

POLICY BRIEF

Teaching All of Our Children Well: Teachers and Teaching to Close California's Achievement Gap

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Introduction/Overview

The Superintendent of Public Instruction and the P-16 Committee have set the important goal of increasing the achievement of the many cultural and linguistic minority students in California who are achieving below their peers, and thus, closing the achievement gap. While the ways to address this are as numerous as its causes, this brief focuses on several questions related to the critical resource of teachers and teaching for California's diverse students.

Evidence supports that teachers matter and researchers take various approaches to

studying the often-elusive questions related to how and why. A challenge for this research is the limitations of what can be measured—such as teacher test scores and years of experience—and what is unquantifiable—such as passion and caring, and the difficulty involved in the collection and analysis of data on those factors which are measurable [1,2]. Moreover, some indicators, including how well teachers facilitate learning experiences, engage students, and value student interests, can only be understood by observation at the school or classroom level [3,4].

Major Conclusions, Limitations, and Challenges to the Research

Overview of Effectiveness Research

Despite these caveats, a growing body of research using paradigms in which teacher quality or some aspect of this is the input, and student achievement is the output, demonstrates that teacher skill can affect student achievement—sometimes dramatically [5,6,7,8,9,10]. Moreover, these teacher impacts can last over time so that having a high quality teacher in one year can contribute to greater student learning in a subsequent year and, unfortunately, having a

poor quality teacher can contribute to decreased learning in subsequent school years [7,11].

There is reasonable agreement in the education research that teachers with several years in the classroom outperform new teachers, as measured by student standardized test results [2,9,10,12,13,14]. There is also research supporting the conclusion that teachers who stay on the job continue to become more effective [3] and that this effectiveness can grow for four or five years

[15]. It should be noted that some researchers have found that there may be a “prime time” for teachers: that they are most effective during the middle years of their experience, and less so both at the beginning and end of their careers [16,17].

There is a body of research that has found a positive relationship between teachers’ scores on standardized tests^a during their undergraduate years and the success of their teaching as measured by student test scores [18,19,20]. Verbal ability, as indicated by standardized tests, appears as one indicator of overall teacher effectiveness in the research [18,19].

Other research finds a positive link between higher teacher test scores in particular content areas and greater achievement of their students in those subjects, particularly in math and slightly less so in science [3]. Researchers found a similar relationship between teacher passage rates on professional certification tests and secondary students’ math achievement [10,21,22]. Overall, then, the research suggests that higher teacher test scores—most likely as a proxy for content and/or teaching knowledge—can be predictive of higher student scores on standardized exams in specific subject areas, and probably at specific grade levels.

Teachers’ undergraduate studies have an impact on student learning as well. Secondary teachers with an undergraduate major in math and science have been linked with increased student achievement in those areas [10,12,23]. In addition, some studies report a positive relationship between the quality of the undergraduate institutions teachers attended and their students’ achievement [10,20,22].^b Taken together, these findings show that teachers who have more preparation and knowledge—as indicated by their college major, test scores, or the quality of their undergraduate education, may be more effective at raising student achievement as indicated by standardized test scores.

Finally, research indicates that teachers’ pedagogy courses also contribute to students’ learning: several studies of teacher effectiveness found a positive relationship between teacher certification and student achievement [12,19,24].^c In addition, students of teachers who participate in high quality induction programs tend to reap achievement benefits [25].

Distribution of Effective Teachers

There is evidence that the students with the greatest need for high quality teachers are the ones who have the least access to this key resource. Here in California, despite a recent decrease in the number of classrooms with under-prepared teachers, there continues to be a small percentage of schools (4%) with a teaching force of more than 20 percent under-prepared teachers [26]. In some regions this problem is even greater, such as urban areas like Los Angeles and rural areas like Merced, both with approximately 14% percent of the teacher force on emergency teaching permits [27]. Unequal distribution of teacher absenteeism is evident in California’s urban and low income schools as well [28].

