World Language Task Force Summative Report

Table of Contents

1. Introduction
2. Current DJUSD Programs
3. State of California Language Initiatives
4. Overview of World Language Task Force Process and Action Team
5. DJUSD Staff Action Items
6. Appendices
    - Executive Summary of Appendices
    - Appendix A - WLTF Member Biographies
    - Appendix B - WLTF Project Schedule
    - Appendix C - WLTF Meeting Norms
    - Appendix D - WLTF Meeting Dates
    - Appendix E - WLTF Meeting Minutes/Attendance
    - Appendix F - WLTF Tuning/Feedback Tool - Final Presentations
    - Appendix G - DJUSD Instructional Services Coherence Map (Vision, Mission and Goals)
    - Appendix H - WLTF Data Requests and Provided Data
    - Appendix I - Davis Joint USD - Board Policy 6146.1- Instruction - High School Graduation Requirements
    - Appendix J - Action Research Team 1 - World Language Task Force Committee Focused on Current District Policies/ Programs
    - Appendix K - Action Research Team 2 - World Language Task Force Committee Focused on Barriers to World Language Access
    - Appendix L - Action Research Team 3 - World Language Task Force Committee Focused on Elementary Dual Language Program Expansion
    - Appendix M - World Language Task Force Survey/Results
    - Appendix N - Current DJUSD World Language Enrollment
    - Appendix O - Teacher Shortages in California: Status, Sources, and Potential Solutions (Getting Down To Facts II 2018)
    - Appendix P - Teacher Staffing Challenges in California: Exploring the Factors that Influence teacher Staffing and Distribution (Getting Down To Facts II 2018)
    - Appendix Q - California English Learner Roadmap Strengthening Comprehensive Educational Policies, Programs and Practices for English Learners (California Department of Education 2018)
    - Appendix R - Global California 2030: Speak, Learn, Lead- An initiative of the State Superintendent of Public Instruction Tom Torlakson (California Department of Education 2018)

I. Introduction

On October 5, 2017, the Davis Joint Unified School District (DJUSD) Board passed a motion that provided direction for staff to create a World Language Task Force, which was tasked with examining the following:

- Current barriers to student participation
- Current funding support, predicted funding support needed for committee-proposed options, future funding opportunities and cost-neutral opportunities
- Additional immersion opportunities
- Potential collaboration with community groups, local community colleges, and UCD
- The District's existing program in light of high school graduation requirements along with University of California and California State University language requirements
- Innovative programs offered by other school districts

The World Language Task Force (WLTF) was comprised of community members, parents and educators. The team met eight times from January 2018 to September 2018. The Task Force work was led by Ricardo Perez, Director of English Learner, Immersion and World Language Programs. Meetings were facilitated by Troy Allen, Director of Secondary Education and Leadership.

World Language Task Force Members (in alphabetical order)

Agustin Antuňez, Parent Melanie Barbier, Parent Heather Bock, Parent Sharon Davies, Teacher Mele Echiburu, Teacher Michael Hallinan, Parent Lang Hoch, Parent Sharon Knox, Parent Tanya Lieberman, Parent Lianwu Liu, Parent Elaje Lopez, Student	Naoko McHale, Teacher Patricia Mueller-Moule, Parent Chian Ohler, Parent Christine Oyakawa , Community Member Kim Sellon, Community Member Joyce Tamanaha-Ho, Parent Izabella Terry, Student Marina Valle Perez, Parent Bin Wang, Teacher Stacey Williams, Parent

* Member Biographies (Appendix A)

We are thankful for the investment of time, insights, and shared learning the World Language Task Force brought to the Instructional Services Team. The report contains the meeting information, research, data, and thinking the group used for recommendations by Action Teams (see associated appendices). The Task Force work has informed the staff recommendations contained herein.

II. State of California Language Initiatives

At the same time that the World Language Task Force has been working to explore World Language-related programming, the State of California continues to lead the way for our nation in multicultural and multilingual education. Upcoming World Language statewide initiatives include:

Frameworks and Curriculum

The California Department of Education (CDE) is developing the World Languages Framework for California Public Schools, Kindergarten Through Grade Twelve (*WL Framework*) to incorporate and support the 2019 WL Standards, which are currently under revision. Please note that the 2003 Foreign Language Framework is no longer current. It does not reflect the World Language Content Standards adopted by the State Board of Education in January 2009. The California State Board of Education anticipates taking action on new frameworks in May of 2020 and adoption of materials in Spring of 2021. There are exciting changes on the near horizon related to World Language frameworks and curriculum, however state or local resources have not yet been identified to meet this emergent opportunity.

California Education For Global Economy Initiative (CA Ed.G.E.)

The CA Ed.G.E. initiative allows school districts and county offices of education to establish language acquisition programs that equip students with world language skills that prepare them to excel in a global economy, engage and appreciate diverse cultures, heritages and languages representative of California's rich diversity. We note that the California Education For Global Economy Initiative (CA Ed.G.E.) and Global California 2030: Speak, Learn, Lead, and the California English Learner Roadmap are aspirational plans.

The California Department of Education created these initiatives to ensure that students within our state not only master the English language, but have access to high-quality, innovative language programs, are prepared for our global economy and are valued for the linguistic and cultural characteristics they bring. While California is a national leader of language initiatives, DJUSD has been recognized as a statewide leader for its language programs. These programs include model Spanish Immersion Programs at César Chávez Elementary and Emerson Junior High, a Two-Way Bilingual Immersion at Marguerite Montgomery Elementary, and extensive language offerings at the secondary level.

The directional documents from our state leadership ask that school districts design program and instruction in accordance to the values reflected in these initiatives. The initiatives provide a backdrop that was shared with the WLTF and inform the final actions from the Instructional Services Team. We note that these initiatives provide guidance and signal that we must invest in systematic reflection and explore innovation within our World Language programming.

III. Current DJUSD World Language Programs

As part of the Task Force's work, staff provided an overview of the DJUSD World Language program offerings. These offerings span a wide breadth of languages with entry points into those languages at several developmental levels. Five languages[1] are taught in our Junior High and Senior High School programs. Two elementary Immersion programs allow students to enter World Language programming in kindergarten through the DJUSD Spanish Immersion (grades K-6) at César Chávez Elementary School and the Two-Way Bilingual Immersion program (grades K-6) at Marguerite Montgomery Elementary School. These Immersion programs also feed to a Junior High Spanish Immersion program (grades 7-8) at Emerson Junior High.

DJUSD has been celebrated for innovative programming and instruction by the California Department of Education and the Sacramento County Office of Education where staff gave a presentation about the

[1] German will be phased out of DJUSD World Language Programming by 2019.

District's innovative and best practices at the conference titled, *California English Learner Roadmap: Launching the Roadmap to Strengthen Educational Policies, Programs, and Practices for English Learners*. Furthermore, the Two-Way Bilingual Immersion program at Marguerite Montgomery Elementary and Spanish Immersion program at César Chávez Elementary and Emerson Junior High are held in high regard and neighboring districts frequently tour the programs, requesting access to our teachers and leadership for guidance.

DJUSD and World Language enrollment has remained stable and predictable over the past ten years. Over half of all DJUSD secondary students and approximately one quarter of elementary students participate in a World Language course or program annually. Students choose Spanish courses at significantly higher rates than all other offerings. Enrollment in all language courses follows a predictable enrollment pattern, with variation often driven by staffing-related considerations.

DJUSD does not have high school graduation requirements that necessitate participation in a World Language course. However, the University of California (UC) and California State University (CSU) system have a minimum requirement of two years (UC recommends three years) of successful completion of the same World Language. It is possible to fulfill this requirement in the ninth grade with successful completion of the third year in the sequence (this includes our approved Spanish Intermediate 1 Honors (ACTFL 45) and Spanish Intermediate 2 Honors (ACTFL 55) Immersion courses), as this validates the prior years' learning and competency.

World Language Teachers have limited opportunities to collaborate, develop articulation paths between programs, coordinate learning activities, or participate in language-specific professional learning communities.

IV. Overview of World Language Task Force Process and Action Team

Process and Report

The World Language Task Force primarily focused on items related the Board of Education direction, which included the following focus areas:

- Current barriers to student participation
- Current funding support, predicted funding support needed for committee-proposed options, future funding opportunities and cost-neutral opportunities
- Additional immersion opportunities
- Potential collaboration with community groups, local community colleges, and UCD
- The District's existing program in light of high school graduation requirement along with University of California and California State University language requirements
- Innovative programs offered by other school districts

Staff created a meeting format that allowed members to engage in an inquiry process to deeply understand the focus areas and provided valued discussion, feedback and recommendations to staff. Staff conveyed to the Task Force that the project schedule (Appendix B), research and data (Appendix H), meeting information (Appendix D and E) and all recommendations would be represented to our Trustees through the report. Additionally, staff conveyed that the Instructional Services Team would review, with more depth, the same considerations provided to the Task Force (e.g., feasibility based on staffing, resources, fiscal impact to include opportunity costs, facilities, structures, DJUSD vision, mission, and

goal alignment, as well as the research) and ultimately decide on a course of action.

Inquiry Phase
The WLTF began their work by understanding and unpacking the DJUSD Board motion. All members generated, through dialogue and protocols, lists of what it is they would need to know, research, see, or learn in order to answer these questions:

1. How can we identify barriers to the ideal World Language Program and how might we negotiate barriers in the best interest of World Language instruction?
2. How can we, as a District, explore other immersion models and opportunities to better understand assets and challenges?
3. How can we better understand our current District programs, as well as explore future opportunities and practices outside of Davis?
4. How can we better understand current funding and resources?
5. How can we identify future opportunities and resources, including potential partners (UC Davis, Sac. City, etc.)?

Action Research Phase
Staff invited WLTF members to self-select into subgroups (derived from the Board motion) based upon their interest. From this process the following three collaborative Action Research Teams emerged:

- Exploration of Current District Programs,
- Barriers to Current World Language Programs Success/Sustainability/Growth, and
- Potential Immersion Opportunities.

Staff emphasized the importance of curiosity over advocacy in this initial phase, and DJUSD staff supported working groups as they framed questions and needed answers, data (see Appendix H), and access to staff or community members. District leadership provided workshops as needed, answered questions between meetings, made sure data requests were expedited, and met with members outside of meeting dates. From January through September 2018, each meeting was facilitated to best answer questions generated by the working group. The working groups used a facilitator-created tuning tool (rubric) (Appendix F) to give and receive feedback on their ideas throughout the process. Most groups were also informed by their own networks of experts, researching other districts and holding discussions outside of scheduled WLTF meeting times.

Recommendations Development and Vetting
In the Spring of 2018 each group presented their initial recommendations to the larger Task Force for feedback and guidance. The larger team used the tuning tool and a Critical Friends protocol to identify strengths as well as emerging or underdeveloped aspects of each recommendation. Feedback regarding the viability, appropriateness, and sustainability of each recommendation was given based on the following considerations:

- Staffing and resources
- Fiscal impact
- Facilities and Structures
- DJUSD Vision, Mission, and Goal alignment
- Research and Support

As an example, while a recommendation may be grounded in research and innovation, the fiscal impact or issue of staffing and credentialing may be underdeveloped. This feedback was used by each group to

guide their work as they went back into the inquiry, research, revision, and planning stages. We also noted areas of overlap in WLTF member recommendations. In some cases this caused Action Team members to change and/or combine groups. In other cases this allowed for a sharing of resources. It became clear that some Action Teams were surfacing similar recommendations and needs.

On September 27, 2018 the WLTF met for the last time in order for Action Teams to present their final recommendations. Action Teams fielded questions after their presentation and the whole WLTF discussed recommendations and the impact of each Action Team suggestion. The three Action Teams shared up to three recommendations each, which included their rationale and presentation materials, prior to the meeting so that all participants could review with time and attention to detail in anticipation of the final WLTF meeting. Task Force members participated in a survey (Poll Everywhere, attached after each group recommendation (Appendices J-L) to independently indicate their thoughts about each recommendation.

It should be noted that while 20 members began this process, by September of 2018, ten members were in attendance for the final presentation, discussion, and dialogue. Of those ten, eight were present for all meetings.

V. Instructional Services Current and Future Actions

The Instructional Services Team and Superintendent have carefully reviewed each of the WLTF recommendations, conducted additional analysis and are committed to the following actions regarding DJUSD World Language programs.

Action Item 1 (In-progress): World Language Teacher Working Group

Teachers are at the heart of the World Language program, and it is essential to expand opportunities for them to discuss the evolution of the program, anticipate the new frameworks and standards, collaborate together and implement high quality professional development. Prior to 2017, there was not an effective articulation mechanism for World Language program coherence, discourse, or planning from the District level to the site level. Now, with the creation of a new Director of English Learners, Immersion and World Language Programs position and the foundational work begun by the World Language Task Force, we have a direction and individual to lead this important work. To further this effort, the Instructional Services Team will form a World Language Teacher Working Group. This group will facilitate collaboration among teachers, site leadership and the District in articulation of language programming. Instructional Services has had success in similar working groups such as our DJUSD Librarians and English Learner Specialists. It is our intention to raise up teacher voice, insight, expertise, and experience in order to make decisions with those most directly responsible for instruction. Specifically this World Language Teacher Working Group will immediately engage in discussions regarding the implementation of Heritage classes, placement processes, professional development, and educational information regarding the World Language options in Junior High and Senior High School.

Action Item 2 (In-progress): Conduct an In-depth Analysis of A-G Course Access and Eligibility

The Instructional Services Team has begun an in-depth course analysis (through root cause analysis strategies) to investigate the disparity between students who enroll in World Language courses and who

are meeting the University of California or California State University A-G eligibility requirements and those who do not. The World Language Task Force reviewed data which suggests that student access to World Language courses, completion of at least two years of World Language coursework and meeting the math eligibility requirements is an indicator for college readiness. The data the WLTF reviewed demonstrated a disparity in does and does not meet the A-G eligibility requirements in DJUSD by subgroup.

Action Item 3 (Future): Elementary Enrichment: World Languages and Cultures

The DJUSD Instructional Services team believes our elementary students, staff, and communities would benefit from increasing World Languages and culture enrichment opportunities at the elementary school level. There is a body of evidence that supports early and low-stakes exposure to language and culture to include higher levels of proficiency in the target languages, development of native or near-native pronunciation and intonation, strengthening of literacy in students' first language, higher standardized test scores in other subject areas (including English language arts, mathematics, science, and social studies), and more comfort with cultural differences.

DJUSD is fortunate to be surrounded by community, parent, and business partners with the expertise and a desire to support student learning, inclusive of exposure to World Languages. Our Graduate Profile competency of *Civic and Cultural Awareness* was developed in consultation with our larger community.

The Instructional Services Team is currently exploring who could coordinate these enrichment activities and will be discussing this item in more depth with the newly formed World Language Teacher Working Group, in collaboration with sites and Principals. We hope to have small scale enrichment pilots on-line by fall of 2019.

Action Item 4 (In-progress): Pathways for Immersion and Heritage Speakers at Harper Junior High

In an analysis of enrollment and a program review, we believe it is in the best interest of students, staff, and program to create and sustain a pathway for our current Spanish immersion students, future Two-Way Bilingual (TWBI) and Heritage speakers at Harper Junior High. Currently, Harper Junior High hosts students who have graduated from the Marguerite Montgomery Spanish Immersion Program. As a result of seven years of instruction in Spanish, our students enter Harper Junior High with a different skill set and experience than peers from the other feeder schools. Additionally, Harper Junior High hosts a larger population of Heritage speakers than other Junior High sites.

In an effort to address this pathway, MME alumni were allowed to enroll in Spanish 3 along with Heritage speakers for the 2018-19 school year. Because of the gradual expansion of the TWBI program at MME, we anticipate that the number of students looking for the immersion pathway will grow and level off at approximately 70 students in the year 2020-21. After consultation with teachers from Harper Junior High School, in addition to teaching staff who served on the WLTF, and through a review of research, we know that students who are in their third year of language acquisition have very divergent instructional needs than Heritage speakers or TWBI students. We also note that a pathway specifically for TWBI and Heritage speakers is a mechanism that would assign value and respect to the culture and skills students bring. It is important to note that we are not recommending replicating the model at Emerson Junior High School where a second class is taught in Spanish (Emerson Junior High Immersion includes Social Studies taught in Spanish). It was determined, by examining programs already in place at Harper JHS,

enrollment numbers, and staffing implications, that teaching two Immersion courses per grade level would very likely create a staffing dilemma as well as replicate the "tracking" construct that was deliberately interrupted at MME in 2018.

Action Item 5 (In-progress): Explore Opportunities for Innovation through Blended Learning

It is appropriate to consider digital options and innovation to encourage access to language courses and potentially alleviate challenges that come with scheduling courses at a specific site and at a specific time. We envision a learning process wherein students and teachers have a language lab, where they are able to listen and engage with text and other students/staff independently and through an online platform. We also believe, and this was reiterated by World Language teachers during discussion and WLTF work, that high-quality instruction includes the social exchange and application of a language so that fluency includes expression, feedback, listening to respond, reading and writing. Blended learning options may allow for more deliberate and targeted differentiation in combination classes (like language levels 3 and 4 combined in one classroom) as well as a helpful approach for practice and exposure outside of the classroom.

Currently in DJUSD, the Davis School for Independent Study (DSIS) offers an approved A-G pathway for students, but does not have a World Language offering. They have revised each course of study to be "blended" so that teaching staff utilize a hybrid of online materials (including video) and instructional time for feedback, dialogue, peer-to-peer collaboration, and teacher response to formative assessments (both in class and what is learned from digital assessments). DSIS Principal Kinder has had experience successfully implementing a blended World Language course in the past and our Instructional Services Team will explore that process and format further at DSIS.

VI. Executive Summary of Appendices

This report represents the research and work of the Davis Joint Unified School District World Language Task Force. The World Language Task Force was comprised of District teachers, students, parents, community members and Instructional Services Team. The resources and documents included were either documents created by the team or resources they utilized to inform their thinking and ultimately develop their final recommendations to Instructional Services.

Appendix A

World Language Task Force Members Biographies

World Language Task Force Members (in alphabetical order)

Agustin Antuñez is a parent of a student at César Chávez Elementary School. As a parent advocate he is a proponent of multilingualism and seeking adequate educational resources for our students and staff particularly for people with economic and/or educational disadvantage. His background is in economics, public policy and business.

Melanie Barbier is a parent of two students in Marguerite Montgomery's TWBI program (grades K and six). Her household is multilingual, speaking French in the home. Melanie has served as past Site Council president at MME. She is a world language educator in higher education who enjoys research and data-driven learning. Her passion is education and believes that a collaborative community can bring about social justice and close the achievement gap.

Heather Bock has worked as a professional freelance translator of German and English for more than 25 years. She offers perspective in how language learning provides students with insights into other cultures and countries as well as into their own. She is a parent of two daughters who have grown up in DJUSD schools, and her younger daughter is currently a senior at DHS.

Sharon Davies is a Spanish Immersion teacher within DJUSD, having taught 18 years at César Chávez Elementary and three years at Emerson Junior High. She is currently participating in a collaboration grant involving observation of colleagues for professional learning. She contributes her expertise as an educator to the committee.

Mele Echiburu is Spanish Immersion teacher at Emerson, offering 24 years of experience and familiarity with different types of programs including Dual Immersion, One-way Immersions, and traditional Spanish classes. She offers expertise in language acquisition, and an understanding of the needs of Heritage Spanish speakers for biliteracy and equitable achievement.

Michael Hallinan is a parent of two elementary students in the Davis. He is an executive in the banking industry offering an analytical and project management perspective. Prior to his participation on the committee, he shared an opinion paper on language education in Davis schools with our community.

Lang Hoch is a parent in the district with two sixth graders at North Davis and one student at Davis Senior High School. She offers her perspective from her own experience as a multi-lingual of Mandarin, Cantonese and Chinese. She also brings professional experience as a bilingual teacher of Mandarin to students kindergarten through eighth grade.

Sharon Knox is a parent of two students including a graduate from DHS and a high school student at Da Vinci. Sharon is the Director of Communications at UCD's Office of Undergraduate Education. She believes that learning another language is an essential component of education and attests to the transformative experience of language learning for her family. Through her role as Director of Communications at UCD she hopes to foster a collaborative relationship between UC Davis and DJUSD.

Tanya Lieberman is the Deputy Chief Consultant of the Assembly Education Committee, the Education Policy Committee of one of the houses of the state legislature. In this role she advises Assembly Members who serve on this Committee on policy issues related to curriculum and instruction (including World Languages), graduation requirements, English learners, and special education. She is the parent of two students, one at Cesar Chavez Elementary and one at Emerson Junior High.

Lianwu Liu is a parent of a child at North Davis Elementary. He volunteers at his child's school to support new students from China adjust to their new environment. He is interested in the District's support of multilingualism.

Elaje Lopez is a student of DJUSD who has participated in the Teach Another Language to Kids (T.A.L.K.) language program and World Language programs in middle school. Elaje shares both a personal perspective and the perspective of classmates and friends participating in various language programs within the district.

Naoko McHale is a World Language teacher at Davis Senior High School, teaching Japanese and brings her vast teaching experience and knowledge to the group on eliminating current barriers to world language programming.

Patricia Mueller-Moule is a parent of a first grader in the Montessori program at Birch Lane and a seventh grader at Holmes and a seventh grader at Emerson. She has participated in the LCAP for four years and is currently on the SACSE committee. She offers her perspective having grown up learning multiple languages in schools in Germany.

Chian Ohler is a parent of two students in DJUSD, a ninth grader and a fifth grader. She has personal experience learning English as a second language, and wishes to contribute to the group by drawing upon her experience. She is a practicing attorney in the United States. She believes that a World Language education enriches children in many ways and wants to continue to advocate for the importance of our world language programs.

Christine Oyakawa is board president of T.A.L.K., Teach Another Language to Kids, a parent-run program offering second language classes for children at the Davis Arts Center and six elementary schools in Davis. A former attorney, she is active in our local Deaf community and previously with the Davis Korean Cultural Society. She is the parent of two students, one at Holmes Jr. High and one in the Yolo County Office of Education Deaf and Hard of Hearing program.

Kim Sellon teaches English as an additional language in a local business, "A-leg-up." She calls for multicultural biliteracies as a foundation for world peace.

Joyce Tamanaha-Ho is a parent of two children attending DJUSD schools. She contributes her expertise as an educator. Her background includes teaching English and Journalism, working with teachers as a Literacy Coach, and working with students learning English as an English Language Development (ELD) Instructional Specialist.

Izabella Terry is a fifth year Da Vinci student. She values learning multiple languages, cultures, and affecting real change for equal opportunity.

Marina Valle Perez is a parent of three students enrolled in DJUSD; a seventh grader, fifth grader and third grader. All three of her children have attended the Two-Way Bilingual Immersion program at Montgomery Elementary. Marina is a strong supporter of continuing Immersion opportunities for children through secondary level, especially building pedagogically responsive programs for Heritage speakers.

Bin Wang is a World Language teacher, teaching Chinese at the secondary level and offers her perspective that language learning broadens students' understandings of diversity and multiculturalism.

Stacey Williams has been a teacher of English as an additional language for 25 years. She is also a parent of two student graduates from the Cesár Chávez Spanish Immersion program. She offers perspective in how bilingual learning can be transformative in students' personal growth, and their potential to contribute to others' needs and the world at large.

Appendix B

World Language Task Force Projected Schedule

World Language Task Force Project Schedule

DJUSD
DAVIS JOINT UNIFIED SCHOOL DISTRICT

December 2017	January 2018	February 2018
• Application made available to the public • December 15th – Applications reviewed and Task Force members selected	• Initial planning meeting • Team building • Generate norms and team work agreements • Review Board motion for creation of plan and alignment of work • Create Action Teams based on board motion inquiry questions	• Create inquiry plans • Create and delegate tasks • Data requests • Research
March 2018	**April 2018**	**May 2018**
• Status Check • Action Teams begin to author findings	• Status and time check • Action Teams author findings	• Action Teams present findings to Task Force members • Task Force members give critical feedback & questions • Seek answers to questions for next meetings
June 2018	**July 2018**	**August 2018**
• Synthesize feedback and delegate tasks • Research and revisions	• No meetings	• Status check-in
September 2018	**October 2018**	**Notes**
• Final presentations (Tuning Tool) for Instructional staff in preparation of Board presentation and recommendations	• Board Presentation October (2nd Board meeting of the month)	• Not advocacy

Appendix C

World Language Task Force Meeting Norms

World Language Task Force Meeting Norms

- Equally share ideas and time
- Everyone contributes (experience, knowledge, etc.)
- Practice constructivist listening
- Respectful and civil
- Solution-oriented
- Open-minded
- Think of as the District as a whole
- Be realistic and practical (budget filter)
- Mindful and growth mindset
- Speak with heart and listen with heart
- Stick to agenda and schedule
- No interrupting
- Snap for agreement
- No monopolizing conversations
- If you make a commitment, keep it
- Use affirmative language
- Don't be afraid to ask questions
- Assume positive intent
- Go hard on ideas but easy on people (don't be afraid to disagree)

Appendix D

World Language Task Force Meeting Dates

World Language Task Force Meeting Dates

January 17, 2018
February 22, 2018
March 22, 2018
April 30, 2018*
May 30, 2018 *
June 13, 2018
August 30, 2018
September 27, 2018

* Meeting dates changed due to Holmes Junior High Open House and Board Meeting conflict

Appendix E

World Language Task Force Meeting Minutes/Attendance

World Language Task Force Meeting Minutes

January 17, 2018 Meeting Minutes

Participants in attendance included Bin Wang, Heather Bock, Kim Sellon, Mele Echiburu, Ricardo Perez, Matt Duffy, Rody Boonchouy, Sharon Davies, Tanya Lieberman, Troy Allen, Christine Oyakawa, Joyce Tamanaha-Ho, Izabella Terry, Michael Hallinan, Melanie Barbier, Elaje Lopez, Patricia Mueller-Moule, Chian Ohler, Lianwu Liu, Lang Hoch, Agustin Antunez, and Denise Beck.

Introduction
Constructivist Listening/Protocol: Partner up and one person will have a chance to speak while the other listens without interrupting (2 minutes). This gives an opportunity for the other person to think and give more information. Active listening for the benefit of the speaker. When the 2 minutes are done, it is reciprocated. Maintain confidentiality of information shared by one another. (Ricardo) Now Troy will walk you through some activities where you will implement constructivist listening protocol.
Team Building: Try to identify a partner who speaks the first language as you. (Troy)

- Question: Why did you select to be part of the World language Task Force?
- Question: What matters to you the most about what we accomplish?

Ricardo guides the group through an activity of listing norms that are important to the whole group . A generative list of norms that the group agrees to adhere to and respect in order to foster collaboration and complete objectives of World Language Motion:

- Equally share ideas and time
- Everyone contributes (experience knowledge etc.)
- Practice constructivist listening
- Respectful and civil
- Solution-oriented
- Open-minded
- Think of as the district as a whole
- Be realistic and practical (budget filter)
- Mindful and growth mindset
- Speak with heart and listen with heart
- Stick to agenda and schedule
- No interrupting
- Snap for agreement
- No monopolizing conversations
- If you make a commitment, keep it
- Use affirmative language
- Don't be afraid to ask questions
- Assume positive intent
- Go hard on ideas but easy on people (Don't be afraid to disagree)

Framing the WLTF Work
Board Motion October 5, 2017: Advisory Committee WLTF, review current program and provide recommendations on how we can improve what programs we have to meet 21st century learning.

- Look into current barriers
- Current funding support for community options

- Future funding opportunities?
- Cost neutral opportunities
- Additional immersion opportunities
- With UCD, Sac City etc.

WLTF member asked for copy of PP. Ricardo emphasizes that all this will be placed in the January 17, 2018 World Task Force Google Folder which will be accessible to all members.

Ricardo goes over the Tentative Schedule and timeline of scope of work
Question: Update to the board sometime in November??
Troy: ISLT's job is to relay the info they receive from WLTF to the board. All updates will be given by ISLT.
Question: Tell us about the CURRENT Program.
Troy: Yes, That is one example about "NEED TO KNOW"
Question: What is ISLT
Question: Are we all going to be researching the same things? Are most of these things going to be overlapping?
Some may be, but we may frame it different and there may be some reimaging so that one group is working on a specific aspect and the other is working on the other. Goal: Strong points or themes that we need to talk about to move on.

Chalk Talk
Break into 4 groups. Answering the 4 questions that are posted.
- We will have opportunity to add to those questions as we continue.
- We are not here as an advocacy group. We are here to explore and understand ideas.
- What is the best course of action? Use skillful advocacy.
- This is what we are exploring, These are our findings, and this is our action.

Quick Overview
- World Language Task Force Team Drive
- DO NOT delete things on Google drive. Add comments or copy the document.
- Future dates. Next meeting Feb 22, 2018; 5:30-7:30pm.
- Food is great. Vegetarian 4 people.
- April 26, 2018 (Open House @ Holmes)
- Explore conflicts with tentative dates

Question and Answer
Q: Do we have any assignments due next meeting?
A: Not at the moment. ISLT will collaborate and send something out if they need to.

Q: What is the expected outside workshop commitment be?
A:Depends on the group and the learning that needs to be done. As we start to identify milestones we will commit more outside of these meetings.
Q: Are all the Team drives accessible from Everyone?
A: Yes. It will be all public. All the groups will be able to see everyone's work.
Suggestion: 1 google doc called Comments and Questions where people comment and ask questions.

Q: Are all the things we wrote down on the sheets will that be in Google drive?
A:(Yes)
Q: Is the work we are doing public knowledge? Troy: Trust your best judgment.
A: Examination of all points. Exploratory. Your goal and value is transparency and to have a clear and inclusive process. This will be left to your discretion. Be careful we don't send a message to the community that isn't really what we mean.

February 22, 2018 Meeting Minutes

Participants in attendance included Heather Bock, Denise Beck, Elaje Lopez, Izabella Terry, Lianwu Liu, Tanya Lieberman, Stacey Williams, Patricia Mueller-Moule, Joyce Tamanaha-Ho. Christine Oyakawa, Kim Selon, Lang Hoch, and Sharon Davies.

Welcome & Review of Norms- Ricardo Perez

Revisit Need to Knows

Project Structure and Path

Review of Project Based Learning. Driving Questions and need to knows were created to make this Project Based learning. In the middle of this project we have to build understanding to be able to research, and develop skills to answer questions. Create a possible answer.

- Review of the Calendar. First Presentation is in May, use Draft Rubric (Tuning Tool).
- Next Fall (October 2018) ISLT will make recommendations to the board

Workshop Activity

- Presentation of District WL Programs by Matt Best/ Ricardo Perez to inform World Language Task Force members of current district World Language programs.

Question and Answer

Q: What do we offer?
A: Spanish & French. Japanese @ Harper. WL Trends: Sustainability & Choice- A lot of Pedagogical impacts based on fiscal budget not request. Ex: Chinese 1&3, 2&4. But still Recognizing that 5 and above are still requested. The # of Prep periods and combo classes are hard on teachers. Review Seal of Biliteracy throughout the years. Student Choice & Programmatic Decision making- come into competition. A Class with only 15 students is a hard to due fiscally. Conditions for Success: Students can have as much choice as possible, sustainable for class and as efficient as possible. What is the persistence after a student starts at Level 1. Advertising and Counselor recommendations are all factors when deciding language classes or other electives. Some students earn more than 30 units by language. Some students may take more than one language.
Q: At what age can you travel to another school?
A: Only in 9th Grade. Classes offered are Spanish 4 and Japanese 1, French 3 during 1st period. Another Challenge is Credentialed teachers. High Demand and not as many teachers with credentials. Especially in World Language Classes. The Second factor is lay off notices for classes/teachers that are low in student demand. Students have to take 1 year in High School. The A-G Requirements are fulfilled, but not the actual graduation requirements. More electives are required. 6th and 7th periods are mostly language, exploration or music.
Q: What's going to happen to MME students that go to Harper?
A:What Spanish class do they take there? That is an exploration question.
Q: Are there any courses for Heritage speakers?
A:For students who speak Spanish @ Holmes but are not in Spanish Immersion, does the Immersion course apply to them? If they are proficient then they should take it in 7th Grade. An Assessment is given first. 1 year at DJUSD = 10 units Sac City 1 semester= 10 units @ DJUSD This covers the A-G Requirements as well.

Q: What is the main purpose of the Seal of Biliteracy?
A: Mainly encourages students to take a second language and to get a recognition on their diploma. They can use that for future employers and may be used in college for recognition. It also helps guide our students to pursue one language at higher levels to be fluent in two languages as opposed to minimal fluency. Ricardo to upload State Seal of Biliteracy Brochure to Team drive.

How to Request Data
We have real questions that require data. Team presentations require data.
Treat this similar to PRA (Public Records Act). Requests will go directly to Ricardo and he will push that request to the Data Analyst.
Things to keep in mind:

- Make a *specific* data request (time, era, classes, school etc.) and express *intent* of the data.
- We cannot breach confidentiality (student data or information). For example, even if the data is too small, it can breach student confidentiality.
- Volume of Data
- We will make a "Data" folder in the Drive and dump all the data in there so it is accessible to everyone.

Discussed the change of meetings In April & May. See new calendar of meeting dates in Team drive. Ricardo also reviewed new things in the Team Drive under Resources and Data-mainly research and studies.

Project Work Time

Action Team members spent the remaining time planning and working in groups.

March 22, 2018 Meeting Minutes

Participants in attendance included Michael Hallinan, Lang Hoch, Joyce Tamanaha-Ho, Tanya Lieberman, Patricia Mueller-Moule, Heather Bock, Agustin Antunez, Christine Oyakawa, Troy Allen, Bin Wang, Mele Echiburu, and Sharon Knox.

Welcome

Updates

- CA Dept of Education Recruit Focus Group: Path way to how to go from focus group to purchasing materials for DJUSD teachers in the span of several years
    - Focus group
    - Framework & Standards
    - Adopt (CDE)
    - Publishers
    - Adopt (CDE)
    - Pilot
    - Adopt
    - Purchase
- Evolution of Montgomery Elem TWBI (in Spanish)- There are some impacts and implications when expanding TWBI. Really highlights importance of these opportunities.
- Currently: 2 classes TWBI and 1 class English Only (EO). The TWBI students very well. Great improvement. Data shows very good improvement. The EO class is disproportionate. Bad behavior, low grades, etc. Next plan is to fade out English Only so that in 5 years MME can be TWBI. Board meetings were held March 1st and March 15. Can be viewed online.

Laying the Foundation for Group Work Time

- Powerpoint to discuss Group Work Time (can be found in the team drive)

April 30, 2018 Meeting Minutes

Participants in attendance included Heather Bock, Stacey Williams, Agustin Antunez, Marina Valle, Patricia Mueller-Moule,and Joyce Tamanaha-Ho.

Welcome

Updates

- Graduate Profile by Troy Allen
    - What does 21st Century Learning look like? DJUSD presented this powerpoint to the community (parents, teachers, staff, Migrant Center, Chamber of Commerce, School Board etc.)
    - Based on a survey, 10 characteristics were chosen and narrowed down to 6: Collaboration, Civic & Cultural Awareness, Creativity and Innovation, Critical thinking & Problem Solving, Communication, Adaptability & Resilience.
- Spanish 3P Update at Harper Jr. High by Ricardo Perez
    - Parents and Students from MME voiced concerns on current immersion opportunities. What was decided was that Spanish 3P will be offered at Harper for Spanish Immersion students. Native speakers/Heritage speakers will be able to take this class as well
    - Concern: Heritage Speaker class should be provided ONLY for Heritage Students. Heritage Students do not benefit from Spanish 3P.
    - A Spanish class for Heritage Speakers is in progress and currently being discussed and planned but it will take a few years (2-3 years) to plan it and implement it.
    - How did this all come about? 7th Grade students are given Course Request Sheets. Students were told 7th Graders are not able to take Spanish 3 classes. This is a big setback for students who want to continue in spanish. Therefore 3P was created at Harper for 7th grade immersion and Heritage speakers.
    - Concern: This will not work because immersion students in 3p will not read at the speed of Heritage speakers. Having a blended class will not be beneficial for both.

Idea for Survey: Send survey in May so that we can get it back before school ends.

Laying the Foundation for Group Work Time

- Process for Mini Presentations in May
    - 10 min presentation
    - 1 slide with 3 recommendations/key areas from Action Team
    - 10 min to field questions using feedback tool (Rubric)
    - Begin to build consensus on recommendations
        - Concern: Not everyone's ideas or work will be taken into account.
        - The district will represent areas of consensus. District will not try to change the feedback provided. They will represent what the WLTF wants as well as their concerns.

DJUSD staff represents the areas of consensus. Board will read minutes if they need to.

Group Work Time:

- Action Team member time to develop a one slide presentation that briefly summarizes the groups' recommendation.

May 30, 2018 Meeting Minutes

Participants in attendance included Heather Bock, Christine Okayawa, Tanya Lieberman, Agustin Antunez, Bin Wang, and Izabella Terry.

Welcome:

Updates:

- Ricardo explained to the group that he will be delivering an update to the board of education on the current work of the WLTF on May 31st
- Global CA 2030 - Ricardo presented to the WLTF on this bold initiative led by State Superintendent Tom Torlakson to expand the teaching and learning of World Languages. The goal is to strengthen the diversity of backgrounds and languages in CA.
- Group Norms were reviewed prior to the start of work and presentations

Groups gave their mini presentations on current 3 recommendations and used the tuning tool to provide feedback

- Process for Mini Presentations in May
    - 15 min to present
    - 10 min to field questions using Tuning Tool
        - Clarifying questions
        - Wonders
    - 2 min for groups to respond
    - Begin to build consensus on recommendations

WLTF action teams were given time to work in their groups to collaborate and to calibrate

June 13, 2018 Meeting Minutes

In attendance were Marina Valle, Tanya Lieberman, Agustin Antunez, Joyce Tamanaha-Ho, Mele Echiburu, Kim Sellon, Patricia Muller-Moule, and Stacey Williams.
Welcome:
Recap of last meeting: Group presented and gave recommendations.

- No Meeting in July
- Everything needs to be done by September to present to the Board of Education. Written report also needs to be done by then.
- *In August WLTF group will give final presentation and recommendation.
- Survey should be out next week for community and parents to take.
- Recommend:
- Parent input & Explore/Review with Staff

Group Calibration with Tuning Tool:

Self score with Tuning Tool Protocol - Drafting recommendations. WLTF members take the self score individually and reflect on it for 20 minutes, then talk about it with their group.

- Action Team Rotations with Troy and Ricardo
- Commit/Jettison Recommendations
- Position to begin to author Final presentation to Team on August 30th
    - building coherence and consensus
    - start to build core components of presentation to share in Sept. 2018 with WLTF

August 30, 2018 Meeting Minutes

Participants in attendance included Bin Wang, Izabella Terry, Heather Bock, Patricia Mueller-Moule, Christine Oyakawa, Joyce Tamanaha-Ho, Mele Echiburu, Elaje Lopez, Tanya Lieberman, and Naoko McHale.

Welcome:

Ricardo and Troy reviewed the September 27th meeting goals and expectations . It was explained to the group that they be working over the next few weeks finalizing the following:

- final recommendations (3 per group)
- written summary / rationale of recommendations
- Written Summary/rationale due September 21st (updated now due on Monday, September 24th by 9:00 AM per group request).
- Mechanism/ Method of gathering group consensus (prioritizing recommendations using the tuning tool and categorize as a WLTF group red, yellow, green using voting dots)

Ricardo presented to the group the results of the WLTF Survey and explained were they can be located in the team drive for reference. The groups spent time analyzing the data.

- The remainder of the working time was devoted to action teams meeting as a group and working on their final presentation and rationale.

Questions, Need To knows, Parking Lot

September 27, 2018 Meeting Minutes

Participants in attendance included Mele Echiburu, Patricia Mueller -Moule, Michael Hallinan, Heather Bock, Joyce Tamanaha-Ho, Stacey Williams, Christine Oyakawa, Isabella Terry, Kim Sellon, Agustin Antunez.

Welcome: Ricardo opened and welcomed the WLTF group members and went over the agenda. Norms were also reviewed.

Ricardo explained to the WLTF members that the recommendations presented tonight will help inform the final recommendations instructional services will make to the school Board. The Instructional Services report to the board will capture process, rationale, research, ppt, recommendations and discussions of group work. In the final summative report group presentation powerpoints and rationale will be included in an unfiltered form. The summative report will be shared with the WLTF members prior to the BOE.

Updates: Ricardo reminds the group to please review your biography – can add to the bio as this, too, will be part of the report. Also your final rationale needs to be in 11pt and Calibri font.

Troy updates the group on articles regarding staffing from the Commission on Teacher Credentialing and reminds the group of current enrollments.

Ricardo explains to the group the process for the evenings final group presentations

- A question from WLTF member- "I am aware that every group has a different recommendation. But as far as District staff what needs have you identified? And what filter are you going to present?"Ricardo explains that instructional services will be able to finalize their recommendations after all groups have had the opportunity to present their recommendations to the whole group. Even though instructional services Directors have been following and reading the work along the way from each Action team, the purpose of today's work is to hear openly the presentations and rationale from each Action Team. We want to make a decision after presentations.
- Troy Allen explains to the group the protocol for presentations: We will use the tuning tool. As core mission 1) are we thinking of 21 century Graduate profile 2) close achievement gap 3) create safe and inclusive environment.

Presentation format

Each group will have 10 min to present
Each group will present 3 recommendations.
2 min clarifying questions
15 min discussion
3 min poll
Use the tuning tool for members to give us feedback to create "a diverse community" and to help us focus the discussion.
"Poll Everywhere" digital voting will be used to "vote". A practice run was given to the group, so they could get familiarized with Poll Everywhere.

Current Programs Action Team: Presentation by Patricia
Group given a few minutes to write down notes for own reference.

Clarifying Questions (Q) and Answers Time (A)
Q: Employing or UCD...Single subject Credential Program? How would we get the students if UCD doesn't have single Spanish program? Bilingual but not a "teaching" credential
A: A bilingual teacher would be someone that would help out. Sac State can also help
Q: Did you contact UCD extension program? What about International house?
A: Don't think so but that would be a great resource.

Discussion:
Q: Debate- Face to face v online learning.
A: No using that for classes that are combined, or elementary. Online classes for Elem.
Q: have you researched effectiveness
A: yes. Blended learning is better for younger kids. computer alone is not as engaging for children (littles) . Blended learning created more time for teachers.
Q: High prices for blended learning...who pays for that?
A: The district
Q: How feasible is that? Students who don't have devices they can get their own and buy Chromebook for $99. 10K for 30
A: Troy Allen: Chromebook is about 1k for each chromebook. Laptop wouldn't be a problem but anticipating a scale would.
Q: How would blended learning impact course? Would it be revised?
A: Yes, it would need to be sent to _____. Needs to be aligned to WL Standards.
Q: how to have credential teacher with Blended program.....bio teacher sitting in language class.
A: online teachers aren't DJUSD teachers so they wouldn't be able to put them on the transcript.
Q: Like the idea but it should be a "flipped classroom". The student learning the language must be in interactive environment. By learning s language you're not acquiring the language. Interactive human being cannot be replaced. Many programs are great but that doesn't supplement learning.
Q: UCD students teaching classes, but is it feasible or reliable?
A: ARC is teaching classes at High School.
Q: Early exposure to WL... two 25 min per session per week... what's the goal in the recommend?A: just exposure. a little of this and that just to get excited. Try the language and culture.
Comment: can subs be trained as World Language Programs.
A: no.... sub shortage and teacher shortage. Optimistic about Intern program. Most will get jobs in 18 months and then we have to train more. Early exposure Opens ears and their minds. it's to a rigid curriculum, more fluid and play based. An obsolete program would be best.
Comment: TALK program is great.
Q: Concerns with adding ASL removing enrollment in Chinese and Japanese.
A: When we add program, we take from other programs.
A: will not because it will raise exposure in Elementary and increase WL enrollment overtime.
Q: If it is exposure then we must shorten time in another subject? Reading, math etc.

Poll: (1) Early Exposure to WL (2) expanding breadth and depth of Would Language Instruction in secondary (3) Addressing inequity in WL

Barriers Action Team: Presented by whole group

Group given a few minutes to write down notes for own reference.
Clarifying Questions (Q) and Answers Time (A):

- Cluster in add in. Or instead.....well it depends on the $$ District has. If More pilot it, if less instead of. A semester class would be great and accessible for everyone.
- HD Diploma Req.- WL/Art or Comp. Tech. JUSD says Arts or Tech. But they want to add WL to the requirements. That will happen regardless....not just WL but in everything.

Heritage classes should be part of Equity reasons. SSB was created to show and gain bilingual status. It doesn't cost extra money and shouldn't replace teacher.

A: LCAP Addressed EL... how much is used for Heritage speakers?

- Q: 0. we have to find out how to use supp funds to create a heritage class. But LCAP cannot fund teaching staff. Only District are those concentration districts but not this one.
  It wouldn't take from another group but make a more robust WL program.
  It would attract more but not much.

Comment: choice for cluster would be great. Start with Elem school instruction, then start cluster classes in middle school. Cluster class can be a choice. Or it can be one language.
Comment: some kids might not want to try language for the whole year.
Comment: Recomm. 1- not much collaboration between teachers and district, no PD. There needs to be collaboration between the two. Member agreed this is the best thing to do.

Both short- and long-term recommendations....
Ex: Latino community only 30% ready for UC/CSU- Long term

- Teachers were part of Recommendation 1- it is key. It feels like WL is not a priority for the district.
- Arts and robotics can be showed off, but language cannot. However, language is being showed off. Ricardo and Jen presenting at CDE.
- RP: Great teachers and great programs but it's not being showed cased as much as we should.
- Heritage learner will start interest. The parents know that that is important to them. But what about the other ones?
- Is it true that kids who are going to DaVinci cannot take WL Class? Charter school, different requirements and it's a choice. either PBL or WL...

Polls: (1) Supporting and improving existing program with input from Lang. Teachers, including pathways for heritage. (2) Create an info campaign emphasizes importance WL (Target students/) (3) Boosts enrollment with intro level WL classes in JH cluster classes (4) WL to meet CTE/Practice...for grad requirement (5) create volunteer peer tutor program

Immersion Opportunities Action Team: Presented by whole group

Group given a few minutes to write down notes for own reference.
Clarifying Questions (Q) and Answers Time (A):

- What % of School are in immersion and what % of districts in CA offer immersion? Good to have for comparison.
- What other district offers more than 1 dist. of immersion?
  Chavez had 4 kinder; maybe have 3 and 1 mandarin so we can keep same population, not necessarily decreasing enrollment in one school just giving more options.
- Something difficult to compare: some districts similar others don't offer immersion. It has everything to do with choices and priorities.
- What parent demand is there for a different language immersion? What is the pool of potential teachers because of WL teacher shortage? Mandarin....or ASL? would there be enough demand? Chavez was very parent initiated. But summer or after school classes can kindle fire and maybe raise interest.
  Rich people will take their kids from one side of town to the other for immersion language classes. Poor kids will miss out. Afternoon classes is not a great idea to get income.
- Why isn't there an after school program that grows WL?
  CDC and kids club is fee based and the low income people cannot get in. LCAP funding might not be able to fund after school language?

Would like TALK program to be more available for kids. And how can it be subsidies?

Poll: (1) Piloting a new language immersion program starting in Kinder? (2) Partnering with others to increase access points in Elementary.
Board Meeting Oct 18, 2018. If members want to attend the board meeting. please let Ricardo/Troy know so they can introduce you. If there is anything left out in the folder let us know. If you have additional notes please let us know! A copy of the presentation will be available to members.

Appendix F

World Language Task Force Tuning/Feedback Tool – Final Presentation

Tuning Feedback Tool - Final Presentations

Presenting to your peers in the WLTF - September 2018

1. Presentations: review recommendations and rationale overview (10 minutes)
2. Clarifying questions (2 minutes)
3. Discussion (10 minutes)
4. Individual feedback, Poll Everywhere.

	Underdeveloped	Emerging	Developed
Staffing and Resources	● Staffing and resources have not been thought out yet ● Credential and legal constraints have not been considered or are a potential barrier ● This is not sustainable over time	● Staffing implications (credentialing and hiring) have been evaluated and considered ● Curriculum would have to be teacher-generated	● Staffing and resources can be creatively allocated and are sustainable over time ● Curricular resources exist and are aligned with World Language standards
Fiscal Impact	● Fiscal impact does not justify expense ● Costs are unpredictable and may not be sustainable ● Opportunity costs have not been assessed	● Fiscal impacts have been acknowledged, but not evaluated ● Potential opportunity costs are acknowledged, but not fully evaluated	● Fiscal impact and costs are predictable, and fit within budget ● Opportunity costs are identified and justified
Facilities and Structures	● School facilities and structures cannot accommodate the recommendation	● Facilities and scheduling structures have been explored and considered.	● Facilities can be used creatively and sustainably ● Scheduling is flexible and does not create unintended limitations
Vision, Mission, and Goals	● Recommendations are in contrast or misaligned with current district goals	● Recommendations acknowledge district goals	● Recommendations promote and are aligned with district goals (LCAP, Strategic Plan, and BOE) ● Equitable learning opportunities and outcomes are evident
Research Support	● Limited research is included ● No interviews or observations have been made ● Recommendation does not include analysis of potential concerns	● Research is narrow ● Minimal outreach or direct observations were pursued	● Research to support the recommendation is robust, academic, and comprehensive ● Rich data included from direct field observations ● Includes thorough analysis of pros and cons of recommendation

Appendix G

DJUSD Instructional Services

Coherence Map (Vision, Mission, and Goals)

DJUSD Instructional Services Coherence Map

WHY (Vision/Mission)		
Ignite a love of learning and equip each student with the knowledge, skills, character, and well-being to thrive in the 21st century.		
WHAT (Goals)		
21st Century Teaching and Learning	Close Achievement Gap	Inclusive and Safe Environment
HOW (Strategies)		
Professional Learning Communities	Effective Instruction	Social Emotional Learning

Appendix H

World Language Task Force Data Requests and Provided Data

World Language Task Force Member Data Requests and Provided Data

1. March 2018: Current World Language offerings by site

2. May 2018: District Wide 5 year data by ethnicity, EL vs. non-EL, & SED vs. no SED including:
    - How many student take World Language classes?
    - How many years on average do they take these classes?
    - Which languages do they take?
    - Average letter grades for these classes?
    - How many students are A-G eligible

3. July 2018: District Wide 5 year data by Special Education designation including:
    - What percent of the total SpEd population take World Language classes?
    - How many years on average do they take these classes?
    - Which languages do they take (what % is this of all languages taken by kids in special ed?)?
    - Average letter grades for these classes?
    - What percent of the total SpEd population are A-G eligible?

4. September 2018: World Language/Immersion trends including:
    - Current MME 4^{th}-6^{th} enrollment
    - Current World Language offerings & enrollment by site
    - 2 year data on 6^{th} grade MME 7^{th} grade Harper students and which electives they take
    - 3 year data on percent of 6^{th} grade CCE who go on to the Emerson Immersion program versus the percentage that do not.
    - 5 year World Language offerings & enrollment by site

5. October 2018: Junior High World Language breakdown by ethnicity, EL vs. non-EL, & SED vs. no SED, Special Education, vs. Regular Education including:
    - How many student take World Language classes?
    - Which languages do they take?
    - Average letter grades for these classes?

1. March 2018: Current World Language offerings by site

Davis Senior High School (T 223 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
010884,	AY			218200 - 2 P-22 English 12 P	218200 - 1 P-22 English 12 P	2121A0 - 1 P-22 ELD 1A	213500 - 3 P-22 Lit/Comp AP	
				218210 - 3 P-22 English 12/Modif		2122A0 - 1 P-22 ELD 2A		
						770200 - 18 P-22 Teaching Assistant/Yr		
010070,	AY							
000072,	AY							
000124,	AY						745000 - 6 LRC Study/Trans Skills	745000 - 7 LRC Study/Trans Skills
009841,	AY							
C10091,	AY							
011211,	AY							
000164,	AY							
009875,	AY	187300 - 1 A-05 Intrn Engnr 1 (CISC P	187300 - 2 A-05 Intrn Engnr 1 (CISC P	186200 - 1 A-05 Comp Prog P	370000 - 1 A-05 Drafting 1			
			187400 - 1 A-05 Intrn Engnr 2 (CISC P					
009736,	AY							
011559,	AY							
000262,	AY	511310 - 4 Gym-S Independnt Sports/Fll	500000 - 1 Gym-S Physical Ed	500000 - 2 Gym-S Physical Ed	527600 - 1 Weight Strength/Cond 11/12th	500000 - 3 Gym-S Physical Ed		511310 - 3 Gym-S Independnt Sports/Fll
		511320 - 4 Gym-N Independnt Sprts/Sprg	770200 - 57 Gym-S Teaching Assistant/Yr	500003 - 1 Gym-S Physical Ed/Modif	770200 - 59 Weight Teaching Assistant/Yr	500003 - 2 Gym-S Physical Ed/Modif		511330 - 5 Gym-N Independnt Sprts/Wntr
				770200 - 58 Gym-S Teaching Assistant/Yr		770200 - 60 Gym-S Teaching Assistant/Yr		511320 - 3 Gym-N Independnt Sprts/Sprg
								511330 - 8 Gym-N Independnt Sprts/Wntr
012733,	AY							
000266,	AY							
C100038,	AY							
010120,	AY							
012753,	AY							
000369,	AY	620000 - 1 S-11 Physics P	620000 - 2 S-11 Physics P		615000 - 1 S-08 Chemistry P	615000 - 2 S-08 Chemistry P	615000 - 3 S-08 Chemistry P	
011806,	AY	203000 - 1 T-03 AVID 10		211400 - 3 T-03 English 10 Hon P	217310 - 1 T-03 British Lit/Modif	217400 - 6 T-03 British Lit P	211400 - 7 T-03 English 10 Hon P	
		770200 - 106 T-03 Teaching Assistant/Yr			217400 - 7 T-03 British Lit P			

* - Not the teacher of record. Class was previously taught by this teacher.

Davis Senior High School (T 223 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
012764,	AY							
009872,	AY	564000 - 4 C-02 Environmental Sci P	561000 - 3 C-02 Biology P	564000 - 3 C-02 Environmental Sci P	564000 - 2 C-02 Environmental Sci P	564000 - 1 C-02 Environmental Sci P		
		770200 - 82 C-02 Teaching Assistant/Yr	770200 - 49 C-02 Teaching Assistant/Yr			770200 - 50 C-02 Teaching Assistant/Yr		
012129,	AY							
000558,	AY							
011534,	AY							
008811,	AY		291000 - 1 L-23 Spanish 1 P	293000 - 12 L-23 Spanish 3 P	293000 - 10 L-23 Spanish 3 P	770200 - 78 L-23 Teaching Assistant/Yr	293000 - 5 L-23 Spanish 3 P	291000 - 2 L-23 Spanish 1 P
				770200 - 124 Teaching Assistant/Yr	770200 - 76 L-23 Teaching Assistant/Yr		770200 - 79 L-23 Teaching Assistant/Yr	
012697,	AY							
000607,	AY							
011880,	AY	419000 - 1 N-09 Calculus BC AP	407950 - 3 N-09 Integrtd Mathmtcs 2 P	419000 - 2 N-09 Calculus BC AP		407950 - 4 N-09 Integrtd Mathmtcs 2 P	407950 - 5 N-09 Integrtd Mathmtcs 2 P	
				770200 - 91 N-09 Teaching Assistant/Yr				
000658,	AY	408070 - 1 N-08 Math Clinic-CC3	407980 - 1 N-08 Acclrt Intgrt Math 3 P	*407970 - 9 N-10 Integrtd Mathmtcs 3 P	418000 - 1 N-08 Calculus AB AP		418000 - 2 N-08 Calculus AB AP	
		408075 - 1 N-08 Math Clinic-CC3/Modif		407980 - 2 N-08 Acclrt Intgrt Math 3 P				
		770200 - 87 N-08 Teaching Assistant/Yr						
011981,	AY							
000820,	AY							
CI00055,	AY							
008927,	AY							
000941,	AY	220200 - 1 P-11 Science Fiction P	220200 - 2 P-11 Science Fiction P	220200 - 3 P-11 Science Fiction P	770200 - 125 Teaching Assistant/Yr	245500 - 1 P-11 Drama P	2121B0 - 1 P-11 ELD 1B	
		770200 - 116 Teaching Assistant/Yr	220210 - 2 P-11 Science Fiction/Modif	220210 - 1 P-11 Science Fiction/Modif		245510 - 1 P-11 Drama/Modif	2122B0 - 1 P-11 ELD 2B	
		770200 - 41 P-11 Teaching Assistant/Yr	770200 - 42 P-11 Teaching Assistant/Yr	770200 - 129 Teaching Assistant/Yr		245510 - 2 P-11 Drama/Modif	770200 - 93 P-11 Teaching Assistant/Yr	
						246120 - 1 P-11 Drama/Advanced P		
						770200 - 85 P-11 Teaching Assistant/Yr		
000947,	AY							
008522,	AY							

* - Not the teacher of record. Class was previously taught by this teacher.

Davis Senior High School (T 223 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
009492,	AY	665000 - 1 N-04 World Civ/Modern P	672000 - 1 N-04 US Hist/Soc Just P	665000 - 2 N-04 World Civ/Modern P	672000 - 2 N-04 US Hist/Soc Just P			
				665200 - 6 N-04 World Civ/Modif	672001 - 1 N-04 USHist/SocJ/Modif			
012255,	AY							
010449,	AY							
001120,	AY	294500 - 6 O-06 Span 4 Hon P	293000 - 8 O-06 Spanish 3 P	294500 - 8 O-06 Span 4 Hon P		293000 - 11 O-06 Spanish 3 P	296000 - 1 O-06 Span 6 Lit AP	
		296000 - 3 O-06 Span 6 Lit AP	770200 - 30 O-06 Teaching Assistant/Yr			296000 - 2 O-06 Span 6 Lit AP		
						770200 - 83 O-06 Teaching Assistant/Yr		
009262,	AY							
009606,	AY							
011343,	AY							
006360,	AY							
009894,	AY							
012250,	AY							
001400,	AY							
001412,	AY							
009266,	AY							
001464,	AY							
001572,	AY	743500 - 4 C-04 Transitin to Indepndnc	744000 - 4 C-04 Transition Skills		745700 - 1 C-04 Read/Writing Fund	743500 - 3 C-04 Transitin to Indepndnc		
001585,	AY							
009085,	AY	511310 - 2 Gym-S Independnt Sports/Fll		527500 - 1 Weight Strength/Cond 10th	500000 - 5 Gym-S Physical Ed	500000 - 4 Gym-S Physical Ed		511310 - 1 Gym-S Independnt Sports/Fll
		511330 - 3 Gym-S Independnt Sprts/Wntr						511330 - 1 Gym-S Independnt Sprts/Wntr
		511320 - 2 Gym-S Independnt Sprts/Sprg						511320 - 1 Gym-S Independnt Sprts/Sprg
		511330 - 9 Gym-N Independnt Sprts/Wntr						511330 - 10 Gym-N Independnt Sprts/Wntr
010340,	AY	761000 - 1 Lib Library Assistant	761000 - 2 Lib Library Assistant	761000 - 3 Lib Library Assistant	761000 - 4 Lib Library Assistant		761000 - 5 Lib Library Assistant	761000 - 6 Lib Library Assistant
		761010 - 2 Lib Library Assistant/Modif					761010 - 1 Lib Library Assistant/Modif	761010 - 3 Lib Library Assistant/Modif

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Davis Senior High School (T 223 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
009846,	AY			292000 - 1 L-29 Spanish 2 P	263000 - 1 O-04 French 3 P	292000 - 4 O-04 Spanish 2 P	263000 - 2 O-04 French 3 P	261000 - 1 O-04 French 1 P
					770200 - 10 O-04 Teaching Assistant/Yr		770200 - 11 O-04 Teaching Assistant/Yr	262000 - 1 O-04 French 2 P
001668,	AY							
001679,	AY	218200 - 6 P-24 English 12 P	218200 - 7 P-24 English 12 P		211000 - 4 P-24 English 10 P	211000 - 5 P-24 English 10 P	211200 - 1 P-24 English 10 AIM P	
		770200 - 95 P-24 Teaching Assistant/Yr			770200 - 110 P-24 Teaching Assistant/Yr	770200 - 48 P-24 Teaching Assistant/Yr	211400 - 8 P-24 English 10 Hon P	
012871,	AY							
001823,	AY							
C100069,	AY							
001889,	AY	141300 - 1 A-06 Ceramics/Sculpt P	141310 - 3 A-06 Ceramics/Sculpt Modif	145320 - 2 A-01 AP Studio Art Drawing		143150 - 2 A-01 Draw/Paint/Modif	143150 - 1 A-01 Draw/Paint/Modif	
		141310 - 1 A-06 Ceramics/Sculpt Modif	145320 - 1 A-01 AP Studio Art Drawing			145000 - 1 A-01 Draw/Paint P	145000 - 2 A-01 Draw/Paint P	
		770200 - 14 A-06 Teaching Assistant/Yr				770200 - 15 A-01 Teaching Assistant/Yr		
1000957,	AY							
010077,	AY							
CS00015,	AY							
012756,	AY	384000 - 2 O-01 Ag Engineering I	565000 - 1 O-01 Animal Sci P	384000 - 1 O-01 Ag Engineering I		565000 - 2 O-01 Animal Sci P		
		384500 - 1 O-01 Ag Engineering 2	565050 - 2 O-01 Animal Sci/Modif	384500 - 2 O-01 Ag Engineering 2		565050 - 3 O-01 Animal Sci/Modif		
		384600 - 1 O-01 Adv Ag Engnrng/Dsgn/		384510 - 1 O-01 Agrclt Engnrn 2/Modf		770200 - 74 O-01 Teaching Assistant/Yr		
				770200 - 96 O-01 Teaching Assistant/Yr				
002079,	AY							
009486,	AY							
002103,	AY		211000 - 7 L-25 English 10 P	211400 - 2 L-25 English 10 Hon P	211110 - 1 L-25 ACES 10	211400 - 4 L-25 English 10 Hon P		211000 - 11 L-25 English 10 P
			211400 - 11 L-25 English 10 Hon P					211800 - 3 L-25 Eng 10/Modif
			211800 - 5 L-25 Eng 10/Modif					
011881,	AY							

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Grid Master Schedule

Davis Senior High School (T 223 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
012777,	AY				211000 - 1 N-02 English 10 P	211000 - 9 N-02 English 10 P	211111 - 2 N-02 ACES 11 - 12	211400 - 10 N-02 English 10 Hon P
					211800 - 2 N-02 Eng 10/Modif	770200 - 126 Teaching Assistant/Yr		
011844,	AY							
010711,	AY							
008655,	AY							
002319,	AY							
011860,	AY							
011875,	AY							
002500,	AY							
002545,	AY							
002558,	AY		480200 - 1 PA-08 Concert Choir P	491000 - 1 PA-08 Music/Essentials P	481000 - 1 PA-08 Madrigals P	481200 - 1 PA-08 Choir/Treb/Adv P	490000 - 1 PA-08 Music Theory AP	
				491050 - 1 PA-08 Music Essent/Modif		481210 - 1 PA-08 Choir/Treb/Adv/Modif	770200 - 34 PA-08 Teaching Assistant/Yr	
				491200 - 1 PA-08 Music Essen Hon P				
012942,	AY							
002667,	AY							
C100005,	AY							
002733,	AY	407970 - 1 T-06 Integrtd Mathmtcs 3 P	770200 - 61 T-06 Teaching Assistant/Yr	418000 - 3 T-06 Calculus AB AP	770200 - 62 T-06 Teaching Assistant/Yr	418000 - 4 T-06 Calculus AB AP		
		770200 - 100 T-06 Teaching Assistant/Yr	407990 - 2 T-06 EAP Senr Year Math (ESM P		407970 - 2 T-06 Integrtd Mathmtcs 3 P	770200 - 88 T-06 Teaching Assistant/Yr		
			407995 - 2 T-06 EAP Senir Year Mthmt		770200 - 102 T-06 Teaching Assistant/Yr			
			770200 - 101 T-06 Teaching Assistant/Yr					
012672,	AY							
009281,	AY							
011528,	AY		264500 - 1 O-04 French 4 Hon P	265000 - 1 O-04 French 5 Lang AP				
			266500 - 1 O-04 French 6 Hon P					
010679,	AY							
012239,	AY							
C100052,	AY							

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Grid Master Schedule

Davis Senior High School (T 223 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
012458,	AY							
011647,	AY							
009879,	AY							
012571,	AY							
011162,	AY							
003004,	AY							
013078,	AY							
003085,	AY				385010 - 1 M-01 Intro to Robotics P		407900 - 2 M-01 Integrtd Mathmtcs 1 P	407900 - 3 M-01 Integrtd Mathmtcs 1 P
							407910 - 7 Intgrt Mthmtc 1/Modf	407910 - 4 M-01 Intgrt Mthmtc 1/Modf
003120,	AY	665000 - 3 P-25 World Civ/Modern P	696100 - 1 P-25 Economics P	696100 - 5 P-25 Economics P	665000 - 5 P-25 World Civ/Modern P	665000 - 4 P-25 World Civ/Modern P		
			696101 - 5 P-25 Economics/Modif	696100 - 6 P-25 Economics P	665200 - 5 P-25 World Civ/Modif			
			696100 - 2 P-25 Economics P	696101 - 7 P-25 Economics/Modif				
012780,	AY							
010019,	AY							
003155,	AY							
003189,	AY							
008523,	AY	561400 - 1 O-01A Biology/IntAg P			565200 - 1 O-01A Veterinary Science P	564400 - 1 O-01A Adv Intr Sci Sus Ag Hon P		
		770200 - 94 O-01A Teaching Assistant/Yr			565210 - 1 O-01A Veterinary Sci/Modif			
001874,	AY	765700 - 1 CounOff Office Assist	765700 - 16 FrnDsk Office Assist	765700 - 10 AttOff Office Assist	765700 - 11 AttOff Office Assist	765700 - 12 AttOff Office Assist	765700 - 13 AttOff Office Assist	765700 - 14 AttOff Office Assist
		765700 - 15 FrnDsk Office Assist	765700 - 2 CounOff Office Assist	765700 - 17 FrnDsk Office Assist	765700 - 18 FrnDsk Office Assist	765700 - 19 FrnDsk Office Assist	765700 - 20 FrnDsk Office Assist	765700 - 21 FrnDsk Office Assist
		765700 - 8 AttOff Office Assist	765700 - 22 Finance Office Assist	765700 - 23 Finance Office Assist	765700 - 4 CounOff Office Assist	765700 - 5 CounOff Office Assist	765700 - 6 CounOff Office Assist	765700 - 7 CounOff Office Assist
		770050 - 1 L-10 Peer Tutor Yr	765700 - 9 AttOff Office Assist	765700 - 3 CounOff Office Assist	770050 - 4 L-10 Peer Tutor Yr	770050 - 5 L-10 Peer Tutor Yr	770050 - 6 L-10 Peer Tutor Yr	770050 - 7 L-10 Peer Tutor Yr
		770200 - 107 L-10 Teaching Assistant/Yr	770050 - 2 L-10 Peer Tutor Yr	770050 - 3 L-10 Peer Tutor Yr			770200 - 89 AttOff Teaching Assistant/Yr	
				770200 - 103 L-10 Teaching Assistant/Yr				
003233,	AY							
010904,	AY							

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Davis Senior High School (T 223 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
003276,	AY							
CI00052,	AY							
010328,	AY					665000 - 6 N-04 World Civ/Modern P	672000 - 3 N-04 US Hist/Soc Just P	672000 - 4 N-04 US Hist/Soc Just P
								672001 - 2 N-04 USHist/SocJ/Modif
003436,	AY							
009511,	AY							
003450,	AY	566400 - 1 S-01 Life Science	566400 - 2 S-01 Life Science	566000 - 1 S-01 Physio & Anat P	566000 - 2 S-01 Physio & Anat P			
		566600 - 1 S-01 Life Science/Modif	566600 - 2 S-01 Life Science/Modif	770200 - 115 S-01 Teaching Assistant/Yr				
012695,	AY	615000 - 4 S-08 Chemistry P	615000 - 5 S-08 Chemistry P	615000 - 6 S-08 Chemistry P		561000 - 1 S-01 Biology P	561000 - 2 S-01 Biology P	
		770200 - 40 S-08 Teaching Assistant/Yr						
010926,	AY	665000 - 10 L-29 World Civ/Modern P	693200 - 3 L-29 Psychology P		665000 - 8 L-29 World Civ/Modern P	665000 - 20 L-29 World Civ/Modern P	665000 - 9 L-29 World Civ/Modern P	
					665200 - 12 L-29 World Civ/Modif	770200 - 23 L-29 Teaching Assistant/Yr		
					770200 - 22 L-29 Teaching Assistant/Yr			
012716,	AY		407970 - 7 N-07 Integrtd Mathmtcs 3 P	407950 - 11 N-07 Integrtd Mathmtcs 2 P	407950 - 12 N-07 Integrtd Mathmtcs 2 P	407970 - 8 N-07 Integrtd Mathmtcs 3 P		407800 - 2 N-07 Common Core Math 3
					770200 - 99 N-07 Teaching Assistant/Yr			407810 - 3 N-07 Cmmn Core Math 3/Md
012804,	AY							
C100046,	AY							
003596,	AY							
003615,	AY		418000 - 5 N-11 Calculus AB AP	407900 - 1 N-11 Integrtd Mathmtcs 1 P	418000 - 6 N-11 Calculus AB AP	407970 - 3 N-11 Integrtd Mathmtcs 3 P	407970 - 4 N-11 Integrtd Mathmtcs 3 P	
			770200 - 131 N-11 Teaching Assistant/Yr	407910 - 5 N-11 Intgrt Mthmtc 1/Modf	770200 - 66 N-11 Teaching Assistant/Yr		770200 - 132 Teaching Assistant/Yr	
003708,	AY							
011926,	AY							
003742,	AY		674000 - 2 L-27 US History AP	693200 - 1 L-27 Psychology P		671000 - 4 L-27 US Hist/Modern P	693200 - 2 L-27 Psychology P	671000 - 5 L-27 US Hist/Modern P
			770200 - 25 L-27 Teaching Assistant/Yr	770200 - 130 Teaching Assistant/Yr		671600 - 5 L-27 US Hist/Modif		671600 - 4 L-27 US Hist/Modif
						770200 - 105 L-27 Teaching Assistant/Yr		

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Grid Master Schedule

Davis Senior High School (T 223 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
012336,	AY							
012765,	AY		211400 - 1 T-02 English 10 Hon P	211000 - 10 T-02 English 10 P		214000 - 5 T-02 Amer Voices P	211000 - 3 T-02 English 10 P	214000 - 7 T-02 Amer Voices P
				211800 - 4 T-02 Eng 10/Modif		214010 - 5 T-02 Amer Voices/Modif	211800 - 6 T-02 Eng 10/Modif	
009324,	AY							
012459,	AY							
011845,	AY	*407980 - 5 N-10 Acclrt Intgrt Math 3 P	*407950 - 7 N-10 Integrtd Mathmtcs 2 P	*407950 - 8 N-10 Integrtd Mathmtcs 2 P	*407980 - 6 N-10 Acclrt Intgrt Math 3 P		*407980 - 7 N-10 Acclrt Intgrt Math 3 P	
		*770200 - 98 N-10 Teaching Assistant/Yr		*407970 - 9 N-10 Integrtd Mathmtcs 3 P				
				*770200 - 104 N-10 Teaching Assistant/Yr				
008172,	AY							
010920,	AY							
CI00004,	AY							
004110,	AY							
011862,	AY	696101 - 9 T-07 Economics/Modif	211800 - 8 T-02 Eng 10/Modif	681500 - 1 T-07 US Govt/Modif	211800 - 1 T-07 Eng 10/Modif	681500 - 2 T-07 US Govt/Modif		
		407910 - 2 T-07 Intgrt Mthmtc 1/Modf	218210 - 2 T-07 English 12/Modif	696101 - 1 T-07 Economics/Modif	214000 - 9 T-07 Amer Voices P	696101 - 2 T-07 Economics/Modif		
		665200 - 2 T-07 World Civ/Modif	566760 - 1 T-07 Life Sci/Foundatns/Mdf	407810 - 4 T-07 Cmmn Core Math 3/Md	214010 - 1 T-07 Amer Voices/Modif	407810 - 1 T-07 Cmmn Core Math 3/Md		
		764000 - 1 T-07 Educ/Fund	611410 - 1 T-07 Earth/Phys Scienc/Mdf	665200 - 1 T-07 World Civ/Modif	218210 - 1 T-07 English 12/Modif	407910 - 1 T-07 Intgrt Mthmtc 1/Modf		
			764000 - 2 T-07 Educ/Fund	671600 - 1 T-07 US Hist/Modif	611410 - 2 T-07 Earth/Phys Scienc/Mdf	665200 - 8 T-07 World Civ/Modif		
				764000 - 3 T-07 Educ/Fund	681500 - 3 T-07 US Govt/Modif	764000 - 5 T-07 Educ/Fund		
					764000 - 4 T-07 Educ/Fund			
004122,	AY							
CS00002,	AY							
008821,	AY							
008625,	AY							
004198,	AY	693300 - 1 L-14 Human Geog AP	693300 - 2 L-14 Human Geog AP	693300 - 3 L-14 Human Geog AP	674000 - 3 L-14 US History AP		674000 - 4 L-14 US History AP	
		691100 - 1 L-14 Internat Rel P	691100 - 2 L-14 Internat Rel P	691100 - 3 L-14 Internat Rel P				
009246,	AY							

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Grid Master Schedule

Davis Senior High School (T 223 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
009944,	AY							
010004,	AY							
011489,	AY							
004368,	AY	414300 - 1 N-06 Trig Funct/Apps P	407950 - 1 N-06 Integrtd Mathmtcs 2 P	417100 - 1 N-06 Precalculus P		417100 - 2 N-06 Precalculus P	407950 - 2 N-06 Integrtd Mathmtcs 2 P	
						770200 - 44 N-06 Teaching Assistant/Yr		
011659,	AY							
011444,	AY							
CS00014,	AY							
C10092,	AY							
011200,	AY							
012766,	AY							
011015,	AY							
010714,	AY							
010714,	AY							
004640,	AY							
011491,	AY							
004686,	AY							
C100072,	AY							
012767,	AY	407900 - 4 N-03 Integrtd Mathmtcs 1 P		407970 - 5 N-03 Integrtd Mathmtcs 3 P	407900 - 5 N-03 Integrtd Mathmtcs 1 P	407950 - 9 N-03 Integrtd Mathmtcs 2 P	407970 - 6 N-03 Integrtd Mathmtcs 3 P	
		407910 - 3 N-03 Intgrt Mthmtc 1/Modf			407910 - 6 N-03 Intgrt Mthmtc 1/Modf			
CI00053,	AY							
004885,	AY							
004889,	AY			286100 - 1 S-06 Japanese 2 P	286000 - 1 S-06 Japanese 1 P	286200 - 1 S-06 Japanese 3 P		
				286110 - 1 S-06 Japanese 2/Modif	770200 - 114 S-06 Teaching Assistant/Yr	286400 - 1 S-06 Japanese 4 Hon P		
						286500 - 1 S-06 Japanese 5 Lang AP		
004890,	AY							

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Davis Senior High School (T 223 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
011214,	AY	671000 - 1 N-01 US Hist/Modern P		203100 - 1 N-01 AVID 11	665000 - 11 N-01 World Civ/Modern P		671000 - 2 N-01 US Hist/Modern P	
		671600 - 2 N-01 US Hist/Modif		203200 - 1 N-01 AVID 12			671600 - 3 N-01 US Hist/Modif	
		770200 - 56 N-01 Teaching Assistant/Yr						
CS00009,	AY							
011900,	AY				745000 - 4 LRC Study/Trans Skills			
012276,	AY							
004248,	AY							
009035,	AY							
010165,	AY							
012794,	AY							
011851,	AY	211000 - 2 S-07 English 10 P	211000 - 8 S-07 English 10 P	214000 - 8 S-07 Amer Voices P	211400 - 9 S-07 English 10 Hon P	*212300 - 1 P-21 ELD 3	214000 - 6 S-07 Amer Voices P	
		211800 - 7 Eng 10/Modif	770200 - 21 S-07 Teaching Assistant/Yr	214010 - 2 S-07 Amer Voices/Modif	770200 - 64 S-07 Teaching Assistant/Yr	*212400 - 1 P-21 ELD 4		
		770200 - 63 S-07 Teaching Assistant/Yr						
012327,	AY	*214000 - 1 P-21 Amer Voices P	*214000 - 2 P-21 Amer Voices P	*214000 - 3 P-21 Amer Voices P		*212300 - 1 P-21 ELD 3	*215300 - 9 P-21 Amer Lit Hon P	
		*214010 - 4 P-21 Amer Voices/Modif				*212400 - 1 P-21 ELD 4		
						*770200 - 53 P-21 Teaching Assistant/Yr		
005159,	AY	472200 - 1 PA-03 Orch/Chamber P	473000 - 1 PA-03 Orch/Symphony P	472500 - 1 PA-03 Baroque Ensemble P				
012773,	AY							
005174,	AY	562500 - 1 S-05 Biology AP	562500 - 2 S-05 Biology AP	564500 - 1 S-05 Biotechnology P	564500 - 2 S-05 Biotechnology P	564500 - 3 S-05 Biotechnology P		
		770200 - 37 S-05 Teaching Assistant/Yr	770200 - 38 S-05 Teaching Assistant/Yr			770200 - 86 S-05 Teaching Assistant/Yr		
010389,	AY							
009510,	AY							
012552,	AY							
005296,	AY							

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Davis Senior High School (T 223 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
012328,	AY	152300 - 1 A-07 Photography P	152300 - 2 A-07 Photography P			151000 - 1 A-05 GraphicArt/Des P	151000 - 2 A-05 GraphicArt/Des P	151900 - 1 A-05 Video/Film P
		155130 - 4 A-07 Photography/Modif				151010 - 1 A-05 GraphicArt/Des/Modif	151010 - 2 A-05 GraphicArt/Des/Modif	151910 - 1 A-05 Video/Film P/Modif
1002544,	AY							
008749,	AY	295000 - 5 O-07 Span 5 Lang AP		293000 - 9 O-07 Spanish 3 P	292000 - 2 O-07 Spanish 2 P	295000 - 3 O-07 Span 5 Lang AP	292000 - 3 O-07 Spanish 2 P	
						770200 - 84 O-07 Teaching Assistant/Yr		
005427,	AY							
005431,	AY							
011557,	AY							
CS00005,	AY							
011285,	AY							
005495,	AY	665000 - 12 P-13 World Civ/Modern P	672000 - 5 P-13 US Hist/Soc Just P	672000 - 6 P-13 US Hist/Soc Just P		665000 - 13 P-13 World Civ/Modern P	665000 - 14 P-13 World Civ/Modern P	
		665200 - 3 P-13 World Civ/Modif	770200 - 20 P-13 Teaching Assistant/Yr			665200 - 11 World Civ/Modif	665200 - 7 N-07 World Civ/Modif	
		770200 - 19 P-13 Teaching Assistant/Yr						
CS00012,	AY							
005536,	AY		213500 - 1 L-15 Lit/Comp AP	213500 - 2 L-15 Lit/Comp AP	215300 - 3 L-15 Amer Lit Hon P	215300 - 4 L-15 Amer Lit Hon P	215300 - 5 L-15 Amer Lit Hon P	
011341,	AY							
011259,	AY							
012721,	AY							
005613,	AY	*214000 - 1 P-21 Amer Voices P	*214000 - 2 P-21 Amer Voices P	*214000 - 3 P-21 Amer Voices P			*215300 - 9 P-21 Amer Lit Hon P	
		*214010 - 4 P-21 Amer Voices/Modif						
005645,	AY							
011902,	AY							
005684,	AY							
011700,	AY							
009023,	AY							
005736,	AY							
005737,	AY							
009344,	AY							

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Davis Senior High School (T 223 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
005762,	AY		563500 - 1 C-01 Zoology & Botany P		563500 - 2 C-01 Zoology & Botany P	562500 - 3 C-01 Biology AP	563500 - 3 C-01 Zoology & Botany P	562500 - 4 C-01 Biology AP
005779,	AY							
010184,	AY							
1003113,	AY							
009839,	AY					770200 - 8 PA-10 Teaching Assistant/Yr	332000 - 1 PA-10 Stagecraft Prod	
005824,	AY		331500 - 1 S-04 Foods/Nutr/Culnry Arts	331500 - 2 S-04 Foods/Nutr/Culnry Arts	331500 - 3 S-04 Foods/Nutr/Culnry Arts		421000 - 1 S-04 Consumer Math	346000 - 1 S-04 Health
			331510 - 1 S-04 Fds/Ntr/Clnr Arts/Modif	331510 - 2 S-04 Fds/Ntr/Clnr Arts/Modif			421010 - 1 S-04 Consumer Math/Modif	346010 - 1 S-04 Health/Modif
							770200 - 46 S-04 Teaching Assistant/Yr	
009131,	AY	215300 - 1 P-20 Amer Lit Hon P		215300 - 2 P-20 Amer Lit Hon P		218200 - 3 P-20 English 12 P	218200 - 4 P-20 English 12 P	
		770200 - 81 P-20 Teaching Assistant/Yr		770200 - 68 P-20 Teaching Assistant/Yr		218210 - 4 P-20 English 12/Modif	770200 - 69 P-20 Teaching Assistant/Yr	
005922,	AY							
005951,	AY							
008819,	AY							
005961,	AY							
008495,	AY							
005999,	AY							
006003,	AY							
009656,	AY							
009106,	AY	*407980 - 5 N-10 Acclrt Intgrt Math 3 P	*407950 - 7 N-10 Integrtd Mathmtcs 2 P	*407970 - 9 N-10 Integrtd Mathmtcs 3 P	*407980 - 6 N-10 Acclrt Intgrt Math 3 P		*407980 - 7 N-10 Acclrt Intgrt Math 3 P	
		*770200 - 98 N-10 Teaching Assistant/Yr		*770200 - 104 N-10 Teaching Assistant/Yr				
008747,	AY					745000 - 5 LRC Study/Trans Skills	764000 - 6 T-07 Educ/Fund	
						770200 - 123 LRC Teaching Assistant/Yr		

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Davis Senior High School (T 223 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
006139,	AY	683000 - 1 P-10 US Govt/Pol AP	683000 - 3 P-10 US Govt/Pol AP	681100 - 2 P-10 US Govt/Pol P	681100 - 3 P-10 US Govt/Pol P	681100 - 12 P-10 US Govt/Pol P		
		683000 - 2 P-10 US Govt/Pol AP	681100 - 1 P-10 US Govt/Pol P	681500 - 9 P-10 US Govt/Modif	681500 - 6 P-10 US Govt/Modif	681500 - 5 P-10 US Govt/Modif		
		770200 - 24 P-10 Teaching Assistant/Yr	681500 - 10 P-10 US Govt/Modif	683000 - 4 P-10 US Govt/Pol AP	683000 - 5 P-10 US Govt/Pol AP	683000 - 6 P-10 US Govt/Pol AP		
			770200 - 118 Teaching Assistant/Yr		770200 - 90 P-10 Teaching Assistant/Yr	770200 - 122 Teaching Assistant/Yr		
006143,	AY							
006191,	AY			745000 - 3 LRC Study/Trans Skills				
006202,	AY	621000 - 1 S-12 Physics Honors P	621000 - 2 S-12 Physics Honors P		625000 - 1 S-12 Physics AP	625000 - 2 S-12 Physics AP	621000 - 3 S-12 Physics Honors P	
					770200 - 70 S-12 Teaching Assistant/Yr		770200 - 55 S-12 Teaching Assistant/Yr	
011542,	AY							
012222,	AY							
006364,	AY	416700 - 3 N-05 Statistics AP		407800 - 1 N-05 Common Core Math 3	416700 - 1 N-05 Statistics AP	407990 - 1 N-05 EAP Senr Year Math (ESM P	416700 - 2 N-05 Statistics AP	
				407810 - 2 N-05 Cmmn Core Math 3/Md		407995 - 1 N-05 EAP Senir Year Mthmt		
						770200 - 28 N-05 Teaching Assistant/Yr		
008617,	AY							
006760,	AY	770060 - 1 NorthDv Peer Tutor Yr	770060 - 2 NorthDv Peer Tutor Yr	770060 - 3 NorthDv Peer Tutor Yr	770060 - 4 NorthDv Peer Tutor Yr	770060 - 5 NorthDv Peer Tutor Yr		770060 - 6 NorthDv Peer Tutor Yr
006410,	AY							
006420,	AY							
011244,	AY							
011762,	AY							
013009,	AY							
011907,	AY							
011530,	AY							
011882,	AY		141300 - 2 A-06 Ceramics/Sculpt P	152300 - 3 A-07 Photography P	145300 - 1 A-07 AP Studio Art 2-D	145300 - 2 A-07 AP Studio Art 2-D	152300 - 4 A-07 Photography P	152300 - 5 A-07 Photography P
			141310 - 2 A-06 Ceramics/Sculpt Modif	155130 - 1 A-07 Photography/Modif			155130 - 2 A-07 Photography/Modif	155130 - 3 A-07 Photography/Modif
			770200 - 120 A-06 Teaching Assistant/Yr				770200 - 109 A-07 Teaching Assistant/Yr	

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Davis Senior High School (T 223 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
006525,	AY	614500 - 1 S-10 Chem/Comm P	614500 - 2 S-10 Chem/Comm P	563500 - 4 S-10 Zoology & Botany P		563500 - 5 S-10 Zoology & Botany P	614500 - 3 S-10 Chem/Comm P	
		770200 - 39 S-10 Teaching Assistant/Yr	614501 - 1 S-10 Chem/Comm/Mod			770200 - 108 S-10 Teaching Assistant/Yr	614501 - 2 S-10 Chem/Comm/Mod	
010336,	AY							
011461,	AY							
011846,	AY	407950 - 6 N-12 Integrtd Mathmtcs 2 P	417100 - 3 N-12 Precalculus P	*407980 - 3 N-12 Acclrt Intgrt Math 3 P	417100 - 4 N-12 Precalculus P	407980 - 4 N-12 Acclrt Intgrt Math 3 P	407980 - 8 N-12 Acclrt Intgrt Math 3 P	
					770200 - 73 N-12 Teaching Assistant/Yr			
C10082,	AY							
006595,	AY							
009842,	AY							
011854,	AY							
006676,	AY							
012252,	AY							
011050,	AY	763530 - 1 C-04 Peer Helper	744000 - 1 C-04 Transition Skills	763530 - 3 C-04 Peer Helper	763530 - 4 C-04 Peer Helper	763530 - 5 C-04 Peer Helper	763530 - 6 C-04 Peer Helper	744000 - 3 C-04 Transition Skills
			763530 - 2 C-04 Peer Helper					763530 - 7 C-04 Peer Helper
006788,	AY							
010414,	AY							
010878,	AY				465000 - 1 PA-03 Jazz Band P	461500 - 1 PA-03 Symphonic Band P	460500 - 1 PA-03 Concert Band P	
012511,	AY							
006860,	AY	745850 - 1 L-21 Essential Writing	745850 - 2 L-21 Essential Writing	745850 - 3 L-21 Essential Writing	745750 - 1 L-21 Reading Foundation	745750 - 2 L-21 Reading Foundation		
006901,	AY							
006911,	AY							
006923,	AY	745000 - 1 LRC Study/Trans Skills	745000 - 2 LRC Study/Trans Skills					517200 - 1 Weight Athletics Strngth/C Fall
006958,	AY							
006984,	AY							
007014,	AY							
011978,	AY							
A223,	AY							
B223,	AY							

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Grid Master Schedule

Davis Senior High School (T 223 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
C223,	AY							
D223,	AY							
E223,	AY							
F223,	AY							
G223,	AY							
H223,	AY							
I223,	AY							
J223,	AY							
K223,	AY							
L223,	AY							
M223,	AY							
N223,	AY							
O223,	AY							
P223,	AY	810100 - 1 Free 1st	810102 - 1 Free 2nd Per Fall			810500 - 1 Free 5th	810600 - 1 Free 6th	810700 - 1 Free 7th
			810202 - 1 Free 2nd Per Sprng					
Q223,	AY							
R223,	AY							
S223,	AY							
T223,	AY							
U223,	AY							
Z223,	AY							
V223,	AY							
W223,	AY							
X223,	AY							
Y223,	AY							
007043,	AY	696300 - 1 L-24 Microeconomics AP	683000 - 10 L-24 US Govt/Pol AP	683000 - 11 L-24 US Govt/Pol AP	696100 - 8 L-24 Economics P	696300 - 2 L-24 Microeconomics AP		
		696100 - 7 L-24 Economics P	696350 - 1 L-24 Macroeconomics AP	696350 - 2 L-24 Macroeconomics AP	696100 - 9 L-24 Economics P	696100 - 17 L-24 Economics P		
					696101 - 4 L-24 Economics/Modif	696101 - 3 L-24 Economics/Modif		
012380,	AY							
008300,	AY							
012045,	AY							

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Grid Master Schedule

Davis Senior High School (T 223 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
011648,	AY							
012285,	AY							
009475,	AY		665000 - 16 L-22 World Civ/Modern P	696100 - 11 L-22 Economics P	665000 - 15 L-22 World Civ/Modern P	696100 - 12 L-22 Economics P		665000 - 17 L-22 World Civ/Modern P
			665200 - 4 L-22 World Civ/Modif	683000 - 8 L-22 US Govt/Pol AP	665200 - 13 L-22 World Civ/Modif	683000 - 9 L-22 US Govt/Pol AP		665200 - 10 L-22 World Civ/Modif
					770200 - 113 L-22 Teaching Assistant/Yr	770200 - 36 L-22 Teaching Assistant/Yr		
1000956,	AY							
008515,	AY		294500 - 7 O-05 Span 4 Hon P	295000 - 1 O-05 Span 5 Lang AP	294500 - 4 O-05 Span 4 Hon P		295000 - 4 O-05 Span 5 Lang AP	294500 - 9 O-05 Span 4 Hon P
				770200 - 71 O-05 Teaching Assistant/Yr			770200 - 72 O-05 Teaching Assistant/Yr	
007244,	AY							
007269,	AY							
007321,	AY							
009107,	AY		365000 - 1 O-03 Basic Auto Yr	390000 - 1 O-03 Advanced Auto Tech	390000 - 2 O-03 Advanced Auto Tech		365000 - 2 O-03 Basic Auto Yr	365000 - 3 O-03 Basic Auto Yr
			770200 - 54 O-03 Teaching Assistant/Yr	392000 - 1 O-03 Advanced Auto Tech	392000 - 1 O-03 Advanced Auto Tech			365010 - 1 O-03 Basic Auto Yr/Modif
					770200 - 9 O-03 Teaching Assistant/Yr			
C100011,	AY							
007366,	AY	272000 - 1 O-04 German 2 P						
		273000 - 1 O-04 German 3 P						
		770200 - 112 O-04 Teaching Assistant/Yr						
007368,	AY							
007488,	AY							
007494,	AY	513000 - 1 Dance Dance, Intro	513000 - 2 Dance Dance, Intro	513000 - 3 Dance Dance, Intro	514000 - 1 Dance Dance/Inter/Adv P			
		770200 - 111 Dance Teaching Assistant/Yr		513010 - 1 Dance Dance, Intro/Modif				
011627,	AY							
007612,	AY	616000 - 1 S-09 Chemistry Honors P	616000 - 4 S-09 Chemistry Honors P	616000 - 2 S-09 Chemistry Honors P	616000 - 3 S-09 Chemistry Honors P		617000 - 1 S-09 Chemistry AP	617000 - 2 S-09 Chemistry AP
			770200 - 117 Teaching Assistant/Yr					

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Davis Senior High School (T 223 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
010620,	AY	217400 - 1 ASC100 British Lit P	217400 - 2 ASC100 British Lit P	217400 - 5 ASC100 British Lit P	694000 - 1 ASC100 Student Govt			
		770200 - 121 ASC100 Teaching Assistant/Yr	770200 - 119 ASC100 Teaching Assistant/Yr	770200 - 97 ASC100 Teaching Assistant/Yr				
012896,	AY							
007652,	AY							
008640,	AY							
011475,	AY	251000 - 1 P-22 Chinese 1 P	252000 - 1 P-22 Chinese 2 P					
		253000 - 1 P-22 Chinese 3 P	254000 - 1 P-22 Chinese 4 Hon P					
		770200 - 16 P-22 Teaching Assistant/Yr	770200 - 17 P-22 Teaching Assistant/Yr					
007879,	AY							
012340,	AY			621000 - 4 S-11 Physics Honors P	621000 - 5 S-11 Physics Honors P	621000 - 6 S-11 Physics Honors P	620000 - 3 S-11 Physics P	621000 - 7 S-11 Physics Honors P
					770200 - 65 S-11 Teaching Assistant/Yr			
010350,	AY	215300 - 7 P-23 Amer Lit Hon P	211111 - 1 P-23 ACES 11 - 12	242110 - 1 P-23 Spech and Debat 1 P	214000 - 4 P-23 Amer Voices P	215300 - 8 P-23 Amer Lit Hon P		
			770200 - 12 P-23 Teaching Assistant/Yr	242120 - 1 P-23 Spch and Debt 1/Md	770200 - 13 P-23 Teaching Assistant/Yr			
				243110 - 1 P-23 Discussion/Debate 2				
				770200 - 134 Teaching Assistant/Yr				
008471,	AY		765000 - 1 L-28 Yearbook	215300 - 6 L-28 Amer Lit Hon P	234600 - 1 L-28 Multimed Journlsm 2 P	234500 - 1 L-28 Multimed Journlsm 1 P		
					770200 - 29 L-28 Teaching Assistant/Yr	234600 - 2 L-28 Multimed Journlsm 2 P		
008046,	AY	674000 - 1 P-14 US History AP	672000 - 7 P-14 US Hist/Soc Just P		671000 - 3 P-14 US Hist/Modern P	672000 - 8 P-14 US Hist/Soc Just P	672000 - 9 P-14 US Hist/Soc Just P	
		770200 - 75 P-14 Teaching Assistant/Yr			770200 - 80 P-14 Teaching Assistant/Yr			
008712,	AY							

