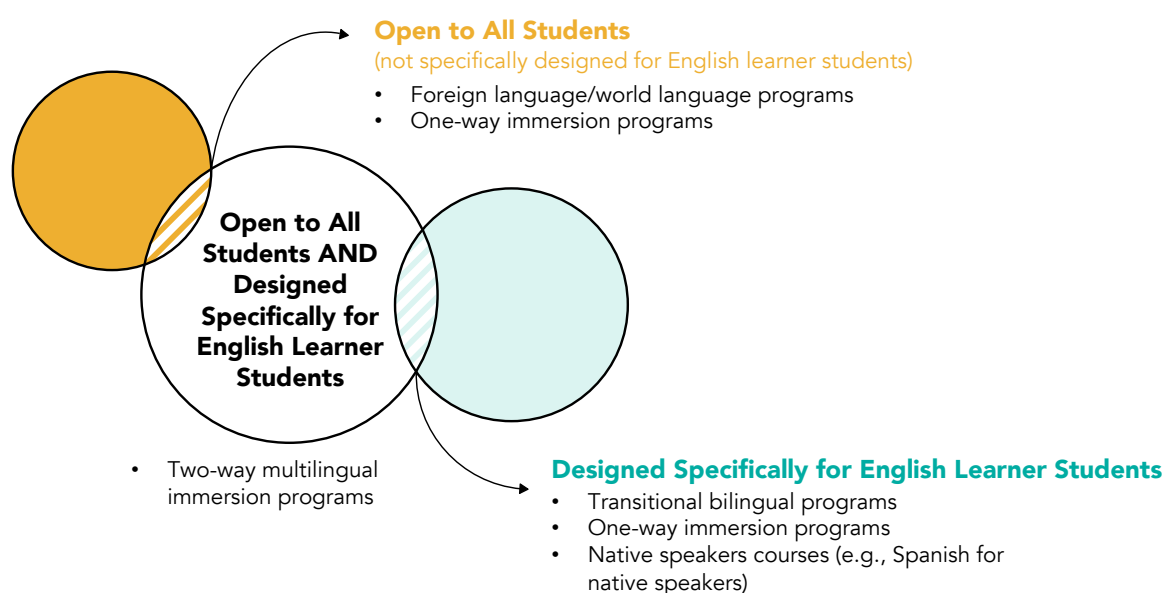
Bilingual educational programs typically take one of two forms: transitional and multilingual learning. Transitional bilingual programs have long been the preference for bilingual instruction. These programs are designed to temporarily support English learners' home language as they become accustomed to English-dominant instruction. As they achieve English proficiency, native language instruction is gradually phased out of instruction. This model, therefore, does not further advance students' home languages.

Multilingual programs, on the other hand, elevate students' home languages, enabling them to become bilingual, biliterate, and bicultural.⁹ They are also more successful at narrowing academic achievement gaps between English learners and English native students than transitional education programs.¹⁰ Multilingual programs primarily come in two forms, **one-way dual immersion** and **two-way dual immersion**.

One-way dual immersion programs, often advertised as enrichment strategies targeted toward native English-speakers, group students from one language background, either multilingual learners or native-English speakers. This system has been found to raise the reading scores of multilingual learners, but not to the same degree as two-way dual immersion programs.¹¹

Two-way dual immersion programs, often referred to as the "gold standard," tend to result in the greatest academic advancements for students. Unlike one way immersion programs, or world language immersion programs – which are only designed for English speakers to learn a non-English language – **two-way immersion programs combine multilingual learners and native English speakers together, allowing for language learning to occur in two directions.** A challenge to maintaining these programs is balancing enrollment evenly by language, while also maintaining such balance over time. Overall, however, these two immersion programs are structured to keep multilingual learners within the programs even after reaching English proficiency.¹²

Figure 2. Types of Bilingual Education Programs



One study in Portland, Oregon Public Schools (PPS) found that students randomly assigned to dual-language immersion programs outperformed their peers on state reading tests by 13 percent of a standard deviation in grade 5 and by 22 percent of a standard deviation in grade 8. While the researchers did not find a statistically significant benefit in math or science, they also found no detriment, meaning that the additional investment and effort required by multilingual immersion programs is not zero sum, and that advancement in other subjects may happen concurrently for students enrolled in DLL programs.¹³

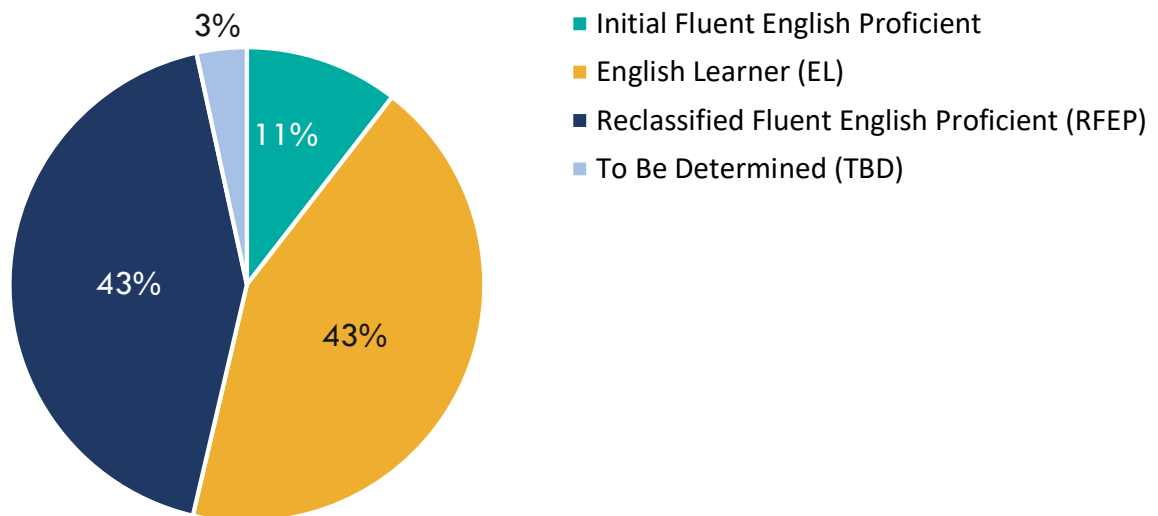
California's Approach to Bilingualism

California has a long, wavering history in terms of its support for multilingual learning programs and its relationship with multilingualism. Beginning in 1998, Proposition 227, approved by the state's voters, essentially banned non-English instruction in California's

public schools, ultimately depleting bilingual instruction and support for students.¹⁴ Prop 227 was ultimately repealed in 2016 when voters approved Proposition 58, ending nearly two decades of restrictions to bilingual programs. The following year, the State Board of Education adopted the California English Learner Roadmap intended to strengthen policies, programs, and practices for students classified as English learners preschool through 12th grade.¹⁵ Finally, in October 2021, Governor Gavin Newsom signed Assembly Bill 1363, which established an asset-based process for identifying multilingual learners in California state preschool programs.¹⁶ The pandemic slowed the expansion and creation of new bilingual programs – but now, several school districts are resuming their plans, following the California Department of Education's Global California 2030 initiative, which aims to enroll half of all K-12 students in programs focused on proficiency in two or more languages.¹⁷ Additionally, the state allocated \$10 million in its 2021 budget toward multilingual program expansion.¹⁸

Figure 3. In the 2020-2021 school year, 40% of California's K-12 public school students were classified as multilingual, with equal shares of English Learners and Reclassified Fluent English Proficient students.