Characteristics of High Quality Teachers for Diverse Students

Teachers can have attitudes, skills, and knowledge that better prepare them to teach cultural and linguistic minority children well. The desire and ability to make connections with students’ families is one of these. Frequent teacher to home communication has been found to be a common factor in classrooms where students’ academic achievement was highest [29,30,31] and there is a high correlation between various kinds of parental involvement and minority students’ academic outcomes [32,33,34,35]. Related to this is the willingness and ability to tap into home and community resources [36,37] and use these in the classroom [30,31,38]. It is also critical for teachers to conduct ongoing meaningful assessment of students’ abilities

in order to provide instruction aimed at an appropriate level above what students currently know [38,39]. Teachers' high expectations for the success of all students and the ability to communicate this belief effectively are critical to students' success [30,31,38] as are high expectations for themselves and a sense of their own responsibility and ability to work within the school system to protect and support their students and themselves [40]. Examples of classroom practices and strategies that are effective with culturally and linguistically diverse students include creating interactive and collaborative learning environments in the classroom [31], and establishing a community of learners within the classroom that provides students with opportunities to learn collaboratively, teach, and take responsibility for each other [30].

Positive Effects of Teachers from Similar Backgrounds to their Students

The quantitative research on whether teachers of the same racial and ethnic backgrounds as their students are more pedagogically effective with these students exhibits a pattern of support for such teacher-student matching. However, the number of studies is small and not all are equally conclusive [3, 41,42,43]. Other types of literature support the success of teachers of color with students of color, finding that teachers from similar backgrounds as those of their ethnic minority students have many of the qualities, skills, and knowledge discussed in the previous section. Researchers have found that teachers of color serve as role models for their students of color [44,45,46], have high expectations [45], are able to use their knowledge of the culture of their students to make the best educational decisions [47] and avoid misplacement in special education or misunderstanding of behavior [42,48], and, given their ability to communicate in the home language of linguistic minority students, they have an advantage with regard

to making and maintaining fruitful home-school connections. In addition, having teachers with the above described background and understanding is a counter to the negative teacher expectations with regard to academic ability and classroom behavior for culturally and linguistically diverse students on the part of mainstream teachers and counselors that is revealed by several researchers [49,50,51,52,53].

Unique Skills and Attributes of Effective Teachers of English Language Learners

Although empirical studies are limited, qualitative studies and expert opinion provide guidance regarding the identifiable pedagogical, language, and cultural skills and knowledge of the most successful teachers of EL students. Some of the skills and knowledge supported by the research that comprise the expertise that all teachers of English learners (ELs) need in order to help their students succeed include: skills in teaching the mechanics of language and how language is used in different contexts [54,55,56,57,58], the ability to incorporate the culture of students into the curriculum [39,54,59], a deep understanding of the content they are teaching and of its demands on students who are learning English [54], and understanding of a whole range of instruction and curricular strategies that work for ELs [59]. It is also critical that teachers have the ability to understand and implement ongoing meaningful assessment of students' English language and academic abilities [39,54,60] and to determine and integrate into instruction the students' mix of academic level and degree of English language proficiency Gándara [61]. This is particularly critical given the over-representation of culturally and linguistically diverse students in special education [62,63]. Teachers also need the ability and willingness to act as advocates for their students [57] and to work cooperatively with colleagues to advance

learning for ELs [39,54]. Secondary level English learners face unique educational challenges that are often overlooked, as do their teachers.

Older children have less time to acquire both English and the academic skills they need for high school graduation and post-secondary options. They experience issues of identity development and adolescent transitions [64,65]. Based on an extensive review of the research on EL students and adolescent literacy, Meltzer and Hamann [66] found motivation and engagement to be central to adolescent EL learning and that making connections to what students already know and what excites them, helping them feel safe and accepted in the classroom and school environment, and having high expectations of and confidence in students' abilities, can contribute to motivating and engaging students. There is evidence to support the positive effect on EL student learning of teachers who have CLAD and BCLAD certification [67]. In addition, the more extensive the preparation that teachers had in EL instruction, the greater their confidence in their own ability to successfully teach English learners [68].

What We Know About the Best Ways to Prepare Teachers Overall

Teacher preparation is a career-long trajectory encompassing the pre-service or fifth year programs, induction activities, and professional development. The preponderance of research on teacher preparation supports an argument for teacher certification programs in which pedagogical knowledge forms an important part of the curriculum [69,70,71,72,73,74,75] and in which field experience provides teachers the chance to put knowledge into practice [76] and receive evaluative feedback from those in schools [26]. Teacher induction is another part of the teacher certification trajectory. The fundamentals of teacher induction are individualized teacher support—often through

mentoring—and various kinds of professional development activities [76], and there is increasing evidence that strong induction programs work [78,79]. Professional development, whether it is part of induction or not, is found to be most successful when it is grounded in deep knowledge of the student curriculum, includes adequate time for teachers to acquaint themselves with the new learning, [80] and is linked directly to classroom practice [81,82].