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Grid Master Schedule

Davis Senior High School (T 223 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
008059,	AY	665000 - 18 L-20 World Civ/Modern P	681100 - 4 L-20 US Govt/Pol P	681100 - 5 L-20 US Govt/Pol P	665000 - 19 L-20 World Civ/Modern P		681100 - 6 L-20 US Govt/Pol P	
		770200 - 35 L-20 Teaching Assistant/Yr	681500 - 7 L-20 US Govt/Modif	681500 - 8 L-20 US Govt/Modif			681500 - 4 L-20 US Govt/Modif	
			696100 - 13 L-20 Economics P	696100 - 15 L-20 Economics P			696100 - 16 L-20 Economics P	
				696101 - 8 L-20 Economics/Modif			696101 - 6 L-20 Economics/Modif	
				770200 - 51 L-20 Teaching Assistant/Yr			770200 - 52 L-20 Teaching Assistant/Yr	
012769,	AY		615000 - 7 S-02 Chemistry P		611400 - 1 S-02 Earth/Phys Science P	611400 - 2 S-02 Earth/Phys Science P	615000 - 8 S-02 Chemistry P	615000 - 9 S-02 Chemistry P
			770200 - 127 Teaching Assistant/Yr		611410 - 4 S-02 Earth/Phys Scienc/Mdf	611410 - 5 S-02 Earth/Phys Scienc/Mdf	770200 - 128 Teaching Assistant/Yr	
009409,	AY							
008201,	AY	146700 - 1 A-03 Art History AP	146700 - 2 A-03 Art History AP	146700 - 3 A-03 Art History AP	145310 - 1 A-06 AP Studio Art 3-D	146700 - 4 A-03 Art History AP		
					770200 - 32 A-06 Teaching Assistant/Yr			
012819,	AY							
008267,	AY							
008291,	AY							
012426,	AY							
008718,	AY							
008348,	AY	482000 - 1 PA-08 Jazz Choir P						
008351,	AY							
ZDO0001,	AY							

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Grid Master Schedule

Emerson Junior High School (T 221 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
009841,	AY							
011540,	AY							
009736,	AY							
012753,	AY							
008808,	AY					291000 - 4 IDC1 Spanish 1 P	292000 - 4 IDC1 Spanish 2 P	291000 - 5 IDC1 Spanish 1 P
012764,	AY							
010370,	AY	407600 - 1 C-11 Common Core Math 2		408050 - 2 Tech Math Clinic-CC2/3	407600 - 4 Tech Common Core Math 2		407600 - 7 Tech Common Core Math 2	
				408052 - 1 Tech Math Clinic-CC2/3				
				408050 - 3 Tech Math Clinic-CC2/3				
				408052 - 2 Tech Math Clinic-CC2/3				
				408050 - 4 Tech Math Clinic-CC2/3				
				408052 - 3 Tech Math Clinic-CC2/3				
				408050 - 5 Tech Math Clinic-CC2/3				
				408052 - 4 Tech Math Clinic-CC2/3				
				408050 - 1 Tech Math Clinic-CC2/3				
011534,	AY							
012341,	AY	552500 - 1 Wood SAVE	552520 - 1 Wood SAVE		552500 - 3 Wood SAVE			
		552500 - 2 Wood SAVE						
		552575 - 1 Wood SAVE/Modif						
000576,	AY							
000583,	AY							
000607,	AY							
000699,	AY			407800 - 2 C-10 Common Core Math 3	407700 - 2 C-10 Commn Core Math 2/3	407800 - 1 C-10 Common Core Math 3	407800 - 3 C-10 Common Core Math 3	407800 - 4 C-10 Common Core Math 3
011981,	AY							
011010,	AY							
CI00055,	AY							

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Grid Master Schedule

Emerson Junior High School (T 221 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
000942,	AY		454300 - 1 Music Orchestra	454000 - 1 Music Orchestra P				
001101,	AY							
010449,	AY							
001123,	AY							
009262,	AY							
009660,	AY	745000 - 5 A-8 Study/Trans Skills			745000 - 2 A-8 Study/Trans Skills	745000 - 3 A-8 Study/Trans Skills	745000 - 4 A-8 Study/Trans Skills	
006360,	AY							
005236,	AY							
011476,	AY	207100 - 4 S-3 Eng 7 - Lit/Writing	611500 - 2 S-3 Earth/Phys Science P	407600 - 3 S-3 Common Core Math 2	209000 - 4 S-3 English 9 P	745000 - 1 S-3 Study/Trans Skills	557000 - 4 S-3 Science 7	
		346000 - 9 S-3 Health		407610 - 1 Cmmn Core Math 2/Md				
				407800 - 5 Common Core Math 3				
009894,	AY							
001412,	AY							
009266,	AY							
012155,	AY							
001736,	AY	657500 - 2 A-7 Soc Studies 7 Imm	294700 - 1 A-7 Span Intr 1H P (ACT	294700 - 2 A-7 Span Intr 1H P (ACT	293000 - 1 A-7 Spanish 3 P		657500 - 1 A-7 Soc Studies 7 Imm	
					770000 - 6 A-7 Teaching Assistant			
C100029,	AY							
017285,	AY			710520 - 2 A-8 Math General				
001839,	AY			*208000 - 2 A-5 English 8	*770000 - 11 A-5 Teaching Assistant	*208000 - 1 A-5 English 8	*262000 - 1 A-5 French 2 P	*208000 - 3 A-5 English 8
					*261300 - 1 A-5 French 1 P			
011928,	AY							
011539,	AY							
001893,	AY							
1000957,	AY							
012946,	AY							
011487,	AY							

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Grid Master Schedule

Emerson Junior High School (T 221 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
011563,	AY	659000 - 1 IDC1 World Geography P	659000 - 3 IDC1 World Geography P	166000 - 1 IDC1 Computer Arts 7	659000 - 5 IDC1 World Geography P		207550 - 3 C-9 Eng 7 AIM	
		659950 - 1 World Geog/Modif	659000 - 4 IDC1 World Geography P	166000 - 2 IDC1 Computer Arts 7				
		659000 - 2 IDC1 World Geography P	770000 - 18 Teaching Assistant	166000 - 3 IDC1 Computer Arts 7				
				166000 - 4 IDC1 Computer Arts 7				
				770000 - 3 IDC1 Teaching Assistant				
009086,	AY		291000 - 2 S-4 Spanish 1 P		294900 - 1 S-4 Span Intr 2H P (ACT	293700 - 2 S-4 Span E-In Trns P (ACT	294900 - 2 S-4 Span Intr 2H P (ACT	293700 - 1 S-4 Span E-In Trns P (ACT
012313,	AY							
002079,	AY							
002194,	AY		509000 - 1 Gym Phys Ed 9 Year	508000 - 7 Gym Phys Ed 8 Year	509000 - 3 Gym Phys Ed 9 Year	509000 - 2 Gym Phys Ed 9 Year	770000 - 12 Teaching Assistant	509000 - 4 Gym Phys Ed 9 Year
							509000 - 5 Gym Phys Ed 9 Year	
011844,	AY							
010439,	AY							
010711,	AY							
002319,	AY							
002500,	AY							
002545,	AY							
002551,	AY							
012942,	AY							
002667,	AY							
012672,	AY							
009281,	AY							
C100052,	AY							
002893,	AY	407700 - 1 C-13 Commn Core Math 2/3	407600 - 2 C-13 Common Core Math 2		407900 - 1 C-13 Integrtd Mathmtcs 1 P		407600 - 5 C-13 Common Core Math 2	407600 - 6 C-13 Common Core Math 2
009879,	AY							
012571,	AY							

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Emerson Junior High School (T 221 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
003075,	AY	346000 - 1 C-14 Health	346000 - 3 C-14 Health	344500 - 1 C-14 Health 7	346000 - 5 C-14 Health	346000 - 6 C-14 Health	346000 - 8 C-14 Health	346000 - 7 C-14 Health
		346000 - 2 C-14 Health	346000 - 4 C-14 Health	344500 - 2 C-14 Health 7				
		346010 - 1 Health/Modif		344500 - 3 C-14 Health 7				
				344500 - 4 C-14 Health 7				
011668,	AY							
003189,	AY							
003233,	AY							
010904,	AY							
010931,	AY	770000 - 2 Gym Teaching Assistant		507000 - 3 Gym Phys Ed 7 Year	508000 - 4 Gym Phys Ed 8 Year	508000 - 5 Gym Phys Ed 8 Year	770000 - 8 Gym Teaching Assistant	
		507000 - 7 Gym Phys Ed 7 Year			770000 - 10 Gym Teaching Assistant	508010 - 1 Gym Phys Ed 8 Year/Modif	770000 - 23 Teaching Assistant	
							507000 - 5 Gym Phys Ed 7 Year	
003276,	AY							
CI00052,	AY							
003436,	AY							
003554,	AY	658510 - 1 A-4 Am Studies Hist 8	658510 - 2 A-4 Am Studies Hist 8	770000 - 22 Teaching Assistant		658000 - 2 A-4 United States	658000 - 3 A-4 United States	
				658000 - 1 A-4 United States			770000 - 7 A-4 Teaching Assistant	
012375,	AY							
C100046,	AY							
003596,	AY							
010472,	AY							
003708,	AY							
009605,	AY							
011926,	AY							
012336,	AY							
009324,	AY							
003901,	AY				694550 - 1 B-4 Leadership/Modif			

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Grid Master Schedule

Emerson Junior High School (T 221 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
003987,	AY	209000 - 1 A-2 English 9 P	209000 - 2 A-2 English 9 P		209000 - 3 A-2 English 9 P	209600 - 2 A-2 English 9/Human P		770000 - 25 Teaching Assistant
					209950 - 1 English 9/Modif			209600 - 1 A-2 English 9/Human P
011338,	AY							
008172,	AY							
011160,	AY				*694500 - 1 B-4 Leadership			
CI00004,	AY							
CS00002,	AY							
008625,	AY							
009944,	AY							
011659,	AY							
011444,	AY							
009503,	AY							
CS00014,	AY							
011200,	AY							
010988,	AY	*743000 - 1 IDC2 Comm Instruction	*745150 - 1 IDC2 Math Fund		*745000 - 7 IDC2 Study/Trans Skills	*745000 - 6 IDC2 Study/Trans Skills	*743300 - 1 IDC2 Comm Inst Reading	
011015,	AY							
010714,	AY							
009201,	AY							
011491,	AY							
004686,	AY							
010836,	AY							
008478,	AY	433000 - 1 Tech Comp Prog/Robots	407950 - 1 C-11 Integrtd Mathmtcs 2 P	407900 - 2 C-11 Integrtd Mathmtcs 1 P		407900 - 3 C-11 Integrtd Mathmtcs 1 P	407900 - 4 C-11 Integrtd Mathmtcs 1 P	
		433000 - 2 Tech Comp Prog/Robots						
011465,	AY	761100 - 1 Library Assistant	761100 - 2 Library Assistant	761100 - 3 Library Assistant	761100 - 4 Library Assistant	761100 - 5 Library Assistant	761100 - 6 Library Assistant	761100 - 7 Library Assistant
		761100 - 8 Library Assistant	761100 - 9 Library Assistant	761100 - 10 Library Assistant	761100 - 11 Library Assistant	761100 - 12 Library Assistant	761100 - 13 Library Assistant	761100 - 14 Library Assistant
CI00053,	AY							
004885,	AY							
004248,	AY							

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Grid Master Schedule

Emerson Junior High School (T 221 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
011680,	AY	508000 - 1 Gym Phys Ed 8 Year	508000 - 2 Gym Phys Ed 8 Year	508000 - 6 Gym Phys Ed 8 Year			770000 - 21 Gym Teaching Assistant	509000 - 6 Gym Phys Ed 9 Year
		770000 - 9 Gym Teaching Assistant					508000 - 3 Gym Phys Ed 8 Year	
009510,	AY							
005323,	AY			557550 - 1 C-8 Sci 7 AIM		557000 - 1 C-8 Science 7	557000 - 2 C-8 Science 7	557550 - 2 C-8 Sci 7 AIM
010048,	AY							
CS00012,	AY							
009972,	AY							
005645,	AY							
136068,	AY							
011700,	AY							
009023,	AY							
005736,	AY							
005779,	AY							
010184,	AY							
011853,	AY							
005922,	AY							
005951,	AY							
005961,	AY							
008495,	AY							
005999,	AY							
006013,	AY							
006143,	AY							
011542,	AY							
008617,	AY							
006420,	AY							
011244,	AY							
013009,	AY							
006471,	AY							
010336,	AY							
011644,	AY							
012791,	AY							
011854,	AY							

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Emerson Junior High School (T 221 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
010899,	AY	561000 - 1 S-2 Biology P	611410 - 2 Earth/Phys Scienc/Mdf	561000 - 2 S-2 Biology P		561000 - 3 S-2 Biology P	561000 - 4 S-2 Biology P	557000 - 3 S-2 Science 7
			611500 - 1 S-2 Earth/Phys Science P					
011362,	AY							
012821,	AY							
006848,	AY	558100 - 1 S-1 Science 8	558100 - 2 S-1 Science 8		558100 - 3 S-1 Science 8		558100 - 4 S-1 Science 8	558100 - 5 S-1 Science 8
								558175 - 1 S-1 Science 8/Modif
008934,	AY	131100 - 2 Art Art Survey		130000 - 1 Art Exploring Art 7	131100 - 3 Art Art Survey	140000 - 1 Art Art 1 P	770000 - 13 Art Teaching Assistant	140000 - 3 Art Art 1 P
		131600 - 1 Art Art/Ceramics		130000 - 2 Art Exploring Art 7	131600 - 2 Art Art/Ceramics		140000 - 2 Art Art 1 P	
				130000 - 3 Art Exploring Art 7	770000 - 14 Art Teaching Assistant			
				130000 - 4 Art Exploring Art 7	131100 - 1 Art Art Survey			
				770000 - 1 Art Teaching Assistant	131105 - 1 Art Art Survey/Modif			
006984,	AY							
006994,	AY	770000 - 5 A-3 Teaching Assistant	207550 - 2 A-3 Eng 7 AIM	760025 - 1 A-3 Skills	207100 - 2 A-3 Eng 7 - Lit/Writing	207100 - 3 A-3 Eng 7 - Lit/Writing	207550 - 1 A-3 Eng 7 AIM	
		207100 - 1 A-3 Eng 7 - Lit/Writing		760025 - 2 A-3 Skills			770000 - 4 A-3 Teaching Assistant	
				760025 - 3 A-3 Skills				
				760025 - 4 A-3 Skills				
011978,	AY							
A221,	AY							
B221,	AY							
C221,	AY							
D221,	AY	407980 - 1 C-11 Acclrt Intgrt Math 3 P						
E221,	AY							
F221,	AY							
G221,	AY							
H221,	AY							
I221,	AY							

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Grid Master Schedule

Emerson Junior High School (T 221 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
J221,	AY							
K221,	AY							
L221,	AY							
M221,	AY							
N221,	AY							
O221,	AY							
P221,	AY							
Q221,	AY							
R221,	AY							
S221,	AY							
T221,	AY	263000 - 1 Comp French 3 P						
		286000 - 1 Comp Japanese 1 P						
		294500 - 1 Comp Span 4 Hon P						
		561400 - 1 Comp Biology/IntAg P						
U221,	AY							
V221,	AY							
W221,	AY							
X221,	AY							
Y221,	AY							

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Emerson Junior High School (T 221 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
Z221,	AY	Z24350 - 1 B-4 Res Com	Z76560 - 3 Office Assist	Z76560 - 5 Office Assist	Z76560 - 7 Office Assist	Z76560 - 9 Office Assist	Z65900 - 2 B-2 World Geography P	Z76560 - 13 Office Assist
		Z76560 - 1 Office Assist	Z76560 - 4 Office Assist	Z76560 - 6 Office Assist	Z76560 - 8 Office Assist	Z65900 - 1 B-3 World Geography P	Z76560 - 11 Office Assist	Z65900 - 3 B-2 World Geography P
		Z76560 - 2 Office Assist	231220 - 1 B-1 Publications	Z20900 - 2 B-1 English 9 P	Z20710 - 1 C-12 Eng 7 - Lit/Writing	Z76560 - 10 Office Assist	Z76560 - 12 Office Assist	Z76560 - 14 Office Assist
		Z20900 - 1 B-1 English 9 P	Z40780 - 1 B-6 Common Core Math 3	Z24300 - 1 B-4 Res Com/Yr	Z20900 - 3 B-1 English 9 P	Z20710 - 2 C-12 Eng 7 - Lit/Writing	Z20710 - 3 C-12 Eng 7 - Lit/Writing	Z20800 - 3 B-3 English 8
		Z40770 - 1 B-7 Commn Core Math 2/3	Z40795 - 1 B-7 Integrtd Mathmtcs 2 P	Z40780 - 2 B-6 Common Core Math 3	Z40760 - 1 B-6 Common Core Math 2	Z20800 - 1 B-1 English 8	Z20800 - 2 B-3 English 8	Z24300 - 2 B-4 Res Com/Yr
		Z40780 - 3 B-6 Common Core Math 3	Z55700 - 2 C-12 Science 7	Z40790 - 1 B-7 Integrtd Mathmtcs 1 P	Z55810 - 1 B-5 Science 8	Z40760 - 2 B-6 Common Core Math 2	Z24300 - 3 B-4 Res Com/Yr	Z24550 - 1 C-12 Drama P
		Z55700 - 1 C-12 Science 7	Z56100 - 2 B-5 Biology P	Z55700 - 3 C-12 Science 7	Z65700 - 3 B-3 Social Studies 7	Z65800 - 3 B-2 United States	Z40760 - 3 B-6 Common Core Math 2	Z40760 - 4 B-6 Common Core Math 2
		Z56100 - 1 B-5 Biology P	Z65700 - 2 B-3 Social Studies 7	Z56100 - 3 B-5 Biology P	Z74500 - 1 IDC2 Study/Trans Skills	Z74500 - 2 B-8 Study/Trans Skills	Z40790 - 2 B-7 Integrtd Mathmtcs 1 P	Z40790 - 3 B-7 Integrtd Mathmtcs 1 P
		Z65700 - 1 B-3 Social Studies 7	Z65800 - 2 B-2 United States	Z74500 - 3 B-8 Study/Trans Skills			Z55810 - 3 B-5 Science 8	Z55810 - 2 B-5 Science 8
		Z65800 - 1 B-2 United States	Z74500 - 5 B-8 Study/Trans Skills					
		Z74500 - 4 B-8 Study/Trans Skills						
011648,	AY							
012774,	AY							
1000956,	AY							
007315,	AY	770000 - 15 Gym Teaching Assistant	770000 - 20 Teaching Assistant	763530 - 1 S-4 Peer Helper		507000 - 4 Gym Phys Ed 7 Year		770000 - 24 Teaching Assistant
		770000 - 19 Gym Teaching Assistant	507000 - 2 Gym Phys Ed 7 Year					507000 - 6 Gym Phys Ed 7 Year
		507000 - 1 Gym Phys Ed 7 Year						
007329,	AY		657000 - 1 A-6 Social Studies 7		657000 - 2 A-6 Social Studies 7	657550 - 1 A-6 Soc Stud 7 AIM	212000 - 1 A-6 ELD	657000 - 3 A-6 Social Studies 7
007368,	AY	755500 - 1 Office Asst	755500 - 2 Office Asst	755500 - 3 Office Asst	755500 - 4 Office Asst	755500 - 5 Office Asst	755500 - 6 Office Asst	755500 - 7 Office Asst
		810100 - 2 Free 1st	810102 - 1 Free 2nd Per Fall	755500 - 10 Office Asst	755500 - 11 Office Asst	755500 - 12 Office Asst	755500 - 13 Office Asst	755500 - 14 Office Asst
		755500 - 8_ Office Asst	755500 - 9 Office Asst	*208000 - 2 A-5 English 8	*261300 - 1 A-5 French 1 P	*208000 - 1 A-5 English 8	*262000 - 1 A-5 French 2 P	*208000 - 3 A-5 English 8
		810100 - 1 Free 1st	810202 - 1 Free 2nd Per Sprng					810700 - 1 Free 7th
C100067,	AY							

* - Not the teacher of record. Class was previously taught by this teacher.

Grid Master Schedule

Emerson Junior High School (T 221 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
011158,	AY				452000 - 1 Music Intermediate Band	460500 - 1 Music Concert Band P	465000 - 1 Music Jazz Band P	450500 - 1 Music Beginning Chorus
								480200 - 1 Music Concert Choir P
007635,	AY							
007716,	AY							
013050,	AY							
012770,	AY	291000 - 1 C-9 Spanish 1 P	292000 - 1 C-9 Spanish 2 P	292000 - 2 C-9 Spanish 2 P	291000 - 3 C-9 Spanish 1 P	292000 - 3 C-9 Spanish 2 P		
					770000 - 16 C-9 Teaching Assistant			
009643,	AY							
008712,	AY							
009409,	AY							
008131,	AY		202800 - 1 A-1 AVID 8	202900 - 1 A-1 AVID 9	208510 - 2 A-1 Amer Studies Eng 8		205251 - 1 A-1 Reading Lab	208510 - 1 A-1 Amer Studies Eng 8
								770000 - 17 A-1 Teaching Assistant
008237,	AY							
008291,	AY							
012426,	AY							
008718,	AY							
008351,	AY							
ZDO0001,	AY							

* - Not the teacher of record. Class was previously taught by this teacher.

Grid Master Schedule

Harper Junior High School (T 220 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
009841,	AY							
009736,	AY							
C100038,	AY							
012753,	AY							
004299,	AY				131600 - 1 A-3 Art/Ceramics	141300 - 1 A-3 Ceramics/Sculpt P	140000 - 1 A-3 Art 1 P	
					130500 - 1 A-3 Art Craft 7/8			
009904,	AY							
013079,	AY							
011534,	AY							
000607,	AY							
009537,	AY	611500 - 1 G-43 Earth/Phys Science P	611500 - 2 G-43 Earth/Phys Science P	558100 - 1 G-43 Science 8		558100 - 3 G-43 Science 8	770000 - 24 G-43 Teaching Assistant	558100 - 4 G-43 Science 8
							770000 - 51 G-43 Teaching Assistant	
							558100 - 2 G-43 Science 8	
009391,	AY							
011981,	AY							
010696,	AY							
000778,	AY	407600 - 1 E-34 Common Core Math 2	407700 - 1 E-34 Commn Core Math 2/3	407700 - 2 E-34 Commn Core Math 2/3	407600 - 4 E-34 Common Core Math 2		760025 - 1 A-4 Skills	760025 - 5 A-4 Skills
		407610 - 1 A-4 Cmmn Core Math 2/Md					760025 - 2 A-4 Skills	760025 - 6 A-4 Skills
							770000 - 35 A-4 Teaching Assistant	770000 - 22 A-4 Teaching Assistant
							760025 - 3 A-4 Skills	552500 - 1 A-4 SAVE
							760025 - 4 A-4 Skills	770000 - 40 A-4 Teaching Assistant
011754,	AY							
009699,	AY							
009212,	AY							
009848,	AY							
CI00055,	AY							
000942,	AY						454000 - 1 C-16 Orchestra P	454300 - 1 C-16 Orchestra

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Harper Junior High School (T 220 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
010487,	AY					*770000 - 52 J-55 Teaching Assistant		205000 - 5 J-55 Reading
010449,	AY							
009262,	AY							
012775,	AY							
006360,	AY							
001375,	AY							
001412,	AY							
009266,	AY							
001444,	AY							
012844,	AY							
001492,	AY							
011147,	AY	205000 - 4 J-55 Reading	745000 - 1 J-55 Study/Trans Skills	710520 - 1 J-55 Math General		745000 - 2 J-55 Study/Trans Skills		
		745000 - 9 J-55 Study/Trans Skills						
010625,	AY	407900 - 1 F-39 Integrtd Mathmtcs 1 P	770000 - 38 F-39 Teaching Assistant	407900 - 4 F-39 Integrtd Mathmtcs 1 P	770000 - 19 F-39 Teaching Assistant	407900 - 3 F-39 Integrtd Mathmtcs 1 P		407900 - 2 F-39 Integrtd Mathmtcs 1 P
			408070 - 1 F-39 Math Clinic-CC3		770000 - 48 F-39 Teaching Assistant			
					407900 - 5 F-39 Integrtd Mathmtcs 1 P			
011911,	AY							
C100069,	AY							
001899,	AY	770000 - 15 G-46 Teaching Assistant		557550 - 1 G-46 Sci 7 AIM	557550 - 2 G-46 Sci 7 AIM			
		558100 - 5 G-46 Science 8						
012645,	AY							
1000957,	AY							
008845,	AY							
002006,	AY							
012360,	AY	208000 - 2 L-67 English 8	207100 - 1 L-67 Eng 7 - Lit/Writing		208000 - 4 L-67 English 8	207550 - 1 L-67 Eng 7 AIM		770000 - 39 L-67 Teaching Assistant
								207550 - 2 L-67 Eng 7 AIM
011715,	AY							
002079,	AY							

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Harper Junior High School (T 220 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
010711,	AY							
011860,	AY							
011283,	AY							
009651,	AY							
010619,	AY	407950 - 1 G-44 Integrtd Mathmtcs 2 P		407600 - 7 G-44 Common Core Math 2		407950 - 2 G-44 Integrtd Mathmtcs 2 P	770000 - 56 G-44 Teaching Assistant	202800 - 1 G-44 AVID 8
							407600 - 6 G-44 Common Core Math 2	
002500,	AY							
011157,	AY	658000 - 4 H-53 United States	659000 - 1 H-53 World Geography P		658000 - 5 H-53 United States	658000 - 3 H-53 United States	658000 - 1 H-53 United States	770000 - 36 H-53 Teaching Assistant
								202900 - 1 H-53 AVID 9
002545,	AY							
012942,	AY							
002667,	AY							
012672,	AY							
002739,	AY							
010947,	AY							
009281,	AY							
011528,	AY					261000 - 1 L-70 French 1 P	262000 - 1 L-70 French 2 P	262000 - 2 L-70 French 2 P
009879,	AY							
012571,	AY							
012623,	AY							
010622,	AY	208000 - 5 H-51 English 8	208000 - 3 H-51 English 8		770000 - 44 H-51 Teaching Assistant	770000 - 17 H-51 Teaching Assistant	212700 - 1 H-51 STEEL (7th Grade)	
					212800 - 1 H-51 STEEL (8th Grade)	208000 - 1 H-51 English 8	21900 - 2 H-51 STEEL (9th Grade)	
					21900 - 1 H-51 STEEL (9th Grade)			
011486,	AY	507000 - 1 Gym Phys Ed 7 Year	507000 - 2 Gym Phys Ed 7 Year	507000 - 3 Gym Phys Ed 7 Year			507000 - 4 Gym Phys Ed 7 Year	770000 - 18 Gym Teaching Assistant
								507000 - 5 Gym Phys Ed 7 Year
C100075,	AY							
003189,	AY							

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Harper Junior High School (T 220 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
011143,	AY			209000 - 3 H-50 English 9 P	770000 - 46 H-50 Teaching Assistant	770000 - 59 H-50 Teaching Assistant	209000 - 4 H-50 English 9 P	770000 - 21 H-50 Teaching Assistant
					2121B0 - 1 H-50 ELD 1B			209000 - 2 H-50 English 9 P
003233,	AY							
010904,	AY							
003276,	AY							
011225,	AY	207100 - 5 E-32 Eng 7 - Lit/Writing		2121A0 - 1 E-32 ELD 1A	207100 - 4 E-32 Eng 7 - Lit/Writing	207100 - 2 E-32 Eng 7 - Lit/Writing		770000 - 26 E-32 Teaching Assistant
								207100 - 3 E-32 Eng 7 - Lit/Writing
003352,	AY	407800 - 1 F-36 Common Core Math 3	407800 - 2 F-36 Common Core Math 3	407800 - 3 F-36 Common Core Math 3		407800 - 4 F-36 Common Core Math 3		
CI00052,	AY							
009629,	AY							
003436,	AY							
003468,	AY							
010485,	AY							
012557,	AY							
003708,	AY							
003780,	AY							
012336,	AY							
010713,	AY							
009324,	AY							
003795,	AY							
003804,	AY		509100 - 1 Gym Phys Ed 9 Fall	509100 - 2 Gym Phys Ed 9 Fall	509100 - 3 Gym Phys Ed 9 Fall		509100 - 4 Gym Phys Ed 9 Fall	509100 - 5 Gym Phys Ed 9 Fall
			770000 - 30 Gym Teaching Assistant	509200 - 1 Gym Phys Ed 9 Spr	509200 - 3 Gym Phys Ed 9 Spr		509200 - 4 Gym Phys Ed 9 Spr	509200 - 2 Gym Phys Ed 9 Spr
			509200 - 5 Gym Phys Ed 9 Spr					
003846,	AY		657000 - 1 E-35 Social Studies 7	770000 - 16 E-35 Teaching Assistant	770000 - 42 E-35 Teaching Assistant		657550 - 1 E-35 Soc Stud 7 AIM	770000 - 53 E-35 Teaching Assistant
				657000 - 2 E-35 Social Studies 7	657550 - 2 E-35 Soc Stud 7 AIM			657000 - 3 E-35 Social Studies 7
CI00003,	AY							
008172,	AY							
CI00004,	AY							

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Grid Master Schedule

Harper Junior High School (T 220 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
004120,	AY							
004664,	AY		770000 - 43 F-38 Teaching Assistant	770000 - 58 F-38 Teaching Assistant	770000 - 32 F-38 Teaching Assistant	407600 - 5 F-38 Common Core Math 2		407800 - 6 F-38 Common Core Math 3
			407600 - 2 F-38 Common Core Math 2	407800 - 5 F-38 Common Core Math 3	407600 - 3 F-38 Common Core Math 2			
008625,	AY							
004229,	AY							
012781,	AY							
011519,	AY							
012324,	AY	770000 - 55 G-47 Teaching Assistant	557000 - 2 G-47 Science 7	557000 - 5 G-47 Science 7	770000 - 27 G-47 Teaching Assistant	770000 - 31 G-47 Teaching Assistant		703350 - 2 G-47 Bridge
		557000 - 1 G-47 Science 7			557000 - 3 G-47 Science 7	770000 - 50 G-47 Teaching Assistant		
						557000 - 4 G-47 Science 7		
009008,	AY							
011659,	AY							
011444,	AY							
CS00014,	AY							
011200,	AY							
011015,	AY							
010714,	AY							
011087,	AY							
011491,	AY							
CI00053,	AY							
004885,	AY							
004889,	AY	286000 - 1 L-70 Japanese 1 P						
004896,	AY	561000 - 1 G-48 Biology P	561000 - 2 G-48 Biology P	561000 - 3 G-48 Biology P	561000 - 4 G-48 Biology P	558550 - 1 G-48 Sci 8 AIM		558550 - 2 G-48 Sci 8 AIM

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Harper Junior High School (T 220 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
004959,	AY	761100 - 1 G-49 Library Assistant	761100 - 2 G-49 Library Assistant	761100 - 3 G-49 Library Assistant	761100 - 4 Lib Library Assistant	761100 - 5 G-49 Library Assistant	761100 - 6 Lib Library Assistant	761100 - 7 G-49 Library Assistant
		761100 - 8 G-49 Library Assistant	761100 - 9 G-49 Library Assistant	903000 - 2 Lib Library Study	761100 - 11 G-49 Library Assistant	761100 - 12 G-49 Library Assistant	903000 - 1 Library Study	166000 - 5 E-34 Computer Arts 7
		208550 - 1 G-49 English 8 AIM		761100 - 10 G-49 Library Assistant			761100 - 13 G-49 Library Assistant	166000 - 6 E-34 Computer Arts 7
				208550 - 2 G-49 English 8 AIM				761100 - 14 G-49 Library Assistant
								770000 - 57 Lib Teaching Assistant
004248,	AY							
004988,	AY							
011667,	AY							
011581,	AY							
011910,	AY							
010389,	AY	755500 - 1 B-15 Office Asst	755500 - 2 B-15 Office Asst	755500 - 3 B-15 Office Asst	755500 - 4 B-15 Office Asst	755500 - 5 B-15 Office Asst	755500 - 6 B-15 Office Asst	755500 - 7 B-15 Office Asst
		755500 - 8 B-15 Office Asst	755500 - 9 B-15 Office Asst	*903000 - 3 Lib Library Study	755500 - 11 B-15 Office Asst	755500 - 12 B-15 Office Asst	755500 - 13 B-15 Office Asst	755500 - 14 B-15 Office Asst
		800000 - 1 B-15 Unscheduled 7		755500 - 10 B-15 Office Asst				800000 - 2 Unscheduled 7
		800500 - 1 B-15 Unscheduled 8						800500 - 2 Unscheduled 8
		801000 - 1 B-15 Unscheduled 9						801000 - 2 Unscheduled 9
009510,	AY							
005297,	AY							
1002544,	AY							
005431,	AY							
CS00005,	AY							
CS00012,	AY							
005630,	AY	291000 - 1 H-52 Spanish 1 P	292000 - 1 H-52 Spanish 2 P	291000 - 2 H-52 Spanish 1 P		291000 - 3 H-52 Spanish 1 P		
005645,	AY							
011509,	AY							
011700,	AY							
009023,	AY							
005736,	AY							
005779,	AY							

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Harper Junior High School (T 220 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
010184,	AY							
005922,	AY							
005951,	AY							
005961,	AY							
008495,	AY							
005999,	AY							
006143,	AY							
006216,	AY	294500 - 1 L-69 Span 4 Hon P	293000 - 2 L-69 Spanish 3 P		293000 - 1 L-69 Spanish 3 P	292000 - 3 L-69 Spanish 2 P	292000 - 2 L-69 Spanish 2 P	
011542,	AY							
006323,	AY							
006359,	AY							
008617,	AY							
006420,	AY							
011244,	AY							
013009,	AY							
012376,	AY		346000 - 2 F-37 Health	346000 - 3 F-37 Health	346000 - 1 F-37 Health	346000 - 7 F-37 Health	344500 - 1 F-37 Health 7	344500 - 5 F-37 Health 7
				346000 - 4 F-37 Health	346000 - 5 F-37 Health	346000 - 6 F-37 Health	344500 - 2 F-37 Health 7	344500 - 6 F-37 Health 7
					770000 - 41 F-37 Teaching Assistant	770000 - 54 F-37 Teaching Assistant	344500 - 3 F-37 Health 7	770000 - 33 F-37 Teaching Assistant
							344500 - 4 F-37 Health 7	
011174,	AY							
010627,	AY	452010 - 1 C-16 Concert Band	460500 - 1 C-16 Concert Band P	465000 - 1 C-16 Jazz Band P	765100 - 1 K-63 Yearbook		166000 - 1 K-63 Computer Arts 7	
					765100 - 2 K-63 Yearbook		166000 - 2 K-63 Computer Arts 7	
							166000 - 3 K-63 Computer Arts 7	
							166000 - 4 K-63 Computer Arts 7	
012000,	AY							
010336,	AY							
011854,	AY							
006676,	AY							

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Harper Junior High School (T 220 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
011506,	AY		770000 - 37 A-2 Teaching Assistant		433000 - 1 A-2 Comp Prog/Robots	352100 - 1 A-2 Exploring Tech	356000 - 1 A-2 Industrl Tech 7	353000 - 2 A-2 Industrl Tech 8/9
			370000 - 1 A-2 Drafting 1		770000 - 20 A-02 Teaching Assistant		356000 - 2 A-2 Industrl Tech 7	770000 - 23 A-2 Teaching Assistant
					353000 - 1 A-2 Industrl Tech 8/9		356000 - 3 A-2 Industrl Tech 7	356000 - 5 A-2 Industrl Tech 7
							356000 - 4 A-2 Industrl Tech 7	356000 - 6 A-2 Industrl Tech 7
010414,	AY							
011504,	AY							
012556,	AY							
006977,	AY			745000 - 4 J-57 Study/Trans Skills	745000 - 8 J-57 Study/Trans Skills	770000 - 29 J-57 Teaching Assistant		745000 - 6 J-57 Study/Trans Skills
						205000 - 2 J-57 Reading		
006984,	AY							
012787,	AY						291000 - 4 H-52 Spanish 1 P	
011978,	AY							
A220,	AY	251000 - 1 DHS Chinese 1 P						
		253000 - 1 Chinese 3 P						
		263000 - 1 B-21 French 3 P						
B220,	AY							
C220,	AY							
D220,	AY							
E220,	AY							
F220,	AY							
G220,	AY							
H220,	AY							
I220,	AY							
J220,	AY							
K220,	AY							
L220,	AY							
M220,	AY							
N220,	AY							

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Harper Junior High School (T 220 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
O220,	AY							
P220,	AY							
Q220,	AY							
R220,	AY							
S220,	AY							
T220,	AY							
U220,	AY							
V220,	AY							
W220,	AY							
X220,	AY							
Y220,	AY							
Z220,	AY							
007045,	AY		745000 - 3 J-54 Study/Trans Skills	403489 - 1 J-54 Build Math Sk 8-9	403489 - 2 J-54 Build Math Sk 8-9	770000 - 25 J-54 Teaching Assistant		770000 - 34 J-54 Teaching Assistant
				404300 - 2 J-54 Build Math Skill 7	770000 - 47 J-54 Teaching Assistant	745000 - 5 J-54 Study/Trans Skills		770000 - 49 J-55 Teaching Assistant
					404300 - 3 J-54 Build Math Skill 7			745000 - 7 J-54 Study/Trans Skills
011648,	AY							
1000956,	AY							
007579,	AY	209000 - 1 L-68 English 9 P		209600 - 1 L-68 English 9/Human P	205251 - 1 L-68 Reading Lab		209600 - 2 L-68 English 9/Human P	209600 - 3 L-68 English 9/Human P
010144,	AY		508100 - 5 Gym Phys Ed 8 Fall	508100 - 2 Gym Phys Ed 8 Fall	508100 - 4 Gym Phys Ed 8 Fall		508100 - 3 Gym Phys Ed 8 Fall	508100 - 1 Gym Phys Ed 8 Fall
			508200 - 2 Gym Phys Ed 8 Spr	508200 - 3 Gym Phys Ed 8 Spr	508200 - 4 Gym Phys Ed 8 Spr		508200 - 5 Gym Phys Ed 8 Spr	508200 - 1 Gym Phys Ed 8 Spr
			770000 - 45 Gym Teaching Assistant					
009128,	AY		658550 - 1 E-33 US History AIM	659000 - 3 E-33 World Geography P	659000 - 5 E-33 World Geography P	659000 - 6 E-33 World Geography P	658550 - 2 E-33 US History AIM	
				659000 - 4 E-33 World Geography P	659000 - 2 E-33 World Geography P	659000 - 7 E-33 World Geography P		
011420,	AY							
C100011,	AY							
010183,	AY	657000 - 4 J-56 Social Studies 7	658000 - 2 J-56 United States		694510 - 1 J-56 Leadership Sem	657000 - 5 J-56 Social Studies 7	703350 - 1 J-56 Bridge	
					694500 - 1 J-56 Leadership			

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Grid Master Schedule

Harper Junior High School (T 220 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
007488,	AY	770000 - 1_ Teaching Assistant	770000 - 2_ Teaching Assistant	770000 - 3_ Teaching Assistant	770000 - 4 Office Teaching Assistant	770000 - 5_ Teaching Assistant	770000 - 6_ Teaching Assistant	770000 - 7_ Teaching Assistant
		770000 - 8_ Teaching Assistant	770000 - 9_ Teaching Assistant	770000 - 10_ Teaching Assistant	770000 - 11_ Teaching Assistant	770000 - 12_ Teaching Assistant	770000 - 13_ Teaching Assistant	756500 - 1 B-15 Cross Age
		*295000 - 1 DHS Span 5 Lang AP						770000 - 14_ Teaching Assistant
012022,	AY							
008712,	AY							
008869,	AY							
009049,	AY							
008497,	AY							
008291,	AY							
012426,	AY							
008718,	AY							
008348,	AY				480200 - 1 C-16 Concert Choir P	450500 - 1 C-16 Beginning Chorus		
008351,	AY							
ZDO0001,	AY							

* - Not the teacher of record. Class was previously taught by this teacher.

Grid Master Schedule

Holmes Junior High School (T 222 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
000055,	AY					205251 - 2 P-3 Reading Lab	770000 - 92 P-3 Teaching Assistant	770000 - 17 P-3 Teaching Assistant
							407600 - 2 P-3 Common Core Math 2	770000 - 94 P-2 Teaching Assistant
								407600 - 5 P-3 Common Core Math 2
009339,	AY							
011591,	AY							
012792,	AY							
009841,	AY							
000172,	AY	770000 - 103 D30 Teaching Assistant	770000 - 63 D30 Teaching Assistant	657000 - 6 D30 Social Studies 7	770000 - 18 D30 Teaching Assistant		659000 - 14 D30 World Geography P	659000 - 17 D30 World Geography P
		658000 - 6 D30 United States	657000 - 4 D30 Social Studies 7		657000 - 7 D30 Social Studies 7		659950 - 2 D30 World Geog/Modif	770000 - 19 D30 Teaching Assistant
								659000 - 18 D30 World Geography P
								770000 - 64 D30 Teaching Assistant
009736,	AY							
012753,	AY							
008808,	AY	291000 - 1 H56 Spanish 1 P	293000 - 1 H56 Spanish 3 P	293000 - 2 H56 Spanish 3 P				
C100034,	AY							
013040,	AY							
011534,	AY							
012341,	AY				552500 - 7 G45 SAVE	552500 - 3 G45 SAVE		353000 - 1 G45 Industrl Tech 8/9
					552575 - 1 G45 SAVE/Modif	552500 - 4 G45 SAVE		552500 - 8 G45 SAVE
						552500 - 5 G45 SAVE		354500 - 2 G45 Exploring Woods
						552505 - 1 G45 SAVE		552500 - 9 G45 SAVE
						552500 - 6 G45 SAVE		
						552505 - 2 G45 SAVE		
000607,	AY							
000724,	AY							
011981,	AY							

* - Not the teacher of record. Class was previously taught by this teacher.

Holmes Junior High School (T 222 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
012860,	AY							
000781,	AY							
009546,	AY	770000 - 16 F44 Teaching Assistant	207100 - 6 F44 Eng 7 - Lit/Writing	207100 - 1 F44 Eng 7 - Lit/Writing	770000 - 45 F44 Teaching Assistant			
		209000 - 7 F44 English 9 P			770000 - 65 F44 Teaching Assistant			
		209950 - 1 F44 English 9/Modif			207100 - 4 F44 Eng 7 - Lit/Writing			
C100061,	AY							
CI00055,	AY							
000966,	AY	209700 - 1 H55 Comm/Theater	207550 - 1 H55 Eng 7 AIM	207550 - 2 H55 Eng 7 AIM	770000 - 20 H55 Teaching Assistant	770000 - 91 H55 Teaching Assistant		770000 - 15 H55 Teaching Assistant
		770000 - 61 H55 Teaching Assistant			207550 - 3 H55 Eng 7 AIM	770000 - 98 H55 Teaching Assistant		770000 - 21 H55 Teaching Assistant
						209400 - 2 H55 Eng 9/ClassicApp P		209400 - 1 H55 Eng 9/ClassicApp P
001052,	AY							
010449,	AY							
009262,	AY							
012456,	AY							
006360,	AY							
010919,	AY							
001271,	AY							
001283,	AY							
005465,	AY		743300 - 1 P-1 Comm Inst Reading	743300 - 4 P-1 Comm Inst Reading	743300 - 5 P-1 Comm Inst Reading	743300 - 6 P-1 Comm Inst Reading	743300 - 2 P-1 Comm Inst Reading	743300 - 3 P-1 Comm Inst Reading
007986,	AY	500003 - 1 Gym Physical Ed/Modif	508000 - 1 Gym Phys Ed 8 Year		508000 - 3 Gym Phys Ed 8 Year		508000 - 4 Gym Phys Ed 8 Year	509100 - 8 Gym Phys Ed 9 Fall
		505000 - 1 Gym Adaptive PE						770000 - 56 Gym Teaching Assistant
		509100 - 7 Gym Phys Ed 9 Fall						509200 - 8 Gym Phys Ed 9 Spr
		505000 - 2 Gym Adaptive PE						
		509200 - 7 Gym Phys Ed 9 Spr						
		500003 - 2 Gym Physical Ed/Modif						
		509010 - 1 Gym Phys Ed 9 Year/Modif						

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Holmes Junior High School (T 222 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
012879,	AY							
001412,	AY							
009266,	AY							
012172,	AY							
001647,	AY							
001668,	AY							
C100077,	AY							
001713,	AY							
012148,	AY							
017285,	AY						745000 - 5 C24 Study/Trans Skills	745000 - 9 C24 Study/Trans Skills
011169,	AY		557000 - 6 E40 Science 7	770000 - 57 E40 Teaching Assistant		770000 - 55 E40 Teaching Assistant	558550 - 2 E40 Sci 8 AIM	770000 - 22 E40 Teaching Assistant
				770000 - 58 Teaching Assistant		770000 - 95 E40 Teaching Assistant		770000 - 67 E40 Teaching Assistant
				557000 - 7 E40 Science 7		558550 - 1 E40 Sci 8 AIM		558550 - 3 E40 Sci 8 AIM
1000957,	AY							
002004,	AY		508000 - 6 Gym Phys Ed 8 Year	770000 - 52 Gym Teaching Assistant	770000 - 23 Gym Teaching Assistant		507000 - 2 Gym Phys Ed 7 Year	770000 - 24 Gym Teaching Assistant
				508000 - 2 Gym Phys Ed 8 Year	508000 - 7 Gym Phys Ed 8 Year			770000 - 68 Gym Teaching Assistant
								507000 - 1 Gym Phys Ed 7 Year

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Holmes Junior High School (T 222 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
002005,	AY	755500 - 1 Office Office Asst	755500 - 2 Office Office Asst	755500 - 3 Office Office Asst	755500 - 4 Office Office Asst	755500 - 5 Office Office Asst	755500 - 6 Office Office Asst	755500 - 7 Office Office Asst
		755500 - 15 Office Office Asst	770000 - 2 TBA Teaching Assistant	770000 - 3 TBA Teaching Assistant	770000 - 4 TBA Teaching Assistant	770000 - 5 TBA Teaching Assistant	770000 - 6 TBA Teaching Assistant	770000 - 7 TBA Teaching Assistant
		770000 - 1 TBA Teaching Assistant	755500 - 16 Office Office Asst	755500 - 10 Office Office Asst	755500 - 11 Office Office Asst	755500 - 12 Office Office Asst	755500 - 13 Office Office Asst	800010 - 6 Unsched Per
		800000 - 2 Office Unscheduled 7	755500 - 9 Office Office Asst	755500 - 17 Office Office Asst	755500 - 18 Office Office Asst	755500 - 19 Office Office Asst	755500 - 20 Office Office Asst	755500 - 14 Office Office Asst
		801000 - 2 Unscheduled 9	770000 - 9 TBA Teaching Assistant	770000 - 10 TBA Teaching Assistant	770000 - 11 TBA Teaching Assistant	770000 - 12 TBA Teaching Assistant	770000 - 13 TBA Teaching Assistant	755500 - 21 Office Office Asst
		755500 - 8 Office Office Asst	800010 - 3 Office Unsched Per	658000 - 8 Office United States		800010 - 7 Unsched Per	800010 - 8 Unsched Per	770000 - 14 TBA Teaching Assistant
		770000 - 8 TBA Teaching Assistant		800010 - 5 Unsched Per				800010 - 4 Unsched Per
		801000 - 3 Unscheduled 9						
		800000 - 1 TBA Unscheduled 7						
		800500 - 1 TBA Unscheduled 8						
		801000 - 1 TBA Unscheduled 9						
CS00015,	AY							
002079,	AY							
009486,	AY	300000 - 1 E36 Home Economics 7	346000 - 15 P-2 Health		770000 - 25 P-2 Teaching Assistant	346000 - 11 P-2 Health	346000 - 1 P-2 Health	346000 - 9 P-2 Health
		344500 - 8 P-2 Health 7	346010 - 2 P-2 Health/Modif			344500 - 6 P-2 Health 7	346010 - 1 P-2 Health/Modif	346000 - 2 P-2 Health
		300000 - 2 E36 Home Economics 7	346000 - 16 P-2 Health			344500 - 7 P-2 Health 7	346000 - 5 P-2 Health	770000 - 99 P-2 Teaching Assistant
		344500 - 1 P-2 Health 7	346010 - 3 P-2 Health/Modif				346010 - 4 P-2 Health/Modif	
		344500 - 9 P-2 Health 7						
002249,	AY							
010711,	AY							
002467,	AY							
002500,	AY							
002545,	AY							

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Holmes Junior High School (T 222 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
012329,	AY	770000 - 70 F41 Teaching Assistant				745000 - 10 B23 Study/Trans Skills	770000 - 53 B23 Teaching Assistant	770000 - 101 B23 Teaching Assistant
							770000 - 69 B23 Teaching Assistant	745000 - 2 B23 Study/Trans Skills
							745000 - 6 B23 Study/Trans Skills	
012942,	AY							
002667,	AY							
002673,	AY							
011886,	AY	561400 - 2 C25 Biology/IntAg P		561000 - 4 C25 Biology P	770000 - 26 C25 Teaching Assistant	561000 - 8 C25 Biology P	770000 - 102 C25 Teaching Assistant	
					561000 - 7 C25 Biology P		561000 - 5 C25 Biology P	
008875,	AY							
012672,	AY							
012793,	AY							
002815,	AY	408399 - 2 B21 Math Clinic-Alg	407800 - 7 B21 Common Core Math 3		407950 - 4 B21 Integrtd Mathmtcs 2 P	407800 - 5 B21 Common Core Math 3	407800 - 6 B21 Common Core Math 3	407950 - 2 B21 Integrtd Mathmtcs 2 P
009281,	AY							
C10093,	AY							
009879,	AY							
012571,	AY							
010586,	AY							
003082,	AY	770000 - 71 F41 Teaching Assistant		262000 - 2 F41 French 2 P	770000 - 49 F44 Teaching Assistant	209000 - 5 F41 English 9 P	770000 - 72 F41 Teaching Assistant	261000 - 2 F41 French 1 P
		263000 - 1 F41 French 3 P				209950 - 2 F41 English 9/Modif	209000 - 4 F41 English 9 P	
008719,	AY							
012780,	AY							
003170,	AY	346000 - 4 C28 Health	770000 - 46 D29 Teaching Assistant	557000 - 3 D29 Science 7	557000 - 2 D29 Science 7	344500 - 2 C28 Health 7		
		346000 - 7 C28 Health	770000 - 47 D29 Teaching Assistant			344500 - 3 C28 Health 7		
		346010 - 6 C28 Health/Modif	770000 - 106 D29 Teaching Assistant			346000 - 12 C24 Health		
			557000 - 5 D29 Science 7			346010 - 5 C24 Health/Modif		
003189,	AY							
008523,	AY							

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Holmes Junior High School (T 222 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
003233,	AY							
010904,	AY							
003241,	AY							
003276,	AY							
010887,	AY		611500 - 1 C27 Earth/Phys Science P		558100 - 2 C27 Science 8	558100 - 5 C27 Science 8	558100 - 11 C27 Science 8	770000 - 73 C27 Teaching Assistant
			611510 - 1 C27 Physical Sci/Modif					611500 - 2 C27 Earth/Phys Science P
			611510 - 3 C27 Physical Sci/Modif					611510 - 2 C27 Physical Sci/Modif
012874,	AY							
CI00052,	AY							
012579,	AY							
003436,	AY							
003466,	AY							
003482,	AY	743000 - 1 K67 Comm Instruction	744000 - 6 K67 Transition Skills	744000 - 7 K67 Transition Skills	744000 - 13 K67 Transition Skills	744000 - 9 K67 Transition Skills	744000 - 10 K67 Transition Skills	744000 - 14 K67 Transition Skills
		745150 - 7 K67 Math Fund	745150 - 1 K67 Math Fund	745150 - 2 K67 Math Fund	770000 - 66 K67 Teaching Assistant	745150 - 4 K67 Math Fund	745150 - 5 K67 Math Fund	770000 - 104 K67 Teaching Assistant
					744000 - 8 K67 Transition Skills			744000 - 11 K67 Transition Skills
					745150 - 3 K67 Math Fund			745150 - 6 K67 Math Fund
012199,	AY							
013016,	AY							
003708,	AY							
C100070,	AY							
009925,	AY							
012336,	AY							
009324,	AY							
003795,	AY							
003831,	AY							
003914,	AY	770000 - 62 H49 Teaching Assistant			770000 - 27 H49 Teaching Assistant	407700 - 4 H49 Commn Core Math 2/3	407700 - 3 H49 Commn Core Math 2/3	770000 - 75 H49 Teaching Assistant
		770000 - 74 H49 Teaching Assistant			407900 - 10 H49 Integrtd Mathmtcs 1 P			407700 - 5 H49 Commn Core Math 2/3
		407900 - 15 H49 Integrtd Mathmtcs 1 P						

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Holmes Junior High School (T 222 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
CI00003,	AY							
012397,	AY							
009862,	AY							
008172,	AY							
010142,	AY	770000 - 43 LIb Teaching Assistant	770000 - 96 LIb Teaching Assistant		770000 - 42 LIb Teaching Assistant	770000 - 105 LIb Teaching Assistant		770000 - 93 LIb Teaching Assistant
		770000 - 89 LIb Teaching Assistant						
004085,	AY	561000 - 6 D29 Biology P	557550 - 1 C28 Sci 7 AIM	557550 - 2 C28 Sci 7 AIM	770000 - 28 C28 Teaching Assistant	561000 - 9 D29 Biology P		694500 - 1 C28 Leadership
					557550 - 3 C28 Sci 7 AIM	561300 - 1 C28 Biology/Modif		694550 - 1 C28 Leadership/Modif
CI00004,	AY							
004134,	AY							
008625,	AY							
011277,	AY							
004270,	AY	130500 - 1 E39 Art Craft 7/8	765000 - 1 E39 Yearbook	770000 - 29 E39 Teaching Assistant	131600 - 1 E39 Art/Ceramics	130000 - 1 E39 Exploring Art 7	140000 - 1 E39 Art 1 P	
				770000 - 76 E39 Teaching Assistant		130000 - 2 E39 Exploring Art 7		
				141300 - 1 E39 Ceramics/Sculpt P		130000 - 3 E39 Exploring Art 7		
						130000 - 4 E39 Exploring Art 7		
011659,	AY							
011444,	AY							
012163,	AY							
CS00014,	AY							
011200,	AY							
011015,	AY							
010714,	AY							
004671,	AY							
004672,	AY							
011491,	AY							
C100072,	AY							
CI00053,	AY							
004885,	AY							

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Holmes Junior High School (T 222 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
012326,	AY	770000 - 77 B19 Teaching Assistant	407900 - 12 B19 Integrtd Mathmtcs 1 P	407900 - 8 B19 Integrtd Mathmtcs 1 P				
		407600 - 3 B19 Common Core Math 2						
004248,	AY							
011878,	AY							
011468,	AY	760025 - 1 H57 Skills	209550 - 2 H57 English 9 AIM P		209550 - 1 H57 English 9 AIM P	202900 - 2 H57 AVID 9	213100 - 1 H57 STEEL P	202800 - 1 H57 AVID 8
		760025 - 2 H57 Skills					212700 - 1 H57 STEEL (7th Grade)	
							212800 - 1 H57 STEEL (8th Grade)	
							21900 - 1 H57 STEEL (9th Grade)	
005159,	AY					454300 - 1 Music Orchestra	454000 - 1 Music Orchestra P	
005221,	AY	658550 - 4 P-5 US History AIM	658000 - 3 P-5 United States	658550 - 3 P-5 US History AIM	770000 - 30 P-5 Teaching Assistant	770000 - 97 P-5 Teaching Assistant	659000 - 13 P-5 World Geography P	
					658000 - 2 P-5 United States	658550 - 1 P-5 US History AIM	659950 - 5 P-5 World Geog/Modif	
009510,	AY							
005332,	AY	770000 - 78 H47 Teaching Assistant		770000 - 108 H47 Teaching Assistant	770000 - 31 H47 Teaching Assistant	770000 - 79 H47 Teaching Assistant	292000 - 3 H47 Spanish 2 P	
		291000 - 3 H47 Spanish 1 P		291000 - 4 H47 Spanish 1 P	292000 - 6 H47 Spanish 2 P	291000 - 7 H47 Spanish 1 P		
		770000 - 50 H56 Teaching Assistant						
011206,	AY		657550 - 1 E32 Soc Stud 7 AIM	770000 - 32 E32 Teaching Assistant	770000 - 80 E32 Teaching Assistant	770000 - 54 E32 Teaching Assistant		770000 - 33 P-5 Teaching Assistant
				657550 - 2 E32 Soc Stud 7 AIM	657550 - 3 E32 Soc Stud 7 AIM	658000 - 1 E32 United States		658000 - 7 P-5 United States
CS00005,	AY							
009530,	AY							
012788,	AY		509100 - 2 Gym Phys Ed 9 Fall	509100 - 3 Gym Phys Ed 9 Fall	509100 - 4 Gym Phys Ed 9 Fall		770000 - 82 Gym Teaching Assistant	694500 - 2 E32 Leadership
			509200 - 2 Gym Phys Ed 9 Spr	509200 - 3 Gym Phys Ed 9 Spr	770000 - 44 Gym Teaching Assistant		507000 - 7 Gym Phys Ed 7 Year	
					509200 - 4 Gym Phys Ed 9 Spr			
					770000 - 81 Gym Teaching Assistant			
009730,	AY							

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Holmes Junior High School (T 222 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
CS00012,	AY							
005645,	AY							
011700,	AY							
012024,	AY							
009023,	AY							
005736,	AY							
010810,	AY							
009525,	AY							
005779,	AY							
010184,	AY							
005922,	AY							
008390,	AY							
005951,	AY							
005961,	AY							
008495,	AY							
005999,	AY							
006013,	AY	452000 - 1 Music Intermediate Band	460500 - 1 Music Concert Band P	465000 - 1 Music Jazz Band P				
009964,	AY							
006120,	AY	208550 - 5 P-4 English 8 AIM	208550 - 6 P-4 English 8 AIM	208550 - 1 P-4 English 8 AIM	209600 - 1 P-4 English 9/Human P		703300 - 1 P-4 LC Study Fall	
							703400 - 1 P-4 LC Study Spr	
006143,	AY							
006239,	AY							
011542,	AY							
006366,	AY							
008617,	AY							
006420,	AY							
011244,	AY							
013009,	AY							

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Holmes Junior High School (T 222 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
006471,	AY	507000 - 5 Gym Phys Ed 7 Year	509100 - 5 Gym Phys Ed 9 Fall	509100 - 1 Gym Phys Ed 9 Fall			507000 - 3 Gym Phys Ed 7 Year	770000 - 35 Gym Teaching Assistant
			509200 - 6 Gym Phys Ed 9 Spr	770000 - 34 Gym Teaching Assistant				770000 - 83 Gym Teaching Assistant
				509200 - 5 Gym Phys Ed 9 Spr				507000 - 6 Gym Phys Ed 7 Year
				509010 - 2 Gym Phys Ed 9 Year/Modif				
007006,	AY	558100 - 3 C24 Science 8	558100 - 4 C24 Science 8					
010336,	AY							
011462,	AY		744700 - 2 D31 Reading Fund JH			745000 - 3 D31 Study/Trans Skills	745000 - 4 D31 Study/Trans Skills	770000 - 90 D31 Teaching Assistant
								745000 - 7 D31 Study/Trans Skills
006625,	AY	659000 - 1 H54 World Geography P	659000 - 19 H54 World Geography P	657000 - 1 H54 Social Studies 7	770000 - 36 H54 Teaching Assistant	659000 - 8 H54 World Geography P		
		659000 - 5 H54 World Geography P	659000 - 20 H54 World Geography P		657000 - 8 H54 Social Studies 7	659000 - 4 H54 World Geography P		
		770000 - 84 Gym Teaching Assistant	659950 - 3 H54 World Geog/Modif			659950 - 4 H54 World Geog/Modif		
006673,	AY							
011854,	AY							
008484,	AY							
010843,	AY	770000 - 85 F42 Teaching Assistant	207100 - 8 F42 Eng 7 - Lit/Writing	208000 - 8 F42 English 8	770000 - 37 F42 Teaching Assistant	209000 - 9 F42 English 9 P		
		208000 - 3 F42 English 8			207100 - 3 F42 Eng 7 - Lit/Writing	209950 - 3 F42 English 9/Modif		
						209950 - 4 F42 English 9/Modif		
011373,	AY							
010879,	AY		744000 - 12 P-6 Transition Skills	208005 - 1 P-6 English 8/Modif	702000 - 2 P-6 LC Soc Stu 7	710530 - 1 P-6 Eng General	659950 - 1 P-6 World Geog/Modif	658750 - 1 P-6 US History/Modif
				702000 - 1 P-6 LC Soc Stu 7			209950 - 5 P-6 English 9/Modif	744000 - 15 P-6 Transition Skills

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Holmes Junior High School (T 222 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
006968,	AY	166000 - 5 E34 Computer Arts 7		432000 - 2 E34 Multimedia	433000 - 2 E34 Comp Prog/Robots	166000 - 1 E34 Computer Arts 7		
		166000 - 6 E34 Computer Arts 7		770000 - 38 E34 Teaching Assistant	432000 - 1 E34 Multimedia	166000 - 2 E34 Computer Arts 7		
				433000 - 1 E34 Comp Prog/Robots	770000 - 86 E34 Teaching Assistant	166000 - 3 E34 Computer Arts 7		
						166000 - 4 E34 Computer Arts 7		
006984,	AY							
011978,	AY							
A222,	AY	251000 - 1 HS T-03 Chinese 1 P						
		272000 - 1 German 2 P						
		286000 - 1 HS S-06 Japanese 1 P						
		294500 - 1 TBA Span 4 Hon P						
		407980 - 1 HS Acclrt Intgrt Math 3 P						
B222,	AY							
C222,	AY							
D222,	AY							
E222,	AY							
F222,	AY							
G222,	AY							
H222,	AY							
I222,	AY							
J222,	AY							
K222,	AY							
L222,	AY							
M222,	AY							
N222,	AY							
O222,	AY							
P222,	AY							
Q222,	AY							
R222,	AY							
S222,	AY							

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Holmes Junior High School (T 222 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
T222,	AY							
U222,	AY							
V222,	AY							
W222,	AY							
X222,	AY							
Y222,	AY							
Z222,	AY							
007036,	AY							
007145,	AY			770000 - 39 H48 Teaching Assistant	770000 - 48 H48 Teaching Assistant	770000 - 59 H48 Teaching Assistant	291000 - 2 H48 Spanish 1 P	291000 - 6 H48 Spanish 1 P
				292000 - 2 H48 Spanish 2 P	770000 - 87 H47 Teaching Assistant	770000 - 60 H48 Teaching Assistant		
					293000 - 4 H48 Spanish 3 P	292000 - 1 H48 Spanish 2 P		
011648,	AY							
1000956,	AY							
009967,	AY							
007366,	AY				770000 - 40 F43 Teaching Assistant	209000 - 11 F43 English 9 P	208000 - 6 F43 English 8	208000 - 7 F43 English 8
					770000 - 88 F43 Teaching Assistant			
					208000 - 2 F43 English 8			
007454,	AY							
007652,	AY							
007742,	AY	407600 - 1 B20 Common Core Math 2		407950 - 1 B20 Integrtd Mathmtcs 2 P	407950 - 3 B20 Integrtd Mathmtcs 2 P	407600 - 4 B20 Common Core Math 2	407600 - 8 B20 Common Core Math 2	770000 - 41 B20 Teaching Assistant
							770000 - 51 B20 Teaching Assistant	770000 - 100 B20 Teaching Assistant
								407600 - 7 B20 Common Core Math 2
011260,	AY							
010623,	AY							
011062,	AY							
008712,	AY							
011606,	AY							
009409,	AY							
009611,	AY							

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Holmes Junior High School (T 222 17/18)

Faculty	Term	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7
008237,	AY	407900 - 1 B22 Integrtd Mathmtcs 1 P	770000 - 107 B22 Teaching Assistant	407800 - 1 B22 Common Core Math 3	407800 - 4 B22 Common Core Math 3		407900 - 3 B22 Integrtd Mathmtcs 1 P	407900 - 2 B22 Integrtd Mathmtcs 1 P
				407810 - 2 B22 Cmmn Core Math 3/Md	407810 - 1 B22 Cmmn Core Math 3/Md			
008291,	AY							
012426,	AY							
008718,	AY							
008348,	AY			480200 - 2 E36 Concert Choir P				450500 - 2 Music Beginning Chorus
								480200 - 1 Music Concert Choir P
008351,	AY							
ZDO0001,	AY							

* - Not the teacher of record. Class was previously taught by this teacher.

2. May 2018: District Wide 5 year data by ethnicity, EL vs. non-EL, & SED vs. no SED including:

- How many student take World Language classes?
- How many years on average do they take these classes?
- Which languages do they take?
- Average letter grades for these classes?
- How many students are A-G eligible

American Indian	
How many students take World Language classes?	22
How many years on average do they take these classes?	1 year
Which languages do they take?	German, Japanese, Spanish
Average letter grade for these classes?	D
How many students are A-G eligible?	5
Asian	
How many students take World Language classes?	765
How many years on average do they take these classes?	2 years
Which languages do they take?	German, Japanese, Spanish, American Sign Language, Arabic, Chinese, French, Korean, Mandarin, Russian, Vietnamese
Average letter grade for these classes?	A
How many students are A-G eligible?	362
Black	
How many students take World Language classes?	123
How many years on average do they take these classes?	3 years
Which languages do they take?	French, Japanese, Spanish
Average letter grade for these classes?	C
How many students are A-G eligible?	49
Filipino/Pacific Islander	
How many students take World Language classes?	86
How many years on average do they take these classes?	2 years
Which languages do they take?	German, Japanese, Spanish, Chinese, Filipino, French, Latin, Taiwanese
Average letter grade for these classes?	B
How many students are A-G eligible?	38
Hispanic	
How many students take World Language classes?	763
How many years on average do they take these classes?	1 year
Which languages do they take?	German, Japanese, Spanish, Chinese, Italian, Mandarin
Average letter grade for these classes?	C
How many students are A-G eligible?	228
White	

How many students take World Language classes?	2347
How many years on average do they take these classes?	2 years
Which languages do they take?	German, Japanese, Spanish, American Sign Language, Arabic, Chinese, French, Latin
Average letter grade for these classes?	B
How many students are A-G eligible?	1011
EL	
How many students take World Language classes?	136
How many years on average do they take these classes?	2 years
Which languages do they take?	German, Japanese, Spanish, Arabic, Chinese, French, Korean, Russian
Average letter grade for these classes?	D
How many students are A-G eligible?	12
Non-EL	
How many students take World Language classes?	3986
How many years on average do they take these classes?	3 years
Which languages do they take?	German, Japanese, Spanish, French, American Sign Language, Arabic, Chinese, Italian, Latin, Mandarin, Taiwanese, Vietnamese
Average letter grade for these classes?	B
How many students are A-G eligible?	1681
SED	
How many students take World Language classes?	931
How many years on average do they take these classes?	2 years
Which languages do they take?	German, Japanese, Spanish, American Sign Language, Chinese, French, Mandarin. Vietnamese, Arabic, Russian
Average letter grade for these classes?	C
How many students are A-G eligible?	274
Non-SED	
How many students take World Language classes?	3981
How many years on average do they take these classes?	3 years
Which languages do they take?	German, Japanese, Spanish, French, American Sign Language, Arabic, Chinese, Italian, Korean, Latin, Mandarin, Russian, Taiwanese
Average letter grade for these classes?	B
How many students are A-G eligible?	1666

3. July 2018: District Wide 5 year data by Special Education designation including:
- What percent of the total SpEd population take World Language classes?
- How many years on average do they take these classes?
- Which languages do they take (what % is this of all languages taken by kids in special education?)?
- Average letter grades for these classes?
- What percent of the total SpEd population are A-G eligible?

SpEd	
What percent of total SpEd population take World Language classes?	▪ 2014: 2% ▪ 2015: 5% ▪ 2016: 10% ▪ 2017: 10% ▪ 2018: 11%
How many years on average do they take these classes?	2.5 years
Which languages do they take (what precent is this of all languages taken by kids in SpEd?)	▪ Chinese 1 P – 1% ▪ Chinese 2 P – 1% ▪ Chinese 3 P – 1% ▪ Chinese 4 Hon P 0.3% ▪ French 1 P – 2% ▪ French 2 P – 3% ▪ French 3 P – 2% ▪ French 4 Hon P – 1% ▪ French 5 AP – 0.2% ▪ German 1 P – 3% ▪ German 2 P – 1% ▪ German 3 P – 0.1% ▪ Japanese 1 P - 4% ▪ Japanese 2 P – 3% ▪ Japanese 3 P – 1% ▪ Japanese 4 Hon P – 1% ▪ Japanese 5 AP – 0.3% ▪ Spanish 1 P – 29% ▪ Spanish 2 P – 23% ▪ Spanish Intermediate 2H P – 1% ▪ Spanish 3 P – 15% ▪ Spanish 4 Hon P – 5% ▪ Spanish 5 AP – 2% ▪ Spanish 6 Lit AP – 0.2%
Average letter grade for these classes?	▪ Chinese 1 P – B ▪ Chinese 2 P – C ▪ Chinese 3 P – B ▪ Chinese 4 Hon P - A ▪ French 1 P – C ▪ French 2 P – C ▪ French 3 P – B ▪ French 4 Hon P – B ▪ French 5 AP – B ▪ German 1 P – F ▪ German 2 P – D ▪ German 3 P – F ▪ Japanese 1 P - D

	▪ Japanese 2 P – D ▪ Japanese 3 P – B ▪ Japanese 4 Hon P – B ▪ Japanese 5 AP – A ▪ Spanish 1 P – C ▪ Spanish 2 P – C ▪ Spanish Intermediate 2H P – B ▪ Spanish 3 P – C ▪ Spanish 4 Hon P – B ▪ Spanish 5 AP – B ▪ Spanish 6 Lit AP – C
What percent of the entire SpEd population are A-G eligible?	▪ 2014: 2% ▪ 2015: 3% ▪ 2016: 2% ▪ 2017: 1% ▪ 2018: 1%

4. September 2018: World Language/Immersion trends including:

- Current MME 4th-6th enrollment
- Current World Language offerings & enrollment by site
- 2 year data on 6th grade MME 7th grade Harper students and which electives they take
- 3 year data on percent of 6th grade CCE who go on to the Emerson Immersion program versus the percentage that do not.
- 5 year World Language offerings & enrollment by site

Current MME 4th-6th Enrollment

Grade	Total
4	71
5	70
6	47

Davis Joint USD
Class Enrollment Analysis
Date: 09/20/2018
Printed: 9/20/2018 2:45 PM

Track	(All)
School	Davis Senior High School

Count of Student	Grade				
Course	09	10	11	12	Grand Total
251000-1 Chinese 1 P			7	3	2	12
252000-1 Chinese 2 P		1	6	5	4	16
253000-1 Chinese 3 P			2	3	1	6
254000-1 Chinese 4 Hon P			2	7	3	12
261000-1 French 1 P			16	8	3	27
262000-1 French 2 P			19	7	1	27
263000-1 French 3 P			34	2	1	37
264500-1 French 4 Hon P			19	9	2	30
265000-1 French 5 Lang AP				12	1	13
273000-1 German 3 P		3	2	3	4	12
286000-1 Japanese 1 P			10	4	5	19
286100-1 Japanese 2 P			18	10		28
286200-1 Japanese 3 P				10	6	16
286400-1 Japanese 4 Hon P				1	6	7
286500-1 Japanese 5 Lang AP				1		1
291000-1 Spanish 1 P			26	1		27
291000-2 Spanish 1 P			22	8	1	31
292000-1 Spanish 2 P			26	8	2	36
292000-2 Spanish 2 P			28	7		35
292000-3 Spanish 2 P			30	5		35
293000-1 Spanish 3 P		1	19	7	3	30
293000-2 Spanish 3 P			21	8	1	30
293000-3 Spanish 3 P			16	11	3	30
293000-4 Spanish 3 P			24	7	3	34
293000-5 Spanish 3 P			19	14	2	35
293000-6 Spanish 3 P			12	10	2	24
294500-1 Span 4 Hon P		2	20	7		29
294500-2 Span 4 Hon P			20	5	3	28
294500-3 Span 4 Hon P			23	4	5	32
294500-4 Span 4 Hon P			21	7	3	31
294500-5 Span 4 Hon P			22	9	1	32
295000-1 Span 5 Lang AP		1	20	7	3	31
295000-2 Span 5 Lang AP			10	13	1	24
295000-3 Span 5 Lang AP			15	9	3	27
295000-4 Span 5 Lang AP			18	11	4	33
296000-1 Span 6 Lit AP			3	23		26
Grand Total		8	550	266	79	903

Davis Joint USD
Class Enrollment Analysis
Date: 09/20/2018
Printed: 9/20/2018 2:41 PM

Track	T 220 18/19
School	Harper Junior High School

Count of Student	Grade			
Course	07	08	09	Grand Total
251000-1 Chinese 1 P			3	3
261000-1 French 1 P	18	8	5	31
262000-1 French 2 P		7	12	19
263000-1 French 3 P			18	18
286000-1 Japanese 1 P			12	12
291000-1 Spanish 1 P	15	13	3	31
291000-2 Spanish 1 P	19	11	2	32
291000-3 Spanish 1 P	10	15	11	36
292000-1 Spanish 2 P		10	21	31
292000-2 Spanish 2 P	2	20	11	33
292000-3 Spanish 2 P	3	18	9	30
293000-1 Spanish 3 P	6	4	17	27
293000-2 Spanish 3 P	8	6	17	31
293000-3 Spanish 3 P	6	6	16	28
294500-1 Span 4 Hon P			31	31
Grand Total	87	118	188	393

Davis Joint USD
Class Enrollment Analysis
Date: 09/20/2018
Printed: 9/20/2018 2:44 PM

Track	(All)
School	Holmes Junior High School

Count of Student	Grade			
Course	07	08	09	Grand Total
251000-1 Chinese 1 P			3	3
261000-2 French 1 P	20	6	5	31
262000-2 French 2 P		15	14	29
263000-1 French 3 P		1	18	19
273000-1 German 3 P			3	3
291000-1 Spanish 1 P	14	14	5	33
291000-2 Spanish 1 P	16	12	4	32
291000-3 Spanish 1 P	20	11		31
291000-4 Spanish 1 P		1	30	31
291000-6 Spanish 1 P	17	12	4	33
292000-1 Spanish 2 P		1	27	28
292000-2 Spanish 2 P		25	2	27
292000-3 Spanish 2 P	13	15	2	30
292000-6 Spanish 2 P		13	13	26
292000-7 Spanish 2 P		22	8	30
293000-1 Spanish 3 P			21	21
293000-2 Spanish 3 P		3	20	23
293000-4 Spanish 3 P		1	26	27
294500-1 Span 4 Hon P			10	10
295000-1 Span 5 Lang AP			1	1
Grand Total	100	152	216	468

Davis Joint USD
Class Enrollment Analysis
Date: 09/20/2018
Printed: 9/20/2018 2:42 PM

Track	T 221 18/19
School	Emerson Junior High School

Count of Student	Grade			
Course	07	08	09	Grand Total
251000-1 Chinese 1 P			8	8
262000-1 French 2 P		1	2	3
263000-2 French 3 P			5	5
286000-1 Japanese 1 P			3	3
291000-1 Spanish 1 P	5	12	15	32
291000-2 Spanish 1 P	12	13	6	31
291000-3 Spanish 1 P	16	11	8	35
291000-4 Spanish 1 P	10	15	8	33
292000-1 Spanish 2 P	4	13	17	34
292000-2 Spanish 2 P	4	14	17	35
292000-3 Spanish 2 P	3	17	13	33
293000-1 Spanish 3 P		7	23	30
293700-1 Span E-Interm Trans P (ACTFL35)	34			34
293700-2 Span E-Interm Trans P (ACTFL35)	30			30
294700-1 Span Interm 1H P (ACTFL45)		31		31
294700-2 Span Interm 1H P (ACTFL45)		28		28
294900-1 Span Interm 2H P (ACTFL55)			32	32
294900-2 Span Interm 2H P (ACTFL55)			31	31
Grand Total	118	162	188	468

2 year Data on 6th Grade MME 7th Grade Harper Students

Years	CCE Enrollment	CCE to EJH	CCE to SI
2016 to 2017	79	63/80%	60/76%
2017 to 2018	73	56/77%	54/74%
2018 to 2019	86	55/64%	52/60%

2013-14 World Language Course Enrollment

Row Labels	Count of Student
(ARC) Da Vinci Charter Academy	**119**
Z29100-1 Spanish 1 P	21
Z29200-1 Spanish 2 P	14
Z29200-2 Spanish 2 P	10
Z29200-3 Spanish 2 P	13
Z29300-1 Spanish 3 P	16
Z29300-2 Spanish 3 P	13
Z29300-3 Spanish 3 P	8
Z29450-1 Span 4 Hon P	24
(ARC) Davis Senior High School	**608**
291000-1 Spanish 1 P	21
291000-2 Spanish 1 P	17
292000-1 Spanish 2 P	34
292000-2 Spanish 2 P	36
292000-3 Spanish 2 P	36
293000-10 Spanish 3 P	21
293000-11 Spanish 3 P	31
293000-3 Spanish 3 P	22
293000-4 Spanish 3 P	31
293000-6 Spanish 3 P	28
293000-7 Spanish 3 P	12
293000-8 Spanish 3 P	20
293000-9 Spanish 3 P	29
294500-1 Span 4 Hon P	29
294500-2 Span 4 Hon P	36
294500-3 Span 4 Hon P	33
294500-4 Span 4 Hon P	34
295000-1 Span 5 Lang AP	35
295000-4 Span 5 Lang AP	35
295000-5 Span 5 Lang AP	34
296000-2 Span 6 Lit AP	34
(ARC) Emerson Junior High School	**369**
291000-1 Spanish 1 P	31
291000-2 Spanish 1 P	27
291000-3 Spanish 1 P	24
291000-4 Spanish 1 P	28
291000-5 Spanish 1 P	20
292000-1 Spanish 2 P	32
292000-2 Spanish 2 P	29
292000-3 Spanish 2 P	31
293000-1 Spanish 3 P	15
293000-2 Spanish 3 P	23
293700-1 Span E-Interm Trans P (ACTFL35)	21
293700-2 Span E-Interm Trans P (ACTFL35)	22

294700-1 Span Interm 1H P (ACTFL45)	21
294700-2 Span Interm 1H P (ACTFL45)	16
294900-1 Span Interm 2H P (ACTFL55)	29
(ARC) Harper Junior High School	**259**
291000-1 Spanish 1 P	25
291000-2 Spanish 1 P	27
291000-3 Spanish 1 P	25
291000-4 Spanish 1 P	29
292000-1 Spanish 2 P	32
292000-2 Spanish 2 P	32
292000-3 Spanish 2 P	22
293000-1 Spanish 3 P	34
293000-2 Spanish 3 P	33
(ARC) Holmes Junior High School	**375**
291000-1 Spanish 1 P	32
291000-2 Spanish 1 P	29
291000-3 Spanish 1 P	34
291000-4 Spanish 1 P	33
291000-5 Spanish 1 P	33
292000-1 Spanish 2 P	29
292000-3 Spanish 2 P	22
292000-4 Spanish 2 P	28
292000-5 Spanish 2 P	29
293000-1 Spanish 3 P	27
293000-2 Spanish 3 P	24
293000-3 Spanish 3 P	27
294500-1 Span 4 Hon P	28
Grand Total	**1730**

2014-15 World Language Course Enrollment

Row Labels	Count of Student
(ARC) Da Vinci Charter Academy	**114**
Z29100-1 Spanish 1 P	23
Z29200-1 Spanish 2 P	15
Z29200-2 Spanish 2 P	6
Z29200-3 Spanish 2 P	11
Z29300-1 Spanish 3 P	8
Z29300-2 Spanish 3 P	8
Z29300-3 Spanish 3 P	16
Z29450-1 Span 4 Hon P	27
(ARC) Davis Senior High School	**631**
291000-1 Spanish 1 P	20
291000-2 Spanish 1 P	17
292000-2 Spanish 2 P	33
292000-3 Spanish 2 P	17
292000-4 Spanish 2 P	23
292000-5 Spanish 2 P	31
293000-1 Spanish 3 P	36
293000-2 Spanish 3 P	23
293000-3 Spanish 3 P	33
293000-4 Spanish 3 P	34
293000-5 Spanish 3 P	34
294500-1 Span 4 Hon P	29
294500-2 Span 4 Hon P	30
294500-3 Span 4 Hon P	32
294500-4 Span 4 Hon P	31
294500-5 Span 4 Hon P	30
294500-6 Span 4 Hon P	15
294500-7 Span 4 Hon P	31
295000-1 Span 5 Lang AP	29
295000-2 Span 5 Lang AP	18
295000-3 Span 5 Lang AP	27
295000-4 Span 5 Lang AP	31
296000-1 Span 6 Lit AP	27
(ARC) Emerson Junior High School	**397**
291000-1 Spanish 1 P	26
291000-2 Spanish 1 P	27
291000-3 Spanish 1 P	27
291000-4 Spanish 1 P	25
291000-5 Spanish 1 P	27
292000-1 Spanish 2 P	19
292000-2 Spanish 2 P	26
292000-3 Spanish 2 P	33
292000-4 Spanish 2 P	18
293000-1 Spanish 3 P	31

293700-1 Span E-Interm Trans P (ACTFL35)	33
293700-2 Span E-Interm Trans P (ACTFL35)	29
294700-1 Span Interm 1H P (ACTFL45)	21
294700-2 Span Interm 1H P (ACTFL45)	20
294900-1 Span Interm 2H P (ACTFL55)	35
(ARC) Harper Junior High School	**248**
291000-1 Spanish 1 P	29
291000-2 Spanish 1 P	28
291000-3 Spanish 1 P	29
291000-4 Spanish 1 P	28
292000-1 Spanish 2 P	27
292000-2 Spanish 2 P	28
292000-3 Spanish 2 P	23
293000-1 Spanish 3 P	29
293000-2 Spanish 3 P	27
(ARC) Holmes Junior High School	**356**
291000-1 Spanish 1 P	31
291000-2 Spanish 1 P	30
291000-3 Spanish 1 P	29
291000-4 Spanish 1 P	31
291000-6 Spanish 1 P	33
292000-1 Spanish 2 P	20
292000-2 Spanish 2 P	30
292000-3 Spanish 2 P	28
292000-6 Spanish 2 P	30
292000-7 Spanish 2 P	25
293000-1 Spanish 3 P	30
293000-2 Spanish 3 P	26
294500-1 Span 4 Hon P	13
Grand Total	**1746**

2015-16 World Language Course Enrollment

Row Labels	Count of Student
Da Vinci Charter Academy	**141**
Z29100-1 Spanish 1 P	11
Z29200-1 Spanish 2 P	14
Z29200-2 Spanish 2 P	17
Z29200-3 Spanish 2 P	10
Z29300-1 Spanish 3 P	11
Z29300-2 Spanish 3 P	15
Z29300-3 Spanish 3 P	10
Z29450-1 Span 4 Hon P	34
Z29500-1 Span 5 Lang AP	19
Davis Senior High School	**552**
291000-1 Spanish 1 P	22
291000-3 Spanish 1 P	22
292000-2 Spanish 2 P	17
292000-3 Spanish 2 P	25
292000-4 Spanish 2 P	35
292000-5 Spanish 2 P	26
293000-1 Spanish 3 P	17
293000-2 Spanish 3 P	31
293000-3 Spanish 3 P	32
293000-4 Spanish 3 P	32
293000-5 Spanish 3 P	32
293000-6 Spanish 3 P	30
294500-1 Span 4 Hon P	24
294500-2 Span 4 Hon P	27
294500-3 Span 4 Hon P	31
294500-4 Span 4 Hon P	26
295000-1 Span 5 Lang AP	33
295000-2 Span 5 Lang AP	35
295000-3 Span 5 Lang AP	34
296000-1 Span 6 Lit AP	21
Emerson Junior High School	**419**
291000-1 Spanish 1 P	30
291000-2 Spanish 1 P	27
291000-3 Spanish 1 P	27
291000-4 Spanish 1 P	33
292000-1 Spanish 2 P	28
292000-2 Spanish 2 P	26
292000-3 Spanish 2 P	33
292000-4 Spanish 2 P	27
293000-1 Spanish 3 P	32
293700-1 Span E-Interm Trans P (ACTFL35)	22
293700-2 Span E-Interm Trans P (ACTFL35)	27
294700-1 Span Interm 1H P (ACTFL45)	34

294700-2 Span Interm 1H P (ACTFL45)	29
294900-1 Span Interm 2H P (ACTFL55)	18
294900-2 Span Interm 2H P (ACTFL55)	26
Harper Junior High School	**265**
291000-1 Spanish 1 P	30
291000-2 Spanish 1 P	30
291000-3 Spanish 1 P	29
291000-4 Spanish 1 P	29
292000-1 Spanish 2 P	24
292000-2 Spanish 2 P	35
292000-3 Spanish 2 P	32
293000-1 Spanish 3 P	26
293000-2 Spanish 3 P	30
Holmes Junior High School	**373**
291000-1 Spanish 1 P	31
291000-2 Spanish 1 P	31
291000-3 Spanish 1 P	28
291000-4 Spanish 1 P	27
291000-6 Spanish 1 P	32
292000-1 Spanish 2 P	32
292000-2 Spanish 2 P	32
292000-3 Spanish 2 P	34
292000-6 Spanish 2 P	32
293000-1 Spanish 3 P	24
293000-2 Spanish 3 P	24
293000-3 Spanish 3 P	25
294500-1 Span 4 Hon P	21
Grand Total	**1750**

16-17 World Language Course Enrollment

Row Labels	Count of Student
Da Vinci Charter Academy	**126**
Z29100-1 Spanish 1 P	15
Z29200-1 Spanish 2 P	29
Z29300-1 Spanish 3 P	16
Z29300-2 Spanish 3 P	21
Z29450-1 Span 4 Hon P	31
Z29500-1 Span 5 Lang AP	14
Davis Senior High School	**574**
291000-1 Spanish 1 P	26
291000-2 Spanish 1 P	25
292000-1 Spanish 2 P	33
292000-2 Spanish 2 P	35
292000-3 Spanish 2 P	35
293000-1 Spanish 3 P	34
293000-10 Spanish 3 P	31
293000-11 Spanish 3 P	28
293000-12 Spanish 3 P	22
293000-6 Spanish 3 P	35
293000-9 Spanish 3 P	32
294500-10 Span 4 Hon P	31
294500-5 Span 4 Hon P	31
294500-8 Span 4 Hon P	29
294500-9 Span 4 Hon P	35
295000-3 Span 5 Lang AP	33
295000-6 Span 5 Lang AP	31
295000-7 Span 5 Lang AP	34
296000-1 Span 6 Lit AP	14
Emerson Junior High School	**426**
291000-1 Spanish 1 P	26
291000-2 Spanish 1 P	29
291000-3 Spanish 1 P	30
291000-4 Spanish 1 P	16
291000-5 Spanish 1 P	31
292000-1 Spanish 2 P	25
292000-2 Spanish 2 P	32
292000-3 Spanish 2 P	24
293000-1 Spanish 3 P	18
293000-2 Spanish 3 P	20
293700-1 Span E-Interm Trans P (ACTFL35)	35
293700-2 Span E-Interm Trans P (ACTFL35)	27
294700-1 Span Interm 1H P (ACTFL45)	29
294700-2 Span Interm 1H P (ACTFL45)	25
294900-1 Span Interm 2H P (ACTFL55)	27
294900-2 Span Interm 2H P (ACTFL55)	32

16-17 World Language Course Enrollment

Harper Junior High School	**294**
291000-1 Spanish 1 P	33
291000-2 Spanish 1 P	31
291000-3 Spanish 1 P	32
292000-1 Spanish 2 P	20
292000-2 Spanish 2 P	29
292000-3 Spanish 2 P	28
292000-4 Spanish 2 P	32
293000-1 Spanish 3 P	28
293000-2 Spanish 3 P	28
294500-1 Span 4 Hon P	33
Holmes Junior High School	**385**
291000-1 Spanish 1 P	31
291000-2 Spanish 1 P	32
291000-3 Spanish 1 P	27
291000-4 Spanish 1 P	26
291000-6 Spanish 1 P	32
291000-7 Spanish 1 P	32
292000-1 Spanish 2 P	33
292000-2 Spanish 2 P	31
292000-3 Spanish 2 P	35
292000-6 Spanish 2 P	33
293000-1 Spanish 3 P	24
293000-2 Spanish 3 P	24
293000-4 Spanish 3 P	25
Grand Total	**1805**

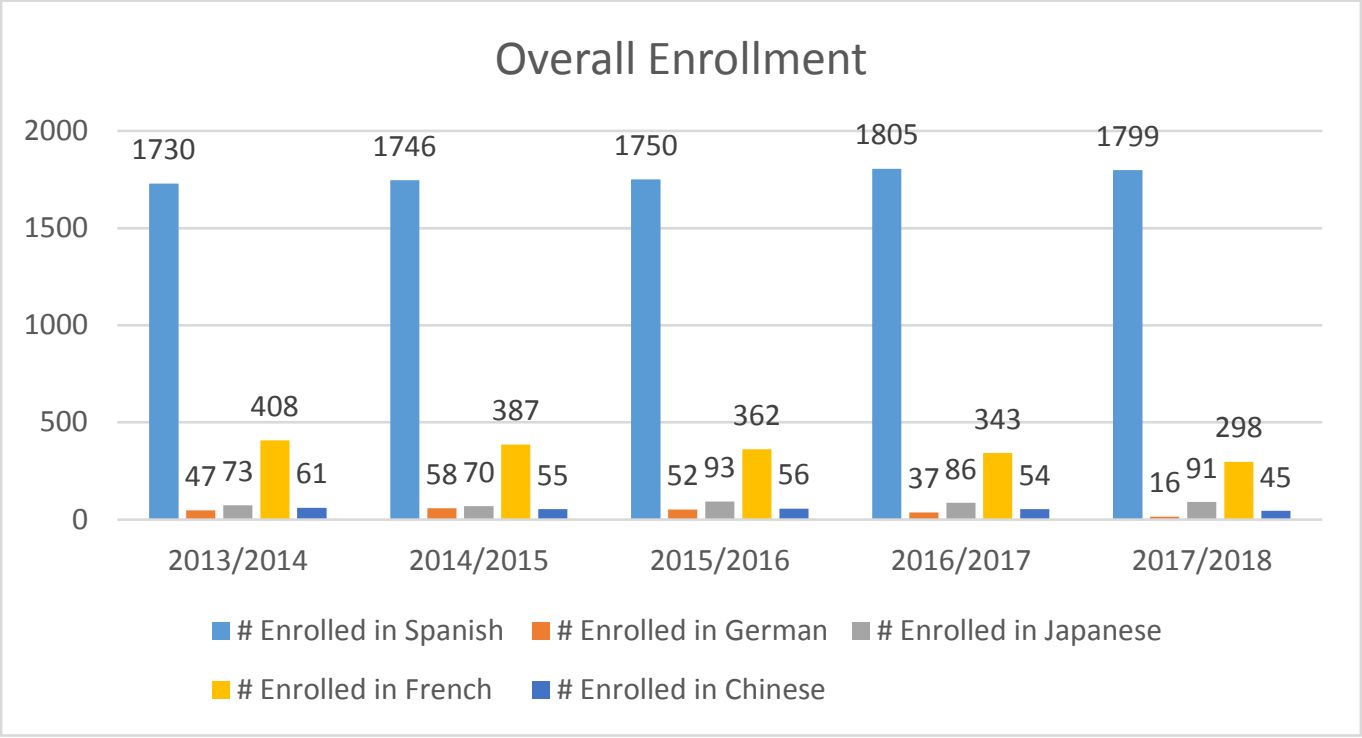
2017-18 World Language Course Enrollment

Row Labels	Count of Student
Da Vinci Charter Academy	**232**
291000-1 Spanish 1 P	7
291000-2 Spanish 1 P	15
291000-3 Spanish 1 P	14
291000-4 Spanish 1 P	14
291000-5 Spanish 1 P	15
292000-1 Spanish 2 P	12
292000-2 Spanish 2 P	8
292000-3 Spanish 2 P	13
292000-4 Spanish 2 P	14
293000-1 Spanish 3 P	10
294700-1 Span Interm 1H P (ACTFL45)	1
294700-2 Span Interm 1H P (ACTFL45)	1
294900-1 Span Interm 2H P (ACTFL55)	4
294900-2 Span Interm 2H P (ACTFL55)	2
295000-3 Span 5 Lang AP	1
295000-4 Span 5 Lang AP	2
296000-1 Span 6 Lit AP	1
Z29100-1 Spanish 1 P	13
Z29200-1 Spanish 2 P	25
Z29300-1 Spanish 3 P	19
Z29300-2 Spanish 3 P	21
Z29450-1 Span 4 Hon P	20
Davis Senior High School	**603**
291000-1 Spanish 1 P	19
291000-2 Spanish 1 P	15
292000-1 Spanish 2 P	28
292000-2 Spanish 2 P	32
292000-3 Spanish 2 P	28
292000-4 Spanish 2 P	33
293000-10 Spanish 3 P	31
293000-11 Spanish 3 P	31
293000-12 Spanish 3 P	25
293000-5 Spanish 3 P	21
293000-8 Spanish 3 P	30
293000-9 Spanish 3 P	28
294500-4 Span 4 Hon P	36
294500-6 Span 4 Hon P	31
294500-7 Span 4 Hon P	29
294500-8 Span 4 Hon P	32
294500-9 Span 4 Hon P	27
295000-1 Span 5 Lang AP	27
295000-3 Span 5 Lang AP	22
295000-4 Span 5 Lang AP	23

295000-5 Span 5 Lang AP	28
296000-1 Span 6 Lit AP	25
296000-2 Span 6 Lit AP	1
296000-3 Span 6 Lit AP	1
Emerson Junior High School	**298**
291000-1 Spanish 1 P	24
291000-2 Spanish 1 P	9
291000-3 Spanish 1 P	10
291000-4 Spanish 1 P	13
291000-5 Spanish 1 P	15
292000-1 Spanish 2 P	5
292000-2 Spanish 2 P	15
292000-3 Spanish 2 P	11
292000-4 Spanish 2 P	13
293000-1 Spanish 3 P	17
293700-1 Span E-Interm Trans P (ACTFL35)	24
293700-2 Span E-Interm Trans P (ACTFL35)	33
294500-1 Span 4 Hon P	2
294700-1 Span Interm 1H P (ACTFL45)	29
294700-2 Span Interm 1H P (ACTFL45)	30
294900-1 Span Interm 2H P (ACTFL55)	27
294900-2 Span Interm 2H P (ACTFL55)	21
Harper Junior High School	**273**
291000-1 Spanish 1 P	30
291000-2 Spanish 1 P	27
291000-3 Spanish 1 P	30
291000-4 Spanish 1 P	30
292000-1 Spanish 2 P	23
292000-2 Spanish 2 P	26
292000-3 Spanish 2 P	29
293000-1 Spanish 3 P	25
293000-2 Spanish 3 P	29
294500-1 Span 4 Hon P	19
295000-1 Span 5 Lang AP	5
Holmes Junior High School	**393**
291000-1 Spanish 1 P	30
291000-2 Spanish 1 P	31
291000-3 Spanish 1 P	29
291000-4 Spanish 1 P	21
291000-6 Spanish 1 P	34
291000-7 Spanish 1 P	30
291010-1 Spanish 1/ Modif	1
292000-1 Spanish 2 P	35
292000-2 Spanish 2 P	31
292000-3 Spanish 2 P	34
292000-6 Spanish 2 P	35
293000-1 Spanish 3 P	29

2017-18 World Language Course Enrollment

293000-2 Spanish 3 P	25
293000-4 Spanish 3 P	28
Grand Total	**1799**


Overall Enrollment
2000
1500
1000
500
0
1730
47
73
408
61
1746
58
70
387
55
1750
52
93
362
56
1805
37
86
343
54
1799
16
91
298
45
2013/2014
2014/2015
2015/2016
2016/2017
2017/2018
Enrolled in Spanish
Enrolled in German
Enrolled in Japanese
Enrolled in French
Enrolled in Chinese

5. October 2018: Junior High World Language breakdown by ethnicity, EL vs. non-EL, & SED vs. no SED, Special Education, vs. Regular Education including:

- How many students take World Language classes?
- Which languages do they take?
- Average letter grades for these classes?