Enrollment by English Language Acquisition Status



Data Source: California Department of Education **Analysis:** Bay Area Council Economic Institute

This new technical language serves to define multilingual learners according to their linguistic strengths, rather than adhering to the current deficit-based and English-centric definition of either:

- **English Learner:** students who have yet to demonstrate English proficiency;
- **Reclassified Fluent English Proficient:** students who previously were English learners and have been reclassified as English proficient¹⁹; or
- **Initial Fluent English Proficient:** students who demonstrate English proficiency when they enter school.²⁰

Assembly Bill 1363 also paved the way for the state to begin collecting more data on how many multilingual learners are enrolled in the state's preschool programs, as the state currently lacks the capability to track and report on multilingual learners, making it difficult to accommodate students as they advance through the public education system.²¹ According to 2020-2021 enrollment figures, approximately 17.7% of California's K-12 students are English learners, 17.6% have been reclassified as fluent English proficient which describes students fluent in English regardless of initial or reclassified status, and 4.3% are initial fluent English proficient which describes students who were placed immediately into mainstream English taught courses. When grouped together, this population represents nearly 2.38 million students in California's public schools, or 39.6% of all students.²²

After removing English Only (EO) students, there are equal shares of English Learners (EL) and Reclassified Fluent English Proficient (RFEP) students in the California K-12 public school system (Figure 3). This distribution has changed over the last 5 years of enrollment: RFEP students previously comprised less than 40% of multilingual enrollment, while EL students comprised over 50%. This indicates an increase in the number of students achieving English proficiency as RFEPs.

Challenges

The state faces several key challenges in leveraging the language assets of its students to meet a growing economic need for bilingualism and provide economic opportunity for immigrant/first generation children. One obstacle is a shortage of bilingual educators. According to a 2017 survey conducted by Californians Together, 86% of K-12 school districts reported that their supply of bilingual teachers was insufficient to meet the staffing needs of planned expansions. At the same time, a majority of districts surveyed (58%) claimed they were planning to expand their bilingual programs. Experiencing a shortage of qualified bilingual educators makes high-quality multilingual programs challenging to implement.²³ These challenges are further exacerbated by fewer institutions offering bilingual authorization training programs – which provide teachers the resources and knowledge to provide instruction for English language learners in bilingual classrooms – resulting in an insufficient amount of qualified bilingual teachers.²⁴ Chapter 4 explores job postings requesting bilingual skills, exploring vacancies in the job market and opportunities for skills matching in highly requested occupations.

Another obstacle the state faces is a lack of available data concerning multilingual learners' home language development, making it difficult to monitor a student's progress.²⁵ Prior to Assembly Bill 1363's introduction, the state's inefficiency at collecting data on children's home languages in pre-K programs made it difficult to design effective programs for young multilingual learners.²⁶ The state must also ensure that dual-language programs are appropriately dispersed across socioeconomic status. With a disproportionate concentration of dual-language learning programs offered in affluent or gentrifying neighborhoods, many students of color are denied access to this education, particularly those attending schools in segregated, low-income communities.²⁷ Multilingual programs generally develop in response to a growing demand from privileged communities with little comprehensive guidance on equitable distribution.²⁸ As these concerns are addressed over time, multilingual programs are certain to play an important role in the economy today and well into the future.



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Literature Review

Multilingual learning is a rapidly evolving topic within the field of education. As more states adopt DLL programs through various approaches, research surrounding this subject continues to mature and grow. Benefits of multilingual learning and multilingualism more broadly are typically divided into three categories: economic, educational, and health.

Economic

The economic benefits of multilingualism have been somewhat contested. Historically, research has focused on the relationship between multilingualism and income as it pertains to a particular race or ethnicity. Some of these researchers concluded that no relationship exists between these variables, or alternatively, that increased bilingual proficiency directly correlated with decreased income in some cases. More recently, however, studies have begun to show a positive trend emerging in both the direct and indirect economic benefits of multilingualism.²⁹

A 2019 report published by New America found that the primary advantages of multilingualism for employees include greater job security and increased promotion opportunities. Although some employers don't necessarily compensate multilingual employees at higher rates for their language abilities, many multilingual employees tend to earn more than their single-language proficient colleagues.³⁰ In addition, a

study referenced by a 2018 Bipartisan Policy Center report found that children of immigrants who developed strong multilingual and biliterate skills were less likely to drop out of high school, more likely to go to college, and earned an average of \$5,400 more a year compared to their peers who lost their home language and speak English exclusively.³¹ A 2021 economic analysis conducted by the Federal Reserve Bank of Dallas discovered that if greater numbers of Spanish-language natives were to acquire multilingual skills, their lifelong economic prospects would increase dramatically. Bringing their educational attainment to the level of English-speaking natives is estimated to increase the disposable income of Spanish-language natives by almost \$1 trillion.³²

A 2018 article released by the World Economic Forum addressed the economic implications of bilingualism on international trade, a top concern of California being the country's second largest exporter of goods.³³ In this case, a study of small- and medium-sized companies in Sweden, Germany, Denmark, and France found that those who invested more in hiring multilingual staff were able to export more goods.³⁴ This finding supports the European Commission's claim that foreign language skills play an increasingly important role in making young people more employable and equip them for working abroad.³⁵ Overall, as the United States becomes increasingly diverse, the economic benefits of multilingualism will become more apparent.

Educational

The educational benefits of multilingualism are well studied. Language immersion incentivizes more parents to enroll their children in public schools. An analysis conducted by researcher Rubén Rumbaut of adult children of immigrants in Southern California found that fluent multilingual children were more likely to complete their high school education than those who grew up speaking only English, or who were non-fluent multilinguals.³⁶ Additional evidence also suggests that multilingual children from low-income families perform better on a number of verbal and nonverbal tasks than their single-language counterparts, underscoring the value of investing in bilingual early childhood education to raise children's lifetime income profiles.³⁷ Research overwhelmingly indicates that the earlier children are exposed to a second language, the better they will perform. In knowing this, they reach the conclusion that the early education system holds the key to a more multilingual society and more competitive economy.³⁸

Health

The health benefits of multilingualism are similarly well documented, and only strengthen the case for the expansion of multilingual programs. Multilingualism has long been shown to benefit brain health by delaying the onset of dementia. It has also been associated with an increased ability to concentrate and process information.³⁹ According to a 2015 article published by the University of Texas News, benefits of multilingualism include higher test scores, better problem-solving skills, sharper mental acuity, and greater empathy.⁴⁰ As time goes on, research into neuroscience and brain development will likely continue to expose new developments in support of multilingual programs.

Filling the Gap in Existing Research

Few reports have investigated the ways in which English language fluency can lead to greater earnings potential and economic productivity for immigrant/first generation children in California specifically. California is the nation's most populated and diverse state and

houses more non-English speakers and immigrants than any other. Additionally, these demographics are contextualized within California being the world's fifth largest economy. California's economy fosters increasingly globalizing businesses that will need to employ an increasingly diverse population. In this context, immigrants, and first-generation children within California with multilingual fluency, potentially stand to gain long-term economic benefits.

This study will expand the literature regarding multilingualism by establishing and investigating the connection between multilingual programs and the economy. This report compares demographic and economic characteristics of linguistically isolated households (households where no person above the age of 14 speaks English "very well") to similar non-linguistically isolated households in California. Using real-time data from job postings, this study examines the state of the California multilingual job market to summarize how multilingualism may aid in filling hiring gaps and improving the economic situations of English learners and the California economy over time. By making the economic case for multilingualism and in turn multilingual programs, this analysis bolsters advocacy efforts for increasing focus on the importance of educational outcomes for not just English proficiency for English learners but multilingual learners more broadly.