California's Teacher Credentialing System: Preparation and Induction

The California Commission on Teacher Credentialing (CCTC) is the credential granting institution for authorization to teach in the state's public schools and school districts. All prospective California teachers must have a four-year undergraduate degree, complete a CCTC approved teacher preparation program, pass a basic skills assessment,^d a test of subject matter content dependent on the level and subject the teacher will teach (e.g., multiple subject elementary school or biology high school), and pass the Reading Instruction Competence Assessment (RICA). To gain a clear (essentially lifetime) teacher credential, teachers must participate in induction (see below).

The requirements of the Beginning Teacher Support and Assessment (BTSA) program as detailed in SB 2042 include induction program standards that address both diverse learners and ELs specifically. These standards detail the content to be taught to teachers through the induction process^e. As we have indicated elsewhere, our research indicates that often neither credential programs nor professional developers have the expertise to pass on the skills and knowledge teachers need for EL instruction. Nonetheless, there are programs such as The New Teacher Center (NTC) at the University of California at Santa Cruz that provide successful models.

Approaches to Preparing Teachers for Diversity

Teacher education programs take two general approaches to increasing the pool of teachers who are well-prepared to work effectively with diverse children: recruitment of candidates of color and activities to try and develop or change the attitudes and knowledge of white candidates about working with diverse students [83]. A major strategy to prepare a white middle class population of prospective teachers to work with diverse students is through coursework. Researchers report generally positive impacts on teacher candidates' attitudes and beliefs with variation in results depending on the "teacher candidates' experiential backgrounds, course content and pedagogical strategies" [84]. Another major approach to preparing teachers for diversity is through fieldwork. Again, studies of field experiences generally showed benefits including "a better understanding of diverse populations and learning how to communicate and build relationships with those from cultures different from their own" [84].

Teacher Preparation for EL Instruction in California

With the passage of AB 1059 in 1999, accredited teacher preparation programs were required to embed knowledge, skills and ability to deliver appropriate instruction to EL students in all teacher credential programs.^f These requirements represent the good intentions of policy makers to ensure that EL students have teachers who are prepared to meet their needs. However, while there is no evaluation yet of the effects of these programs with regard to EL students, research [85] and reports from the field indicate that these good intentions are not being carried out in many instances. A limitation of the embedded approach is that new teachers are expected to learn these complicated and critical skills from faculty who may or may not have expertise in the area, and without adding

instructional units or time to their credential studies. With the passage of SB 472, additional funding specifically for professional development designed to help teachers gain expertise in the instruction of EL pupils in math and language arts was allocated. Despite some excellent professional development opportunities available in California designed specifically for helping teachers gain expertise in EL instruction,^g teachers often indicate that the professional development they most often have—that associated with state-adopted curricula—reflects cursory knowledge and concern on the part of developers and trainers with regard to EL instruction. At the same time our data indicate that more—and better—professional development makes a difference in teachers' sense of efficacy with EL students—even though too few teachers had had such professional development opportunities [68].

Additional Challenges: Recruitment and Restricted Instructional Approaches

The importance of recruiting teachers from the communities in which we have the greatest shortage of high quality teachers is underscored by research on teachers' geographical preferences [86]. Since teachers prefer to work either in, near, or in areas that have similar characteristics to, their hometowns, and currently most teachers come from suburban or rural districts, we need to generate more teachers who are originally from these urban areas. Currently the number of prospective teachers from urban areas falls far short of the numbers of teachers needed in urban schools so these schools must attract teachers from other areas. Another challenge is the current limitation on instructional strategies that makes use of students' primary language; strategies that are strongly supported by high quality research using a range of methods (see e.g., [86,87]). While primary language options are not appropriate for all EL students nor in all learning

situations, limiting proven educational strategies for students who are not learning

well in the current instructional environment may be counter-productive.

Conclusion and Recommendations

We support the need for *every* teacher in California to receive preparation for working with EL and Standard English learner students through teacher preparation programs and induction. Nonetheless, we believe that even these well-prepared teachers need extra support, as it is virtually impossible that all teachers could have deep expertise in all areas for all students in our diverse society. We argue therefore, for a school-wide perspective on addressing the needs of cultural and linguistic minority students: for viewing the school as a team that has within it the expertise to address the needs of these students. The foundation of this team consists of classroom teachers; teachers who will have varying degrees of expertise for working with culturally and linguistically diverse (CLD) students even with professional preparation and induction. The team also includes some school experts who work with students and teachers to fill some of the inevitable “expertise gaps.” A key part of this team is a principal who knows about diverse students and their needs and who therefore knows what kinds of additional expertise are needed at the school and how to use this expertise. Since few principals currently have such knowledge, this would have to be gained through certification. Another source of such expertise is bilingual teachers (see Recommendations 5-8). This view argues for a local approach: the extra expertise at one school might be very different from what is needed at another. In addition, the professional development that teachers need is likely to vary by site, or groups of sites within a district, and should be allowed to do so, so that teachers gain the skills that will benefit them and their particular students. The approach also argues for developing additional teachers who have