American Indian	
How many students take World Language classes?	5/45%
Which languages do they take?	Spanish
Average letter grade for these classes?	C
Asian	
How many students take World Language classes?	129/52%
Which languages do they take?	Spanish, French
Average letter grade for these classes?	B+
Black	
How many students take World Language classes?	18/41%
Which languages do they take?	Spanish, French
Average letter grade for these classes?	B
Filipino/Pacific Islander	
How many students take World Language classes?	15/48%
Which languages do they take?	Spanish, French
Average letter grade for these classes?	B-
Hispanic	
How many students take World Language classes?	247/81%
Which languages do they take?	Spanish, French
Average letter grade for these classes?	B
White	
How many students take World Language classes?	336/45%
Which languages do they take?	Spanish, French
Average letter grade for these classes?	B
EL	
How many students take World Language classes?	8/11%
Which languages do they take?	Spanish, French
Average letter grade for these classes?	B-
Non-EL	
How many students take World Language classes?	617/47%
Which languages do they take?	Spanish, French
Average letter grade for these classes?	B
SED	
How many students take World Language classes?	95/28%
Which languages do they take?	Spanish, French
Average letter grade for these classes?	B-
Non-SED	

How many students take World Language classes?	530/50%
Which languages do they take?	Spanish, French
Average letter grade for these classes?	B
Special Ed	
How many students take World Language classes?	11/6%
Which languages do they take?	Spanish, French
Average letter grade for these classes?	C-
Regular Ed	
How many students take World Language classes?	614/50%
Which languages do they take?	Spanish, French
Average letter grade for these classes?	B

Appendix I

DJUSD – Board Policy 6146.1 – Instruction –

High School Graduation Requirements

Davis Joint USD - Board Policy 6146.1- Instruction - High School Graduation Requirements

Davis Joint USD
Board Policy
High School Graduation Requirements

BP 6146.1
Instruction

The Governing Board desires to prepare all students to obtain a high school diploma to enable them to take advantage of opportunities for postsecondary education and/or employment.

(cf. 5127 - Graduation Ceremonies and Activities)
(cf. 5147 - Dropout Prevention)
(cf. 5149 - At-Risk Students)
(cf. 6143 - Courses of Study)
(cf. 6146.3 - Reciprocity of Academic Credit)

Course Requirements

To obtain a high school diploma, students shall complete at least the following courses in grades 9-12, with each course being one year unless otherwise specified:

1. Four courses in English (Education Code 51225.3)

(cf. 6142.91 - Reading/Language Arts Instruction)

2. Two courses in mathematics (Education Code 51225.3)

At least one mathematics course, or a combination of the two mathematics courses required for completion in grades 9-12, shall meet or exceed state academic content standards for Algebra I. (Education Code 51224.5)

Completion, prior to grade 9, of algebra coursework that meets or exceeds state academic content standards shall satisfy the algebra coursework requirement, but shall not exempt a student from the requirement to complete two mathematics courses in grades 9-12. (Education Code 51224.5)

(cf. 6011 - Academic Standards)
(cf. 6142.92 - Mathematics Instruction)

3. Two courses in science, including biological and physical sciences (Education Code 51225.3)

(cf. 6142.93 - Science Instruction)

4. Three courses in social studies, including United States history and geography; world history, culture, and geography; a one-semester course in American government and civics; and a one-semester course in economics (Education Code 51225.3)

(cf. 6142.3 - Civic Education)
(cf. 6142.93 - History-Social Science Instruction)

5. One course in visual and performing arts, foreign language, including American Sign Language, or career technical education (CTE) (Education Code 51225.3)

To be counted towards meeting graduation requirements, a CTE course shall be aligned to the CTE model curriculum standards and framework adopted by the State Governing Board.

(cf. 6142.2 - World/Foreign Language Instruction)
(cf. 6142.6 - Visual and Performing Arts Education)
(cf. 6178 - Career Technical Education)
(cf. 6178.2 - Regional Occupational Center/Program)

6. Two courses in physical education, unless the student has been otherwise exempted pursuant to other sections of the Education Code (Education Code 51225.3)

(cf. 6142.7 - Physical Education)

7. One semester course in Health

8. One semester CTE/practical arts

9. Seventy-five elective credits

Because the prescribed course of study may not accommodate the needs of some students, the Board shall provide alternative means for the completion of prescribed courses in accordance with law.

(cf. 6146.11 - Alternative Credits Toward Graduation)
(cf. 6146.2 - Certificate of Proficiency/High School Equivalency)

The Superintendent or designee shall exempt or waive specific course requirements for foster youth or children of military families in accordance with Education Code 51225.3 and 49701.

(cf. 6173.1 - Education for Foster Youth)
(cf. 6173.2 - Education for Children of Military Families)

Retroactive Diplomas

Until July 31, 2018, any student who completed grade 12 in the 2003-04 school year or a subsequent school year and has met all applicable graduation requirements other than the passage of the high school exit examination shall be granted a high school diploma. (Education Code 60851.6)

The district may retroactively grant a high school diploma to a former student who was interned by order of the federal government during World War II or who is an honorably discharged veteran of World War II, the Korean War, or the Vietnam War, provided that he/she was enrolled in a district school immediately preceding the internment or military service and he/she did not receive a diploma because his/her education was interrupted due to the internment or military service. A deceased former student who satisfies these above conditions may be granted a retroactive diploma to be received by his/her next of kin. (Education Code 51430)

In addition, the district may grant a diploma to a veteran who entered the military service of the United States while he/she was a district student in grade 12 and who had completed the first half of the work required for grade 12. (Education Code 51440)

Legal Reference:
EDUCATION CODE
47612 Enrollment in charter school
48200 Compulsory attendance
48412 Certificate of proficiency
48430 Continuation education schools and classes
48645.5 Acceptance of coursework
48980 Required notification at beginning of term
49701 Interstate Compact on Educational Opportunity for Military Children
51224 Skills and knowledge required for adult life
51224.5 Algebra instruction
51225.1 Exemption from district graduation requirements
51225.2 Pupil in foster care defined; acceptance of coursework, credits, retaking of course
51225.3 High school graduation
51225.35 Mathematics course requirements; computer science
51225.36 Instruction in sexual harassment and violence; districts that require health education for graduation
51225.5 Honorary diplomas; foreign exchange students
51228 Graduation requirements
51240-51246 Exemptions from requirements
51250-51251 Assistance to military dependents
51410-51412 Diplomas
51420-51427 High school equivalency certificates
51450-51455 Golden State Seal Merit Diploma

51745 Independent study restrictions
56390-56392 Recognition for educational achievement, special education
60851.5 Suspension of high school exit examination
60851.6 Retroactive diploma; completion of all graduation requirements except high school exit examination
66204 Certification of high school courses as meeting university admissions criteria
67386 Student safety; affirmative consent standard
CODE OF REGULATIONS, TITLE 5
1600-1651 Graduation of students from grade 12 and credit toward graduation
COURT DECISIONS
O'Connell v. Superior Court (Valenzuela), (2006) 141 Cal.App.4th 1452

Management Resources:
WEB SITES
CSBA: http://www.csba.org
California Department of Education, High School: http://www.cde.ca.gov/ci/gs/hs
University of California, List of Approved a-g Courses:
http://www.universityofcalifornia.edu/admissions/freshman/requirements

Policy DAVIS JOINT UNIFIED SCHOOL DISTRICT
adopted: March 18, 2010 Davis, California
revised: February 2, 2012
revised: September 4, 2014
revised: February 2, 2017

Appendix J

Action Research Team 1 – World Language Task Force Committee Focused on Current District Policies/Programs

Note: WLTF Action Team recommendations have not been edited or modified, with the exception of font type.

World Language Task Force Action Team Recommendations

Action Research Team 1 - World Language Task Force Committee Focused on Current District Policies

This Committee aligned our recommendations around three principles we believe DJUSD should adhere to when revising World Language policies and programs. The recommendations in this section pertain to the highlighted principle. **The Committee believes that all DJUSD students should have:**

- Early exposure to World Language instruction
- Breadth and depth of World Language program offerings
- Access and equity in World Language learning opportunities

Problems with current DJUSD policies:

Elementary:

- While 80% of DJUSD parents in surveyed believe World Language instruction should be offered in all elementary schools and 95% believe it would be beneficial, 75% of elementary students do not receive this instruction. 71% of parents would like instruction to start as early as Kindergarten or 1st grade.

Junior High:

- Incoming 7th graders are discouraged from taking a World Language course because it is viewed as too rigorous for some students and because
- Course offerings for 7th and 8th graders are limited and declining. Two languages are offered at Harper, Holmes, and one at Emerson (previously two).

Recommendations to improve DJUSD policies:

- Provide World Language instruction to students at all elementary schools. Options include: 1) Hiring a World Language prep teacher at one or more sites (see attachment for information about model programs in Connecticut and Kentucky), 2) establishing a partnership with UC Davis departments of education or world languages, in which UCD students teach a language (i.e. two 35-minute lessons/week), under the supervision of the classroom teacher. UCD students would receive academic credit. 3) support elementary teachers with language skills (materials, training) so that they may offer instruction, 4) provide instruction via computers a few times per week, 5) Apply for a STARTALK grant to establish a supplemental program in one of the less commonly studied languages.

World Language Task Force
Current District Policies Committee

This Committee aligned our recommendations around three principles we believe DJUSD should adhere to when revising World Language policies and programs. The recommendations in this section pertain to the highlighted principle. **The Committee believes that all DJUSD students should have:**

- Early exposure to World Language instruction
- Breadth and depth of World Language program offerings
- Access and equity in World Language learning opportunities

Problems with current DJUSD policies:

Breadth of language learning options is limited.

- Course offerings in 7th and 8th grades is limited and declining. Two languages are offered at Harper, Holmes, and one at Emerson.
- Junior high school students can no longer co-enroll in high school World Language courses, limiting future paths of language study (which for many students continues in high school) to one or two languages.
- Course offerings in high school is limited and has declined (previously five, now four)
- The third most popular language of study at the college-level (ASL) is not offered.

Depth of language learning options is limited.

- Opportunities to study at advanced levels is limited.
- Advanced courses are often combination courses, which are not optimal for teaching and learning.

Recommendations to improve DJUSD policies:

- Expand the breadth and depth of World Language course offerings. Options include: 1) offering online courses (A-G approved, provided by accredited institutions) to expand the breadth of options and depth of study for students. Blended learning, video conferencing, or online course content can support instruction, particularly when combination courses are necessary. Many options, including free programs, exist (see attached summary of options and costs). 2) partnering with UC Davis, the community colleges and/or federal agencies (STARTALK grant; https://startalk.umd.edu/public/about) to offer concurrent enrollment opportunities in a broader range of languages and more advanced study.

This Committee aligned our recommendations around three principles we believe DJUSD should adhere to when revising World Language policies and programs. The recommendations in this section pertain to the highlighted principle. **The Committee believes that all DJUSD students should have:**

- Early exposure to World Language instruction
- Breadth and depth of World Language program offerings
- Access and equity in World Language learning opportunities

Problems with current DJUSD policies:

- Data provided by DJUSD indicate that Latino students take an average of one World Language course, while other subgroups take two to three courses. Two years of World Language courses are required for students to meet the A-G admissions requirements of the UC and CSU (UC recommends three years).
- Overall A-G completion rates for Latino students are currently among the lowest in the district.
- A-G completion rates for Asian students are roughly 80% higher than for Latino students and completion rates for white students are roughly 70% higher than for Latino students.
- This course taking pattern may also make these students ineligible for the State Seal of Biliteracy.
- While World Language course-taking among students with disabilities has increased in recent years, in some cases students with disabilities are viewed as unable to successfully learn second languages (preliminary results of our survey).
- No American Sign Language (ASL) course option exists for students whose native language is ASL or who would prefer or be more successful learning a non-verbal language.

Recommendations to improve DJUSD policies:

- Improve access and equity in World Language course-taking. This should include 1) a root cause analysis of disparities in course-taking in all subjects, including an examination of master scheduling, counseling services, placement policies, A-G course approval processes, and parent education opportunities, leading to a plan to address these causes, 2) aligning local graduation requirements with the A-G admissions requirements of the UC and CSU, 3) having the same expectations for students in special education to take WL regardless of identifier and to 4) add ASL courses to the WL program to have an alternative to traditional oral languages.

Attachment 1: Early Exposure to World Languages

Examples of model elementary programs in other states:

Glastonbury, Connecticut:

- All students in grades K-5 have 25 minutes of Spanish instruction 2x/week as a "special."
- Taught by credentialed World Language teachers. Some teachers are dedicated at one site, some split between sites. Sometimes taught by student teachers from University of Connecticut.
- Operates a STAR TALK summer program (funded by a federal grant) and participates in exchange programs with sister schools in Spain, Russia, and China.

Louisville, Kentucky:

- All elementary students have 30 minute World Languages lessons 3x/week (total of 90 mins). Languages chosen by the school site.
- Taught by credentialed teachers - either classroom teacher or World Languages "special" teacher.
- 5th grade students may earn up to 3 high school credits in World Languages through assessment

References for research on benefits of early exposure to World Languages:

American Council for the Teaching of Foreign Languages (2012): https://www.actfl.org/news/position-statements/early-language-learning

Armstrong, P. W., & Rogers, J. D. (1997). "Basic skills revisited: The effects of foreign language instruction on reading, math, and language arts." Learning Languages, 2(3), 20-31.

Foster, K. M., & Reeves, C. K. (1989). "Foreign Language in the Elementary School (FLES) improves cognitive skills." FLES News, 2(3), 4.

Rafferty, E. A. (1986). Second language study and basic skills in Louisiana. U.S.; Louisiana, from ERIC database.

Stewart, J. Early Childhood Education Journal, Vol. 33, No. I, August 2005 "Foreign Language Study in Elementary Schools: Benefits and Implications for Achievement in Reading and Math."

Taylor (2010) "[Elementary] foreign language (FL) students significantly outperformed their non-FL peers on every test (English language arts, mathematics, science, and social studies)"

Attachment 2: Blended Learning and Distance Learning Options

Blended learning is a formal education program in which the student learns part online and part away from home (i.e. in school) along a learning path leading to an integrated learning experience. There are a variety of models: station, lab and individual rotation, flipped classroom, FLEX, A La Carte, Enriched Virtual (https://www.blendedlearning.org/ models/).

Distance learning, sometimes called e-learning, is a formalized teaching and learning system in which students and teachers are in different classrooms and communicate through computer networks or telephone systems.

Distance Learning and blended learning is encouraged by the National Council of State Supervisors for Languages (National Council of State Supervisors for Languages, "NCSSFL Position Statement on Distance Learning in Foreign Languages," http://www.ncssfl.org/papers/index.php?distancelearning; https://www.actfl.org/membership/special-interest-groups-sigs/distance-learning).

Also see: "Blended: Using Disruptive Innovation to Improve Schools" Book by Heather Staker and Michael B. Horn, breaks down the different blended models, and gives advice for what might work best.

Experiences with blended learning:
Ellen Dorr is Renton SD's Chief Technology Officer and oversees the use of edgenuity online classes. Currently, the district is not using these for WL. However, one of the WL teachers is using lots of online resources (including speaking and recording) and says that he has now more individual contact with each student. (is willing to be contacted with questions).
School directory of schools using blended learning https://www.blendedlearning.org/
Local Contact at UC Davis who studies distance learning for foreign language (mostly college level): Prof. Robert Blake https://spanish.ucdavis.edu/people/robert-blake (has not been contacted by us yet)
Other positive experiences can be found on each of the programs mentioned later.

How could it look like?
Combination classes: Use WL online courses with district teacher in language classes that cover 2 levels (i.e. French 1 and 2). Teacher could assign lectures that are done online by one level and teach other level directly.
Under-enrolled Classes: Use WL courses that come with CA-credentialed teacher (i.e.Scout custom plan, Middlebury) to offer classes which are currently under-enrolled. Class would have students who take a variety of WL classes, or even other specials, like honors or recovery classes) and can be supervised by one teacher. Advantage: financially very reasonable because class can have 30 students rather than just 10 or so. Also, will enable district to offer a wider variety of classes (not just for WL).
Classes without credentialed teacher in that particular WL: Use Wl online class that comes with teacher.

Financial Costs: reasonable

If students use their own computer (BYOD - bring your own device district policy) and students without devices get scholarships to help purchase a computer through the Comcast Internet Essential program (Chromebook for $99), there are minimal set-up costs.

If students use DJUSD computers, most likely need to buy additional Chromebooks (30 for $10,000 without cart, or $15,000 with cart).

Classrooms are already equipped for all technical requirements for using online classes (Marcia Bernard).

Possible Programs:

UC Scout https://www.ucscout.org/plans from University of California is a SAPEP (Student Academic Preparation and Educational Partnerships) program that develops and delivers A-G approved online classes and curriculum. Basic Plan without teacher $0 to custom plan with teacher who gives credit $499/student/semester or $2000 whatever is greater. Contact: Kevin Heller - kheller@ucsc.edu

Middlebury Interactive classes are CA common core aligned and DJUSD teachers can also modify lectures. Contact: Tres Tyvand (ttyvand@fueleducation.com).
Demo:
K-5: https://languages.fueleducation.com/login Username: wlstudentel; PW: password1
6-12: https://peak.getfueled.com/#login Username: WLStudent1, PW: Home2018

Basic Price Information:
1.Per student enrollment (seats are not reusable for different students later in the year): grades K-5: $99 per student for a year-long course + $350 per student to use our instructor for the full year; grades 6-12: $99 per student per semester, so $198 for a year (2 semesters)+ $200 per student, per semester to use instructor.
2. Block enrollment: Seats are reusable for 12 months, Sold in blocks of 10 enrolled user licenses, For every enrolled user license, one student will have access to take multiple courses in the MIL catalog, Enrolled user seats are transferable to another student at no charge, $200 per use of instructor.

- 1 or 2 blocks (of 10 seats each)= $2,000 per block
- 3-9 blocks (30-90 seats) = $1,879 per block
- 10+ blocks (100 or more seats)= $1,637 per block

K12 online school https://www.k12courses.com/subject/world-language.html classes with or without teacher (about $300 without teacher, $950 with teacher)

Keystone Online School for HS with teacher (about $400)
https://hs.keystoneschoolonline.com/KeystoneOes/portlets/catalog/lookupHashToPosition.do

Edgenuity State and common core aligned classes https://www.edgenuity.com/ .

Rosetta Stone: https://www.rosettastone.com/k12/benefits/#access-world-languages
https://www.rosettastone.com/k12/solutions/

Other: Check out this search engine by UC:
https://hs-articulation.ucop.edu/agcourselist#/list/search/course

Attachment 3: Align High School Graduation Requirements with A-G Standards

Why?

It is a DJUSD Board priority goal to reduce our District's Achievement and Opportunity Gap.[1] DJUSD should better prepare underrepresented students for college admissions by implementing graduation requirements that serve as a roadmap toward college readiness.

Requiring 2 years of World Language aligns with most university requirements and prevents students from discovering too late they are ineligible for UC/CSU.

- 51% of of California school districts require students to complete the A–G sequence. Districts with large shares of "high-need" students (economically disadvantaged and English Learner students) are more likely to require A-G completion. Research suggests **such policies can and will lead to improvements in college preparation, especially among students from groups underrepresented in college**.[2]

- DJUSD Can Catch Up to Other School Districts
    - Similar Size Districts Requiring A-G: Palo Alto Unified, Sonoma Valley Unified, Carlsbad Unified, Morgan Hill Unified, Santa Rosa City Schools District
    - Other CA Districts Requiring A-G: LAUSD, SFUSD, SDUSD, San Jose Unified, San Juan USD (starting 2023), Vallejo Unified.
    - Local Districts Requiring World Language for Graduation: Rocklin Unified, Washington Unified (College/Career Ready Path), Sacramento City Unified

- The numerous benefits of World Language study should be provided to *all* student populations.
    - Increase knowledge and ability to interact with people from different cultures to compete/contribute to a global society
    - Students with home language other than English attain higher levels of proficiency in native language
    - Students of different backgrounds interact with each other more and build self-esteem (eg, Heritage speakers, Deaf signers)
    - Improves academic performance
    - Improves employment opportunities
    - Opportunity to earn State Seal of Biliteracy
    - DJUSD Parent Survey: Why parents want students to learn world languages: Develop a Useful Job Skill (77%), Useful in Traveling (67%), Fulfill A-G Requirement (57%), Communicate with Family/Friends (55%), Fulfill High School Graduation Requirements (41%).

How?

In order to raise the college readiness of all students, DJUSD must implement A-G aligned graduation requirements in an equitable manner, with sufficient staff, student and family support and resources.[4] Otherwise, students not meeting A-G standards may potentially be redirected (by staff or family) or self-directed to alternative schools or diploma tracks, which can actually exacerbate the achievement gap and segregate students.

- Monitor for & Increase Intervention Services for At-Risk Students
    - Use "A-G On-Track Model" to predict and support students in 6th/7th Grade at-risk for not meeting A-G (developed by Public Policy Institute of California)

    - Track & Support Student A-G Progress Through High School
    - Counsel Students/Families on need for A-G skills for 21st Century Workforce & Help Identifying Suitable Courses to Meet A-G (eg, Heritage Language, ASL)
    - Student Support: Additional counselors, teachers, tutors; creative class make-up opportunities, including classes online, Saturdays, after school, summer school.
    - Give WL Teachers Additional Support to Differentiate Curriculum As Students With Less Academic Prep Join Classes

- Consider Partial or Phase-In A-G Alignment
    - Start with 1-year WL Requirement, then re-evaluate before increase to 2-years
        - Monitor if other classes are pushed out (e.g., Art, Music)
    - Advise Elementary/Jr High Families of High School Requirements (prep early)

- Consider *Limited* Parental Waiver[5]
    - Alternate Career Technical Education Program
    - Individualized Learning Plan (students with IEP, 504 or otherwise Parent Opt-Out)
    - Foreign-Born Learning Plan (if needed, for older foreign-born students w/o accessible student records)
    - Carefully Monitor Waivers & Opt-Outs
        - Families Adequately Counseled on Exemptions
        - Groups of Students not Automatically Shifted to Alternate Diplomas

- Offer Alternative Language Classes
    - Add Heritage Language Classes
        - Allow students (ELL and non-ELL) to view and use home language as an asset
    - Add American Sign Language Classes (see Attachment 4)
        - Alternative to traditional oral languages can be more accessible to Deaf/Hard of Hearing students, students in Special Education, and typically developing students with visual/kinesthetic learning styles

Notes

[1] DJUSD Board Goals and Priorities (retrieved online: http://djusd.ss18.sharpschool.com/cms/one.aspx?portalId=117173&pageId=1234003).

[2] Gao & Johnson, "Improving College Pathways in California," Public Policy Institute of California (2017) (citing Betts et al. 2016).

[3]Learning World Languages and Cultures in California: A Stimulus for Academic and Economic Success" Stanford California Foreign Language Project (2009); "Studies Support Increased Academic Achievement: Language Learning Correlates with Higher Academic Achievement on Standardized Test Measures," American Council on the Teaching of Foreign Languages, (retrieved online: https://www.actfl.org/advocacy/what-the-research-shows/studies-supporting); "Importance of The State Seal of Biliteracy," CA Dept. of Education (9/12/2017) (retrieved online: https://www.cde.ca.gov/nr/el/le/yr17ltr0912.asp); CA Dept of Education, "Ensuring Success and Closing the Achievement Gap for All of California's Middle Grades Students." TCSII Portal for Middle Grades Educators (retrieved online: https://pubs.cde.ca.gov/tcsii/ch2/foreignwrldlngs.aspx); "Benefits of Language Learning," Modern Language Association Infographic (retrieved online:

https://www.mla.org/Resources/Advocacy/Infographics/Infographic-Benefits-of-Language-Learning).

[4]Betts, J., Zau, A., Volz Bachofer, K. , "The "College Prep for All" Mandate: An Update on How San Diego's Class of 2016 Has Fared with New Graduation Requirements." San Diego Education Research Alliance at the University of California, San Diego (Sept 2017) Betts, J., Zau, A., Volz Bachofer, K. "College Readiness as a Graduation Requirement: An Assessment of San Diego's Challenges." Public Policy Institute of California (April 2013); Gau, N. "College Readiness in California: A Look at Rigorous High School Course-Taking." Public Policy Institute of California (July 2016); "Raising graduation bar poses challenges for school districts," Leal, F. (EdSource Aug. 23, 2015) (retrieved online: https://edsource.org/2015/raising-graduation-bar-poses-challenges-for-school-districts/85149).

[5]Waivers can be granted in compliance with Ed Code 51225.3 (Career Technical Education course option) & 52336.1 (Career Prep option). Districts allowing parental waivers include Sonoma Valley Unified, Santa Rosa Unified, San Jose Unified, Eastside Union, Oakland Unified.

Attachment 4: Same World Language Expectations for Students in Special Education

Why?

In aligning graduation requirements with A-G standards, DJUSD should support students receiving Special Ed services so they have the same college opportunities as other students.

- 12% of DJUSD students have Individualized Education Program (IEP)
- 5% of DJUSD students receive special education services under "504 Plans"
- Only 11% of Special Ed students take World Language courses
- DJUSD Special Ed/WL Survey Preliminary Results: Only 22% of Special Ed teachers believe students in Special Ed are encouraged to take WL classes the same as other students.[1]
- Only 1% of Special Ed students were A-G Eligible
- Many students in Special Ed *can* meet same graduation requirements
- Students in Special Ed require equal access to content areas.
- The numerous benefits of World Language study should be provided to *all* student populations. (see Attachment 3).

How?

- Monitor Implementation of A-G Requirements Closely to Prevent/Reduce Granting of Exemptions to WL Graduation Requirements[2]
    - Outreach / Educate Parents, Teachers Before Grant Exemptions/Waivers
    - Modifications / Accommodations to increase access to standard Curriculum (these practices benefit most children, not just in special ed)
    - Consider alterations to Curriculum itself as well as Instruction Practices (i.e. smaller class sizes, frequent review and repetition), which benefit all students

- Add American Sign Language
    - ASL Satisfies World Language Requirements
        - Meets Current High School and A-G Requirements
        - Qualifies for Seal of Biliteracy
    - Educate staff/parents/students on availability of ASL for students better suited to non-traditional visual/kinesthetic language
    - Alternative to Traditional Oral Languages

- Deaf/Hard of Hearing Students whose Natural Language is ASL[3]
- Other Students in Special Education who may be more suited to a Visual, Kinesthetic, Non-Verbal Language[4]
    - 27% of DJUSD students on IEP identified with Speech or Language Impairment (2017-18)
    - 14% of DJUSD students on IEP identified with Autism
    - ASL may be viable option for other students with other disabilities (eg, Dyslexia, ADHD)
- DJUSD Special Ed / WL Survey Preliminary Results: 78% of Special Education teachers believe ASL should be added as WL option[5]
- Typically Developing Students who are Visual and/or Kinesthetic Learners
    - DJUSD Parent Survey Results: 77% kids identified as visual learners, 66% kinesthetic/tactile, 60% auditory.

- Increasing Popularity / Demand of ASL
    - ASL is 3rd Most Popular College World Language[6]
        - 2018 UCD Student Petition seeks addition of ASL classes[7]
    - Student-Run ASL Clubs in Davis
        - Emerson Jr High
        - Harper Jr High (now forming)
        - Holmes Jr High
        - Davis Sr High (now forming)
        - UC Davis
    - DJUSD Parent Survey Results
        - Elementary: ASL ranked 3rd desired elementary language instruction (after Spanish, Chinese). 2nd rank for Immersion in addition to Spanish (1st rank is Chinese).
        - Jr High: ASL ranked 3rd after Spanish and Chinese for potential Exploratory/Intro WL class in Jr High.
        - High School: ASL ranked 3rd after Chinese and French for High School students' interest.
- Resources Needed
    - Qualified ASL Instructors (Limited Supply)
        - Consider emergency credential or partnering with Sac State Deaf Studies students/grads seeking teaching credentials
        - Consider blended or distance learning options
    - Curriculum, Materials
        - Resource: Sac State - ASL / Deaf Studies Professor Bill Vicars - free ASL instructional materials online
        - Resource: Vaca Pena Middle School (Vacaville) - Intro to ASL instructor - can help with curriculum, program model
        - Resource: Vacaville HS ASL Instructor (also certified Teacher of the Deaf) - can help with curriculum, program model

Notes

[1]One teacher noted: “I think the general mentality is to push these students to art or shop rather than another class that might add to "academic load" or mental fatigue. I believe the world language classes are seen as more rigorous and thus "too much" for SpEd students in many cases..”

[2] See “Students With Learning Disabilities in the Foreign Language Learning Environment and the Practice of Exemption” Mary Caitlin S. Wight ACTFL Foreign Language Annals, First published: 08 March 2015 https://doi.org/10.1111/flan.12122

[3] CA Dept of Education, Position Statement on Language Access, https://www.cde.ca.gov/sp/ss/dh/positionstmnt.asp, California Deaf and Hard-of-hearing Education Advisory Task Force. Communication Access and Quality Education for Deaf and Hard-of-Hearing Children, (California Dep’t of Education, 1999)

[4] Rosen, R., “American Sign Language as a Foreign Language in US High Schools: State of the Art.” Modern Language Journal, March 2008, pp. 20-21 (“[t]he growth in ASL classes provided opportunities for students with disabilities to interact with regular education students”); Tissot, C. & Evans, R., “Visual Teaching Strategies for Children with Autism.” Early Child Development and Care (Aug. 2003;).

In DJUSD Parent Survey, one parent stated they “discovered too late that due to learning disability, learning spanish almost impossible. ASL works.”

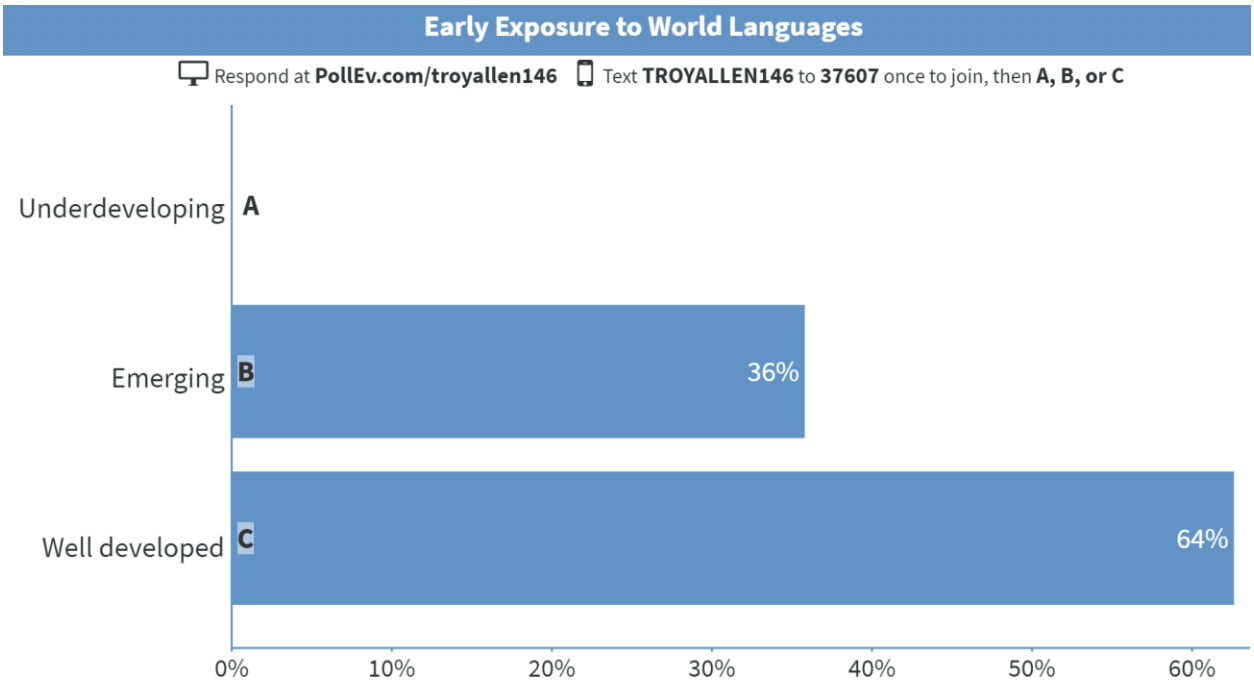
[5]DJUSD Special Ed / WL Survey: Special Ed teacher comments in support of adding ASL included: “Many of our 4-year bound special ed students have been successful in s `hands-on’ or kinesthetic approach to language acquisition, such as sign language;” “Many students with disabilities [sic] struggle with the reading and writing portion of all languages, and tend to perform better kinesthetic tasks;” “Many students prefer other modes of communication to verbal communication, and this class can be taught in a different format as well.”

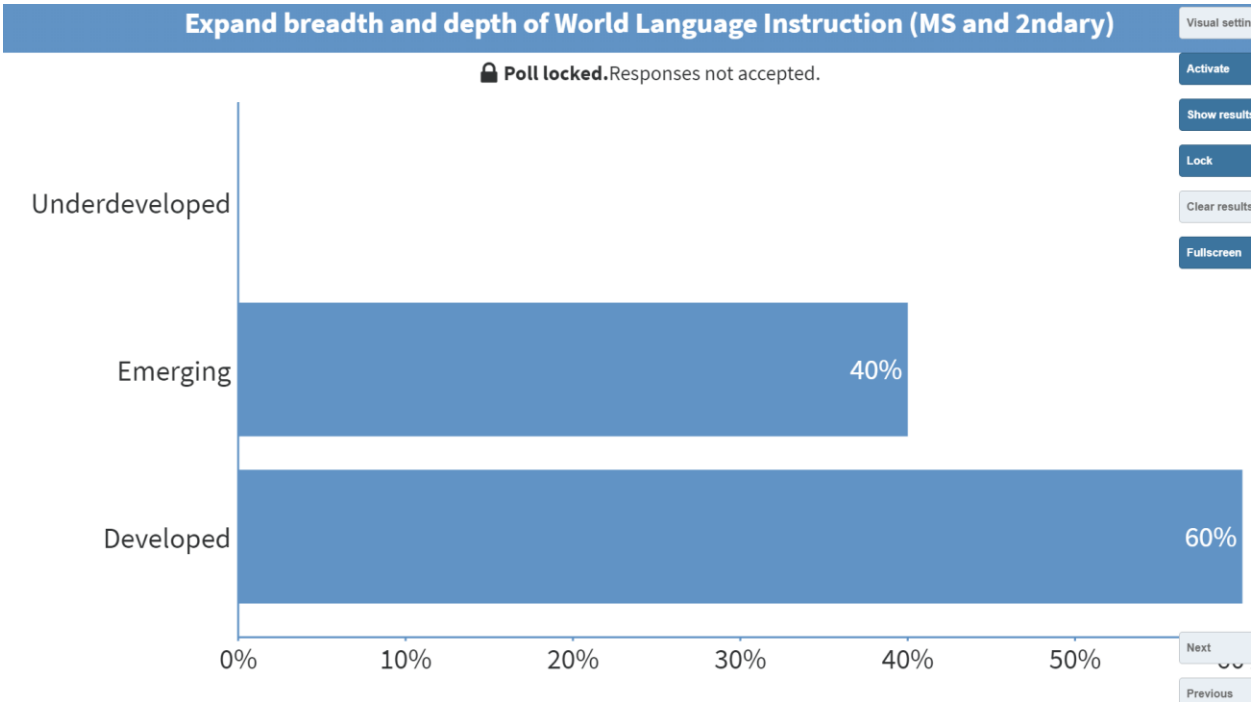
However, some World Language teachers in the survey were unsure or opposed to adding ASL at a time when other languages have been cut. Comments included “There should be no program expansion at a time with small enrollment numbers in some courses currently and when the district is unable to pay teachers a decent salary. . ..;” “I think that would be a good opportunity for kids, however, we have already dropped French at Emerson and German. Which languages are more valued?”

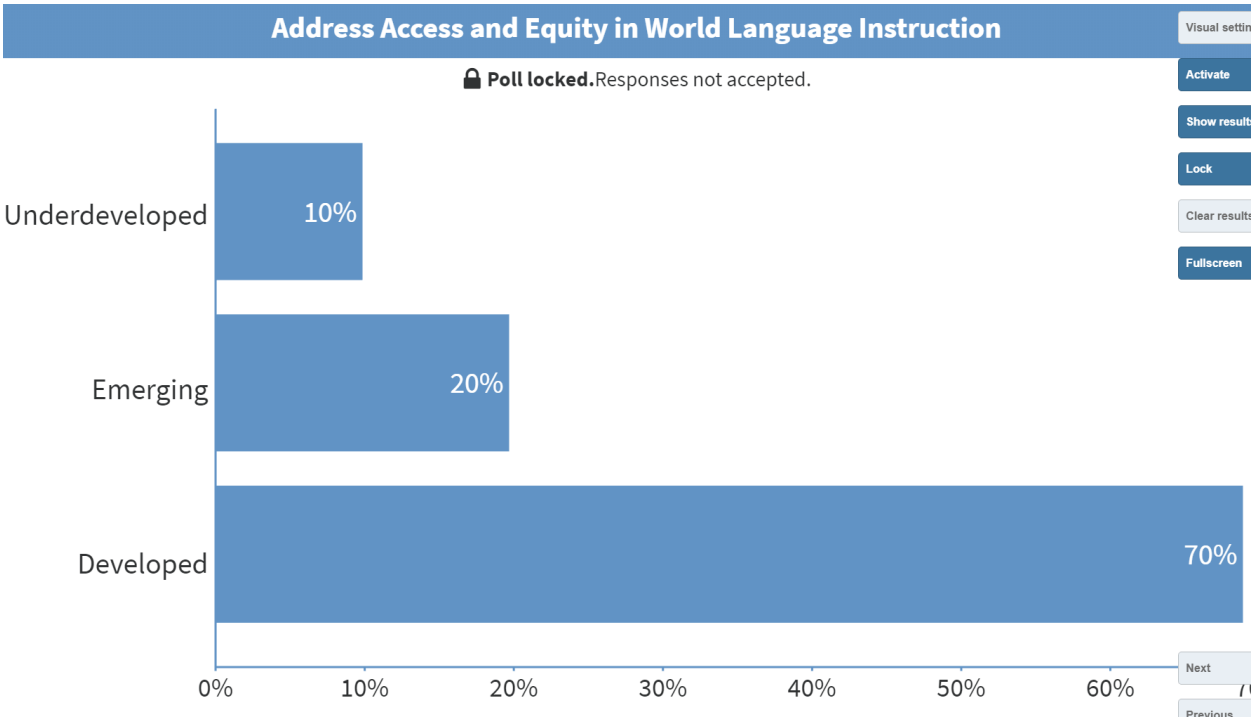
[6]Looney, D. & Lusin, N. “Enrollments in in Languages Other Than English in United States Institutions of Higher Education, Summer 2016 and Fall 2016: Preliminary Report.” Modern Language Assoc. (Web publication Feb. 2018).

[7]https://www.change.org/p/college-of-letters-sciences-make-asl-a-uc-davis-class

Current District Policies- Poll Everywhere Results






Address Access and Equity in World Language Instruction
Poll locked. Responses not accepted.
Underdeveloped
10%
Emerging
20%
Developed
70%
0%
10%
20%
30%
40%
50%
60%
Visual settin
Activate
Show result
Lock
Clear result
Fullscreen
Next
Previous

Appendix K

Action Research Team 2 – World Language Task Force Committee Focused on Barriers to World Language Access

Action Research Team 2 - World Language Task Force Committee Focused on Barriers Action Team of the World Language Task Force

As we began our work with the World Language Task Force, we discovered that barriers came in many different forms, both tangible and intangible. Teachers faced barriers (enrollment-related issues, including combined-level classes; facility-related issues; and a lack of professional development), students encountered barriers (including incorrect and/or inadequate information regarding enrollment options; scheduling conflicts; and access), and the district deals with barriers (foremost possibly being the shortage of qualified World Language teachers).

We felt that the most logical step in exploring the issue of barriers was to start by looking at the existing World Language program. We opened up a dialogue with both past and present district World Language teachers. They provided us with valuable insights and information and helped to inform our work on the World Language Task Force. In a series of e-mails and through an informal survey of the WL teachers, we compiled a list of barriers encountered by our World Language teachers over the years in our school district. It became clear that before we can tackle the issue of what we would like our World Language program to ideally look like in the future, we need to understand the strengths and weaknesses of our current program and focus efforts on overcoming existing barriers and improving and maximizing what we have for the benefit of the students and the instructors.

In this document, we will first present you with an overview of the feedback we received from the World Language teachers, after which we will list our recommendations as well as the rationale behind those recommendations.

Overview of feedback from World Language teachers

Once we collected and compiled the barriers feedback we received from our World Language teachers, our next step was to try to organize that feedback into rough categories. Reading through the numerous e-mail messages, we saw that they touched on issues ranging from poor communication and a lack of transparency and support on the part of the district, extended to facilities issues, and finally referred to historic barriers that have served to steadily undermine certain World Languages over the years.

We received numerous messages that outlined a **dysfunctional district > teacher relationship** that has developed over the years. Extensive feedback explained how our World Language teachers feel that the district and/or school sites do not listen to their professional feedback or take advantage of their expertise. Furthermore, they described a lack of transparency and clear communication on the part of the school district vis-à-vis World Language teachers regarding issues concerning the World Language program. World Language teachers noted a lack of district follow-through over the years, citing such examples as:

- Over the years, district leadership has occasionally asked for professional input from WL teachers in meetings without any further decision, action, or improvement.

- World Language teachers have spoken directly to district superintendents and site administrators regarding program issues with no recognizable changes to scheduling or program offerings.

- District does not use notes from teachers' World Language Articulation meetings as a guidance for district considerations or plans.

- One World Language teacher described attending meetings for a previous WL Task Force for 20+ years, and none of the hours, notes, and objectives ever resulted in any change or improvement.

This feedback makes it clear that in order to improve the World Language program, our district needs to make a serious effort to repair its relationship with the World Language teachers—and re-establishing trust is a process that will be neither fast nor easy.

Another category of feedback from teachers addressed the issue of low enrollment in many World Language classes and the resulting impact this has had. Low enrollment often leads to combined-level classes—sometimes as many as three grade levels in one class—in order to reach the required minimum number of students. World Language teachers explained how combined-level classes undermine both effective instruction (teachers) as well as learning (students). Teachers carry the burden of multiple preps for a single class period as well as the frustration of knowing that they are not able to teach at the level to which they aspire.

Factors contributing to low enrollment are complex. Over the years, such factors have included issues with counselors either discouraging students outright from taking a world language in 7th grade because it is perceived as an academic class that might be overly challenging at that age/grade level, or—back when this was an option—discouraging Junior High students from traveling to the High School to take a World Language class.[2] Furthermore, low enrollment can often be attributed to other factors, such as scheduling conflicts (students being forced to choose between a World Language or music, for instance), as well as (in the past) first level World Language classes being offered at DHS during a time other than first period, precluding interested Junior High students from taking the class. The district needs to realize that even what might seem like a minor decision that prevents students from taking a World Language class will end up having a long-term detrimental ripple effect on enrollment in the affected World Language.

World Language teachers gave us extensive feedback about issues resulting from a **lack of district support**, specifically:

[2] In one instance in the past, counselors actively discouraged Junior High students from enrolling in German at DHS (apparently to protect Spanish & French classes at the Junior Highs) and warned that Junior High students would be "endangered" on the High School campus.

- **Lack of professional development**: None of the World Language teachers we talked to can recall any professional development ever being offered to them in our district, extending back as far as twenty years. To truly grasp what that means, just think of how much math instruction has changed over the years. Similarly, tremendous strides have been made in the field of language acquisition and teaching. World Language teachers need professional development that is based on current research in language acquisition (researchers include Bill VanPatten and Dr. Stephen Krashen). In our district, several World Language instructors are familiar with these approaches and are staunch advocates for the fact that teaching methods need to be research based, and they feel it is vital for our district to update World Language instruction to the 21st century.

- **Lack of district guidelines or regulations** concerning World Language course enrollment. (For example: any student can enroll in any level of any language in any year even if they ***do not*** meet prerequisites and are unprepared to handle the work at that level—to the detriment of all students and the instructor.)

- **Combined-level classes** represent a major barrier to language learning with negative impacts on instructors and students, including:
  - Physical and emotional wear and tear on instructors
  - Instructors have multiple preps for a single class (and no additional compensation to reflect the additional work involved)
  - Less time for student learning at the various levels, instruction that is far less than ideal for students, and less time to help struggling students

- **Improper student placement**
  - If students are inappropriately placed, it is difficult for those students to change their schedule (whether due to misplacement or other class or period schedule changes)

- **Scheduling & enrollment issues**
  - Conflicts created by scheduling World Language classes opposite music and/or leadership classes
  - Discouraging 7th graders from starting a World Language (feedback from parents saying that 7th graders were discouraged from taking a World Language by a principal and/or counselor, saying it would be too hard)
  - Decision to add an elective choice (drama) without a whole school discussion regarding the impact that would have on current electives (Emerson)

- **DJUSD does not have a plan for native Spanish speakers to enroll in a class that is appropriate for their needs**
  - Districts throughout the country have Heritage Speakers classes. Much like it would be wrong to place a native English speaker in an ESL class, it is not right to put a Heritage Spanish speaker

in a traditional Spanish class. At CCE, MME and EJH we try hard to get the native speakers into the program so that they can read literature and learn to write at their level. However, native Spanish speakers that attend Harper or Holmes don't have access to that curriculum.

We received a substantial amount of feedback from teachers regarding the **lack of and/or inadequate technology and facilities**. Facilities-related feedback mentioned the O Wing at DHS, which was described as less than adequate. A World Language teacher at DHS teaches in what was described as a smelly portable classroom only recently equipped with a permanent projector and screen. World Language teachers described materials that are outdated and said they would benefit from some sort of permanent sound system/language lab facility for listening activities/access to curriculum, and laptops with integrated CD/DVD drives (for access to music and films as vital cultural teaching tools).

Overall, World Language teachers expressed their desire for the district to develop a clear policy for the World Language program. They would like guidelines to be established governing enrollment—ones that will also enforce course prerequisites, give teachers a final say over enrollment or placements in higher-level classes, and, finally, will ensure that teachers are compensated for their time if placement assessments are deemed necessary. World Language teachers would also like combined-level classes to be minimized and eliminated whenever possible. Lastly, World Language teachers feel that the district should identify the most effective classrooms for language learning and prioritize those spaces for language instruction.

Overview of Barriers Action team recommendations

Recommendation 1:

Support and improve the existing World Language program with input from World Language teachers and create pathways to support the World Language program as well as Spanish Heritage speakers.

Rationale:

Our first recommendation is largely a result of the direct feedback garnered from our World Language teachers. After reviewing the extensive feedback we received, we concluded that there are a number of steps the district can take to support and improve the existing World Language program in our school district.

First of all, there is universal agreement that, by minimizing and/or eliminating combined-level classes whenever possible, the district can take a vital first step toward improving the quality of World Language classes. Furthermore, the district should develop clear policy guidelines for the World Language program that will address the issues relating to enrollment, course prerequisites, and class placements (these issues are described in more detail above).

Next, the district should provide World Language teachers with research-based professional development so they can update their teaching skills to reflect 21st century practices. This will improve and facilitate language learning in the classroom. To support these updated approaches, the district should review the existing technology and facilities at school sites and explore ways to better exploit

and/or improve that infrastructure whenever possible. This can be as simple as prioritizing classroom assignments and exploring ways for students to better access language-learning curriculum.

Heritage Spanish speakers are an overlooked group at some school sites in our district. While this large population of students has varying levels of Spanish language proficiency, they all have the right to be properly placed in a program that challenges and satisfies their need to become fully bilingual and biliterate. DJUSD has been very good about creating learning environments for our AIM students because the parents were very vocal about it. Oftentimes Spanish speaking parents do not have the language skills to be equally as demanding about their own children's education. MME has an amazing seven year program that serves a lot of these students as well as many Spanish language learners. To place those students in a traditional Spanish class at junior high is like putting a native English speaker in an ESL 2 or 3 class. Some of the students that have the means will transfer over to Emerson, but that is a very small portion. It becomes an educational equity issue and something that could be easily solved by creating a Spanish Immersion/Heritage Speaker class similar to EJH at Harper or Holmes. This would not only allow the SI/Heritage Speakers to continue their education but would also attract other Spanish speakers that attend their school to become fully bilingual/biliterate.

Last but by no means least, the district needs to involve and respect the World Language teachers in our school district as a valuable resource. Among other things, this will entail a long-term and sustained effort on the part of the district to repair its relationship with World Language teachers in order to regain their trust.

Recommendation 2:

Boost World Language enrollment by developing a World Language information campaign aimed at parents and students and offering introductory World Language courses at the Junior Highs (as semester classes and/or as part of a cluster).

Rationale:

Unfortunately, learning a second language has never been a priority in the United States, and yet in an ever-shrinking and increasingly globalized world, learning a second language as well as learning about other cultures and countries has never been more important. As a result, we feel that a key component of boosting enrollment in World Language classes is the need to develop an information campaign aimed at parents and students in order to highlight the importance of World Languages as a vital 21st century skill. We would like to raise awareness about why learning a second language is so important while also highlighting the many career benefits. At the same time, it is important to take steps to ensure that counselors and district staff give families clear, consistent, and accurate information about World Languages and the program options at the different school sites.

Our group and the World Language Task Force as a whole discussed how important it is to boost enrollment in World Languages and how that might be accomplished. In the end, this gave rise to the idea of offering introductory World Language classes at the Junior High level, the key being to make these classes a fun and less academic introduction to the World Languages in our school district. By

possibly offering one or more of the World Languages not otherwise offered at a given school site, students would also have the opportunity to explore other language options open to them at the High School level. This would represent a more relaxed way for students to start a World Language, get them excited about learning about other cultures, raise awareness about the importance of these skills and the various options available to them in our district, and help to encourage them to learn a second language.

These introductory-level World Language classes would offer yet another benefit: They would ease any concerns that students or parents might have about the levels of homework or stress that they may associate with the more challenging year-long World Language classes. Furthermore, introductory classes would give students a taste of World Languages in a fun and stimulating environment that would encourage them to continue learning a second language in High School, thus boosting enrollment rates. After taking an introductory-level World Language class, students would feel more confident and prepared to start a regular year-long World Language class.

Offering semester-long introductory World Language classes and possibly including an introductory-level World Language in the 7th grade cluster class would be an ideal way to create appealing pathways at an earlier stage—pathways that would support and boost World Language enrollment as students continue on in the school district. One major advantage of this recommendation is its flexibility, because it can be tailored to the individual needs of each school site and it paves the way for myriad possibilities—even the possibility of a dedicated World Language cluster if desired (Health + three different World Languages). In addition, even if it is not feasible for a Junior High to make changes to its existing cluster class, it could still offer introductory-level World Languages as semester classes.

In the World Language survey, many students and families in our district expressed an interest in American Sign Language. With this recommendation, the district could explore the possibility of offering ASL as a semester class at the Junior Highs or ASL as part of a cluster class. Apart from helping to create a more inclusive community for hearing-impaired students in our district, in our research we discovered that learning American Sign Language offers a wide range of benefits[i] to all students as well as to children with autism and students with learning disabilities who might otherwise struggle with acquiring a second language.

Recommendation 3:
Support World Languages by amending graduation requirements and by creating a volunteer peer tutoring program at the Junior Highs.

Rationale:
In our work, we came up with a number of easy ways that the district can support World Languages, all at minimal cost. First of all, the district should consider amending the DSHS graduation requirements to allow World Language classes to fulfill the CTE/Practical Arts graduation requirements. A simple step like this would encourage students to explore World Languages and give them a new option to meet these

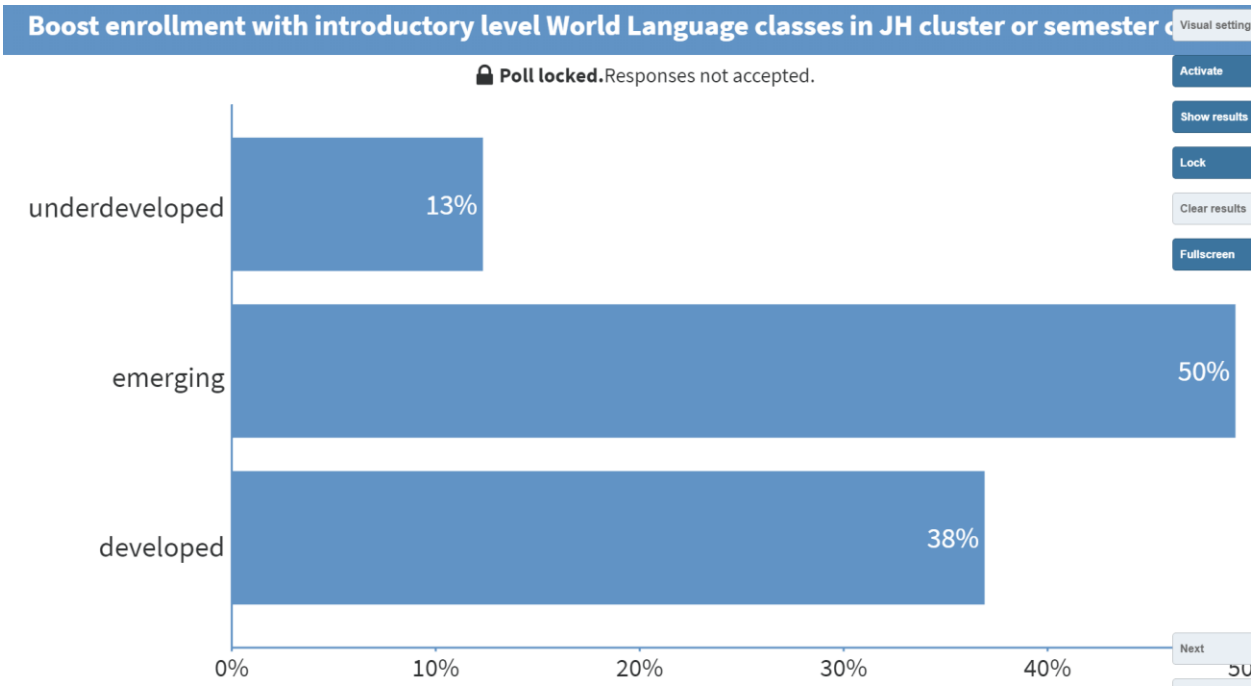
graduation requirements. It cannot be denied that learning a World Language is both practical and a desirable skill in a wide range of careers.

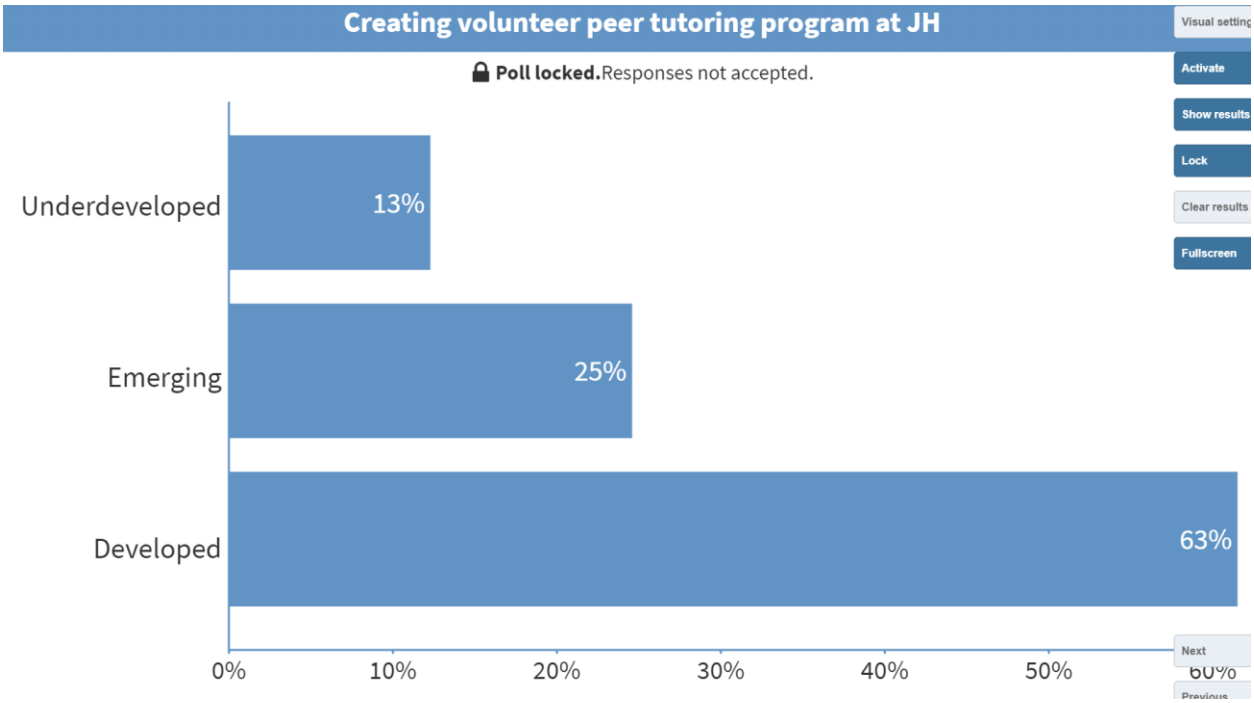
We saw one issue come up among students with the potential to negatively impact enrollment, namely the hesitance of some students to enroll in a World Language class because of the level of difficulty or rigor. We heard of many instances of counselors or other district staff members warning students about the large amount of homework, study time, and the challenging pace of World Language courses, all of which discourage students who are worried about the potential workload. Consequently, a student member of our group came up with the idea of creating a volunteer peer tutoring program for Junior High students who might be reluctant to take World Languages or who may need additional support. In this program, more advanced World Language students could volunteer as World Language tutors while also earning volunteer hours for organizations such as, NHS, CSF, and Key Club. After-school tutoring programs already exist and are held in the libraries of the Junior Highs (such as BRIDGE at Harper or Homework Club at Holmes), so a peer tutoring program specifically tailored to World Languages could be officially added to these as an option for students who anticipate needing help with their classes. If a program like this could be successfully established, then counselors and the district could reassure students and parents that World Language tutoring is available at the Junior High sites to ensure that students have access to the help they need to succeed in World Language classes. Thanks to a pool of student volunteers, any costs associated with this proposal would be minimal, but the potential benefits would be huge.

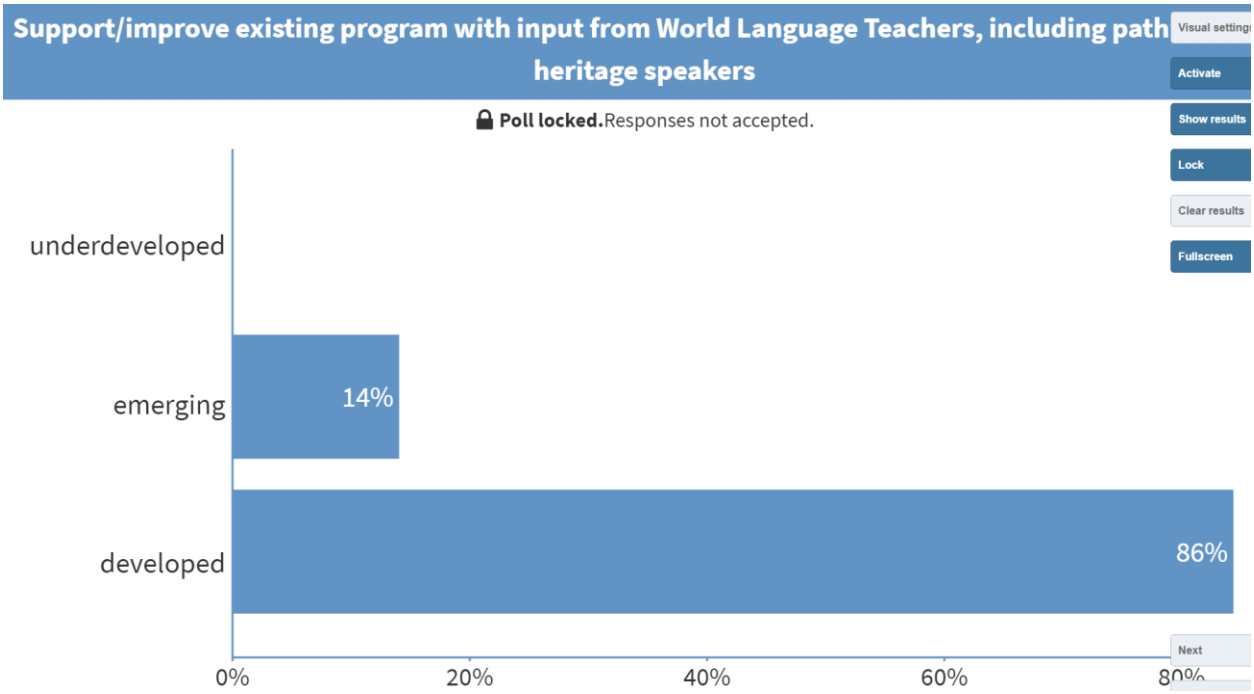
[i] 4 Scientific Reasons Why Everyone Should Learn ASL, July 3, 2017, https://aslblog.goreact.com/2017/07/03/4-scientific-reasons-why-everyone-should-learn-asl/

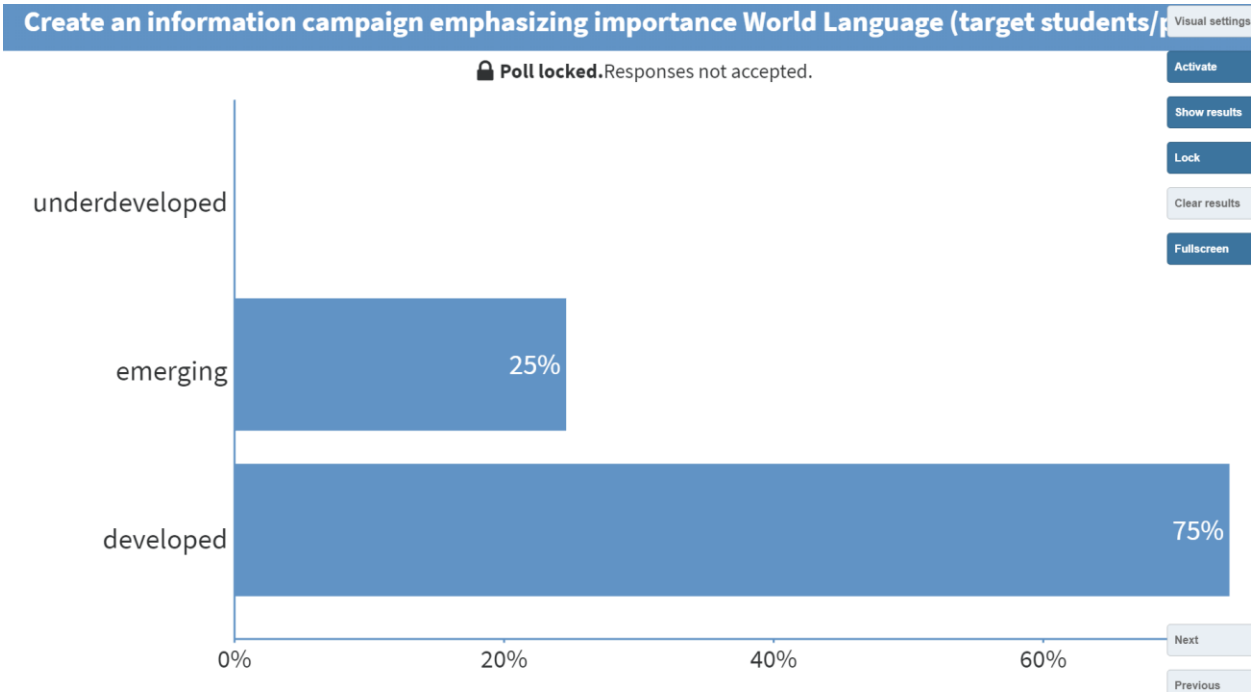
Why We Need To Teach ASL In Schools, March 7, 2016, https://www.theodysseyonline.com/teaching-sign-language-in-schools

Barriers Action Team- Poll Everywhere Results






Support/improve existing program with input from World Language Teachers, including path
heritage speakers
Visual settings
Activate
Show results
Lock
Clear results
Fullscreen
Poll locked. Responses not accepted.
underdeveloped
emerging
14%
developed
86%
0%
20%
40%
60%
Next


Create an information campaign emphasizing importance World Language (target students/p
Visual settings
Activate
Show results
Lock
Clear results
Fullscreen
Poll locked. Responses not accepted.
underdeveloped
emerging
25%
developed
75%
0%
20%
40%
60%
Next
Previous

Appendix L

Action Research Team 3 – World Language Task Force Committee Focused on Elementary Dual Language Program Expansion

Action Research Team 3 - World Language Task Force Committee Focused on Elementary Dual Language Program Expansion

Feasibility Study | By DJUSD World Language Education Task Force - Immersion Group

FINAL REPORT

September 29, 2018

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Table of Contents

Executive Summary
Background
Situation
Opportunity
Community Survey
Facts and Opinion
Overview of Proposed New Program
Benefits
Alignment to Current Vision, Mission and Goals of DJUSD
Staffing and Resources
Budget and Fiscal Impact
Facilities and Structures
Logistical Considerations
Pedagogical Growth and Sustainability
Research and Reading
Appendix 1: DJUSD-approved, parent-led Community Survey (May 2017)
Appendix 2: DJUSD Community Survey (Fall 2018)
Appendix 3: California Education Code Considerations (CA Education for a Global Economy)
Appendix 4: Relevant Dual Language Program Articles

Executive Summary

Recommendation:

Provide greater access to world language education in elementary schools by piloting a new dual language program starting in kindergarten.

- Expand the program by grade each year (K1, then 1, 2, 3, etc)
- Instructional model will depend on the student demographics (for example - 50% English, 50% foreign language)

Establish cost-neutral partnerships to offer world language access points at other elementary school sites not offering dual language programs (e.g. via new or existing after-school or summer programs offered on DJUSD campuses). New programs will provide the benefit of a diversity of world language programs for students and additional daycare options for parents while creating an added revenue stream through rental agreements with DJUSD.

Our final executive summary Presentation PowerPoint .

Summary of Key Facts:

- Fact: Prop 58 (the California Education for a Global Economy Initiative or CA EdGE) effectively allows non-English languages to be used in public educational instruction with no notable fiscal impact on school districts or state government.

- Fact: While DJUSD's dual language program currently has five Spanish immersion classes in K, the most recent community survey is evidence of a need to expand language offerings beyond Spanish, with Mandarin as top choice.

- Fact: Admission to University of California schools require a minimum of two years of coursework in a language other than English.

- Fact: The best time to learn a foreign language is as early as possible. Early language acquisition leads to greater fluency and the potential for higher levels of literacy.

- Fact: Aside from one-time setup expenses (i.e. books), dual language programs are not any more expensive than an English-only education.

- Fact: Aside from one-time setup expenses (i.e. books), dual language programs are not any more expensive than an English-only education.

- English learners enrolled in Dual Language programs can fully close the gap in second language in six years if the program is really well implemented, making 1 ½ years progress each year.

Background

- During November 2016, Proposition 58 passed by a Yes vote of 73.52%, effectively allowing non-English languages to be used in public educational instruction. The fiscal impact anticipated no notable fiscal effect on school districts or state government.[3]

- Starting in July of 2017, if there are parents of 20 students in one grade level or 30 students school-wide who request a multilingual/biliteracy program, it will trigger the exploration and implementation, to the extent possible, of a biliteracy program at the site.[4] **DJUSD schools do not currently have a system in place to regularly monitor these requests** as outlined in California Education Code § 11311.Parent Requests to Establish a Language Acquisition Program. (See Appendix 3, page 27-28)

- In October, 2017 DJUSD Board passed the World Language Motion.[5]
    - The objectives of this motion is to (1) review the current programs and (2) provide recommendations for how the District can further improve the programs consistent with the District's objective of providing a 21st Century education for all students.
      The Advisory Committee was tasked with examining the following:
      - Current barriers to student participation
      - Current funding support, predicted funding support needed for committee-proposed options,
      - Future funding opportunities and cost neutral opportunities Additional immersion opportunities
      - Potential collaboration with community groups, local community colleges, and UCD
      - The District's existing program in light of high school graduation requirements along with UC and CSU language requirements - Innovative programs offered by other school districts

- DJUSD has a formal "World Language Program" dedicated to educate students to become competent and informed global citizens with proficiency in languages and critical insights into international cultures. DJUSD believes that proficiency in a two or more languages is an important part of a 21st century skills toolkit and has significant benefits to individuals, families, communities and global society.

[3] Ballotpedia (website)
[4] California Association of Bilingual Education (website); Authority cited: Section 33031, Education Code. Reference: Sections 305 and 310, 44253.3, and 44253.4, Education Code; 20 U.S.C., Section 1703(f)
[5] DJUSD World Language Motion (website)

- DJUSD language offerings were recently expanded and are shown below.[6]

Spanish	**French**	**Japanese**	**Mandarin**
César Chávez Elementary	Emerson Jr. High	Emerson Jr. High	Emerson Jr. High
Montgomery Elementary	Holmes Jr. High	Holmes Jr. High	Holmes Jr. High
Emerson Jr. High	Harper Jr. High	Harper Jr. High	Davis Senior High
Holmes Jr. High	Davis Senior High	Davis Senior High	
Harper Jr. High			
Da Vinci Academy			
Davis Senior High			

- César Chávez Elementary (CCE) is a great success - offering a unique single campus school offering kindergarten through sixth grade courses in Spanish. In 1982 the Spanish Immersion program opened its doors to a K-1 combination class at Birch Lane Elementary. The program expanded over time to three different elementary schools in the DJUSD as a small strand in each campus. In 1997, Cesar Chávez Elementary opened its door as a K-6 **Spanish Immersion** elementary school. All Spanish Immersion students were brought together into a single campus. In 2013, César Chávez Elementary had an enrollment of 640 students.[7]

- The DJUSD Superintendent is constrained - having to administer the district in accordance with the California Education Code, which dates back to the 1800s and has not kept pace with external trends.[8]

- The DJUSD School Board is constrained - by the agenda, time, and intricacies of operating under the Brown Act, which provides important yet often convoluted guidelines for board presidents, superintendents and governance team members.[9]

Situation

- The purpose of this Feasibility Study is not to advocate for any specific new language immersion program (e.g. French, Mandarin, etc.), rather to explore the feasibility of creating additional new immersion programs.

Opportunity

- Why Immersion? As stated in the César Chávez Elementary brochure:
    - Immersion is a unique educational experience with the goal of developing bi-literacy and

[6] DJUSD World Language Program (website)
[7] César Chávez Spanish Immersion Brochure from DJUSD (website)
[8] California Education Code Statutory History (website)
[9] California School Boards Association (website)

biculturalism in elementary students; students attain the ability to listen, read, speak, write, and appreciate cultures in two languages.

- Immersion is an approach to learning a second language where all activities and curriculum are delivered in two languages. Students hear and use two languages to learn all of their school subjects.

- Immersion is the most effective type of foreign language instruction currently available in schools in the United States. Immersion enhances academic, cognitive, and communications skills. It also promotes intercultural understanding and global awareness.

- Immersion programs are particularly effective for young children because learning language is a natural process for them. Theirs brains are developing and are more open to hearing and imitating sound while vocal physiology is still developing.[10]

Community Survey

- A parent-led, DJUSD approved survey was conducted during May 2017, representing 281 children, showing widespread dissatisfaction with language offerings, and concentrated interest in Mandarin at grades K-6. The final summary/findings were submitted to the Board in public session but ignored.

- A district-wide survey was posted on the DJUSD website during spring 2018 and again during fall 2018, gathering 227 completed respondents, offering the following highlights:[11]
  - **The vast majority of respondents:**
    - Were not satisfied with the current World Language education options at DJUSD
    - Felt DJUSD should offer other immersion programs in addition the current options
    - Expressed an interest in Chinese (Mandarin) and American Sign Language
    - Did not have a child currently enrolled in an immersion program
    - Believe learning a foreign language in elementary school will be beneficial
    - Would like world language instruction offered to elementary students in schools that do not currently offer immersion programs
    - Would like to see immersion opportunities offered at Junior High level and high

[10] César Chávez Spanish Immersion Brochure from DJUSD (website)
[11] DJUSD Survey Results in Google Drive (website)

school

- Were unaware of the requirements for students to earn a California Seal of Biliteracy

Findings of Facts and Opinion

- Fact: Davis is a diverse community. Recent student demographics were as follows: 54% White, 20% Hispanic or Latino, 16% Asian, 6% American Indian or Alaska Native, 3% African American, 1% Filipino.

- Fact: DJUSD currently offers five Spanish Immersion kindergarten classes and no other language immersion classes or other languages are offered.

- Fact: Private schools and programs in Davis offer language immersion programs however tuition limits access to such programs.[12]

- Fact: Dual language programs are on the rise across America even for native English speakers.[13]

- Fact: Admission to University of California schools require courses in a language other than English.[14]

    - "**Two years, or equivalent to the 2nd level of high school instruction, of the same language other than English are required**. (Three years/3rd level of high school instruction recommended). Courses should emphasize speaking and understanding, and include instruction in grammar, vocabulary, reading, composition and culture. American Sign Language and classical languages, such as Latin and Greek, are acceptable. Courses taken in the seventh and eighth grades may be used to fulfill part or all of this requirement if the high school accepts them as equivalent to its own courses."

- Fact: The best time to learn a foreign language is as early as possible. Early language acquisition leads to greater fluency and the potential for higher levels of literacy.

- Fact: Aside from one-time setup expenses (i.e. books), language immersion programs are not any more expensive than English-only education.[15]

    - Fiscal Effect Excerpt: "The bilingual programs created or expanded due to the measure would not necessarily be more or less expensive overall than English-only programs, as

[12] Ex: TALK, Peregrine School, Dee's Wonderland, International House, NewStar (Source: Google search)
[13] NY Times article on the topic (website)
[14] UC Admissions (website)
[15] Fiscal Effects of Prop 58 (website)

annual costs for both types of programs depend mostly on factors like class size and teacher pay. Any school creating a bilingual program would incur some one-time costs for developing new curriculum, purchasing new instructional materials, training teachers on the new curriculum and materials, and informing parents about the program. These costs, however, would not necessarily be added costs, as schools routinely revise curriculum, purchase new materials, train teachers, and keep parents apprised of important school issues."

- Fact: DJUSD developed a 46-page Master Plan for Spanish Language Immersion, which is a design for multilingualism, academic excellence and multicultural understanding. The document addresses guiding principles, program design, standards and accountability, curriculum and instruction, staffing and professional development, leadership and resources, family and community involvement, master plan evaluation tools, and more.[16]

- Fact: Spanish accounts for 71% (or 147 students) of the State Seal of Biliteracy (SSB) students in DJUSD.[17]

- Fact: César Chávez Elementary accounts for the majority of the State Seal of Biliteracy (SSB) students in DJUSD.

- Fact: DJUSD cannot employ contract employees (e.g. H1B Visa workers) as foreign language instructors due to "credentialing" barriers.[18]

- Fact: Other school districts offer expanded elementary school dual immersion programs (usually in both Spanish and Mandarin) AND robust world language offerings at the secondary level. The following chart lists comparable school districts similar in profile to DJUSD in several aspects. Additional comparison data viewable via Ed-Data website and cross-referenced with selected school district websites.[19]

	Davis Joint Unified	South Pasadena Unified	San Gabriel Unified
Size (Enrollment Count)	8582	4779	6,302
Ethnic Diversity Index	49	61	47
Total General Fund expenditures per student	$11,395	$10,416	$11,774

[16] DJUSD Master Plan for Spanish Immersion (website)
[17] California Department of Education - State Seal of Biliteracy (website)
[18] Source: Ricardo Perez, Director of English Learner, Immersion and World Language Programs
[19] Source: Ed-Data website reflects 2016-2017 school year.

Teacher Salary (low/high	$38,811- $86,263	$45,026- $114,272	$41,014- $89,418
Student/Teacher Ratio	19.2	23.4	19.4
Free/Reduced meals%	20.4%	13.3%	57.1
English Learners (EL)	11.2%	7.4%	25.4%
Special Education Participation	853	364	533

- Nearby in Sacramento (a larger district), the William Land Chinese Immersion Program is a popular K-6 program providing instruction in English and Mandarin in addition to the academic core curriculum. Students achieve bilingual proficiency in both languages. A similar program called the Elder Creek Chinese Immersion Program is offered by the Sacramento City Unified School District. In the past, Davis residents have applied to attend the William Land Chinese Immersion Program but were not admitted.[20]

Overview of Proposed New Immersion Program

- GOALS: The proposed program goals would mirror the program goals of the language immersion program at César Chávez Elementary:[21]

    - Bilingualism/Biliteracy: To develop fluency and literacy in another language and English.
    - Academic Excellence: To achieve academic excellence in all subject courses in accordance with state and DJUSD guidelines.
    - Intellectual Flexibility: To increase students' cognitive ability in all subjects by providing fluency in two languages.
    - Global Awareness: To cultivate understanding and appreciation for diverse languages and cultures and strengthen positive attitudes among students, friends, family and the community.
    - Responsibility: To provide a safe, enriching environment in which our children can grow as responsible world citizens.

- FORMAT: Any new (non-Spanish) language immersion program would likely follow the immersion model used by César Chávez Elementary, in which students begin their study of the new language in kindergarten and continue with primary instruction in the new language through to the 6th grade. English is introduced gradually beginning in 2nd grade and increased incrementally with each grade level. Graduates complete 6th grade with a high level of

[20] William Land Chinese Immersion Program (website)
[21] César Chávez Spanish Immersion Brochure from DJUSD (website)

proficiency in the new language and English.[22]

The immersion format would depend on the student demographics and could be 10% English or 50% English. Two popular models are the **90/10 and a 50/50 model.** The first number refers to the amount of instructional time initially spent for instruction in the non-English language in kindergarten. The second number refers to English. In a 90/10 model the amount of the non-English language decreases yearly as English increases until there is a 50/50 balance of the languages generally in grades four through six. A 50/50 model uses English and the target language for 50 percent of the time throughout the duration of the program.[23]

Benefits

- According to the California Department of Education, students proficient in English and a second language will be more employable, start out earning higher wages, and make California's workforce better prepared to compete for jobs in the global economy.

Dual Language Programs are Aligned to current Vision, Mission and Goals of DJUSD and state initiatives

- Vision and Mission - The introduction of new dual language programs other than Spanish supports the DJUSD Mission, especially preparedness to "to thrive and contribute to an evolving and increasingly-connected world" since most of the world does not speak English.[24]

- DJUSD Strategic Plan - Refer to strategies and action plans.[25]

- Graduate Profile - The introduction of new dual language programs in addition to Spanish will support all aspects of the newly created DJUSD Graduate Profile:
    - Critical Thinking and Problem Solving: Students reason more effectively in order to identify, define, and solve complex problems and essential questions.
    - Creativity and Innovation: Students take risks, explore multiple possibilities, challenge the status quo, and seek to continually improve processes and products. They deliberate through a design process to solve problems and act on creative ideas.
    - Civic and Cultural Awareness: Students will develop and establish an awareness of the responsibilities of contributing individuals in a diverse society. They recognize and respect the differences in values that may exist between themselves and people from other countries or from varying social and cultural backgrounds.
    - Adaptability and Resilience: Students adapt to varied roles, responsibilities, and contexts, working effectively in a climate of ambiguity and changing priorities. They persist to accomplish difficult tasks and to overcome academic and personal barriers to

[22] César Chávez Spanish Immersion Brochure from DJUSD (website)
[23] California Department of Education FAQ (website)
[24] DJUSD Mission (website) and Washington Post "The world's languages, in 7 maps and charts" (website)
[25] DJUSD Strategic Plan (website)

meet goals.
    - Collaboration: Students work effectively, respectfully, and with empathy in a team of differing opinions, skills, and strengths. Students assume shared responsibility for collaborative work.
    - Communication: Students speak and write with clarity, listen actively, and read with comprehension. They know their audience, understand the purpose, choose precise language, and when appropriate, incorporate media to enhance ideas.

- DJUSD Board Goals and Priorities noted in **bold** are in alignment with Dual Language program goals - Reaffirmed February 24, 2018.

Board Goals		Priority
21st Century Learning Environments	>>	Facilities Bonds; Safe Schools
Social Emotional Health	>>	We all Belong Student Listening tour
Achievement and Opportunity Gap	>>	Continue as a priority
Developing Excellent Academic Program for all Students	>>	Continue as a priority
Attract and Retain Employees with Equity Compensation	>>	in conjunction with Strategic Goal

- **The California Education for a Global Economy (CA EdGE) Initiative** acknowledges the benefits that multilingual education provides students toward participation in a global economy. Operational since July 1, 2017, it:
    - provides opportunity for English learners and native speakers of English to participate in a program that leads to proficiency in English and another language.
    - prioritizes English learners' acquisition of English as rapidly and as effectively as possible.
    - encourages school districts and county offices of education to offer language programs for native speakers of English to develop proficiency in a language other than English.

- **State Superintendent of Public Instruction Tom Torlakson's Global California 2030** initiative is a call to action whereby

    - HALF of all k-12 students in California can participate in "programs leading to proficiency in two or more languages, either through a class, program, or experiences" and
    - **75%** attain the Seal of Biliteracy rate by year **2040.**

Equity Considerations

- **Dual language programs are proven to be the most effective way to close the achievement gap for English language learners as well as benefit native English speakers of all backgrounds and needs.** As cited in Dual Language Education for a Transformed World by Drs. Wayne Thomas and Virginia Collier (researchers from George Mason University) in their longitudinal studies of second language acquisition programs involving over 6 million student records from all regions of the United States:
    - Language minority students who are fluent in English and of the same Heritage as the English learners can enroll in Dual Language (DL) classes. In DL classes, these students score higher on state tests as well as norm-referenced tests than language-minority students in the English mainstream classroom. This means Long Term English Learners (LTELs) would also benefit from participation in Dual Language Programs, especially those designed specifically with Heritage Speakers in mind.
    - Title I and African American English speakers in Dual Language score very significantly higher; White, Special Needs, and gifted students in Dual Language score higher on state tests as well as norm-referenced tests than their peers in the English mainstream classroom.
    - DL students have more favorable attitudes toward being bilingual and toward students who are different from themselves than do students in the English mainstream classroom.
    - DL students report high levels of satisfaction and enjoyment in DL classes, stronger cultural identity and high self-esteem
    - Current strategies that close the gap in the shortest amount of time possible are found in dual language programs, in which English learners are receiving the curriculum at least half of the instructional time through their mother tongue and the other half in English.
    - Both English learners and native English speakers in these dual language classes are outperforming their peers in all grades in which they are tested (in North Carolina grades 3-8). By middle school they are scoring one grade level above their peers in 6th-8th grade because of the intellectual stimulus of schooling in two languages.
    - English learners may need up to eight years to reach grade-level achievement in second language. That means dual language program should continue through the middle school years … **We highly recommend that each school district implementing dual language education plan for a continuation throughout all the school years, to fully realize the potential of K-12 dual language education. That is ideal.**
- Current A-G data in World Language for certain subgroups reveal that despite district efforts to shrink the achievement gap, **some students continue to be SHUT OUT of UC eligibility**:
    - Native Americans on average completed 1 year of world language with a “D” average
    - Hispanic students completed on average 1 year of world language with a “C”

average

- English learners completed on average 2 years of world language with a “D” average

Staffing and Resources

- (1) FTE with bilingual certification is not paid any more than other teachers.

- Special or additional staff are not required. DJUSD hires approximately 30 new teachers every year. In this case, DJUSD would recruit and hire one bilingual teacher to serve as teacher/program leader to start the program and guide hiring during future years. Adequately credentialed teachers already exist in and around our community, so staffing and resources should be be a problem at all.

- Each year, as the program expands upwards by one grade level, a new credentialed teacher would need to be recruited. While there is a statewide teacher shortage, in reality, Davis is a very desirable place to live and teach and DJUSD is able to fill opening each year because supply/demand are in balance.

- Some initial setup costs may be required as books and teaching materials are required. The program would receive regular PTA/PTO funds and parents are likely to contribute personal funds to setup the initial classroom - one parent has already pledged $10,000 towards a K-level Mandarin program (far more than is needed) and outside organizations such as the Confucius Institute are likely to match funds.

Budget and Fiscal Impact

- Based on an analysis of the César Chávez Elementary site plan, the school budget is consistent with other DJUSD schools and teaching expenses are not anymore expensive than other DJUSD schools, however greater fiscal emphasis is placed on reading versus mathematics.[26]

- The US economy is nearing the end of a record-long business cycle. A 'countercyclical' fiscal policy takes the opposite approach: reducing spending and raising taxes during a boom period, and increasing spending and cutting taxes during a recession.

- DJUSD budget is healthy - excess funds are available for one-time expenditures as follows:[27]

    - Davis voters approved their first parcel tax of $45 in 1984 to raise money for the schools. Today, we have multiple Parcel Taxes that total $531 per parcel - generating $9.5 million for the district.

[26] Review of César Chávez Elementary Site Plan (budget)
[27] 2017-2018 Adoption Budget Board Summary dtd June 12, 2017 (website or Board Report)

- For FY 2017-18, the Parcel Tax Revenue contributed 11% to the the district's Total General Fund Revenue of $84MM. Parcel tax revenue is forecast as: $9,600,000 (2017-2018), $9,900,000 (2018-2019), $10,150,000 (2019-2020)

- Support for multiple foreign languages is a significant selling point in support of the Parcel Tax. The Parcel Tax Citizens Oversight Committee reports to the DJUSD Board of Education annually to affirm that all parcel tax revenues are property spent.[28]

- For FY 2017-18, overall expenses listed by type are as follows:
  88% to Salaries and Benefits,
  9% to Operating Expenses, and
  3% to Books and Supplies.

- DJUSD forecasts a (cash) "reserve" of 8.5% (2017-2018) to 7.7% (2019-2020), which represents unrestricted funds that may be used for one-time expenditures such as establishing a new program. The DJUSD Board minimum reserve threshold is 8% and state minimum is 3%.

- During May 2018, the DJUSD was "pleased to announce" that DJUSD and the Davis Teachers Association (DTA) have reached a contract agreement. After eight negotiations sessions during the 2017-18 school year DTA and DJUSD have made an agreement that **includes bargaining any future revenue if a Parcel Tax for Employee Compensation is passed, a 3.5% on-going salary schedule increase for all DTA members, retroactive to July 1, 2017 as well as a 2% one-time lump sum payment in 2018-19.**[29]

- The Confucius Institute, funded by China, may be a source of funding or matching funds. The institute provides a variety of funding to strengthen educational cooperation between China and the United States, support and promote the development of Chinese language education, and increase mutual understanding among people in China and the United States.[30]

- Budget - During November 2016, Proposition 58 passed by a Yes vote of 73.52%, effectively allowing non-English languages to be used in public educational instruction. **The fiscal impact anticipated no notable fiscal effect on school districts or state government.** One-time expenses are limited to the following item and such activities would need to be completed anyway as part of current programs.
  - Teacher recruitment (adequate credentials)
  - Materials set up (books, instruction materials)

Facilities and Structures

[28] DJUSD Parcel Tax Committee (website)
[29] DTA Package Proposal (signed) from March 6, 2018 (website)
[30] Signed agreement between Confucius Institute HQ in China and UC Davis (website)

- Special facilities or structures are not required for language immersion programs. Existing facilities could be used or expansion at Montgomery or Chávez could be explored.

- Special scheduling is not required. The new language immersion program should start at Kindergarten, and then expand upwards one grade until grade 8, based on public interest and lessons learned.

Logistical Considerations

- Logistics will not prevent the program creation. Creating a new language immersion program is not anymore logistically difficult than creating the choice schools and charter school in Davis.

Pedagogical Growth and Sustainability

- Various efforts are underway within the the State of California Department of Education to develop world language content standards for California public schools (K-12).[31]

- A logical approach would be to survey the community, market the new language immersion program at the K-level, and then expand the program based on success - expanding up one grade from K to 8.

- In future, the new program can expand horizontally to more classes using a wait list or to more schools.

- We need to experiment - buying Chromebook does not adequately prepare students for the future characterized by globalization (e.g. outsourcing and offshoring) and computer automation.

Research and Reading

1. Learner Performance in Mandarin Immersion and High School World Language Programs: A Comparison (website)

2. California Department of State Foreign Language Framework (website)

3. César Chávez Spanish Immersion Brochure from DJUSD (website)

4. "Dual Language Education Can Close Achievement Gap" by the Joint National Committee for Languages and the National Council for Languages and International Studies https://drive.google.com/open?id=1PWwXZYnZtE2oYrJgDAFVfD5FZ9Jw5C9T

[31] California Department of State Foreign Language Framework (website) and Content Standards (website)

5. For more on the California Superintendent of Public Schools initiative, Global California 2030, go to https://www.cde.ca.gov/eo/in/documents/globalca2030report.pdf

6. For more on the California Education for a Global Economy Initiative (CA EdGE Proposition 58) go to https://www.cde.ca.gov/sp/el/er/caedge.asp

7. For details on CA EdGE regulations and compliance, see https://drive.google.com/open?id=1OojcHTdVjQGj9pBfnyfJwz6PggxcTtqd

Appendix 1: DJUSD-approved, parent-led, Community Survey (May 2017)

Davis Language Education Working Group
Discussion Document

May 30, 2017

The effort started with an Op Ed printed in the Davis Enterprise

Local Op Ed on Chinese Immersion Program

enterprise

Davis schools should explore Chinese Immersion Program

Recent Posts

Positive reaction from the Director of Peregrine School which already has a Chinese immersion preschool class:

Lorie Hammond · Director at Peregrine School

I support the idea of an elementary Chinese immersion program in Davis, and think that David would be "ahead of the curve" by creating such a thing. As Director of Peregrine School, where we have a Chinese immersion preschool class, I have seen first hand that such a program could be workable. Many of our preschool graduates also come from preschool classes which provide experience in Spanish and then attend Cesar Chavez or Montgomery Schools to augment their Spanish. We support international, multilingual children in all of our programs, and Peregrine Elementary provides after-school classes in Chinese and Spanish for interested students.

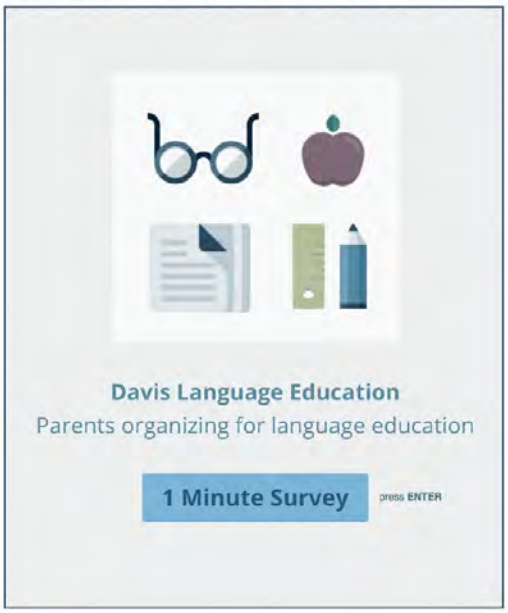
Like · Reply · Mar 17, 2017 12:44pm

Available at https://davislanguageeducation.wordpress.com/

Next a Language Education Survey was distributed - resulting in 156 responses:

281 children

Live at https://dle2017.typeform.com/to/oJkR27



Q1: Are you satisfied with current Language Education options in Davis?

Q2: Are you interested in sending your child or children to immersive language education program(s) in Davis?

89% said Yes

Q3: How many of your children are interested in language education?

	1 Child	2 Children	3 Children	4+ Children
Total Families	**54**	**81**	**19**	**2**
Total Children	**54**	**162**	**57**	**8**

Grand Total:

281 Children

Q4: Are you interested to volunteer?

Community Organizing	38 people
Education	29 people
Marketing or Communications	10 people
Finance or Budgeting	7 people

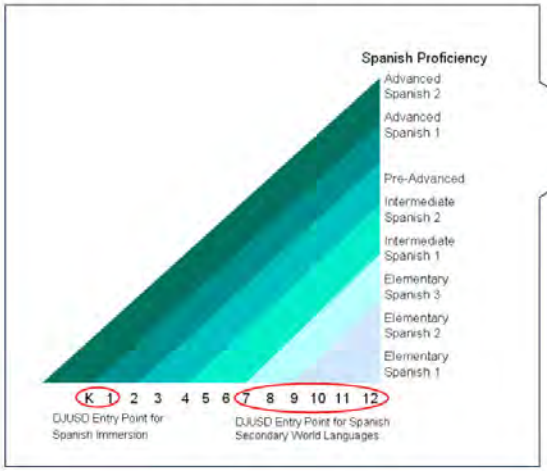
Q5: Children | What are the age(s) of the children who are interested to attend?