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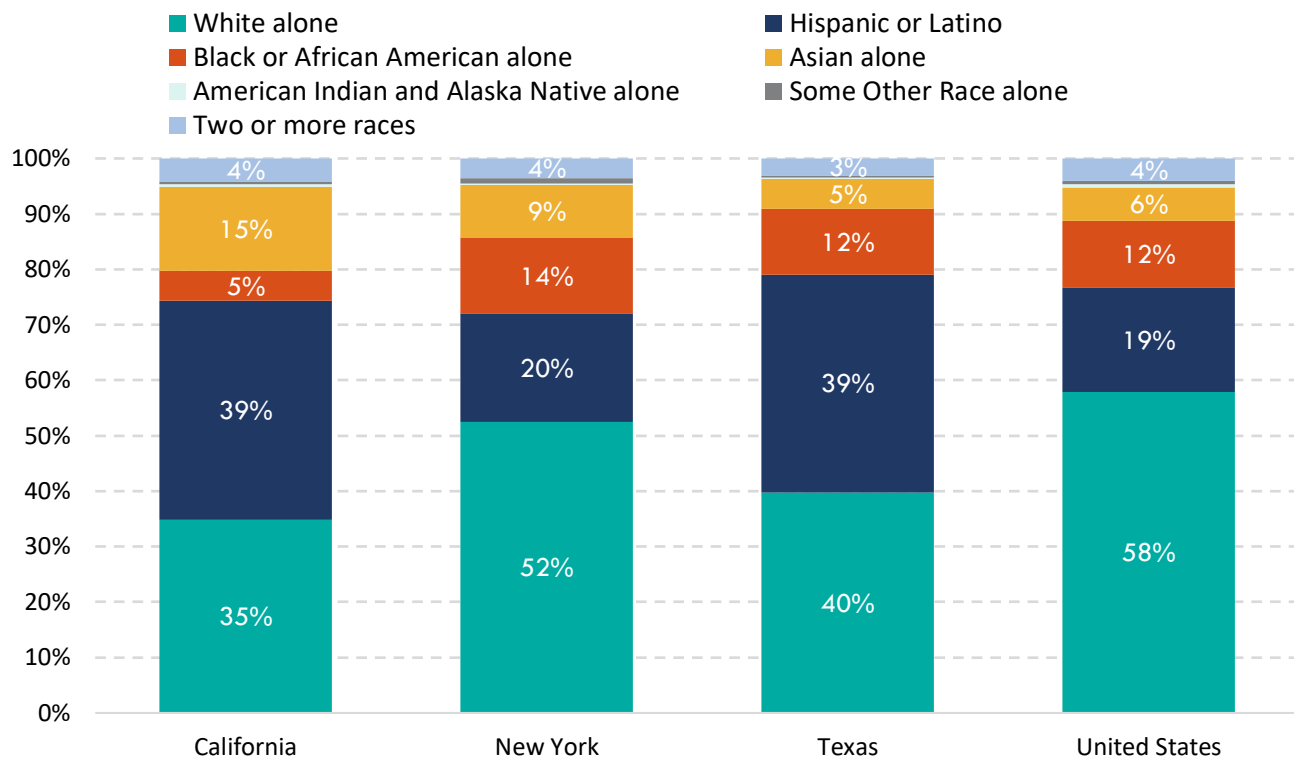
The Most Diverse State in the Nation

California is home to nearly a quarter of the nation's foreign-born population, and almost half of all children enrolled in public schools reside in a home

where a language other than English is spoken. This incredible diversity has wide-ranging impacts, providing economic competitiveness, cultural richness, and

Figure 4. In California, 65% of the population identify as a person of color, compared to 42% in the United States overall.

State Population by Share of Race & Ethnicity, 2020



Data Source: 2020 U.S. Census

Analysis: Bay Area Council Economic Institute

greater social and business innovation. This chapter explores California's demographics, drilling down to detailed data on multilingual learners in the state. With an economy increasingly dependent on global connections, California has the unique opportunity to foster early language skills in its 2.4 million multilingual children, who represent 40 percent of the state's school enrollment.

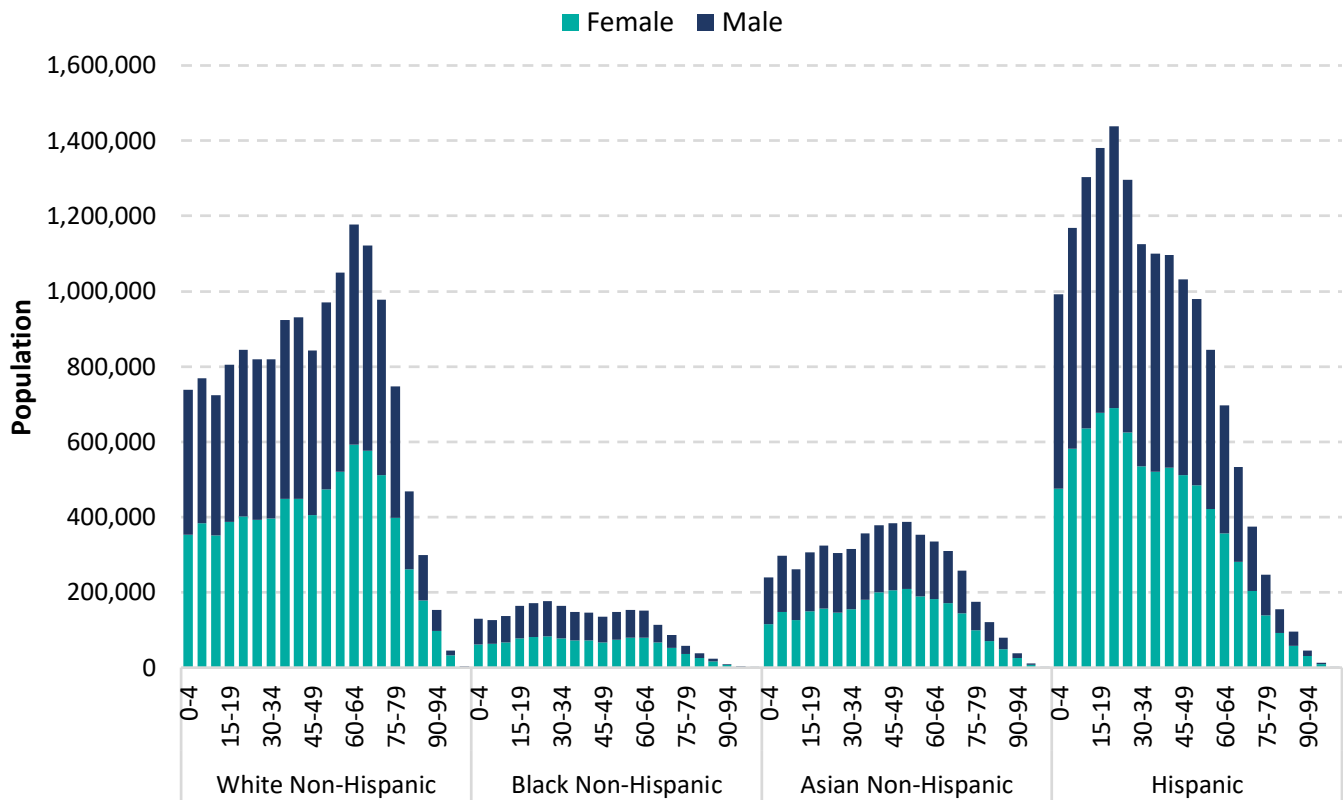
California's population distribution by race and ethnicity is relatively balanced, especially when compared to other large states and the country overall. According to the latest available Census data, the plurality of the state's population is either Hispanic or Latinx, comprising approximately 39 percent of the overall population. Spanish speakers also comprise 64 percent

of California's non-English speakers, significantly more than all Asian languages combined.

California's population growth has been slowing, most recently leading to the loss of a congressional seat for the first time in the state's history. This shift is nothing new, but rather part of a decades-long trend in decreasing birth rates, increasing death rates, and domestic out-migration. The state's white population, which shrank by 8 percent from 2010 to 2020, lost 1 million people every decade since 1990. Still, the state added 2.3 million people since 2010, mainly driven by an increase in the Hispanic/Latinx population, which accounted for 69% of the state's total population growth.