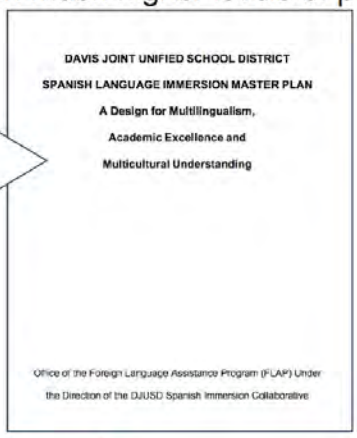
Language (primary choice)	AGE 0	AGE 1	AGE 2	AGE 3	AGE 4	AGE 5	AGE 6	AGE 7	AGE 8	AGE 9	AGE 10	AGE 11	AGE 12	AGE 13	AGE 14	AGE 15	AGE 16	AGE 17	AGE
English - 527MM speakers, USA #1 in GDP																			
Mandarin - 18 speakers, China #2 in GDP		7	12	20	7	18	15	8	10	4	7	1	3	4	1	3	3	0	1
Cantonese (write-in)					2														
Japanese - 123MM speakers, Japan #3 in GDP			1		1				1	2	1	2					1		
German - 132MM speakers, #4 in GDP	1		2	2	1	2		2	1	2	1	1	1						
French - 118MM speakers, #6 in GDP			4	1		1		3	2	2	1	1		1					
Hindi-Urdu - 588MM speakers, India #7 in GDP					1														
Portuguese - 193MM, Brazil #9 in GDP						1													
Korean - 75MM speakers, South Korea #11 in GDP			1			2			1							1	1		
Russian - 254MM, Russia #12 in GDP								1		1									
Spanish - 389MM, Spain #14 in GDP		3	2	8	6	9	5	11	3	3	5	2			2	1		1	
Arabic - 467MM speakers, Saudi Arabia #17 in GDP					2		1												
Other – **Italian** (write-in)					1		1			1		1							
Other – **Polish** (write-in)				1					1										
Other – **Latin** (write-in)																1			

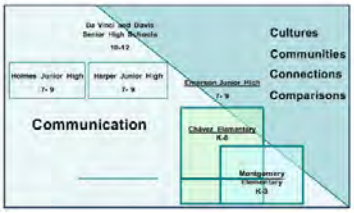
Boxes show a tally of languages and ages - showing concentration in Mandarin and early ages

The Chavez Spanish Immersion Program emphasizes an early start:

"There is a strong correlation between the entry points and the proficiency levels typically attainable for speaking in Spanish. The combination of an early start and an uninterrupted and extended sequence allows Spanish Language Immersion students to reach much higher levels of proficiency."







http://www.djusd.k12.ca.us/wlelem

Positive Qualitative Feedback

"My neighbor elementary school is Korematsu. I would not move my children for a Mandarin immersion program at another school. I would rather go to an English only elementary to stay at Korematsu. However if Korematsu was to start a Mandarin program, I would happily enroll my children."

"Will be great to have Chinese immersion in Davis. A lot of my friends no matter what color are very interested"

"Would like to have bilingual/immersion options at all neighborhood schools, even if just part day/after school programs"

"It would be great if DJUSD could implement a bilingual program in more elementary schools than just Chavez elementary school."

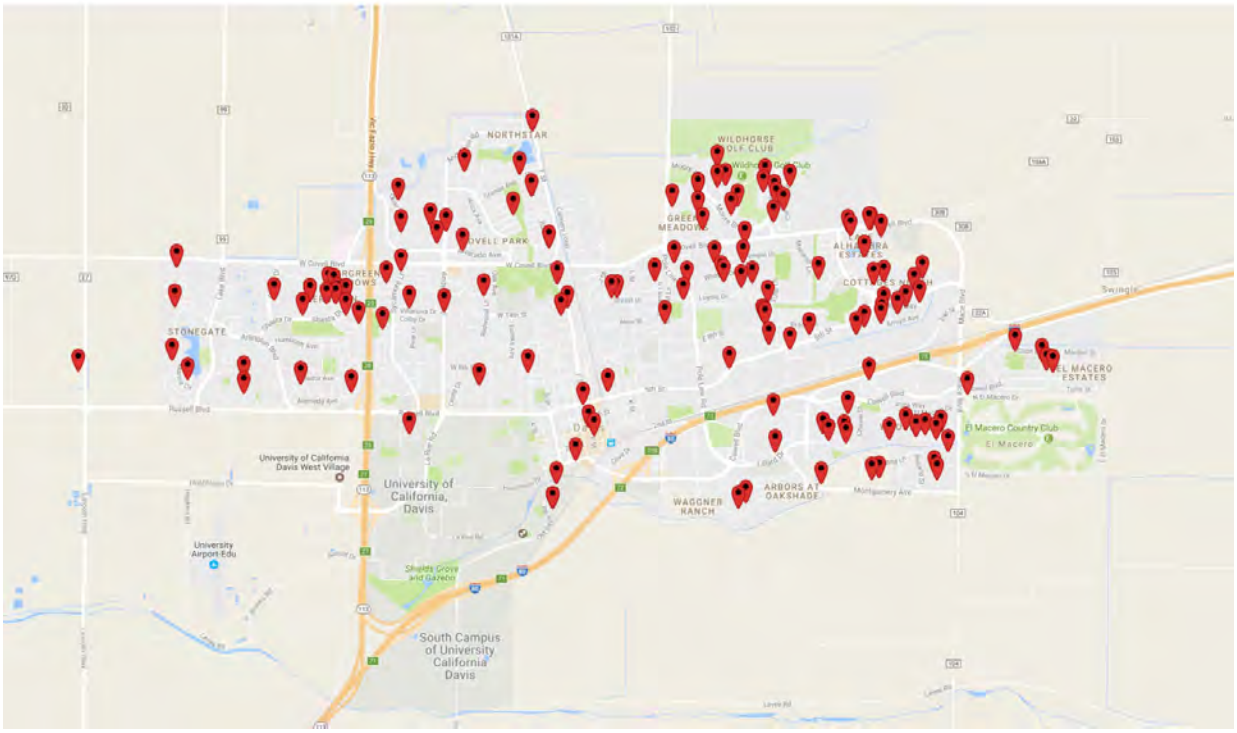
"I tried to get my son into the Spanish Immersion at Chavez and Montgomery and this is no room."

"Thanks for organizing this!"

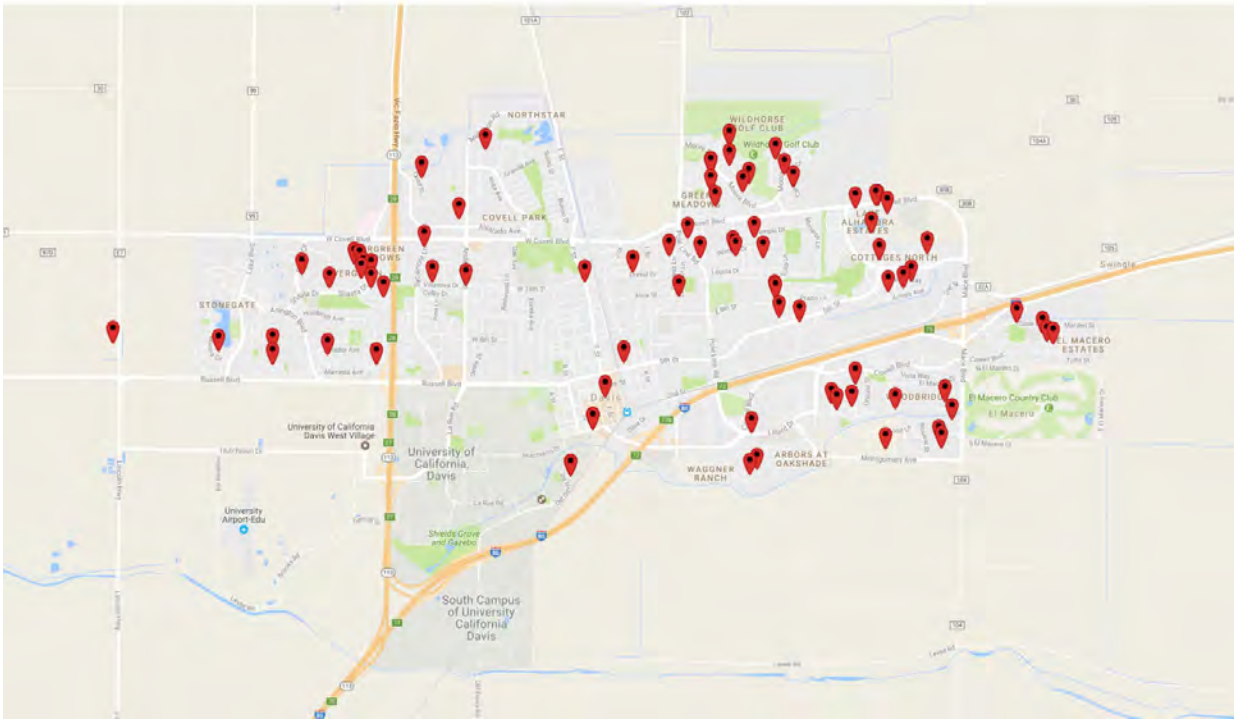
"I am interested in expanding language offerings in DJUSD at all levels and particularly a Chinese immersion program. I think Davis should become a public school district destination for those interested in educating their children in multiple languages."

"Dual immersion programs at more schools would be great!"

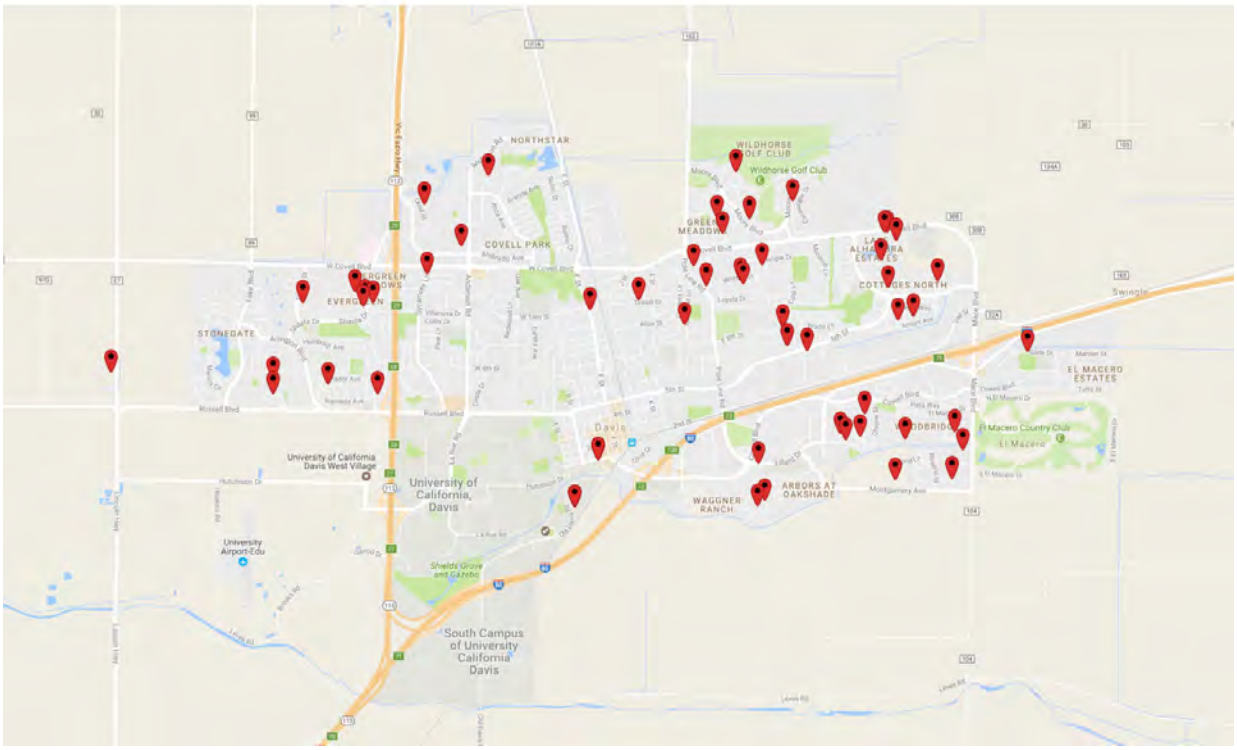
Geographic laydown of survey respondents - all 112 valid responses shown



Geographic laydown of survey respondents - 83 interested in Mandarin shown



Geographic laydown of survey respondents - showing 57 who are interested in Mandarin and age 6 or below

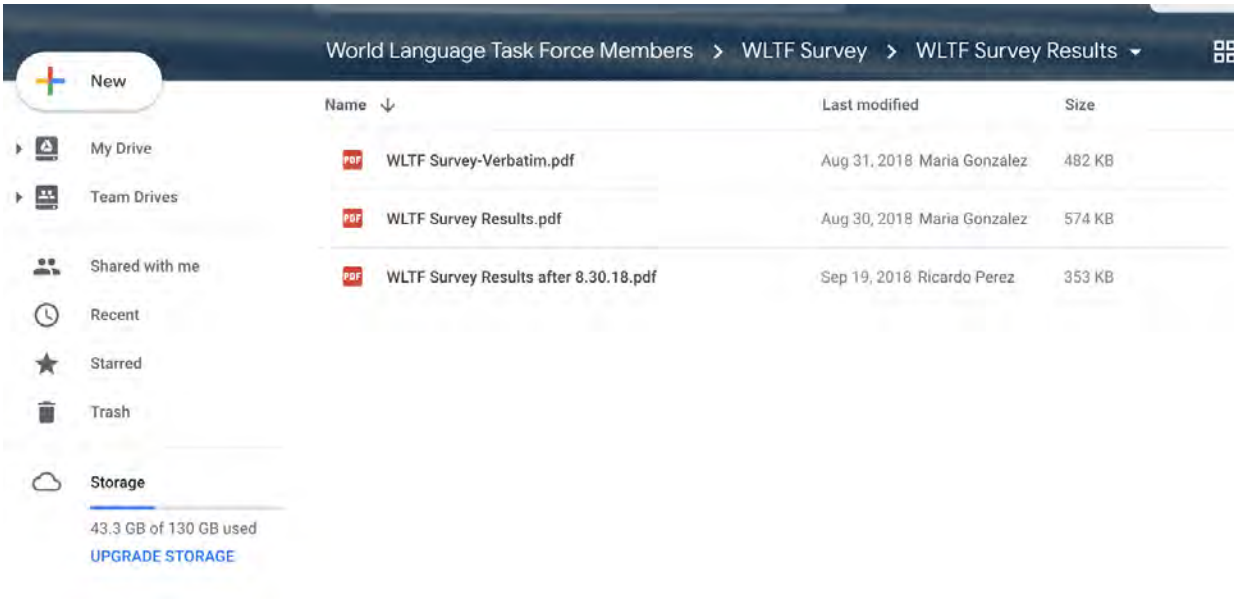


Appendix 2: DJUSD Community Survey (Fall 2018)

Request access to DJUSD drive for results broken down into two seperate summaries:

Restricted URL:

https://drive.google.com/drive/u/0/folders/15KJU5Bxpjvv7GPrDtW-KGFXwWL0yUM4j?ogsrc=32



Appendix 3: California Education Code Considerations

Title 5.
EDUCATION Division 1.
California Department of Education Chapter 11.
Special Programs Subchapter 4.
Multilingual and English Learner Education
§ 11311.Parent Requests to Establish a Language Acquisition Program.

(a)An LEA shall establish a process for schools of the LEA to receive and respond to requests from parents of pupils enrolled in the school to establish a language acquisition program other than, or in addition to, such programs available at the school.

The LEA process shall require each school to make a written record of each request,including at least the following:

(1) The date of the request;
(2) The names of the parent and pupil;
(3) A general description of the request; and
(4) The pupil's grade level on the date of the request.

(b) Each school shall maintain a written record of verbal requests that includes the information set forth above.

(c) Each school shall assist parents in clarifying requests, as needed.

(d) Each school shall retain written records of parent requests for language acquisition programs for at least three years from the date of the request.

(e) A parent whose pupil is enrolled in a school for attendance in the next school year may submit a request for a language acquisition program.

(f) A school shall consider requests for a multilingual program model from parents of pupils enrolled in the school who are native speakers of English when determining whether a threshold specified in subdivision (h) is reached.

(g) Each school shall monitor the number of parent requests for language acquisition programs on a regular basis and notify the LEA immediately upon reaching a threshold specified in subdivision (h).

(h) When the parents of 30 pupils or more enrolled in a school, or when the parents of 20 pupils or more in the same grade level enrolled in a school, request the same or substantially similar type of a language acquisition program, the LEA shall

respond by taking the following actions:

(1) Within 10 school days of reaching a threshold described in subdivision (h), notify the parents of pupils attending the school, the school's teachers, administrators,and the LEA's English learner parent advisory committee and parent advisory committee,in writing, of the parents' requests for a language acquisition program;

(2) Identify costs and resources necessary to implement any new language acquisition program, including but not limited to certificated teachers with the appropriate authorizations,necessary instructional materials, pertinent professional development for the proposed program, and opportunities for parent and community engagement to support the proposed program goals; and

(3) Determine, within 60 calendar days of reaching a threshold described subdivision (h), whether it is possible to implement the requested language acquisition program; and provide notice, in writing, to parents of pupils attending the school, the school's teachers, and administrators, of its determination;

(A) In the case of an affirmative decision to implement a language acquisition program at the school, create and publish a reasonable timeline of actions necessary to implement the language acquisition program.

(B) In the case where the LEA determines it is not possible to implement a language acquisition program requested by parents, the LEA shall provide in written form an explanation of the reason(s) the program cannot be provided,and may offer an alternate option that can be implemented at the school.

(i) Each school shall follow the process set forth in subdivision(h), even when the LEA provides the requested language acquisition program at another school of the LEA at the time the threshold specified in subdivision (h)is met.

NOTE: Authority cited: Section 33031, Education Code. Reference: Sections 305 and 310, 44253.3,and 44253.4, Education Code; 20 U.S.C., Section 1703(f).

Appendix 4: Relevant Dual Language Program Articles

Houston's Two-Way Dual-Language Programs Best for ELLs, Study Finds

By Corey Mitchell on June 5, 2015 9:50 AM Education Week

Native Spanish-speaking students in the Houston school district have more success learning English when they're enrolled in two-way dual-language programs that include native English speakers in the classroom, a **joint study** by the district and Rice University has found.

The study's findings should dispel notions parents have that their English-language-learner children will learn English faster if they're totally immersed in the language, researchers argued.

"The best way to help them learn that language involves teaching them in their native tongue," a research summary indicated.

Here are some of the study's findings:

- Through 3rd grade, ELLs in two-way programs demonstrated higher Spanish reading scores and slightly faster growth than their peers in other bilingual programs.
- Regardless of the type of bilingual program, ELLs who participated in their original program for approximately four years (through grade 3) had the highest English reading achievement.
- ELLs in two-way programs had consistently higher English performance in grade 5.
- With additional program exposure (greater than one year), two-way students met and surpassed the performance of students whose parents opted out of bilingual or dual-language programs.
- ELLs in poverty had significantly lower Spanish- and English-language reading performance.
- Girls outperformed boys on both Spanish- and English-language reading outcomes.

Researchers from Rice University's Kinder Institute for Urban Research tracked test results for a cohort of ELLs who started kindergarten in 2007, examining how those students performed on Spanish-language reading tests as well as English tests.

The two-way dual-language program is just one of four options for language instruction for ELLs in the Houston. The study shows that two-day, dual-language programs are the most effective, but also the most expensive, the authors found.

This new study builds on other recent analyses of different language-instruction models for ELLs. A **Stanford University analysis of English-learners' performance in San Francisco's public schools** found that ELLs were equally proficient in English by the time they reached 5th grade, regardless of whether they had been in a bilingual program or had received all of their instruction in English. And though ELLs who were in bilingual education programs in San Francisco lagged in the earlier grades, they also scored similarly on the state's academic tests and had virtually the same rates of reclassification to English-fluent status by 5th grade as their ELL peers who were in the district's English-immersion program.

More than a third of students in Houston are not fluent in English, but the district has had success with

English-language learners. More than half the district's high school valedictorians this year school year are **former ELLs**.

Houston offers Spanish language dual-language programs at 31 of its 287 schools. District Leaders want to add dual-language programs to an additional 21 campuses in the fall.

Dual-Language Programs Boost Student Achievement in English, Study Finds

By Corey Mitchell on November 22, 2017 7:45 AM Education Week

English-language learners assigned to dual-language-immersion classrooms in the Portland, Ore., school district were more likely to be classified as English proficient by 6th grade when compared to peers enrolled in traditional classes, a new study by the RAND Corp. found.

The research team also determined that the district's dual-language students significantly outperformed their ELL who were not in dual-language classes peers on English-reading skills—by nearly a school year worth of learning by the end of middle school.

Those are two of the key findings of a four-year, randomized trial of the district's dual-language program by RAND, along with the the American Councils for International Education, and Portland schools.

Researchers compared students who were randomly assigned to the immersion programs to those who had applied unsuccessfully for the lottery. That allowed researchers to run a randomized trial of about 1,600 students who started kindergarten between the fall of 2004 and fall of 2010.

The study included programs that represented four different partner languages: Spanish, Japanese, Mandarin Chinese, and Russian. The random-assignment process allowed the study to estimate effects caused by access to these programs and not by the characteristics or preferences of families who chose dual-language instruction.

The students who participated in the immersion programs scored significantly higher on the Oregon Assessment of Knowledge and Skills in reading; by the equivalent of seven months of learning by the end of 5th grade and by nine months of learning by the end of 8th grade. The research team found no benefit, but also no negative effect, on immersion students' scores in math or science. *Education Week's* Inside School Research blog first reported on the **preliminary conclusions of the RAND study** two years ago.

The findings are consistent with other research that touts the benefits of dual-language instruction. That body of research includes a 2015 Rice University study that determined that English-learners in the Houston schools **have more success learning English when they're enrolled in dual-language programs** that include native-English speakers in the classroom.

How Monrovia's Mandarin and Spanish language programs are helping offset declining enrollment
By **COURTNEY TOMPKINS** , Pasadena Star News| PUBLISHED: May 12, 2016 at 8:36 pm | UPDATED: August 28, 2017 at 2:31 am

In a few short years, a dual-immersion Spanish program propelled one elementary school into the fastest growing campus in the Monrovia Unified School District, and now officials hope a new Mandarin language program could have a similar effect.

At a time when local school districts are experiencing declining enrollment, and some are considering consolidating and closing campuses, districts are looking for ways to brand themselves and their individual schools, Superintendent Katherine Thorossian said.

And that's where unique programs like these come in.

"We are at a time where parents look for choice," she said. "They are looking for programs they think will meet the needs of their kids, while also helping prepare them for college and their careers, and being bilingual is one of those qualities."

Plymouth Elementary created a Mandarin language dual-immersion program in the fall, in which kindergarten students, including those in transitional kindergarten, learn in English for half the day and in Mandarin for the other half.

Principal Suzanne Heck said the program serves students on many levels.

"One thing we do know about these dual language programs is it enhances students' abilities to be problem solvers because they have to navigate languages not spoken in their native tongue," she said. "They regularly do better on standardized testing because they have more of the cognitive ability and flexible thinking."

The district brought in two teachers to run the program — Steve Cook, who built a dual-immersion program in Orange County schools several years ago, and Miki Boyle, who is from Beijing and recently taught a Mandarin program for the Hacienda La Puente Unified School District.

In addition to learning the English alphabet and Chinese characters, students in the program learn about culture, traditions and history.

Recently, one student's mother came in to teach the kids how to make dumplings, and earlier this week, the students learned the Dragon Dance, a form of traditional dance in Chinese culture often performed at festivities such as the Lunar New Year.

This year, the Mandarin program brought in students from Arcadia, Glendora and El Monte, said Sue Kaiser, assistant superintendent, educational services. And Kaiser said she has seen demand for the programs rise.

In 2010, the district launched its Spanish language dual-immersion program at Monroe Elementary School. Since its inception, the program has had 331 students and is now being expanded to Clifton Middle School, which will have its first class of sixth graders in the fall.

Between 2002 and 2010, the district saw a continuous decline in enrollment, but it began to spike not

long after the program was created, according to enrollment data from 2000 to 2012.

Thorossian said Monroe is not only the fastest growing school by enrollment, it is among the fastest growing in student achievement.

Ninety students have applied to enter the 2016-17 Spanish dual immersion kindergarten class and 53 are on the list for the transitional kindergarten class, Kaiser said. The district is currently accepting students for the Mandarin and Spanish programs.

Thorossian said she intends to shepherd the Mandarin program forward, while clearing the path for the Spanish program to continue through high school.

***From Education Week*: Several regional and national dual-language education experts offer insights into what it takes to launch dual-language programs and strengthen existing ones.**

What resources do you need to start a dual-language program?
"Once a program is well designed and implemented and it has all of its systems of support in place, the additional costs for a dual-language program is not much higher than any other monolingual English program. The issue, though, up front is going to be ... it's a very different design, a very different approach to education. You have training costs, you have leadership-development costs, you have resource costs because, of course, now you need materials in the non-English language. That takes a while for districts to reach that capacity where now their budget is going to be able to ... ensure sufficient materials to support instruction in both languages. That takes some time. It depends on where you are in the country as to how much that startup cost will be. Here in New Mexico, we would say that the cost could be ... somewhere between $30,000 and $60,000 per school for the first three years of design and implementation. That would be a starting point."
—David Rogers
Executive director, ***Dual Language Education of New Mexico***

Spanish is the most dominant target, or non-English, language offered in dual programs, but districts now offer a broader array of languages to learn. What are some of the challenges districts may encounter with those lesser-taught languages?
"There is a level of investment that a district has to make to be able to provide the core materials in those languages, because you just can't go to Vietnam and buy the standard curriculum that's used in schools there, nor could you do that for [Chinese] or any other languages, because it has to be really aligned with [Common Core State Standards]. First of all for us is to figure out, what is our content allocation? What are we going to be teaching in the partner language, versus what are we going to be teaching in English? And then our goal is to try to provide those materials in an equivalent and rigorous way. Sometimes that involves buying materials that are out in the field and adapting those. Sometimes that means developing them ourselves. Sometimes that means translating the English material. Just like any good educational program, you have to invest in the curriculum, the professional development, to make it work well for kids."
—Michael Bacon
Director, ***department of dual language, Portland, Ore., schools***

Are there other examples of growing pains that schools may not anticipate?
"Another perhaps growing pain is districts kind of struggling to realize when they need to add additional

people to their staff that they may not have had in place before. We're finding that right around the transition from 2nd grade into 3rd grade, we're starting to see districts now start to look for special [education] teachers who have bilingual ability. We want to make sure that every child is successful in an immersion environment, and should that child need special education services, et cetera, we want them to be able to receive those services in the immersion language."
—Lynn Fulton-Archer
Education specialist, ***dual-language immersion, Delaware Department of Education***

If you haven't already, read our **explainer on dual-language learning** before you dive into our conversation with **Rosa Molina**, the executive director of the Association for Two-Way & Dual-Language Education, which provides technical assistance and professional development to two-way immersion programs in California and the Western region of the United States.

Molina previously served as assistant superintendent of curriculum and instruction for the Ravenswood City schools in East Palo Alto, Calif., from 2009 to 2011, and spent 25 years working in a variety of roles in the San Jose Unified schools.

Education Week edited the questions and responses for clarity and length.

Question: How long does it take to start dual-language program, if done properly?

Answer: A year's planning is really optimum. So that you can put certain elements in place and we highly suggest to programs that they select their school and then survey the incoming kindergarten and preschool parents to see what their interest is. It's a multi-year endeavor for their children so parents have to be very well grounded and informed about what these programs are and how long it takes for students to reach the goal set out by the program. When you don't have interest, then you wait until you do get interest because you need to have what we call linguistically balanced classrooms, in order for the programs to be effective.

Q: How do you maintain a good balance of native speakers of the target language, as well as the native English-speakers?

A: In [many] districts in this country, we have these demographics, where you have children who are speakers of other languages and English speakers who are interested in learning a second language. And when you can develop a program where you combine these children in this setting, it requires parents to be very knowledgeable about what that means ... an eight- to nine-year commitment to ensuring that the kids become fluent in both languages. And it's not even fluency that we're going for, we're going for literacy. Literacy in two languages, so reading and writing, speaking and receptive language.

If it was just teaching children to speak, we could probably do that within the scope of three years. But it's the reading and writing process that takes time and so we're looking for grade-level proficiency in both languages over the course of their K-8 experience. We're starting early enough where children see this as just an integral part of their school. There isn't the resistance that we see when we start with students at a middle school, for example, [or] at the high school and they're very peer conscious. And pronunciation really matters to them and they're not using it as much and it's really only an hour a day. This is a very different process and a very different concept.

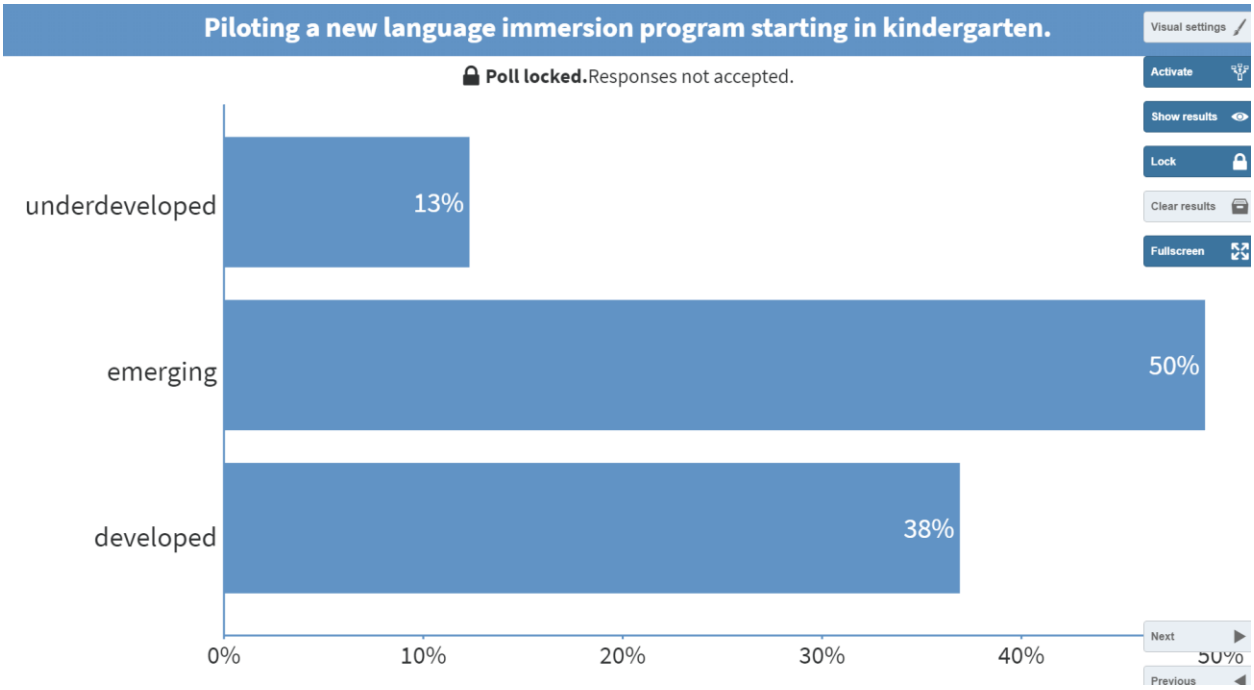
Q: Are more school districts looking to expand dual-language programs into their middle schools and high schools?

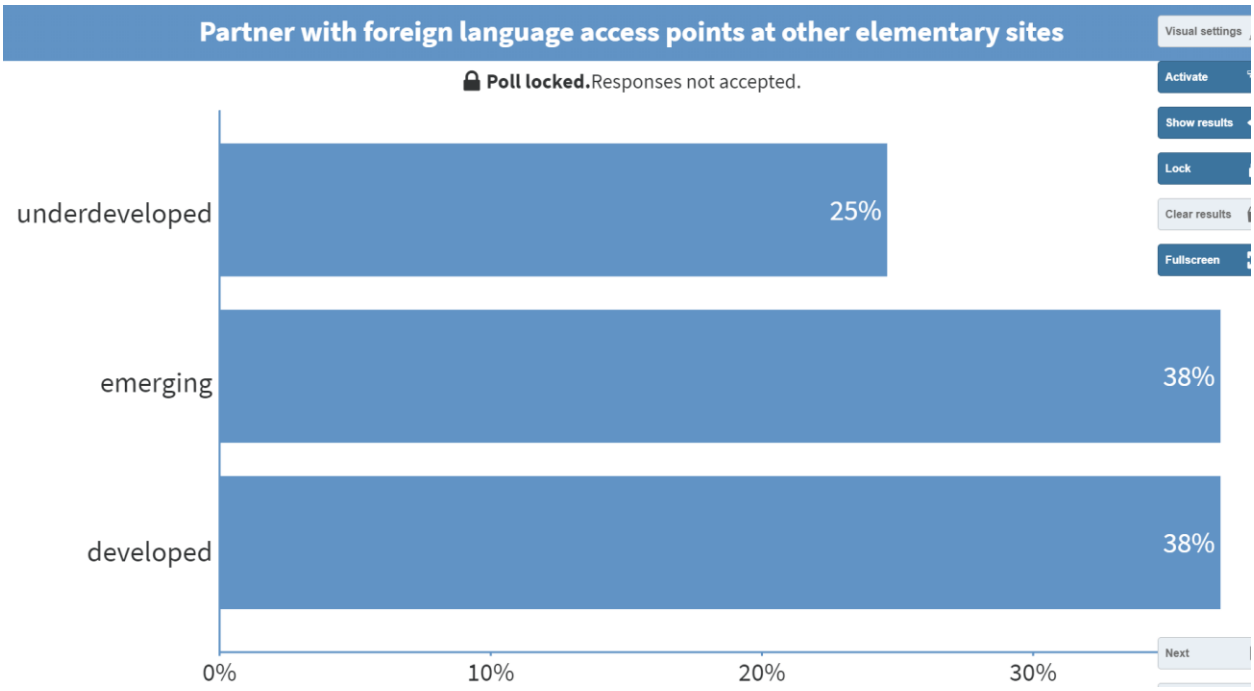
A: We suggest, from the beginning stages of implementation, that the programs design themselves to be a K-12 endeavor because we can't just put an elementary program in place and then not have that middle school program developed, since the students go into middle school with a 6th-grade level of another language and they should be allowed to take it further.

Our goal is that students can move into high school at the highest level of language proficiency and that they can then end up taking Advanced Placement as 9th graders and then have other options that open up their schedule to a third language or courses for special courses, like legal and medical translation courses or internships.

We're working with many districts as they're working through the middle school and high school [program development]. You blink and five years passed and those kids (heading into middle school) are ready for something else. You just can't move them into middle school and put them into Spanish I. They're so far beyond that. They don't fit in the regular world language structure.

Immersion Opportunities Action team: Poll Everywhere Results





Appendix M

World Language Task Force Survey/Results

Survey Title: World Language Task Force Survey	
Report Type: Bar Graph	**Language:** All
Start Date :23-May-18	
End Date :25-Mar-23	
Sent :0	
Delivered :0	
Bounced : 0	
Completed :217	
Unique Access Rate :0.00%	
Incomplete :0	
Incomplete Incl. in Report :0	

Q1. What are the grades of your child(ren)? Please include younger children not yet in school.

Responses	Responses	%	Percentage of total respondents
Pre-K	28	12.90%	
Kinder	40	18.43%	
1st	22	10.14%	
2nd	24	11.06%	
3rd	23	10.60%	
4th	25	11.52%	
5th	30	13.82%	
6th	23	10.60%	
7th	39	17.97%	
8th	22	10.14%	
9th	33	15.21%	
10th	23	10.60%	
11th	24	11.06%	
12th	13	5.99%	
Not yet in school	16	7.37%	
None of the above	5	2.30%	
(Did not answer)	1	0.46%	
Total Responses	**391**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q2. Does your child speak a language other than English at home?

Responses	Responses	%	Percentage of total respondents
No	145	66.82%	
Yes, what language(s)?	71	32.72%	
(Did not answer)	2	0.92%	
Total Responses	**218**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q3. How often do the adults in your family use their heritage language (other than English)?

Answer	Responses	Value	%	Percentage of total respondents
0 - 0%	67	0	30.88%	

1 - 10%	19	1	8.76%	
2 - 20%	13	2	5.99%	
3 - 30%	15	3	6.91%	
4 - 40%	5	4	2.30%	
5 - 50%	15	5	6.91%	
6 - 60%	5	6	2.30%	
7 - 70%	9	7	4.15%	
8 - 80%	8	8	3.69%	
9 - 90%	7	9	3.23%	
10 - 100%	13	10	5.99%	
(Did not answer)	41	NULL	18.89%	
Weighted Score : 3.04				
Total Responses	**217**			20% 40% 60% 80% 100%

Q4. What kind of learner is your child? (Check all that apply).

Responses	Responses	%	Percentage of total respondents
Visual (seeing/observing)	166	76.50%	
Auditory (listening)	131	60.37%	
Kinesthetic/Tactile (touching, feeling, doing)	143	65.90%	
Not Applicable	19	8.76%	
Other (Please specify)	4	1.84%	
(Did not answer)	3	1.38%	
Total Responses	**466**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q5. Is it important to you that the district offer World Language opportunities/experiences that appeal to different learning styles or approaches?

Responses	Responses	%	Percentage of total respondents
Yes	195	89.86%	
No	21	9.68%	
(Did not answer)	2	0.92%	
Total Responses	**218**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q6. Does your child need any additional modification or accommodations to successfully complete either a traditional oral language class or a sign language class due to learning differences or disabilities?

Responses	Responses	%	Percentage of total respondents
Yes	26	11.98%	
No	189	87.10%	
(Did not answer)	3	1.38%	
Total Responses	**218**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q7. Are you worried that your child will not be able to successfully complete the class even with accommodations?			
Responses	**Responses**	**%**	**Percentage of total respondents**
No	139	64.06%	
Not Applicable	73	33.64%	
If Yes, please explain	7	3.23%	
(Did not answer)	2	0.92%	
Total Responses	**221**		20% 40% 60% 80% 100%
Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.			

Q8. Are you satisfied with current World Language education options at Davis Joint Unified School District?			
Responses	**Responses**	**%**	**Percentage of total respondents**
Yes	88	40.55%	
No	122	56.22%	
(Did not answer)	10	4.61%	
Total Responses	**220**		20% 40% 60% 80% 100%
Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.			

Q9. How important is it for your child to learn languages with practical application?				
Answer	**Responses**	**Value**	**%**	**Percentage of total respondents**
1 - Not Important	6	1	2.76%	
2 - Somewhat Important	36	2	16.59%	
3 - Very Important	173	3	79.72%	
(Did not answer)	2	NULL	0.92%	
Weighted Score : 2.78				
Total Responses	**217**			20% 40% 60% 80% 100%

Q10. Should DJUSD consider offering other immersion Programs in addition to the current Spanish Immersion Programs?			
Responses	**Responses**	**%**	**Percentage of total respondents**
Yes	130	59.91%	
No	80	36.87%	
(Did not answer)	9	4.15%	
Total Responses	**219**		20% 40% 60% 80% 100%
Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.			

Q11. If "Yes", what language(s)?		
Answer	**Rank 1**	**Weighted Rank (Score)**
Chinese (Mandarin)	42	1 (38)
American Sign Language	39	2 (31)
Spanish	9	3 (9)
French	5	4 (2)

German	3	5 (1)
Japanese	3	6 (-4)
Arabic	0	7 (-13)
Italian	2	7 (-13)
Hindi	0	8 (-16)
Korean	0	9 (-20)
Punjabi	0	10 (-26)
Russian	0	10 (-26)
Portuguese	1	11 (-28)
Urdu	0	12 (-31)
Other (Please specify)	3	12 (-31)
Did Not Answer		110
Total Responses		**217**

Q12. Do you have a child currently enrolled in an immersion program?

Responses	Responses	%	Percentage of total respondents
Yes	81	37.33%	
No	134	61.75%	
(Did not answer)	2	0.92%	
Total Responses	**217**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q13. If you answered "yes" in the previous question, what school and what grade are your children in?

Responses	Responses	%	Percentage of total respondents
Cesar Chavez- Kinder	22	10.14%	
Cesar Chavez- 1st Grade	11	5.07%	
Cesar Chavez- 2nd Grade	9	4.15%	
Cesar Chavez- 3rd Grade	10	4.61%	
Cesar Chavez- 4th Grade	11	5.07%	
Cesar Chavez- 5th Grade	14	6.45%	
Cesar Chavez- 6th Grade	8	3.69%	
Montgomery - Kinder	2	0.92%	
Montgomery- 1st Grade	1	0.46%	
Montgomery- 2nd Grade	2	0.92%	
Montgomery- 3rd Grade	4	1.84%	
Montgomery- 4th Grade	2	0.92%	
Montgomery- 5th Grade	2	0.92%	
Montgomery- 6th Grade	2	0.92%	
Emerson Jr. High- 7th Grade	8	3.69%	
Emerson Jr. High- 8th Grade	4	1.84%	
Emerson Jr. High- 9th Grade	7	3.23%	
(Did not answer)	135	62.21%	
Total Responses	**254**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q14. Are you interested in having your child continue in his/her Spanish immersion program as

they move on to Junior High and High School?			
Responses	**Responses**	**%**	**Percentage of total respondents**
Yes	90	41.47%	
No	48	22.12%	
(Did not answer)	79	36.41%	
Total Responses	**217**		20% 40% 60% 80% 100%
Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.			

Q15. If your child is not currently enrolled in an Immersion program, are you interested in having your child participate in an Immersion Program?			
Responses	**Responses**	**%**	**Percentage of total respondents**
Yes	59	27.19%	
No	47	21.66%	
Not Applicable	97	44.70%	
(Did not answer)	14	6.45%	
Total Responses	**217**		20% 40% 60% 80% 100%
Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.			

Q16. If yes, which immersion model would you prefer, 50/50 (two-way-bilingual--i.e. Montgomery) or Spanish Immersion ("full" immersion--i.e. Chavez)?			
Responses	**Responses**	**%**	**Percentage of total respondents**
Two-Way Bilingual Immersion	43	19.82%	
Full Immersion	51	23.50%	
Not Applicable	59	27.19%	
I Don't Know	19	8.76%	
(Did not answer)	49	22.58%	
Total Responses	**221**		20% 40% 60% 80% 100%
Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.			

Q17. Do you think world language instructions should be offered to Elementary Students in schools that do not currently offer Immersion programs?			
Responses	**Responses**	**%**	**Percentage of total respondents**
Yes	171	78.80%	
No	13	5.99%	
Not Applicable	3	1.38%	
I Don't Know	29	13.36%	
(Did not answer)	2	0.92%	
Total Responses	**218**		20% 40% 60% 80% 100%
Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.			

Q18. Do you believe learning a world language in elementary school will be a problem for your child?			
Responses	**Responses**	**%**	**Percentage of total respondents**
Yes	12	5.53%	
No	184	84.79%	

Not Applicable	22	10.14%	
None of the above	2	0.92%	
(Did not answer)	1	0.46%	
Total Responses	**221**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q20. Do you believe learning a foreign language in elementary school would be beneficial to your child?

Responses	Responses	%	Percentage of total respondents
Yes	207	95.39%	
No	6	2.76%	
(Did not answer)	4	1.84%	
Total Responses	**217**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q21. In which grades should elementary school world language instruction start?

Responses	Responses	%	Percentage of total respondents
Kindergarten - 1st grade	153	70.51%	
2nd - 3rd grade	40	18.43%	
4th - 5th grade	30	13.82%	
(Did not answer)	13	5.99%	
Total Responses	**236**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q22. If you think world language instruction should be offered to Elementary students in schools that do not currently offer immersion, which world language do you think should be offered?

Responses	Responses	%	Percentage of total respondents
American Sign Language	59	27.19%	
Arabic	11	5.07%	
Chinese	115	53.00%	
French	52	23.96%	
German	24	11.06%	
Hindi	5	2.30%	
Italian	9	4.15%	
Japanese	19	8.76%	
Korean	13	5.99%	
Portuguese	4	1.84%	
Punjabi	2	0.92%	
Russian	9	4.15%	
Spanish	120	55.30%	
Urdu	1	0.46%	
Other (Please specify)	6	2.76%	
(Did not answer)	18	8.29%	
Total Responses	**467**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q23. Do you believe learning a World Language in Junior High will be beneficial to your child.

Responses	Responses	%	Percentage of total respondents
Yes	204	94.01%	
No	4	1.84%	
Not Applicable	9	4.15%	
(Did not answer)	0	0%	
Total Responses	**217**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q24. Do you believe learning a World Language in Junior High School will be a problem for your child?

Responses	Responses	%	Percentage of total respondents
Yes	15	6.91%	
No	189	87.10%	
Not Applicable	14	6.45%	
(Did not answer)	0	0%	
Total Responses	**218**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q25. If your child is currently taking or has taken a World Language class in the last 2 years, where was the class taken?

Responses	Responses	%	Percentage of total respondents
DJUSD class	93	42.86%	
Community College class	1	0.46%	
Private language program	20	9.22%	
Online class	11	5.07%	
My child has not taken World Language classes in the last 2 years	22	10.14%	
Not Applicable	56	25.81%	
Other (Please specify)	18	8.29%	
(Did not answer)	7	3.23%	
Total Responses	**228**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q26. Are you satisfied with the Immersion opportunities at Emerson Jr High?

Responses	Responses	%	Percentage of total respondents
Yes	28	12.90%	
No	30	13.82%	
Not Applicable	146	67.28%	
(Did not answer)	13	5.99%	
Total Responses	**217**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q28. Would you like to see more immersion opportunities offered at Jr. High level and beyond?			
Responses	**Responses**	**%**	**Percentage of total respondents**
Yes	134	61.75%	
No	43	19.82%	
Not Applicable	34	15.67%	
(Did not answer)	6	2.76%	
Total Responses	**217**		20% 40% 60% 80% 100%
Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.			

Q29. A Heritage Speaker is a native speaker that possesses some proficiency in their first language. Do you believe there should be more immersion opportunities for Heritage speakers at the Jr. High level?			
Responses	**Responses**	**%**	**Percentage of total respondents**
Yes	93	42.86%	
No	53	24.42%	
Not Applicable	60	27.65%	
(Did not answer)	12	5.53%	
Total Responses	**218**		20% 40% 60% 80% 100%
Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.			

Q31. If offered at the Junior High level, would your child be interested in taking an Introductory or exploratory world language class (1 semester or shorter) that would cover the fundamentals of that language, but would be less rigorous than a high school level class of the same language?			
Responses	**Responses**	**%**	**Percentage of total respondents**
Yes	156	71.89%	
No	25	11.52%	
Not Applicable	30	13.82%	
(Did not answer)	6	2.76%	
Total Responses	**217**		20% 40% 60% 80% 100%
Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.			

Q32. If so, what language?			
Responses	**Responses**	**%**	**Percentage of total respondents**
American Sign Language	55	25.35%	
Arabic	12	5.53%	
Chinese (Mandarin)	80	36.87%	
French	53	24.42%	
German	35	16.13%	
Hindi	6	2.76%	
Italian	14	6.45%	
Japanese	31	14.29%	
Korean	15	6.91%	
Portuguese	4	1.84%	
Punjabi	0	0%	
Russian	10	4.61%	

Spanish	79	36.41%	
Urdu	3	1.38%	
Other (Please specify)	8	3.69%	
(Did not answer)	56	25.81%	
Total Responses	**461**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q33. Is your child currently enrolled in a World Language class?

Responses	Responses	%	Percentage of total respondents
Yes	96	44.24%	
No	115	53.00%	
(Did not answer)	8	3.69%	
Total Responses	**219**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q35. If so, does your child enjoy the class?

Responses	Responses	%	Percentage of total respondents
Yes	86	39.63%	
No	16	7.37%	
Not Applicable	83	38.25%	
(Did not answer)	33	15.21%	
Total Responses	**218**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q36. Why do you want your child to take a World Language class? Check all that apply.

Responses	Responses	%	Percentage of total respondents
Fulfill UC/CSU A-G requirement	123	56.68%	
Fulfill High School graduation requirements	90	41.47%	
Develop a Useful Job Skill	160	73.73%	
Communicate with Family/Friends in that language	120	55.30%	
Useful in Traveling	145	66.82%	
Not Applicable	9	4.15%	
Other (Please specify)	46	21.20%	
(Did not answer)	4	1.84%	
Total Responses	**697**		20% 40% 60% 80% 100%

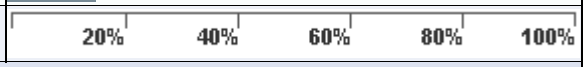
Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q37. Does the district provide adequate career/college counseling regarding language opportunities/requirements to be competitive in college acceptance or for vocational opportunities?

Responses	Responses	%	Percentage of total respondents
Yes	36	16.59%	
No	58	26.73%	

Not Applicable	108	49.77%	
(Did not answer)	15	6.91%	
Total Responses	**217**		
Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.			

Q38. If your child already took, or is taking a world language in High School is s/he interested in taking another (second) World Language?

Responses	Responses	%	Percentage of total respondents
Yes	45	20.74%	
No	38	17.51%	
None of the above	100	46.08%	
(Did not answer)	34	15.67%	
Total Responses	**217**		
Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.			

Q39. Rank the languages your child is interested in learning.

Answer	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6	Rank 7	Rank 8	Rank 9	Rank 10	Rank 11	Rank 12	Rank 13	Rank 14	Rank 15	Weighted Rank (Score)
Chinese (Mandarin)	18	15	36	17	17	6	12	4	3	0	1	0	0	0	0	1 (1565)
French	10	25	13	39	13	11	11	7	0	0	0	0	0	0	0	2 (1545)
American Sign Language	43	15	17	11	10	8	4	4	4	3	1	1	3	3	2	3 (1538)
German	7	7	9	16	42	13	16	12	3	0	3	1	0	0	0	4 (1384)
Spanish	36	23	9	4	5	2	2	1	1	0	1	0	41	3	1	5 (1270)
Arabic	0	22	13	13	14	18	4	8	11	8	4	6	7	0	1	6 (1258)
Japanese	7	8	12	11	10	7	6	40	23	2	2	0	1	0	0	7 (1245)
Italian	1	6	6	9	6	12	42	20	13	10	3	1	0	0	0	8 (1179)
Hindi	1	1	1	1	2	38	17	16	15	14	7	7	5	3	1	9 (1011)
Korean	4	3	6	3	5	1	5	8	39	38	11	5	1	0	0	10 (969)
Portuguese	1	2	1	4	1	7	4	1	5	5	42	44	11	1	0	11 (715)
Punjabi	0	0	0	0	0	0	0	2	5	42	48	16	9	6	1	12 (647)
Russian	0	1	2	0	2	4	6	4	6	5	5	44	45	5	0	13 (606)
Urdu	0	0	0	1	1	0	0	1	0	1	0	4	6	105	10	14 (291)
Other	1	1	4	0	1	2	0	1	1	1	1	0	0	3	113	15 (257)
Did Not Answer																88
Total Responses																**217**

Q40. Are you satisfied with the current offering of languages in our World Language Program?

Responses	Responses	%	Percentage of total respondents
Yes	38	17.51%	
No	88	40.55%	

Don't Know	80	36.87%	
(Did not answer)	12	5.53%	
Total Responses	**218**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q41. Which problem(s) has your child encountered that has made it difficult to take or continue taking a World language class of his/her first choice?

Responses	Responses	%	Percentage of total respondents
course conflicted with a core class	19	8.76%	
course not offered at school site	64	29.49%	
could not participate in split-site enrollment due to lack of transportation, etc.	18	8.29%	
Not Applicable	104	47.93%	
Other (Please specify)	22	10.14%	
(Did not answer)	23	10.60%	
Total Responses	**250**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q42. Do you feel that Jr. High students are made aware of the possibility of enrolling in a world language course (as a split-site student) offered at Davis High School or another Junior High?

Responses	Responses	%	Percentage of total respondents
Yes	59	27.19%	
No	53	24.42%	
Not Applicable	88	40.55%	
(Did not answer)	18	8.29%	
Total Responses	**218**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q43. If so, how were you made aware of this?

Responses	Responses	%	Percentage of total respondents
Counselor	30	13.82%	
Course schedule	20	9.22%	
Word of mouth	35	16.13%	
Not Applicable	87	40.09%	
Other (Please specify)	11	5.07%	
(Did not answer)	59	27.19%	
Total Responses	**242**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q45. Would you be interested in a blended program that includes online instruction for 3 days a week with 2 days a week instruction by a language teacher in class?

Responses	Responses	%	Percentage of total respondents
Yes	101	46.54%	
No	63	29.03%	

Not Applicable	28	12.90%	
Other (Please specify)	12	5.53%	
(Did not answer)	18	8.29%	
Total Responses	**222**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Q46. Are you aware of the requirements/pathways for your child to earn a California State Seal of Biliteracy?

Responses	Responses	%	Percentage of total respondents
Yes	41	18.89%	
No	164	75.58%	
(Did not answer)	12	5.53%	
Total Responses	**217**		20% 40% 60% 80% 100%

Multiple answers per participant possible. Percentages added may exceed 100 since a participant may select more than one answer for this question.

Appendix N
Current DJUSD World Language Enrollment

Davis Joint USD
Class Enrollment Analysis
Date: 09/20/2018
Printed: 9/20/2018 2:45 PM

Track	(All)
School	Davis Senior High School

Count of Student	Grade				
Course	09	10	11	12	Grand Total
251000-1 Chinese 1 P			7	3	2	12
252000-1 Chinese 2 P		1	6	5	4	16
253000-1 Chinese 3 P			2	3	1	6
254000-1 Chinese 4 Hon P			2	7	3	12
261000-1 French 1 P			16	8	3	27
262000-1 French 2 P			19	7	1	27
263000-1 French 3 P			34	2	1	37
264500-1 French 4 Hon P			19	9	2	30
265000-1 French 5 Lang AP				12	1	13
273000-1 German 3 P		3	2	3	4	12
286000-1 Japanese 1 P			10	4	5	19
286100-1 Japanese 2 P			18	10		28
286200-1 Japanese 3 P				10	6	16
286400-1 Japanese 4 Hon P				1	6	7
286500-1 Japanese 5 Lang AP				1		1
291000-1 Spanish 1 P			26	1		27
291000-2 Spanish 1 P			22	8	1	31
292000-1 Spanish 2 P			26	8	2	36
292000-2 Spanish 2 P			28	7		35
292000-3 Spanish 2 P			30	5		35
293000-1 Spanish 3 P		1	19	7	3	30
293000-2 Spanish 3 P			21	8	1	30
293000-3 Spanish 3 P			16	11	3	30
293000-4 Spanish 3 P			24	7	3	34
293000-5 Spanish 3 P			19	14	2	35
293000-6 Spanish 3 P			12	10	2	24
294500-1 Span 4 Hon P		2	20	7		29
294500-2 Span 4 Hon P			20	5	3	28
294500-3 Span 4 Hon P			23	4	5	32
294500-4 Span 4 Hon P			21	7	3	31
294500-5 Span 4 Hon P			22	9	1	32
295000-1 Span 5 Lang AP		1	20	7	3	31
295000-2 Span 5 Lang AP			10	13	1	24
295000-3 Span 5 Lang AP			15	9	3	27
295000-4 Span 5 Lang AP			18	11	4	33
296000-1 Span 6 Lit AP			3	23		26
Grand Total		8	550	266	79	903

Davis Joint USD
Class Enrollment Analysis
Date: 09/20/2018
Printed: 9/20/2018 2:41 PM

Track	T 220 18/19
School	Harper Junior High School

Count of Student	Grade			
Course	07	08	09	Grand Total
251000-1 Chinese 1 P			3	3
261000-1 French 1 P	18	8	5	31
262000-1 French 2 P		7	12	19
263000-1 French 3 P			18	18
286000-1 Japanese 1 P			12	12
291000-1 Spanish 1 P	15	13	3	31
291000-2 Spanish 1 P	19	11	2	32
291000-3 Spanish 1 P	10	15	11	36
292000-1 Spanish 2 P		10	21	31
292000-2 Spanish 2 P	2	20	11	33
292000-3 Spanish 2 P	3	18	9	30
293000-1 Spanish 3 P	6	4	17	27
293000-2 Spanish 3 P	8	6	17	31
293000-3 Spanish 3 P	6	6	16	28
294500-1 Span 4 Hon P			31	31
Grand Total	87	118	188	393

Davis Joint USD
Class Enrollment Analysis
Date: 09/20/2018
Printed: 9/20/2018 2:44 PM

Track	(All)
School	Holmes Junior High School

Count of Student	Grade			
Course	07	08	09	Grand Total
251000-1 Chinese 1 P			3	3
261000-2 French 1 P	20	6	5	31
262000-2 French 2 P		15	14	29
263000-1 French 3 P		1	18	19
273000-1 German 3 P			3	3
291000-1 Spanish 1 P	14	14	5	33
291000-2 Spanish 1 P	16	12	4	32
291000-3 Spanish 1 P	20	11		31
291000-4 Spanish 1 P		1	30	31
291000-6 Spanish 1 P	17	12	4	33
292000-1 Spanish 2 P		1	27	28
292000-2 Spanish 2 P		25	2	27
292000-3 Spanish 2 P	13	15	2	30
292000-6 Spanish 2 P		13	13	26
292000-7 Spanish 2 P		22	8	30
293000-1 Spanish 3 P			21	21
293000-2 Spanish 3 P		3	20	23
293000-4 Spanish 3 P		1	26	27
294500-1 Span 4 Hon P			10	10
295000-1 Span 5 Lang AP			1	1
Grand Total	100	152	216	468

Davis Joint USD
Class Enrollment Analysis
Date: 09/20/2018
Printed: 9/20/2018 2:42 PM

Track	T 221 18/19
School	Emerson Junior High School

Count of Student	Grade			
Course	07	08	09	Grand Total
251000-1 Chinese 1 P			8	8
262000-1 French 2 P		1	2	3
263000-2 French 3 P			5	5
286000-1 Japanese 1 P			3	3
291000-1 Spanish 1 P	5	12	15	32
291000-2 Spanish 1 P	12	13	6	31
291000-3 Spanish 1 P	16	11	8	35
291000-4 Spanish 1 P	10	15	8	33
292000-1 Spanish 2 P	4	13	17	34
292000-2 Spanish 2 P	4	14	17	35
292000-3 Spanish 2 P	3	17	13	33
293000-1 Spanish 3 P		7	23	30
293700-1 Span E-Interm Trans P (ACTFL35)	34			34
293700-2 Span E-Interm Trans P (ACTFL35)	30			30
294700-1 Span Interm 1H P (ACTFL45)		31		31
294700-2 Span Interm 1H P (ACTFL45)		28		28
294900-1 Span Interm 2H P (ACTFL55)			32	32
294900-2 Span Interm 2H P (ACTFL55)			31	31
Grand Total	118	162	188	468

Appendix O

Teacher Shortages in California: Status, Sources, and Potential Solutions

GETTING DOWN TO FACTS II

Technical Report

Teacher Shortages in California: Status, Sources, and Potential Solutions

Linda Darling-Hammond
Learning Policy Institute

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Desiree Carver-Thomas
Learning Policy Institute

September 2018

About: The *Getting Down to Facts* project seeks to create a common evidence base for understanding the current state of California school systems and lay the foundation for substantive conversations about what education policies should be sustained and what might be improved to ensure increased opportunity and success for all students in California in the decades ahead. *Getting Down to Facts II* follows approximately a decade after the first Getting Down to Facts effort in 2007. This technical report is one of 36 in the set of *Getting Down to Facts II* studies that cover four main areas related to state education policy: student success, governance, personnel, and funding.

Stanford University

PACE Policy Analysis for California Education

Teacher Shortages in California: Status, Sources, and Potential Solutions

Linda Darling-Hammond
Learning Policy Institute

Leib Sutcher
Learning Policy Institute

Desiree Carver-Thomas
Learning Policy Institute

Introduction

Teacher shortages have been worsening in California since 2015. After years of budget cuts and teacher layoffs, the passage of Proposition 30, officially titled Temporary Taxes to Fund Education, and the Local Control Funding Formula (LCFF) brought more money back into California schools after 2014. Many districts began to hire again, looking to reinstate classes and programs reduced or eliminated during the Great Recession. But qualified teachers were hard to find: The supply of new teaching candidates had declined by more than 70% over the decade when jobs were not available.[1] As a result, since 2014–15, California districts have reported acute shortages of teachers, especially in mathematics, science, and special education.[2] The passage of Proposition 58 reinstating bilingual education has triggered additional shortages of bilingual teachers.

In a fall 2016 survey of 211 school districts that are part of the California School Boards Association's Delegate Assembly—a sample that generally reflects the demographics of California's districts—75% of districts reported having a shortage of qualified teachers for the 2016–17 school year, with more than 80% of these districts reporting that shortages worsened since the 2013–14 school year.[3]

In fall 2017, a survey of California's largest districts, plus a sampling of rural districts—representing one-quarter of the state's enrollment—found that teacher shortages had grown worse yet again.[4] Fully 80% of district respondents reported a shortage of qualified teachers for the 2017–18 school year. Of those districts registering shortages, 90% reported that they were as bad or worse than in the previous year.[5]

While the most acute shortages have been reported in special education, mathematics and science, emerging shortages in bilingual education and career and technical education are becoming more pronounced. Furthermore, about one third of California districts also report shortages in fields such as elementary education, English, and social studies, which are traditional areas of surplus.[6]

California's ongoing teacher shortage threatens recent education initiatives in the state—new standards, curriculum, instruction, and assessments—that aim to move the system toward more meaningful 21st century learning. When districts cannot fill a position with a qualified teacher, they have few good options. California districts report dealing with shortages by hiring long-term substitutes or teachers with substandard credentials, leaving positions vacant, increasing class sizes, or canceling courses.[7] All of these strategies can undermine the quality of instruction and student achievement.[8]

This report highlights the most recent data on California teacher shortages. We first describe overarching trends in the teacher labor market, then discuss current indicators of shortages and how they vary by subject area, location, and student population. We investigate sources of shortages in California, and finally we turn to potential state action to mitigate shortages in California.

Over the last 4 years, California has invested nearly $200 million in curbing teacher shortages. These investments have included $45 million to help classified staff become certified

to teach, $10 million to start new undergraduate programs for teacher education, and $5 million to launch a Center on Teaching Careers, a recruitment and resource center for teaching candidates and those considering a teaching career. Additional investments have included $9 million for teacher and leader recruitment and retention through the California Educator Development (CalEd) competitive grants program and about $5 million for the Bilingual Teacher Professional Development Program. In summer 2018, California enacted its largest investments: $75 million to support teacher residencies to recruit and train teachers in special education, math, science, and bilingual education; and $50 million in 2018 for "local solutions" to special education teacher recruitment and retention, which may include everything from loan repayment to mentoring, retention bonuses, and redesign of workload, among other strategies.

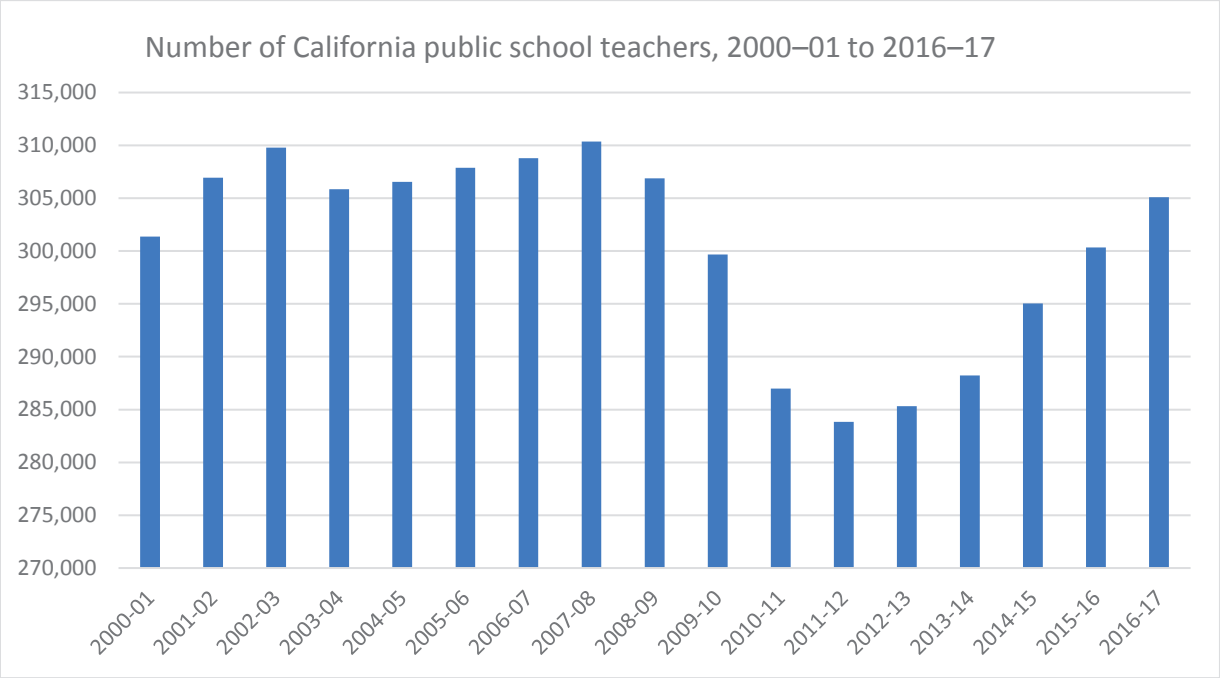
A key policy question is whether these programs will be enough to address the shortages, or whether more still needs to be done, and, if so, what? As described in this paper, shortages have continued and deepened over the last 3 years. The largest investments have just been made and it will take time to evaluate their results.

Trends in California's Teacher Workforce

Increase in Demand

After many years of budget cuts and staff layoffs, the tide turned in 2013–14, when California brought new, more equitably distributed revenues into the education system as a result of Proposition 30, which expanded revenues, and the LCFF, which redistributed funds based on pupil needs.[9] As funding improved and districts began trying to replace the positions they had lost, teacher hiring increased dramatically. The teacher workforce has expanded steadily over the past 5 years, growing by more than 8%, or 22,000 teachers (see Figure 1).

Figure 1: Teacher Workforce Growth Since 2011–12



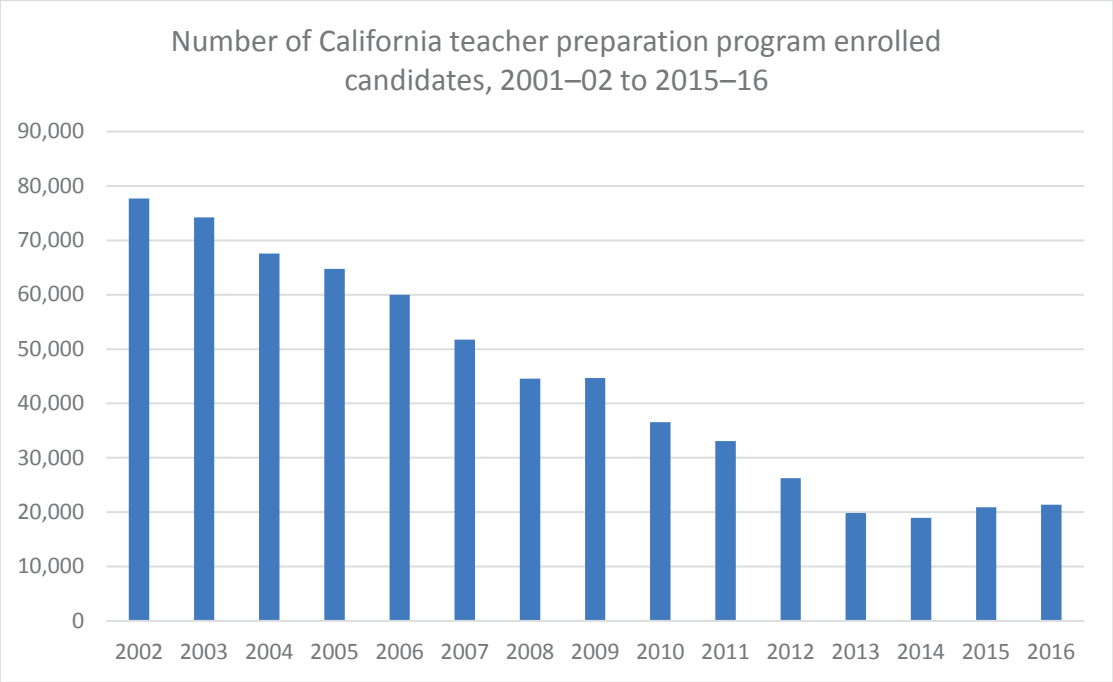
Source: California Department of Education, 2000–2016. Retrieved from http://data1.cde.ca.gov/dataquest/.

This rapid expansion in the teacher workforce over the past several years signals an overall increase in hiring. Hiring teachers would normally not be reason for concern, but California's teacher supply remains low, and all signs suggest there are not enough qualified teachers to go around.

Decline in Teacher Education Enrollments

Teacher preparation program enrollments declined by more than 70% between 2002 and 2014 when ongoing budget cuts meant that jobs for new teachers were fewer and further between (see Figure 2). Between 2008 and 2012, more than 100,000 pink slips were issued to teachers warning them they could be laid off.[10] Although most of these teachers were eventually hired back,[11] this highly publicized practice was likely a contributing factor to a diminished supply of college students wanting to go into teaching. Many teachers experiencing multiple lay-offs also decided to find another career path.

Figure 2: Enrollment in Teacher Preparation Programs Remains Low



Source: California Commission on Teacher Credentialing. Data available at http://www.ctc.ca.gov/reports/data/titleII-prog-info.html. Data from 2015-16 was provided by the CTC through a special request.

Teacher education enrollments overstate the true number of candidates entering the labor market in a given year. This is in part because not all individuals who enroll in teacher preparation programs complete them, and those who do may take more than 1 year to do so. For example, in 2014–15, while more than 20,000 individuals were enrolled in teacher education programs, only about 10,600 candidates completed programs in the same year, despite the fact that the vast majority of California programs are post-baccalaureate programs that can be completed in a year by those attending full-time. Consistent with declines in enrollments, the number of program completers declined by 25% in the last 5 years[12] (see Figure 3).

The pool of teachers available to be hired shrinks further because not all teacher education completers go on to teach in California after earning a credential. Some take time off; some go to other states; and others do not end up teaching at all. National estimates suggest that between 75% and 90% of program completers go on to teach within 4 years.[13]We were unable to estimate this number in California because of lack of access to data linking program graduates to employment.

Teacher preparation enrollments increased by 12.5% between 2013–14 and 2015–16, which represents just over 2,000 candidates (see Figure 2). About 1,200 of these candidates were enrolled in the University of California (UC) and California State University (CSU) systems. Together, these two systems prepare around 60% of teachers in the state.[14] Although small increases in 2014–15 and 2015–16 were positive signs, enrollment in the CSU system has

remained stagnant in the 2 years since then, and the UC system saw a tiny increase of just over 100 students in 2016–17 (see Table 1). Both systems remain far below enrollment levels of a decade ago. At its highest point, in 2002–03, CSU alone enrolled more than 31,000 teaching candidates, which is three times more than it currently enrolls.[15]

Table 1. Teacher Preparation Enrollments in California's State University System

University System	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18
California State University (CSU)	9496	8052	8642	8837	9660	9642	9662
University of California (UC)	1055	788	726	883	928	1065	—
Total	10551	9840	9368	9720	10588	10707	—

Source: Data provided by the California State University (CSU) Office of the Chancellor and the University of California (UC) Office of the President through a special request. UC Data for 2016–17 and CSU data for 2017–18 are preliminary.

Increase in Substandard Credentials and Permits

One of the best indicators of teacher shortages is the prevalence of substandard credentials and permits. We use the term "substandard" because these teaching authorizations are issued to candidates who have not completed the testing, coursework, and student teaching requirements that are required for what the California Commission on Teacher Credentialing (CTC) considers standard or full credentials: the "preliminary" credential for new, fully prepared teachers and the "clear" credential for those fully prepared who have also completed an induction program. By law, substandard credentials and permits can only be granted when fully credentialed teachers are not available, and are thus a key indicator of shortages. (See Box 1.)

Box 1. California Teacher Credential and Permit Types

Fully Prepared Teachers/Teachers with Full Credentials

Preliminary credentials are awarded to individuals who successfully complete a teacher preparation program and the state assessments required for a license, including demonstration of subject-matter competence and teaching skills. These credentials are valid for 5 years.

Clear credentials are awarded to preliminary credential holders upon successful completion of an induction program. These credentials are renewable every 5 years.

Underprepared Teachers/Teachers with Substandard Credentials and Permits

Provisional Intern Permits (PIPs), **Short-Term Staff Permits (STSPs)**, **and waivers** are used to fill "immediate and acute" staffing needs. These emergency-style, one-year permits allow individuals who have not completed teacher preparation programs nor demonstrated subject-matter competence to teach a particular grade or course for a maximum of one year.

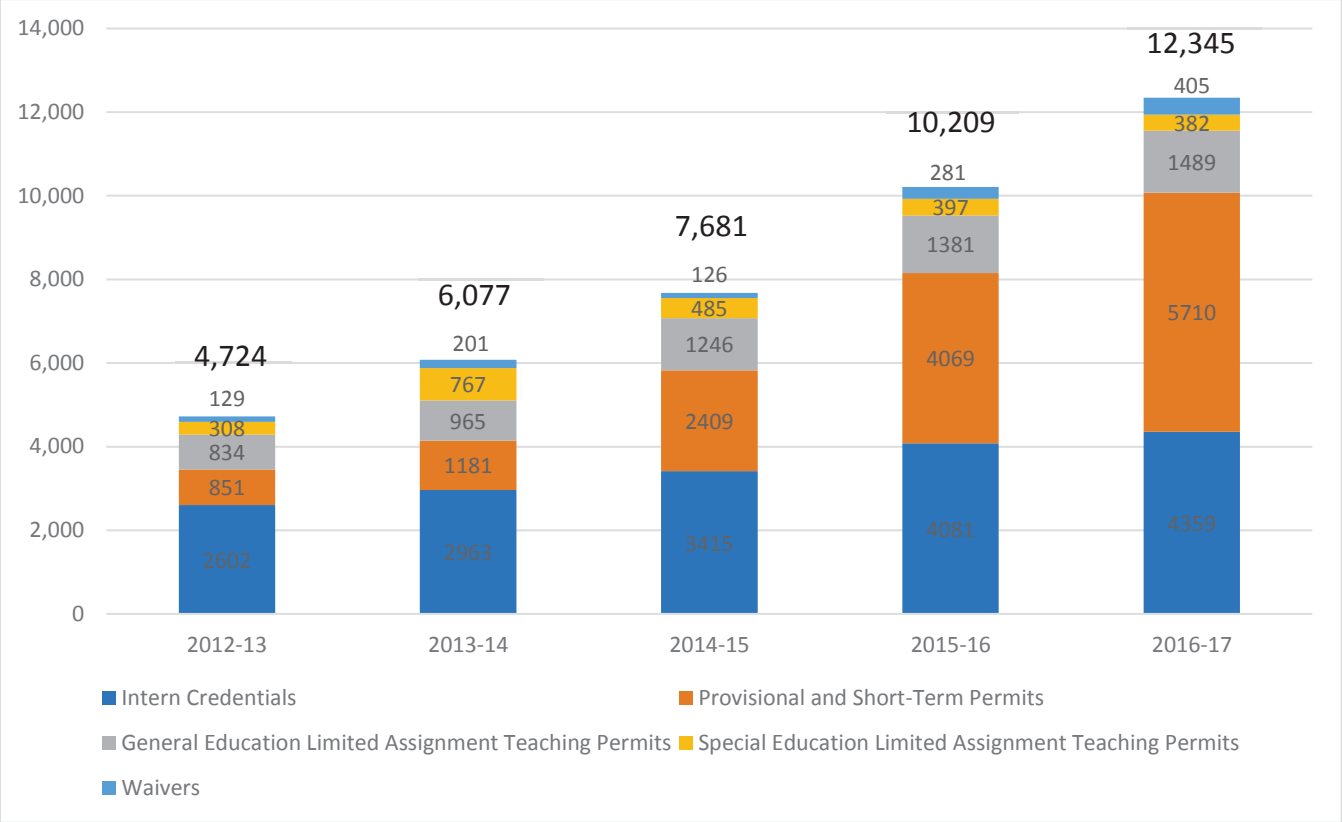
Limited Assignment Teaching Permits allow credentialed teachers to teach outside of their subject area to fill a "staffing vacancy or need."

Intern credentials are awarded to teachers in training who have demonstrated subject-matter competence but have not completed a teacher preparation program or met the performance assessment requirements for a license. Interns take courses and receive mentoring while teaching.

Source: California Commission on Teacher Credentialing, CTC Glossary: http://www.ctc.ca.gov/reports/data/files/data-terms-glossary.pdf. See also http://www.ctc.ca.gov/credentials/leaflets/cl856.pdf; http://www.ctc.ca.gov/credentials/leaflets/cl858.pdf; http://www.ctc.ca.gov/credentials/leaflets/cl402a.pdf.

In 2016–17, the most recent data available, California issued more than 12,000 intern credentials, permits and waivers, which comprised roughly half of all credentials issued that year (see Figure 3). In all, the number of substandard credentials increased by 260% from 2012–13 to 2016–17. Emergency-style permits—issued to individuals who have not demonstrated subject-matter competence for courses they are teaching and who typically have not yet entered a teacher training program—have increased by nearly seven-fold since 2012–13 and represent the fastest growing category of substandard teaching authorizations. In 2016–17, 5,700 teachers entered teaching on emergency-style permits, compared to fewer than 900 in 2012–13. These data strongly suggest supply is insufficient to meet teacher demand in the areas where these kinds of permits are being issued.

Figure 3: Substandard Permits and Credentials More Than Doubled in California Between 2012–13 and 2016–17



Note: The number of credentials issued between July 1 of each year and June 30 of the following year.
Source: Data provided by the California Commission on Teacher Credentialing through a special request.

Teacher Workforce Trends Predict Continued Shortages

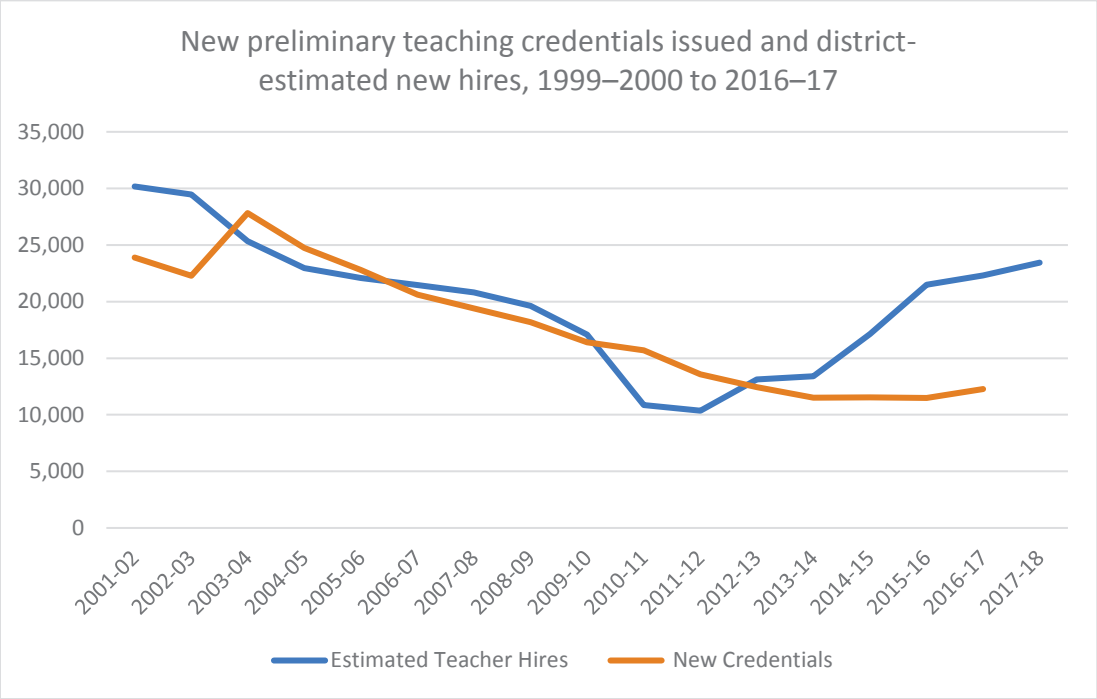
As districts have used their new resources to reinstate teaching positions, classes, and programs that were reduced or eliminated during the Recession, estimated annual hires have more than doubled in the last few years. Meanwhile the number of teaching credentials issued continues to remain at historic lows, despite a small uptick in recent years. Between 2013–14 and 2015–16, California preliminary credentials issued by the CTC stagnated at about 11,500, while district-estimated annual demand increased to more than 22,000 in 2015–16 and over 23,000 in the year after (see Figure 4).

According to the California Department of Education (CDE) data we analyzed, even more teachers were hired than districts predicted in their estimates. Actual hiring in these years reached nearly 30,000 annually, suggesting that districts either experienced more attrition than they had anticipated, which created new vacancies, or that – as LCFF was fully funded at a more rapid rate than initially planned – new funding allowed them to move more rapidly to recoup losses of teachers during the Recession.

In 2016–17, California issued more than 12,000 new preliminary teaching credentials, a small increase from the prior year (see Figure 4). Even with the additional roughly 3,900 out-of-

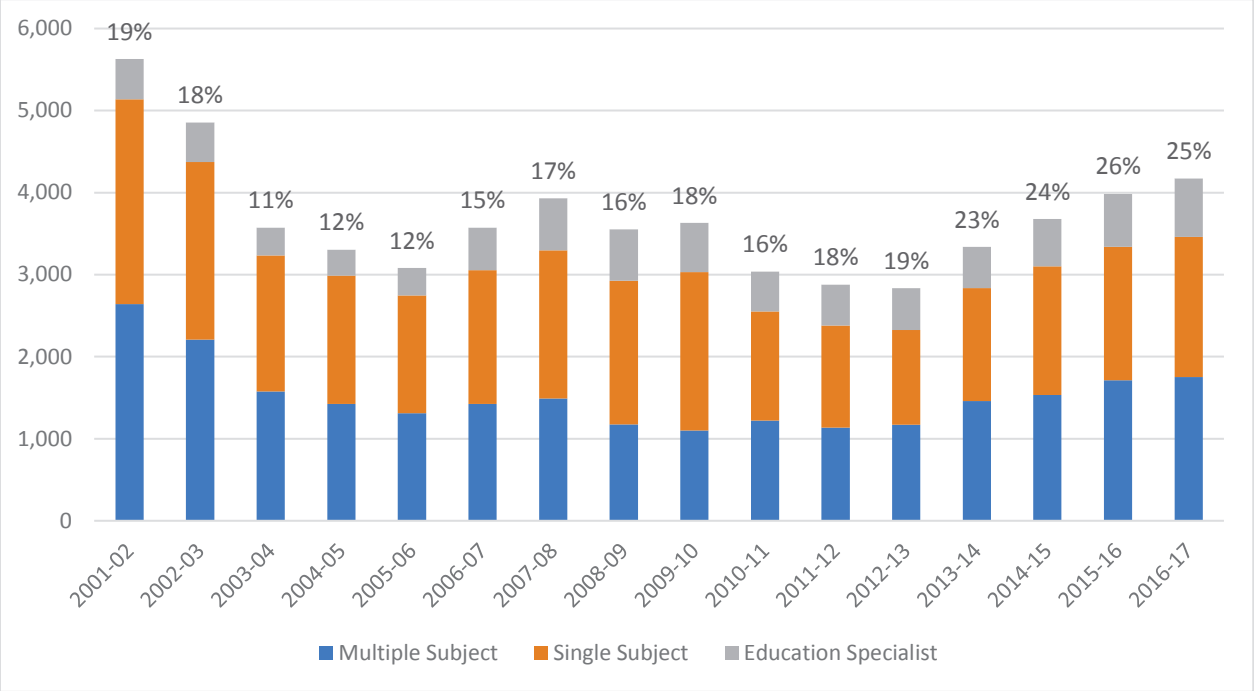
state and out-of-country credentials, plus teacher re-entrants, this increase does not close the gap between supply and demand. The number of out-of-state credentials increased by about 7% since 2013–14, comprising about one quarter of all credentials issued (see Figure 5).

Figure 4: Teacher Demand Continues to Grow



Note: New credentials are preliminary credentials issued to newly prepared teachers. 2016–17 data are preliminary. Source: California Commission on Teacher Credentialing, 2002–2015. *Teacher supply in California: A report to the l*egislature. Data available at http://www.ctc.ca.gov/reports/all-reports.html; Credential data from 2016–17 provided by the CTC by request; District estimated hires come from the CDE, 2002–2018. http://data1.cde.ca.gov/dataquest/.

Figure 5: New California Teaching Credentials Issued for Individuals Prepared Out-of-State and Out-of-Country as Percentage (%) of Total New Teaching Credentials



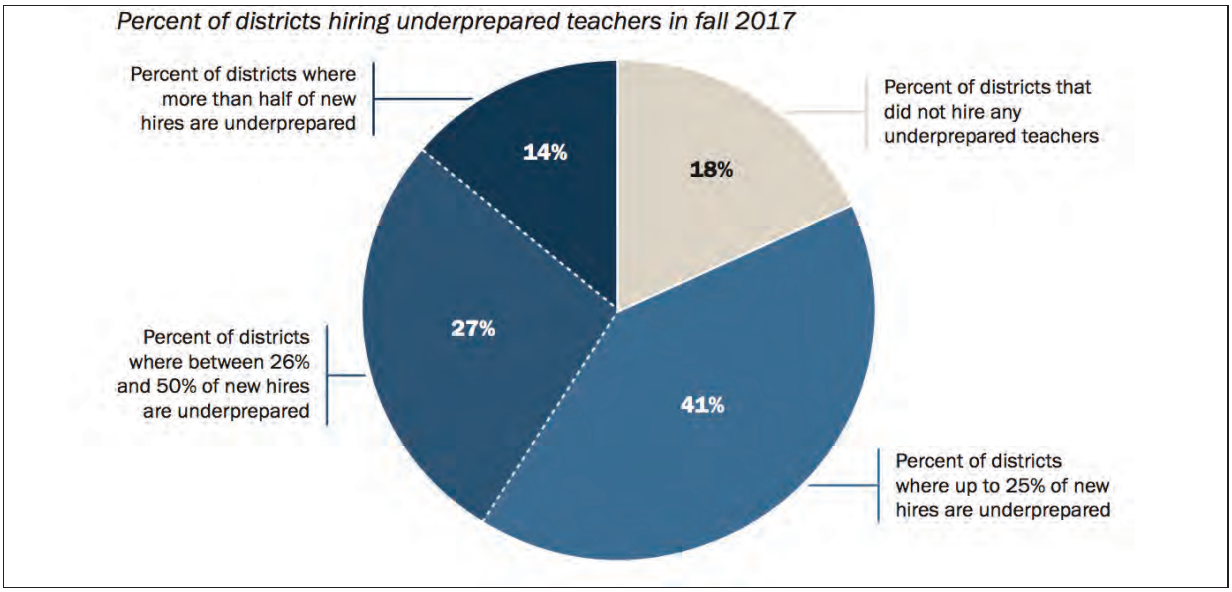
Note: Total new teaching credentials include both institutions of higher education and district pathways.
Source: California Commission on Teacher Credentialing, 2002–2016. *Teacher supply in California: A report to the legislature.* Data available at http://www.ctc.ca.gov/reports/all-reports.html; Credential data from 2016–17 provided by the CTC through a special request.

Increases in Demand are Slowing but Teacher Shortages Remain

After a spike in teacher demand as districts refilled positions cut during the layoff era, demand for new teachers could be steadying.[16] District hiring estimates reported to the CDE, in which districts project their hiring needs 1 year into the future, are increasing still, but at a slower rate than previously. Additionally, in the Fall 2017 Learning Policy Institute district survey, many districts reported small decreases in the number of vacancies and new hires between 2016–17 and 2017–18.[17]

Still, 74% of districts reported they were unable to fill all their vacancies with fully credentialed teachers in 2017–18,[18] and 82% of those resorted to hiring underprepared teachers who had not completed the requirements for full certification. Even though districts are looking for fewer teachers overall, a greater proportion of those new hires are underprepared, suggesting shortages are persisting.[19] Nearly half of these districts reported hiring a greater proportion of underprepared teachers in fall 2017 than the year before.[20] In a substantial number of districts (41%), at least one quarter of new hires were underprepared teachers in 2017–18, and in 14% of districts, underprepared teachers comprised more than half of all new hires (see Figure 6).

Figure 6. Districts Continue to Hire Underprepared Teachers



Source: Sutcher, L., Carver-Thomas, D., & Darling-Hammond, L. (2018). *Understaffed and underprepared: California districts report ongoing teacher shortages.* Palo Alto, CA: Learning Policy Institute.

Moreover, many districts are relying on the least prepared teachers—those not even enrolled in intern programs—to fill positions. Nearly two thirds of surveyed districts reported hiring teachers on Provisional Intern Permits (PIPs), Short-Term Staff Permits (STSPs), and waivers, and half of those districts hired a greater proportion of teachers on emergency-style permits in fall 2017 than they did the year prior.[21] These permits, which are for "acute" areas of shortage, do not require their holders to have demonstrated competence in the subject matter they will teach or any knowledge about how to teach the subject. In some small, rural districts, all new teachers were hired on emergency-style permits in fall 2017. In some large districts, teachers on emergency-style permits made up as much as 30% of new hires. Interns, who are completing teacher preparation while teaching and are supposed to be receiving mentoring and support, also comprised up to 30% of new hires in some large districts.[22]

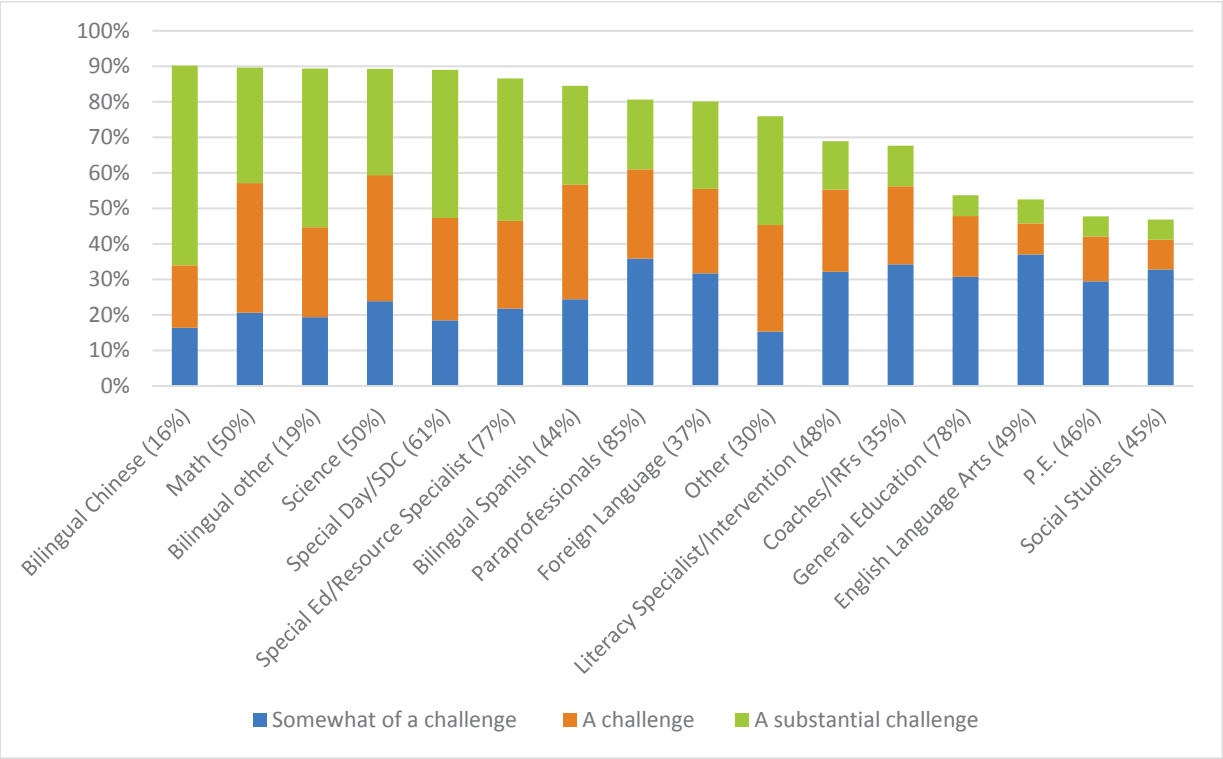
The Shape of Shortages

Shortages vary by teaching field. Looking at state-level indicators of teacher supply and demand is a first step, but it is equally important to understand imbalances in specific subject areas and locations. Although teacher shortages are more severe in some subject areas than others, districts find hiring a challenge in most subjects. For example, of more than 12,300 substandard permits and credentials issued in 2016–17, about half (6,400) were issued in the acute shortage areas of math, science, and special education. However, the remaining 6,000 or so authorizations were distributed among other subjects, including traditional surplus areas such as elementary (multiple subjects), English, and social studies, signaling widespread staffing difficulties.

Figure 7 shares the results of a fall 2017 survey of California principals conducted for the Getting Down to Facts (GDTF) project by the RAND Corporation. Of principals looking to hire in

a given subject, most had challenges filling positions. About 90% of principals looking to hire bilingual, special education, science, and mathematics teachers reported hiring challenges. And more than half of principals looking to hire world language teachers, English teachers, and elementary ("general education") teachers experienced challenges finding candidates.