Figure 5. The Hispanic/Latinx population is young and getting younger, maintaining the highest share of school-aged individuals of all racial or ethnic groups.

California Population by Age, 2022 Projection



Data Source: California Department of Finance

Analysis: Bay Area Council Economic Institute

The overwhelming majority of the Hispanic/Latinx population is young and getting younger, with the highest percentage of school-aged individuals than any other racial or ethnic groups: 30 percent of the Hispanic/Latinx population is under 20 years old, compared to 24 percent of the Asian or Pacific Islander population and 20 percent of the white population.

California's racial and ethnic diversity translates into linguistic diversity across the state. The most commonly spoken language other than English among Californians is Spanish. This is especially pronounced among English

learners: the share of Spanish speaking English learners is nearly 20 percentage points higher than their share of the overall population, due to a much higher share of school aged children in the Hispanic/Latinx population than in other groups.

While Asian languages such as Mandarin, Tagalog, and Vietnamese account for a smaller share of English learners, kindergartners see higher shares of these speakers, and slightly lower shares of Spanish speakers (78 percent versus 82 percent for English learners of all ages). The greater linguistic diversity

Figure 6. In California, Spanish is the most commonly spoken language other than English, representing 64% of the population. For English Learners, this share increases by nearly 20 percentage points.

Most Common Languages Spoken Other than English in California

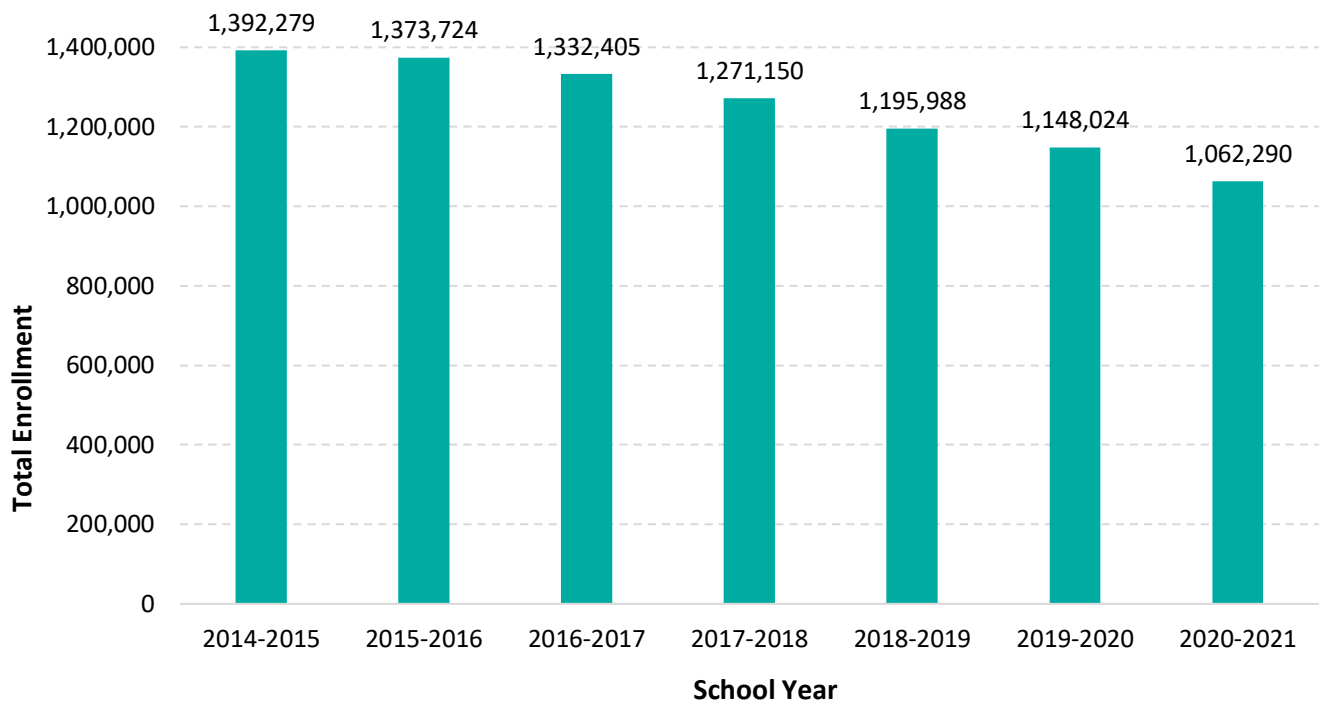
Language	Overall Population	English Learner Students
Spanish	63.9%	82.0%
Mandarin	5.5%	1.8%
Tagalog	4.7%	1.0%
Vietnamese	3.3%	2.1%
Korean	2.0%	0.7%
Cantonese	1.6%	1.2%
Farsi	1.3%	0.7%
Hindi	1.2%	0.3%
Arabic	1.2%	1.5%
All Other	15.3%	8.6%

Source: ACS 2019 1-Year Estimates, California Department of Education

among kindergartners illustrates a current and growing demand for instruction in multiple languages. To ensure the success of ML programs, it is critical that both policymakers and educators fully understand the demographics of the children they serve and maintain a strong commitment to providing equitable opportunity for all, particularly as certain immigrant groups grow in population.

Since the 2014-2015 school year, California's English learner enrollment has steadily declined – so why are multilingual programs needed when the number of English learners is decreasing? This decline is in large part attributable to an increase in students reclassifying as fluent English proficient. As students achieve English proficiency and are reclassified, they no longer count as an English learner. In order to fully examine the scope of multilingual learners, it is essential to evaluate ELs and RFEPs together.

Figure 7. The population of English Learners in California K-12 public schools is decreasing due in part to the reclassification of English Learners to Fluent English Proficient
K-12 English Learner (EL) Enrollment, 2014-2021



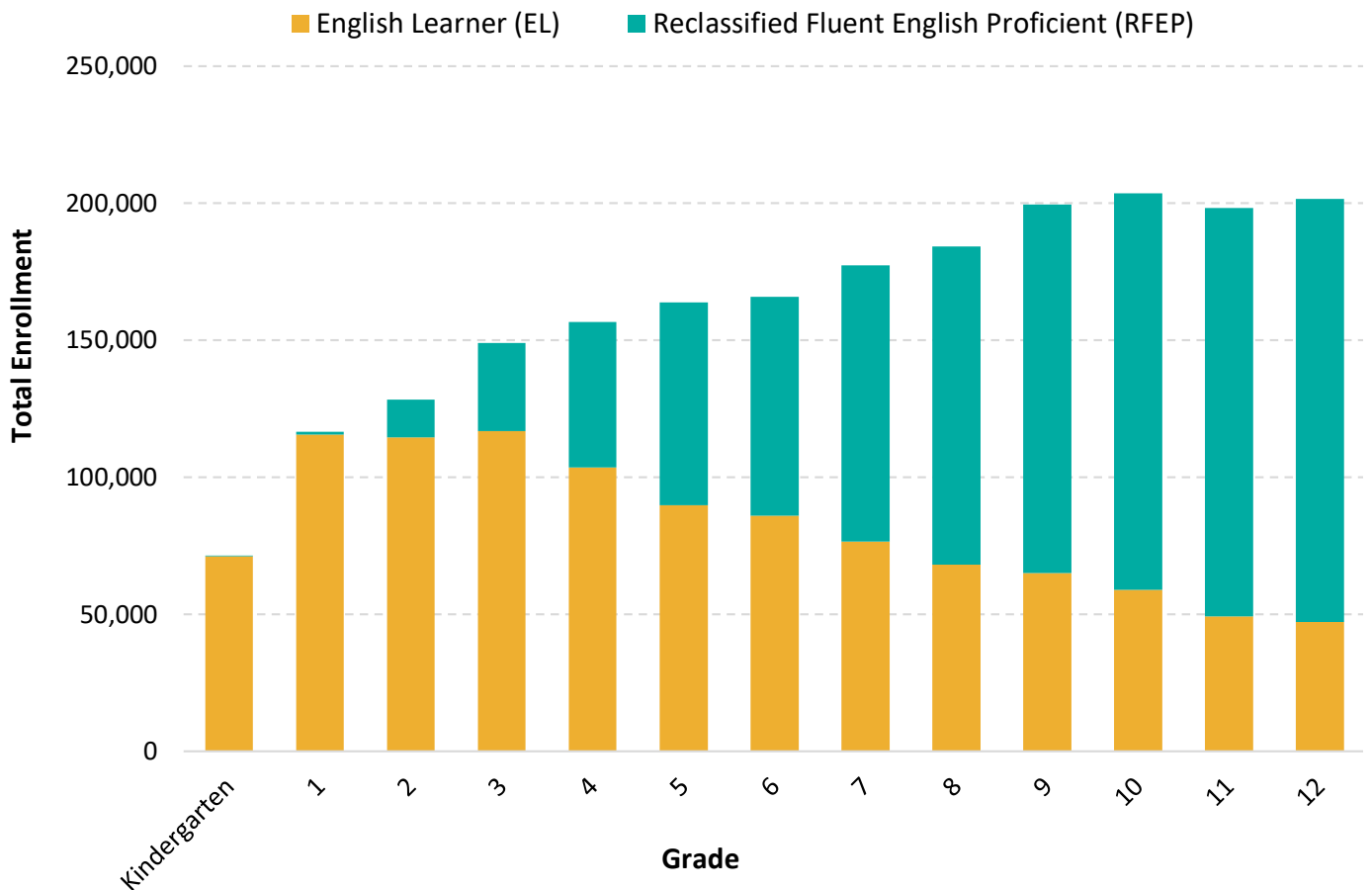
Data Source: California Department of Education
Analysis: Bay Area Council Economic Institute

Figure 8 below illustrates the decreasing ratio of English Learners to Reclassified Fluent English Proficient students from kindergarten to grade 12. This pattern demonstrates how quickly younger children are able to adopt a new language and to achieve English proficiency, and why introducing ML programs at an early age is optimal (before grade 3).

The following chapter explores California's growing need for a bilingual workforce. As many young multilingual learners age into the labor market, it is essential they are provided the skills and opportunities to utilize their multilingual skills in industries and occupations that require or desire them.

Figure 8. The increasing number of students reclassified as Fluent English Proficient indicates the success of multilingual instruction in California K-12 public education and that EL students can quickly become fluent in English.

K-12 Enrollment by English Language Acquisition Status (ELAS) and Grade, 2020-2021



Data Source: California Department of Education

A Growing Need for a Bilingual Workforce

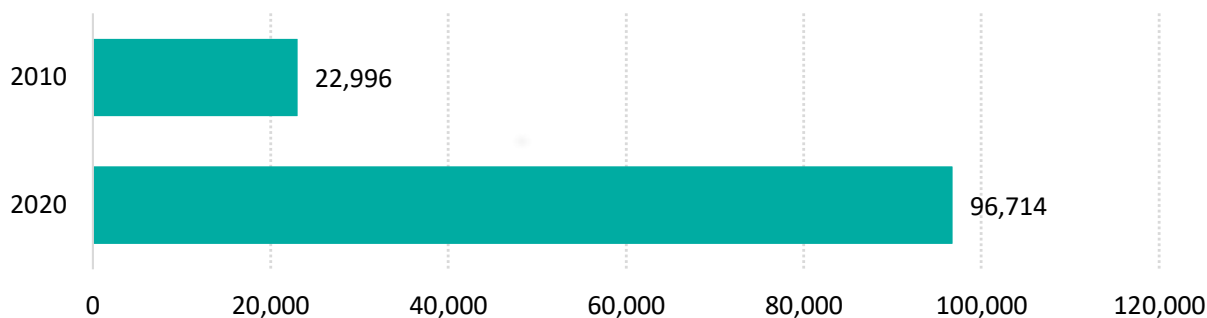
There is growing consensus amongst researchers and businesses that the labor market is increasingly globalizing – meaning a greater interdependence between economies, populations, and cultures -- and therefore demanding more employees with multilingual experience.⁴¹ In addition, the number of non-English speakers is growing: in 2018, a record 67.3 million U.S. residents spoke a language other than English at home. The number has more than doubled since 1990 and almost tripled since 1980.⁴² In California, nearly half of the state's population speaks a language other than English at home, the highest share of any state in the country.⁴³ The rising number of non-English speakers and consequently rising number of young bilingual children indicates that the future US workforce will be increasingly multilingual.

This chapter utilizes proprietary and publicly available data to understand the market for multilingual skills, how this market has changed over time, and compares the earning potential for bilingual households with high levels of English language fluency versus those that are more linguistically isolated across the state of California.

Insights from Job Postings

Once viewed as a deficiency, bilingualism is increasingly treated as an asset in the national job market. Recent studies have shown that businesses in sectors that require interpersonal skills – such as healthcare (nursing, medical assistants, mental health counselors), leisure and hospitality, and sales – prefer to hire multilingual employees.⁴⁴ Using data from Emsi Burning Glass, a

Figure 9. Job Postings Seeking Bilingual Skills in California (2010-2020)

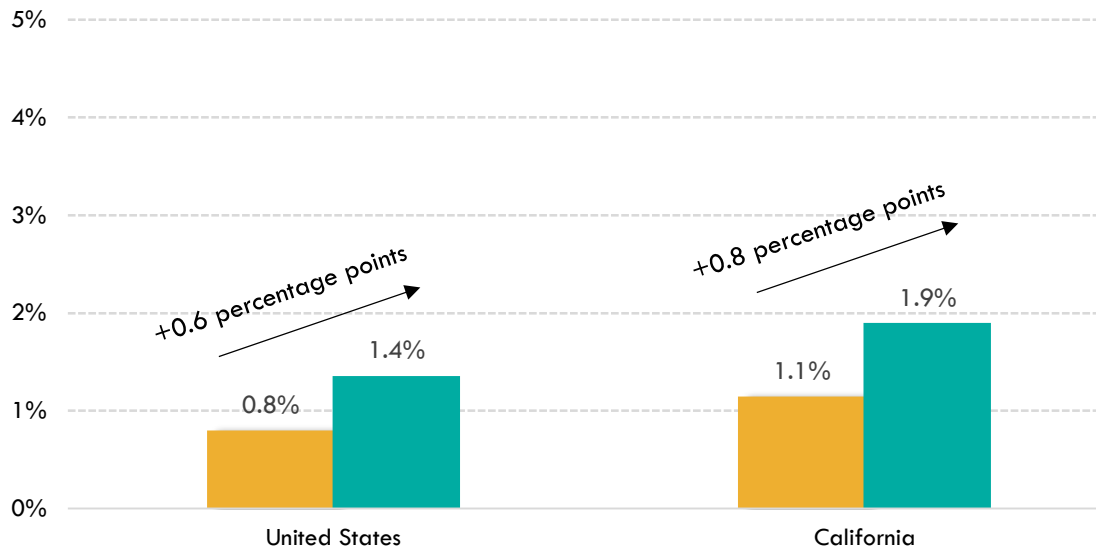


Data Source: Emsi Burning Glass **Note:** 2010 includes Jan 2010 - Jan 2012. 2020 includes Jan 2020 - Jan 2022 to maximize sample sizes. **Analysis:** Bay Area Council Economic Institute

labor market analytics tool that web scrapes millions of job postings each week, Figure 9 shows the increase of total job postings in California that requested applicants with bilingual skills from 2010 to 2020. Postings nearly quadrupled from 23,000 postings to over 96,000.