Figure 7: Percentage of Principals Reporting Hiring is a Challenge (Percentage of schools that attempted to hire for a given subject area/position)

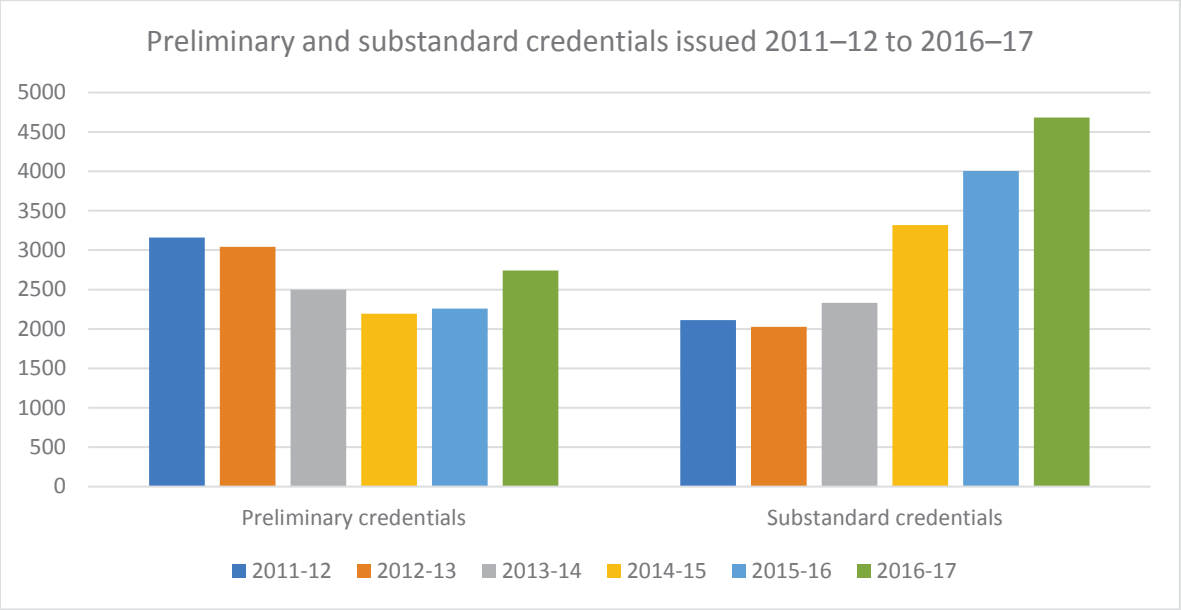


Source: Learning Policy Institute analysis of GDTFII 2018 Principal Survey conducted by RAND.

In special education, shortages are a five-alarm fire. The most vulnerable students—students with the greatest needs who require the most expert teachers—are those with the least qualified teachers. According to the GDTF survey data, depicted in Figure 7, nearly 8 in 10 California schools are looking to hire special education teachers, and 87% of principals at those schools reported hiring is a challenge. Although there was a 21% increase in new education specialist preliminary credentials in 2016–17, with more than 2,700 authorizations issued and an additional 700 out-of-state preliminary credentials issued, this increase was not nearly enough to meet demand (see Figure 8).

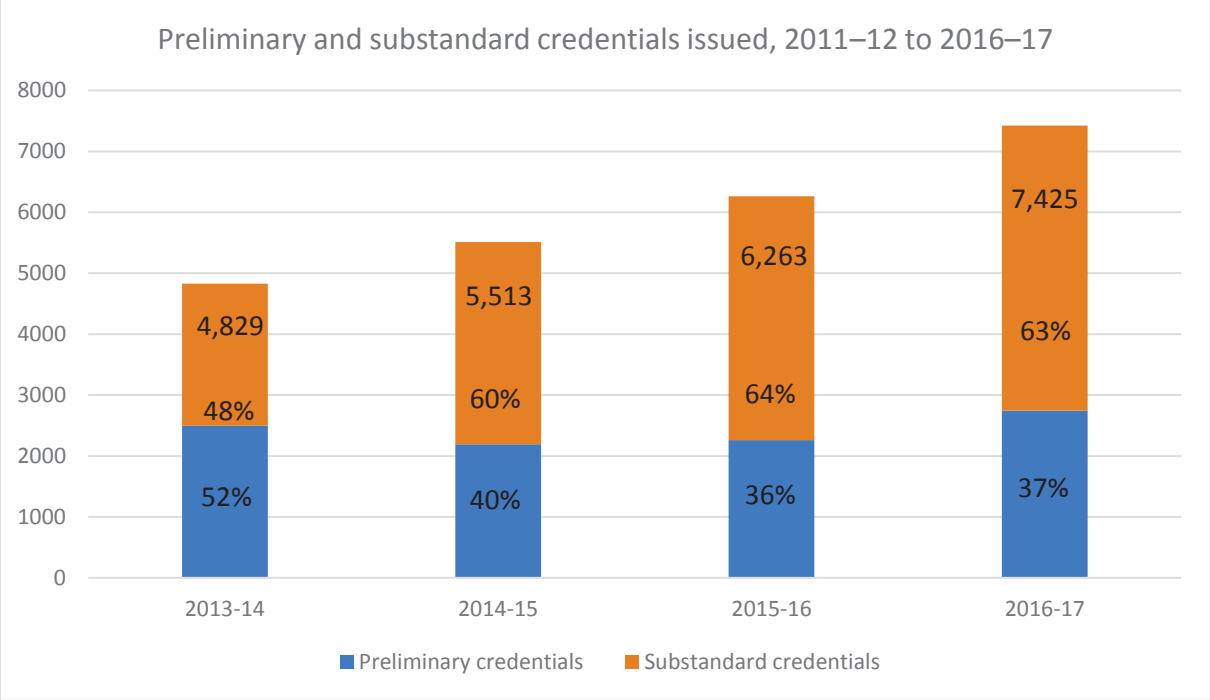
About two thirds of entering California-prepared special education teachers are on substandard credentials (see Figure 9). In total, 4,500 substandard special education/education specialist credentials were issued in 2016–17, representing the largest total in the last decade. Of these substandard credentials, most (2,500) were emergency-style permits granted to individuals without teacher preparation or subject-matter competence.

Figure 8: Trends in Special Education Teacher Supply



Source: Data provided by the California Commission on Teacher Credentialing through a special request.

Figure 9: More Total Credentials and More Underprepared Teachers in Special Education

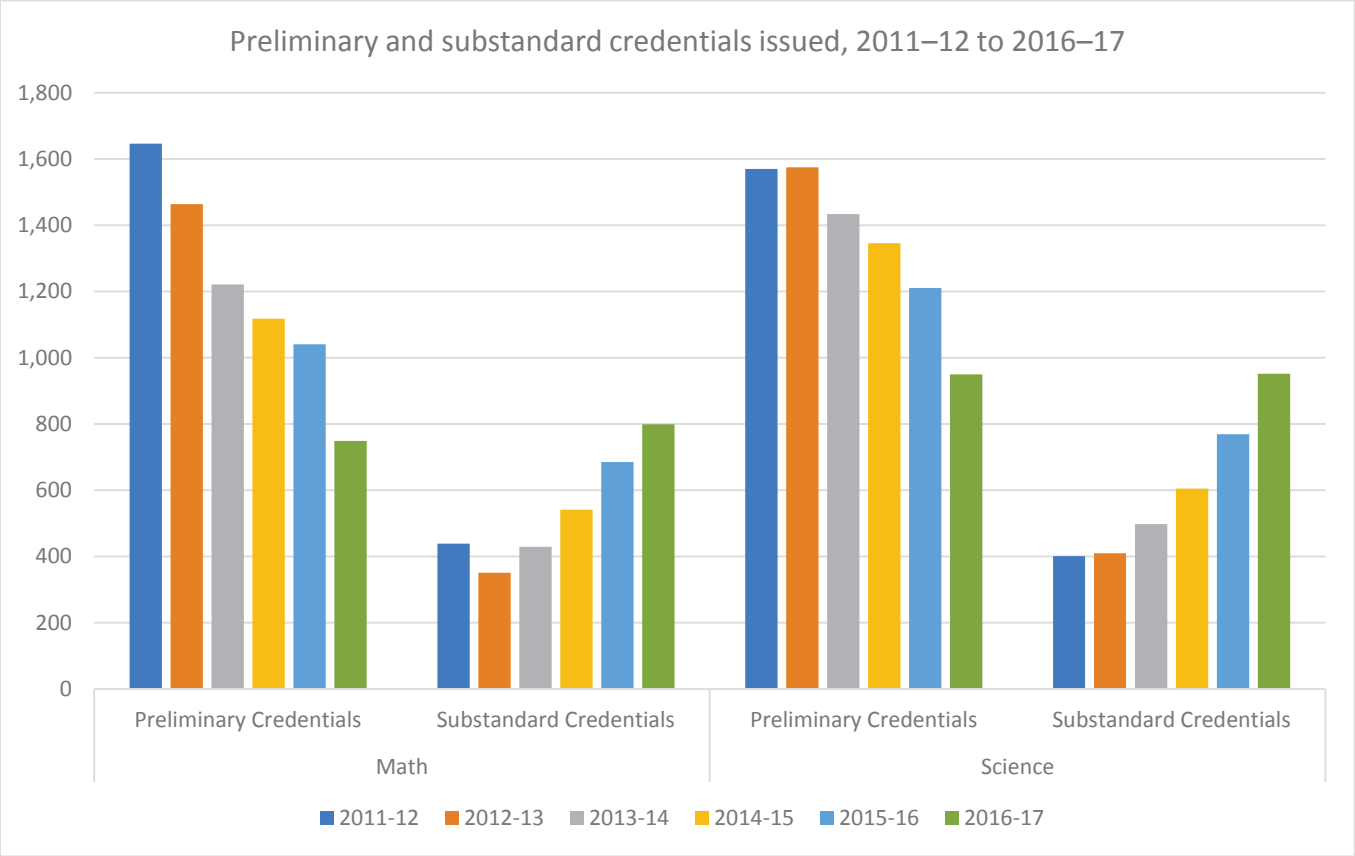


Note: Credential data exclude out-of-state credentials.
Source: Data provided by the California Commission on Teacher Credentialing through a special request.

Teacher shortages also are severe in mathematics and science. In math, the number of new fully prepared teacher candidates holding preliminary credentials has decreased by 50% in 6 years, while the number holding substandard credentials increased by more than 80% in the

same time period (see Figure 10). Similar patterns exist in science with decreasing preliminary credentials and increasing substandard credentials. Substandard science credentials also are being issued at an increasing rate. About 950 were issued in 2016–17, which is more than double the number issued in 2011–12.

Figure 10: Trends in Mathematics and Science Teacher Supply

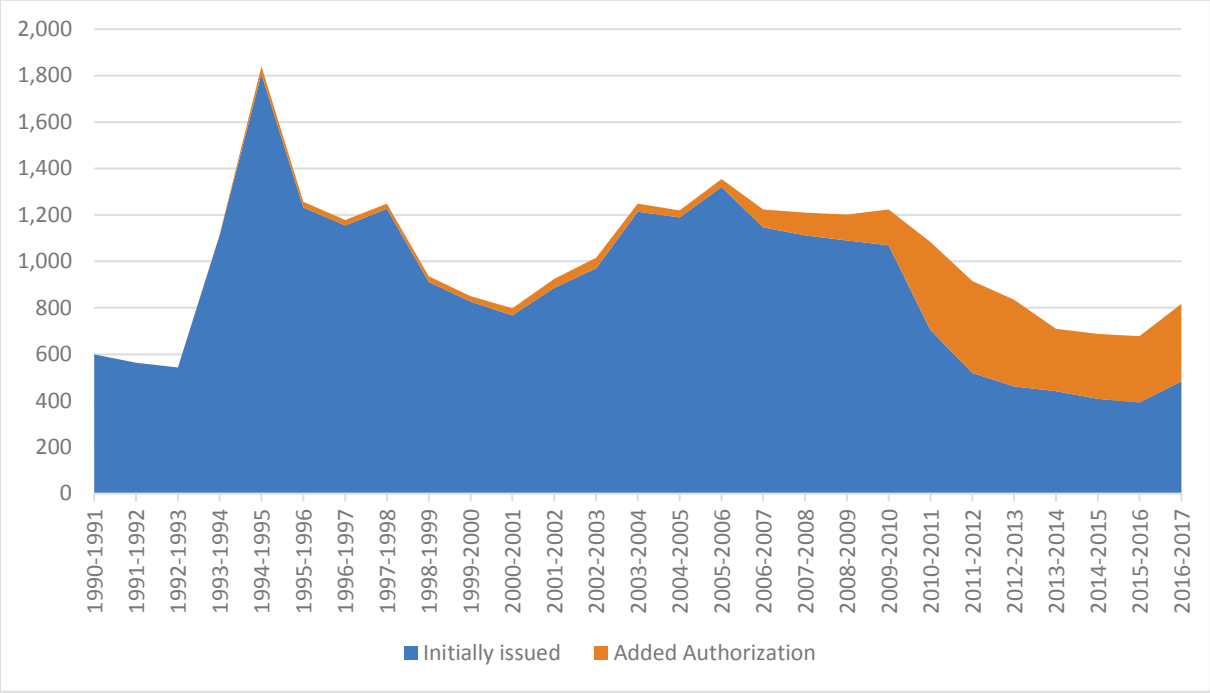


Note: Credential data exclude out-of-state credentials.
Source: Data provided by the California Commission on Teacher Credentialing through a special request.

The passage of Proposition 58 reinstating bilingual education has triggered additional shortages of bilingual teachers. Proposition 58 amends and removes key components of Proposition 227, which, when passed in 1998, severely limited the extent to which schools could offer bilingual education. With 1.4 million English learners (ELs) in California, about one out of every five students in the state is an EL.[23] Before the passage of Proposition 227, roughly 30% of ELs were served by bilingual programs. A decade later, the proportion of ELs served by bilingual programs decreased to 5%.[24] As a result, the number of bilingual teacher preparation programs was greatly reduced across the state. Currently, only 30 preparation institutions in California offer bilingual authorization training programs, compared to more than 80 that grant secondary and elementary teaching certifications.[25]

At its peak in 1994–95, California granted more than 1,800 bilingual authorizations (see Figure 11). Even after the passage of Proposition 227, California issued more than 1,200 bilingual authorizations a year between 2003–04 and 2009–10. Since 2010, new bilingual authorizations have declined steadily, with fewer than 700 teachers authorized in 2015–16. In 2016–17, there was a slight increase in the number of authorized bilingual teachers to just over 800. This is a positive sign, but still not enough to meet increasing demand. For example, in the fall 2017 survey of California principals, close to 50% of schools reported looking to hire bilingual teachers for 2017–18 school year. However, roughly 90% of these schools reported hiring challenges. In fact, more than half of all schools looking for Chinese bilingual teachers and close to one third looking for Spanish bilingual teachers reported a substantial challenge.

Figure 11: Bilingual Authorizations Issued 1990–91 to 2016–17

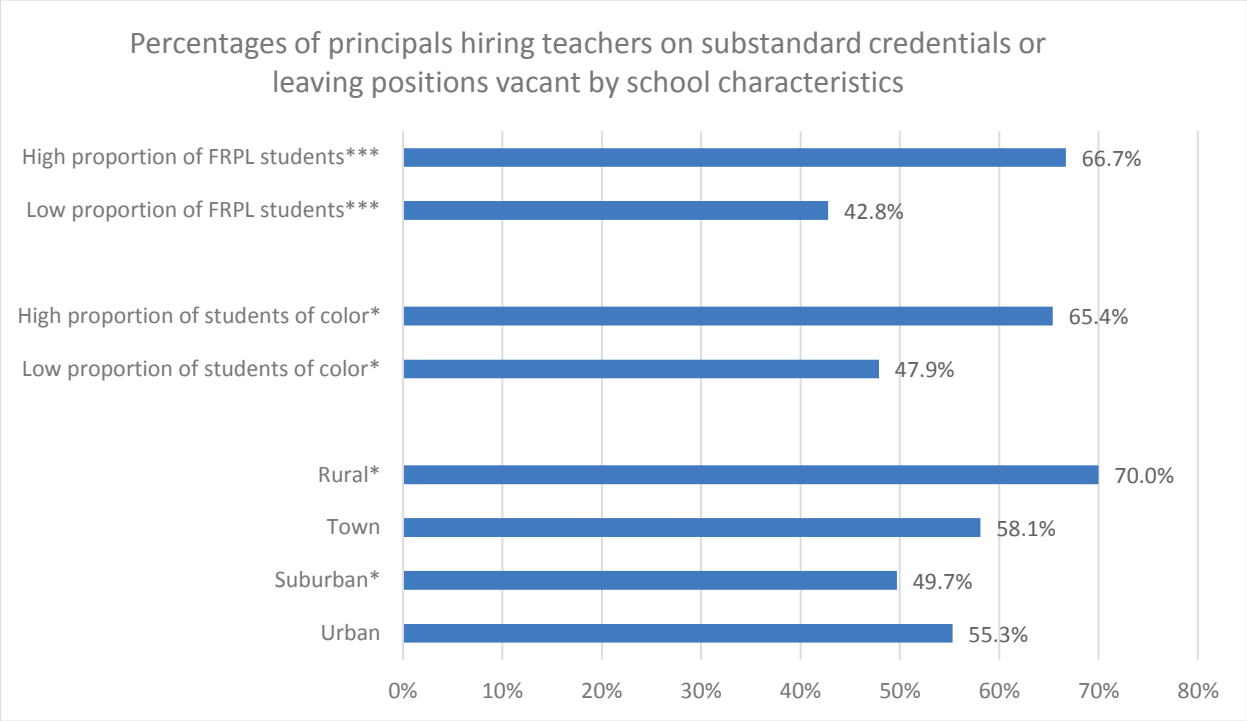


Note: Initially issued bilingual authorizations are those issued on a new teaching credential. Added authorizations are those issued on an existing credential. Source: Data provided by the California Commission on Teacher Credentialing through a special request.

Shortages vary by location and school characteristics. When there are not enough teachers to go around, it is often the schools serving the most vulnerable populations that are left with the greatest challenges. In the fall 2017 GDTF survey of California principals, 55% reported hiring teachers on substandard credentials or leaving positions vacant. In addition to hiring teachers on substandard credentials, 13% of principals reported canceling courses or expanding class sizes to deal with shortages. In schools that hired teachers on substandard credentials, on average, more than half their hires were underprepared teachers. The fact that a larger proportion of districts than schools reported these hiring patterns suggests that, within districts, only certain schools experience shortages. The fact that, among these schools, most new hires were underprepared suggests that the shortages in these places are quite severe.

Two-thirds of principals serving schools with high proportions (top quartile) of students of color and students from low-income families left positions vacant or hired teachers on substandard credentials while fewer than half of their peers in schools in the bottom quartile of low-income or minority students did so (48% and 43%, respectively) (see Figure 12).[26] Districts also reported shortages in schools serving ELs. According to survey data, of districts serving the most ELs, 83% reported having shortages, compared to 64% of districts with the fewest ELs.[27]

Figure 12: Shortages Disproportionately Impact Schools Serving Historically Disadvantaged Students



Note: Statistical differences denoted by: *** p<0.01, ** p<0.05, * p<0.1; Low proportion represents schools in the bottom quartile and high proportion represents schools in the top quartile. FRPL is the free and reduced-price lunch program. Source: Learning Policy Institute analysis of GDTFII 2018 Principal Survey conducted by RAND.

According to California's 2016 State Plan to Ensure Equitable Access to Excellent Educators, teachers in the state's high-minority schools are nearly three times as likely to be teaching on an emergency-style permit than teachers in a low-minority school. In high-poverty schools, such permits are twice as common as in low-poverty schools.[28]

Teacher shortages vary by location. For example, as the 2017–18 school year opened, Oakland Unified School District had 186, or 7%, of its teachers on emergency-style permits, while neighboring Berkeley had only five such teachers, or fewer than 1%. Principals in rural schools were most likely to report shortages, followed by those in small town and urban areas (see Figure 12). However, high-poverty urban schools have shortage levels at least as severe as rural districts.

Teacher shortages vary for a variety of reasons. Local differences in teacher salaries can contribute to the variability in teacher labor markets. Salaries can affect the attractiveness of

teaching jobs in ways that impact both recruitment and retention.[29] Working conditions, such as administrative supports and the amount of collaboration, have a strong effect on teacher retention, which, in turn, affects shortages.[30] Personnel management strategies and human resources practices also can impact shortages as they affect the speed and timing of hiring, assignments of teachers, and availability of mentoring. How all these factors play out in local labor markets in part determines the variation in teacher shortages.

When teachers are scarce, districts compete for the teachers who are available. This can result in wealthier districts with more resources and more desirable working conditions poaching teachers from poorer districts. This is one reason shortages are particularly acute in high-poverty schools,[31] and why high-poverty districts in California are twice as likely to report teacher turnover as a reason why their district is facing shortages as low-poverty districts.[32]

Teacher shortages are widespread in California, with a majority of districts reporting challenges finding qualified candidates across a wide range of teaching fields. Still, shortages are not felt uniformly across the state. They are most severe in certain subject areas, and in schools serving higher proportions of students from low-income families, students of color, and ELs. Shortages also are more pronounced in urban and rural communities. In order to appropriately target policy action to most effectively mitigate shortages, we discuss the levers that impact the teacher labor market and potential root causes of shortages in the next section.

Root Causes of Teacher Shortages in California

Our framework for supply and demand defines a teacher shortage as an inadequate quantity of qualified individuals willing to offer their services in the fields and locations where there are jobs under prevailing wages and conditions. In order to respond effectively to teacher shortages, it is important to understand the factors driving these shortages and what can be done to shift teacher supply and demand to bring the teacher labor market to equilibrium.

Each year, school districts in California must adjust their staffing levels. In the aggregate, California must replace teachers who have left the profession or state, hire additional teachers to account for student enrollment increases, and adjust the size of the workforce depending on the collective pupil-teacher ratio. (If there are increases in total student enrollment or decreases in the pupil-teacher ratio, it means fewer teachers who left must be replaced.)

In times of shortage or economic hardship, districts cannot always hire their desired demand and must make do with their current labor market conditions. For example, in the Great Recession, actual demand for teachers dropped as budgets were cut, and schools could not afford to hire new teachers or even keep all the teachers they already had. In this case, actual demand dropped, but ideal demand did not. In an ideal sense, many districts would like, at a minimum, to maintain the number of teachers and return to the class sizes and course offerings they had in place before the recession. Thus, the actual number of teachers demanded is a negotiation between *ideal* demand, economic realities, and teacher supply.

On the supply side, teachers are either new entrants or re-entrants. In California, new entrants are a combination of teacher candidates coming directly from a California teacher

preparation program (Institutions of Higher Education and district pathways), teacher candidates who graduated from a California preparation program in the past, but who did not enter directly after finishing, or new teachers transferring from out-of-state positions or preparation programs. Teacher re-entrants are former teachers returning to the classroom after stepping out of the classroom for a time. In 2016–17, for example, re-entrants constituted about 27% of new hires.[33]

In order to understand what is contributing to widespread staffing difficulties across the state, we look to the available evidence to estimate the new teacher pipeline, the factors that compose demand, and the composition of new teacher hires. Using CDE data, we look at the statewide teacher labor market and the sources of supply and demand.

Figure 13 shows (1) the number of new preliminary credentials issued to California graduates and to entrants from out-of-state pathways; (2) the number of hires by source (e.g., new entrants, re-entrants, and teachers on substandard credentials (total supply));[34] and (3) the number of teachers demanded by source (e.g., attrition, enrollment changes, and changes in pupil-teacher ratios).[35] In recent years, student enrollment decreased in California, which is shown in the graph as a negative number below the X axis.

Figure 13 highlights two main points: First, the number of fully credentialed new teachers in California is far less than the number of new teacher hires demanded. Even with re-entrants, this mismatch results in a substantial shortfall illustrated by the number of substandard credentials necessary to fill teacher hires. For example, in 2016–17, there were about 16,500 total new teaching credentials, while districts hired more than 29,000 teachers.

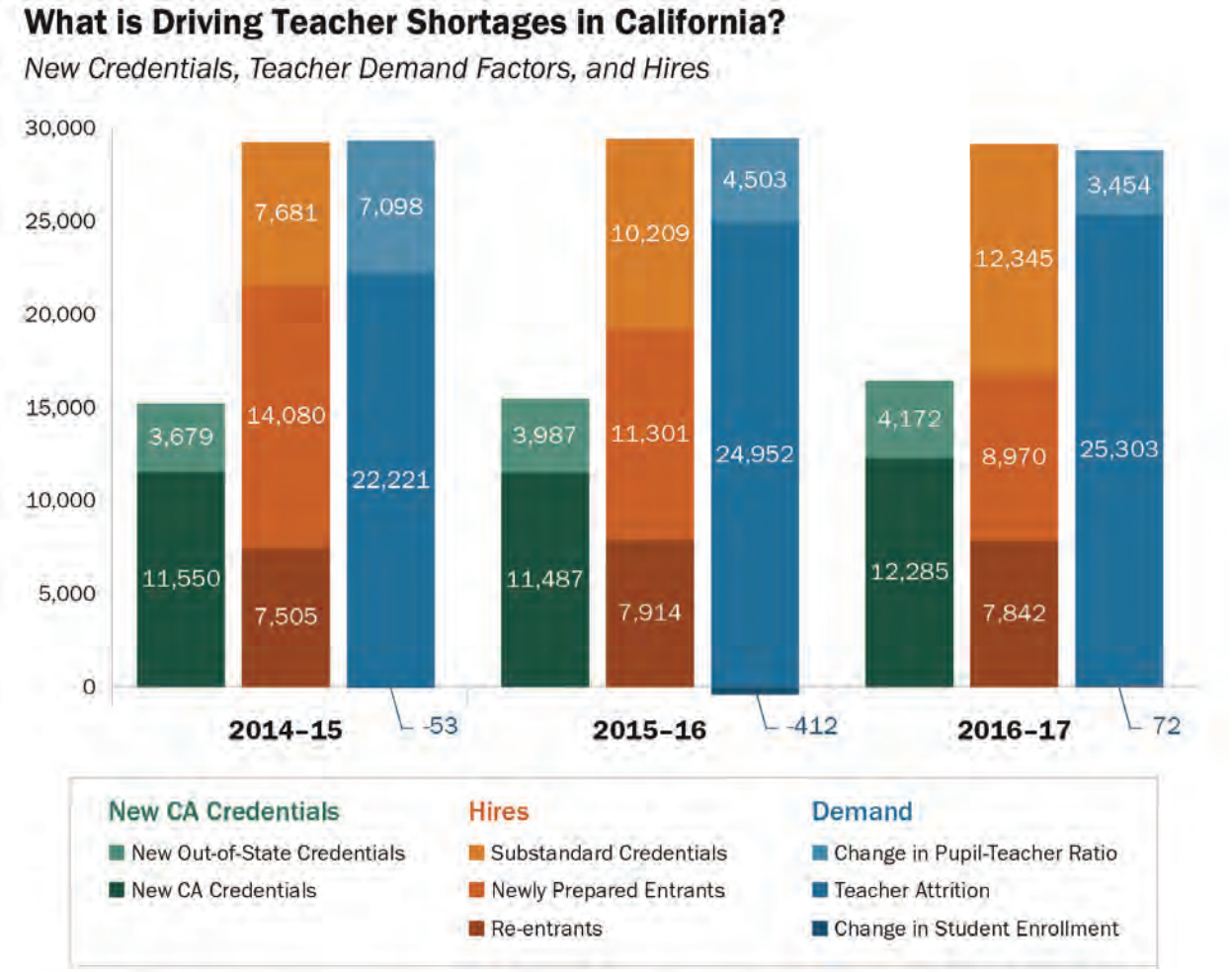
However, new credentials can overestimate the available new entrant supply because (1) some individuals earn more than one credential; (2) not all potential teachers choose to enter the classroom directly after earning a credential; and (3) some new credentials are granted to teachers who leave the state. In recent years, there has been intense recruiting from neighboring states, such as Nevada, and some new teachers leave the state. We estimate there were actually only 9,000 new entrants in 2016–17.

New entrants also include delayed entrants, or teachers who earned a credential but took time off before entering the classroom. This was particularly true when new teachers who could not get a job during the period of layoffs entered a year or two later. This is likely why in 2014–15, there were more new entrants than total new credentials issued in the same year.

Second, teacher demand is largely driven by attrition. In 2015–16 and 2016–17, attrition was responsible for roughly 86% and 88% of demand, respectively. In 2014–15, 24% of the demand was due to attrition. This pattern fits with general economic trends and the idea that schools and districts worked to reinstate classes and programs that were cut during the Recession.

Demand due to pupil-teacher ratio reduction has slowed slightly, but still represents a notable share. In 2015–16 and 2016–17, 15% and 12% of demand was due to pupil-teacher ratio reduction, respectively. Although student enrollment increases are not the driving factor in demand for the state as a whole, enrollment growth impacts some counties far more than others.

Figure 13:



Note: A negative number of teachers represents a decrease in the total number of teachers.
Source: California Staffing Data File provided to the Learning Policy Institute by the CDE through a special request; California Department of Education. Data available on DataQuest Web Page at http://data1.cde.ca.gov/dataquest/; California Commission on Teacher Credentialing through a special request.

Based on available evidence, California teacher shortages have been driven by three main factors:

1. A rapid decline in teacher preparation enrollments and thus new entrants,
2. New demand as districts seek to return to pre-Recession course offerings and class sizes, and
3. Teacher attrition.

We investigate each in turn below.

The Decline in Teacher Preparation Enrollments

As noted, over the past decade or so, teacher preparation enrollments in California have declined by more than 70%. Program completers have decreased in step with enrollments and the number of new preliminary credentials issued remains at recent lows. According to the fall

2016 California School Boards Association (CSBA) survey, nearly 80% of districts that reported having a teacher shortage cited the shrinking supply of new teachers as the reason for shortages.[36] The 3,500–4,000 new credentials issued to out-of-state teachers and former teachers re-entering the workforce are not enough to close the gap. The rapid and sustained increase in substandard credentials indicates supply is inadequate to meet demand. Understanding the factors that have contributed to this sharp decline in supply is critical if policymakers are to craft an effective response.

Diminished interest in teaching. Many researchers and practitioners point to the large number of Recession-era layoffs as a major cause of the much-diminished interest in the teaching profession, noting that young people were discouraged from entering a field in which there were few jobs and little job security. As the San Diego school system's director of human resources noted:

For several years, there was no incentive to go into teaching and as a result, the pipeline for new teachers is smaller. Now, we have to do more than just recruit teachers. We have to let people know teaching is a viable career.[37]

During the years of layoffs, California law required that notifications be delivered to teachers in danger of being laid off by March 15th of each year. Between March 2008 and March 2012, the California Teachers Association reported that roughly 100,000 California teachers received such "pink slips."[38] Although a significant percentage of these teachers ultimately kept their jobs in many of these years, the layoffs caused others to leave the profession, and the annual flurry of news articles announcing these events left a mark on the public psyche, including the perceptions of individuals who might consider teaching as a profession. As an Orange County Register headline noted in March 2015, "March used to be the month we dreaded."[39]

Teacher salaries were frozen and working conditions suffered during the era of cutbacks, as resource limitations led to increased class sizes, less availability of materials, and fewer instructional supports. In addition, some observers suggest that the teaching profession has also become less attractive because it has been at the center of intense policy debates and legal battles over such issues as teacher evaluation and tenure.[40]

The impact of these various factors can be seen in the results of an annual survey of high school students taking the ACT college entrance exam, which found that the number of high school students interested in becoming educators dropped by more than 16% between 2010 and 2014.[41] Only 5% of high school students taking the college admissions test say they are interested in teaching as a career. This number could expand if teaching becomes a more attractive career, but it also could dwindle further as candidates encounter the standards for entry that have been put in place in most states and explore other career options available to them.

Another significant obstacle to entry into the teaching profession is cost of teacher preparation. More than two thirds of individuals entering the field of education borrow money to pay for their higher education, resulting in an average debt of about $20,000 for those with a bachelor's degree and more than twice that for those with a master's degree.[42] While research

demonstrates that a teacher's level of preparation is associated with their effectiveness as well as with their likelihood of remaining in the profession,[43] the cost of preparation is increasingly difficult for candidates to afford. Research also suggests that college students' choice of career is affected by the debt they incur and salaries they can expect to earn.[44]

Teacher education program capacity. Much of the decline in teacher education enrollments in California has occurred within the state university system, which typically prepares nearly 60% of teacher education graduates each year and is the most productive sector for California teaching candidates. UC and CSU completion rates are much higher than those of some very large private institutions, which enroll many part-time students who graduate more slowly and at lower rates. In 2015–16, for example, the UC and CSU systems served 43% of enrollees in teacher education, but graduated 57% of all completers who received credentials.[45] In the fall 2017 survey of California principals, 78% said the CSU system and 57% said the UC system was an important source of teachers to their school. No other source of teachers was reported as important by more than 40% of principals surveyed.[46]

***Teacher education program types*.** The large majority of teacher education programs in California are post-baccalaureate credentialing programs that typically take 9 to 12 months to complete for full-time enrollees. Internships that prepare teachers while they are employed often take 24 months to complete. These are offered by both IHEs, which offer the largest share, and local education agencies (LEAs) (districts or counties).

A relatively small number of undergraduate programs were created under an earlier CTC-developed exception to the Ryan Act, which required post-baccalaureate teacher education in 1970. These so-called "blended" programs of undergraduate teacher education are joined by 41 new programs launched in response to a $10 million legislative allocation in 2016 to expand undergraduate programs, especially in shortage fields. These new undergraduate programs are expected to enroll students beginning in fall 2018. Nearly one third of the new programs will prepare candidates in mathematics or science; nearly one quarter will prepare candidates in special education; and one fifth will prepare candidates for a bilingual authorization.[47]

***Teacher education program capacity*.** While there has been some small increase in teacher preparation program enrollments, that increase appears to have stagnated in the last 2 years in the CSU and UC systems. In addition, a question has emerged as to whether low enrollments are, in all cases, due to a dearth of candidates, or if there is, in part, insufficient program capacity.

To understand more about the teacher pipeline, LPI partnered with the CTC to administer a survey to all institutions approved by the CTC to sponsor teacher education. As shown in Table 2, of the 88 institutions preparing teachers, 75 (85%) responded to the survey.

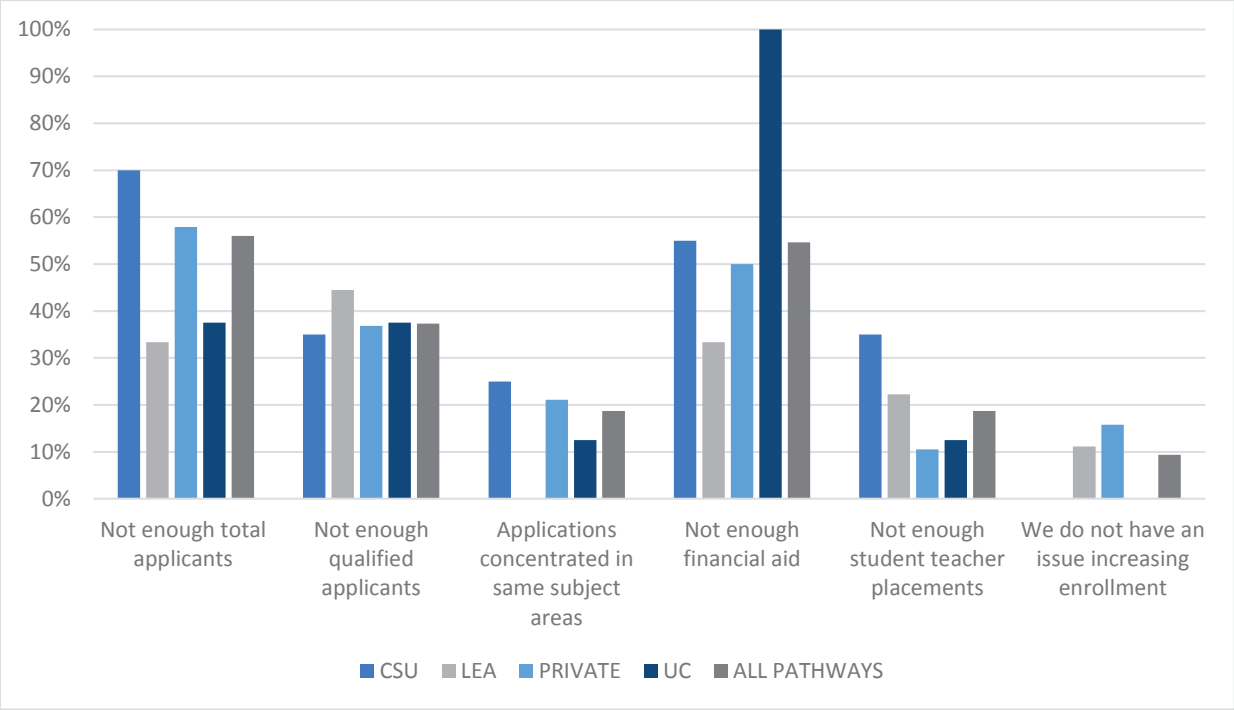
Table 2. Respondents to the Teacher Education Program Capacity Survey

	Sponsoring Teacher Preparation	Institutions Responding to the Survey	Percent of Institutions Responding
California State University (CSU)	23	20	87%
Private or Independent Colleges and Universities	47	38	81%
University of California (UC)	8	8	100%
Local Education Agencies (LEAs)	10	9	90%

Source: Data provided by the California Commission on Teacher Credentialing through a special request.

One common explanation for low enrollment in teacher education programs is that applications are concentrated in popular subjects, such as English and social studies, while shortage areas such as mathematics and science go unfilled. Although some institutions experience this phenomenon, the majority of programs do not identify this as a major obstacle. The top problem cited by institutions was inadequate numbers of applicants (56%), and inadequate financial aid was close behind (55%) (see Figure 14). Lack of financial aid was cited by more than half of all programs and by 100% of reporting UC campuses. In addition, more than one third of teacher preparation programs emphasized that a lack of *qualified* applicants is a major obstacle to boosting enrollments. Very few institutions responded they did not have an issue increasing enrollments.

Figure 14: Obstacles to Increasing Teacher Preparation Enrollments by Preparation Type



Source: Data provided by the California Commission on Teacher Credentialing and analyzed by Learning Policy Institute.

The survey also asked for estimates of the number of available slots, applications, and acceptances in each subject area. The way institutions interpreted and reported these estimates varied significantly, leading to imperfect data with missing values. For that reason, the following results should be interpreted with caution.

Table 3. Estimated Teacher Education Slots, Applications, and Acceptances, 2017–18

	California State University (CSU)			Private			University of California (UC)			Total		
Subject Area	Slots	Apps	Accept	Slots	Apps	Accept	Slots	Apps	Accept	Slots	Apps	Accept
Mathematics	488	432	281	1717	842	440	64	185	107	2269	1459	828
Science	608	417	285	1655	579	324	87	211	126	2350	1207	735
Special Education	1747	904	703	884	590	341	50	80	46	2681	1574	1090

Note: Slots = estimated number of available slots for 2017–18; Apps = number of applications received for 2017–18, Accept = number of individuals accepted for 2017–18. Source: Data provided by the California Commission on Teacher Credentialing through a special request.

In the CSU system, individual programs generally reported more slots available than applications received. This was particularly true in special education, where even if every applicant was accepted and attended, the system still would be at just over half of its possible capacity. As Table 3 shows, only a portion of applications was accepted, and we can assume that, even after being accepted, not all students end up attending. In the UC system, programs tended to receive more applications than slots available. Although the story varies across preparation segment, on the whole, there appears to be additional capacity to accommodate more students. However, as noted below, these data mask some challenges that are not readily apparent in the numbers by themselves.

Program terminations and cutbacks. Even if there were enough capacity to accommodate the current number of applicants, program capacity has declined since a decade ago when California was enrolling many more prospective teachers. In special education—an extreme shortage area—four programs were eliminated outright (two in "Moderate to Severe Disabilities" and two in Early Childhood Special Education), and nearly thirty were put on a moratorium status or reduced in size since 2007 (see Table 4). This is a natural response to both state budget cuts in higher education and the reduced number of applicants to teacher education, but it signals the need to rebuild capacity.

Table 4. Special Education Programs Cut Back Since 2007

	California State University (CSU)	Private	University of California (UC)	Total
Mild to Moderate Disabilities (MM)	5	10	1	16
Moderate to Severe Disabilities (MS)	5	2	1	8
Early Childhood Special Education (ECSE)	2	3	—	5
Visual Impairments (VI)	—	—	—	—
Deaf and Hard of Hearing (DHH)	—	—	—	—
Physical and Other Health Impairments (PHI)	—	—	—	—
Language and Academic Development (LAD)	—	—	—	—

Source: Data provided by the California Commission on Teacher Credentialing through a special request.

Limited enrollment resources. In our research, we also learned that the numbers of slots enumerated by CSU campuses are in part theoretical. Although the programs might be able to grow to those levels, on an annual basis, the amount of funding allocated to teacher education slots within each university is often constrained by CSU practices that typically determine annual slots based on the size of enrollments in the previous year or two. Because campuses experienced low enrollment in response to the tight Recession-era labor market, they no longer have sufficient enrollment funding to admit more candidates despite the current demand. In

this sense, CSU teacher education programs are caught in challenging position. Even as applications increase, a number of programs have had to turn away interested applicants because they did not have enrollment allocations sufficient to cover all of the students they would like to admit. This enrollment funding deficit may in turn dampen demand, because word gets out that campuses are not accepting candidates, even though k–12 schools are struggling to find teachers.

A disincentive to universities increasing teacher education slots is that the cost of providing quality teacher preparation—which involves management of clinical placements and supervision —is larger than that of many liberal arts majors, so the system can admit more students at lower cost in other programs. We learned that the increases in enrollments at some campuses were due to individual deans making strong arguments to provosts. To change this, the legislature would need to allocate funds more directly to teacher education within the UC and CSU systems, and/or the university's practices for allocating funds to programs would need to change within those systems.

***Qualifications requirements*.** Another interesting pattern emerges from these data. In mathematics and science, only about 55–60% of applicants were accepted, and in special education, only 69% of applicants were accepted. Since programs seem to have more slots than applicants, and they complain of shortages of qualified applicants, there appears to be an issue of teacher qualifications. To increase enrollment, it is important not only to have more applicants applying to teacher education program, as well as more who are qualified.

The CTC has extensive requirements for teacher education entry that may account, in substantial part, for these trends. To be eligible for student teaching or an internship, candidates must pass at least two hurdles often required by programs for admission:

1. The California Basic Educational Skills Test (CBEST) or a high enough score on certain other tests;[48]
2. Subject-matter qualifications that may be met by completing a specified subject-matter program of study but are typically met by passing the California Subject Examination for Teachers (CSET)

Because the rules for "highly-qualified teachers" under No Child Left Behind until recently required elementary (i.e., multiple subjects) teachers to pass a content-matter test rather than complete a program of study, as was true before 2002, and because the CTC-approved programs of study for secondary teachers do not map well onto majors in most universities, most elementary and secondary candidates completed subject-matter qualifications by taking the CSET. This pattern is likely to change, since the CTC recently re-authorized subject-matter programs of study for elementary (multiple subjects) candidates. As shown in Tables 5 and 6, both sets of examinations have relatively high fail rates. The fail rates are extremely high in fields such as math and science, in which even individuals with majors in these fields have difficulty passing the tests.

Table 5. CBEST First-Time and Cumulative Passing Rates, 2012–2017

Testing Year			First-Time Passing Rate		Cumulative Passing Rate	
	N Completed	N Passed	% Passed	N Completed	N Passed	% Passed
2012–17	163,669	112,377	68.7	163,669	137,670	84.1
2016–17	37,673	25,175	66.8	37,673	28,691	76.2
2015–16	36,942	25,056	67.8	36,942	31,045	84.0
2014–15	34,229	23,476	68.6	34,229	29,524	86.3
2013–14	29,130	20,555	70.6	29,130	25,703	88.2
2012–13	25,695	18,115	70.5	25,695	22,707	88.4

Source: California Commission on Teacher Credentialing (2018). Annual report on passing rates of Commission-approved examinations from 2012–13 to 2016–17. Sacramento, CA: Author.

Table 6. CSET Annual and Cumulative Passing Rates, 2003–2017

CSET Examination	Annual Passing Rate (2016–17)			Cumulative Passing Rate (2003–2017)		
	# Attempted	# Passed	% Passed	# Attempted	# Passed	% Passed
All Exams	17,573	12,021	68.4	374,375	302,384	80.8
Multiple Subjects (2003)				157,532	143,992	91.4
Multiple Subjects Updated (2014)	8,838	6,379	72.2	28,702	23,210	80.9
Writing	436	351	80.5	10,231	8,667	84.7
Single-Subject Exams						
Agriculture	20	3	15.0	239	126	52.7
Art	260	186	71.5	2,829	2,393	84.6
Business	31	8	25.8	737	410	55.6
English (2003)				26,164	20,894	79.9
English Updated (2014)	1,574	1,146	72.8	4,669	3,739	80.1
English Language Development	22	1	4.5	63	5	7.9
Health Science	150	77	51.3	3,566	2,682	75.2
Home Economics	29	15	51.7	542	388	71.6
Industrial Technology Education	102	82	80.4	813	690	84.9
Preliminary Educational Technology	158	155	98.1	2,973	2,877	96.8
Mathematics (2003)				10,103	6,505	64.4
Mathematics Updated (2015)	374	234	62.6	1,122	728	64.9
Music	128	109	85.2	1,567	1,441	92.0
Physical Education	636	295	46.4	7,698	5,499	71.4
Biological Sciences	739	500	67.7	13,595	10,750	79.1
Chemistry	239	179	74.9	5,604	4,471	79.8
Geosciences	107	69	64.5	4,388	3,384	77.1
Physics	128	66	51.6	3,339	2,134	63.9
Social Science	1,279	872	68.2	26,243	21,082	80.3

Source: California Commission on Teacher Credentialing (2018). Annual report on passing rates of Commission-approved examinations from 2012–13 to 2016–17. Sacramento, CA: Author.

Only about 65–70% of candidates pass the CBEST on the first attempt, and the cumulative pass rate over the period of 2012–16 was 85%. A declining quality of candidates as shortages grow more severe may be signaled by the fact that the cumulative pass rate in the most recent year, 2016–17, was only 76%.

The CSET is taken by the smaller number of candidates who have already passed the CBEST. About 80% of all candidates pass the CSET, but cumulative pass rates for 2003–17 were only 65% for mathematics candidates and only 64% for physics candidates. The new English language development test—aimed at teachers of new ELs—currently has a pass rate of only 8%. The pass rates on these and other tests were lower in 2016–17 than in previous years.

Although the CTC recently voted to re-establish subject-matter programs as an alternative to the CSET for multiple-subjects teachers, now that the NCLB requirements are ended, and is exploring the use of majors and perhaps a form of transcript review as an alternative to CSET passage for single-subject candidates, for now, the CSET stands as a significant barrier to enrollment in many teacher education programs, especially in high-need fields such as mathematics and science. (In some cases, candidates take the CSET multiple times throughout the program and still may still be struggling to pass it when they have graduated, and thus must teach on an emergency-style permit rather than a preliminary credential.)

In addition to the CBEST and the CSET tests, there are two other assessments most candidates must pass to earn a credential:

1. Reading Instruction Competence Assessment (RICA) is required for all multiple subjects and education specialist candidates.
2. Teacher Performance Assessment (TPA)—an assessment of applied teaching skills—is required for candidates in most teaching fields.[49]

About two thirds of candidates pass the RICA on the first try; between 2012–17 the cumulative pass rate was 91%.[50] Since the capstone TPA is typically taken only by candidates who have already passed the other two or three sets of assessments required of them and have completed most of their teacher education training, the pass rates are higher: about 85% of candidates pass the TPA on the first attempt and about 90% eventually pass.

The pathway to becoming a teacher in California loses a significant share of candidates at each testing juncture: Overall, at least 40% of those who initially intend to teach are unable to move forward at some testing juncture, and in some fields, including mathematics and science, this includes well over half of those who initially intended to teach. Of these assessments, only the TPA has been shown to be related to teachers' effectiveness in the classroom.[51] Given that candidates also reported that the tests are a financial hurdle and a logistical challenge, there is no doubt that they have a noticeable impact on the pipeline for becoming a teacher in the state.

Teacher re-entrants. Using CDE teacher assignment data, we find roughly 27% of new hires in 2016–17 were re-entrants who had previously taught but did not teach in the preceding year[52] (see Table 7). Nationally, re-entrants constitute roughly one third to one half of the

teacher supply in a given year.[53] These trends are very much subject to labor market conditions and also can be affected by re-entry policies. California has fairly stringent re-entrance polices, often requiring teachers who left the classroom for an extended period of time to re-certify, pay fees, and sometimes take additional coursework before returning to the classroom.

Table 7. Estimated Re-entrants as a Percentage of New Hires in California

	2014–15	2015–16	2016–17
Of New Hires (n):	29,266	29,424	29,157
% Re-Entrants	26%	27%	27%
% New-Teachers	74%	73%	73%

Source: California Staffing Data File provided to the Learning Policy Institute by the California Department of Education through a special request.

The factors that influence re-entrants are similar to those that influence new entrants and those from out of state: the ease of entry and the attractiveness of salaries and teaching conditions. In theory, there is a reserve pool of teachers made up of a large group of former teachers who left teaching for a variety of reasons, but still hold a credential and are a potential source of supply. In California, some teachers who left the classroom re-enter, but few, at least recently, return to California classrooms more than 2 or 3 years after leaving (see Table 8).

Table 8. Length of Time to Re-entry

Length to return …	2009–10	2010–11	2011–12	2012–13	2013–14	2014–15
Total Leavers:	41,046	22,003	23,023	22,627	22,221	24,952
No Re-entry	53%	67%	69%	73%	76%	83%
After 1 year	31%	17%	18%	17%	18%	17%
After 2 years	8%	7%	7%	6%	5%	
After 3 years	4%	4%	4%	3%		
After 4 years	3%	3%	3%			
After 5 years	2%	2%				
After 6 years	1%					

Source: California Staffing Data File analyzed by the Learning Policy Institute, provided by the California Department of Education through a special request.

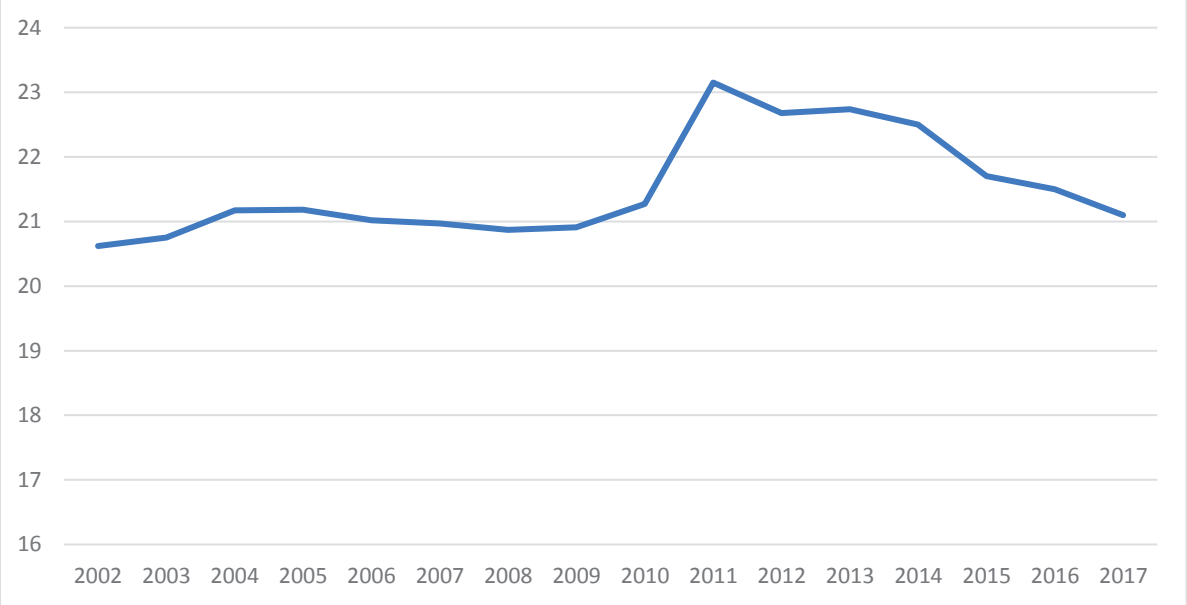
Increased and Sustained Demand

As districts develop their annual hiring projections, key considerations include student population growth, class size, program expansion or contraction (such as adding or eliminating courses or areas of study), and the number of expected retirements, along with other kinds of teacher attrition, ranging from medical leave and family moves to departures for other districts, states, or out of the profession entirely.

Pupil- teacher ratios. One of the strongest drivers of growing teacher demand, especially in the years of recovery following the Recession, is the effort to return class sizes and teacher loads to more manageable levels. California's pupil-teacher ratios have been the largest in the country for many years. [54] During the Recession, when school districts stopped hiring and laid off thousands of teachers, California's pupil-teacher ratios, already ranked the highest in the country, jumped even further. Whereas the national average is about 16:1, the California ratio reached a peak of 24:1 in 2011, according to nationally comparable measures (see Figure 15).[55] (Note that class sizes are always larger than pupil-teacher ratios.) During the Recession, many districts increased class sizes to 30 or more in elementary schools and 40 in some high schools. This pupil-teacher ratio increase was not a policy preference but a response to the economic reality. With new resources, districts are now seeking to increase the number of teachers.[56]

Since then, as funding returned to California schools the pupil-teacher ratios moved slowly toward pre-Recession levels. In the process, California expanded its workforce by more than 20,000 teachers, or 7%. In 2016–17, the state pupil-teacher ratio was roughly 21:1, which almost fully returns the state to 2007–08 levels (see Figure 15). This may mean that the rapid increase in hiring post-Recession could be slowing. However, California's pre-Recession pupil-teacher ratios were already the worst in the nation, so it is possible that California districts will continue to hire to become more comparable with national benchmarks.

Figure 15: California Pupil-Teacher Ratios 2001-02 to 2016–17



Source: California Department of Education, 2000–2016. Data available on DataQuest Web Page at http://data1.cde.ca.gov/dataquest/

Student enrollment. Another key factor that determines hiring needs and shortages is student enrollment. In California, student enrollment growth is not currently a major driving factor for shortages, but this varies by location. According to the California Department of Finance, k–12 student enrollment is projected to decrease slightly—by less than 1% by 2021–22

and by nearly 3% in the next decade—if birthrates, immigration, and migration do not shift unexpectedly. However, these projections vary by region. For example, in 12 counties, enrollment is expected to increase by more than 3% and in five counties more than 5% by 2021–22. Conversely, enrollment in nine counties is projected to decrease by more than 3% and in 2 counties more than 5% by 2021–22.[57]

The Role of Teacher Attrition

While teacher demand is driven by several factors, including growing student enrollment and pupil-teacher ratios, the lion's share of demand is driven by teacher attrition. In fact, in California, we estimate that attrition accounts for about 88% of annual demand, and drives many of the shortages we see today, particularly in high-need schools.[58]

Most of attrition is pre-retirement attrition caused by teachers leaving the profession early or in mid-career, usually due to dissatisfactions with their positions or with the profession. Nationally, less than one third of attrition is caused by retirements.[59] This suggests that if the level of pre-retirement attrition were reduced, the demand for teachers would decrease substantially, and that would help solve the teacher shortage. In fact, if California were able to cut its attrition rate in half, from around 8.5% to 4%, to be comparable to high-achieving countries and low turnover states (generally these are in the Northeast), demand would drop about 13,500 teachers and largely eliminate overall teacher shortages, potentially leaving only small regional and subject-specific shortages. Recruitment alone is not enough to solve shortages, since high rates of turnover quickly undo schools' efforts to bring in new hires.

Which teachers leave and why? Recently, about 8.5% of teachers in California appear to be leaving the profession (or the state) each year, and another 8% leave their current school to move to another (see Table 9). Between 2007–08 and 2011–12 California's teacher workforce contracted by 9%, leading to higher attrition than normal, which was especially pronounced in 2009–10 where the bulk of the layoffs occurred.

Whereas movers mostly changed schools within their current district during the Recession, in recent years, movers have been changing schools across districts to a greater extent than previously. In this section, we summarize what we know about teacher turnover in California, including which teachers turn over at higher rates, why teachers leave their schools or the profession, and the satisfaction level of California teachers, among other things. (For more on teacher turnover over time, see Appendix A.)

Table 9. Teacher Turnover over Time

	2009–10	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16
Leavers	13.85%	8.00%	8.12%	7.99%	7.78%	8.53%	8.52%
Movers	8.88%	9.19%	7.80%	7.85%	8.39%	8.26%	7.86%
Within district movers	7.61%	7.44	6.16	5.23%	5.19%	4.81%	4.39%
Between district movers	1.27%	1.75	1.64	2.62%	3.20%	3.45%	3.47%
Total Turnover	22.73%	17.19%	15.92%	15.84%	16.17%	16.79%	16.38%

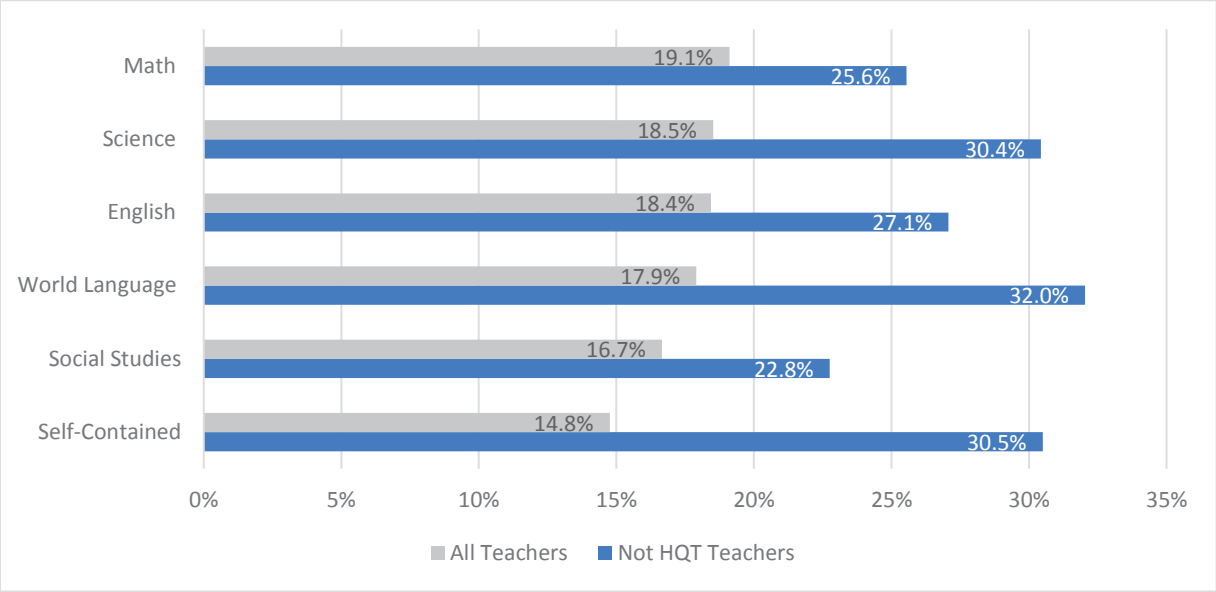
Source: California Staffing Data File, analyzed by the Learning Policy Institute, provided by the California Department of Education through a special request.

Which teachers turn over at higher rates? In California, teachers of mathematics, science, and English are more likely to leave their school or the profession than those in other fields (see Figure 16). Because some teaching specialties are not identified in the data file available to us, we were not able to calculate turnover rates for special education or teachers of English language development in traditional schools. Nationally, these teachers tend to turn over at higher rates than other fields as well.[60] However, we were able to calculate turnover for teachers working in special education schools: Between the 2015–16 and 2016–17 school years, 13.4% of teachers teaching in special education schools left the profession or state and another 7.3% moved between schools within California. Combined, more than one out of five teachers teaching in special education schools left their position, which was more than any other subject.

Similarly, according to the 2017 principals' survey conducted for GDTF, principals reported that teachers in the shortage areas of special education, mathematics, science, bilingual education, and world languages are the most difficult to retain (see Figure 17).

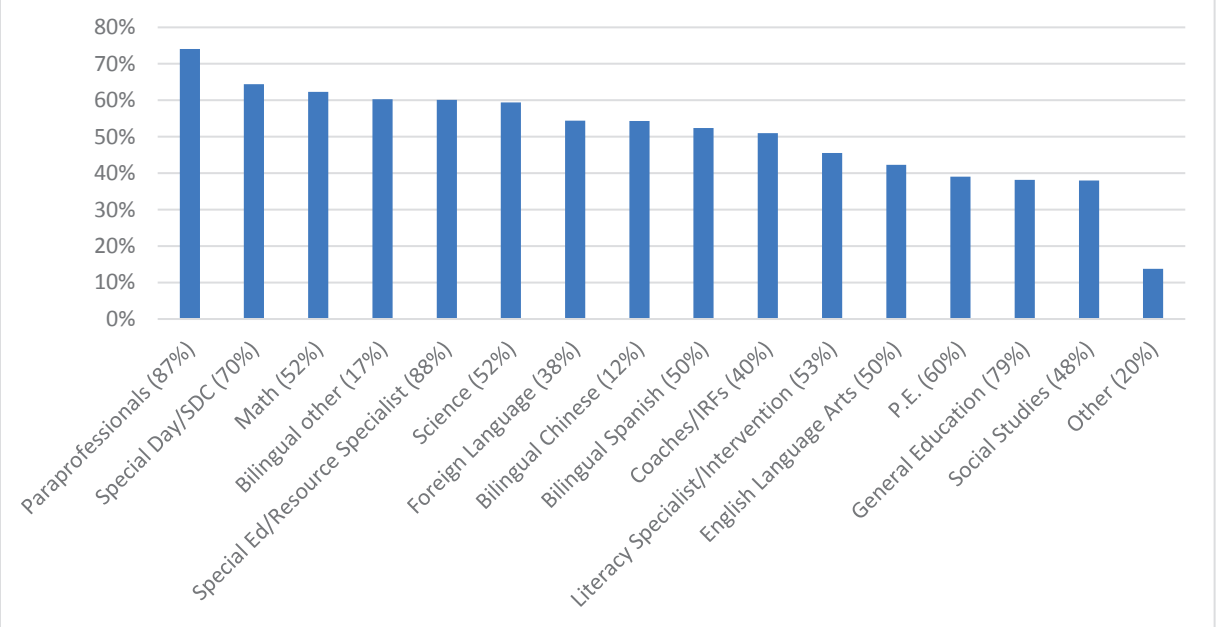
In addition, underprepared teachers are much more likely to leave: Teachers not designated as "highly qualified" under the federal law (in California, these are teachers on emergency-style credentials or those assigned out of field), depending on the subject area, are nearly twice as likely to turn over. This finding is similar to national findings that teachers who are the least well prepared are two to three times more likely to leave the profession than those who are fully prepared.[61]

Figure 16: Teacher Turnover by Subject and Highly Qualified Teacher (HQT) Status Between 2015–16 to 2016–17 School Years



Note: Self-contained classes include both elementary school classrooms and special education classrooms. Not HQTs, or not highly qualified teachers, are teachers who did not meet the designation of "highly qualified" under the former federal education law, No Child Left Behind. A highly qualified teacher in California is defined as a teacher who holds a bachelor's degree, a teaching or intern credential, and has demonstrated core academic subject-matter competence. In this analysis, "not highly qualified teachers" are teachers who lack an appropriate subject-matter credential for the courses they teach.
Source: California Staffing Data File analyzed by the Learning Policy Institute, provided by the California Department of Education through a special request.

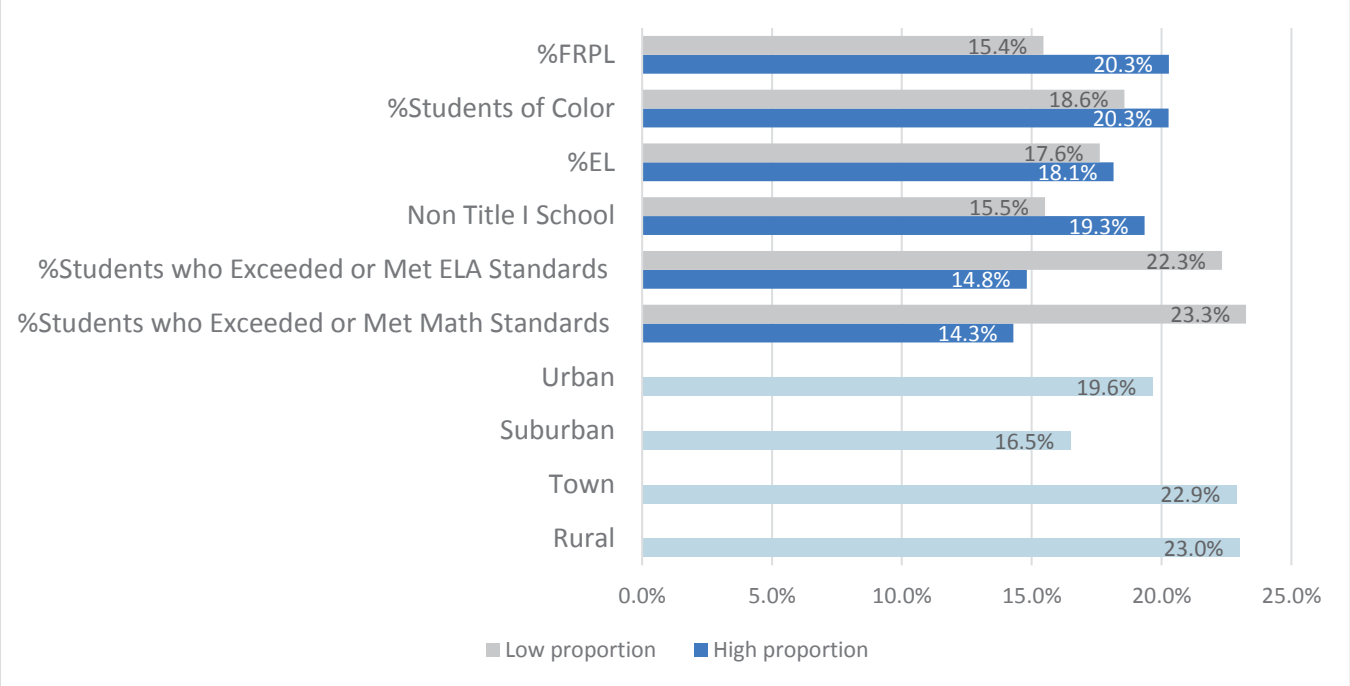
Figure 17: Percentage of schools reporting that teacher retention is a challenge (Percentage (%) of districts that have that teacher in a given subject area/position)



Source: Learning Policy Institute analysis of GDTFII 2018 Principal Survey conducted by RAND.

Turnover also varies by school characteristics, with higher rates in schools serving higher proportions of students from low-income families, in Title I schools, and those serving a large concentration of students of color (see Figure 18). High-achieving schools, as measured by the percentage of students who met or exceeded the California Assessment of Student Performance and Progress (CAASPP) standard, have turnover rates about 30% lower than low-achieving schools. Schools in rural and town areas have slightly higher turnover rates (23% and 22.9%, respectively) compared to schools in urban areas (19.6%) and much higher than schools in suburban areas (16.5%).

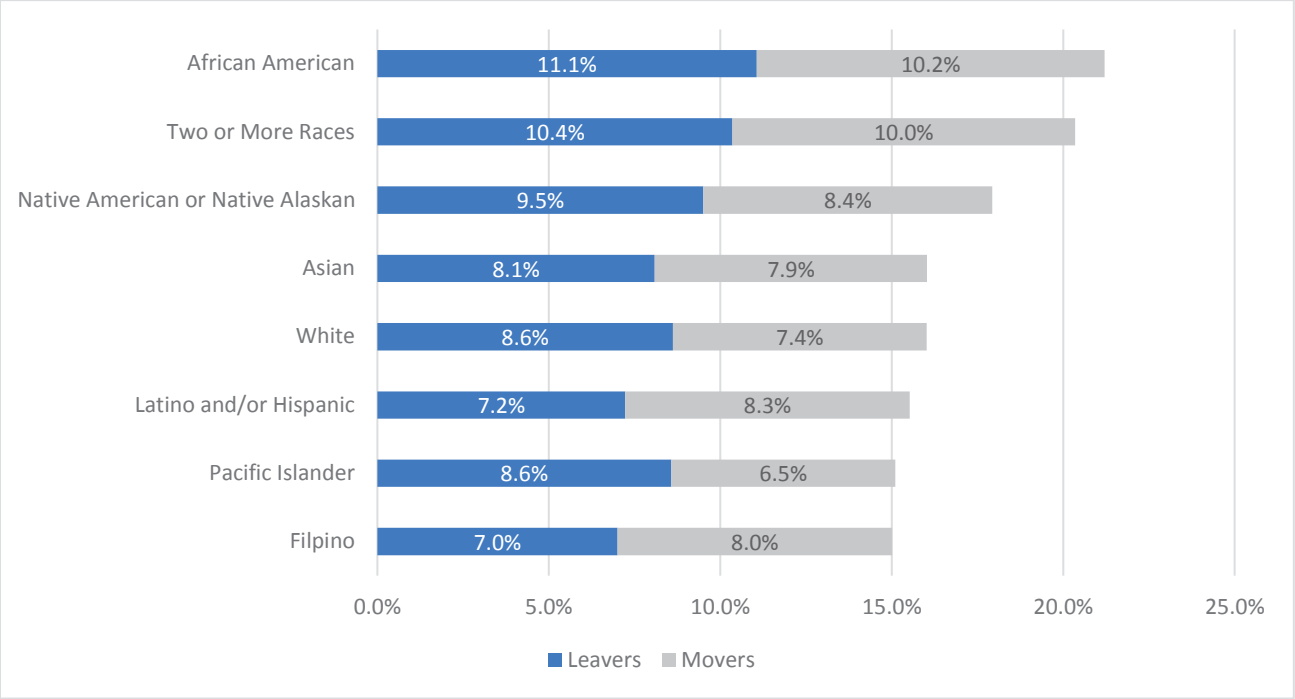
Figure 18: Teacher Turnover by School Characteristics Between the 2015–16 to 2016–17 School Years



Note: Student achievement data are from the 2016–17 CAASSP obtained from Ed-Data.org. Source: California Staffing Data File analyzed by the Learning Policy Institute, provided by the California Department of Education through a special request.

Teacher race/ethnicity also is associated with varying levels of turnover. For example, 21.2% of African American teachers and 20% of teachers who identify with two or more races left or moved schools in 2015–16, compared to only 16% of White teachers and about 15% of Latino and Filipino teachers (see Figure 19 and Appendix A).

Figure 19: Turnover by Teacher Race/Ethnicity Between the 2015–16 and 2016–17 School Years



Note: Race and ethnicity categories are those used in the CDE database.
Source: California Staffing Data File analyzed by the Learning Policy Institute, provided by the California Department of Education through a special request.

Why do teachers leave? Although there are no recent data on why California teachers leave their jobs, the federal Schools and Staffing Survey sheds light on reasons teachers leave their school and/or the profession nationally. The most frequently cited reasons in 2012–13 were a range of dissatisfactions noted by 55% of those who left the profession and 66% of those who left one school for another. The top-ranked concerns were testing and accountability pressures (listed by 25% of those who left the profession); lack of administrative support; dissatisfaction with the teaching career, including lack of opportunities for advancement; and dissatisfaction with working conditions, from input into decision making to opportunities for collaboration and professional learning. Personal and financial reasons also were cited, along with the desire to take another kind of job or to retire.

According to the teacher survey conducted for GDTF II, about 80 to 90% of California teachers in different settings are reasonably satisfied with their jobs (averaging 85%), with the highest satisfaction rates from teachers in low-poverty, low-minority schools, and those in rural areas (see Table 10). However, only about half are satisfied with the recognition they get from society, with the lowest rates from teachers in high-poverty, high-minority schools, and those in rural areas. White teachers and those with more than 10 years of experience are less satisfied with teachers' recognition from society than teachers of color and those with less experience.

Table 10. California Teacher Satisfaction by School and Teacher Characteristics

	How satisfied are you with your job?	How satisfied are you with recognition from society
	Percentage satisfied or very satisfied	
Overall	85%	51%
High-Poverty Schools	82%	44%
Low-Poverty Schools	90%	57%
High-Minority Schools	83%	47%
Low-Minority Schools	86%	61%
Urban Schools	85%	51%
Suburban Schools	84%	51%
Town Schools	81%	59%
Rural Schools	91%	41%
Non-White Teachers	84%	67%***
White Teachers	85%	46%***
> 10 Years of Experience	85%	43%***
10 Years of Experience or Less	85%	64%***

Note: Statistical differences within category denoted by matching symbols: *** p<0.01, ** p<0.05, * p<0.1
Source: Learning Policy Institute analysis of GDTFII 2018 Teacher Survey conducted by the RAND Corporation.

Similarly, while California teachers generally feel good about their performance (97%) and like working in their current schools (88%) and districts (85%), those working in high-poverty and high-minority schools feel less positively and are less likely to say they would become a teacher if they could do it all over again (see Tables 11 and 12).

In contrast, 69% of teachers say they are discouraged by the state of the teaching profession, with those in the most advantaged schools (low-minority, low-poverty, suburban, and white teachers) feeling most discouraged. Finally, a substantial minority of teachers in high-poverty (40%) and high-minority (38%) schools – and 47% of teachers of color – believe that "biases and stereotypes make it difficult for staff of particular backgrounds or identities to advance in my district." Teachers of color are disproportionately represented in high-poverty and high-minority schools, and they may see evidence of bias in advancement in their districts.

Table 11. California Teacher Reports by School Characteristics

Question	Percentage of Teachers Who Agree or Strongly Agree								
	Overall	High-Poverty	Low-Poverty	High-Minority	Low-Minority	Urban	Suburban	Town	Rural
If I could do it all over, I would definitely become a teacher.	81%	77%	84%	76%	83%	79%**	80%	84%	92%**
I am discouraged by the state of the teaching profession.	69%	65%	75%	57%***	80%***	61%**	76%**	72%	73%
I like being a teacher in my current district.	85%	83%	92%	80%	89%	84%	85%	96%	84%
I like working at my current school.	88%	83%**	97%**	77%***	97%***	89%	88%*	83%	96%*
I feel good about my performance as a teacher overall.	97%	99%	99%	98%	99%	97%*	97%**	98%	100%***
Biases and stereotypes make it difficult for staff of particular backgrounds or identities to advance in my district.	24%	40%**	20%**	38%**	17%**	29%***	22%***	6%***	14%

Note: Statistical differences from the mean within category are denoted by asterisks: *** p<0.01, ** p<0.05, *p<0.1 Source: Learning Policy Institute analysis of GDTFII 2018 Teacher Survey conducted by RAND.

Table 12. California Teacher Reports by Teacher Characteristics

Question	Percentage of Teachers Who Agree or Strongly Agree				
	Overall	Non-White Teachers	White Teachers	> 10 Years of Experience	10 years or less Experience
If I could do it all over, I would definitely become a teacher.	81%	78%	82%	80%	82%
I am discouraged by the state of the teaching profession.	69%	57%**	74%**	66%	74%
I like being a teacher in my current district.	85%	89%	83%	85%	85%
I like working at my current school.	88%	85%	89%	85%***	94%***
I feel good about my performance as a teacher overall.	97%	98%	97%	96%*	99%*
Biases and stereotypes make it difficult for staff of particular backgrounds or identities to advance in my district.	24%	46%***	15%***	22%	26%

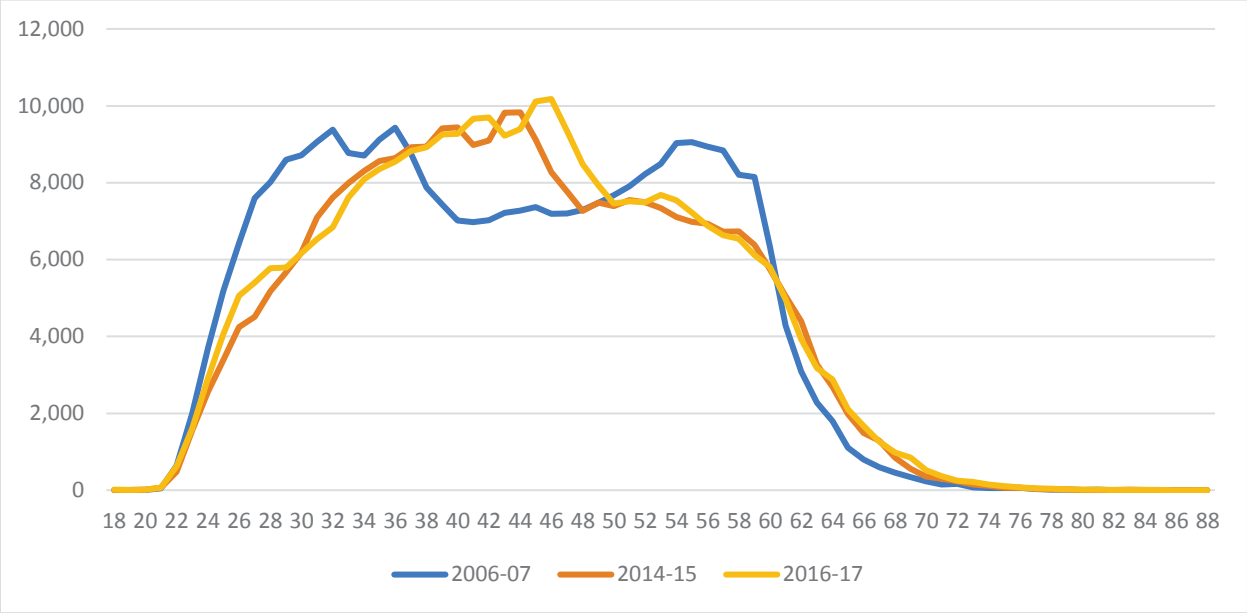
Note: Statistical differences within category denoted by matching symbols: *** p<0.01, ** p<0.05, * p<0.10
Source: Learning Policy Institute analysis of GDTFII 2018 Teacher Survey conducted by RAND.

These findings suggest that while California teachers are not generally dissatisfied with their immediate work in their schools and districts, those who work in more challenging contexts are less satisfied, and there are concerns across the profession about the status of the profession and the respect with which the teaching is held. This signals the long-term work needed to support teacher recruitment and retention.

Other factors associated with turnover. Nationally, teachers' reports of a lack of administrative support have a very strong relationship with teacher turnover. In a model controlling for other school and teacher factors, teachers who strongly disagreed that their administration is supportive were more than twice as likely to leave their school or teaching than teachers who strongly agreed their administration is supportive. Teachers who enter the classroom through alternative certification pathways—who have had less coursework and student teaching, on average, than teachers who are prepared through traditional programs—are more likely to leave their schools and the profession, even after controlling for their students, schools, and teaching conditions. Controlling for other factors, teachers in districts with higher salary schedules are significantly less likely to leave their schools than those in districts with lower salary schedules.[62]

***Retirement*.** Nationally, about one third of annual attrition is due to retirements, but there are very different patterns of retirement across and within states. As Figure 20 shows, California's teacher workforce age distribution has changed shape over the last decade to one with a more substantial mid- and late-career segment. Nearly 10% of teachers (9.8%) are over the age of 60 and can be expected to retire within the decade, most within the next 5 years. An additional 24% of teachers are over the age of 50 (see Table 13). Of these, one could expect at least half (12% of the total) to retire within the decade. Together, this amounts to more than 65,000 teachers who will likely need to be replaced over the course of the decade.

Figure 20. Age Distribution of California's Teaching Force



Source: Learning Policy Institute analysis of California Department of Education data from the California Staffing Data File, provided by request.

Table 13. Age Distribution of California's Teacher Workforce

Age	2006–07	2008–09	2010–11	2012–13	2014–15	2016–17
Under 30	42214	40823	28082	24372	27679	31342
	13.7	13.3	9.8	8.5	9.4	10.3%
30–39	87269	89535	84605	82071	81679	79153
	28.3	29.2	29.5	28.8	27.6	26.0%
40–49	72018	73020	76185	80790	87082	93302
	23.3	23.8	26.5	28.3	29.4	30.7%
50–59	84501	78368	73205	70778	70652	71088
	27.4	25.5	25.5	24.8	23.9	23.7%
60 and older	22009	24357	24854	27294	28706	29476
	7.1	7.9	8.7	9.6	9.7	9.8%
Total	308,011	306,103	286,931	285,305	295,798	304,361

Source: Learning Policy Institute analysis of California Department of Education data, provided through a special request.

***Costs of teacher turnover*.** Not all teacher turnover is bad. There is a healthy level of turnover that represents retirements and incorporates teachers who are not a fit at their school or in the profession all together. But a high level of turnover can impact student achievement. Research shows that high teacher turnover rates in schools negatively impact student achievement for all students in a school, not just those in a new teacher's classroom.[63] These rates are highest in schools serving students from low-income families and students of color. Constant churn exacerbates staffing difficulties that lead to shortages. Thus, students in these hard-to-staff schools disproportionately suffer the consequences of both turnover and shortages: substitute teachers, canceled classes, and inexperienced, underprepared teachers.

Turnover also extracts a significant financial cost. Research shows that teacher replacement costs, including expenses related to separation, recruitment, hiring, and training, can range from an average of $9,000 per teacher in rural districts to more than $20,000 in urban districts.[64] If the supply of highly qualified teachers were plentiful, there might be no need to worry about turnover, even if it is high and costly. However, that is not currently the case in California, given widespread teacher shortages.

Teacher turnover can become a vicious cycle: Teachers without preparation negatively impact student outcomes and leave teaching at two to three times the rates of fully prepared teachers.[65] In fact, in California, teachers who are designated as not highly qualified (those on emergency-style permits)[66] turn over at nearly twice the rates of teachers more generally (27% vs. 15%). This undermines achievement both through direct effects of churn and through

children's overexposure to a string of beginning teachers who are typically less effective than experienced teachers.[67]

At a time when it is particularly important to retain teachers, the prevalence of underprepared teachers, unfortunately, impedes schools' ability to do so. In this way, high turnover becomes a vicious cycle: high turnover leads to vacancies being filled by underprepared teachers, more underprepared teachers means higher turnover, and the cycle repeats. Short-term fixes, such as hiring teachers without full preparation, may curb fears of empty classrooms but do little to solve underlying issues that produce shortages, especially teacher turnover.

Strategies for Addressing Shortages

California has not been standing still in the face of teacher shortages. Over the last 3 years, the state legislature has enacted several initiatives to address teacher shortages, including designating $45 million to help classified staff become certified to teach, $10 million to start new undergraduate programs for teacher education, and $5 million to launch a Center on Teaching Careers, a recruitment and resource center for teaching candidates and those considering a teaching career. In addition, federal funding under Title II of the Every Student Succeeds Act (ESSA) was allocated in 2017 that can be used to address shortages through the CalEd competitive grant program. The program offers about $9 million in grants, ranging from $100,000 to $1.25 million, for LEAs to focus on the development of school leaders or teacher recruitment and development, especially in shortage subjects.[68] The state also invested an additional $5 million in the Bilingual Teacher Professional Development Program to fund initiatives that increase the number of teachers with bilingual authorizations, a critical shortage area.[69]

In summer of 2018, California enacted its two largest investments: $75 million to support teacher residencies to recruit and train teachers in special education, mathematics, science, and bilingual education; and $50 million in 2018 for "local solutions" to special education teacher recruitment and retention, which could include everything from loan repayment to mentoring, retention bonuses, and redesign of workload, among other strategies.

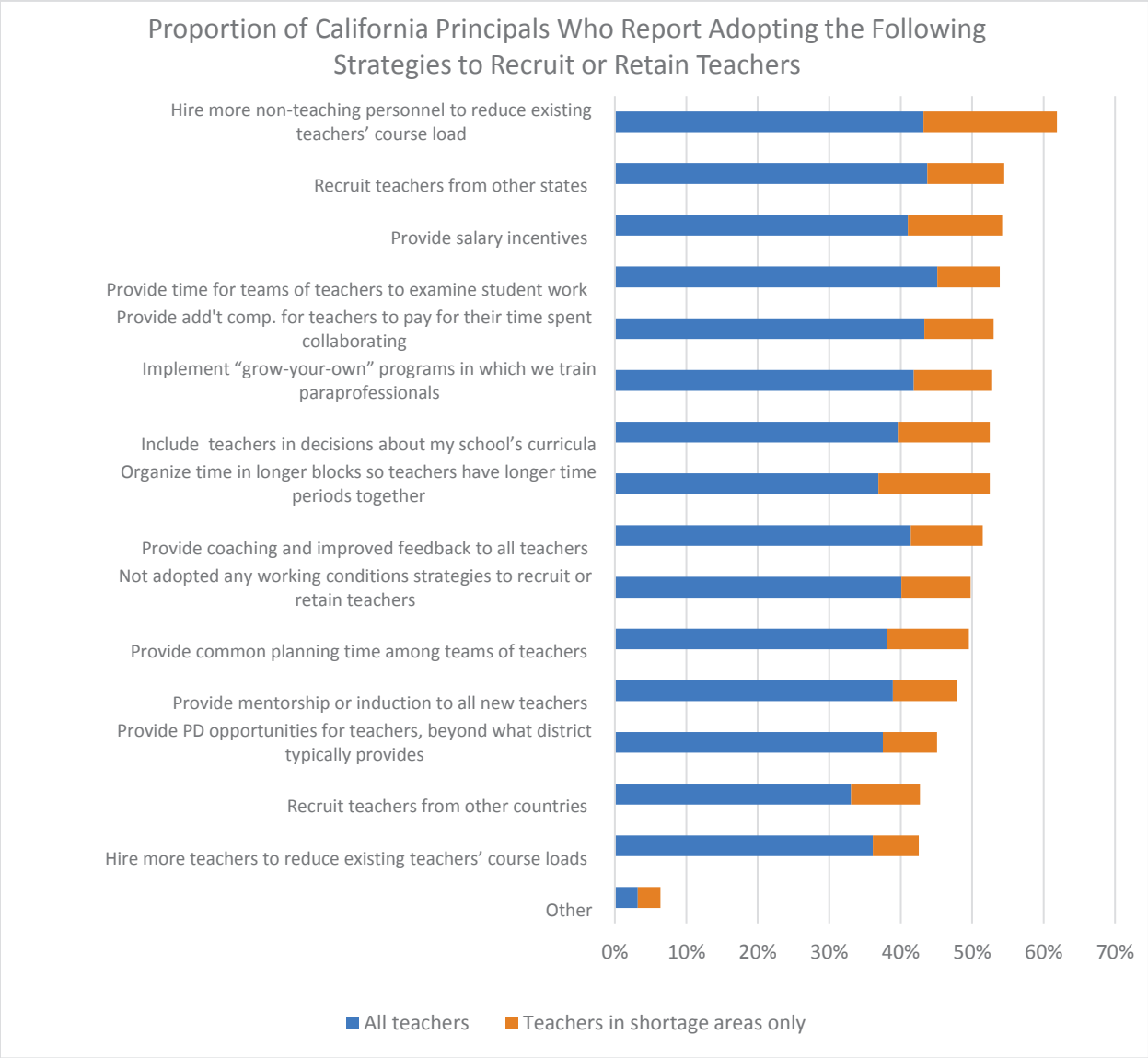
When considering whether these efforts have made progress in addressing shortages, our findings suggest that, while these programs should make a positive difference, California will need to undertake additional policy steps to solve the shortages soon.

Principals' Strategies for Attracting and Retaining Teachers

Given that most of the state's strategies have not yet had time to take full effect, local leaders have been seeking local solutions while tapping state programs as they can. In the 2017 GDTF principals' survey, more than 40% of principals reported seeking to hire both more non-teaching personnel and more teaching personnel in order to reduce existing teaching loads. To fill these slots, more than 50% of principals reported efforts to engage in "grow-your-own" programs for recruitment, to recruit teachers from other states and countries, and to recruit and retain teachers by providing salary incentives (see Figure 21).

Similarly, more than 40% reported attending to issues of teacher support and collaboration, including time for teaching teams to plan and examine student work, compensation for collaboration time, longer blocks of time for teachers to work together, involvement in decision making, mentoring, coaching, and professional development. In some cases, these efforts are specific to teachers in shortage fields, but in most cases, they pertain to all teachers. The goal is to improve the teaching environment for all teachers and thus to strengthen the profession overall.

Figure 21. California Principals' Strategies for Recruiting and Retaining Teachers



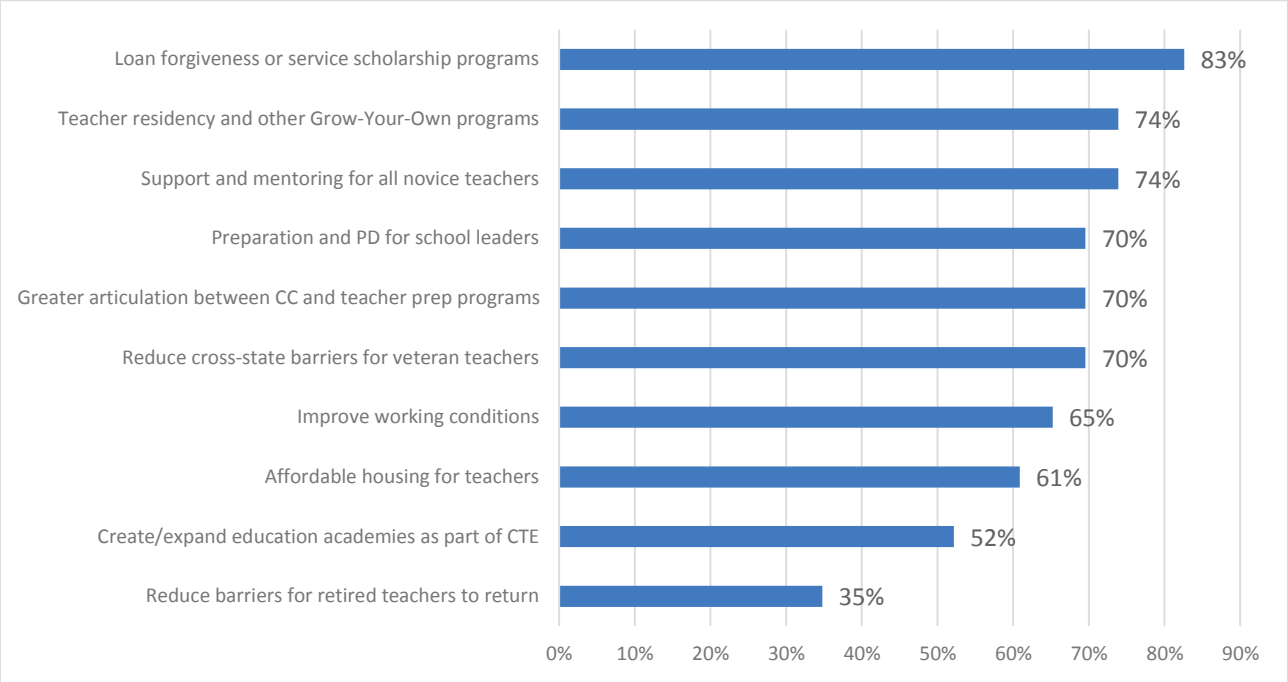
Source: Learning Policy Institute analysis of GDTFII 2018 Principal Survey conducted by RAND.

District Leaders' Views of How to Address Shortages

When asked in a recent survey what state policies would address the teacher shortage, district leaders most frequently cited strategies that could increase entrance to teaching

through loan forgiveness or service scholarship programs, teacher residencies and other Grow Your Own programs, and mentoring support for novice teachers (see Figure 22). All of these are means to increase both recruitment and retention.

Figure 22. What Districts Feel California Can Do to Reduce Teacher Shortages



Source: Sutcher, L., Carver-Thomas, D., & Darling-Hammond, L. (2018). *Understaffed and underprepared: California districts report ongoing teacher shortages.* Palo Alto, CA: Learning Policy Institute.

District leaders also identified several other state policies most believe can reduce teacher shortages, including:

- Invest in **preparation and professional development for school leaders**, including training in how to productively manage hiring and support for new teachers.
- Provide incentives for **greater articulation between community colleges and teacher preparation programs**, so that teacher candidates can begin their teacher training coursework and clinical training while enrolled in community college.
- **Reduce barriers to entry for veteran teachers moving from other states** through stronger licensure reciprocity and/or cross-state pensions or portable retirement benefit plans.
- Offer incentives to schools **to improve working conditions** associated with job satisfaction and retention, such as providing time for teacher collaboration.
- Provide support to create affordable housing for teachers.
- Provide funding for districts to **create or expand high school education academies** as part of their career and technical education programs.

Of these proposed approaches, the state has not yet reinstated the most popular proposal from district leaders and teacher education leaders: creation of forgivable loans and service scholarships that offset the costs of preparation to teach with a service requirement.

The state also has not yet invested in preparation and training for school leaders or improved working conditions, such as time for collaboration.

Findings and Policy Considerations

With the data currently available in California, our analysis suggests the following findings:

Trends in Teacher Supply

- Stagnant teacher supply is insufficient to meet teacher demand. New California credentials to fully prepared candidates remain near recent lows of around 12,000 (of whom not all enter the profession), while district hires approach 30,000 teachers annually. Even with an additional nearly 4,000 out-of-state and out-of-country credentials and close to 8,000 teacher re-entrants, supply is not keeping pace with demand.
- This mismatch has led to significant increases in substandard credentials and permits being issued. In 2016–17, California issued more than 12,000 intern credentials, permits, and waivers, more than double the number issued in 2012–13 and roughly half of all credentials issued this past academic year. The greatest growth has been in emergency-style permits, which numbered close to 6,000 in 2016–17.
- Teacher shortages are most severe in special education, with two out of three new teachers entering on substandard credentials, as well as in mathematics, science, and bilingual education. In high-need schools, shortages extend to other subject areas, including English and elementary education.
- In recent years, 27% of new teacher hires in California have been re-entrants, or former teachers returning to the classroom. Teachers who left the classroom are coming back, but in the last 8 years, few have returned to California classrooms more than 2 years after leaving.

Declines in Teacher Education Enrollments

- The steep decline in teacher education enrollments and graduates (70% over the last decade) is reversing slightly, but a small increase in completers has stalled in the UC and CSU systems, which typically provide about 60% of California's newly credentialed teachers each year. Although the system theoretically has capacity to grow, restrictions on program enrollments caused by university funding rules may be slowing the system's ability to respond to the growth in demand.
- Both school districts and teacher education programs identify the need for financial aid for candidates as an additional major driver for impacting supply.
- Relatively low admittance and acceptance rates for university programs from among the pool of candidates who apply also contribute to a shortage of qualified candidates. Qualification rules, including requirements to pass CTC-required tests of basic skills and subject-matter knowledge (usually prior to admission), plus tests of reading and teaching performance prior to licensure, are reducing the supply of teachers.

Increases in Demand

- Increases in demand have occurred as districts have sought to reduce their high pupil-teacher ratios to pre-Recession levels. The number of annual teacher hires has hovered around 30,000 since 2014–15, a 30% increase, or nearly 8,000, additional hires each year compared to demand in 2012–13, the year before Proposition 30 and LCFF began to turn around the funding situation. In 2014–15, 25% of demand was driven by reductions in the pupil-teacher ratio, a share which dropped to about 12% in the subsequent years. Overall, the pupil-teacher ratio has fallen from 23:1 to 21:1 on average, nearly back to pre-Recession levels. This is still one of the highest ratios in the country (the national average is 16:1). The likelihood that this source of demand will continue depends in part on resources available to schools in the coming years.
- Student enrollments are projected to remain stable and then decrease slightly over the next decade if current birthrates and immigration trends continue. Some parts of the state will have increases while other parts have decreases. For most districts, enrollment growth will not be a major driver of demand.

The Role of Teacher Attrition

- In recent years, teacher attrition has accounted for about 88% of demand in California. Roughly 8.5% of teachers leave the profession or state each year, and another 8% leave their current school to move to another. Most attrition tends to be pre-retirement attrition. However, with 34% of teachers statewide age 50 and older, retirements will continue to be an important factor in some locations over the next decade.
- In California, mathematics, science, and English teachers turn over at higher rates than teachers in other fields. Although we could not acquire identifying data for California special education or bilingual teachers, nationally, these teachers also turn over at higher rates. Teachers teaching in schools serving a high proportion of students from low-income families and students of color have higher rates of teacher turnover. Moreover, schools in rural, town, and urban communities have higher turnover rates than schools in suburban areas. African American teachers have higher turnover rates than Latino, White, and Filipino teachers.
- California teachers are not generally dissatisfied with their immediate work in their schools and districts; however, those who work in more challenging contexts are less satisfied, and there are concerns across the profession about the status of the profession and the respect with which the teaching is held.
- Research shows that compensation matters to teachers' career decisions (including salaries, college debt levels, and housing costs), as do working conditions, especially having a supportive administrator and a collegial work environment. Turnover for beginners is influenced by how well novices are prepared prior to entry—teachers without preparation leave teaching at two to three times the rate of fully prepared teachers—and how well they are mentored in the first years on the job.

Policy Considerations

Given that much of the teacher shortfall appears to be the result of steep declines in the production of new teachers as demand has increased, a key policy strategy may be the expansion of high-retention pathways to teaching that will both recruit and retain teachers. Previous research suggests consideration of the following evidence-based approaches:

1. **Loan forgiveness programs and service scholarships** can recruit and retain high-quality teachers into the fields and schools where they are most needed. These approaches underwrite preparation in exchange for a number of years of service in the profession, often in particular high-need locations and subject areas. College students choose their professions in part based on whether the salaries they earn can offset the higher-education debt they accumulate. With teachers earning about 30% less than other college graduates,[70] some who would like to teach eschew the profession because they cannot afford the costs required or debt incurred to be trained. Service scholarships and forgivable loan programs have proven to be highly effective in recruiting individuals into teaching and directing them to the neediest fields and locations.[71]

The now-defunct Assumption Program of Loans for Education (APLE) loan forgiveness program and Governor's Teaching Fellowship provided teacher candidates between $11,000 and $20,000 in exchange for a commitment to teach for at least 4 years in high-need schools and subjects. Beneficiaries of those programs were more likely to teach in low-performing schools and had higher retention rates than the state average.[72] As noted earlier, a fall 2017 survey of California teacher preparation programs administered by the CTC, found that university faculty were most likely to identify a lack of financial aid for teaching candidates as the largest obstacle to increasing enrollment in their programs. Reinstating support for training, repaid with service, could be a critically important tool for turning shortages around.

2. **Teacher residencies**, which are one-year intensive apprenticeships modeled on medical residencies, consistently show higher retention rates, attract more diverse candidates, and target high-need subjects and locations.[73] Residents apprentice alongside an expert teacher in a high-need classroom for a full academic year while completing coursework for a master's degree at a partnering university. They typically receive a stipend and tuition assistance in exchange for a commitment to teach in the district for an additional 3 to 4 years after their residency. Such programs supply a diverse pool of effective teachers for high-need fields and dramatically reduce teacher attrition rates.[74] California has about 12 such programs across the state.[75] As noted above, the legislature appropriated $75 million for teacher residencies focused on special education, math, science, and bilingual education teachers. Designing and implementing these well will be the state's next major challenge.
3. Other **Grow Your Own teacher education programs** recruit, train, and support paraprofessionals, after-school program staff, and other local community members to teach in their own communities. The California Classified School Employee Teacher Credentialing Program, funded in 2016 and 2017, supports classified staff, such as paraprofessionals, to earn a bachelor's degree and teaching credential. The program provides classified staff with $4,000 per year for up to 5 years (or $20,000 in total) to subsidize their teacher training costs. With a state investment of $45 million, the program funded 2,250 slots. Nearly half of

all program participants are Hispanic or Latino/a, and 5% are African American. Districts submitted grant applications requesting funding for more than 8,000 slots, suggesting that there is a significant unmet need that could be addressed with program continuation in the years to come.[76]

4. **Support and mentoring for novice teachers** can include seminars, coaching and mentoring, reduced workloads, collaborative planning time, extra classroom assistance, and a variety of other activities. High-quality induction is associated with higher teacher retention rates and improved student learning.[77] All beginning California teachers are required to complete an induction program during their first 5 years of teaching in order to earn the California clear credential. However, targeted state funding for induction was folded into the LCFF, resulting in many districts reducing their support for new teachers, supporting them only in their second year (not their first), requiring new teachers to pay a fee for induction, or requiring new teachers to enroll at an IHE to complete induction. A renewal of the quality and availability of the Beginning Teacher Support and Assessment Program is needed and timely.
5. California has sought to **remove unnecessary barriers to teacher entry** with some easing of rules for reciprocity from other states and enabling teacher candidates to substitute adequate scores from other academic tests for the basic skills (CBEST) exam for licensing. Still, there is room for the CTC to examine whether other steps could be taken. Fully prepared, often experienced teacher candidates seeking to transfer in from other states still often struggle to get approved in California and sometimes must jump through hoops that are not always clearly necessary. Barriers to credentialing posed by CTC testing policies also are significant, with four tests for most multiple-subjects candidates and three for most single-subject candidates. In addition to the fact that candidates report the tests are a financial hurdle and a logistical challenge, fail rates not significant. Overall, at least 40% of those who initially intend to teach are unable to move forward at some testing juncture; in some fields, including mathematics and science, this comprises well over half of those who initially intended to teach. Other professions require one test after completion of training (e.g. the bar exam, medical licensing exam, architectural registration exam). The CTC is already examining coursework-based pathways for some of the requirements (e.g., demonstrating subject-matter competence through programs of study) and should be encouraged to look further at these issues.
6. Like many other states, California could **utilize retirees** to avoid teacher shortages, especially with 10% of the workforce over the age of 60 and soon to retire. Some states have sought to immediately expand the pool of qualified educators by recruiting recently retired educators to serve in shortage areas or as mentors to beginning teachers. States using this approach have typically eliminated barriers to re-entry, such as mandatory separation from service periods and caps on earnings that may apply while a teacher is receiving a pension – two barriers California currently has in effect. If teachers contribute to the retirement fund while they are working, even if they draw down retirement income, the approach can be cost-neutral.
7. **Investments in teacher preparation and training** may be needed to expand program availability in high-need fields, such as special education, where a number of programs were earlier discontinued and where the annual demand is extremely high. As California is

changing the licensing expectations for Education Specialists, it may be helpful to support new program designs with strategic competitive grants. There also may be a need to evaluate the university funding rules, which determine how quickly teacher education program enrollments can be expanded within the CSU system, either targeting some of the state's funding that goes to CSU campuses specifically for teacher education or transforming rules within the university that seem to constrain annual growth in teacher education slots.

8. **Investments in principal preparation and training** can also help curb teacher attrition. Holistic strategies to address teacher shortages consider the central role principals play in attracting and retaining talented teachers. Teachers cite principal support as one of the most important factors in their decisions to stay in a school or in the profession,[78] especially in high-poverty schools. [79] Research demonstrates that a principal's ability to create both positive working conditions and collaborative, supportive learning environments plays a critical role in attracting and retaining qualified teachers.[80] With the transition to ESSA—including new opportunities in the law to set aside up to 3% of Title II funds to support leadership development—a growing number of states are committing resources to strengthen school leadership in ways that can support efforts to recruit and retain high-quality educators.[81] California's State Board has suggested it will likely seek to do this – a move that should be designed to focus training on this set of issues.
9. **Improvements in teaching conditions** can be incentivized through awareness – for example, by using school-by-school working conditions surveys, as many states do, to provide ongoing data on teachers' experiences and perceptions. They also can be improved through investments in collaboration time, professional learning communities, pupil load reductions (which currently are especially important for special education teachers in California), and career ladders that compensate teachers as they gain expertise and use it to mentor and coach other teachers. California's now defunct Teachers as a Priority program, which provided funding to high-need schools so that they could improve local teaching conditions ranging from mentoring to class sizes to collaboration time, is one example of a previously successful strategy.
10. To manage supply and demand more effectively, there is a need for **greater data availability** and analysis of data that can reveal entry and exit patterns for teachers of different subjects and training backgrounds, and the productivity of different pathways and investments in teaching in terms of recruitment and retention. This requires using merged data sets in the possession of the CTC and CDE, which should be supported as soon as possible.

Conclusion

A common objection to teacher shortage interventions is the belief that the teacher labor market will adjust on its own to meet demand. It is true that teacher supply is dynamic and adjusts as economic and social conditions change. As the demand for teachers increases, districts mostly likely will seek to improve salaries and working conditions and more individuals will take an interest in teaching, a change that will likely occur incrementally over the next few years.

Nonetheless, teacher shortages are still a major problem. The possibility of more teachers tomorrow does nothing to help students today. Even if teacher supply eventually adjusts to meet growing demand, that change could be years into the future with a cost borne by students. And while teacher preparation enrollments may once again grow, there is no guarantee that new candidates will enter the fields where they are most needed. Indeed, evidence suggests that special incentives will continue to be needed for certain high-need teaching fields and locations. Even high-paying, low turnover states such as Connecticut, Massachusetts and New Jersey, offer incentives to address shortages in special education, bilingual education, math, and science, despite having a statewide surplus of teachers in other fields.[82] Similarly, schools in urban and rural areas or with low-income, high-minority, and/or high-EL student populations may continue to struggle to find qualified teachers.

Faced with a similar challenge during a period of severe shortages more than 20 years ago, California responded by issuing emergency-style permits and waivers By the year 2000, more than 40,000 individuals were teaching with substandard authorizations, disproportionately assigned to high-minority, high-poverty schools.[83] However, the number of underprepared teachers decreased quickly as incentives introduced in the late 1990s took hold; the APLE loan forgiveness program, the governor's fellowships, and Cal T grants all helped to underwrite preparation with service requirements that recruited and distributed teachers to places they were most needed. Salary increases, investments in teacher mentoring, and the Teachers as a Priority program all contributed to sharp reductions in the number of underprepared teachers who were hired. However, these programs were eliminated over the subsequent decade, leaving the state unprepared for the emergence of a new round of shortages.

The most recent evidence shows that the pattern of many years ago may be repeating itself now; substandard credentials and permits are rapidly increasing, and students in special education, as well as those in high-minority, high-poverty, and high-EL schools are being hit the hardest. There are thousands of students today in classrooms with teachers who are wholly unprepared. While California has made initial investments in increasing the supply of well-prepared teachers, these investments will take time to yield qualified teachers. More action is needed to ensure a robust, well-prepared teacher workforce now and into the future. Rather than filling more classrooms with underprepared teachers, California could invest in rapidly building the supply of qualified teachers in the fields and locations where they are most needed, while creating incentives for experienced, effective teachers to re-enter and remain in the classroom.

Appendix A

Table A1. Teacher Leavers and Movers by Race/Ethnicity

Teachers' Race/Ethnicity		2009–10	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16
African American	Leavers	18.1%	10.4%	10.9%	11.0%	11.0%	11.3%	11.1%
	(Movers)	10.5%	11.3%	9.8%	10.4%	10.0%	9.9%	10.2%
Native American/Alaskan	Leavers	14.7%	8.1%	7.5%	8.3%	8.1%	8.6%	9.5%
	(Movers)	9.7%	10.0%	7.6%	7.8%	9.4%	8.7%	8.4%
Asian	Leavers	13.0%	7.7%	7.5%	7.1%	7.2%	7.2%	8.1%
	(Movers)	8.9%	8.6%	7.3%	7.7%	8.1%	8.2%	7.9%
Filipino	Leavers	13.0%	7.0%	7.1%	6.8%	7.1%	6.7%	7.0%
	(Movers)	8.5%	9.8%	8.7%	8.4%	9.0%	8.7%	8.0%
Latino and/or Hispanic	Leavers	11.7%	6.3%	6.8%	6.4%	6.3%	6.6%	7.2%
	(Movers)	9.9%	10.0%	9.1%	8.8%	8.9%	8.8%	8.3%
Not Reported	Leavers	18.1%	11.2%	10.9%	11.8%	10.8%	11.3%	10.5%
	(Movers)	11.8%	12.6%	10.5%	12.8%	14.2%	14.5%	11.6%
Pacific Islander	Leavers	14.8%	5.3%	9.5%	7.7%	9.1%	7.3%	8.6%
	(Movers)	11.4%	9.7%	9.0%	9.8%	10.1%	8.4%	6.5%
White	Leavers	14.1%	8.2%	8.2%	8.1%	7.9%	8.9%	8.6%
	(Movers)	8.5%	8.7%	7.2%	7.2%	7.8%	7.6%	7.4%
Two or More Races	Leavers	—	—	—	9.2%	8.4%	8.9%	10.4%
	(Movers)	—	—	—	8.0%	10.1%	8.9%	10.0%

Note: Two or more races was not a category until 2012–13.
Source: Learning Policy Institute analysis of California Staffing Data File provided by the California Department of Education through a special request.

Table A2. Teacher Movers and Leavers by Subject and Highly Qualified Teacher (HQT) Designation

				2014–15	2015–16
Mathematics	All teachers		Leavers	8.5%	8.2%
			Movers	10.6%	9.6%
	Teachers designated as not HQT for at least one mathematics class		Leavers	10.8%	10.3%
			Movers	13.1%	11.7%
	Teachers designated as not HQT for all mathematics classes		Leavers	16.3%	14.2%
			Movers	12.9%	11.4%
Science	All teachers		Leavers	8.6%	8.3%
			Movers	10.0%	9.4%
	Teachers designated as not HQT for at least one science class		Leavers	11.1%	10.9%
			Movers	13.6%	12.7%
	Teachers designated as not HQT for all their science classes		Leavers	18.8%	16.6%
			Movers	14.1%	13.9%
English	All teachers		Leavers	8.6%	8.5%
			Movers	9.8%	9.3%
	Teachers designated as not HQT for at least one English class		Leavers	10.1%	10.0%
			Movers	11.6%	11.1%
	Teachers designated as not HQT for all their English classes		Leavers	16.3%	14.6%
			Movers	12.7%	12.4%
Social Studies	All teachers		Leavers	8.1%	7.7%
			Movers	8.6%	8.3%
	Teachers designated as not HQT for at least one social studies class		Leavers	9.3%	9.1%
			Movers	10.7%	10.3%
	Teachers designated as not HQT for all their social studies classes		Leavers	13.7%	12.7%
			Movers	10.4%	10.0%
World Languages	All Teachers		Leavers	8.8%	7.7%
			Movers	9.2%	8.6%
	Teachers designated as not HQT for at least one world language class		Leavers	13.5%	11.1%
			Movers	15.8%	14.6%
	Teachers designated as not HQT for all their world language classes		Leavers	25.4%	17.8%
			Movers	14.0%	14.2%

Table A2. Teacher Movers and Leavers by Subject and Highly Qualified Teacher (HQT) Designation (continued)

Self-Contained Classes	All Teachers		Leavers	7.1%	7.5%
			Movers	7.6%	7.2%
	Teachers designated as not HQT for at least one self-contained class		Leavers	12.5%	14.2%
			Movers	14.3%	12.2%
	Teachers designated as not HQT for all their self-contained classes		Leavers	17.7%	18.5%

Note: Self-contained classes include both elementary school classrooms and special education classrooms. Not HQTs, or not highly qualified teachers, are teachers who did not meet the designation of "highly qualified" under the former federal education law, No Child Left Behind. A highly qualified teacher in California is defined as a teacher who holds a bachelor's degree, a teaching or intern credential, and has demonstrated core academic subject-matter competence. Not HQT teachers in this analysis are teachers who lack an appropriate subject-matter credential for all the classes they teach. Source: California Staffing Data File provided to the Learning Policy Institute by the California Department of Education through a special request.

Table A3. Teacher Turnover by School Demographics

School Level Turnover (movers + leavers)	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Average Turnover	27.9%	21.8%	19.1%	18.9%	19.6%	20.0%	19.6%
10th Percentile	6.3%	0.0%	1.7%	0.0%	2.5%	3.4%	3.4%
25th Percentile	12.8%	7.3%	7.9%	7.6%	8.0%	9.1%	8.7%
Median Turnover	20.9%	13.6%	14.3%	13.6%	14.3%	15.4%	14.8%
75th Percentile	33.3%	24.0%	23.1%	22.2%	24.0%	25.0%	24.0%
90th Percentile	61.5%	50.0%	38.1%	37.9%	40.0%	40.0%	39.1%
Non-Title I Schools	26.1%	16.2%	17.9%	16.0%	15.4%	16.0%	15.5%
Title I Schools	25.5%	18.4%	17.9%	18.7%	19.4%	19.8%	19.3%
%FRPL Q1 (low poverty)	20.0%	12.9%	13.8%	14.0%	15.0%	15.4%	15.4%
Q2	23.9%	17.4%	17.4%	16.9%	18.9%	19.0%	18.5%
Q3	25.7%	18.7%	18.5%	18.8%	19.4%	20.4%	19.2%
%FRPL Q4 (high poverty)	28.0%	19.6%	19.7%	20.3%	20.5%	20.8%	20.3%
%Students of Color Q1 (low minority)	26.3%	16.7%	17.9%	17.9%	18.8%	19.2%	18.6%
Q2	24.4%	16.2%	16.1%	16.3%	17.7%	18.8%	18.0%
Q3	25.7%	17.3%	17.9%	17.8%	18.6%	18.8%	18.5%
%Students of Color Q4 (high minority)	26.7%	21.2%	20.6%	20.9%	20.9%	20.9%	20.3%
%EL Q1 (low EL)	27.8%	17.1%	19.2%	15.7%	18.1%	18.8%	17.6%
Q2	23.8%	15.8%	17.0%	15.9%	18.4%	18.7%	18.0%
Q3	26.2%	17.0%	18.7%	16.9%	19.2%	19.7%	19.5%
%EL Q4 (high EL)	25.4%	17.9%	17.5%	16.8%	17.9%	18.3%	18.1%
%Exceed or Met CAASPP Math Q1 (low achievement)						23.8%	23.3%
Q2						18.8%	17.7%
Q3						16.9%	16.3%
%Exceed or Met CAASPP Math Q4 (high achievement)						14.5%	14.3%

%Exceed or Met CAASPP ELA Q1 (low achievement)						22.4%	22.3%
Q2						19.2%	18.6%
Q3						17.2%	16.0%
%Exceed or Met CAASPP ELA Q4 (high achievement)						15.1%	14.8%
Urban	24.9%	18.0%	18.4%	18.5%	19.3%	19.9%	19.6%
Suburban	24.5%	15.8%	16.1%	16.2%	16.8%	17.3%	16.5%
Town	28.7%	20.7%	20.7%	22.5%	22.0%	22.8%	22.9%
Rural	30.6%	21.2%	20.6%	21.3%	24.0%	23.5%	23.0%

Note: The turnover rate is calculated for each school then averaged.

Source: California Staffing Data File provided to LPI by the California Department of Education through a special request.

Endnotes

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18 Twenty-three of the 25 districts surveyed reported on their ability to fill all vacant positions with qualified teachers in 2017–18.

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20 Twenty-two of the 25 districts surveyed reported on the hiring of underprepared teachers in 2017–18, and 21 of the 25 districts surveyed reported sufficient data to determine the proportion of underprepared teachers in 2017–18 compared to 2016–17.

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33 Percentages of re-entrants and new hires were calculated using teacher assignment data from 2009–10 to 2016–17. A teacher re-entrant is defined as a teacher who is teaching in year t, not teaching year t-1, but was a California teacher in at least one prior year before t-1 in which data were available. Therefore, a new teacher is one teaching in year t, not teaching year t-1, and has not taught in any years in which data were available, 2009–10 to year t. As a result, analysis for 2016–17 is the most reliable and the analysis from 2014–15 is the least reliable because there are less data to determine teachers' prior experiences. California Staffing Data File was provided to LPI by the CDE through a special request.

34 The number of re-entrants was calculated using teacher assignment data from 2009–10 to 2016–17. A teacher re-entrant is defined as a teacher who is teaching in year t, not teaching year t-1, but was a California teacher in at least one prior year before t-1 for which data were available. As a result, the analysis for 2016–17 is the most reliable for identifying re-entrants and the analysis from 2014–15 is the least reliable because there are less data to determine teachers' prior experiences. Substandard credential data are from the CTC. The number of credentials does not always equal the number of teachers because it is possible for a teacher to hold multiple substandard permits or credentials. The number of new entrants was calculated by subtracting the number of re-entrants and teachers on substandard credentials from the total number of hires. This method roughly captures the proportion of re-entrants, new entrants, and teachers on

substandard credentials. This does not measure exact counts because a teacher can hold multiple substandard credentials and a re-entrant also could hold a substandard credential. These problems would result in a slight underestimation of the new entrant category.

35 Estimated demand was calculated using teacher assignment data from 2009–10 to 2016–17 obtained from the CDE. Publicly available student enrollment data also were used for this analysis. Estimated demand represents the total number of new hires in a given year. A new hire is defined as a teacher who is teaching in California in the current year but was not teaching in California the previous year. As described earlier, teacher demand in a given year is driven by two factors: additional teachers to replace those who left teaching and additional teachers due to marginal increases (or decreases) in the size of the teacher workforce. Demand due to attrition is the number of teachers who left the profession or the state in the prior year. To disaggregate the rest of demand into smaller components, additional workforce growth was separated into student enrollment–driven workforce growth and pupil-teacher ratio–driven workforce growth. Teacher demand due to student enrollment growth was estimated by dividing the change in student enrollment by the previous pupil-teacher ratio. The difference between the number of teachers necessary under the current pupil-teacher ratio and the number of teachers necessary under the following year's pupil-teacher ratio represents the increase in teachers needed due to changes in the pupil-teacher ratio. After replacing teachers who left and accounting for changes in student enrollment, the remaining teacher hires can be attributed to changes in the pupil-teacher ratio.

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Appendix P

Teacher Shortages in California: Exploring the Factors that Influence Teacher Staffing Distribution

GETTING DOWN TO FACTS II

Technical Report

Teacher Staffing Challenges in California: Exploring the Factors that Influence Teacher Staffing and Distribution

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September 2018

About: The *Getting Down to Facts* project seeks to create a common evidence base for understanding the current state of California school systems and lay the foundation for substantive conversations about what education policies should be sustained and what might be improved to ensure increased opportunity and success for all students in California in the decades ahead. *Getting Down to Facts II* follows approximately a decade after the first Getting Down to Facts effort in 2007. This technical report is one of 36 in the set of *Getting Down to Facts II* studies that cover four main areas related to state education policy: student success, governance, personnel, and funding.

Stanford University

PACE Policy Analysis for California Education

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Introduction

California, like many states, is experiencing significant challenges with teacher staffing. Numerous headlines over the last few years highlight the difficulties that the state faces in developing, recruiting, and, ultimately, hiring enough teachers (Blume, 2016; Apodaca, 2017; Calefati, 2017; Carver-Thomas & Darling-Hammond, 2017; Times Editorial Board, 2017). In a 2016 survey of over 200 California school districts, roughly 75% of districts reported having a shortage of qualified teachers and a little over four in five districts indicated the problem has gotten worse in recent years (Podolsky & Sutcher, 2016). Similarly, in a 2018 survey of 206 California district human resources (HR) personnel conducted by the California School Boards Association for the *Getting Down to Facts II* studies, 76% of HR staff reported having teacher shortages. This reported trend comports with data collected by the California Commission on Teacher Credentialing (CCTC) which shows that the number of emergency permits, teaching credential waivers and limited assignment permits issued by the state has increased over the last several years, going from approximately 2,100 in 2012-13 to nearly 8,000 in 2016-17; an increase of nearly 300% (CCTC, 2018).[1] These staffing difficulties likely stem from a combination of reasons, including California's relatively high rates of teacher attrition (in some school systems and subject areas), declining enrollments in teacher preparation programs, severe cuts to education budgets alongside recessionary layoffs, and the fact that the recovery from the Great Recession means that California schools attempting to attract and retain teachers are competing in an increasingly tight labor market.

Yet digging beneath the headlines reveals a more complex situation. Conversations about "teacher shortages" often treat teacher staffing issues generically. In reality, however, teacher shortages tend to be concentrated in certain subjects and most acute for certain types of schools (Cowan, Goldhaber, Hayes, & Theobald, 2016; Dee & Goldhaber, 2017). In California, the California Department of Education lists shortage areas in special education and STEM, which is similar to other states, but they also list shortages in less commonly reported areas like English and Physical Education.[2] In 2018, the CSBA survey of human resources personnel shows the most severe shortages in special education, math and science, with 82, 56, and 50% of districts reporting shortages in those areas, respectively.

While schools compete for teachers in high demand fields, and teacher labor more generally, it is important to note that certain types of schools experience varying degrees of difficulty attracting and retaining teachers to fill their classrooms. In particular, there is a significant amount of research investigating the challenges traditionally disadvantaged schools face in securing quality teachers, and a body of evidence shows that measures of teacher

[1] Districts in California can fill teaching assignments with candidates who are not "fully credentialed" (i.e. they do not meet all the state's licensure training and subject-matter competency requirements) by submitting a permit or waiver request to the state which often entails providing evidence that no qualified candidate could be found and/or that an "acute staffing need" exists. For more information regarding the different types of permits/waivers and the request process see https://www.ctc.ca.gov/docs/default-source/commission/agendas/2012-08/2012-08-5a-pdf.pdf.

[2] For a full listing of shortage areas see https://www2.ed.gov/about/offices/list/ope/pol/bteachershortageareasreport201718.pdf

quality tend to be inequitably distributed across students (e.g., Clotfeter, Ladd, & Vigdor, 2005; Goldhaber et al., 2015, 2017; Kalogrides & Loeb, 2013). These results suggest that certain kinds of schools – most often those with the greatest proportions of low-income, minority and low-achieving students – have the greatest difficulty attracting and retaining quality teachers, and especially in shortage areas (Clark, McConnell, Constantine, & Chiang, 2013; Sutcher, Darling-Hammond, & Carver-Thomas, 2016).

Understanding the nature of school staffing challenges is a significant policy issue. A growing body of research shows that teachers are the most important school-based factor influencing student achievement (e.g., Aaronson, Barrow, & Sander, 2007; Goldhaber & Hansen, 2013) and longer term life outcomes, such as college-going behavior and labor market earnings (e.g., Chamberlain, 2013; Chetty, Friedman, & Rockoff, 2014). Thus, the distribution of teacher quality is an important equity concern. There is also increasing evidence suggesting that the "churn" associated with teacher turnover may itself negatively impact student achievement (e.g., Ronfeldt, Loeb, & Wyckoff, 2013), as turnover disrupts instructional programs and/or impedes efforts to develop collaborative networks of teachers within schools. The findings on teacher quality and attrition provide a strong argument for the need to understand how school district policies affect teacher staffing.

In this paper we use district-level aggregate student and teacher administrative data publicly provided by the California Department of Education (CDE), information on teacher job postings, and local policies established in district collective bargaining agreements (CBAs) and associated compensation policies to assess the association between district staffing needs, district characteristics and school district pay and workforce policies. We address five inter-related questions:

1. What do districts' vacancy postings tell us about California districts' staffing needs and how they vary across districts?

2. What is the landscape of district compensation and workforce policies that affect the California teacher labor force, and how do these policies vary across districts within California?

3. What is the association between district compensation and workforce policies (e.g. those governed by CBAs) and the number of posted vacancies?

4. What is the association between district compensation and workforce policies and the number of vacancies that districts post late (i.e., in the fall for the current school year)?

5. What is the association between district compensation and workforce policies and the duration of job postings?

We believe that it is also important to highlight a final research question that we are unable to answer given data limitations in the state of California (for more on this, see Phillips, Reber, & Rothstein, 2018). In particular, any assessment of the supply and distribution of teachers across schools and districts should necessarily rely on individual student- and teacher-level data that enable researchers to understand what kinds of students, schools and districts have access to teachers of different experience levels, certification and education levels, and, ideally, measures of performance and effectiveness. In spite of efforts to acquire these data, we were not able to access them in time for this report.[3]

This paper proceeds as follows. In the next section, we review some of the many factors that affect districts' abilities to appropriately staff their classrooms, and potential state and district policy responses that can help facilitate teacher workforce management. Sections three and four outline the data, measures and analytic strategies we employ to answer our research questions. Section five discusses the results and section six concludes.

Factors Affecting Teacher Staffing and the California Context

Myriad factors affect the degree to which districts are able to meet their staffing needs; needs which often vary by context and/or change over time. For instance, it is well-documented that schools have quite different applicant pools when advertising for a teaching position (DeArmond, Gross, & Goldhaber, 2010; Goldhaber et al., 2017) and that attrition rates can vary significantly from school to school (Clotfelter, Ladd, & Vigdor, 2011; Hanushek, Kain, & Rivkin, 2004; Imazeki, 2005; Jacob, 2007; Ronfeldt, Loeb, & Wyckoff, 2013). There are also a host of issues that influence whether teachers (or prospective teachers) choose to apply to and remain in a particular school or district, ranging from considerations about pay to working conditions. And while some of these issues may be school specific (e.g. having to do with school leadership or the safety of the neighborhood in which a school is located), others are related to district-level factors (e.g. district pay scales or evaluation policies).

The differences in schools' and districts' challenges in recruiting and retaining teachers also translate into inequities in the distribution of teachers across students. In particular, it is well-established that a student's socioeconomic status, race, and/or locale can significantly impact the likelihood that he or she is taught by either a high- or low-quality teacher. Clotfelter, Ladd, and Vigdor (2005) find that black middle school students in North Carolina are much more likely to be taught by an inexperienced teacher in Math and English than are their white student peers. In three large urban districts in different parts of the country, Kalogrides and

[3] Due to legal restrictions, the California Department of Education (CDE) is unable to provide researchers with student-teacher linkages. At the time of this study, we were not able to acquire data on teacher credentials from the California Commission on Teaching Credentialing (CTC). As a consequence, it was not possible for us to understand how equitably teachers are distributed across students, schools and districts across the state, nor could we assess the distribution of teachers based on measures of performance or effectiveness. Thus, even though California boasts unique data unavailable in other states in the form of detailed CBA data (collected by the research team) and data on teacher vacancies (collected and provided by Edjoin), the lack of individual-level panel data of the sort available in many other states reduces the amount researchers and decision makers can learn in California about issues critical to education policy.

Loeb (2013) observe a similar trend whereby poor, lower-achieving, students of color are more likely to be taught by more novice teachers. Goldhaber, Lavery, and Theobald (2015) provide evidence that not only are disadvantaged students more likely to be taught by less experienced teachers, but they are also more likely to have teachers with lower licensure exam scores and value added (a statistical measure of teachers' contributions to student learning gains on tests). More recent research (Goldhaber, Quince, & Theobald, 2018b) explores the extent to which inequities in the distribution of teachers are associated with different processes – teacher hiring, within and between district mobility of teachers, and exits from the teaching profession. They find heterogeneity in the import of the processes across two states (North Carolina and Washington) and for different measures of teacher quality but note the importance of hiring in both.

In the remainder of this section, we briefly outline the literature on teacher staffing and the factors thought to influence the makeup of a district's teacher workforce, while also describing how these issues relate to the California context, focusing at the end on equity concerns.

Teacher Supply

Districts hire the majority of teachers new to the profession from the pool of teacher candidates obtaining licenses from traditional teacher education programs operated by institutions of higher education (IHEs).[4] A great deal of media attention has focused on recent decreases in the number of teacher candidates both enrolling in and emerging from traditional teacher education programs (e.g., Cowen & Strunk, 2016; Felton, 2017; Lindsay, 2018; Maio, 2016; Sawchuk, 2014; 2016; Strauss, 2015; Zinshteyn, 2018). Nationwide, between 2008-09 and 2015-16 (the most recent year of available aggregate Title II data) traditional teacher education programs saw enrollment decline from just under 640,000 to roughly 350,000 (a decrease of approximately 45%) (U.S. Department of Education, 2018).[5] Although this is a notable and steep decline, the slope and magnitude of this downward trend changes depending on the time horizon one considers (Cowan et al., 2016). If one examines the number of graduates from teacher education programs between 1999-2000 to 2015-16, for instance, there is an ebb and flow pattern to the year-to year-totals, where the number of graduates declined in the early 2000s, then steadily increased leading up to the Great Recession, and then declined again most recently (U.S. Department of Education, 2018). These national trends roughly mirror what has been taking place in California, with at least one important deviation: where the national trend has continued to decrease in recent years, in California the number of new credentials issued and enrollment in teacher education programs have both steadily increased since 2013-14 (California Commission on Teacher Credentialing, 2018). That said, it appears that this slight rebound might be slowing down (see Darling Hammond & Sutcher, 2018, *Getting Down to Facts II*).

[4] In the most recently available Title II report, over 85 percent of individuals completing a credential program were from a traditional teacher education program. For the annual number of completers by credential program type see https://title2.ed.gov/Public/TitleIIReport16.pdf

[5] Over this same period K-12 student enrollment grew by around 2 percent.

A second pool from which districts draw new teachers are those candidates completing alternative teaching programs. Nationwide, just under 15% of new teachers earned their credential through an alternative route (e.g. internship programs attended by Teach For America members, or in the California context, CalState Teach) (U.S. Department of Education, 2016).[6] Reliance on individuals entering teaching through alternative routes varies significantly from state-to-state, although in California this figure is roughly similar at 14.5%, or just over 2,100 teachers (California Commission on Teacher Credentialing, 2015). Similar to the trend in traditional teacher education program completion, alternative program numbers declined following the Great Recession, but in recent years have made modest but consistent gains (e.g. from 28,468 alternative program completers in AY 2012-13 to 31,757 in AY 2015-16).

While these national trends are important, focusing simply on enrollment or production in generic terms ignores the reality that for many years the nation has been producing far greater numbers of newly minted teacher candidates in certain endorsements areas, while producing relatively fewer candidates in other areas. Essentially, the supply of new teachers, when accounting for endorsement or subject area, does not seem to comport with demand (Sawchuk, 2013). For instance, using U.S. Department of Education data, Sawchuk (2013) shows that some states are producing far more elementary teachers than there are openings (e.g., ratios of 2:1 in Michigan, 4:1 in Pennsylvania and 9:1 in Illinois). In Washington State, for example, Goldhaber, Krieg, Theobald, and Brown (2015) provide evidence that over a fifteen-year period (1995-2010) the state produced 12,775 more elementary endorsed teachers than the number of teachers who exited the profession with this endorsement. Meanwhile, over this same period the state produced fewer Science, Technology, Engineering, and Mathematics (STEM) teachers than exited, resulting in a net shortage of approximately 3,719 STEM teachers. Although the picture may be more dire in California, it is impossible to accurately assess the true size of the teacher shortage, or determine in what areas of teaching and geographic locations districts are most in need of high quality teachers. However, research conducted in California by Sutcher, Darling-Hammond, and Carver-Thomas (2016) found that nationally between 20% to 30% of teachers leave the profession in the first five years, a figure that rises to 50% in some school systems, such as schools serving low-income and minority students. Similar to Washington state, it seems likely that the supply of new teachers has not kept pace with those leaving.

State and Local Policies to Address Teacher Shortages

The challenge, then, is not as simple as asking whether we are producing *enough* teachers, but rather, whether we are producing enough of the *right types* of teachers and if these teachers are finding their way into the classrooms that need them. If the answer to the latter, more pertinent set of questions is "no," then we must probe the *causes* of the disconnect between supply and demand, and what *solutions* districts can implement to address this issue.

[6] Includes both IHE and non-IHE programs.

One would think that if districts or states were not able to locate the teacher talent they require they might work to implement policies to address shortage concerns. However, the ability of districts and states to effectively address teacher shortages is often inhibited by both state-level barriers such as state licensure requirements, and teacher pension and compensation systems, as well as district-level policies, including seniority-based protections and specific forms of compensating teachers for "quality" only by their education credential, experience, or, less frequently, by some other credential enabling them to teach in shortage areas.

One seemingly obvious state-level response to teacher shortages might be implementing policies to recruit teachers from neighboring states or locales, especially those that have potential surpluses in teacher labor. Indeed, out-of-state teachers comprise a sizeable portion of state teacher workforces, though the proportion varies from state to state. In California, a 2017 report by the Commission on Teacher Credentialing shows that both the number and proportion of new credentials issued each year to individuals prepared out of state increased between 2012-13 to 2015-16, growing from 2,813 or roughly 18.4% to 3,965 or 25.7% of all new credentials (California Commission on Teacher Credentialing, 2017).

Districts' abilities to hire out-of-state teachers can be curtailed, however, by state licensure requirements. States can address this barrier by simplifying licensure reciprocity requirements. While most state licensure requirements for public school teachers tend to be quite similar,[7] it can often be a rather difficult and lengthy process for existing teachers to become certified in a new state. Ostensibly this should not be the case considering that many states maintain reciprocity agreements, whereby a state recognizes teacher certificates from other partner states. However, while reciprocity agreements may save an existing teacher from needing to complete certain steps or to start completely over in the licensure process, they often still must take and pass state-specific licensure tests, enroll and complete additional coursework, submit necessary paperwork, and await variable processing times to re-achieve their status as a licensed teacher. Anecdotal evidence suggests that this process is burdensome enough to discourage some teachers from pursuing re-certification when coming from out of state. Arbury et al. (2015) interviewed a sample of teachers struggling to relocate and from their interactions concluded, "the obscurity of individual state licensure requirements represents one of the largest obstacles to entry into the state's licensed workforce" (Arbury, Bonilla, Durfee, Johnson, & Lehninger, 2015, abstract).

California is one of several states to sign the National Association of State Directors of Teacher Education and Certification (NASDTEC) Interstate Agreement, which facilitates license reciprocity for member states. However, the NASDTEC-membership does not guarantee full teacher license reciprocity, it only provides information for which licenses will transfer and what additional requirements must be met. California does not offer full reciprocity for out-of-state teachers. Regardless of the number of years teaching, those desiring to teach in public schools in California may need to take a basic skills test, pass a subject-matter examination, or

[7] That is, teachers obtain an initial license following graduation from an approved teacher education program, and after passing basic skills and subject-matter tests.

complete additional coursework to earn an authorization to teach English learners (Goldhaber, Grout, & Holden, 2017).

Another way states can reduce barriers to entry into the teaching profession and address teacher shortages is by removing the requirement for teachers to pass one or more basic skills tests. Requiring teachers to pass certain skills tests may further dampen supply in certain shortage areas, as evidence clearly shows that pass rates are considerably lower for certain subject-based tests. For instance, Darling-Hammond, Sutcher, and Carver-Thomas (2018), in their report released as part of these *Getting Down to Facts II* studies, show that the passing rate on the California Basic Educational Skills Test (CBEST) in 2016-2017 was only 67% for first-time test-takers and the cumulative pass rate was only 76%. Additionally, teacher candidates must show subject matter competency by either completing a specified subject matter program of study or by passing one of the California Subject Examinations for Teachers (CSET). Cumulative pass rates (based on testing from 2003 to 2017) show that approximately 80% of all teacher candidates pass the CSET, but cumulative pass rates are only 65% for mathematics candidates and 64% for physics candidates. The pass rates are even more striking when considering the annual passing rate for 2016-2017: Only 63% for mathematics, 68% for biological sciences, 75% for chemistry, and 52% for physics.

Teacher pension systems, and their portability (or lack thereof) may also affect whether a teacher decides to seek employment in a neighboring state. In contrast to the private sector, teachers are overwhelmingly enrolled in defined benefit pension systems in which their retirement compensation is based on a formula that takes into account a teacher's years of service (aka service credits), their average salary during the last few years of their employment (typically 3-5 years), and an age factor (multiplier based on their age at the time of retirement). Under such systems teachers face a penalty for moving from one state to another, even if their salary profile working across two states is exactly the same as if they maintained employment in only one state (Costrell and Podgursky, 2010; Goldhaber et al., 2015a; Koedel et al., 2011). Indeed, teachers who split their careers across states (and hence pension systems) will often see the value of their pensions cut by 25-50% relative to if they had stayed in the same state.

Consider, for instance, a hypothetical scenario where a 40-year-old teacher with 15 years of experience teaching in Nevada is considering taking a teaching job in California. For simplicity, we will assume the annual salary for each position to be equal at $60,000. If our teacher remains teaching in Nevada for 15 more years, they will receive an annual retirement benefit of $68,086. However, if our teacher moves to take a position in California and then teaches for 15 more years they will receive an annual retirement benefit of $49,894. This represents roughly a 30% reduction in their annual retirement benefit.[8,9] It is important to note

[8] California and Nevada have relatively similar pension structures. Nevada's benefit calculation formula is: 2.25% * Average Final Compensation (AFC) (3-year average) * Years of Service (YOS). California's formula is 2.0% *AFC * YOS. For the calculation we report above we assume an annual salary increase of 3%.

[9] A related issue inhibiting cross-state and cross-district teacher mobility, one that skirts state and local policies, is the granting of tenure. In California, tenure is earned after the accumulation of two years of experience. However,

that this benefit decrease is not being driven by differences between California and Nevada teacher pension formulas (the two states actually have quite similar formulas), but rather it is a result of the importance of accumulated years of service (YOS) credits and average final compensation (AFC) in calculating a final benefit (two features common to the majority of teacher pension systems). Despite teaching for 30 years in each scenario, the teacher who relocates is only able to apply their 15 YOS to each pension system, separately, while simultaneously achieving a much lower AFC in their origin state.

While state policymakers can enact reforms that reduce barriers to entry into teaching or make it easier for teachers to move across state or district lines, district policymakers (district administrators, school boards and teachers' unions) can also implement strategies to ease shortages. In particular, local California districts govern teacher compensation through their negotiated salary schedules. The way teachers are compensated greatly affects labor supply and teacher mobility. The use of uniform pay scales, commonly utilized by districts, which do not differentially compensate teachers based on specialty or subject area, may influence whether certain types of teachers decide to enter the teaching profession. Teachers with specialized training, such as those in STEM, likely have more favorable employment opportunities outside of teaching (Walsh, 2014) which in turn would affect both one's decision to enter teaching as well as how long to remain in the profession. Districts might offer economic incentives -- extra compensation on top of their schedule-allocated salaries, or separate salary schedules for certain kinds of high-need teachers. However, there is little evidence that such economic incentives are broadly used to target teachers in shortage areas. In a review of local policies in place in California school districts in the 2005-6 and 2008-9 school years, Strunk and Zeehandelaar (2011, 2015) show that only 1% of school districts offered salary incentives for math or science teachers in either year, and only 14% and 22% offered incentives to special education teachers in each year, respectively.

Although economic incentives may be a useful and underutilized policy, the research investigating the degree to which financial incentives can be used to attract and retain teachers in subject shortage areas and hard-to-staff schools is somewhat mixed. First, it is not clear that incentives are always aligned with districts' own staffing needs; Strunk and Zeehandelaar (2015) find that, in California, incentives that were in place for teachers with credentials to teach English as a Second Language or Special Education frequently are not aligned with the observable staffing needs of districts. That said, there is some evidence that incentives – even of relatively small values – might aid in retention and, to a lesser extent, in recruitment. Clotfelter, Ladd, Vigdor and Wheeler (2006) find that a short-lived incentive policy in North Carolina that provided $1,800 salary increases to math, science, and special education teachers who taught in low-performing public schools was successful at reducing turnover rates by an

school districts must inform teachers by March 15th of a teacher's second year whether or not they will be reelected and granted permanent status (i.e., tenure). Because of this March 15th deadline, districts have less than a year and a half to determine whether or not a teacher should be granted tenure. Because tenure is a district decision, teachers who move across district lines (or across state lines into a California district for the first time), lose their tenured status and must start a fresh tenure clock if they choose to move into the teaching workforce in a new district in California.

average of 12 percent. In addition, Steele, Murnane and Willett (2010) find that a California incentive policy providing $5,000 per year for four years to attract academically talented new teachers to the state's lowest performing schools increased the likelihood that those teachers would work in hard-to-staff schools by 28 percent. In addition, 75 percent of the teachers receiving the incentive stayed in the schools for at least four years. However, in the most recent large-scale study of sizable economic incentives, Glazerman, Protik, Teh, Bruch, and Max (2013) examined the effects of the Talent Transfer Initiative, a program which offered $20,000 bonuses (paid over two years) to teachers if they moved from advantaged to less-advantaged schools. They find that a relatively low percentage (approximately 5%) of eligible teachers accepted the offer. However, the program may have been a helpful retention tool, as the majority of teachers who accepted the incentive persisted in the less-advantaged schools while they received the bonuses.[10]

Probably the most important local policies that impact teacher supply and shortage are contained in districts' collective bargaining agreements (CBAs) – the contracts negotiated between school district administrators and local teachers' unions. These CBAs contain most of the local policies that govern teacher working conditions, and thus may affect district-specific recruitment and retention of teachers. These policies include those surrounding compensation and benefits, class size, preparation time, evaluations, school year and day schedule, seniority rules and transfer policies, all of which determine critical elements of teachers' working conditions (e.g., Strunk, 2012; Strunk et al., 2018). There is a significant amount of research on the relationship between CBA content and student achievement (e.g., Moe, 2009; Strunk, 2011; Marianno & Strunk 2018; Strunk & McEachin, 2011), but fewer studies have examined the relationship between CBA content or strength and teacher mobility, distribution or supply.[11]

The small group of studies that examine one set of CBA provisions -- seniority-based transfer and vacancy protections – and their association with teacher distribution suggests the transfer protections in teacher CBAs contribute to inequities in the distribution of teachers across schools by influencing patterns in teacher transfers that occur within-district (Cohen-Vogel, Feng, & Osborne-Lampkin, 2013; Feng, 2010; Moe, 2005; Anzia & Moe, 2014; Goldhaber et al., 2015). When CBAs contain provisions that shield senior teachers from involuntary transfers or allow senior teachers first pick of open positions in other schools within the district over less senior teachers, those provisions may be enabling certain teachers to move out of less desirable schools (as proxied by student poverty or minority composition) and stay in more attractive placements. The CBA provisions may therefore be contributing to the inequitable distribution of teacher experience within school districts. For instance, Goldhaber and colleagues (2015b) find evidence that seniority transfer protections play a role in the movement of teachers within school districts; the differences in mobility patterns by teacher experience vary depending on the CBA transfer provisions that govern such moves. In particular, they found that the interaction between teacher experience and school

[10] For more on the effects of financial incentives as a teacher retention tool see Clotfelter, Glennie, Ladd, and Vigdor, (2008), Cowan and Goldhaber (2015), Springer, Swain, and Rodriguez (2016).

[11] We will turn to an analysis of the contents of California CBAs below to better understand the landscape of local policies that affect teacher supply and distribution.

disadvantage in teacher transfer decisions is more extreme in districts with strong seniority transfer protections, with veteran teachers being more likely to leave disadvantaged schools and thus new teachers being more likely to stay in disadvantaged schools.

It has been difficult to pursue this line of questioning in California because of the afore-mentioned lack of access to teacher-level longitudinal data. This is a shame, given that in California the issue of equity and teacher quality has been a matter of considerable debate in the run-up to and wake of the *Vergara v. California* court case (Cal. Ct. App. 2016). In this case, student advocates argued that there was evidence that various state and district policies, including many that are ensconced in CBAs, were contributing to the increased likelihood that low-income and minority students were assigned to lower quality teachers. Eventually the court ruled against the plaintiffs in the case, but it was impossible to provide definitive evidence about the relationship between CBA policies and the equitable distribution of teachers, even though California is one of the few states in which researchers have collected a longitudinal dataset of CBAs to enable such study (e.g., Marianno & Strunk, 2018).

California is hardly the only state to struggle with issues of student equity and teacher quality. In fact, the widespread recognition that teacher quality gaps (TQGs) exist between advantaged and disadvantaged students and that this problem is systemic is likely the impetus behind the US Department of Education launching a recent initiative directing states to devise equity plans and describing the steps they would take to ensure every student has equitable access to excellent educators.[12] Crafting policies to address TQGs first requires a better understanding of what contributes to them and which policies seem to exacerbate them. In the remainder of this report we examine how policies contained in local CBAs might contribute to one aspect of TQGs: the distribution of teacher vacancies.

Data & Measures

This project draws upon three main sources of data, which we discuss below.

District-Level Administrative Data

The California Department of Education makes publicly available cross-sectional district-level data on the demographics and characteristics of students and teachers. From these data, we use aggregate student characteristics including the proportions of students in each district who are under-represented minorities (not White or Asian), eligible for free- or reduced-price lunches, English Language Learners, meet or exceed state standards in English Language Arts (ELA) and math, and average student performance on state standardized tests. We also use district enrollment size and geographic location (urban, suburban, town and rural). Aggregate teacher characteristics include the proportion of teachers in each district who are White, are considered new teachers (either to the profession or the district), have advanced degrees, and the average number of years teaching in the district. We mainly rely on data from the 2014-15 school year to complement the data collected from district CBAs (detailed in the section below).

[12] For more see https://www2.ed.gov/programs/titleiparta/equitable/titleiiequityanalysis1031.pdf

Table 1 provides summary statistics for these data.

Table 1. Summary statistics of district-level administrative data

	2014-2015	
	Mean	SD
Students (in each district)		
% of minority students (excluding Asians and Whites)	0.56	0.26
% of students eligible for free or reduced-price lunch	0.54	0.26
% of students who are ELLs (current and formally LEP)	0.21	0.15
% of students meeting or exceeding standards in ELA on CAASPP	0.46	0.17
% of students meeting or exceeding standards in Math on CAASPP	0.35	0.18
Average standardized scale score in ELA on CAASPP	0.15	0.86
Average standardized scale score in Math on CAASPP	0.13	0.89
District		
Rural	0.08	0.27
Town	0.17	0.37
Suburban	0.49	0.50
Urban	0.26	0.44
Total number of students in each district	11,695	31,189
Teachers (in each district)		
% of teachers who are White	0.72	0.19
% of teachers with 2 years or less of teaching experience	0.13	0.07
% of teachers with 2 years or less of district experience	0.19	0.09
Average # years teaching of teachers	13.71	2.16
% of teachers who have a doctorate	0.01	0.02
% of teachers who have a MA degree	0.22	0.16

	2015-2016	
	Mean	SD
Staffing difficulties (in each district)		
Average # of vacancies per 1,000 students[1]	7.41	5.90
Average duration of job postings (in days)	41.61	29.40

We also generate two measures that we believe may help to explain potential shortages faced by districts: 1) being located on the state borders with Arizona, Nevada or Oregon); and 2) the proximity (in miles) of the district to a Teacher Education Program (TEP). We include the former measure because of many of the reasons we highlight above. Teachers who live near the border have the option of teaching in two drastically different state contexts. We give the example above of the similarities between the Nevada and California pension systems, but California differs from Nevada and other border states in their licensure reciprocity, and other barriers to entry (e.g., standards for gaining a license).[13] We include the latter measure because TEPs often use nearby districts as placements for student teachers, and research shows that student teachers often gain and accept employment in the district in which they did their training (Krieg, Theobald, and Goldhaber, 2016).

[13] Of course there may be other instances of teachers who move across state lines, which we cannot capture using this analysis.

CBA and Salary Data

This paper also draws upon a dataset of contract provisions and salary schedules for California school districts from the 2014-2015 school year to examine individual provisions in the CBAs that may affect teacher supply and distribution and to generate measures of district desirability for all teachers, teachers who are new to the profession, those who continue to teach in the district, teachers who are not new to the profession, but are new to the district, and teachers in shortage areas. We combine measures of teachers' negotiated compensation at different points on their salary schedules and "district desirability" with California school district demographic and performance data.

We limit our sample to CBAs from school districts with four or more schools. The focus on districts with four or more schools is because many contract policies (e.g., teacher transfer and grievance provisions) do not operate in smaller districts or operate to a much lesser extent than similar provisions in larger districts. We collected 495 (86%) of California school district contracts with four or more schools from the 2014-15 school year.

Our measures of district desirability are developed from a close content analysis of the collected CBAs. We selected particular provisions and then marked them as potentially positive or negative for different types of teachers (i.e., all teachers, new teachers, shortage area teachers, those continuing in district, and those new to the district). For example, the provision, "Does the CBA provide a credit on the salary schedule for military experience?" could indicate a recruitment strategy that is potentially desirable to teachers new to the district. Similarly, whether or not the CBA outlines a required new teacher mentoring program might make that district more desirable to incoming new teachers. The provision of economic incentives (bonuses) for math or science teachers may help districts recruit teachers in those specific shortage areas. Other provisions send school culture signals, such as grievance procedures or layoff/transfer processes, which in turn can be thought as positively or negatively desirable for all types of teachers, new and those already teaching in the district.

The final items included in the model were selected according to standard test item selection methods. Following Strunk and Reardon (2010), we performed exploratory Cronbach's alpha analysis, removing items that were not associated with the underlying trait of desirability at above 0.10. Then we re-ran the alpha-item correlations and removed items that were not associated with contract desirability at above 0.25. The total number of items used in the model is reduced substantially by using this method but are more tightly aligned with the underlying trait.

The final measures are sums of the final set of CBA provisions identified via the process described above. Each district's score on an index measure is simply the number of provisions from the set for that measure that can be found in the district's CBA. We generate several measures of "desirability," assessing the prevalence of items that might make CBAs desirable to 1) all teachers in a district; 2) teachers who teach in a "shortage area"; 3) new teachers who are just entering the profession; 4) teachers who are new to a district but not necessarily new to

the profession; and 5) veteran or continuing teachers. Tables 3-7 provide the individual CBA provisions included in each desirability measure. The first column of Table 8 provides the summary statistics for the desirability indices. These means can be interpreted as the average proportion of CBA provision items in that index in California CBAs in our sample.

Edjoin Data

Job posting data are provided by Edjoin, a national organization that assists school districts with listing education job position openings. The Edjoin data span from July 2014 through December 2018 and include just under 400,000 unique district job postings throughout California, of which, a little over 130,000 are specific to teacher vacancies. There are approximately 98,155 teaching position openings stemming from 898 unique California public school districts, or roughly 85% of the total districts in the state.[14] The data include information on the position posting date, the title of the position, whether the position is full time or part time, as well as a number of other descriptive elements related to the various openings.

We use the Edjoin data to assess the degree of staffing difficulties faced by California districts. While these data likely represent the best California statewide information on teaching vacancies, they are limited in some respects. For instance, while the vast majority of districts using Edjoin follow guidelines when developing their job postings, flexibility within their system allows districts the opportunity for entry error. In some cases we are unable to link a posting to the corresponding district because the posting agency field (i.e. the agency for which the posting is submitted) contains either missing or incorrect information. California County Offices of Education, for example, often make postings on behalf of the school districts they serve, but in some cases a posting does not specify which particular district a position relates to. In exploring the data, and through correspondence with Edjoin official(s) we have established other instances of limitations with the data and have added notes regarding these issues while describing the measures below (J. Michaels, personal communication, July 25, 2018).

We use the Edjoin data to construct measures of teacher vacancies at the district and year level. We take the number of teaching position postings listed by a district in a year and divide that by the number of students in that district and year.[15] This measure is presented in Table 1 as the mean number of teaching position vacancies per 1,000 students.[16] We are also interested in the timing and duration of postings. Some of the teacher hiring literature defines

[14] Edjoin also serves private schools, county offices of education (COEs) (COEs in turn sometimes post on behalf of school districts), post-secondary institutions, and some alternative programs/schools which accounts for the difference in linkable postings.

[15] The Edjoin data also contain a measure for the number of openings associated with a position. However, this measure is not consistently utilized by districts. Therefore, each posting is treated as a single opening which may suggest measures of vacancy and/or total postings by districts are conservative.

[16] We also explore using a vacancy measure based on the number of teachers in each district. These two measures have a correlation of above 0.95. We elect to use the former per student measure as it has better coverage across districts and years. The latter measure is available upon request.

late postings as any hiring done over the summer months and during the first months after the start of the school year (Levin & Quinn 2003; Keo et al., 2017; Papay & Kraft, 2016). Using the date of a job posting we are able to track the number of postings listed from month-to-month and we are also able to create a late posting flag for any posting occurring after the start of the school year through the end of the calendar year (e.g. September-December). We then use these measures to ask, "What is the number and percentage of late job postings?" We report on how late posting figures break down by various district types and by posting subject areas (elementary, STEM, special education, ELL, and other).[17]

We also create a measure of the duration of the job posting – how long it was posted, which should provide information about how difficult it was to fill. However, we note at the outset that there are substantial limitations to the posting duration measure. While around 95% of postings have durations falling within 365 days, in some cases districts enter a posting end date that is chronologically before the original posting date. We assume in these cases that districts are back-dating the posting deadline field so that the position no longer appears to potential applicants, but we cannot confirm this or other assumptions about this measure. Because of the potential noisiness of the duration measure, we view our duration results only as loosely suggestive of relationships between district characteristics or CBA provisions and staffing difficulties.

Analytic Dataset

The final analytic dataset includes merged data from the three sources listed above (i.e., district-level administrative data, CBA and salary data, and Edjoin data). For consistency purposes we report outcomes based on the restricted sample of 495 unique school districts (described in the *CBA and salary data* section).[18] The final dataset includes administrative and Edjoin data for four academic years (e.g. 2014-15 to 2017-18 school years) and contain 87,862 district-year posting observations. CBA specific analyses are limited to 2014-15, while the Edjoin regression analyses are limited to 2015-16 (includes 28,908 district-year postings).[19] Summary statistics for these samples are reported in Table 1.

Analytic Approach

We rely on purely descriptive methods to assess the landscape of local workforce policies and the distribution of teacher vacancies in California, and how they vary across districts. To examine relationships between workforce and compensation policies and local teaching shortages, we run simple district-level regression models that merge the CBA data with the Edjoin measures. This allows us to identify how policies found in local CBAs are

[17] We extract posting subject areas using the listed position titles, grade (if listed), school (if listed), and endorsements required (if listed). If a teaching position title lacks a subject area descriptor but is at the elementary level the posting is assigned to "Elementary", and for secondary grades to "Other."

[18] Results for staffing difficulties for the full Edjoin data (898 unique school districts) are available upon request.

[19] Because the Edjoin data begin in July 2014, we select the 2015-16 school year for Edjoin regression analyses to have complete data for the calendar and academic year. In addition, this allows us to run lagged measures on select controls that would be influential in year t-1 but less so in year t (e.g. average student achievement).

associated with the number of vacant teaching slots posted, the proportion posted after the school year begins, and the average duration of vacancy postings, all controlling for other district characteristics that may affect vacancy rates. Together, these analyses help paint a picture of the kinds of policies that local districts negotiate to help address teacher shortages in California, and to take a first cut at the effectiveness of such policies. Of course, we cannot draw causal claims from these analyses.[20]

Using the available data, we estimate models of the following form:

$$(1)\ VACANCY_d = \beta_0 + \beta_1 CBA_d + \beta_2 \ln(enrollment)_d + \beta_3 \%\mathrm{FRL}_d + \beta_4 \mathrm{urban}_d + \beta_4 \mathrm{rural}_d + \varepsilon_d$$

Where $VACANCY_d$ is one of three outcome variables: 1) the number of vacancies per 1000 students (Vacancy Rates); 2) the proportion of vacancies posted late; or 3) the duration of the vacancy posting. CBA_d is one of several CBA compensation or workforce policies: Desirability indices for all teachers, shortage teachers, teachers new to the district, teachers new to the profession and continuing teachers; Negotiated class sizes for elementary (K-5) middle (6-8) and secondary (9-12) grades; negotiated salaries for teachers (with and without master's degrees) with 0, 5, 10, 20 and maximum scheduled years of experience; and salary structure as measured by the returns to experience in the first five years of teaching in a district and the measure of backloading discussed above. We include controls for district size (the natural log of enrollment) the proportion of students who qualify for Free or Reduced Priced Lunch (FRL), an indicator for Rural District, and the Urban or Rural location of the district (with suburban and town as the reference category). We also include an indicator for whether or not the district had any postings in Edjoin (not shown) to enable us to include districts without any postings in our analyses but not have these "0" outcome measures affect our results.

In addition, we run regressions similar to the model above, this time substituting the CBA provisions with our measures of border district location and proximity to the nearest TEP. These regressions are intended to answer our third research question, about the distribution of teacher vacancies and duration across different kinds of school districts.

Results

In this section, we address our five research questions in turn: 1) What do districts' vacancy postings tell us about California districts' staffing needs and how they vary across districts?; 2) What is the landscape of district compensation and workforce policies that affect the California teacher labor force, and how do these policies vary across districts within California?; 3) What is the association between district compensation and workforce policies (e.g. those governed by CBAs) and the number of posted vacancies?; 4) What is the association between district compensation and workforce policies and the number of vacancies that districts post late (i.e.,

[20] We cannot interpret the findings as being causal given that matches between teachers and schools/districts are only observed when preferences of teacher applicants and district hiring officials align (Boyd, Lankford, Loeb & Wyckoff, 2013).

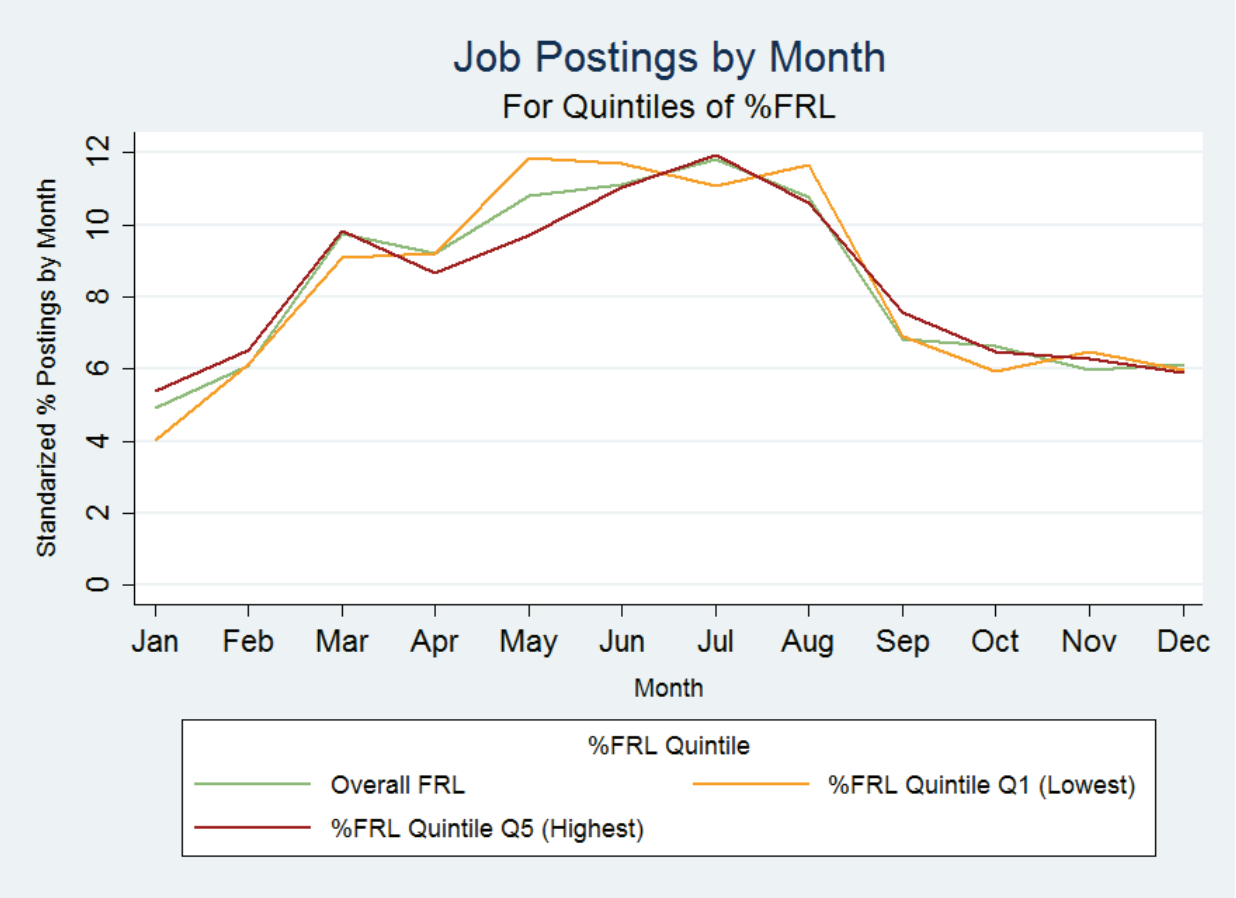
in the fall for the current school year)?; and 5) What is the association between district compensation and workforce policies and the duration of job postings?

What Do Districts' Vacancy Postings Tell Us about California Districts' Staffing Needs and How They Vary across Districts?

We begin to assess the staffing needs of various districts by looking at the *timing of the distribution of postings* by different types of districts for different types of teachers. As noted above, we assume that postings that happen in the spring of a year are for the following school year (i.e. these represent early postings), and that postings that happen in the fall of a year are for that same school year (i.e. represent late postings). Figures 1–3 describe the number of cumulative postings for teaching positions throughout the year for school districts that vary by poverty (as measured by the percentage of FRL students), achievement (as measured by the average of California Assessment of Student Performance and Progress (CAASPP) score in ELA and Math), and urbanicity.[21] We split districts into quintiles (Q1 are the lowest poverty and lowest performing and Q5 are the highest poverty and highest performing districts), and compare districts in the first and fifth quintile of districts to the overall distribution. Figure 1 shows that, in low poverty (bottom quintile) districts, 11.8% of the teacher postings throughout the year are posted by May of that year, whereas this is the case for only 9.8% of postings for low poverty districts).

[21] These figures are created by averaging the monthly percentage of postings for each district across years 2015-2017—as those are the years in which the Edjoin data covers the entire calendar year—and then averaging across all districts in each category of poverty, achievement, or urbanicity respectively. The analysis is restricted to the 495 districts that can be merged to the CBA and salary data described above. Comparable data for the full 898 districts in the data supplied by Edjoin are available upon request. The results for the full Edjoin dataset look qualitatively similar those described in the main text.

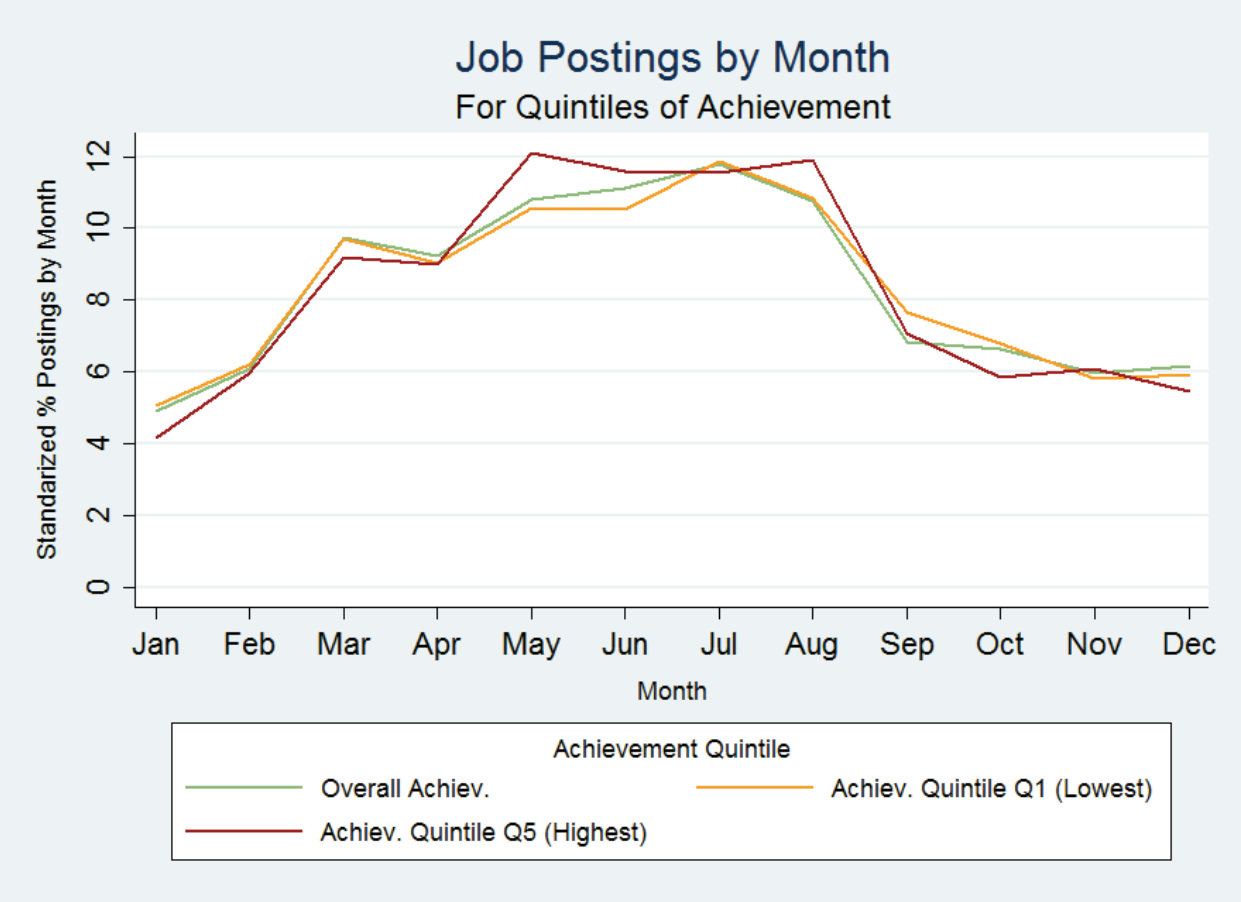
Figure 1. Percent postings throughout the year by FRL



Note. Total number of job postings: N=87,862. Job postings are standardized by school district and year. Result are based on all years of available data (e.g. 2014-2015, 2015-2016, 2016-2017). The overall %FRL plot is based on all quintiles of data. The %FRL quintiles are estimated using administrative data from California Department of Education (CDE). Assignment to quintile is done by taking the district year mean of %FRL across all years.

Figures 1 and 2 show that there are differences between districts in terms of poverty and achievement status in the timing of postings. Postings peak in July for high poverty districts but in May for low poverty districts. Moreover, roughly 25% of postings for low poverty (Q1) districts occur after August as compared to 28% of postings for high poverty (Q5) districts. We observe similar discrepancies by student performance, with high-performing districts posting earlier and having fewer late postings. The differential in the timing of postings may in turn have implications for districts' abilities to fill vacancies with high-quality teachers given the aforementioned (Levin & Quinn 2003; Keo et al., 2017; Papay & Kraft, 2016) evidence connecting hiring data and teacher quality.

Figure 2. Postings throughout the year by achievement

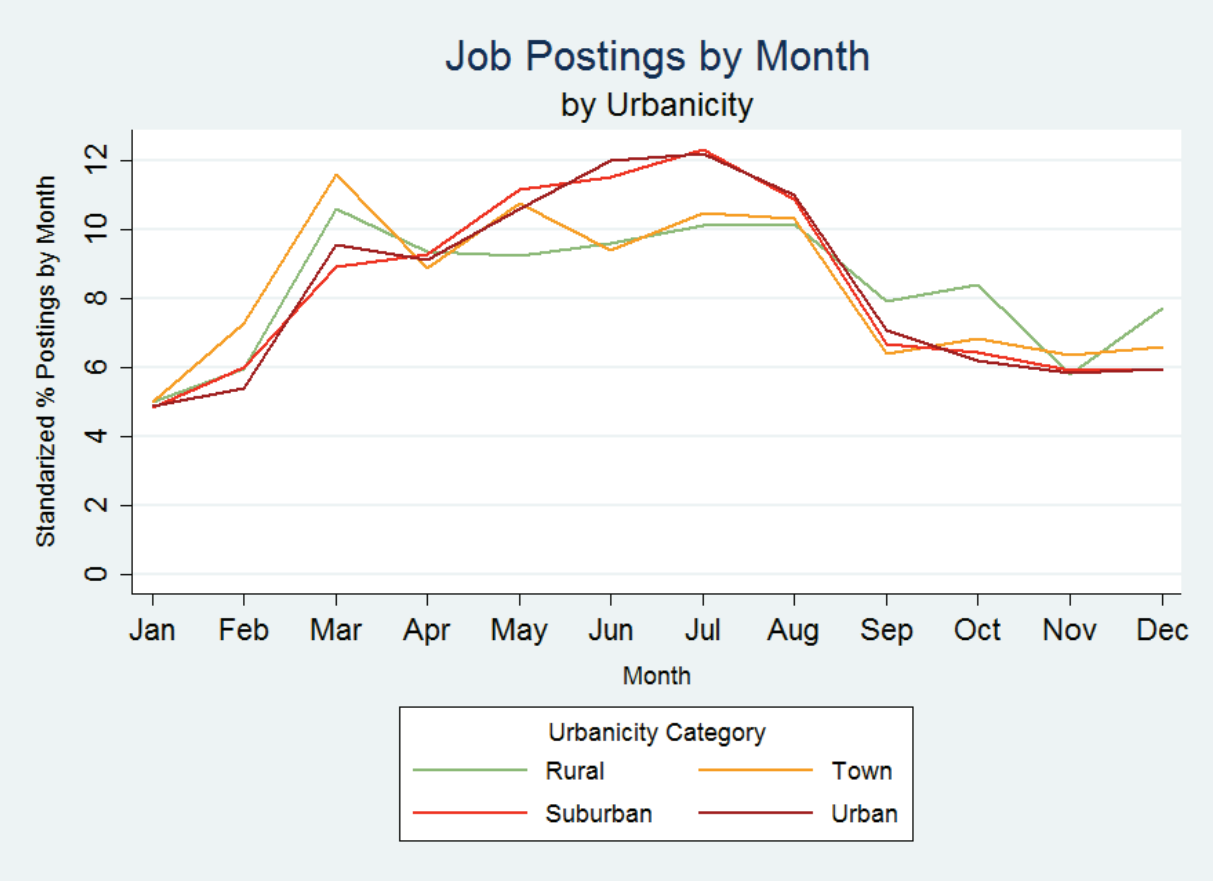


Note. Total number of job postings: N=87,862. Job postings are standardized by school district and year. Result are based on all years of available data (e.g. 2014-2015, 2015-2016, 2016-2017). Achievement is measured by the average of California Assessment of Student Performance and Progress (CAASPP) score in ELA and Math. The overall achievement plot is based on all quintiles of data. The achievement quintiles are estimated using administrative data from California Department of Education (CDE). Assignment to quintile is done by taking the district year mean of achievement across all years.

There are even larger differences in hiring timing by urbanicity (shown in Figure 3). Less urban areas are far more likely to post positions early. For instance, 31% of yearly job postings in rural districts and 33% of yearly postings in town districts occur prior to May, whereas urban districts post only 29% of their openings in the same time frame. One possible explanation for this finding is that urban districts are more likely to have CBA provisions requiring that candidates for a position who are internal to a district get a first shot at a new job opening, i.e. districts cannot post a job for external applicants before a set date by which internal (transfers) candidates get a first shot at the job (Marianno et al., 2018; Strunk, 2012).[22]

[22] However, we test for this by including such provisions in the CBA measure in equation (1) and find no consistent relationship between these provisions and our measures of vacancy rates or late posting. Results available upon request.

Figure 3. Postings throughout the year by urbanicity

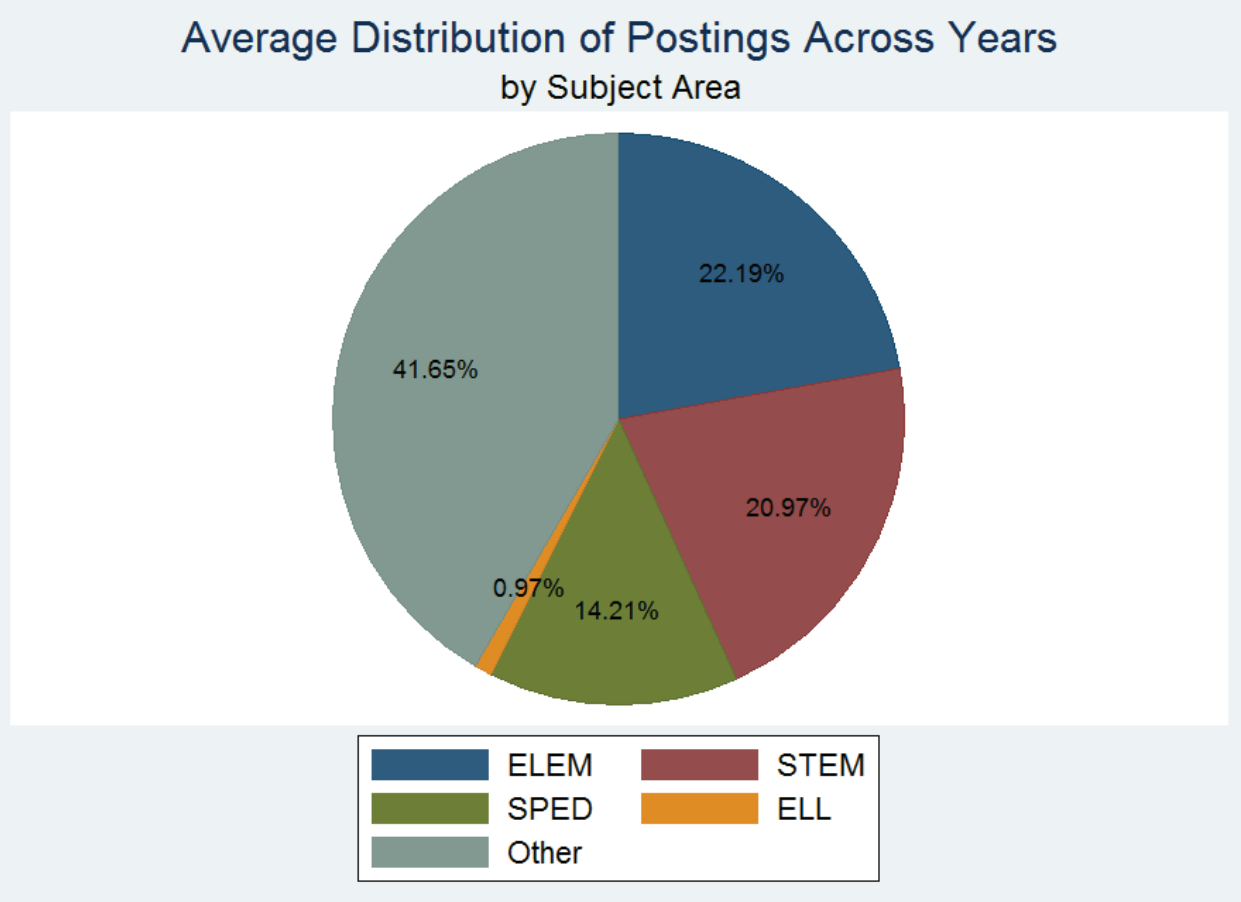


Note. Total number of job postings: N=87,862. Job postings are standardized by school district and year. Result are based on all years of available data (e.g. 2014-2015, 2015-2016, 2016-2017). All Districts: N=495, Rural Districts: N=38, Town Districts: N=89, Suburban Districts: N=246, Urban District: N=122. Urbanicity categories are assigned based on the mode category observed across all years of the data.

Next, we turn to the type of teachers that districts are seeking. Figure 4 shows the percentage of postings by subject area (Elementary, STEM, Special Education, ELL, and Other[23]), averaged across all years. Approximately 22% of postings are for elementary teachers, with another 21% seeking STEM teachers. Fourteen percent of postings are for special education teachers. A small number (less than 2% in any year) are for ELL teachers. The largest category of postings for all types of districts in all years is for the *Other* category (42%).

[23] The Other category is inclusive of all other subject areas (i.e. everything from English to Physical Education to Art and Drama).

Figure 4. Percent breakdown of postings by subject areas



Note. Total number of postings: N=87,862. Percentages displayed are based on raw counts of job postings and are influenced by number of postings by district and year.

These teaching vacancy rates differ substantially from actual district staffing by subject area. For instance, in most K-12 districts throughout the country, about 32% of teachers are considered elementary teachers whereas only 15% are STEM teachers (U.S. Department of Education, 2016). Thus, to gain a better sense of the *relative needs* for specific teacher skills in California, we divide each share by the proportion of teachers in a subject area, creating a *relative needs ratio*. More explicitly, we first take the percent of postings by subject area at the district-year level, and then using figures derived for California from the National Teacher and Principal Survey (NPTS) 2015-16 estimate over the percent of positions associated with those subject areas.[24] Under this weighting scheme, postings across all areas would have an equal percentage if the relative staffing needs were the same across subject areas. However, there are cases where the proportion of postings exceeds the estimated existing staffing, meaning that the relative needs ratio is higher than 1, which in turn suggests that the need is relatively

[24] NPTS 2015-2016 is designed to be a nationally representative survey which collects data on a range of education related issues, one of which is, teaching positions by subject area.

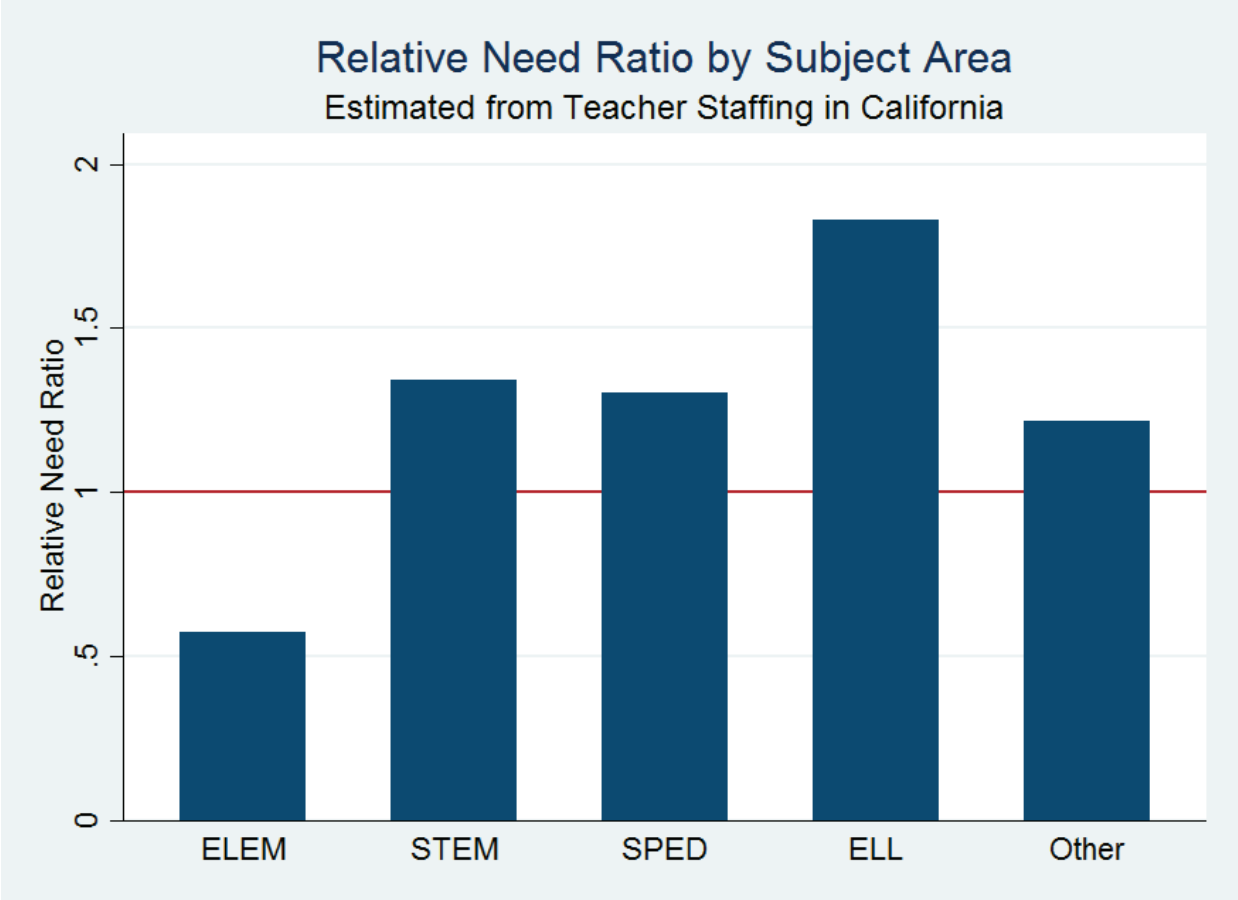
high in that subject area (the converse is also true in that a ratio of less than 1 suggests that the relative need is low).

Figure 5 shows the estimated relative need in each subject area using the weighting scheme described above. The relative needs ratio in Figure 5 strongly reflects the difficulties that districts face in staffing STEM classrooms. Specifically, while 21.0% of the postings are for a STEM teacher, only 15.6% of teachers are in STEM areas, meaning that, on average, STEM postings are about 1.3 times as likely as one would expect relative to the proportion of STEM teachers in districts. We also observe high relative needs for special education teachers, teachers who fall into "other" categories, and ELL.[25] By contrast, districts have relatively little difficulty staffing Elementary positions; 22.2% of all postings are for an Elementary position, but 38.7% of California teachers are Elementary teachers, so that Elementary positions are on average .58 times as likely as one would expect.[26] The finding that schools in California face more difficulty staffing special education, ELL, and STEM classrooms is very much in line with evidence about school staffing difficulties nationally (Cowan et al., 2016; Dee and Goldhaber, 2017).

[25] The percentage of teachers in each subject area are based on the 2015-2016 NPTS estimates of California teachers. Results are qualitatively similar when percentages are based on nationally representative (rather than California specific) estimates of staffing from the 2015-2016 NPTS.

[26] It is worth mentioning that estimates based on ELL staffing are limited. The 2015-2016 NPTS estimates California having ELL teachers account for 0.53% of teachers in the state, whereas the national estimate is 2.05%. While the 1998 California Proposition 227 imposed "English Only Classrooms", that was only recently overturned in 2016 by Proposition 58, the estimate still seems low.

Figure 5. Weighted proportion of postings by subject area

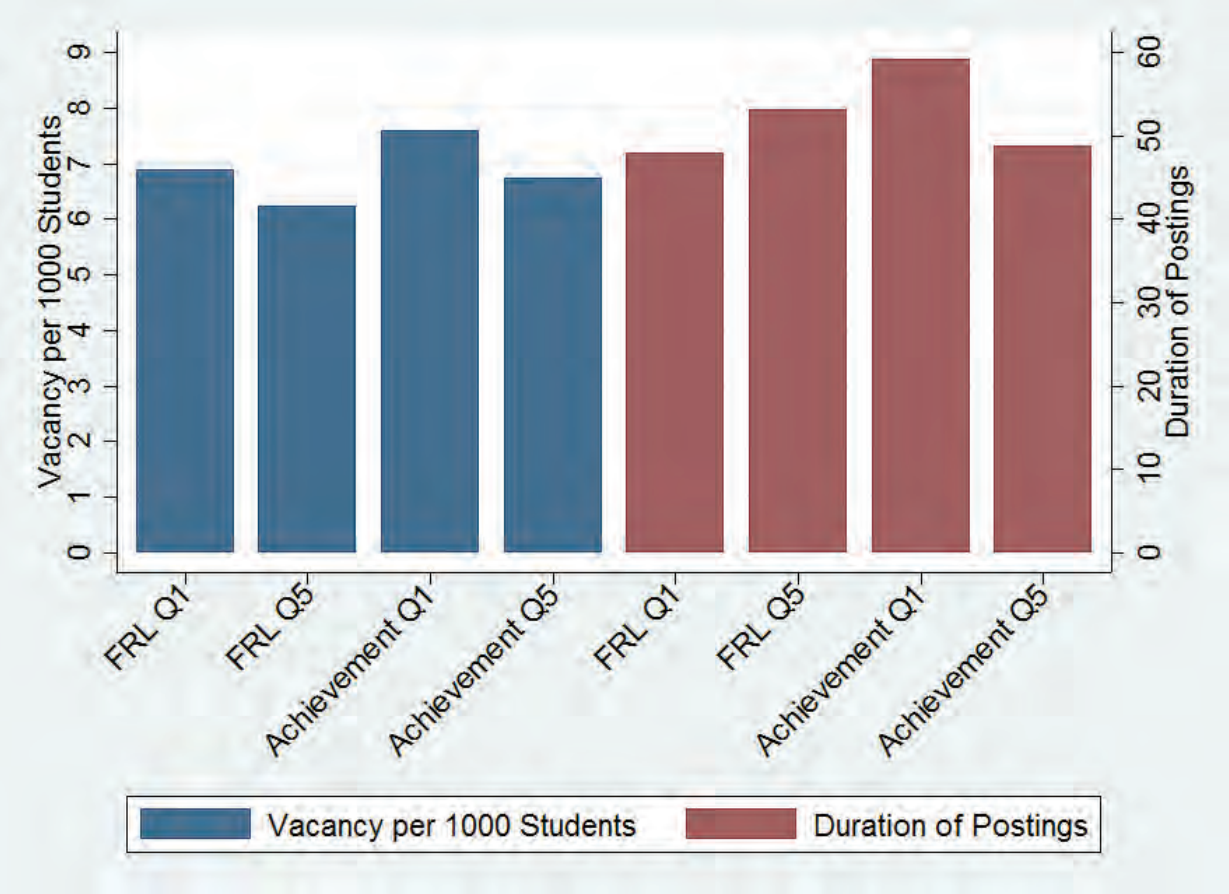


Note. Total number of postings: N=87,862. Proportion of teachers in each subject category estimated from 2015-2016 NTPS survey, restring the sample to California respondents.

Figures 6 and 7 report measures of district need by poverty and achievement quintiles (Figure 6) and by urbanicity (for both figures, the left vertical axis and blue bars shows vacancies as a measure of the number of postings per 1000 students. The right vertical axis and red bars provides the average duration of postings.[27] The evidence clearly shows that lower achieving (bottom quintile) districts (shown on the right sides of each figure) have relatively more vacancies – roughly twice the number per 1000 students than higher achieving (top quintile) districts. We also see that lower-achieving districts tend to have their postings available for longer periods – approximately 11 days – before they are filled.

[27] The vacancy measure reported is average vacancies per 1000 students. Only postings that had a positive reported duration spanning less than a year were used, which accounts for 98.54% of the overall postings from the CBA district restricted sample.

Figure 6. Poverty and achievement bar charts vacancies postings/duration



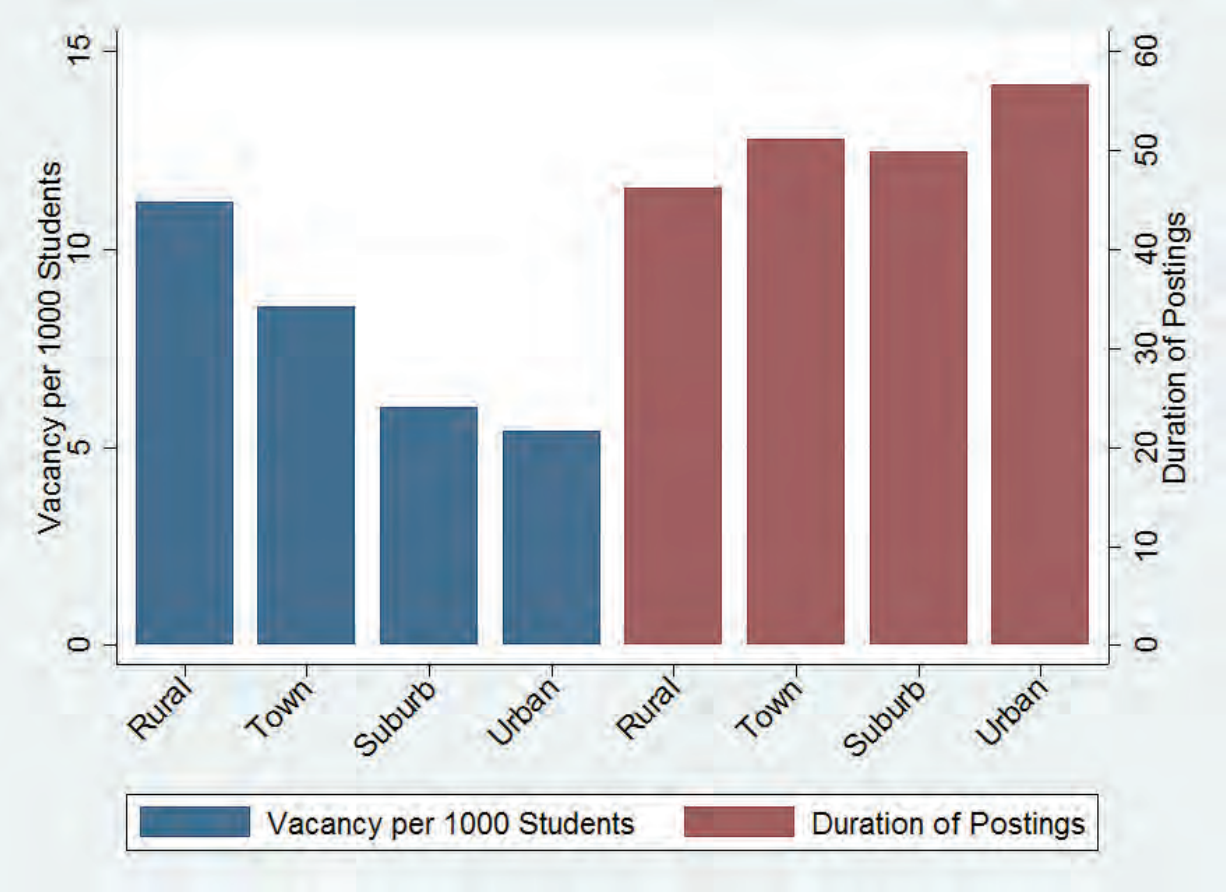
Note. Total number of postings: N=87,862. The FRL quintiles are estimated using administrative data from California Department of Education (CDE). Assignment to quintile is done by taking the district year mean of FRL across all years. Achievement is measured by the average of California Assessment of Student Performance and Progress (CAASPP) score in ELA and Math. Assignment to quintile is done by taking the district year mean of achievement across all years. Only postings that had a positive reported duration spanning less than a year were used, which accounts for 98.5% of the overall postings from the 495 districts restricted sample.