While this raw increase is important to note, it may be influenced by employers increasingly advertising jobs online, or a general increase in jobs within sectors that seek bilingual skills. For those reasons, it is critical to examine bilingual postings as a share of total job

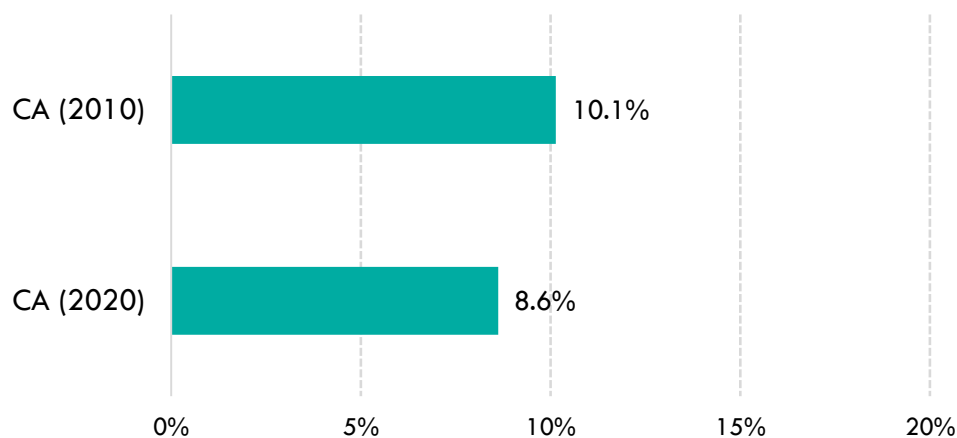
Figure 10. Bilingual Job Postings as a Share of Total Job Postings (2010-2020)



Data Source: Emsi Burning Glass

Analysis: Bay Area Council Economic Institute

Figure 11. California's Share of Total US Bilingual Job Listings (2010-2020)



Data Source: Emsi Burning Glass

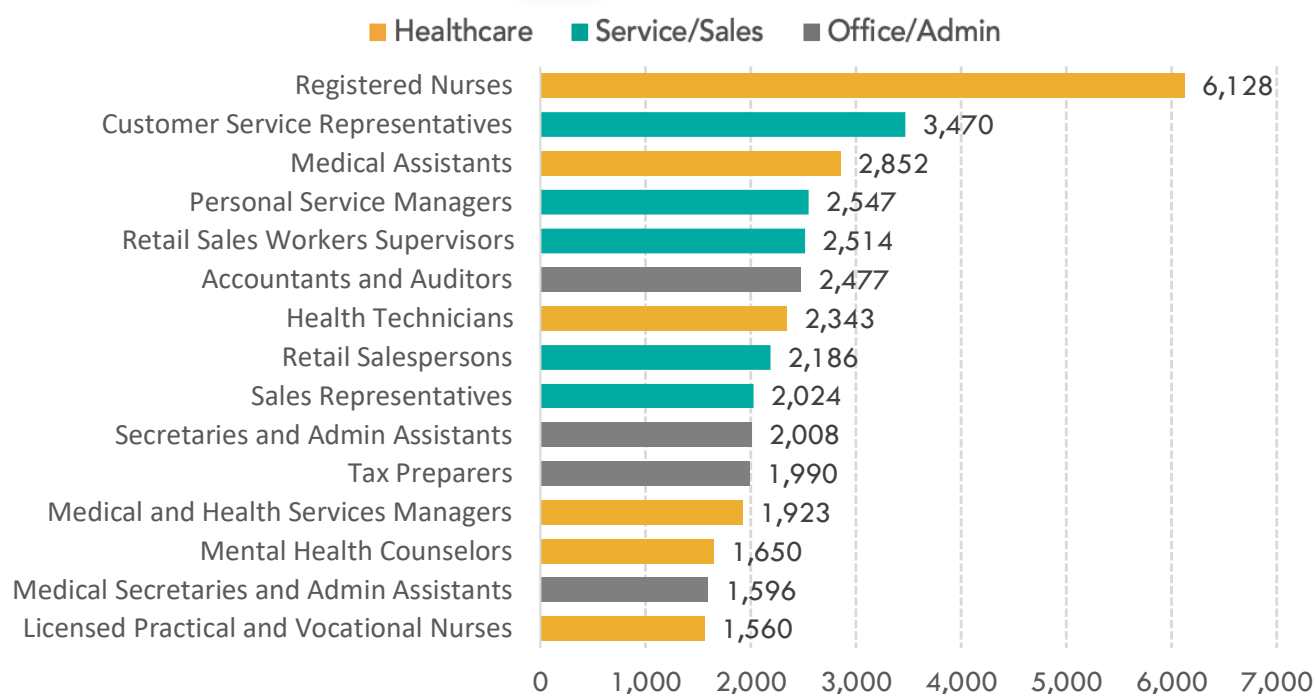
Analysis: Bay Area Council Economic Institute

postings. In 2010, 1.1% of job postings in California sought bilingual skills; in 2020, this share increased to nearly 2%, growing at a faster rate than the United States as a whole. While these numbers seem small, they reflect the growing need for a bilingual workforce, particularly in California where bilingual individuals comprise nearly half of the total population. While the share of bilingual postings grew faster in California than the nation as a whole, the concentration of bilingual job listings within California may be trending downward as bilingual listings increase across other states. In 2010, California accounted for 10.2% of all bilingual job listings across the United States. In 2020, this share decreased to 8.6%. This decrease may be attributed to other states catching up with California, following the state's lead regarding bilingualism as an asset. It may also be due to a decentralized Hispanic/Latinx population across the country. Once concentrated in a handful of states and cities, Spanish-speaking communities have seen recent growth in states with

historically small Spanish-speaking populations. California's slowing population growth may also factor into this decrease, particularly when compared to other states such as Florida, Arizona, and Texas, which have seen astronomical population growth largely attributed to their growing Hispanic/Latinx communities.

By industry, the healthcare industry dominates bilingual job postings, accounting for over 25% of total bilingual postings in California in 2020. By occupation, registered nurses account for the largest share of bilingual job postings at 13% (6,128 total postings). Registered nurses also represent one of the most abundant jobs in terms of overall postings: there were 413,293 postings for registered nurses in California from 2020 to 2022, followed by software developers at 175,002 postings. These occupational trends indicate a need for bilingual programs targeted at the healthcare sector, given its higher pay than the service or retail sectors and overall abundance in the current job market.

Figure 12. Top Occupations Requesting Bilingual Skills by Number of Postings (2020)



Data Source: Emsi Burning Glass

Analysis: Bay Area Council Economic Institute

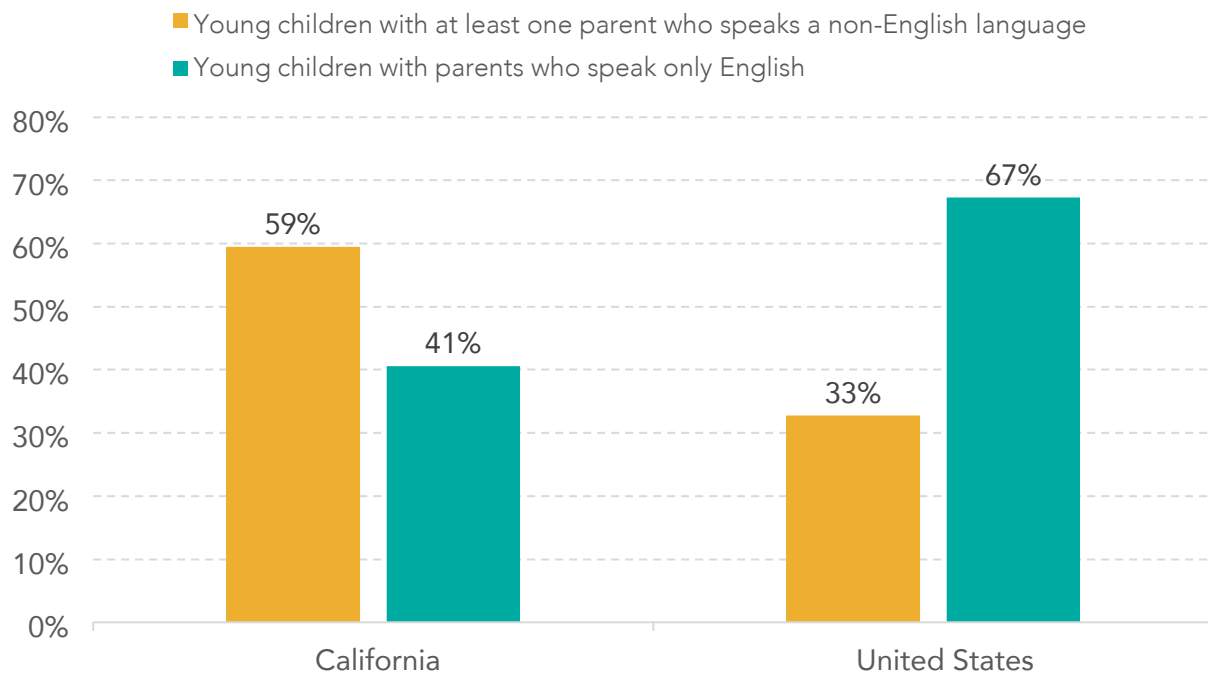
Many industry sectors and businesses are creating more and more job opportunities for bilingual individuals. What was once viewed as a deficiency is now seen as an incredible asset for interpersonal sectors engaging with local communities of non-English speakers, as well as businesses looking to interact with the global marketplace. Bilingual listings are not only keeping up with the growth rate of job postings overall but are exceeding them, and this trend is occurring on both a national and statewide level. These data over a 10-year span reflect a cultural shift regarding bilingualism and a growth in opportunity for bilingual individuals across California.

The Earning Potential of Bilingual Households

Multilingual children represent 40% of California's public-school enrollment, and among the youngest generation of children, they represent nearly 60%.⁴⁵ As Figure 13 below shows, California is unique in its share of multilingual children. Nearly 60% of young children in California live in a multilingual household, versus 33% nationwide, a gap of over 25%. It is critical that these children statewide are given the tools and resources to realize their earning potential as they age and enter the labor market.

Figure 13. In California, children under the age of 5 with parents who speak at least one language other than English comprise nearly 60% of young children, versus 33% nationwide.

Young Children by Parents' English-Speaking Proficiency in California and the US, 2019

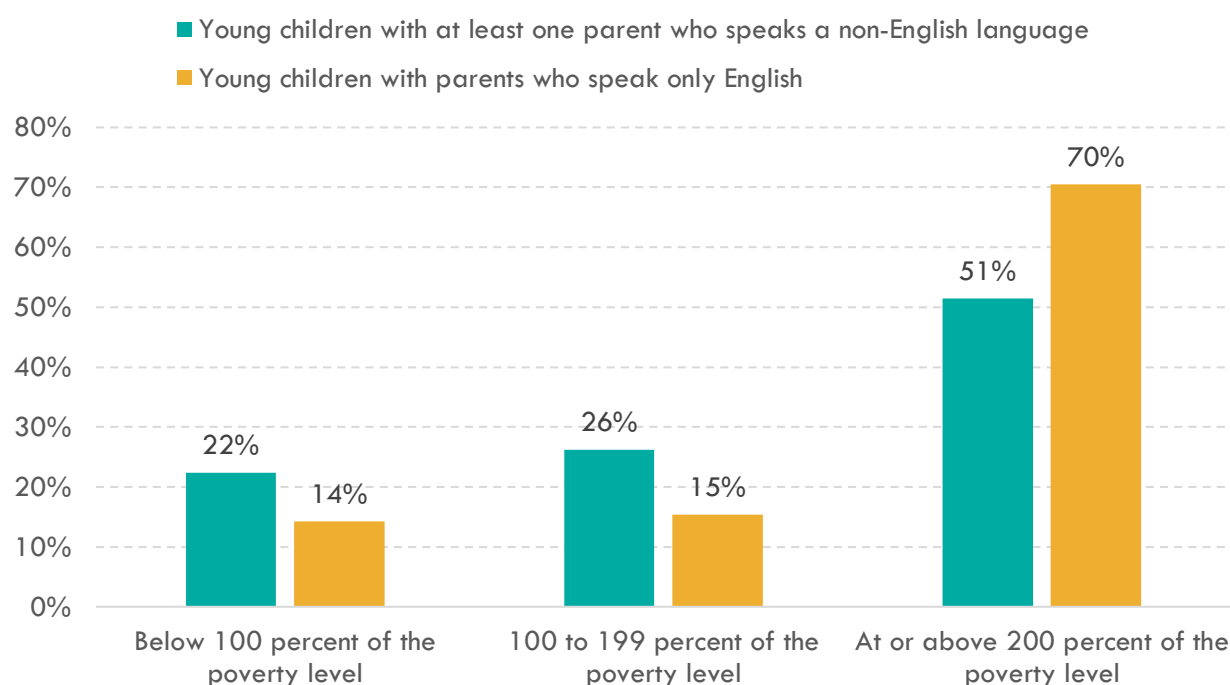


Source: Migration Policy Institute, National Center on Immigrant Integration Policy

Analysis: Bay Area Council Economic Institute

Figure 14. Children under the age of 5 with parents who speak at least one language other than English are 1.6x more likely to live under the poverty level.

Young Children by Poverty Level and Parents' English-Speaking Proficiency in California, 2019



Source: Migration Policy Institute, National Center on Immigrant Integration Policy. **Analysis:** Bay Area Council Economic Institute

As illustrated in Chapter 2, multilingual children from low-income families perform better on a number of verbal and nonverbal tasks than their single-language counterparts, underscoring the value of investing in multilingual childhood education to raise children's lifetime income profiles.⁴⁶ However, when comparing poverty rates of the children of multilingual households to children in English-only-speaking households, there is a substantial discrepancy. Children under the age of five with parents who speak at least one language other than English are 1.6 times more likely to live under the poverty level. These gaps point to the need for ML educational programs and curriculum catered to both English-speaking children and multilingual children.

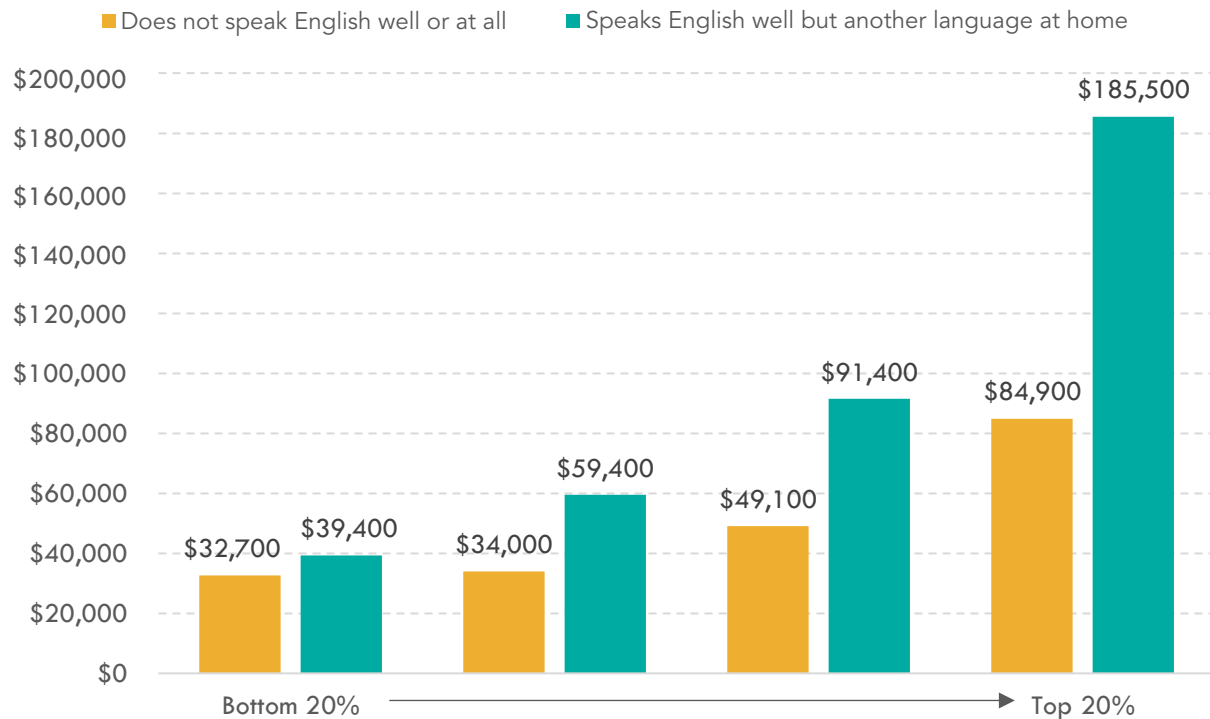
Multilingual children are also twice as likely to lack access to a computer than children with parents who speak only English. For children in low-income families,