Interestingly, the picture is less clear when we examine the economic disadvantage of districts, shown on the left side of Figure 6; high-poverty districts have fewer vacancies per 1000 students than do the low-poverty districts, but the average posting duration is about 6 days longer in the highest quintile FRL districts than the lowest quintile districts. This finding for the postings per student by FRL is counterintuitive. It appears, however, that this is at least partially an artifact of the subset of districts in the CBA sample (those with four or more schools). The full sample follows the intuition that higher FRL tends to be associated with (slightly) higher vacancies (these results are available upon request).[28]

[28] The CBA sample predominantly excludes small rural districts: 13% of all rural districts are in the CBA sample. Furthermore, only 8% of top quintile FRL rural districts are in the CBA sample, while for all other urbanicity categories 70% of the top quintile FRL districts are in the CBA sample.

In Figure 7 we observe that rural districts have far more vacancies per 1000 students than do other districts, about twice as many as urban districts, but their posting duration is shorter. Again, the dichotomy between the vacancies per student and posting duration is counterintuitive. It may be that urban districts have more cumbersome hiring processes than other, generally smaller and potentially less bureaucratic districts. In addition, as noted above, we cannot ascertain if a single posting is for more than one vacancy. It may be that urban districts are using a single posting to fill several vacancies, in which case postings may be left on Edjoin for longer as districts work to hire additional teachers. We return to this question in Section 5.3, when we examine the relationship between district location (near a border and distance from nearest TEP) and vacancy rates, late posting and duration.

Figure 7. Urbanicity bar charts vacancies postings/durations



Note. Total number of postings: N=87,862. All Districts: N=495, Rural Districts: N=38, Town Districts: N=89, Suburban Districts: N=246, Urban District: N=122. Urbanicity categories are assigned based on the mode category observed across all years of the data. Only postings that had a positive reported duration spanning less than a year were used, which accounts for 98.54% of the overall postings from the 495 districts restricted sample.

Next, we turn to Table 2, which reports coefficients from the regressions shown in equation (1), where we regress the vacancy outcomes discussed above on districts' location on a border and proximity to the nearest TEP. The first column in each vertical panel shows relationships between CBA policies and vacancy outcomes (vacancy rates, percent of vacancies

posted late, and posting duration) without any controls included in the model, and the second column shows regressions including controls for district characteristics: district size (total student enrollment), the proportion of students in poverty (percent of students qualifying for FRL), and district geographic location (rural and urban, with town/suburban as the reference). Each row provides just the coefficient of interest (the relationship between the border / TEP proximity variable and the outcome) from separate regressions.

Table 2. OLS regressions of vacancy measures on district border location and TEP proximity

		(1)		(2)		(3)	
		Vacancy Rates		**Vacancy Posted Late**		**Posting Duration**	
Panel A	Border district	7.935***	6.116***	-0.34	-0.014	-0.64	2.027
		1.852	1.83	0.004	0.045	9.402	9.506
	Miles to nearest TEP	0.073***	0.057***	-0.001***	-0.001**	0.110+	0.126+
		0.013	0.014	0.00	0.00	0.065	0.073
	CONTROLS		X		X		X

Note. Results are restricted to 2015-16 school year. Total number of postings: N=28,908. All Districts: N=495. Vacancy Rates are the number of job postings per 1,000 students. Vacancy Posted Late are the vacancy rates limited from August to December. Only postings that had a positive reported duration and a span of less than a year were used, which accounts for 98.54% of the overall postings from the restricted sample of 495 districts. Means and standard deviations reported for each covariate in the panel. + p<0.10, * p<0.05, ** p<0.01, *** p<0.001

We find that California districts located on the border with Oregon, Nevada or Arizona have substantially and significantly higher vacancy rates, on the order of six additional vacancies per 1,000 students in a district. This finding accords with our hypothesis; when California districts face increased competition from districts in *another state,* they have a harder time staffing their schools with qualified candidates. The second row shows that districts that are farther away from TEPs have higher vacancy rates and are less likely to post their vacancies late. The first relationship is intuitive. If, as we hypothesize above, districts have an easier time drawing new teachers from the set of graduates who have student-taught in their schools, then districts that are farther away from TEPs will have greater difficulty gaining access to such new teachers. This may, in turn, cause them to post their vacancies earlier, in an effort to attract teachers, since they have less of a ready pool.

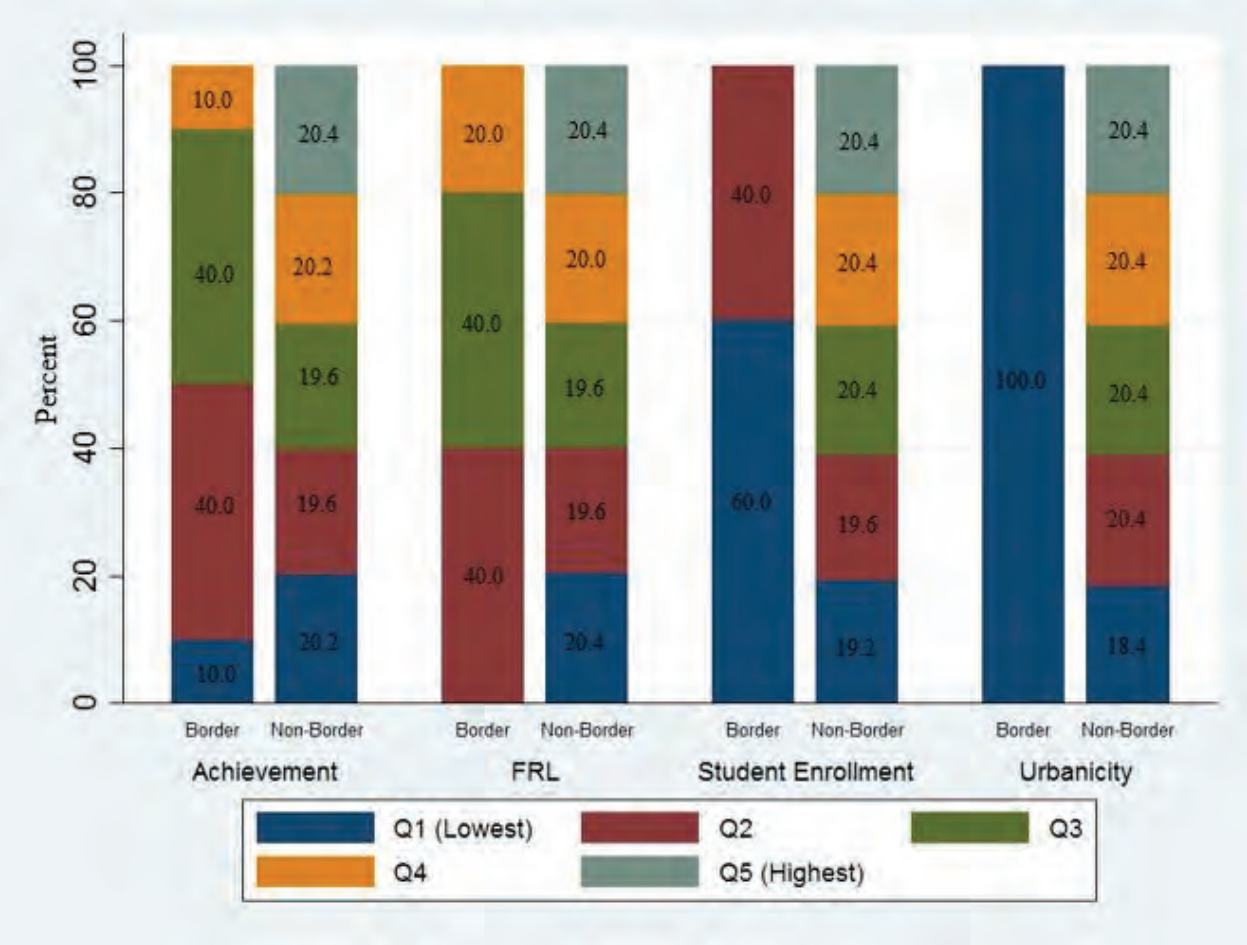
The above findings are based on regressions that attempt to make apples to apples comparisons across school districts. Nevertheless, one might worry that the border districts and districts the furthest away from TEPs differ in systematic ways from other districts across California that are not accounted for in the regression models (see equation 1 above). Indeed, there is evidence that these districts tend to be different. For instance, in Figure 8 we compare border districts to non-border districts in terms of the percentages of districts that fall into different quintiles of student achievement, FRL, size (student enrollment), and urbanicity.[29] In the figure we include quintile values for non-border districts, just for visual comparison, but these

[29] The quintiles are based on the entire sample of districts for which we have CBAs, and each district is equally weighted.

are each roughly 20% as would be expected given the construction of the measures. The border districts tend to be far smaller, tend to exhibit lower levels of achievement, and have roughly average levels of FRL (no border district falls within either highest or lowest quintiles of FRL for the entire sample). The measure of urbanicity we used was created by dividing the number of students enrolled in the district by the geographic area (in square miles) of the district (i.e. is somewhat more refined than the census measure of urbanicity).[30] Based on this measure, we find border districts are comprised entirely of the most rural of district types. Clearly border districts tend to be quite different from the average California district.

[30] We created this measure of urbanicity because the census urbanicity measure is somewhat crude and may mask important differences between districts that fall into the same census category. California has elementary, secondary, and unified school districts. In instances where district borders overlap, the total number of students recorded for a district is their individual total plus a portion of the total students in the overlapping district proportional to that of overlap. For instance, if district A had a 30% overlap with district B then the total for number of students for district B would be equal to: Total students in district B + (.3 * Total students in district A).

Figure 8. Comparing border and non-border districts on observables

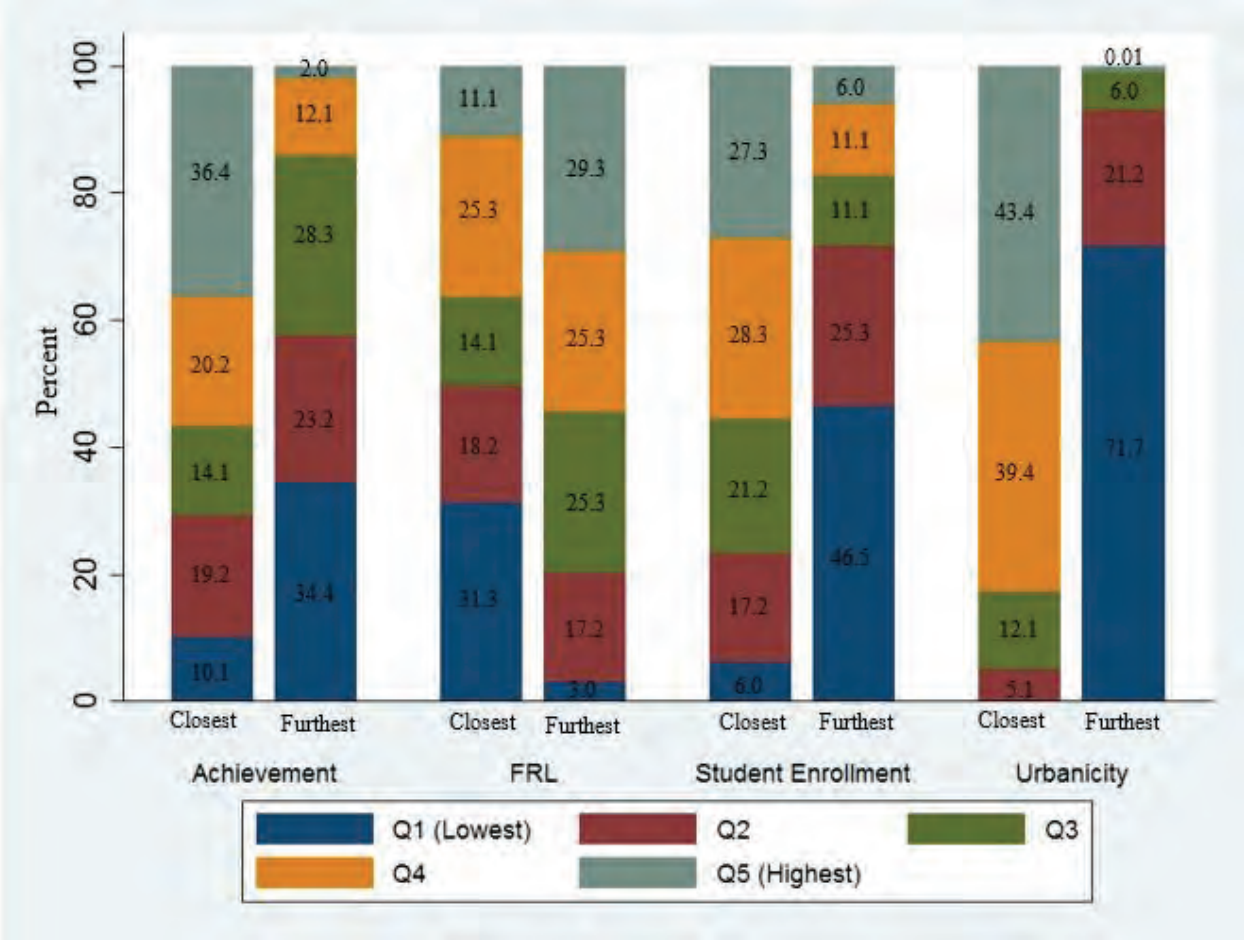


Note. All Districts N= 495; of which 10 are border districts. Achievement is measured by the average of California Assessment of Student Performance and Progress (CAASPP) score in ELA and Math. FRL is the percent of FRL eligible students in the district. Student enrollment is total number of students enrolled in district. Urbanicity is a measure of total student enrollment (and any overlap as described in FN30) divided by district area in square miles.

Next we assess whether districts of varying distance from TEPs are different from each other. In Figure 9 we categorize districts into quintiles based on the minimum distance to the nearest TEP. Those categorized as the closest are districts located between 0 to 4 miles from the nearest TEP, whereas those designated as furthest are 28 to 141 miles from the nearest TEP. There are rather striking differences across each observable (achievement, FRL, student enrollment, and urbanicity) between closest and furthest districts, particularly in the lowest (Q1) and highest (Q5) quintiles for each area. Thus, districts far from TEPs also differ substantially from those that are close to TEPs. The differences shown in Figures 8 and 9 between district types seem notable but may be confounded with urbanicity; border districts and districts furthest away from TEPs are both overwhelmingly rural. Because of this, we compare border districts and

districts furthest way from TEPs with districts of similar urbanicity levels.[31] Consistent with regressions in Table 2, border districts have higher rates of vacancies per 1000 students and per teachers, and a higher percentage of late vacancies than non-border districts with similar urbanicity. Note, however, that none of the differences are statistically significant, likely due to the smaller sample sizes in the comparison groups (relative to the regressions described earlier).

Figure 9. Comparing districts closest and furthest to teacher education programs (TEPs) (closest = 0-4 miles to nearest TEP; furthest = 28.3-141.2 miles to nearest TEP)



Note. All Districts N= 495. Achievement is measured by the average of California Assessment of Student Performance and Progress (CAASPP) score in ELA and Math. FRL is the percent of FRL eligible students in the district. Student enrollment is total number of students enrolled in district. Urbanicity is a measure of total student enrollment (and any overlap as described in FN30) divided by district area in square miles.

[31] We identify 99 districts as either border districts or districts in the top quintile of miles to the nearest TEP. We then randomly sample 99 districts from the rest of the CBA sample by matching each border or furthest from TEP district with the district which minimizes their difference in continuous urbanicity, sampling without replacement to ensure unique matching. We run two-sided t-tests of vacancy per 1000 students, vacancy per teacher, and percent of late vacancy postings between the two groups.

What is the Landscape of District Workforce and Compensation Policies that Affect the California Teacher Labor Force?

CBA provisions that make districts more desirable to teachers. Tables 3 – 7 show the individual provisions included in CBAs that may make the district more desirable to teachers. We first examine Table 3, which provides summary statistics for items included in our overall teacher desirability index. The first panel of Table 3 shows that California districts use economic incentives to reward teachers with high levels of education credits; 23% of all CBAs in California include incentives for teachers with National Board Certifications and 57% provide extra compensation for teachers who possess a doctorate degree. Nearly all districts in California offer medical and dental benefits, and nearly a third of districts include protections for teachers who are being involuntarily transferred between positions. In addition, the vast majority (approximately two-thirds) of districts provide protections for teachers whose class size exceeds negotiated class size maximums. Although not shown here, districts must recompense teachers in oversized classes in various ways, including through the provision of extra-duty pay (32%), rebalancing of classes within a specified set of time (13%), moving students out of over-enrolled classes (11%) and increasing aid and clerical time (17%).

Although there are many provisions governing teacher evaluations and professional growth in California CBAs, the two that remained as part of our desirability index after item reduction were: 1) provisions that disallow publishers' norms on standardized tests from being included in teachers' evaluations (16% of CBAs);[32] and 2) that require that the district provides teachers with advance notice of any reprimand or complaint that will become part of an employee's record (44%). These provisions provide protections for teachers whose students are not achieving expected levels on standardized tests and who have had previous complaints against them.

The majority of California CBAs also dictate the specific processes by which teachers can be transferred. We highlight three provisions in CBAs that are specifically related to involuntary transfers and may affect the desirability of a district for all teachers. Involuntary transfers are particularly important because these are the subset of provisions that govern how teachers can be moved across classrooms or schools even if they do not want to. First, we show that nearly a third (31%) of district CBAs limit the frequency with which teachers may be involuntarily transferred. This is important because seniority rules in CBAs often cause substantial reshuffling of teachers across schools when teachers must be displaced from their positions (e.g., Goldhaber et al., 2016). This provision protects teachers from frequent involuntary moves across classrooms or schools. Only eight percent of CBAs require that districts honor placement

[32] We also code for two additional items about standardized test score usage in teachers' evaluations: 1) "Does the CBA explicitly hold that teachers will be evaluated at least in part on student achievement or progress on standardized achievement tests?" (which we reverse code to indicate desirability); and 2) "Standardized test scores are not allowed to be included in the evaluation." Neither are included in our desirability index. The former is not included because our item-test analysis suggests that it is not highly enough aligned with the underlying desirability construct (although 81% of districts do not explicitly require the use of student achievement/progress on standardized achievement tests) and the latter because only 9% of districts include it in their CBAs.

requests of involuntary teachers. Thirty-nine percent of CBAs protect teachers from being involuntarily transferred if there is another qualified teacher who wishes to be voluntarily transferred into that vacant position.

Table 3. Items desirable for all teachers (proportion of districts with each item)

CBA specifies/requires:	(1) All Districts	(2) Urban	(3) Rural	(4) Town/ Suburban	(5) Low Minority	(6) High Minority	(7) Low Poverty	(8) High Poverty
Economic Incentives								
National Board Certification bonus	0.23	0.29	0.13	0.21	0.32***	0.12	0.32***	0.14
PhD/EdD bonus	0.57	0.64*	0.55	0.54	0.66***	0.43	0.71***	0.41
Medical benefits	0.89	0.91	0.82	0.90	0.94**	0.83	0.94**	0.83
Dental benefits	0.90	0.95	0.82	0.90	0.93*	0.84	0.96***	0.83
Retirement plan details	0.73	0.80	0.68	0.71	0.69	0.75	0.70	0.73
District & association split the costs of the arbitrator	0.74	0.80	0.68	0.73	0.73	0.75	0.73	0.79
Class Size								
Action taken if class size ceiling is exceeded	0.69	0.70	0.63	0.69	0.63*	0.75	0.65	0.73
Particular action(s) if class size is exceeded	0.65	0.67	0.63	0.64	0.60	0.67	0.62	0.67
Caseloads/total # of students seen/day	0.32	0.38	0.15*	0.32	0.32	0.24	0.35	0.24
Evaluation & Professional Growth/Discipline								
Publishers' norms on standardized tests are not allowed to be included in evaluation	0.16	0.13	0.13	0.18	0.15	0.16	0.17	0.18
Advance notice of reprimand/complaint provided before becoming part of employee record	0.44	0.50	0.50	0.41	0.47	0.41	0.43	0.42
Transfer Assignments & Layoffs								
Limit on the frequency with which members may be invol. transferred	0.31	0.42*	0.13*	0.29	0.27	0.35	0.32	0.30
Honors request among list of vacancies if member meets req. in invol. transfer	0.08	0.13*	0.10	0.06	0.05	0.08	0.06	0.10
No member can be invol. transferred if there is another member as qualified requesting a voluntary transfer to that position	0.39	0.43	0.28	0.38	0.35	0.43	0.31	0.39
Layoff notifications procedure	0.08	0.11	0.23*	0.06	0.10	0.08	0.05	0.11
Association Rights								
Additional specific association rights	0.62	0.64	0.63	0.61	0.60	0.67	0.61	0.63

Note. All Districts: *N*=495; Urban Districts: *N*=129; Rural Districts: *N*=40; Town/Suburban: *N*=326
Districts are classified as "Low Minority" if the percent of the minority student population is less than 35.2% and "High Minority" if the percent is greater than 79.9%. Districts with Low % of Minority Students: *N*=124; Districts with High % of Minority Students: *N*=123. Districts are classified as "Low Poverty" if the percent of students eligible for free or reduced-price lunch is less than 35.6% and "High Poverty" if the percent is greater than 76.2%. Districts with Low % of Students in Poverty: *N*=124; Districts with High % of Students in Poverty: *N*=123; * p<0.05, ** p<0.01, *** p<0.001

Table 4. Items desirable for shortage area teachers (proportion of districts with each item)

CBA specifies/requires:	(1) All Districts	(2) Urban	(3) Rural	(4) Town/ Suburban	(5) Low Minority	(6) High Minority	(7) Low Poverty	(8) High Poverty
Economic Incentives								
Bonus for "hard to recruit" teachers	0.30	0.26	0.15**	0.33	0.17	0.49***	0.19	0.43***
Bonus for math teachers	0.01	0.01	0.00*	0.02	0.01	0.03	0.01	0.04
Bonus for science teachers	0.01	0.01	0.00*	0.02	0.01	0.03	0.01	0.04
Bonus for special ed teachers	0.25	0.22	0.13*	0.28	0.13	0.44***	0.15	0.38***

Note. All Districts: *N*=495; Urban Districts: *N*=129; Rural Districts: *N*=40; Town/Suburban: *N*=326
Districts are classified as "Low Minority" if the percent of the minority student population is less than 35.2% and "High Minority" if the percent is greater than 79.9%. Districts with Low % of Minority Students: *N*=124; Districts with High % of Minority Students: *N*=123.
Districts are classified as "Low Poverty" if the percent of students eligible for free or reduced-price lunch is less than 35.6% and "High Poverty" if the percent is greater than 76.2%. Districts with Low % of Students in Poverty: *N*=124; Districts with High % of Students in Poverty: *N*=123
* p<0.05, ** p<0.01, *** p<0.001

Table 3 also shows that only eight percent of district CBAs describe district procedures for layoffs. This is because state education code dictates how layoffs occur in all districts in the state, specifying that layoffs must occur in reverse order of seniority and notices must be given by a specified date. The eight percent of districts that provide additional information may be more desirable for teachers because these districts clarify expectations, timelines and/or recall rights for teachers, perhaps providing teachers with an increased sense of job security.

The last item we include in our desirability index for all teachers falls into the subsection of CBAs called "Association Rights." This set of provisions specifies the rights union leadership and members are guaranteed. The last panel of Table 3 shows that 62% of districts provide additional association rights in their CBAs. For example, additional rights might include time off to represent members in grievances, the ability to serve on school/district committees and the like.

The first column of Table 8 provides the summary statistics for the desirability indices. These means can be interpreted as the average proportion of CBA items in that index contained in California CBAs in our sample. We see that, overall, California district CBAs contain nearly ½ (49%) of the 16 items that are included in our "All teacher" desirability index.

CBA provisions that make districts more desirable to shortage area teachers. As noted above, the "Shortage teacher desirability" index consists of only four items, all of which are economic incentives intended to target high-need teachers. Table 8 (column 1) shows that districts on average have only 14% of the four items in this index, suggesting that districts do little in their CBAs to target shortage area teachers. Table 4 shows that the majority of districts that provide any extra incentive are for a general "hard to recruit" teacher (30%) or for special education teachers (25% of districts). Only one percent of districts, on average, provide incentives targeted specifically at math or science teachers.

CBA provisions that make districts more desirable to new teachers & teachers new to the district. California district CBAs include only 41% of the seven potential items that target teachers who are brand new to the profession, whereas CBAs include nearly 2/3 of the potential nine provisions intended to target experienced teachers who are new to the district, but not new to the profession (see Table 8). The relative lack of focus on making working conditions desirable for new teachers is apparent in Table 5, which provides information about the proportion of districts that negotiate specific provisions into their CBAs that may make the district desirable to *new* teachers. We find that only 20% of districts provide salary credit for teachers' previous military experience, even though doing so would help recruit teachers who have such experience by immediately placing them at a higher point on the salary schedule (thus paying them more upon entry). Only a little over a third of districts (35%) contractually provide teacher mentoring programs, and only 12% guarantee that new teachers will be assigned to mentor peers, even though doing so might show districts' attention to new teacher development and support.

Table 5. Items desirable for new teachers (proportion of districts with each item)

CBA specifies/requires:	(1) All Districts	(2) Urban	(3) Rural	(4) Town/ Suburban	(5) Low Minority	(6) High Minority	(7) Low Poverty	(8) High Poverty
Economic Incentives								
Salary credit for military experience	0.20	0.20	0.03***	0.22	0.17	0.23	0.14	0.22
Professional Growth								
Teacher mentoring	0.35	0.35	0.47	0.34	0.27	0.36	0.27	0.33
New teachers are assigned to mentor peers	0.12	0.12	0.23	0.10	0.07	0.13	0.10	0.11
CBA does not specify/require:								
School Year								
Mandatory additional work days for new teachers	0.74	0.71	0.75	0.74	0.78	0.76	0.70	0.79
Transfer Assignments & Vacancies								
Seniority in district is considered when transferring members overall	0.29	0.31	0.28	0.28	0.34	0.31	0.31	0.28
Seniority is deciding factor in who is involuntarily transferred when all else is equal	0.61	0.58	0.70	0.62	0.61	0.57	0.55	0.65
Teacher with the most seniority fills vacant position when all else is equal	0.56	0.53	0.65	0.55	0.52	0.54	0.50	0.58

Note. All Districts: *N*=495; Urban Districts: *N*=129; Rural Districts: *N*=40; Town/Suburban: *N*=326
Districts are classified as "Low Minority" if the percent of the minority student population is less than 35.2% and "High Minority" if the percent is greater than 79.9%. Districts with Low % of Minority Students: *N*=124; Districts with High % of Minority Students: *N*=123.
Districts are classified as "Low Poverty" if the percent of students eligible for free or reduced-price lunch is less than 35.6% and "High Poverty" if the percent is greater than 76.2%. Districts with Low % of Students in Poverty: *N*=124; Districts with High % of Students in Poverty: *N*=123
* p<0.05, ** p<0.01, *** p<0.001

Table 6. Items desirable for teachers new to the district (proportion of districts with each item)

CBA specifies/requires:	(1) All Districts	(2) Urban	(3) Rural	(4) Town/ Suburban	(5) Low Minority	(6) High Minority	(7) Low Poverty	(8) High Poverty
Economic Incentives								
New employees get credit on salary schedule for previous teaching experience	0.87	0.83	0.80	0.89	0.85	0.85	0.84	0.82
New employees get credit for previous teaching in public school or private if credentialed	0.84	0.81	0.80	0.86	0.82	0.80	0.82	0.78
CBA does not specify/require:								
School Year								
Mandatory additional work days for new teachers	0.74	0.71	0.75	0.74	0.78	0.76	0.70	0.79
Transfer Assignments & Vacancies								
Seniority in district is considered when transferring members overall	0.29	0.31	0.28	0.28	0.34	0.31	0.31	0.28
Seniority is deciding factor in who is invol. transferred when all else is equal	0.61	0.58	0.70	0.62	0.61	0.57	0.55	0.65
Current teachers will be considered for a vacant position before new personnel	0.74	0.74	0.82	0.73	0.73	0.73	0.73	0.72
Retirement Benefits								
Minimum employment in order to receive retirement benefits	0.43	0.36	0.57	0.44	0.51**	0.34	0.47	0.40
Minimum time members must have worked full time in district prior to retirement	0.44	0.35*	0.55	0.46	0.52**	0.36	0.52	0.41
Regulations restrict who can take retirement benefits (e.g., Min step/ row on salary schedule max # members receiving benefits)	0.75	0.74	0.82	0.75	0.84*	0.72	0.80	0.74

Note. All Districts: *N*=495; Urban Districts: *N*=129; Rural Districts: *N*=40; Town/Suburban: *N*=326

Districts are classified as "Low Minority" if the percent of the minority student population is less than 35.2% and "High Minority" if the percent is greater than 79.9%. Districts with Low % of Minority Students: *N*=124; Districts with High % of Minority Students: *N*=123.

Districts are classified as "Low Poverty" if the percent of students eligible for free or reduced-price lunch is less than 35.6% and "High Poverty" if the percent is greater than 76.2%. Districts with Low % of Students in Poverty: *N*=124; Districts with High % of Students in Poverty: *N*=123

* p<0.05, ** p<0.01, *** p<0.001

Districts do appear to refrain from creating additional work for new teachers; three-quarters of districts do not require additional work days for new teachers, which would often be used for professional development or school set-up.

Perhaps most important to new teachers – at least to new teachers who value job stability and the ability to choose their own classroom and school placements – is whether or not CBAs enshrine protections for teachers based on seniority. Although, as mentioned above, layoffs in California are required to proceed along traditional "last-in-first-out" lines, Table 5 shows that many districts are *not* using – or at least not relying on – seniority in decision-making for transfer assignments, if all else is equal between teachers. This can be a positive for teachers new to the teaching profession or new to the district, who may feel job insecurity because of being "last in."

Table 6 reviews the additional items included in our desirability index for teachers who are *new to the district*, even if not new to the profession. We find that over 80% of districts offer new teachers credit on the salary schedule for previous teaching experience regardless if in a public or private school setting. Further, 43% of all districts do not specify minimum employment in order to receive retirement benefits and 75% do not have a required minimum step on the salary schedule in order to receive retirement benefits, allowing for teachers later in their careers to transfer without feeling penalized.

CBA provisions that make districts more desirable to continuing teachers. Last, we consider how policies established in CBAs may make districts more or less desirable to continuing, or veteran, teachers. Table 8 shows that district CBAs include, on average, 42% of the provisions within CBAs that may make the district more attractive to continuing teachers. Items desirable for veteran teachers include how districts handle open positions and early, partial, and full retirement. Table 7 shows that many districts use seniority in making transfer decisions in ways that provide veteran teachers with enhanced choice and job security; 44% of CBAs give the most senior teacher right of preference for voluntary transfers; 86% of all districts make vacancies open to all teachers in the district before opening the position to new teachers/external hires; and 71% require that vacancies are held open for a specified amount of time, giving teachers time to apply. However, only 39% of CBAs require that districts use seniority as a deciding factor in who is involuntarily transferred. Of course, as we mentioned earlier, these same provisions that may make districts more attractive to continuing teachers may be exactly those that dissuade new teachers from coming to the district.

Table 7. Items Desirable for Continuing Teachers (proportion of districts with each item)

CBA specifies/requires:	(1) All Districts	(2) Urban	(3) Rural	(4) Town/ Suburban	(5) Low Minority	(6) High Minority	(7) Low Poverty	(8) High Poverty
Transfer Assignments & Vacancies								
Teacher with the most seniority fills vacant position if 2 or more apply, if all else is equal	0.44	0.47	0.35	0.45	0.48	0.46	0.50	0.42
Seniority will be the deciding factor in who is invol. transferred, if all else is equal	0.39	0.42	0.30	0.38	0.39	0.43	0.45	0.35
All certificated vacancies must be posted/made available to teachers in the district	0.86	0.89	0.88	0.85	0.85	0.89	0.83	0.91
Cannot fill vacancy within a set amount of time after posting	0.71	0.64	0.75	0.73	0.72	0.75	0.68	0.76
Early or Part-Time Retirement								
Early retirement incentive	0.39	0.33	0.40	0.42	0.47	0.37	0.35	0.41
Additional early retirement incentive	0.23	0.19	0.20	0.24	0.28	0.20	0.21	0.17
Additional money towards health & welfare benefits for early retirees	0.12	0.12	0.13	0.12	0.15*	0.07	0.13	0.07
50% or more part-time employment with full retirement credit	0.51	0.54	0.38	0.51	0.55**	0.37	0.52*	0.38
Early-retirement/consulting option	0.32	0.36	0.15**	0.32	0.38	0.30	0.40	0.32
Compensation for consulting work	0.22	0.24	0.10*	0.23	0.28	0.23	0.30	0.20
Full benefits for consulting work	0.10	0.12	0.05	0.10	0.07	0.14	0.07	0.13
CBA does not specify/require:								
Retirement Benefits								
Minimum employment to receive retirement benefits	0.43	0.36	0.57	0.44	0.51**	0.34	0.47	0.40
Minimum time member must have worked full-time in district prior to retirement	0.44	0.35*	0.55	0.46	0.52**	0.36	0.52	0.41
Other regulations restricting who can take retirement benefits	0.75	0.74	0.82	0.75	0.84*	0.72	0.80	0.74

Note. All Districts: *N*=495; Urban Districts: *N*=129; Rural Districts: *N*=40; Town/Suburban: *N*=326. Districts are classified as "Low Minority" if the percent of the minority student population is less than 35.2% and "High Minority" if the percent is greater than 79.9%. Districts with Low % of Minority Students: *N*=124; Districts with High % of Minority Students: *N*=123.
Districts are classified as "Low Poverty" if the percent of students eligible for free or reduced-price lunch is less than 35.6% and "High Poverty" if the percent is greater than 76.2%. Districts with Low % of Students in Poverty: *N*=124; Districts with High % of Students in Poverty: *N*=123 * p<0.05, ** p<0.01, *** p<0.001

Table 8. CBA desirability indices by district

	(1) All		(2) Urban		(3) Rural		(4) Town/Suburban		(5) Low Minority		(6) High Minority		(7) Low Poverty		(8) High Poverty	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
All Teachers	0.49	0.15	0.53***	0.14	0.44*	0.16	0.48	0.15	0.49	0.13	0.47	0.15	0.50***	0.14	0.46	0.15
Shortage Teachers	0.14	0.23	0.13*	0.22	0.07***	0.16	0.16	0.24	0.08	0.19	0.25***	0.28	0.09	0.19	0.22***	0.28
New Teachers	0.41	0.19	0.40	0.19	0.45*	0.17	0.41	0.19	0.39	0.20	0.41	0.18	0.37	0.20	0.42**	0.18
New to District Teachers	0.63	0.18	0.61**	0.18	0.67	0.21	0.64	0.18	0.66***	0.19	0.60	0.17	0.64	0.18	0.62	0.18
Continuing Teachers	0.42	0.19	0.41	0.17	0.40	0.17	0.43	0.19	0.46***	0.18	0.40	0.17	0.45***	0.19	0.40	0.17

Note. SD is standard deviation. The means reflect the proportion of districts with the CBA provisions in that index (e.g., 49% of all districts included in this study have all of the CBA provisions deemed desirable for All Teachers).

All Districts: *N*=495; Urban Districts: *N*=129; Rural Districts: *N*=40; Town/Suburban: *N*=326

Districts are classified as "Low Minority" if the percent of the minority student population is less than 35.2% and "High Minority" if the percent is greater than 79.9%. Districts with Low % of Minority Students: *N*=124; Districts with High % of Minority Students: *N*=123.

Districts are classified as "Low Poverty" if the percent of students eligible for free or reduced-price lunch is less than 35.6% and "High Poverty" if the percent is greater than 76.2%. Districts with Low % of Students in Poverty: *N*=124; Districts with High % of Students in Poverty: *N*=123

* p<0.05, ** p<0.01, *** p<0.001

Another set of policies that may make districts more attractive to continuing or experienced teachers are early- or part-time retirement incentives, which enable veteran teachers to stay in the district until they reach the experience level for early retirement benefits. Only 39% of all districts offer an early retirement incentive, with 23% of districts specifying additional details such as money towards health and welfare benefits (12%) and additional money paid out over time (e.g., money paid into a supplemental early retirement plan). However, 51% of districts allow for teachers who teach part-time to receive full retirement credit, and nearly a third provide an option for teachers to retire early and yet retain a salary as a consultant, and nearly a quarter provide extra compensation for consulting work. A full 10% of districts provide consulting retired teachers full benefits while they serve in this capacity.

Retirement incentives, shown in the bottom panel of Table 7, provide similar incentives to continuing teachers to have them stay in the district until they are qualified to draw down these benefits. Forty-three percent of district CBAs do not establish minimum employment to receive retirement benefits (these districts instead likely require teachers to be a certain age upon retirement), and approximately 44% do not require specified levels of full time work. Nearly ¾ of district CBAs do not include additional restrictions on who can take retirement benefits, above and beyond the minimum age and/or time-in-service requirements.

Other working conditions. District administrators might also work to improve working conditions and make their districts more attractive for prospective teachers by negotiating reduced loads into teachers' CBAs. They might do this via negotiating smaller class sizes, shorter school days, or fewer teacher work days in a year. Table 9 shows average negotiated class sizes for California districts. We see that the mean and median class sizes are around 30 students/teacher, on average, across all grade ranges, with negotiated elementary class sizes slightly lower (28 students/teacher) and negotiated high school class sizes slightly higher (31 students/teacher). Table 10 shows the length of the school day (in minutes) in California school districts. We see that, on average, kindergarten days last 259 minutes, and days get increasingly longer as grades go up. There is substantial variation around these means. Table 11 shows average teacher work hours required in CBAs and the number of days in the school year. We see that, on average, teachers are required to work 7 hours/ day and there is very little deviation around the mean, and the average school year lasts 184 days.

Table 9. Negotiated class size

	All Districts					Urban Districts					Rural Districts					Town/Suburban Districts				
	Mean	Median	SD	Min	Max	Mean	Median	SD	Min	Max	Mean	Median	SD	Min	Max	Mean	Median	SD	Min	Max
Grade K - 5	28	29	2.9	14	34	28	29	3.0	20	34	27	28	2.4	24	30	28	29	3.0	14	34
Grade 6 - 8	30	30	2.5	23	36	30	30	2.5	23	36	29*	30	2.5	25	33	30	30	2.5	24	36
Grade 9 - 12	31	30	2.8	20	37	30	30	3.1	20	36	30	30	3.1	25	37	31	31	2.7	24	37
	Low Minority					High Minority					Low Poverty					High Poverty				
Grades K - 5	28	29	3.0	20	33	28	29	2.7	23	33	27	28	3.5	14	33	28	29	2.6	23	33
Grades 6 - 8	30	30	2.7	24	35	31*	31	2.3	25	36	30	30	2.9	24	36	30	31	2.3	24	35
Grades 9 - 12	30	30	2.9	24	37	31	32	2.3	27	36	30	29	3.6	20	37	31	31	2.4	27	36

Note. Districts are classified as "Low Minority" if the percent of the minority student population is less than 35.2% and "High Minority" if the percent is greater than 79.9%. Districts with Low % of Minority Students: 25.05%; Districts with High % of Minority Students: 24.85%.
Districts are classified as "Low Poverty" if the percent of students eligible for free or reduced-price lunch is less than 35.6% and "High Poverty" if the percent is greater than 76.2%. Districts with Low % of Students in Poverty: 25.05%; Districts with High % of Students in Poverty: 24.85%
* p<0.05, ** p<0.01, *** p<0.001

Table 10. Length of school day (in minutes) specified by CBA

	All				Urban				Rural				Town/Suburban			
	Mean	SD	Min	Max	Mean	SD	Min	Max	Mean	SD	Min	Max	Mean	SD	Min	Max
Kindergarten	259	52.8	197	450	246*	43.0	200	347	284	69.0	200	400	264	55.3	197	450
Grades 1 - 5	305	26.6	200	450	300	17.9	200	330	323	35.8	293	400	306	29.2	240	450
Grades 6 - 8	316	32.5	240	450	313	24.8	250	366	325	31.6	292	397	316	36.2	240	450
Grades 9 - 12	333	45.9	250	450	323	44.0	250	372	331	45.7	275	400	339	46.7	250	450
	Low Minority				High Minority				Low Poverty				High Poverty			
Kindergarten	250	47.5	200	360	274	59.6	197	400	254	46.7	200	360	273	60.1	197	400
Grades 1 - 5	301	28.8	200	385	313	24.7	283	400	302	24.2	240	385	311	25.6	280	400
Grades 6 - 8	314	34.9	250	410	320	23.2	267	370	310	33.0	250	410	321	22.8	267	390
Grades 9 - 12	328	53.6	250	440	323	47.8	250	394	328	52.8	250	440	320	44.6	250	394

Note. All Districts: *N*=495; Urban Districts: *N*=129; Rural Districts: *N*=40; Town/Suburban: *N*=326
Districts are classified as "Low Minority" if the percent of the minority student population is less than 35.2% and "High Minority" if the percent is greater than 79.9%. Districts with Low % of Minority Students: *N*=124; Districts with High % of Minority Students: *N*=123.
Districts are classified as "Low Poverty" if the percent of students eligible for free or reduced-price lunch is less than 35.6% and "High Poverty" if the percent is greater than 76.2%. Districts with Low % of Students in Poverty: *N*=124; Districts with High % of Students in Poverty: *N*=123
* p<0.05, ** p<0.01, *** p<0.001

Table 11. Teacher work day and year

	All				Urban				Rural				Town/Suburban			
CBA specifies/requires:	Mean	SD	Min	Max	Mean	SD	Min	Max	Mean	SD	Min	Max	Mean	SD	Min	Max
# of hours/day teachers must work	7	0.3	6	9	7	0.4	7	9	7	0.2	7	8	7	0.3	6	8
# of work days/school year	184	2.9	171	234	185	4.9	171	234	184	1.9	178	188	184	1.7	175	190
	Low Minority				High Minority				Low Poverty				High Poverty			
# of hours/day teachers must work	7	0.3	7	9	7	0.3	6	9	7	0.3	7	9	7	0.3	6	9
# of work days/school year	185	1.6	178	190	184	5.0	176	234	185***	2.1	171	190	184	1.7	176	188

Note. All Districts: *N*=495; Urban Districts: *N*=129; Rural Districts: *N*=40; Town/Suburban: *N*=326
Districts are classified as "Low Minority" if the percent of the minority student population is less than 35.2% and "High Minority" if the percent is greater than 79.9%. Districts with Low % of Minority Students: *N*=124; Districts with High % of Minority Students: *N*=123.
Districts are classified as "Low Poverty" if the percent of students eligible for free or reduced-price lunch is less than 35.6% and "High Poverty" if the percent is greater than 76.2%. Districts with Low % of Students in Poverty: *N*=124; Districts with High % of Students in Poverty: *N*=123
* p<0.05, ** p<0.01, *** p<0.001

Compensation. One obvious way that districts might attempt to attract and retain teachers is through compensation. In particular, we are interested in the degree to which districts reward teachers early in their teaching career by frontloading compensation via a high starting salary and large increases in salary early in a teaching career relative to backloading compensation by having large increases in compensation associate with late-career gains in teaching experience. This is an important question given evidence that teacher turnover is relatively high for early career teachers and that new teachers are likely to pay more attention to the front-end of the salary schedule (Goldhaber, Grout & Holden, 2017; Grissom & Strunk, 2012; Lankford & Wyckoff, 1997).

Table 12 examines the amounts and structures of compensation provided to teachers via uniform salary schedules negotiated into CBAs. The first column provides the actual salary dollars negotiated into CBAs, column 2 shows average compensation adjusted for cost-of-living using Taylor's extension of the NCES Comparable Wage Index based on the 2012-14 American Community Survey (Taylor & Glander, 2006; Taylor, 2016), and column 3 adjusts these figures to 2017-18 dollars. The top panel of Table 12 simply reports average salaries built into negotiated salary schedules. The average base salary for new teachers with no master's degree is approximately $45,000, with an approximately $2,500 bump for having a master's degree upon district entry. Salaries increase over time, with the master's degree bonus staying about constant. On average, teachers in the 2014-15 school year can make a maximum of approximately $90,000. Notably, the variation around the mean is large, and grows over the course of the salary schedule, with a teacher who makes 1 SD above the mean in real dollar salaries making nearly $106,000 per year.

It is useful to assess how salaries look when adjusted for location via the Comparable Wage Index (CWI), and then when converted to real dollars, signifying purchasing power in the current year (2017-18). Adjusting just for CWI (column 2), we see that the salary schedule is at least somewhat constricted, with base salaries approximately $4,000 lower and maximum salary over $8,000 lower than in the average unadjusted figures. Converting CWI-adjusted into average salaries into real dollars (Column 3) brings the minimum base salary to approximately $42,000 and the maximum salary to a little over $83,000 in 2017-18 dollars.

The bottom panel of Table 12 provides some detail about the structure of the salary schedule, showing that yearly returns to experience teaching in-district are, on average, largest in the first ten years of teachers' careers and relatively small in the last ten years. This can be seen in the measure of backloading, which is only 7% (far lower than the national average; see Grissom & Strunk, 2012). Moreover, our two frontloading measures (comparing yearly returns to experience in the first five relative to the last five years, and in the first ten relative to the last ten years, respectively), show that gains early in teachers careers in California are far larger than gains in later years.

Table 12. Salary

	(1) *Contract Salary Amounts from CBAs*		(2) *Adjusted by NCES Comparable Wage Index (CWI)*		(3) *2017-2018 Salary Amounts (Using CWI Adjusted Salaries)*	
	Mean	SD	Mean	SD	Mean	SD
Salary Schedule Averages						
Base salary with credential (Year 1), no MA	$44,834	4,871	$40,539	4,300	$4,2035	4,459
Base salary with credential (Year 1), with MA	47,131	5,233	42,648	4,950	44,223	5,133
5 years experience, no MA	50,034	5,493	45,262	5,045	46,934	5,231
5 years experience, with MA	53,274	6,404	48,229	6,184	50,009	6,413
10 years experience, no MA	62,172	7,537	56,243	6,906	58,320	7,161
10 years experience, with MA	64,640	8,034	58,498	7,529	60,658	7,807
20 years experience, no MA	78,096	8,987	70,698	8,680	73,308	9,001
20 years experience, with MA	80,489	9,286	72,895	9,198	75,586	9,538
Highest row experience, no MA	82,996	9,756	75,131	9,351	77,905	9,696
Highest row experience, with MA	85,841	10,077	77,742	9,918	80,612	10,284
Highest row, highest column (max salary)	88,824	9,254	80,411	9,053	83,379	9,387
Yearly Salary Returns						
Yearly salary returns in first 5 years	$1,040	552	$945	505	$980	524
Yearly salary returns in first 10 years	1,734	533	1,570	489	1,628	507
Yearly salary returns in last 5 years	980	840	887	756	919	783
Yearly salary returns in last 10 years	490	420	443	378	460	392
Yearly salary returns - Year 10 to Year 20	1,592	604	1,445	562	1,499	583
Backloading	7%	75%	7%	75%	7%	75%
Frontloading first vs. last 5	134%	148%	134%	148%	134%	148%
Frontloading first vs. last 10	453%	491%	453%	491%	453%	491%

Note.

Contract salary amounts from CBAs were adjusted by NCES Comparable Wage Index (CWI) based on the 2012-2014 American Community Survey

Yearly salary returns in first 5 years = (salary in year 5 – salary in base year) / 5

Yearly salary returns in first 10 years = (salary in year 10 – salary in base year) / 10

Yearly salary returns in last 5 years = (highest row experience – salary in year 20) / 5

Yearly salary returns in last 10 years = (highest row experience – salary in year 20) / 10

Yearly salary returns in Year 10 to Year 20 = (salary in year 20 – salary in year 10) / 10

Backloading = [((salary in year 20 – salary in year 10)/10 – (salary in year 10 – salary in base year)/10)) all divided by ((salary in year 10 – salary in year 0)/10)]*100

Frontloading first vs. last 5= (salary returns in first 5 years / salary returns in last 5 years)*100

Frontloading first vs. last 10= (salary returns in first 10 years / salary returns in last 10 years)*100

How do Workforce and Compensation Policies Included in CBAs Vary across Districts within California?

Tables 3-7 and 9-14 provide details on the variation in specific CBA workforce provisions across district urbanicity, proportion minority students and proportion of students in poverty. We generate indicators for district location in urban, rural and town/suburban areas, and for districts in the top and bottom quartiles of proportion minority students and students in poverty. Table 8 shows how the desirability indices vary across districts of these types.

Although the overall means in Table 8 suggest that, on average, district administrators are not implementing all of the potential CBA provisions they could to attract and retain teachers to their districts, the standard deviations (SD) show that there is wide variation across districts in California. For instance, although the mean proportion of shortage teacher policies provided in CBAs is 14%, the standard deviation is 23%. Some districts in California are putting into place multiple CBA provisions intended to attract and retain teachers and others are putting in very few or none. Some of this variation seems to be explained by districts' location in an urban or rural area. We see that urban district negotiate CBAs that are more desirable to all teachers than do town/suburban districts, and rural districts negotiate CBAs with fewer provisions that might make the district attractive to teachers overall. Rural districts also negotiate fewer of the shortage teacher provisions than do town/suburban and urban districts, though suburban/town districts negotiate more of these provisions than either, on average. Urban districts negotiate fewer provisions that might make districts more attractive to teachers who are new to the profession or to the district, whereas rural districts lead in this regard.

It also appears that high poverty and high minority districts negotiate CBAs that are more or less desirable than their low poverty/minority counterparts. In particular, high minority/poverty districts negotiate more provisions into their CBAs that might prove desirable to shortage area teachers and to teachers who are new to the profession. On the other hand, low poverty/minority district CBAs contain more provisions, on average, that might attract teachers overall, and especially teachers who might be switching districts (new to the district) and continuing teachers. This may help them recruit and retain more experienced teachers relative to their lower minority/poverty peers.

Tables 3-7 provide more detail about what kinds of provisions vary across district types. There are some notable differences across district types, and in particular variation by district proportion minority and low-income. For instance, low-minority and low-poverty districts are more likely to include economic incentives for NBC teachers and teachers with PhDs or EdDs. They are also more likely to specify medical and dental benefits in their CBAs. On the other hand, high-minority and high-poverty districts are more likely to provide incentives for teachers in "hard-to-recruit" subjects and special education teachers. This is in line with studies that examine similar variation in earlier California CBAs (e.g., Strunk & Zeehandelaar, 2011; 2015). Moreover, across the board, low-minority districts are more likely to provide retirement and early-retirement incentives and benefits than are higher-minority districts.

There are fewer differences in CBA provisions across geographic type; urban districts are more likely to provide teachers with protections from frequent involuntary transfers and to honor teachers' requests for placement when involuntarily transferred. Rural districts, on the other hand, are less likely to provide economic incentives for teachers who teach in "hard to recruit" fields and special education, as well as to provide new teachers with salary credit for previous military experience.

Notably, there is very little variation across district types in class size, length of school day and teacher workday/year policies, as shown in Tables 9-11.

Tables 13 and 14 show how average salary levels and structure differ by district characteristics. Table 13 uses dollar values as negotiated directly into the CBAs and Table 14 uses dollar values adjusted by the NCES Comparable Wage Index. Using these two measures provides slightly different results. First, Table 13 (using negotiated dollar values), shows that rural districts pay teachers significantly less than do town/suburban districts at every single point along the salary schedule. By contrast, urban districts pay slightly more, and significantly so at many levels in the salary schedule. Unsurprisingly, low-poverty districts also pay more, and again this is the case at every single step in the salary schedule. When we examine negotiated salaries adjusted by the CWI and into real dollars (Table 14), the geography differences hold, but we now see that high minority and high poverty districts pay teachers significantly more than do other districts.

Table 13 also highlights important differences in the structure of salary schedules by district type, when considering negotiated actual wages. Rural districts provide lower yearly returns to experience for teachers in their first 10 years than do urban or town/suburban districts. Low-minority and low-poverty districts provide greater yearly returns to experience for teachers in their last five and 10 years of experience than do other districts, again revealing preferential policies for more senior teachers. Interestingly, we see that high-minority districts frontload salary schedules to a greater extent than do their low-minority peers (and there are similar patterns for high-poverty vs. low-poverty districts, although not significant), suggesting that they work to reward novice/early career teachers more for teaching in these working conditions. These patterns are again consistent for the adjusted values in Table 14.

Table 13. Salary schedule in 2014-2015 CBA dollars

	All	Urban	Rural	Town/ Suburban	Low Minority	High Minority	Low Poverty	High Poverty
Salary Schedule Averages								
Base salary with credential (Year 1), no MA	$44,834	$46,152**	$41,369***	$44,738	$45,332	$44,698	$46,504***	$43,877
Base salary with credential (Year 1), with MA	47,131	48,342*	42,951***	47,165	47,367	47,639	48,583**	46,500
5 years' experience, no MA	50,034	51,215*	46,186***	50,039	50,481	49,891	51,893***	49,342
5 years' experience, with MA	53,274	54,445	47,904***	53,469	53,336	54,355	54,973**	52,901
10 years' experience, no MA	62,172	64,043*	55,959***	62,194	62,658	61,446	64,875***	60,835
10 years' experience, with MA	64,640	66,662*	57,431***	64,725	64,898	64,982	67,279***	63,670
20 years' experience, no MA	78,096	80,443**	70,589***	78,088	79,168	77,398	82,167***	76,965
20 years' experience, with MA	80,489	82,392	72,194***	80,754	81,305	80,438	84,410***	79,854
Highest row experience, no MA	82,996	85,278*	74,806***	83,098	84,923*	81,659	87,448***	81,112
Highest row experience, with MA	85,841	87,580	76,601***	86,287	87,422	85,177	90,133***	84,336
Highest row, highest column (max salary)	88,824	90,857	79,104***	89,212	89,445	88,504	92,548***	87,031
Yearly Salary Return Averages								
Yearly salary returns in first 5 years	$1,040	$1,013	$963	$1,060	$1,030	$1,038	$1,078	$1,093
Yearly salary returns in first 10 years	1,734	1,789	1,459***	1,746	1,733	1,675	1,837*	1,696
Yearly salary returns in last 5 years	980	967	843	1,002	1,151**	852	1,056*	829
Yearly salary returns in last 10 years	490	483	422	501	575**	426	528*	415
Yearly salary returns - Year 10 to Year 20	1,592	1,640	1,463	1,589	1,651	1,595	1,729	1,613
Backloading	7%	11%	24%	4%	17%	9%	11%	9%
Frontloading first vs. last 5	134%	135%	141%	133%	104%	158%**	132%	177%
Frontloading first vs. last 10	453%	494%	452%	436%	352%	506%**	491%	531%

Note. All Districts: *N*=495; Urban Districts: *N*=129; Rural Districts: *N*=40; Town/Suburban: *N*=326

Districts are classified as "Low Minority" if the percent of the minority student population is less than 35.2% and "High Minority" if the percent is greater than 79.9%. Districts with Low % of Minority Students: 25.05%; Districts with High % of Minority Students: 24.85%.

Districts are classified as "Low Poverty" if the percent of students eligible for free or reduced-price lunch is less than 35.6% and "High Poverty" if the percent is greater than 76.2%. Districts with Low % of Students in Poverty: 25.05%; Districts with High % of Students in Poverty: 24.85%

* p<0.05, ** p<0.01, *** p<0.001

Yearly salary returns in first 5 years = (salary in year 5 – salary in base year) / 5

Yearly salary returns in first 10 years = (salary in year 10 – salary in base year) / 10

Yearly salary returns in last 5 years = (highest row experience – salary in year 20) / 5

Yearly salary returns in last 10 years = (highest row experience – salary in year 20) / 10

Yearly salary returns in Year 10 to Year 20 = (salary in year 20 – salary in year 10) / 10

Backloading = [((salary in year 20 – salary in year 10)/10 – (salary in year 10 – salary in base year)/10)) all divided by ((salary in year 10 – salary in year 0)/10)]*100

Frontloading first vs. last 5= (salary returns in first 5 years / salary returns in last 5 years)*100

Frontloading first vs. last 10= (salary returns in first 10 years / salary returns in last 10 years)*100

Table 14. Salary schedule in 2017-2018 CWI dollars

	All	Urban	Rural	Town/ Suburban	Low Minority	High Minority	Low Poverty	High Poverty
Salary Schedule Averages								
Base salary with credential (Year 1), no MA	$42,035	$42,676	$39,883**	$42,046	$41,555	$43,049**	$41,633	$42,772*
Base salary with credential (Year 1), with MA	44,223	44,727	41,406***	44,369	43,457	45,902***	43,525	45,348**
5 years' experience, no MA	46,934	47,393	44,558	47,043	46,301	48,058**	46,500	48,082*
5 years' experience, with MA	50,009	50,424	46,217***	50,310	48,948	52,362***	49,307	51,545**
10 years' experience, no MA	58,320	59,232	54,019***	58,487	57,490	59,160	58,178	59,268
10 years' experience, with MA	60,658	61,695	55,428***	60,889	59,570	62,568**	60,361	62,021
20 years' experience, no MA	73,308	74,524	68,145***	73,461	72,643	74,539	73,729	75,019
20 years' experience, with MA	75,586	76,350	69,709***	76,005	74,620	77,506**	75,770	77,858
Highest row experience, no MA	77,905	78,979	72,229***	78,176	77,968	78,619	78,467	79,057
Highest row experience, with MA	80,612	81,141	73,976***	81,217	80,282	82,038	80,922	82,221
Highest row, highest column (max salary)	83,379	84,167	76,327***	83,933	82,138	85,216**	83,067	84,803
Yearly Salary Return Averages								
Yearly salary returns in first 5 years	$980	$943	$935	$999	$949	$1,002	$973	$1,062
Yearly salary returns in first 10 years	1,628	1,656	1,414**	1,644	1,594	1,611	1,655	1,650
Yearly salary returns in last 5 years	919	891	817	943	1,065*	816	948	808
Yearly salary returns in last 10 years	460	445	408	472	533*	408	474	404
Yearly salary returns - Year 10 to Year 20	1,499	1,529	1,413	1,497	1,515	1,538	1,555	1,575
Backloading	7%	11%	24%	4%	17%	9%	11%	9%
Frontloading first vs. last 5	134%	135%	141%	133%	104%	158%**	132%	177%
Frontloading first vs. last 10	453%	494%	452%	436%	352%	506%**	491%	531%

Note. Contract salary amounts from CBAs were adjusted by NCES Comparable Wage Index (CWI) based on the 2012-2014 American Community Survey, then by the Comparable Wage Index. All Districts: *N*=495; Urban Districts: *N*=129; Rural Districts: *N*=40; Town/Suburban: *N*=326. Districts are classified as "Low Minority" if the percent of the minority student population is less than 35.2% and "High Minority" if the percent is greater than 79.9%. Districts with Low % of Minority Students: 25.05%; Districts with High % of Minority Students: 24.85%. Districts are classified as "Low Poverty" if the percent of students eligible for free or reduced-price lunch is less than 35.6% and "High Poverty" if the percent is greater than 76.2%. Districts with Low % of Students in Poverty: 25.05%; Districts with High % of Students in Poverty: 24.85%. * p<0.05, ** p<0.01, *** p<0.001

Yearly salary returns in first 5 years = (salary in year 5 – salary in base year) / 5

Yearly salary returns in first 10 years = (salary in year 10 – salary in base year) / 10

Yearly salary returns in last 5 years = (highest row experience – salary in year 20) / 5

Yearly salary returns in last 10 years = (highest row experience – salary in year 20) / 10

Yearly salary returns in Year 10 to Year 20 = (salary in year 20 – salary in year 10) / 10

Backloading = [((salary in year 20 – salary in year 10)/10 – (salary in year 10 – salary in base year)/10)) all divided by ((salary in year 10 – salary in year 0)/10)]*100

Frontloading first vs. last 5= (salary returns in first 5 years / salary returns in last 5 years)*100

Frontloading first vs. last 10= (salary returns in first 10 years / salary returns in last 10 years)*1000

What is the Association between District Compensation and Workforce Policies (e.g., Those Governed by CBAs) and the Number of Posted Vacancies?

We next turn to our final set of research questions, which combine the CBA policy and compensation data with the Edjoin data about teacher vacancies. Tables 15 and 16 provide results from the regressions described in equation (1). As in Table 2, the first column in each vertical panel shows relationships between CBA policies and vacancy outcomes (vacancy rates, percent of vacancies posted late, and posting duration) without any controls included in the model, and the second column shows regressions including controls for district characteristics (district size (ln), the proportion of students in poverty, and district geographic location (rural and urban, with town/suburban as the reference). Each row provides just the coefficient of interest (the relationship between the CBA policy and the outcome) from a separate regression.

Column 1 in Tables 15 and 16 examine how workforce and compensation policies outlined in the CBAs are associated with the number of vacancies posted by districts (per 1000 students).[33] Somewhat counterintuitively, we find suggestive evidence that districts with CBAs that seem to make the district more "desirable" – to teachers overall, to teachers new to the district and to teachers who continue to teach in the district—have higher rates of vacancies (see Panel A of Table 15). This may be simply a result of reverse causation, which of course plagues all of these cross-sectional analyses. In brief, it may be that being more "desirable" (as per the CBA policies) does not *cause* a district to have more vacancies, but rather that districts that are harder to staff (as proxied by vacancy rates) try to make themselves more attractive by negotiating friendlier policies into their CBAs. This finding actually echoes earlier work on individual CBA provisions and overall contract "restrictiveness" that shows that districts traditionally considered "hard to staff" (i.e., those with greater proportions of minority, low income and low-achieving students) may negotiate more restrictive CBAs, perhaps in order to attract teachers to these districts (e.g., Strunk, 2012). Conversely, we see negative correlations between *desirability to shortage area teachers* and vacancy rates. Notably, as discussed earlier in, this particular CBA desirability measure solely captures economic incentives to teachers in shortage area subjects. This may suggest that districts that provide economic incentives to shortage area teachers have *fewer* vacancies*,* as theory might predict.[34]

[33] We also run these analyses using the ratio of number vacancies per 1000 teachers. Results remain consistent and are available from the authors upon request.

[34] We also examine the relationship between individual items in the CBAs that specify how districts must staff their vacant positions and vacancy rates. We find no significant relationship between these provisions and actual posted vacancy rates. We do not show these results, but they are available upon request.

Table 15. OLS Regression of Vacancy Measures on District Desirability as Expressed in CBA Provisions and Negotiated Class Sizes

		(1)		(2)		(3)	
		Vacancy Rates		**Vacancy Posted Late**		**Posting Duration**	
Panel A	All teacher desirability index	1.053	2.573	0.127**	0.127**	-11.278	-12.1
		1.775	1.748	0.041	0.042	8.854	9.013
	Shortage area teacher desirability index	-2.036+	-1.717	0.045+	0.042	13.007*	10.032+
		1.143	1.135	0.027	0.028	5.699	5.847
	New Teacher desirability index	-0.707	-1.142	0.041	0.045	11.217	10.283
		1.415	1.367	0.033	0.033	7.091	7.07
	New to district teacher desirability index	2.553+	1.672	-0.027	-0.021	2.221	4.08
		1.486	1.441	0.035	0.035	7.448	7.437
	Continuing teacher desirability index	3.949**	3.767**	0.001	0.002	0.899	3.389
		1.432	1.391	0.034	0.034	7.218	7.227
Panel B	Negotiated class size K-5	-0.188	-0.122	0.007**	0.007*	-0.666	-0.874
		0.123	0.117	0.003	0.003	0.629	0.625
	Negotiated class size 6-8	-0.589***	-0.483***	0.008*	0.007*	-0.4	-0.7
		0.146	0.144	0.003	0.003	0.774	0.781
	Negotiated class size 9-12	-0.499***	-0.416**	0.006+	0.005	0.366	0.168
		0.138	0.134	0.003	0.003	0.6	0.611
	CONTROLS		X		X		X

Note. Vacancy Rates are the number of job postings per 1000 students. Vacancy Posted Late are the vacancy rates limited from August to December. Only postings that had a positive reported duration spanning less than a year were used, which accounts for 98.54% of the overall postings from the restricted sample of 495 districts. Details of district level "desirability" for desirability indices are given in Table 3. Means and standard deviations reported for each covariate in the panel. + p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Panel B of Table 15 Column 1 provides the coefficients of interest from regressions on the class sizes negotiated in the CBAs. Here we see a negative relationship between the negotiated class size for elementary (K-5), middle (6-8) and high school (9-12) grades and vacancy rates, and these relationships are significant for middle and high school class sizes. In other words, districts with higher negotiated class sizes have lower vacancy rates. While this may again seem surprising given that larger class sizes are usually viewed as undesirable characteristics of districts, it is mathematically intuitive; districts with larger class sizes require fewer teachers to staff the same number of classes/serve the same number of students, thus need to post for fewer positions.

Table 16. OLS regressions of vacancy measures on negotiated salaries (adjusted)

		(1)		(2)		(3)	
		Vacancy Rates		**Vacancy Posted Late**		**Posting Duration**	
Panel A	Base salary, no MA ACS	-0.340***	-0.277***	-0.001	-0.002	-0.274	-0.446
		0.058	0.058	0.001	0.001	0.299	0.304
	Base salary, with MA ACS	-0.315***	-0.265***	0	0	-0.192	-0.365
		0.05	0.05	0.001	0.001	0.26	0.266
	5 years' experience, no MA ACS	-0.349***	-0.307***	0	-0.001	-0.123	-0.255
		0.049	0.048	0.001	0.001	0.256	0.259
	5 years' experience, with MA ACS	-0.296***	-0.261***	0.001	0.001	-0.119	-0.25
		0.039	0.04	0.001	0.001	0.209	0.213
	10 years' experience, no MA ACS	-0.271***	-0.237***	0.001	0	-0.194	-0.277
		0.035	0.035	0.001	0.001	0.187	0.191
	10 years' experience, with ACS ACS	-0.268***	-0.238***	0.001	0	-0.225	-0.315+
		0.033	0.033	0.001	0.001	0.173	0.177
	20 years' experience, no MA ACS	-0.163***	-0.135***	-0.001	-0.001	-0.122	-0.179
		0.029	0.028	0.001	0.001	0.148	0.15
	20 years' experience, with MA ACS	-0.183***	-0.157***	0	0	-0.183	-0.249
		0.027	0.027	0.001	0.001	0.14	0.142
	Max Salary ACS	-0.215***	-0.188***	0.001	0	-0.172	-0.250+
		0.027	0.027	0.001	0.001	0.142	0.146
	Yearly salary returns first 5 years ACS	-0.408***	-0.410***	0.001	0.001	0.308	0.263
		0.101	0.097	0.002	0.002	0.511	0.51
	Backloading ACS	0.010**	0.009*	0	0	-0.006	-0.004
		0.004	0.004	0	0	0.018	0.018
	CONTROLS		X		X		X

Note. Vacancy Rates are the number of job postings per 1000 students. Vacancy Posted Late are the vacancy rates limited from August to December. Only postings that had a positive reported duration spanning less than a year were used, which accounts for 98.54% of the overall postings from the restricted sample of 495 districts. ACS = XXX. Means and standard deviations reported for each covariate in the panel. + p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Panel A of Table 16 shows the relationships between salaries negotiated into CBA salary schedules (at the entering level, with five, 10 and 20 years of experience, and the maximum possible salaries, all with and without master's degrees) and a measure of frontloading (salary returns in the first five years) and our measure of backloading (as described in the data section above). We ran these regressions using salaries taken directly from salary schedules and after adjusting for both inflation (CPI) and cost of living (CWI). We provide results from the latter adjusted salary figures, but results from the actual salary regressions are consistent in magnitude and direction, and available upon request from the authors. As expected, we find that on every point on the salary schedule, whether with or without a master's degree, higher salaries are associated with lower vacancy rates. Moreover, the greater the yearly returns to experience in the first five years of teaching, the lower the vacancy rate. The only salary measure that is *positively* (and significantly) associated with vacancy rates is our measure of

backloading; districts that provide greater returns to experience for very senior teachers relative to very junior teachers – i.e., those that reward veteran teachers for each year they teach more than they do for early career teachers – have significantly *higher* vacancy rates.

What is the Association between District Compensation and Workforce Policies (e.g., Those Governed by CBAs) and the Number of Vacancies that District Post Late (e.g., in the Fall for the Current Year)?

Column (2) of Tables 15 and 16 provides the relationships of interest from regressions of the proportion of total vacancies posted "late" (September through December) and CBA policies. We again find a positive (and this time significant) relationship between the overall desirability index and the proportion of vacancies posted late (Panel A), which again could suggest a reverse causality argument. Panel B shows that we find positive (and almost always significant) relationships between negotiated class sizes and the proportion of vacancies posted late. It is hard to say why this might be the case. There is no relationship between salary amounts or schedule structure and late posting of vacancies.

What is the Association between District Compensation and Workforce Policies and the Duration of Job Postings?

Panel (3) of Tables 15 and 16 present the relationships between the duration of postings and the CBA policies of interest. We find almost no significant relationships between any CBA measures and this outcome, suggesting that duration of posting (which, in theory, signifies difficulty filling a vacancy) is related to the overall policy desirability of the district, negotiated class size, or salary measures. This may be because our measure of posting duration is inherently noisy, as we discuss above.

Conclusions

Our findings on job vacancies in California tend to confirm what we know from research in other contexts: school systems have greater difficulty staffing STEM, special education, and ELL positions than elementary teaching positions, and more disadvantaged and lower performing systems also tend to have great staffing difficulties. There is some suggestive evidence, as well, that districts that face steeper competition from school systems in other states have greater difficulties staffing their schools. In addition, proximity to a teacher education program is associated with fewer staffing difficulties.

Although we show that there is substantial variation in the kinds of provisions included in CBAs that may make districts more desirable to certain kinds of teachers, our analyses reveal only week evidence of links between the CBA working conditions measures and district vacancies. As we noted above, it is difficult to disentangle whether this is related to potential teachers being aware or unconcerned with the provisions in CBAs, or the fact that the provisions in CBAs may be adjusted over time in light of staffing needs.

There is much better evidence that district compensation structure is related (in expected directions) to vacancies. For instance, districts with higher salaries have fewer

vacancies. Interestingly, districts that backload their salary schedules, providing greater returns to experience for senior relative to junior teachers, have *higher* vacancy rates. These districts may be working to retain their senior teachers, but they have greater difficulty staffing their openings.

These results give rise to several potential solutions that California and districts within the state may consider as they work to alleviate the specific teacher shortages plaguing their own districts. First, given the strong evidence cited here and elsewhere that relatively few districts utilize compensation as a tool to address staffing difficulties, more districts may wish to consider using economic incentives to target high-need teachers. If salaries matter, as our results and others cited earlier suggest they do, and districts appear to be underutilizing economic incentives to target specific teachers, as our results and those from earlier work in California suggest they do, there seems to be an opportunity for districts to provide enhanced salaries to targeted teachers to address specific shortage areas. The California state government might also consider how to put into place incentives for certain kinds of teachers to enter the profession.

Second, our results that highlight the staffing difficulties faced by districts on the state borders suggest that California may wish to make it easier for districts to compete for out-of-state teachers, and make teaching in the Golden State more desirable relative to states in close proximity to California. There is an opportunity for California to make what is required for experienced teachers to become teachers in California transparent, and perhaps easier as well. Many of the barriers to cross-state mobility associated with licensure rules are artificial and do not serve a policy purpose; it is unclear why teachers who have already demonstrated that they are highly successful in one state wouldn't be readily welcomed into the California teacher workforce, especially if they could staff hard-to-fill positions. Indeed, it is likely that there exists a significant reserve pool of potential teachers who actually have moved from other states but have opted not to re-enter the teacher labor market in California due to real or perceived burden of doing so.

Last, we find that districts that are closer to TEPs have fewer staffing challenges, at least as expressed through vacancy rates. While it is impossible for districts to locate closer to a TEP, it is not difficult for districts to provide TEPs with student teaching slots and for the state to encourage student teaching in districts that need to fill vacancies. Given that student teaching appears to be a key factor in influencing the location of a first job, it makes good sense for the state to encourage teacher candidate-student teaching internship matches be in districts with greater classroom staffing struggles.

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Appendix Q

California English Learner Roadmap

Strengthening Comprehensive Educational Policies, Programs and Practices for English Learners

(California Department of Education, 2018)

California English Learner ROADMAP

Strengthening Comprehensive Educational Policies, Programs, and Practices for English Learners

Publishing Information

The *California English Learner Roadmap: Strengthening Comprehensive Educational Policies, Programs, and Practices for English Learners* (*CA EL Roadmap*) was written by Dr. Kenji Hakuta with input from the English Learner Roadmap Workgroup in cooperation with the California Department of Education (CDE). The cover and interior design were created and prepared by Michael Medina, graphic designer, WestEd. It was published by the Department, 1430 N Street, Sacramento, CA 95814-5901. It was distributed under the provisions of the Library Distribution Act and Government Code Section 11096.

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Notice

The guidance in the *CA EL Roadmap* is not binding on local educational agencies or other entities. Except for statutes, regulations, and court decisions that are referenced herein, the document is exemplary, and compliance with it is not mandatory. (See Education Code Section 33308.5.)

Contents

Acknowledgments i

Foreword v

Introduction 1

A Call to Action 3

Policy and Research in Historical Context 5

Lau v. Nichols: An Affirmation of Civil Rights Law 5

The Debate Over Bilingual Education 6

Standards-Based Reform 7

A New Accountability Paradigm 9

Proposition 58: California Education for a Global Economy (CA Ed.G.E.) Initiative 10

A Growing Research Consensus 10

Four Interrelated Principles 13

Principle One: Assets-Oriented and Needs-Responsive Schools 13

Principle Two: Intellectual Quality of Instruction and Meaningful Access 14

Principle Three: System Conditions That Support Effectiveness 15

Principle Four: Alignment and Articulation Within and Across Systems 15

Crosswalk of the CA EL Roadmap Principles and Elements to the LCFF and LCAP 16

CA EL Roadmap information graphic 19

Illustrative Case Examples of *CA EL Roadmap* Implementation 21

Characteristics of Illustrative Case Examples 21

Standards for Reviewing Examples 22

Highlighted Case Examples 25

Example 1: Sobrato Early Academic Language (SEAL) 25

Example 2: Sanger and Firebaugh-Las Deltas Partnership 27

Example 3: Garden Grove Unified School District 29

Example 4: Fresno Unified School District 30

Conclusion 33

Appendix A: EL Roadmap Policy 34

California's Vision of Success for English Learners 36

Mission 36

Four Principles 36

Appendix B: Acronyms 38

Appendix C: Glossary 39

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Foreword

On July 12, 2017, the California State Board of Education (SBE) unanimously approved the California English Learner Roadmap Policy: Educational Programs and Services for English Learners. The SBE policy ushers in a new era of English learner education that embraces linguistic diversity as an asset while providing the supports necessary to allow English learners meaningful access to intellectually rich and engaging curriculum. This document was developed with input from parents, teachers, administrators, county offices of education, and other agencies that assist schools to prepare California's over 1.3 million English learners for college, career, and civic participation in this, our linguistically and culturally diverse state.

This guidance document, the *California English Learner Roadmap: Strengthening Educational Policies, Programs, and Practices for English Learners* (*CA EL Roadmap*) supports local educational agencies (LEAs) as they incorporate English learner education into their local program designs. This guidance document elaborates on the SBE policy, providing research- and evidence-based examples from the field that illustrate the *CA EL Roadmap* principles in action. The crosswalk to the Local Control and Accountability Plan (LCAP), embedded in this document, allows LEAs to bring English learners to the forefront as they consider the state priorities and work with their communities to develop their LCAPs.

When 73 percent of California voters passed the California Education for a Global Economy (CA Ed.G.E.) Initiative in 2016, they spoke loudly and clearly that multilingualism is a priority in our state. Capitalizing on the assets that our English learners bring to our vision of a multilingual society is vital. To bring this to fruition, we need to not only cultivate English learners' language skills, but also ensure they meet the high academic expectations that we hold for all students so that they can use those biliterate/multiliterate skills to thrive and lead in a multilingual state.

The *CA EL Roadmap* paves the way for English learner success by providing tools and examples aligned to the State priorities so that parents, communities, schools, teachers, administrators, districts, and county offices of education can effectively implement policies, programs, and practices for our state's English learners. The *CA EL Roadmap* assists LEAs to leverage these State priorities, along with the principles within this guidance document, and tailor them to the local context.

The *CA EL Roadmap* is the road to a thriving future for California.

Tom Torlakson
State Superintendent of Public Instruction

Introduction

On July 12, 2017, the California State Board of Education (SBE) unanimously approved a new policy for English learners, the California English Learner Roadmap: Educational Programs and Services for English Learners (EL Roadmap Policy) with the following vision and mission:

Vision

English learners fully and meaningfully access and participate in a twenty-first century education from early childhood through grade twelve that results in their attaining high levels of English proficiency, mastery of grade level standards, and opportunities to develop proficiency in multiple languages.

Mission

California schools affirm, welcome, and respond to a diverse range of English learner (EL) strengths, needs, and identities. California schools prepare graduates with the linguistic, academic, and social skills and competencies they require for college, career, and civic participation in a global, diverse, and multilingual world, thus ensuring a thriving future for California.

As the SBE resolution noted, this action inaugurates a new era in state policy for English learners and leverages recent advances in educational research, development, policy, and practice:

The EL Roadmap Policy is necessary and timely for the following reasons: (1) the passage of the California Education for a Global Economy Initiative (CA Ed.G.E. Initiative), Proposition 58, effective July 1, 2017, amended most of Proposition 227 and resulted in changes to *Education Code (EC)* sections 300, 305–306, 310–311, 320 and 335; (2) the implementation of the State content standards and curriculum frameworks featuring evidence-based practices and exemplary services for English learners as described in the SBE adopted documents; (3) the implementation of the Local Control Funding Formula (LCFF) and the Local Control and Accountability Plan (LCAP); and (4) changes to the Elementary and Secondary Education Act (ESEA) as reauthorized by the Every Student Succeeds Act (ESSA) of 2015.

The policy recognizes that many English learners represent the newest members of our society (including recently arrived immigrants and children of immigrants) who bring a rich diversity of cultural backgrounds and come from families with rich social and linguistic experiences. They also bring skills in their primary languages that contribute enormously to the state's economic and social wealth of talented multilingual and multicultural population.

This policy explicitly focuses on California's English learners—whose current and former members represent over 38 percent of the state's 6.2 million transitional kindergarten/kindergarten through twelfth grade students—in the context of the state's efforts to advance the educational system, the quality of teaching and learning, and achievement outcomes for all students. It centers on standards, curriculum frameworks, assessment, accountability, school improvement, educator quality, early childhood/preschool, social and family support services, and parent/community involvement. Its purpose is to promote local

capacity-building and continuous improvement in each of these areas and their interrelationships, based on evidence of effectiveness from local experience as well as the most current rigorous research evidence that speaks to the strengths and needs of the diverse population of English learners.

With this policy, the SBE directs the California Department of Education (CDE) to develop guidance to local educational agencies (LEAs) in welcoming, understanding, and educating the diverse population of students who are English learners attending California public schools. This guidance document shares the SBE policy's historical context; the research and the principles underlying the policy; and examples from California school districts that illustrate the innovative tools, evidence-gathering, and knowledge development needed to support educators' continuous improvement in serving California's substantial EL population.

A Call to Action

The primary audiences for this guidance document are the state's LEAs and technical assistance providers, including county offices of education. But every parent, professional educator, and agency involved in educating English learners—early childhood educators, institutions of higher education (IHEs), teacher and administrator credentialing bodies, and professional and advocacy organizations—are also intended audiences. Although these individuals and agencies play different roles in supporting California's educational system, the *CA EL Roadmap* signals that serving English learners is a central responsibility of **each and every educator**. Effectively serving this diverse group of learners fosters excellence for all Californians because language is foundational to learning and development in all students.

Language is foundational to learning and development in all students.

Implementing the *CA EL Roadmap* will require:

- Parent/community leaders and district/school leaders to forge a common language and understanding of the *CA EL Roadmap* principles and elements to value students' native languages and bilingualism, raise educational expectations for all students, and foster English learners' equitable access to quality teaching and learning.
- District and school leaders to allocate resources and make purposeful decisions about program models, professional learning, curriculum and materials, and assessment practices that are consistent with *CA EL Roadmap* principles.
- District and school leaders to shift their planning and internal accountability practices toward continuous improvement for English learners guided by evidence of effectiveness that is timely, responsive, and meaningful for local stakeholders.
- County offices of education to support and build the capacity of local educators through well-leveraged resources for improvement and a clear focus on strengthening practices and outcomes for English learners within the context of LCFF/LCAP.
- Early childhood educators and LEAs to design and enact services that support dual language development, early literacy and numeracy, and promote early childhood education as a crucial part of each English learner's education.
- LEAs to strengthen career and college pathways for secondary EL students by collaborating with local industries, community colleges, and four-year universities to better guide graduates toward career preparation and degree completion.
- IHEs to prepare teachers and leaders who understand and ensure that English learners are the responsibility of all educators, to strengthen pathways for bilingual teachers, and to collaborate with accrediting agencies on these needs.
- Professional associations to leverage their conferences and professional development opportunities in support of *CA EL Roadmap* principles and components, and to foster collaboration on their implementation.

In a state whose prosperity depends on the success of immigrants and their children, all California stakeholders must own this vision and mission, respond to this call to action, and interpret and apply the content of this guidance document within their respective roles in order to improve educational opportunities for the state's EL students.

Policy and Research in Historical Context

Every act of human learning is rooted in history, and so this document begins by offering an overview of the historical context in which California's English learners find themselves. This account sets down important markers of policy history and notes milestones in research on human learning, language development, bilingualism, and educational policies, practices, and programs that advance EL success.

Lau v. Nichols: An Affirmation of Civil Rights Law

- The U.S. Supreme Court ruled in 1974 to affirm the rights of English learners to have equal access to a meaningful education.[1] The justices unanimously agreed that the civil rights of the class of students represented by Kinney Lau, a student in the San Francisco Unified School District, were violated by not having available (1) English language development services, nor (2) meaningful access to the curriculum. Most importantly, equality in this case meant a program **appropriate and targeted** to the needs of English learners, and not just the same as what is provided to native English speakers.

Every act of human learning is rooted in history, and so this document begins by offering an overview of the historical context in which California's English learners find themselves.

- The Lau decision, rooted in the Civil Rights Act of 1964, lent the force of the judiciary to the nascent efforts of the United States Congress to recognize English learners (then called "Limited English Proficient" students) through its civil rights legislation embodied in the ESEA. In 1968, Congress recognized this as a separate title, the Bilingual Education Act. An effort to build local capacity has evolved, and continues as Title III, Language Instruction for English Learners and Immigrant Students, of the ESEA reauthorization of 2015, known as the Every Student Succeeds Act.
- California was one of the first to enact a state law affirming these rights. The Chacón-Moscone Assembly Bill 1329 of 1976 required all English learners enrolled in California's public schools to receive a program of English language development (ELD) and instruction in a language they understand. The bill also required all schools to provide English learners access to the regular curriculum. This bill gave rise to the ambitious effort to provide bilingual education on a broad basis.
- During this period, the rights of English learners to programs that enable access to the language of instruction as well as to the full curriculum became deeply rooted. This commitment is reflected in the Castañeda standards (after Castañeda v. Pickard, a 1981 U.S. Fifth Circuit Court ruling[2]) that identify a dual obligation to English learners to provide

1 *Lau v. Nichols*, 414 U.S. 563 (1974).

2 Castañeda v. Pickard, U.S. Court of Appeals, Fifth Circuit. 781 F2d 456.

a program to learn English and access to the same academic achievement goals as for all other students, thus defining appropriate programming for English learners. About policies and practices adopted by a school or district, the Castañeda standards ask:

1. Are they based on sound educational theory?
2. Are they implemented with sufficient rigor?
3. Is there demonstrable evidence of effectiveness after a sufficient period of implementation?

An implicit fourth standard speaks to continuous improvement:

4. Based on the evidence of effectiveness, does the system make efforts to improve implementation or to modify its theory?

The Castañeda standards remain agnostic as to the method or language of instruction, and only ask for a sound theory supported by research and a commitment to an approach to implementation whose effectiveness is monitored and improved, using evidence of student learning.

The Debate Over Bilingual Education

Congressional enactment of the Bilingual Education Act, fueled by an interpretation by the U.S. Department of Education's Office for Civil Rights to mandate bilingual education as a remedy to Lau v. Nichols, resulted in a spirited national debate about the theory and the efficacy of the bilingual approach.[3]

The early research on efficacy found equivocal results when comparing students in English-only versus bilingual education programs, leading to a pushback against favoring bilingual approaches.[4] There was evidence that well-implemented bilingual programs—and evaluated in well-controlled studies—were more effective[5]. Yet for the most part, the broad U.S. cultural attitude that bilingualism runs counter to assimilation, and is therefore un-American, ruled the day and the research received scant notice.

Within California, the bilingual education movement advanced through important publications by the CDE. The CDE published an influential series of theoretical frameworks and case studies of bilingual schools[6]. In addition to documenting actual cases of effective bilingual schools to show what is possible, an important legacy of this work was the recognition of what we today call academic uses of language as distinguished from everyday oral language.[7]

Another important component of the bilingual education debate was the time frame for programs for English learners. Bilingual education models distinguish transitional approaches, where the native language is a temporary and short-term support, and maintenance approaches where the long-term goal is bilingualism and biliteracy. Congress debated not just the efficacy of the bilingual approach, but also the question of how to cap the period of time students could be served by programs utilizing the student's primary language.

This consideration of time frame also appeared in Proposition 227, which was passed by California voters

3 Crawford, J. (1989). Bilingual Education: *History, Politics, Theory, and Practice*. Trenton, NJ: Crane Publishing Co.

4 Hakuta, K. (1986). *Mirror of Language: The Debate on Bilingualism*. New York: Basic Books.

5 Willig, A. (1985). A Meta-Analysis of Selected Studies on the Effectiveness of Bilingual Education. Review of Educational Research, 55: 269-317.; Greene, J. (1998). A Meta-Analysis of the Effectiveness of Bilingual Education. University of Texas at Austin and Harvard University: The Tomas Rivera Policy Institute.

6 California Department of Education (1984). *Schooling and Language Minority Students: A Theoretical Framework*. Sacramento: Office of Bilingual Bicultural Education. ERIC ED249773; California Department of Education (1986). *Beyond Language: Social and Cultural Factors in Schooling Language Minority Students*. Sacramento: Bilingual Education Office. ERIC ED304241.

7 An early and influential conceptualization of this was introduced by researcher Jim Cummins in the California Department of Education (1984). *Schooling and Language Minority Students: A Theoretical Framework*. Cummins employs the acronyms "BICS" for Basic Interpersonal Communication Skills, and "CALP" for Cognitive Academic Language Proficiency.

in 1998 and greatly curtailed bilingual education in the state. Indeed, Proposition 227 stipulated English immersion programs be provided to EL students for a period "not normally intended to exceed one year"—a time frame unsupported by existing studies, which instead suggested a far longer time period of four to seven years.[8]

Proposition 227 also expanded on the sunset of the Chacón-Moscone bilingual education bill, which occurred in 1987. These events, coming during a period of heightened voter concerns about immigration and the shifting demographics of the state, effectively eclipsed the successes of bilingual instructional program advocacy begun by Lau.

Standards-Based Reform

The emerging paradigm of standards-based reform, beginning in the late 1980's, promised to create "a rising tide" of student achievement that would lift all students, including English learners.[9] This paradigm shaped the ESEA reauthorizations in 1994 (Improving America's Schools Act), in 2001 (No Child Left Behind [NCLB]), and in broad strokes it remains the framework for the current reauthorization, the ESSA of 2015.

California was first in the nation to produce ELD Standards in 2000 and implement a standards-based annual ELD assessment in 2001, signaling the importance of systematically focusing on the language development needs of EL students along with academic needs. California's efforts arguably influenced NCLB Title III, which required all states to adopt ELD standards, and mandated annual assessment and accountability for EL progress toward, and attainment of, English language proficiency.[10]

During the NCLB period, the state was also focused on the "scientifically-based research" aspect of the law that guided academic programs and textbook adoptions adhering to this paradigm. This new paradigm asked educators to be more accountable for the evidence that they had to support their decision-making in practice, and had the effect of making programs focus largely on foundational literacy skills, where much of the strongest research evidence existed. This scientific paradigm was limited by its definition of rigor (through randomized control trials), which in turn limited the range of practices that could be identified, and therefore identified only those practices that could be confirmed across different contexts. In effect, the paradigm ignored approaches adapted to be effective with particular students served in local contexts.

These laws, by focusing on student attainment and progress toward attainment of the standards rather than the means by which this is done (as played out in the bilingual v. English-only debates), enabled further consideration of how to increase the capacity of schools and local districts in serving the needs of English learners.[11]

Finally, national standards-based reform has led to the current enactment of the Common Core State Standards, which are known in California as the California State Standards, and the Next Generation Science Standards (NGSS), and to revisions in federal law found in ESSA.

8 Hakuta, K., Butler, Y. G. & Witt, D. (2000). *How Long Does It Take English Learners to Attain Proficiency?* University of California Linguistic Minority Research Institute. ERIC ED443275.

9 McLaughlin, M. W., Shepard, L.A., & O'Day, J.A. (1995). Improving Education through Standards-Based Reform. Report by the National Academy of Education Panel on Standards-Based Education Reform. National Academy of Education.

10 Linquanti, R. & George, C. (2007). Establishing and Utilizing an NCLB Title III Accountability System: California's Approach and Findings to Date. In J. Abedi (Ed.), *English Language Proficiency Assessment in the Nation: Current Status and future Practice* (pp. 105-118). Davis: University of California. Retrieved from UC Davis Web site at https://www.education.ucdavis.edu/sites/main/files/ELP_Report.pdf.

11 August, D. & Shanahan, T. (eds.) (2006). *Developing Literacy in Second-Language Learners*. Washington, DC: Center for Applied Linguistics.

The new college- and career-readiness standards are notable in the way in which content and language are systematically related. An analysis of the key practices of the California State ELA and Math Standards and the NGSS[12] illustrates the ways in which uses of language in disciplinary learning, such as engagement in argument from evidence or supporting analysis of complex texts with evidence, comprise key ways that students are expected to use language during disciplinary learning. This expanded perspective on language shifted the nature of the California ELD standards, which were completely revised in 2012,[13] to encompass collaborative and analytical practices in addition to grammatical structure related to language purpose and use, with less focus on isolated vocabulary.

The importance of language use in enacting the analytical practices found in the new academic content standards highlighted the intertwined nature of academic content and ELD standards. This in turn led to California's groundbreaking work on the nation's first integrated English Language Arts/English Language Development Framework for California Schools (ELA/ELD Framework), developed under the state's Curriculum Framework and Evaluation Criteria Committee and adopted by the SBE in 2014.

As a result of California's ELA/ELD Framework, the concepts of **designated and integrated ELD** have been incorporated in additional state subject matter frameworks, and also gained currency nationally. Integrated and designated ELD signal that the academic uses of language are to be developed in every subject matter and classroom throughout the day, not just during the designated ELD time or stand-alone ELD class. It systemically signals that all educators, not just bilingual instructional and ELD staff, are responsible for English learners' linguistic and academic achievement.

The reauthorization of ESEA as ESSA in 2015 also brought notable changes for EL policy through federal law. Key shifts include:

- Accountability for EL progress toward and attainment of English language proficiency is integrated into Title I accountability, signaling the importance of ELD as a key contributor to academic achievement;[14]
- Setting expectations for progress toward English language proficiency can take into account students' initial English proficiency status and time in U.S. schools, as called for by second language acquisition research;[15]
- Former EL students can be included in the EL subgroup for academic achievement for up to four years after exit in order to (a) stabilize the group and reduce selection bias created by removing English-proficient students from the

12 Cheuk, T. 2013. Relationships and Convergences Among the Mathematics, Science, and ELA Practices. Refined version of diagram created by the Understanding Language Initiative for ELP Standards. Stanford, CA: Stanford University. Retrieved from the Understanding Language Web site at http://www.ell.stanford.edu/sites/default/files/VennDiagram_practices_v11%208-30-13%20color.pdf.

13 *California English Language Development Standards: Kindergarten through Grade 12*. California Department of Education. Retrieved from the CDE website at http://www.cde.ca.gov/sp/el/er/documents/eldstndspublication14.pdf

14 Goldschmidt, P. & Hakuta, K. (2017). Incorporating English Learner Progress into State Accountability Systems. Washington DC: Council of Chief State School Officers. Retrieved from the CCSSO Web site at http://www.ccsso.org/Documents/Incorporating%20English%20Learner%20Progress%20into%20State%20Accountability%20Systems_Final%2001%2012%202017.pdf.

15 Cook, H. G., Linquanti, R., Chinen, M., & Jung, H. (2012). *National Evaluation of Title III Implementation Supplemental Report: Exploring Approaches to Setting English Language Proficiency Performance Criteria and Monitoring English Learner Progress*. Washington DC: U.S. Department of Education, Office of Planning, Evaluation and Policy Development.

subgroup, and (b) provide a fuller accounting of long-term EL success;[16,17]

- States, under Title III, must establish standardized, statewide entry and exit procedures and criteria for EL status, responsive to evidence of their importance from extensive research and policy analysis;[18, 19, 20]
- Evidence-based interventions (not restricted to EL programs) are tiered to allow for a range of innovations and local adaptations.[21]

These changes in federal law allow for more coherent, nuanced, and responsive policies and systems of accountability that complement and support California's approach to continuous improvement and capacity building.

A New Accountability Paradigm

ESSA, as well as California's emerging accountability system for continuous improvement, represents a broad acknowledgment of the failure of NCLB-style accountability to reduce achievement gaps. The state encourages the measurement and improvement of meaningful learning for students, improved resource allocation to the neediest students, and professional learning and supports for teachers and leaders. Accompanying these shifts are a continuous improvement model that builds political accountability (through LCAPs), professional accountability, and performance accountability.[22] A crosswalk of the *CA EL Roadmap* to LCFF/LCAP, as elaborated later in this report, is essential to successfully implementing California's improvement strategy.

16 Saunders, W. M., & Marcelletti, D. J. (2013). The Gap That Can't Go Away: The Catch-22 of Reclassification in Monitoring the Progress of English Learners. *Educational Evaluation and Policy Analysis* (35)2, 139–156.

17 Hopkins, M., Thompson, K. D., Linquanti, R., Hakuta, K., & August, D. (2013). Fully Accounting for English Learner Performance: A Key Issue in ESEA Reauthorization. *Educational Researcher, 42*(2), 101–108.

18 Umansky, I., Reardon, S., Hakuta, K., Thompson, K., Estrada, P., Hayes, K., Maldonado, H., Tandberg, S. & Goldenberg, C. (2015). Improving the Opportunities and Outcomes of California's Students Learning English: Findings from School District-University Collaborative Partnerships. PACE Policy Brief. Downloaded at http://www.edpolicyinca.org/publications/improving-opportunities-and-outcomes-californias-students-learning-english-findings-school-district-university-collaborative-partnerships.

19 Linquanti, R., Cook, H. G., Bailey, A. L., & MacDonald, R. (2016). *Moving Toward a More Common Definition of English Learner: Collected Guidance for States and Multi-State Assessment Consortia*. Washington DC: Council of Chief State School Officers. Retrieved from the CCSSO Web site at http://www.ccsso.org/Documents/Moving%20Toward%20a%20More%20Common%20Definition%20of%20English%20Learner-Final(0).pdf.

20 National Research Council. (2011). Allocating Federal Funds for State Programs for English Language Learners. Panel to Review Alternative Data Sources for the Limited-English Proficiency Allocation Formula under Title III, Part A, Elementary and Secondary Education Act. Committee on National Statistics and Board on Testing and Assessment. Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academies Press.

21 This includes: Tier 1 – Strong Evidence supported by one or more well-designed and well-implemented randomized control experimental studies; Tier 2 – Moderate Evidence supported by one or more well-designed and well-implemented quasi-experimental studies; Tier 3 – Promising Evidence supported by one or more well-designed and well-implemented correlational studies (with statistical controls for selection bias); and Tier 4 – Demonstrates a Rationale: practices that have a well-defined logic model or theory of action, are supported by research, and have some effort underway by an SEA, LEA or outside research organization to determine their effectiveness. See *Evidence-Based Interventions under the ESSA*. Retrieved from CDE Web site at http://www.cde.ca.gov/re/es/evidence.asp.

22 See Fullan, M. & Rincón-Gallardo, S. (2017). California's Golden Opportunity – Taking Stock: Leadership from the Middle. Retrieved from Michael Fullan Web site at https://www.michaelfullan.ca/wp-content/uploads/2017/09/17_Californias-Golden-Opportunity-Taking-Stock-FinalAug31.pdf.

Proposition 58: California Education for a Global Economy (CA Ed.G.E.) Initiative

Proposition 58 was approved by 73.5 percent of California voters in 2016, including by a majority of voters in every county. The CA Ed.G.E. Initiative reaffirms the requirement that public schools ensure EL students attain English language proficiency, but repeals Proposition 227's provisions which resulted in severely restricting bilingual programs in favor of English immersion, which never demonstrated superior outcomes to bilingual approaches.[23] The CA Ed.G.E. Initiative promotes multiple pathways and opportunities, including dual language acquisition programs, for any student to become proficient in two or more languages.[24] The initiative also provides districts with greater flexibility in implementing instructional approaches to support English learners and native English-speaking students in obtaining the State Seal of Biliteracy, a multilingual education initiative created in California and adopted by 30 other states and the District of Columbia.[25]

A Growing Research Consensus

A recent 2017 consensus study report from the National Academies of Sciences, Engineering and Medicine (NASEM) offers important conclusions and recommendations in promoting the educational success of English learners.[26] Many of the findings reinforce and expand on prior research syntheses, including earlier from the CDE.[27]

Findings include the following:

- English language proficiency development: (1) is a process that takes four to seven years for those entering with emerging English, (2) benefits from coherent and aligned instruction across that time period, and (3) can take place as an integrated process simultaneous with academic content learning in addition to designated ELD and the development of bilingualism/biliteracy.
- Bilingualism provides benefits from the capacity to communicate in more than one language, may enhance cognitive skills, and may improve academic outcomes.
- Establishing proper and consistent procedures and criteria for identifying, monitoring, and exiting English learners using appropriate assessment procedures—while developing professional capacity to use assessment results—constitutes a key lever for effective system improvement.
- The diversity of the EL population (e.g., newcomers, long-term English learners, students with interrupted formal education, students with disabilities, gifted and talented students, and the expected continuous exiting of students from the EL category) necessitates pedagogy and educational support services that are differentiated and responsive.
- Brain development research reinforces the crucial period of birth through early childhood in the areas of cognitive, social, and language development. There is great need for coherent, aligned support for dual language learners

23 Parrish, T., Perez, M., Merickel, A., & Linquanti, R. (2006). Effects of the Implementation of Proposition 227 on the Education of English Learners, K–12: Findings from a Five-Year Evaluation (Final Report). Palo Alto, CA and San Francisco, CA: American Institutes for Research and WestEd. Retrieved from https://www.wested.org/online_pubs/227Reportb.pdf.

24 See https://www.cde.ca.gov/sp/el/er/caedge.asp.

25 See http://www.sealofbiliteracy.org/.

26 National Academies of Sciences, Engineering, and Medicine (2017). *Promoting the Educational Success of Children and Youth Learning English: Promising Futures*. Washington, DC: The National Academies Press. DOI: 10.17226/24677.

27 CDE (1984) Schooling and Language Minority Students: A Theoretical Framework; CDE (1986) Beyond Language: Social and Cultural Factors in Schooling Language Minority Students; and CDE (2010) *Improving Education for English Learners: Research-Based Approaches*.

across the preschool and primary grade systems to begin developing their bilingual and biliterate capacities.

The current research evidence base also supports the need to attend to the following instructional factors:

- Explicit literacy instruction, especially in the early grades and with students not literate upon entry
- Peer-assisted and small-group learning opportunities
- Academic language support during content area instruction, balanced with structured explicit opportunities for oral and written language skills development
- Appropriate assessment in various forms (e.g., formative, benchmark, summative) to understand and support student learning
- Processes related to social-emotional development and identity formation

The NASEM report also reviews existing research on educational systems serving English learners, and notes the following characteristics (from pages 7–20, emphasis added) of effective local systems:

- **Administrative leadership at the district and school levels takes responsibility** for initiating and sustaining instructional programs and practices that support the full academic development of all students, including [English learners].
- **[English learners] are recognized as capable of learning whatever society expects all children to learn in school rather than as incapable of handling the school's curriculum until they master English.** This is a fundamental epistemological difference between schools that educate [English learners] successfully and those that do not.
- **Socioemotional support** is provided for both teachers and students through the creation of learning communities. In the successful districts and schools described, administrators recognized that educating students with complex and diverse needs could be very challenging for teachers, emotionally and physically. They, like their students, required collegial support from fellow teachers and administrators to accomplish all they were expected to do.
- **Teachers are encouraged to work collaboratively** and support one another to improve instruction. …[c]ross-disciplinary endeavors in planning and integrating instruction [are] critical in supporting language and literacy development across the curriculum.
- **Language-rich classroom and school environments** are promoted in which communication and self-expression are encouraged. Teachers are linguistically, culturally, and pedagogically prepared to meet the academic and sociocultural needs of [English learners]. Instruction is adapted based on frequent analysis of student performance in formative and summative assessments. School and community partnerships are encouraged to augment and enrich classroom-based learning.

The *CA EL Roadmap* principles and elements delineated below incorporate the current trajectory of policy and the most recent research consensus. The workgroup of practitioners and stakeholders which supported the CDE in developing the *CA EL Roadmap* Policy and this accompanying guidance document provided extensive input and feedback to both, bringing to bear the diverse professional expertise and practical experiences of the workgroup's members.[28]

28 The full list of the EL Roadmap Workgroup members can be found at https://www.cde.ca.gov/sp/el/rm/roadmapmembers.asp.

Four Interrelated Principles

Four principles support the vision and provide the foundation of the *CA EL Roadmap*. These principles are intended to guide all levels of the system towards a coherent and aligned set of practices, services, relationships, and approaches to teaching and learning that together create a powerful, effective, twenty-first century education for the state's English learners. Underlying this systemic application of the principles is the foundational understanding that simultaneously developing English learners' linguistic and academic capacities is a shared responsibility of all educators, and that all levels of the schooling system have a role to play in ensuring the access and achievement of the 1.3 million English learners who attend our schools. The principles address the following themes:

Programs value and build upon the cultural and linguistic assets students bring.

1. Assets-Oriented and Needs-Responsive Schools
2. Intellectual Quality of Instruction and Meaningful Access
3. System Conditions that Support Effectiveness
4. Alignment and Articulation Within and Across Systems

These principles, and the elements delineated for each, are research- and values-based, and build upon California's academic content and ELD standards, the California ELA/ELD Framework, Blueprint for Great Schools 1.0 and 2.0, and other state policy and guidance documents. It is important to stress that these principles and elements are not meant to serve as a checklist. Rather, they might be thought of as the strings of an instrument from which music is created. Extending this metaphor, district and school educators are musicians who ultimately must take up these resources and strive together to attain their harmonious implementation.

Principle One: Assets-Oriented and Needs-Responsive Schools

Pre-schools and schools are responsive to different EL strengths, needs, and identities and support the socio-emotional health and development of English learners. Programs value and build upon the cultural and linguistic assets students bring to their education in safe and affirming school climates. Educators value and build strong family, community, and school partnerships.

Elements:

A. The **languages and cultures** English learners bring to their education are **assets** for their own learning and are important contributions to learning communities. These assets are valued and built upon in culturally responsive curriculum and instruction and in programs that support, wherever possible, the development of proficiency in multiple languages.

B. Recognizing that **there is no single EL profile** and no one-size-fits-all approach that works for all English learners, programs, curriculum, and instruction must be responsive to different EL student characteristics and experiences. EL students entering school at the beginning levels of English proficiency have different needs and capacities than do students entering

at intermediate or advanced levels. Similarly, students entering in kindergarten have different needs than students entering in later grades. The needs of long term English learners are vastly different from recently arrived students (who in turn vary in their prior formal education). Districts vary considerably in the distribution of these EL profiles, so no single program or instructional approach works for all EL students.

English learners engage in intellectually rich, developmentally appropriate learning experiences

C. **School climates** and campuses are affirming, inclusive, and safe.

D. Schools value and build strong **family and school partnerships**.

E. Schools and districts develop a collaborative framework for identifying **English learners with disabilities** and use valid assessment practices. Schools and districts develop appropriate individualized education programs (IEPs) that support culturally and linguistically inclusive practices and provide appropriate training to teachers, thus leveraging expertise specific to English learners. The IEP addresses academic goals that take into account student language development, as called for in state and national policy recommendations.[29, 30, 31]

Principle Two: Intellectual Quality of Instruction and Meaningful Access

English learners engage in intellectually rich, developmentally appropriate learning experiences that foster high levels of English proficiency. These experiences integrate language development, literacy, and content learning as well as provide access for comprehension and participation through native language instruction and scaffolding. English learners have meaningful access to a full standards-based and relevant curriculum and the opportunity to develop proficiency in English and other languages.

Elements:

A. Language development occurs in and through subject matter learning and is **integrated** across the curriculum, including integrated ELD and designated ELD (per the ELA/ELD Framework pages 891–892).

B. Students are provided a rigorous, **intellectually rich, standards-based curriculum** with instructional scaffolding that increases comprehension and participation and develops student autonomy and mastery.

C. Teaching and learning emphasize engagement, interaction, discourse, inquiry, and critical thinking with the same **high expectations** for English learners as for all students in each of the content areas.

D. English learners are provided **access to the full curriculum** along with the provision of appropriate EL supports and services.

E. Students' **home language** is understood as a means to access subject matter content, as a foundation for developing English, and, where possible, is developed to high levels of literacy and proficiency along with English.

F. Rigorous **instructional materials** support high levels of intellectual engagement. Explicit

29 California Department of Education (2009) Inventory of Services and Supports (ISS) for Students with Disabilities. Special Education Division. Retrieved from the California Department of Education Web site at https://www.cde.ca.gov/sp/se/sr/issforswd.asp.

30 Park, S., Martinez, M., Chou, F. (2017). CCSSO English Learners with Disabilities Guide: A Guide for States Creating Policies on the Identification of and Service Provision for English Learners with Disabilities. Washington, DC: Council of Chief State Schools Officers. Retrieved from http://www.ccsso.org/resource-library/ccsso-english-learners-disabilities-guide.

31 Dear Colleague Letter (DCL) from the U.S. Department of Justice Civil Rights Division and U.S. Department of Education Office for Civil Rights, January 7, 2015. Downloaded from https://www2.ed.gov/about/offices/list/ocr/letters/colleague-el-201501.pdf 9/16/17.

Each level of the school system has leaders and educators who are knowledge-able of and responsive to the strengths and needs of English learners

scaffolding enables meaningful participation by English learners at different levels of English language proficiency. Integrated language development, content learning, and opportunities for bilingual/biliterate development are appropriate according to the program model.

G. English learners are provided choices of **research-based language support/development programs** (including options for developing skills in multiple languages) and are enrolled in programs designed to overcome language barriers and provide access to the curriculum.[32]

Principle Three: System Conditions That Support Effectiveness

Each level of the school system (state, county, district, school, pre-school) has leaders and educators who are knowledgeable of and responsive to the strengths and needs of English learners and their communities and who utilize valid assessment and other data systems that inform instruction and continuous improvement. Each level of the school system provides resources and tiered support to ensure strong programs and build the capacity of teachers and staff to leverage the strengths and meet the needs of English learners.

Elements:

A. **Leaders** establish clear goals and commitments to English learners by providing access, growth toward English proficiency, and academic engagement and achievement. Leaders maintain a systemic focus on continuous improvement and progress toward these goals —over and above compliance via the EL Master Plan and English Learner Advisory Committee (ELAC) and District English Learner Advisory Committee (DELAC) regulations.[33]

B. The school system invests **adequate resources** to support the conditions required to address EL needs.

C. A **system of culturally and linguistically valid and reliable assessment** supports instruction, continuous improvement, and accountability for attainment of English proficiency, biliteracy, and academic achievement.

D. **Capacity building** occurs at all levels of the system, including **leadership development** to understand and address the needs of English learners. **Professional learning** and **collaboration time** are afforded to teachers. The system makes robust efforts to address the teaching shortage and build a **recruitment and development pipeline** of educators skilled in addressing the needs of English learners, including bilingual teachers.

English learners experience a coherent, articulated, and aligned set of practices and pathways

Principle Four: Alignment and Articulation Within and Across Systems

English learners experience a coherent, articulated, and aligned set of practices and pathways across grade levels and educational segments, beginning with a strong foundation in early childhood and appropriate identification of strengths and needs, continuing

32 *Castañeda v. Pickard*, U.S. Court of Appeals, Fifth Circuit. 781 F2d 456.

33 School and District English Learner Advisory Committees (ELAC/DELAC). Letter from Tom Torlakson and Michael Kirst. November, 6, 2016. Retrieved from the California Department of Education Web site at https://www.cde.ca.gov/nr/el/le/yr16ltr1107.asp.

through to reclassification, graduation, higher education, and career opportunities. These pathways foster the skills, language(s), literacy, and knowledge students need for college- and career-readiness and participation in a global, diverse, multilingual, twenty-first century world.

Elements

A. EL educational approaches and programs are designed for continuity, **alignment, and articulation** across grade levels and system segments beginning with a strong foundation in early childhood (preschool), and continuing through elementary and secondary levels onto graduation, postsecondary education, and career preparation.

B. Schools plan schedules and resources to **provide extra time** in school (as needed) and build partnerships with after-school and other entities to provide additional support for English learners, to accommodate the extra challenges they face in learning English and accessing/mastering all academic subject matter.

C. EL educational approaches and programs are designed to be **coherent** across schools within districts, across initiatives, and across the state.

These principles and elements provide a set of research-, evidence-, and practice-based considerations that districts can use as they develop strategies and modify local action plans in the process of continuous improvement. As a guide, the table below shows a crosswalk of *CA EL Roadmap* principles and elements with the LCFF priorities. As these principles and elements are integrated into the communication of district and school systems, educators can shape conversations about priorities both with each other and with parents and community members, and better serve EL students.

Crosswalk of the *CA EL Roadmap* Principles and Elements to the LCFF and LCAP

The *CA EL Roadmap* sets a common direction for the state and provides guidance for LEAs in local planning and improvement of programs and services for English learners. It was designed to speak to the eight state priorities embedded in the LCFF and LCAP. Local leadership and governing boards will find it useful to consider alignment of local goals and policies with the mission, vision, and principles of the *CA EL Roadmap* and to use the principles as a lens for assessing strengths and needed improvements in services, programs and approaches to EL education. The following crosswalk between the *CA EL Roadmap* principles and the eight state priority areas can facilitate this process.

The Crosswalk can be used in various ways. An LEA might, for example, focus on a priority around implementing state standards. To ensure they are incorporating the needs of English learners in that effort, those working on the LCAP could examine the row of the Crosswalk for Priority Two (State Standards [Conditions of Learning]) and note the way in which each principle (in columns 2–5) has elements that together comprise a comprehensive EL approach for standards implementation. They would find that under Principle One (Assets-Oriented and Needs-Responsive Schools) Element A and B, it would be important to turn to the sections of the California ELA/ELD Framework that address the different profiles, strengths, and need within the English learner population (e.g., long term English learners, newcomers, etc.), and might decide to incorporate aspects of the History-Social Studies Framework that speak directly to culturally responsive curriculum and instruction. Continuing across the row of the Crosswalk for that Priority, they would be reminded to consider various research- and evidence-based language acquisition program options. This process would continue across all of the principles for that Priority row.

Another way to utilize the Crosswalk involves an LEA focusing on a particular principle of the *CA EL*

Roadmap. For example, an LEA might elect to work on Alignment and Articulation Within and Across Systems (Principal Four) in order to build coherence. Looking through the lens of the *CA EL Roadmap*, that LEA would find that there are actions to be considered in each of the LCAP priority areas in order to comprehensively address this challenge. They would find that under Priority One, they need to consider their teacher workforce for early childhood programs and that materials are available and are articulated across grade levels and appropriate to the various language acquisition program pathways the district offers (e.g., dual language immersion, heritage language, etc.). Under Priority Two, the academic content and performance standards already articulate across grade levels, but the LEA might decide that implementation is uneven across schools and so investing in grade level collaboration across sites around ELD standards implementation would be helpful. This process would continue down each of the priority areas.

The *CA EL Roadmap* will only be valuable if it is integrated in processes of local reflection, planning, resource allocation, and accountability. By working across the LCAP Priorities and the EL Roadmap principles, districts can move more efficiently and coherently towards developing, implementing, and improving the programs and services English learners need in order to participate, achieve and thrive in California schools.

An information graphic illustrating the *CA EL Roadmap's* principles and elements is provided on page 19.

	Principle One Assets-Oriented and Needs-Responsive Schools	Principle Two Intellectual Quality of Instruction and Meaningful Access	Principle Three System Conditions that Support Effectiveness	Principle Four Alignment And Articulation Within and Across Systems
LCAP One Basic (Conditions of Learning) Teachers, Materials, Facilities	Elements A, C & E	Elements A, B, & D	Elements B & D	Elements A, B, & C
LCAP Two State Standards (Conditions of Learning)	Elements A, B & E	Elements A, B, F, & G	Elements B & D	Elements B & C
LCAP Three Parental Involvement (Engagement)	Elements B, D & E	Element D	Element D	Element C
LCAP Four Pupil Achievement (Pupil Outcomes)	Element C	Elements A, B, & C	Elements A & B	Elements B & C
LCAP Five Pupil Engagement (Engagement)	Elements B, C, & D	Elements E & F	Element D	Element C
LCAP Six School Climate (Engagement)	Elements A & D	Elements A & D	Element D	Element C
LCAP Seven Course Access (Conditions of Learning)	Elements B & D	Elements D, E, & G	Element C & D	Elements B & C
LCAP Eight Other Pupil Outcomes (Pupil Outcomes)			Elements A, C, & D	Elements A & C

California English Learner Roadmap

Developing English learner (EL) students' linguistic and academic capacities is a shared responsibility of all educators across the system

Principle 1
Assets-Oriented and Needs-Responsive Schools

- School climate is inclusive and safe
- Learning builds on linguistic and cultural assets
- Schools build strong partnerships with families
- Instruction is responsive
- Educators collaborate to support ELs with disabilities
- Language development is integrated across curriculum
- Instructional materials support intellectual engagement and language development
- Assessments are culturally and linguistically valid
- Educators have high expectations for EL students

Principle 2
Intellectual Quality of Instruction and Meaningful Access

- EL students are provided language development program choices, including multilingual options
- EL students are provided access to full curriculum
- Instruction is scaffolded
- Home language is used as a foundation

Principle 3
System Conditions that Support Effectiveness

- Capacity-building fosters systemic EL support
- Learning is aligned across grades and systems
- Leadership is committed to EL achievement
- Schools provide extra time and support for EL students
- School system provides adequate resources to support EL needs

Principle 4
Alignment and Articulation Within and Across Systems

- School system has a coherent approach to EL learning

should be applied to the theoretical or conceptual model, the implementation, and the locally observed outcomes for the district.[36]

Examples should reflect the variability of local contexts found in districts around California, but should include evidence that can be gathered and monitored to inform the continuous improvement of the system. The use of evidence in continuous improvement cycles is fully consonant with the local capacity-building approach of the Blueprint 2.0 as well as the LCFF/LCAP priorities and the SBE's approach to district accountability.[37]

Standards for Reviewing Examples

The following standards are proposed for reviewing examples submitted for inclusion in the online appendix. These standards inform the guidelines for online submission.

Standard 1: Research basis that holds promise to have local impact.

In 1997, the National Research Council released a report on English learners that summarized the research to date. During the intervening years, considerable progress has been made in identifying and documenting promising practices, and developing a nuanced way of judging evidence (including the changes between NCLB in 2001 and ESSA in 2015 referenced above). Any effort at district reform to address the needs of English learners should to begin with a clear specification of the theory (Standard One of Castañeda), and a clear sense of what research base might support the theory. The following are some milestone publications:

- "Promising Futures" report from the National Academies of Sciences, Engineering and Medicine (discussed above)[38]

36 While the "gold standard" of evidence is valuable in identifying practices whose effectiveness is likely to be causally related to outcomes, and therefore should be given priority as a starting point, examples are not limited to those practices. First, equating "scientific" with a specific research design and methodology aimed to establish causality does not reflect the dynamic nature of scientific inquiry in education, whose essence is the iteration of theory, observation, and explanation (see Shavelson and Towne, Scientific Research in Education (https://www.nap.edu/catalog/10236/scientific-research-in-education). Second, there are technical limitations to thinking about validity of inferences that can be made from randomized control studies with a single-minded focus on the randomization aspect of the research enterprise (the internal validity of an experiment) poses threats to other forms of validity, including what can be applied to a range of educational contexts (see Darling-Hammond, L. & Plank, D. (2015). Supporting Continuous Improvement in California's Education System. PACE. Downloaded at http://www.edpolicyinca.org/publications/supporting-continuous-improvement-californias-education-system).

37 Darling-Hammond, L. & Plank, D. (2015). Supporting Continuous Improvement in California's Education System. PACE. Downloaded at http://www.edpolicyinca.org/publications/supporting-continuous-improvement-californias-education-system.

38 National Academies of Sciences, Engineering, and Medicine. (2017). Promoting the Educational Success of Children and Youth Learning English: Promising Futures. Washington, DC: The National Academies Press. Retrieved from the NASEM Web site at https://www.nap.edu/catalog/24677/promoting-the-educational-success-of-children-and-youth-learning-english.

- Institute of Education Sciences Practice Guides on literacy[39] and academic content/language[40]
- National Literacy Panel on English learners[41]
- The CDE's publication of research-based practices[42]
- Other published syntheses of research on English learners[43]

Such publications should provide an initial impetus to districts looking for an evidentiary foothold into their reform efforts. That said, the conclusions from research by no means guarantee applicability and effectiveness in a given local context — with local variations in capacity for implementation or the appropriateness of an approach for the particular composition of the EL student characteristics in the district.

Thus, regardless of the strength of the evidence in the research literature, a district contemplating research-based strategies needs to assess the "goodness of fit" of an approach to their own capacity and population, and if deemed worthy of implementation, gather their own evidence around implementation, and judge its efficacy to promote the desired learning outcomes.

Standard 2: Monitoring use of local metrics of system implementation and adult learning outcomes.

Research on effective systems serving English learners speaks to the important role of coherent leadership. In a process of continuous improvement, it would therefore be important to develop meaningful indicators of system implementation, such as:

1. Leadership roles and responsibilities for EL students are distributed and shared.
2. Leadership creates different plans for EL students based on individual educational and learning histories (e.g., differentiating between programs for newcomers, long-term English learners, and reclassified English-proficient students).
3. Professional learning is focused on content pedagogy, active learning, and coherent, sustained, collective participation.
4. Leadership engages in networks and collaborations with other districts in continuous improvement planning and activities.
5. District resource allocation processes are driven by strategic priorities for English learners.

39 Gersten, R., Baker, S.K., Shanahan, T., Linan-Thompson, S., Collins, P., & Scarcella, R. (2007). Effective Literacy and English Language Instruction for English Learners in the Elementary Grades: A Practice Guide (NCEE 2007-4011). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from http://www.ies.ed.gov/ncee/wwc/publications/practiceguides.

40 Baker, S., Lesaux, N., Jayanthi, M., Dimino, J., Proctor, C. P., Morris, J., Gersten, R., Haymond, K., Kieffer, M. J., Linan-Thompson, S., & Newman-Gonchar, R. (2014). Teaching Academic Content and Literacy to English Learners in Elementary and Middle School (NCEE 2014-4012). Washington, DC: National Center for Education Evaluation and Regional Assistance (NCEE), Institute of Education Sciences, U.S. Department of Education. Retrieved from the NCEE Web site: http://www.ies.ed.gov/ncee/wwc/publications_reviews.aspx.

41 August, D. & Shanahan, T. (eds.) (2006). *Developing Literacy in Second-Language Learners*. Washington, DC: Center for Applied Linguistics.

42 California Department of Education (2010). *Improving Education for English Learners: Research-based Approaches*. Sacramento, CA: California Department of Education. Order information: http://www.cal.org/resource-center/publications/improving-education-for-els.

43 Goldenberg, C. (2013). Unlocking the Research on English Learners: What We Know – and Don't Yet Know – About Effective Instruction. *American Educator, 4-11*. Retrieved from the AFT website: https://www.aft.org/sites/default/files/periodicals/English_Learners.pdf.

Standard 2a: Monitoring use of local metrics of student learning supports and processes.

Student learning outcomes are ultimately products of classroom instruction and student engagement in learning. The capacity of schools and districts to deliver a high intellectual quality of instruction and meaningful access through rigorous instruction depends on the availability of materials, the professional learning opportunities available to teachers, and how the educators in the system are formatively assessing their practice. The following are examples of indicators that might help educators understand the quality of the classroom learning environment.

Student tasks are intellectually meaningful:

1. Materials are accessed with sufficient scaffolding and opportunities for English learners at all levels of proficiency to engage in intellectually rich learning.
2. Professional learning opportunities are available for teachers on how to use materials to engage English learners of all levels of language proficiency in intellectually rich learning.
3. Implementation of materials is accompanied by an examination of ongoing evidence of student engagement and learning.

From the perspective of California State Standards-aligned instructional and learning practices, it is especially valuable to gather evidence of students' oral and written language across disciplinary practices at the classroom and school level, as well as the distribution of the uses of language across English learners with varying levels of proficiency and backgrounds. Examples may include:

1. Students use language and materials purposefully to describe, explain, persuade, inform, justify, negotiate, entertain, and retell.
2. Students contribute actively to class and group discussions, such as by asking questions, responding appropriately, clarifying or seeking clarification, building on what others say, or providing useful feedback verbally and in writing.
3. Students demonstrate metalinguistic behaviors (making explicit references to language and communication) while engaged with structured cohesive texts, expanding and enriching ideas, or combining and condensing ideas.
4. Teachers monitor student participation in learning activities and provide support to build on the strengths and meet the needs of individual students.
5. The socio-emotional climate is culturally and linguistically respectful and appropriate, and could be monitored in a variety of methods, including student climate and Social and Emotional Learning (SEL) surveys.

Standard 3: Evidence of student learning outcomes.

English learners come from a range of educational and learning histories; districts and schools can vary considerably in the composition of their English learners. The state data system has made available a differentiated view of English learners with varying number of years in EL programs or services ("EL 0–3 years," "At-Risk 4–5 years," and [Long-Term English Learner] "LTEL 6+ years," "EL 4+ years not at risk of LTEL," [Reclassified Fluent English Proficient] "RFEP," and "Ever-EL" [current plus former English learners]), as well as various state-specified statuses. Dually identified students (EL students with disabilities) are also a significant portion of the population, especially concentrated in the long-term English learner population at the secondary level.

It is important to examine local data on student learning, to the extent possible, considering the composition of the students. For example, looking at student progress in the area of English language proficiency (California English Language Development Test [CELDT] or English Language Proficiency Assessments for California [ELPAC] scores) will show more rapid progress for newcomer populations with low initial

proficiency scores than in students who are at higher levels of English proficiency, as has been observed by researchers. At the same time, students who begin with higher levels of English proficiency attain reclassification earlier than those who start at lower levels of initial English proficiency.

The range of evidence around student learning might include:

1. Statistically tallied information from formative assessment practices
2. Periodic EL-focused classroom observational or shadowing to monitor level of student engagement and opportunities for academic language use
3. Local interim/benchmark assessment results
4. Summative assessments in content from California Assessment of Student Performance and Progress (CAASPP) (the Smarter Balance Assessment Consortium [SBAC] in ELA and math, the forthcoming California Spanish Assessment [CSA] for Spanish language arts, and the California Science Test)
5. Summative assessments in English language proficiency (CELDT/ELPAC)
6. Local (including classroom-level) assessment evidence
7. Student progress toward meeting the reclassification criteria
8. Reclassification percentages
9. Post reclassification progress in academic assessments

A Meta-Standard: Data for Articulation Across Systems

Despite broad recognition of the importance of cross-segmental articulation of programs valuable opportunities are regularly missed (e.g. transition from an early childhood educational program to a transitional kindergarten through twelfth grade system, within the kindergarten through twelfth grade school segments, and from a kindergarten through twelfth grade system to higher education). The *CA EL Roadmap* envisions identifying system efforts at promoting better articulation, such as capturing developmental information on children in early childhood programs to inform EL classification in the kindergarten through twelfth grade system, or creating better opportunities for high school credit to be recognized by the higher education system. Such articulation efforts can be documented by examining how students flow across systems and reporting how effectiveness and improvement changes over the course of implementation.[44]

- Data articulation with early childhood programs
- Data articulation across school segments (elementary, middle, and high school)
- Data articulation with higher education/career technical education

Highlighted Case Examples

Example 1: Sobrato Early Academic Language (SEAL)[45]

Principles and elements highlighted by this model:

Principle One: Assets-Oriented and Needs-Responsive Schools

44 Aguilar, J., Nayfack, M., & Bush-Mecenas, S. (2017). Exploring Improvement Science in Education: Promoting College Access in Fresno Unified School District. PACE. Downloaded at http://www.edpolicyinca.org/publications/exploring-improvement-science-education-promoting-college-access-fresno-unified-school-district.

45 Sobrato Early Academic Language PreK-3 Model: Powerful, Joyous, Rigorous Language and Literacy Learning. The Sobrato Family Foundation. Retrieved from the Sobrato Family Foundation Web site at https://www.sobrato.app.box.com/s/yx0jme4hbvh1hyy2eyyvjmdkzche68fm.

Element 1A – Language and Culture as Assets

Element 1B – English Learner Profiles

Element 1C – School Climate

Element 1D – Family and School Partnerships

Principle Two: Intellectual Quality of Instruction and Meaningful Access

Element 2A – Integrated and Designated ELD

Element 2B – Intellectually Rich, Standards-based Curriculum

Element 2C – High Expectations

Element 2D – Access to Full Curriculum

Element 2E – Use of Students' Home Languages

Element 2G – Programmatic Choice

Principle Four: Alignment and Articulation Within and Across Systems

Element 4A – Alignment and Articulation

SEAL is a research- and evidence-based, language-rich, early education through third grade model designed to build the capacity of educators to powerfully develop the language and literacy skills of young EL children. This approach strengthens instruction and curriculum across the school for all students while centralizing the needs of English learners. Working through standards-based, teacher-created integrated thematic units, SEAL locates language development within and in connection to science and social studies content — thus ensuring access to the full curriculum for all children, and providing motivating instruction to engage students. Teachers become deeply immersed in state ELA, ELD, NGSS, and social studies standards, explore the Frameworks within the context of research about the development of dual language students in order to design curriculum and prepare high-leverage instructional strategies. They are supported in this work through a series of professional development workshops, job-embedded coaching, and collaborative and reflective professional learning in grade level teams over a three-year period. SEAL further supports students and teachers by providing school and district administrators professional learning opportunities as they lead systemic change.

The SEAL model rests on four pillars:

A focus on the development of powerful, precise, academic language; the creation of content- and language-rich and affirming environments; articulation across grades and alignment of the preschool and kindergarten through third grade systems; and strong partnerships between families and schools.

The SEAL model rests on four pillars: A focus on the development of powerful, precise, academic language; the creation of content- and language-rich and affirming environments; articulation across grades and alignment of the preschool and kindergarten through third grade systems; and strong partnerships between families and schools. All of these pillars are built on the bedrock for instructional improvement and the implementation of the SEAL model: teacher intentionality and responsiveness. Through an extensive series of professional development modules, teachers come to understand how language develops, the needs of English learners and dual language learners, and the optimal schooling conditions that foster learning. SEAL teachers learn strategies in the context of the broader research on literacy development, discussing why particular strategies are effective and when and for whom they might be used. The SEAL model of professional development follows the components of high quality staff development (per the National Standards for Staff Development), including sustained professional development supported by job-embedded coaching and facilitation, coupled with leadership development and the building of a collaborative culture. SEAL provides a toolkit of research-based instructional strategies that fit in the larger pedagogical context of integrated language and content instruction and cross-content thematic units.

Further, SEAL recognizes that mastering a complex set of new instructional strategies and curricular approaches takes time, resources, and support for

teachers. Teachers also need opportunities to see the practices being modeled in their own classrooms, encouragement to try new strategies, and constructive feedback from a knowledgeable and supportive coach and from colleagues.

A Memorandum of Understanding (MOU) with each participating school district outlines all the components of implementation, including job-embedded coaching.

SEAL is currently being implemented at 101 sites across 20 California districts. These districts range from rural (Williams, Coalinga-Huron, Golden Plains, Mendota, and Fillmore Unified School Districts) to urban (Los Angeles Unified School District), to suburban (Oak Grove and Milpitas Unified School Districts). SEAL implementation also entails leadership development and technical assistance for site and district administrators.

Evidentiary Basis

Standard 1 (supported by an existing research basis): The program explicitly states three foundations that draw from research syntheses on effective instruction and the importance of attending to student language development.[46]

Standard 2 (local metrics of system implementation and adult learning outcomes): Teachers who participated in professional learning supports showed evidence of SEAL instructional approaches; SEAL parents who were involved in training on the importance of engaging in literacy activities with their children showed greater engagement compared with national comparison statistics.

Standard 2a (local metrics of student learning supports and processes): There was an increase in the number of preschool parents who requested enrollment in the kindergarten classrooms on campus and an evaluation showed that school and district leaders cited increased involvement of preschool personnel and preschool families in the life of the school.

Standard 3 (student learning outcomes): In a five year pilot evaluation study, SEAL students made statistically significant growth on measures of language and literacy in Spanish and English, as well as in assessments of cognitive and social skills, and on the CELDT. SEAL students also consistently outperformed demographically similar comparison groups in growth and achievement, especially in areas related to language and literacy. Building on these promising results, a major external evaluation of SEAL is currently under way, using controlled comparison groups and an expanded set of outcome measures.

Example 2: Sanger and Firebaugh-Las Deltas Partnership

Principles and elements highlighted by this model:

Principle Two: Intellectual Quality of Instruction and Meaningful Access

Element 2A – Integrated and Designated ELD

Principle Three: System Conditions That Support Effectiveness

Element 3A – Leadership

Element 3B – Adequate Resources

Element 3C – Assessments

Element 3D – Capacity Building

46 The foundational document can be retrieved from the Sobrato Family Foundation Web site at https://www.sobrato.app.box.com/s/yx0jme4hbvh1hyy2eyyvjmdkzche68fm references August, D. & Shanahan (2006). *Developing Literacy in Second Language Learners: Report of the National Literacy Panel on Minority Language Children and Youth.* (Lawrence Erlbaum, Mahwah, NJ), Goldenberg, C., Hicks, J., Lit, L. (2013). Dual Language Learners: Effective Instruction in Early Childhood and Goldenberg, C. (2013). Unlocking the Research on English Learners: What We Know – and Don't Yet Know – about Effective Instruction, both published in, Summer 2013.

Sanger Unified School District, beyond the southeast edge of Fresno, is a rural district that has been noted for its school turnaround efforts beginning in the late 1990's.[47] With a relatively large population of English learners and students from low-income families, the district has gained recognition for developing a culture emphasizing collaboration and systemic change, and this culture is evident throughout the district's leadership structure. In 2011, building on its successful turnaround approach, Sanger established a collaboration with Firebaugh-Las Deltas Unified School District, located about 45 minutes west of Fresno. The Central Valley Foundation provided funding for this cross-district partnership, which emphasized fostering a culture of continuous improvement in order to improve outcomes for all students, particularly English learners. Beginning in 2014, the two districts sharpened the focus of the partnership to specifically address the needs of the districts' long-term English learners. Although the districts are different in many ways geographically and demographically, they have found benefits from collaborating to develop and share tools for reform.

Sanger and Firebaugh have taken a systemic approach to implementing classroom, school, and district practices that better support students' language and content learning.

While the LTEL label was created to focus attention on an overlooked and underserved population, the label has been critiqued as perpetuating a deficit perspective.[48] However, Sanger and Firebaugh have taken a systemic approach to implementing classroom, school, and district practices that better support students' language and content learning. Through the initiative, the districts have thought deeply about how to build on students' assets. For example, informed by research showing that English learners in dual-language programs have better long-term language and content outcomes, Sanger has developed and launched a new dual-language program. In addition, based on internal data analysis showing that English learners who participated in the district's preschool program were attaining English proficiency earlier, Sanger has committed to expanding its outreach to families to encourage more parents of English learners to enroll their children in preschool.

Evidentiary Basis

Standard 1 (supported by an existing research basis): There is little systematic research that speaks to the efficacy of cross-district collaboration,[49] although there is a growing knowledge base on teacher professional collaboration and on research practice-partnerships.[50] Sanger's approach to reform that supports its teacher professional learning culture and a focus on student learning has been well-documented.[51]

Standard 2 (local metrics of system implementation and adult learning outcomes): In the context of Sanger's collaborative district culture, school leaders formed professional learning communities (PLCs) that observed and examined ELD practices, leading to the conclusion that "teachers needed to ask questions that

47 David, J. & Talbert, J. (2013). *Turning Around a High-Poverty District: Learning from Sanger.* The S. H. Cowell Foundation. Retrieved from the S. H. Cowell Web site at http://www.shcowell.org/wp-content/uploads/2015/12/Learning-From-Sanger.pdf.

48 Thompson, K. (2016). Questioning the Long-term English Learner Label: How Categorization Can Blind Us to Students' Abilities. *Teachers College Record* (117), 120305

49 See Vescio, V., Ross, D. & Adams, A. (2008). A Review of Research on the Impact of Professional Learning Communities on Teaching Practice and Student Learning. *Teaching and Teacher Education*, 24: 80-91.

50 see Coburn, C. & Penuel, W. (2016). Research-Practice Partnerships in Education: Outcomes, Dynamics, and Open Questions. *Educational Researcher*, 45: 48-54.

51 David, J. & Talbert, J. (2013). Turning around a High-Poverty District: Learning from Sanger. The S. H. Cowell Foundation. See also National Academies of Sciences, Engineering and Medicine (2017). *Promoting the Education Success of Children and Yourth Learning English: Promising Futures.* Washington, DC: The National Academies Press.

would provoke thoughtful conversation. They observed that ELD was disconnected from core classroom instruction, so their work included ways of linking the two, including the use of ELD time to introduce vocabulary and skills in upcoming core lessons".[52] The district regularly collects and analyzes data from such PLCs.

Standard 2a (local metrics of student learning supports and processes): Student work has always guided much of the work of teacher PLCs. More recently, through the partnership, Sanger and Firebaugh teachers have gathered samples of student collaborative conversations as an indicator of student engagement and learning, using the free online Massive Open Online Courses (MOOCs) from Stanford's *Understanding Language* (UL) that focuses on collaborative conversations and argumentation.

Standard 3 (student learning outcomes): Reclassification rates for long-term English learners have increased during the course of the partnership. Both districts also have maintained or improved their district graduation rates for the "Ever-EL" category of students to 93 percent in 2015, compared to a statewide average of 70 percent; the combined graduation rate for "Ever-EL" students for 2016 was 97 percent, compared to 72 percent statewide. During a recent five-year period, both districts also improved the rate at which students entering kindergarten attain English proficient status on the CELDT. For example, during the interval between 2010 to 2014, the time it took for 50 percent of the cohort of students to attain English proficiency was reduced from four and a half years to three years.

Example 3: Garden Grove Unified School District

Principles and elements highlighted by this model:

Garden Grove embarked on a multi-year project to increase the quantity, quality, and equitable distribution of student-to-student collaborative conversations.

Principle Two: Intellectual Quality of Instruction and Meaningful Access

Element 2A – Integrated and Designated ELD

Principle Three: System Conditions that Support Effectiveness

Element 3A – Leadership

Element 3C – Assessments

Element 3D – Capacity Building

In 2014, the Garden Grove Unified School District, as part of its work in the *Math in Common* Community of Practice Network, embarked on a multi-year project to increase the quantity, quality, and equitable distribution of student-to-student collaborative conversations taking place during math in their kindergarten through eighth grade classrooms. They believed that if the quality and quantity of these conversations improved for English learners, then increased student learning of math would result. Their journey began with participation in an online course, Constructive Classroom Conversations, offered by Stanford's UL initiative, in which Garden Grove's Teachers on Special Assignment (TOSAs) learned how to gather and analyze samples of student discourse using UL's Conversation Analysis Tool (CAT).

Emma Druitt, Director of Garden Grove's kindergarten through eighth grade math department, and her team

52 David, J. & Talbert, J. (2013). *Turning around a High-Poverty District: Learning from Sanger*. The S. H. Cowell Foundation. See also National Academies of Sciences, Engineering and Medicine (2017). *Promoting the Education Success of Children and Youth Learning English: Promising Futures*. Washington, DC: The National Academies Press.

of TOSAs created their own version of the CAT and began to collect baseline data in classrooms to measure the quality of student mathematical discourse. Over time, they refined the discourse tool to meet their specific needs. Responding to the initial data collection, her team created a Summer Math Institute, in which 40 math teachers co-taught for two hours a day (one kindergarten through sixth grade teacher paired with one seventh through twelfth grade teacher), and received two hours of professional development (PD). During the PD time, teachers learned about the district's conversation tool (the Academic Discourse Tool for Mathematics), engagement strategies, and how to train their students to collaborate with each other.

Excited by the results of the summer program, Druitt and her team lead a team of teachers throughout the academic year in ongoing PD as part of their Discourse Collaborative and continue to collect data to monitor the effectiveness of the professional development. The district has documented changes over time in the quality and in the distribution of student-to-student mathematical conversations that are collaborative and focused on the lesson content. The district is monitoring change in the math CAASPP for student subgroups. They have shared their process with other math educators through presentations at the California Mathematics Council conferences as well as through the *Math in Common* district collaboration. They continue to use the observation tool to develop cohorts of math teacher leaders to enhance this work.

Evidentiary Basis

Standard 1 (supported by an existing research basis): The work is motivated by engaging students in the mathematical practices in the California State Standards around discourse. They rely on the work of Douglas Fisher and Nancy Frey from San Diego State University, who have published on the importance of collaborative conversations. In the area of mathematics for English learners, they rely on a foundational paper by Judit Moschkovich.[53]

Standard 2 (local metrics of system implementation and adult learning outcomes): The district math leaders created a Discourse Collaborative and a Summer Math Institute, and recruitment and participation is registered. Observers are trained in the use of the Academic Discourse Tool for Mathematics that record the level of mathematical discourse in classrooms.

Standard 2a (local metrics of student learning supports and processes): Observations using the Academic Discourse Tool for Mathematics enable analyses of the level of quality of the discourse and mathematical understanding observed in classrooms. The results from the first two years indicate a large shift in the quality of mathematical language used by students.

Standard 3 (student learning outcomes): Consistently strong student math scores on the CAASPP that exceeded expectations for Garden Grove were noted in a report that analyzed data for districts participating in *Math in Common*, a collaborative learning network. While the report is a comprehensive look at the district culture that may have supported the outcome, the role of this initiative is how "a focus on student math discourse now deeply permeates the thinking of staff throughout the district". [54]

53 Moschkovich, J. (2011). *Mathematics, the Common Core, and Language: Recommendations for Mathematics Instruction for ELs Aligned with the Common Core.* Retrieved from the Stanford University Understanding Language Web site at http://www.ell.stanford.edu/sites/default/files/pdf/academic-papers/02-JMoschkovich%20Math%20FINAL_bound%20with%20appendix.pdf.

54 Perry, R., Reade, F., Heredia, A. & Finkelstein, N. (2017). *Three Structures in the Garden Grove Unified School District that Support Implementation of the Common Core State Standards in Mathematics.* WestEd. Retrieved from the WestEd Web site at https://www.wested.org/wp-content/uploads/2017/09/resource-garden-grove-ccss-math-mic8.pdf.

Example 4: Fresno Unified School District[55]

Principles and elements highlighted by this model:

Principle Three: System Conditions that Support Effectiveness

Element 3A – Leadership

Element 3D – Capacity Building

Principle Four: Alignment and Articulation Within and Across Systems

Element 4A – Alignment and Articulation

The partnership was to provide all students with an equal opportunity to graduate with the greatest number of postsecondary choices from the widest array of options.

The Fresno Unified School District has approximately 73,000 students, with English learners comprising 21 percent of the population. In 2009, then-Superintendent Mike Hanson formed the Equity and Access Partnership with University of California (UC), Merced to address areas of inequity in the system and to improve the post-secondary opportunities of Fresno students. In the words of the Superintendent, the purpose of the partnership was "to provide all students with an equal opportunity to graduate with the greatest number of postsecondary choices from the widest array of options."

Within the district, the Office of Equity and Access, led by Jorge Aguilar (now Superintendent of Sacramento City Unified School District), began by developing a data dashboard to identify students who were not applying to California State Universities (CSUs) and UCs although they were qualified to attend. Upon further investigation, Equity and Access team members identified the root cause of this mismatch—Fresno Unified School District seniors were not always aware of all the college options that were available to them based on their academic profile.

In response, the district developed *I am Ready* college packets that provided individualized information to students and their families about the colleges and universities for which students were eligible. High school counselors participated in two days of training to learn about student eligibility to CSU and UC campuses so that they could better inform students about their post-secondary options.

The combination of the *I am Ready* packets and follow-up conversations by high school counselors with Fresno Unified School District seniors led to an increase in student applications to UC/CSU campuses outside of Fresno. Applications increased from 382 to 578. Encouraged by these results, the Office of Equity and Access continued to use data to drive school improvement. As a result, the district has seen the four-year cohort graduation rate increase from 69 percent in 2009–10 to 79 percent in 2013–14 and twelfth grade students' A–G completion rates rise from 32 percent to 48 percent.

Evidentiary Basis

Standard 1 (supported by an existing research basis): The central theoretical motivation for this work is in the continuous improvement model most recently synthesized in the improvement science work of the Carnegie Foundation for the Advancement of Teaching.[56]

55 Haxton, C. & O'Day, J. (2015). Improving Equity and Access in Fresno: Lessons from a K12-Higher Education Partnership. American Institutes for Research. Retrieved from the AIR Web site at http://www.air.org/resource/improving-equity-and-access-fresno-lessons-k12-higher-education-partnership.

56 Bryk, A., Gomez, L., Grunow, A. & LeMahieu, P. (2015). *Learning to Improve: How America's Schools Can Get Better at Getting Better*. Cambridge, MA: Harvard Education Publishing. The Fresno work is directly framed in this way in Aguilar, J., Nayfack, M., & Bush-Mecenas, S. (2017). Exploring Improvement Science in Education: Promoting College Access in Fresno Unified School District. *PACE Policy Brief*. Retrieved from the PACE Web site at http://www.edpolicyinca.org/sites/default/files/FUSD-continuous-improvement.pdf.

Standard 2 (local metrics of system implementation and adult learning outcomes): Jorge Aguilar and his team note a careful, deliberative process undertaken by the team in understanding the root cause of their problem: "Before developing and testing specific solutions to this problem, the Fresno team sought to understand the problem as it was experienced by the user, in this case the District's college-eligible students. The Equity and Access team worked closely with school counselors to understand the experiences of their students. They interviewed students to document (a) why certain students applied to more colleges than others and (b) what interventions had already been tried by counselors. This allowed district leaders to understand the variation in performance across schools, as well as challenges and opportunities for improvement".[57]

Standard 2a (local metrics of student learning supports and processes): Specific to English learners, the Fresno team noted that in the course of analyzing A–G completion by student subgroups, that these students were disproportionately lacking foreign language credits, and that for a large number of students, this was the only deficiency for the students to complete their A–G requirements. This led the district to create UC-approved Spanish for native speakers as an avenue to meet the A–G foreign language requirement.

Standard 3 (student learning outcomes): The district has looked at the four-year cohort graduation rate (increasing from 69 percent in 2009–10 to 79 percent in 2013–14) and twelfth grade students' A–G completion rates (rising from 32 percent to 48 percent during this same time period). In addition, the district has recently created partnerships with the local community college and Fresno State University to share data with the aim of improving student progress from the primary through secondary grades and toward higher education degree completion.[58]

57 Aguilar, J., Nayfack, M., & Bush-Mecenas, S. (2017). Exploring Improvement Science in Education: Promoting College Access in Fresno Unified School District. *PACE Policy Brief*. Retrieved from the PACE Web site at http://www.edpolicyinca.org/sites/default/files/FUSD-continuous-improvement.pdf.

58 Appleton, R. (2016, June 2). Fresno Unified, Higher-ed Partners Get Grant for College Focus. *Fresno Bee*. Retrieved from the Fresno Bee Web site at http://www.fresnobee.com/news/local/education/ article81490217.html.

Conclusion

The work envisioned in the implementation of the *CA EL Roadmap* evokes what district leaders at the Sanger Unified School District refer to as the "Golden Gate Bridge" metaphor — a continual repainting of the structure to constantly reinforce district values and provide educators with repeated learning opportunities to refresh their understanding and skills for the core initiatives, using data as their guide.[59] With evidence as a guide for schools and districts to engage in a community of practice, it is our hope that all California educators will participate in this statewide learning endeavor to share their practices.

We envision a focus on a safe, affirming, welcoming school climate and culture that values and builds upon the linguistic and cultural assets that each individual student brings, supported by a culturally responsive curriculum and instruction. We envision leadership committed to this challenge. We envision explicit recognition of early childhood education as a crucial part of the system. We envision a focus on English proficiency plus proficiency in multiple languages and recognition of the role of home language in supporting English and overall literacy. We envision English language development in and through rigorous academic content rooted in the California State Standards and NGSS, leading to access to the full curriculum along with supports for participation and success in that curriculum. We envision all teachers actively engaged in instruction that elicits academic discourse and lively argumentation across the content areas. All of the hard work will lead our EL students to college- and career-readiness and preparation for civic participation in a global, diverse, multilingual, twenty-first century world.

We envision a focus on a safe, affirming, welcoming school climate and culture that values and builds upon the linguistic and cultural assets that each student brings, supported by culturally responsive curriculum and instruction.

59 Smith, R., Johnson, M. & Thompson, K. (2012). Data, our GPS. Educational Leadership, 69(5): 56-59. Also see David, J. & Talbert, J. (2013). Turning Around a High-poverty District: Learning from Sanger. S. H. Cowell Foundation.

Appendices

Appendix A: EL Roadmap Policy

California English Learner Roadmap State Board of Education Policy: Educational Programs and Services for English Learners

This policy is intended to assist the California Department of Education in providing guidance to local educational agencies (LEAs) in welcoming, understanding, and educating the diverse population of students who are English learners attending California public schools. Many English learners represent the newest members of our society (including recently arrived immigrants and children of immigrants) who bring a rich diversity of cultural backgrounds and come from families with rich social and linguistic experiences. They also bring skills in their primary languages that contribute enormously to the state's economic and social strengths as a talented multilingual and multicultural population.

This policy explicitly focuses on English learners in the context of the state's efforts to improve the educational system, the quality of teaching and learning, and educational outcomes. It centers on standards, curriculum frameworks, assessment, accountability/school improvement, educator quality, early childhood/preschool, social and family support services, parent/community involvement, and higher education. Its purpose is to promote local capacity-building and continuous improvement in each of these areas and their interrelationship, based on evidence of effectiveness from local experience as well as the most current rigorous research evidence that speaks to the strengths and needs of the diverse population of English learners.

The impetus for this policy comes from a number of important related developments in California as well as nationally. If properly coordinated and articulated as part of a coherent California English Learner Roadmap, these developments can better serve the state's large population of English learners to attain college- and career-ready standards and to further promote the rich linguistic diversity of the state as it thrives in a global economy and culture of learning, innovation, and advanced technology.

The adopted academic State Standards and the Next Generation Science Standards, and corresponding English Language Development (ELD) standards, signal an important shift toward emphasizing academic uses of language for all students, and student engagement with college- and career-ready curriculum using English and other languages. Taken together, these standards highlight the tightly interconnected nature of developing disciplinary content understandings, analytical practices, and academic uses of language for all students. This shift enables the educational system to move beyond remediating students' English language skills to simultaneously developing their language and literacy skills while engaging in the full range of academic content learning.

The State Seal of Biliteracy encourages districts to recognize students' biliterate proficiency. Developing assessments in languages other than English that are aligned to state academic standards (e.g., the California Spanish Assessment) are key to recognizing biliteracy and academic achievement in more than one language. The passage of the California Education for a Global Economy Initiative, known as Proposition 58 (amending Proposition 227), moves us beyond improvement efforts focused solely on language of instruction to programs and pathways that effectively develop academic content knowledge, discipline-specific practices and academic language uses, and bilingual-biliterate proficiency.

California's Local Control Funding Formula (LCFF) is premised on local districts providing equitable learning conditions, pupil outcomes, and effective engagement of English learners. Districts are expected to set, with their parent and community partners, meaningful goals and outcomes that require full access to the curriculum, assure English learners' meaningful progress toward attaining academic English proficiency,

and closing gaps in academic achievement for students entering as English learners. LCFF provides districts additional resources to build local capacity to implement and support evidence-based practices. State-produced documents provide coherent guidance for districts on implementing more and better comprehensive, research evidence-based services for diverse groups of English learners via the Local Control and Accountability Plan (LCAP) process, and provides support for continuous improvement.

Our accountability system is state-determined, and is consistent with federal guidance provided for states to implement the Every Student Succeeds Act (ESSA), which supports our aligning federal and state policies to better integrate and leverage resources, services, assessment and accountability. Consonant with LCFF, ESSA elevates English language proficiency to a central indicator for Title I accountability. It values English language development, which California has identified as both, designated ELD equally with integrated ELD—as presaged in California's English Language Arts (ELA)/ELD Curriculum Framework.

Given ESSA's Title III provisions, California will re-examine standardized, statewide EL entrance and exit procedures and criteria, and report academic performance of key sub-categories of English learners, such as long-term English learners and students with disabilities. The broader federal stance on multiple indicators of performance also complements our system's use of multiple state and locally-collected indicators on academic achievement, EL progress, high school graduation, chronic absenteeism and student suspension, school climate and parent engagement to advance a more complete picture of district program effectiveness.

This policy also reflects the current national research consensus on second language learning, bilingualism, program effectiveness, and policy research60, much of which is consistent with earlier syntheses from the California Department of Education61.

Findings include the following:

- English language proficiency development is a process that takes five to seven years for those entering with emerging English, benefits from coherent and aligned instruction across that time period, and can take place as an integrated process simultaneous with academic content learning in addition to designated ELD and the development of bilingualism/biliteracy.
- Bilingualism provides benefits from the capacity to communicate in more than one language and may enhance cognitive skills, as well as improve academic outcomes.
- Establishing proper and consistent procedures and criteria for identifying, monitoring, and exiting English learners using appropriate assessment procedures—while developing professional capacity to use assessment results—constitutes a key lever for effective system improvement.
- The diversity of the EL population (e.g., newcomers, long-term English learners, students with interrupted formal education, students with disabilities, gifted and talented students, and the expected continuous exiting of students from the EL category) necessitates pedagogy and educational support services that are differentiated and responsive.

Brain development research reinforces the crucial period of birth through early childhood in the areas of cognitive, social, and language development. There is great need for coherent, aligned support for dual language learners across the preschool and primary grade systems to begin developing their bilingual and biliterate capacities.

60 National Academies of Sciences, Engineering, and Medicine (2017). *Promoting the Educational Success of Children and Youth Learning English: Promising Futures.* Washington, DC: The National Academies Press. DOI: 10.17226/24677

61 CDE (1984) Schooling and Language Minority Students: A Theoretical Framework; CDE (1986) Beyond Language: Social and Cultural Factors in Schooling Language Minority Students; and CDE (2010) Improving Education for English Learners: Research-Based Approaches.

The current research evidence base also supports the need to attend to the following instructional factors:

- Explicit literacy instruction especially in the early grades
- Peer-assisted and small-group learning opportunities
- Providing academic language support during content area instruction, balanced with structured explicit opportunities for oral and written language skills development
- Appropriate assessment in various forms (e.g., formative, benchmark, summative) to understand and support student learning
- Processes related to social emotional development and identity formation

California is a state that welcomes newcomers and their families, and that addresses their linguistic diversity with a positive, additive orientation. Our schools need to reflect this orientation by affirming, welcoming and responding to a diverse range of student strengths, needs, and identities, and prepare graduates with the linguistic, academic and social skills and competencies needed for college, career and civic participation in a global, diverse and multilingual world.

California's Vision of Success for English Learners

English learners fully and meaningfully access and participate in a 21st century education from early childhood through grade twelve that results in their attaining high levels of English proficiency, mastery of grade level standards, and opportunities to develop proficiency in multiple languages.

Mission

California schools affirm, welcome and respond to a diverse range of EL strengths, needs and identities. California schools prepare graduates with the linguistic, academic and social skills and competencies they require for college, career and civic participation in a global, diverse and multilingual world, thus ensuring a thriving future for California.

Four Principles

Four principles support our vision and provide the foundation of California's English Learner Roadmap. These principles are intended to guide all levels of the system towards a coherent and aligned set of practices, services, relationships, and approaches to teaching and learning that together create a powerful, effective, 21st century education for our English learners. Underlying this systemic application of the Principles is the foundational understanding that simultaneously developing English learners' linguistic and academic capacities is a shared responsibility of all educators, and that all levels of the schooling system have a role to play in ensuring the access and achievement of the 1.3 million English learners who attend our schools.

Principle #1: ASSETS-ORIENTED AND NEEDS-RESPONSIVE SCHOOLS

Pre-schools and schools are responsive to different EL strengths, needs and identities, and support the socio-emotional health and development of English learners. Programs value and build upon the cultural and linguistic assets students bring to their education in safe and affirming school climates. Educators value and build strong family, community, and school partnerships.

Principle #2: INTELLECTUAL QUALITY OF INSTRUCTION AND MEANINGFUL ACCESS

English learners engage in intellectually rich, developmentally appropriate learning experiences that foster high levels of English proficiency. These experiences integrate language development, literacy, and content learning as well as provide access for comprehension and participation through native language instruction and scaffolding. English learners have meaningful access to a full standards-based and relevant

curriculum and the opportunity to develop proficiency in English and other languages.

Principle #3: SYSTEM CONDITIONS THAT SUPPORT EFFECTIVENESS

Each level of the school system (state, county, district, school, pre-school) has leaders and educators who are knowledgeable of and responsive to the strengths and needs of English learners and their communities, and utilize valid assessment and other data systems that inform instruction and continuous improvement; resources and tiered support is provided to ensure strong programs and build the capacity of teachers and staff to build on the strengths and meet the needs of English learners.

Principle #4: ALIGNMENT AND ARTICULATION WITHIN AND ACROSS SYSTEMS

English learners experience a coherent, articulated and aligned set of practices and pathways across grade levels and educational segments beginning with a strong foundation in early childhood and continuing through to reclassification, graduation and higher education. These pathways foster the skills, language(s), literacy and knowledge students need for college- and career-readiness and participation in a global, diverse multilingual 21st century world.

The California State Board of Education will direct the California Department of Education to provide guidance to districts and intermediary support organizations (e.g., county offices of education, California Collaborative for Educational Excellence) on how districts and schools can implement and strengthen comprehensive, research-based programs and services for all profiles of English learners via the LCAP, and provide support for establishing continuous improvement strategies and expectations that enable access to college- and career-ready learning as well as opportunities to attain the State Seal of Biliteracy.

The guidance will invest in and build educators' professional capacity; emphasize collaborative efforts; support effective pedagogy; and develop systemic solutions to create a coherent and positive education system. The guidance will encourage innovative district and school implementation of evidence-based practices for curricula, materials adoption and development, instruction, professional development and leadership that are responsive to the differentiated strengths and needs of English learners, and strengthening appropriate assessment tools and practices. The guidance will be consistent with the requirements set forth in state and federal laws addressing English learners.

Approved by the California State Board of Education (SBE) on July 12, 2017. To obtain the posted SBE agenda and item, please visit the California Department of Education SBE Web page at http://www.cde.ca.gov/be/ag/ag/yr17/agenda201707.asp.

California Department of Education, July 2017

Appendix B: Abbreviations

- CAASPP: California Assessment of Student Performance and Progress
- CA Ed.G.E. Initiative: The California Education for a Global Economy Initiative
- *CA EL Roadmap*: The *California English Learner Roadmap: Strengthening Comprehensive Educational Policies, Programs, and Practices for English Learners*
- CAT: Conversation Analysis Tool
- CDE: California Department of Education
- CELDT: California English Language Development Test
- CSA: California Spanish Assessment
- CSU: California State University
- EC: Education Code
- EL: English learner (abbreviation used for adjectives only, not when used as a noun)
- ELA: English language arts
- ELAC: English Learner Advisory Committee
- ELD: English language development
- EL Roadmap Policy: California English Learner Roadmap State Board of Education Policy: Educational Programs and Services for English Learners
- DELAC: District English Learner Advisory Committee
- ELPAC: English Language Proficiency Assessments for California
- ESEA: Elementary and Secondary Education Act
- ESSA: Every Student Succeeds Act
- IEP: Individualized education program
- IHE: Institution of higher education
- LCAP: Local Control and Accountability Plan
- LCFF: Local Control Funding Formula
- LEA: Local Educational Agency
- LTEL: Long term English learner
- MOOC: Massive Open Online Course
- MOU: Memorandum of Understanding
- NASEM: National Academies of Sciences, Engineering and Medicine
- NCLB: No Child Left Behind
- NGSS: Next Generation Science Standards
- PD: Professional development
- PLC: Professional learning community
- RFEP: Reclassified fluent English proficient
- SBAC: Smarter Balance Assessment Consortium
- SBE: State Board of Education
- SEAL: Sobrato Early Academic Language
- SEL: Social and emotional learning
- TOSA: Teacher on Special Assignment
- UC: University of California
- UL: Understanding Language

Appendix C: Glossary

Local educational agency (LEA): As defined in ESEA, an LEA is a public board of education or other public authority legally constituted within a State for either administrative control or direction of, or to perform a service function for, public elementary schools or secondary schools in a city, county, township, school district, or other political subdivision of a State, or for a combination of school districts or counties that is recognized in a State as an administrative agency for its public elementary schools or secondary schools.

Biliteracy: Biliteracy is high level proficiency in speaking, reading, and writing in two languages.

Designated English language development (ELD): Designated ELD is a protected time during the regular school day when teachers use the CA ELD Standards as the focal standards in ways that build into and from content instruction in order to develop critical English language skills, knowledge and abilities needed for content learning in English.

Integrated ELD: Integrated ELD is made up of effective instructional experiences for English learners throughout the day and across disciplines that: are interactive and engaging, meaningful and relevant, and intellectually rich and challenging; are appropriately scaffolded in order to provide strategic support that moves English learners toward independence; build both content knowledge and academic English; and value and build on primary language and culture and other forms of prior knowledge.

Dual language program: A dual language program is a program in which students are taught literacy and content in two languages. When a program is called "dual language immersion" it is usually the same as two-way immersion or two-way bilingual. When a program is called "dual language" it may refer to students from one language group developing full literacy skills in two languages.

Heritage language program: A heritage language program is a program with the goal of literacy in two languages. Content is taught in both languages, with teachers fluent in both languages. Heritage language programs typically target students who are non-English speakers or who have weak literacy skills in their first language.

Dual language learner: A dual language learner is a child learning two (or more) languages at the same time as well as a child learning a second language while continuing to develop their first (or home) language.

Long term English learner: A long term English learner is a student who has been enrolled in U.S. schools for more than six years, who is not progressing toward English proficiency, and who is struggling academically because of their limited English skills.

Illustrative Case Examples of *CA EL Roadmap* Implementation

The online resources to this guidance document contain examples of system approaches and strategies that illustrate the principles and elements of the *CA EL Roadmap*. Sharing such examples will model and inspire practitioners throughout California to plan, act, document, and iterate their own cycles of learning, considering the examples of others. The CDE will facilitate and curate examples submitted from the field to establish a dynamic, online community of educators focused on effective systems and practices for English learners.[34]

The principles and elements of the *CA EL Roadmap* are sufficiently general, and the diversity of California districts and their community characteristics are so vast, that there will likely be a great diversity of implementation scenarios.

The principles and elements of the *CA EL Roadmap* are sufficiently general, and the diversity of California districts and their community characteristics are so vast, that there will likely be a great diversity of implementation scenarios. The examples, accumulated over a period of time, will become a record of system improvement efforts and outcomes, with an increasing number of time-tested and innovative metrics that can be used to gauge implementation and student outcomes, and that are recognized and adopted by educators.

Characteristics of Illustrative Case Examples

The examples are chosen to be generative and inspiring. The practices, in agreement with the Castañeda standards,[35] will exhibit the following characteristics:

1. They have a research basis that holds promise to have local impact.
2. They are monitored using local metrics of system implementation and adult learning outcomes.
3. They pay attention to evidence of student learning outcomes and make adjustments as needed.

They should lead the reader of the example to recognize connections to their own district's challenges and either inspire an adaptation or spur evidence gathering and sharing of their own approaches to the challenges.

"Evidence" in this case refers to objective information that is broadly interpreted, in contrast to the "scientifically-based research" grounded in randomized control experiments that were a hallmark of NCLB. Furthermore, as in the Castañeda standards, evidence

34 This cycle of continuous improvement is varyingly called "PDSA" (Plan, Do, Study, Act) or "Improvement Science". See Bryk, A., Gomez, L., Grunow, A. & LeMahieu, P. (2015). *Learning to Improve: How America's Schools Can Get Better at Getting Better.* Harvard Education Publishing.

35 Dear Colleague Letter (DCL) from the U.S. Department of Justice Civil Rights Division and U.S. Department of Education Office for Civil Rights, January 7, 2015. Downloaded from https://www2.ed.gov/about/offices/list/ocr/letters/colleague-el-201501.pdf 9/16/17.

California English Learner ROADMAP

Appendix R
Global California 2030: Speak, Learn, Lead

Global California 2030

Speak. Learn. Lead.

An Initiative of State Superintendent of Public Instruction Tom Torlakson

California Department of Education
Sacramento 2018

Publishing Info

Global California 2030 was developed by the Communications and English Learner Support Divisions, California Department of Education (CDE). This publication was edited by Carol Singleton, Scott Roark, Bill Ainsworth, Veronica Aguila, and Elena Fajardo. It was designed by Lunden Almquist with help from Leomel Castellano. It was published by the Department of Education, 1430 N Street, Sacramento, CA 95814. It was distributed under the provisions of the Library Distribution Act and *Government Code* Section 11096.

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Notice

The guidance in *Global California 2030* is not binding on local educational agencies or other entities. Except for the statutes, regulations, and court decisions that are referenced herein, the document is exemplary, and compliance with it is not mandatory. (See *Education Code* Section 33308.5.)

Contents

4 | Mission
5 | What is the California Way?
6 | Work Underway
9 | The Path to a Multilingual California
14 | Conclusion

"If you talk to a man in a language he understands, that goes to his head. If you talk to him in his language that goes to his heart."
—Nelson Mandela

The mission of Global California 2030 is to equip students with world language skills to better appreciate and more fully engage with the rich and diverse mixture of cultures, heritages, and languages found in California and the world, while also preparing them to succeed in the global economy.

Executive Summary

California is immersed in the global economy, is a leader in global culture, and is home to flourishing industries that lead the world, including high-tech, entertainment, and agriculture. California also benefits from a diverse population of residents who speak the majority of languages heard on the planet.

As the world becomes more interconnected, fluency in another language opens up opportunities for people to succeed economically and allows them to take part in diverse cultural activities. A wide body of research shows that the study of languages boosts students' mental flexibility, enhancing their ability to learn all subjects. It also introduces people to new cultures and new ways of looking at the world. This broader perspective nourishes innovation and adaptability in all fields and

State Superintendent of Public Instruction Tom Torlakson

helps to enrich communities economically, culturally, and socially.

California's K–12 education system has made great strides in teaching world languages to students, providing more opportunities for fluency and the benefits fluency brings. But we can and should go further. To better prepare students to succeed in the changing economy and to strengthen California's own rich mixture of cultures and languages, California needs to vastly expand opportunities for students to learn a second and possibly even a third language.

My initiative—Global California 2030—is a call to action. We are inviting educators, parents, legislators, and community and business leaders to join us on the road to a multilingual California. We need support from everyone as our K–12 education system expands access to world language classes, programs, and experiences; trains more bilingual teachers; and

improves the quality and availability of advanced language classes.

By 2030, we want half of all K–12 students to participate in programs leading to proficiency in two or more languages, either through a class, a program, or an experience. By 2040, we want three out of four students to be proficient in one or more languages, earning them a State Seal of Biliteracy.[1]

Universities and businesses can begin to support the program today by giving students who earn the State Seal of Biliteracy additional consideration for admission or hiring. Also, I challenge colleges and universities to develop their own Seal of Biliteracy program statewide. Imagine the impact!

Our call for more language proficiency seeks to build on the work already underway at the California Department of Education (CDE) and at schools throughout the state. It amplifies the voice of California voters, who loudly and clearly stated their interest in world languages by passing Proposition 58 in 2016, which eliminates obstructions for dual-immersion programs.[2]

Global California 2030 is part of a larger effort to better prepare students for twenty-first century careers and college, recognizing that multilingualism is an essential skill. The CDE stands committed to the transformation of our education system we call the "California Way."

What is the California Way?

- Raising academic standards through the alignment of instruction and assessments that ensure those standards are met
- Providing more equitable funding and local control, allowing communities to determine how to best meet the educational needs of the students they serve
- Giving the public valuable information to help evaluate schools, with descriptions that are easy to understand and help identify successes or areas of need
- Doing all this in a collaborative, positive way in which the CDE is a critical friend that supports the decisions made locally

1. Education Code sections 61460–51464; CDE State Seal of Biliteracy web page. 2018. https://www.cde.ca.gov/sp/el/er/sealofbiliteracy.asp (accessed May 1, 2018).

2. CDE. 2018. CA Education for a Global Economy Initiative. https://www.cde.ca.gov/sp/el/er/caedge.asp (accessed May 1, 2018).

Work Underway

California's K–12 system is by far the biggest in the nation. We have 6.2 million students. More than 60 languages are spoken in the homes of California's students. These range from commonly known languages such as Spanish, Mandarin, and Vietnamese to less frequently heard languages such as Mixteco, Pashto, and Tongan. About one in four of those students, or 1.3 million, are English learners. An estimated 1.2 million students are proficient in English yet also have another language in their background. This means that over 40 percent of California's K-12 students come to school with knowledge and experience in at least two languages.[3]

At one point in our recent past, English learners were viewed only as a challenge to the educational system because these students needed extra support. Today, we recognize that these young people are assets to our state and their local communities. Like all students, they bring a rich cultural and linguistic heritage to our classrooms, making our schools more vibrant and diverse.

The California Department of Education and its partners have made great strides in improving instruction for English learners by creating the English Language Arts/English Language Development Framework. This resource ensures that English learners are taught intellectually rich subject content while also becoming proficient in English.

3. CDE. 2018. DataQuest Reports. https://data1.cde.ca.gov/dataquest/ (accessed May 1, 2018).

California has developed a groundbreaking plan—the California English Learner Roadmap—for improving instruction and educational structures to support English learners. The Roadmap strengthens comprehensive policies, programs, and practices for English learners.[4]

Our state has provided English Language Development and Spanish Language Development Standards founded on the California State Common Core Standards and the "Estandares en Comun" for English/Spanish language arts and literacy respectively.[5] [6] Our state is in the process of modernizing the World Language Standards, bringing more rigor and cohesiveness to the study of world languages.[7]

We are all working together to improve and expand professional development for bilingual teachers, language teachers, and teachers of English learners while also encouraging more people to become credentialed bilingual teachers.[8]

We provide support to migrant students through the Mini-Corps program. College and university students planning to become teachers assist students in the 20 migrant regions.[9] In 20 years, Mini-Corps has produced over 3,500 bilingual teachers. We want to double that number by 2030.

4. CDE. 2018. English Learner Roadmap. https://www.cde.ca.gov/sp/el/rm/ (accessed May 1, 2018).

5. CDE. 2014. California English Language Development Standards: Kindergarten Through Grade Twelve. Sacramento: CDE. Available at https://www.cde.ca.gov/sp/el/er/documents/eldstndspublication14.pdf.

6. San Diego County Office of Education, California Spanish Language Development Standards (Electronic Edition) Kindergarten Through Grade Twelve En Español. Prepublication available at https://commoncore-espanol.sdcoe.net/CaCCSS-en-Espanol/SLA-Literacy.

7. CDE. 2018. World Language Standards Guidelines. https://www.cde.ca.gov/be/st/ss/wlrevisionguidelines.asp (accessed May 1, 2018).

8. CDE. 2017. Request for Applications: Bilingual Teacher Professional Development. https://www.cde.ca.gov/fg/fo/r12/btpdp17rfa.asp (accessed May 1, 2018).

9. CDE. 2018. Migrant Education Programs and Services. https://www.cde.ca.gov/sp/me/mt/programs.asp (accessed May 1, 2018).

"One language sets you in a corridor for life. Two languages open every door along the way."

—Frank Smith, psycholinguist

We are working closely with Mexico and Spain to expand our teacher exchange program and our joint teacher training efforts. Currently, 31 teachers from Mexico and 70 teachers from Spain have full teaching contracts in public school districts and charter schools throughout the state. In addition, through the Migrant Summer Binational Program, we have increased the number of bilingual teachers from Mexico from 50 teachers to 70. We look forward to an exponential increase in these numbers.

Our state has made a special effort to work with leaders of the Mexican national education system and leaders of the Baja California education system to better serve the students we share. There are about 50,000 students from the U.S., mainly from California, currently studying in Baja California. There are students from both sides of the border who end up going to school in both nations, and they need to be fluent in both English and Spanish to succeed. The teachers of these students will receive the necessary supports from both nations to provide rigorous education to the students we share.

Furthermore, California is leading the nation in recognizing high school students who demonstrate proficiency in a language in addition to English. Since 2012, over 173,000 graduating high school students have earned the Seal of Biliteracy.

> **"To have another language is to possess another soul."**
>
> **—Charlemagne, Emperor, Holy Roman Empire, speaker of Latin, German, and some Greek.**

The Path to a Multilingual California

Our call to have more students study and become proficient in a world language, while ambitious, is within reach.

My plan to reach our goal includes the following:

- Work with the Legislature to provide additional funding for programs such as the Bilingual Teacher Professional Development Program, pre-K through twelfth grade, which seeks to provide credentials to an additional 1,190 bilingual teachers
- Work with the institutions of higher learning to advocate more bilingual teacher preparation programs
- Work with the Migrant Education Mini-Corps Program to support the existing pipeline to becoming a bilingual teacher
- Work with the Legislature to provide additional funds to initiate and expand a variety of bilingual program opportunities for all students pre-K through twelfth grade
- Develop a communications campaign to share the academic, social, and economic advantages of graduating students with biliteracy skills
- Urge all school districts to award the State Seal of Biliteracy to qualifying seniors
- Invest in professional development resources for teachers and administrators to build capacity to deliver high-quality, effective biliteracy instruction
- Engage all sectors of the education and business community and parents to support this vision and work for comprehensive implementation

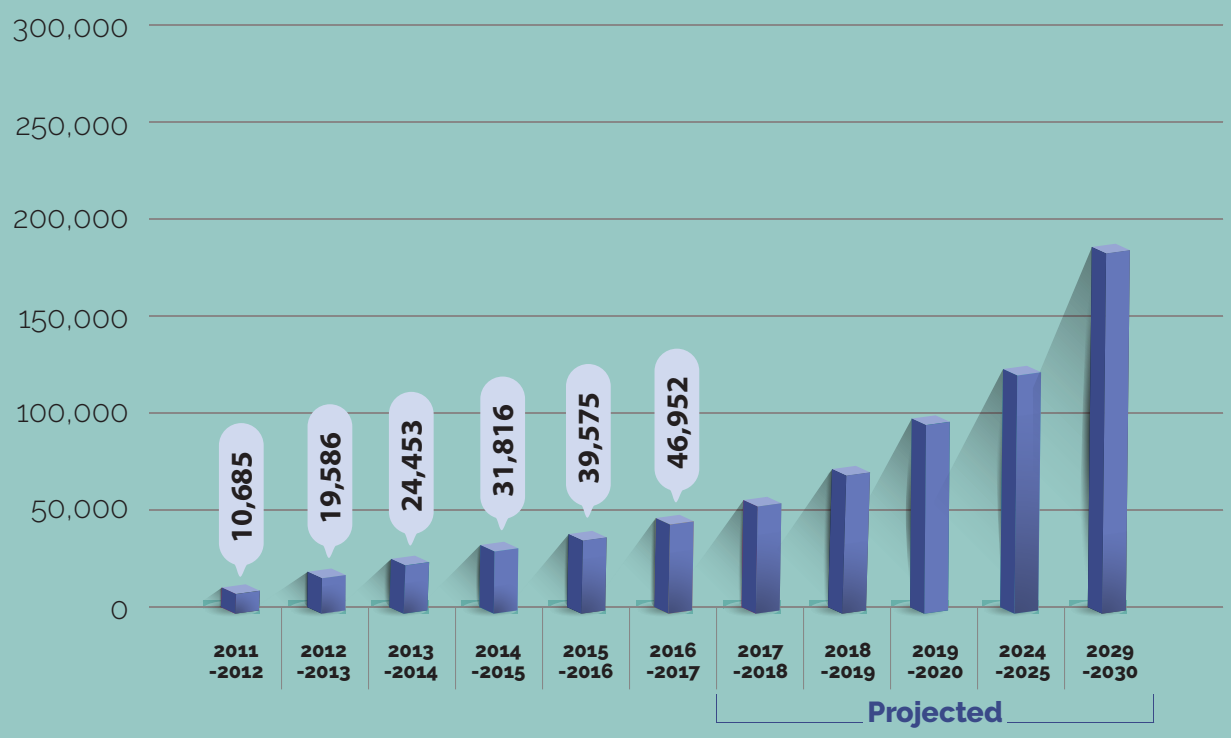
For more information on California Department of Education language resources, go to https://www.cde.ca.gov/languages/.

In six years, the number of students receiving the award has quadrupled from 10,685 in 2011–12 to 46,952 in 2016–17. In the 2016–17 school year, graduating high school students earned the State Seal of Biliteracy in 34 different languages.

As part of Global California 2030, our goal is to vastly expand the number of students who know at least two languages. In 12 years, we want to more than triple the number of students who earn this distinction in 2030.

More students earning the Seal of Biliteracy means more young people will enter the workforce with the skills and knowledge to keep California's economy thriving and to continue its role as a global leader.

State Seal of Biliteracy



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10. CDE. English Learner Support Division internal data, 2012–2017.

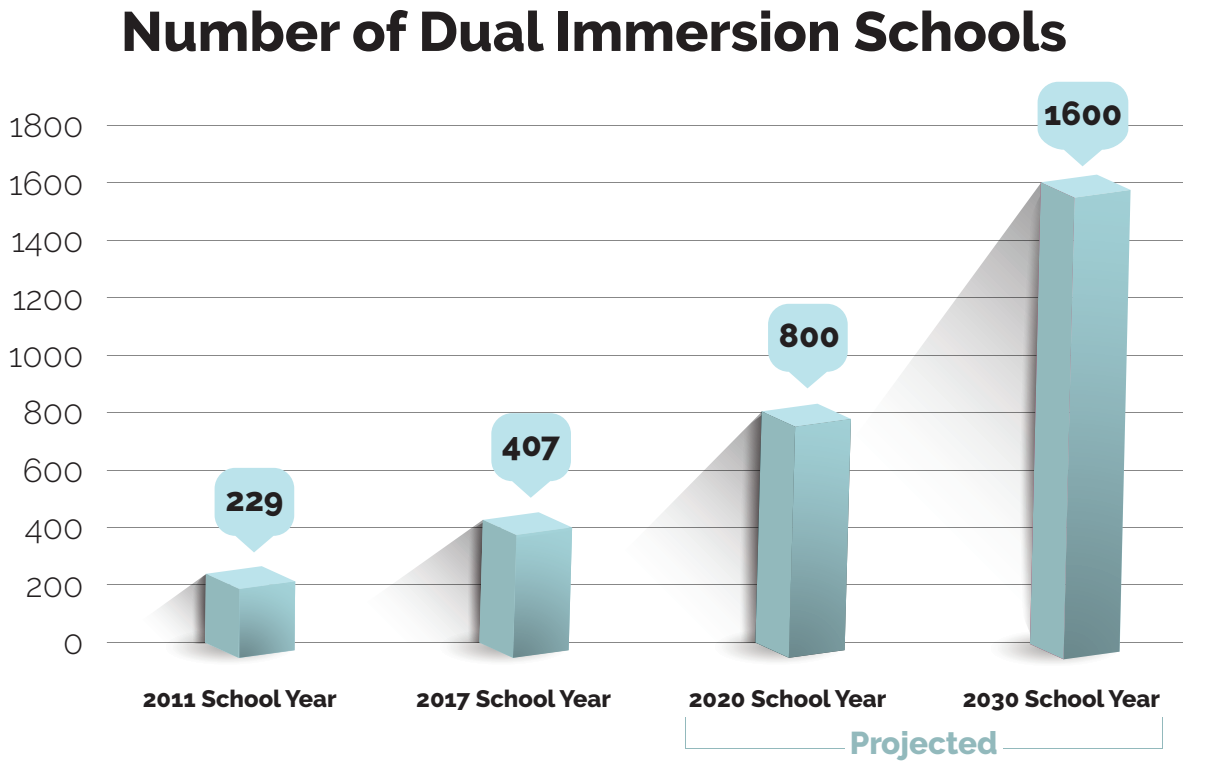
11. Projection

Dual-language immersion programs most frequently use English and Spanish. But California also has programs that offer English/Mandarin, English/Korean, English/Vietnamese, and English/Portuguese, to name a few.[12]

These programs, beginning in kindergarten, deliver instruction in both English and another language. Typically, they start with the majority of instruction in the other language and less in English. Gradually, instruction is half in each language, giving students fluency in two languages. Students typically stay in the program throughout elementary school.

Researchers have found these programs to be extremely beneficial to students, helping them learn all subjects while also giving them the tools to more easily acquire a third language.[13]

Requests by parents for these programs are already on the rise, especially since the passage of Proposition 58 removed barriers to setting up these programs. As part of Global California 2030, we are striving for even more dramatic growth, with the goal of quadrupling the number of programs from 407 in 2017 to 1,600 in 2030.



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12. California Association for Bilingual Education. 2017. Dual-Language Immersion Directory. http://www.resources.gocabe.org/index.php/home/directory-of-dual-language-immersion-programs/ (accessed May 1, 2018).

13. CDE. 2010. Improving Education for English Learners: Research-Based Approaches. Sacramento: CDE.

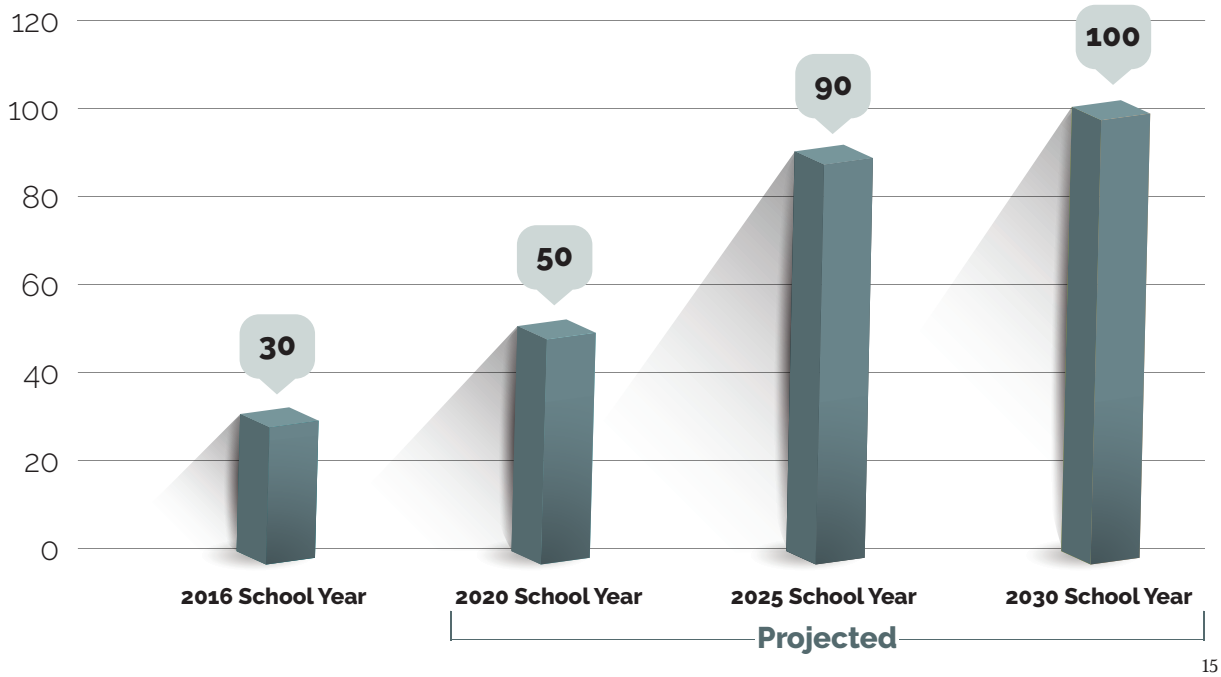
14. CDE. 2018. DataQuest Reports. https://data1.cde.ca.gov/dataquest/ (accessed May 1, 2018). Projections for future years

Of course, vastly expanding the number of students who speak two or more languages will require more teachers and more programs to train those teachers. In 2016, California had 30 state-approved programs. By 2030, we want that number to grow to 100.

More bilingual teachers means that every school where parents want a program will have teachers with the high levels of academic language skill and authorization to teach in the two languages. By 2030, we want to double the number of teachers authorized to teach two languages.

More language classes means parents who want particular types of programs or courses for their child will have access to them.

Number of Bilingual Teacher Preparation Programs at State-Approved Educator Preparation Programs



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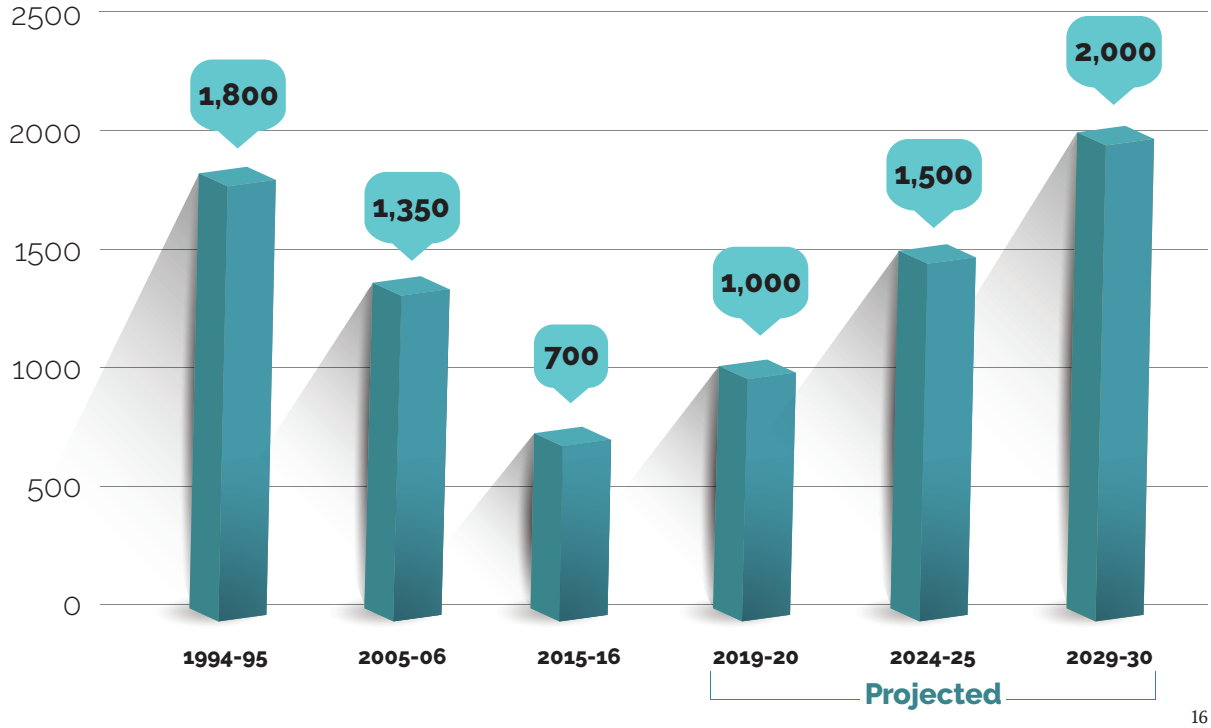
15. California Commission on Teacher Credentialing. 2018. Approved Programs and Institutions. https://www.ctc.ca.gov/commission/reports/data/app-approved-program (accessed May 1, 2018). Projections for future years.

Number of New Bilingual Teacher Authorizations Per Year



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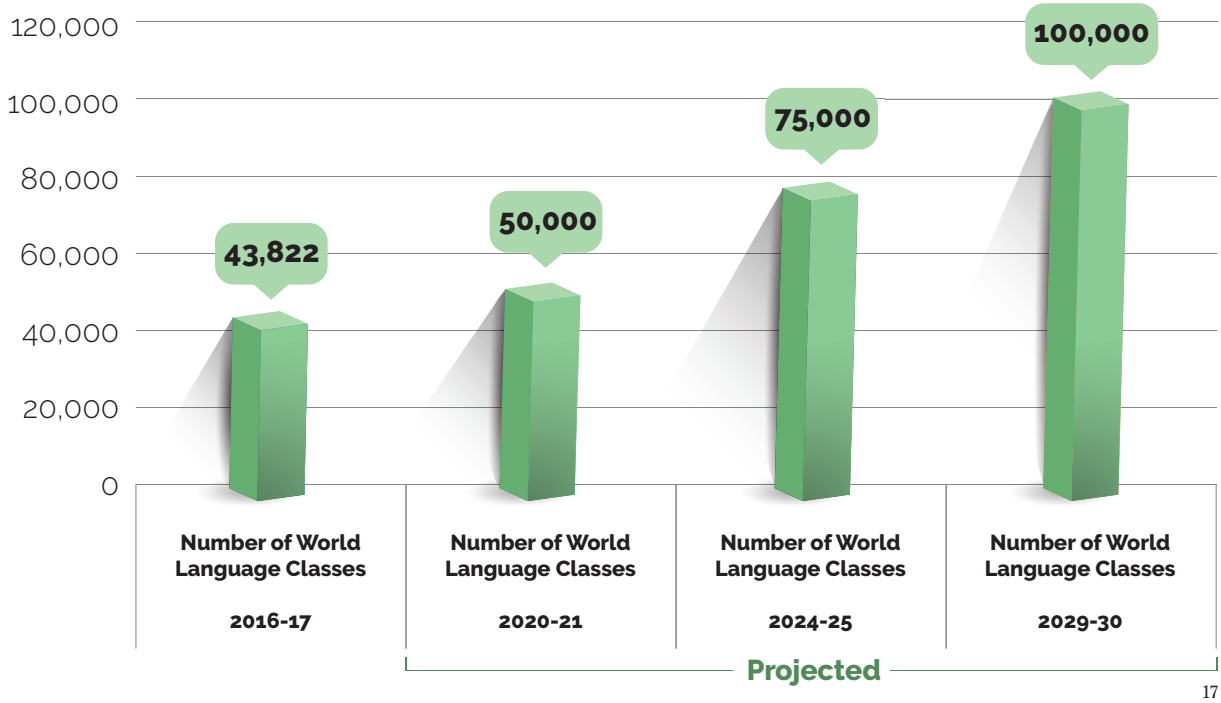
Projected Growth in Number of World Language Classes



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16. California Commission on Teacher Credentialing. 2018. Approved Programs and Institutions. https://www.ctc.ca.gov/commission/reports/data/app-approved-program (accessed May 1, 2018). Projections for future years.

17. CDE. 2018. DataQuest Reports. https://data1.cde.ca.gov/dataquest/ (accessed May 1, 2018). Projections for future years.

Conclusion

Studies have found that speaking two or more languages has many benefits. It strengthens memory and cognitive processes, improves speakers' ability in their first language, expands cultural knowledge and understanding, builds self-confidence, and even delays the onset of Alzheimer's and dementia.

Speaking and learning world languages helps students become leaders in their communities and workplaces, and it ensures that California maintains its position as an economic and cultural powerhouse.

Our ambitions for Global California 2030 are high but so is our ability to work together with parents, communities, and cultural and business leaders toward common goals. Together, we have the dedication, skill, creativity, and vision to give all students the opportunity to learn another language and enhance their ability to fully engage with the culture and economy of California and the world. We are aiming high and dreaming big. It's the California Way.[18]

18. Bhattacharjee, Yudhijit. 2012. "Why Bilinguals Are Smarter." The New York Times. https://www.nytimes.com/2012/03/18/opinion/sunday/the-benefits-of-bilingualism.html (accessed May 10, 2018); Inside California Education. 2018. Dual-Language Immersion, Redding, CA. https://insidecaled.org/videogallery/video/dual-language-immersion/ (accessed May 10, 2018).

Learning another language is like becoming another person.
—Haruki Murakami

GLOBAL CALIFORNIA 2030

Speak Learn Lead

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