this likelihood increases dramatically. The COVID-19 pandemic caused a mass disruption in our education system. School closures caused children to shift to a hybrid or fully-remote style of learning, relying on consistent access to a computer and broadband internet. For multilingual programs to be effective, equal access to modern technology is essential.

While we cannot quantify the difference in incomes of adults who participated in different language immersion programs as children, the following figures illustrate differences in income between linguistically isolated households, and households that speak English as well as another language at home.

Figure 15. As households move up the earning spectrum, disparities widen between those with and without English fluency, with median wages for bilingual speakers over 2x that of their non-English speaking counterparts.

Median Household Incomes by Earning Quartile and English-Speaking Proficiency in California, 2019



Source: ACS 2019 1-Year Estimates. Note: Includes working aged population only (16-65).

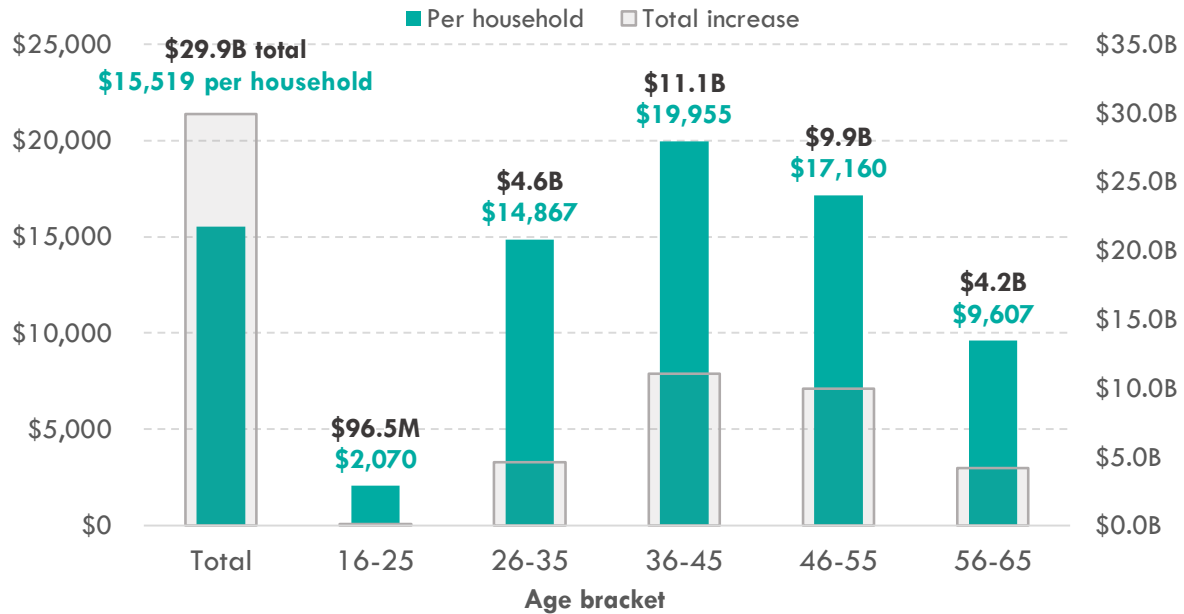
Analysis: Bay Area Council Economic Institute

Figure 15 illustrates median household incomes by earning quartile and English-speaking proficiency. For the bottom 20% of earners, median earnings are mostly comparable between households that do not speak English, and households that speak English well or fluently but another language at home. As households move up the earning spectrum, however,

disparities widen between linguistically isolated and non-linguistically isolated households, with a pay gap of over \$100,000 for the top 20% of earners. This gap represents a rough estimate of a multilingual learner's earning potential when given the opportunity to reach English fluency, as well as maintain speaking a non-English home language.

Figure 16. Non-English speaking households would collectively earn \$30 billion more, or \$15,519 more per household if they earned as much as their bilingual counterparts.

Total and Per Household Annual Increase in Wages if Wage Parity Existed Between Linguistically Isolated Households and Bilingual Households in California, 2019



Source: ACS 2019 1-Year Estimates

Note: Includes working aged population only (16-65). Incomes reflect household incomes.

Analysis: Bay Area Council Economic Institute

If non-English speaking households earned the same income as bilingual households in California, **they would collectively earn \$30 billion more annually, or \$15,519 more per household**, as highlighted in Figure 16. This analysis controls for age and educational attainment to compare analogous groups: for example, how much more do bilingual 26-35 year olds with Bachelor's degrees earn than non-English speakers in the same age and educational bracket?

This increase in income could afford a family one or multiple of the following living expenses in California:⁴⁷

- A year of childcare (\$11,400 for one child, or \$11,500 for a partial year of childcare for adults with 2-3 children)
- A year of transportation expenses (\$8,700, or \$11,400 to \$14,600 for adults with children)
- A year of groceries based on the USDA's low-cost food plan (\$7,332, or \$9,100 to \$14,300 for adults with 1-3 children)
- A year of medical expenses (\$5,700 or approximately \$7,400 for adults with children)



5

Conclusion

For California to thrive into the future, multilingual learning must be cultivated as an asset that will create opportunity for the next generation and fuel the state economy. California is home to nearly a quarter of the nation's foreign-born population, and multilingual children represent 40% of the state's public-school enrollment, a number that is even larger among the state's youngest children. The most effective way to ensure success of these students is for the state to support multilingual programs, which help our students reach their full potential and families attain greater economic mobility.

Once viewed as a deficiency, bilingualism is increasingly treated as an asset in the national job market. Many businesses across different industry sectors now prefer to hire multilingual employees. From 2010 to 2020, job postings in California requesting applicants with bilingual skills nearly quadrupled, with bilingual postings as a share of total postings increasing nearly 2%, a faster rate than the United States as a whole. The value of investing in multilingual early childhood education to increase lifetime earning potential is also clear: as

households move up the earning spectrum, median earnings for bilingual households are \$100,000 higher than households that do not speak English. This gap represents a rough estimate of a multilingual learner's earning potential when given the opportunity to reach English fluency, as well as maintain speaking a non-English home language.

California has the unique opportunity to foster early language skills in its 2.4 million multilingual children by implementing more multilingual programs across the state. Critics cite early evidence of multilingual instruction as detrimental to academic success, but as this study has shown, there is increasing evidence that these essential programs do not come at the cost of academic performance in other subjects. Multilingual instruction allows students to celebrate their home language while achieving English proficiency, ideally at a young age. This principal benefit is lacking in traditional bilingual programs, which prevents true multilingualism, a skill increasingly in demand across multiple industry sectors and regions.

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