such deep expertise: teachers who may come from the same backgrounds as some of the students and who have deep personal and professional knowledge about working with those students.

Create Programs and Incentives to Attract Diverse Teachers

Inasmuch as the research has demonstrated that teachers from students’ own communities are most likely to remain in schools in those communities, gaining important experience and expertise and providing critical continuity for students, it makes sense to recruit from these areas. And while the need for these teachers is unquestioned, it cannot be assumed that because they come from the same community as the students that they will be able to tap into the cultural and linguistic resources that they have—they must be assisted in their teacher preparation and induction experiences to recognize and develop these resources. Talented young people from communities of color, with college degrees and often with competence in additional languages can usually find attractive jobs that pay better than teaching. An incentive to becoming a teacher would be to pay one year of a college education and teacher preparation (including a stipend for living expenses) for each year that a person devotes to teaching in an underserved community.^h

Evaluate Embedded EL Authorization

The numbers of teachers whose preparation for working with EL students via the EL authorization that is earned in multiple and single subject credential programs as a result of AB 1059 will continue to grow. This approach for preparing teachers to work with

ELs has now been in effect for more than five years and we recommend that it is time for a comprehensive evaluation of its effectiveness in this regard including the role of BTSA. Along with discovering strengths, weaknesses, and needs, such an evaluation would uncover exemplary practices that could serve as models for programs that are struggling.

Develop Centers of Teaching and Research

We recommend developing Centers of Teaching and Research Excellence that would serve as incubators for teacher preparation and professional development with a focus on teaching culturally and linguistically diverse students. Centers could be sited at several campuses using the expertise and resources from UC, CSU, and private colleges and institutions combined with some clustering of federal Title III funds, state help, and assistance from foundations. The most knowledgeable faculty, experts, teachers, and researchers would be assigned as “in residence” for a period of time and would participate in research on critical issues for teaching and teacher preparation simultaneously with prospective teachers and professional developers participating in preparation.

Define and Categorize Critical Competencies and Best Practices

We recommend that the state undertake to define and categorize the critical competencies of teachers of English Learners and other specific subgroups of students, and to suggest how these competencies could best be taught and measured. This work might be undertaken in the Centers for Teaching and Research Excellence discussed above. We think this could best be achieved by drawing on the expertise of professional development experts with strong research-based programs

in universities, districts, and county offices of education. This codification of essential skills could provide a critical tool for teacher preparation and professional development, allowing for more consistency of training across the state.¹

Add EL Expertise to Certification for Principals

We recommend that the state develop a certification procedure and related preparation for principals to develop much enhanced knowledge about diverse students, their needs, and the needs of their teachers in serving them.

Create Incentives for Bilingual Credentials

Regardless of the type of program provided by a school, there is strong consensus that the state needs many more bilingual teachers to be part of the support team for diverse students. Thus, we recommend that the state adopt a set of incentives for teachers to attain bilingual credentials such as a state-administered stipend of at least 10 percent above normal salaries in each district.

Formalize a Role for EL Experts and Support Personnel

We recommend that the role of “resident expert” on EL issues that bilingual teachers currently take on, be formalized, and remunerated at a similar level to specialists in special education, math, and science. Their specialized expertise in the instruction of EL students, their ability to communicate with parents and students, and to informally assess EL students, and their ability to serve mentors for induction of new teachers who will be teaching EL students places bilingual teachers in high demand in schools. The purpose of this recommendation is to acknowledge the advanced skills of these teachers, to allow them opportunities to support their colleagues

without having to do so at cost to their own time, and to provide an enhanced role that would be both challenging and rewarding.

Design and Adopt a Single Subject Specialist Certification for Grades 7-12

Given the shortage of teachers with expertise in EL instruction at the secondary level, we recommend the design and adoption of a single subject specialist certification as an add-on for teachers in grades 7-12. There should also be a pay incentive for teachers to obtain this certification and the cost of obtaining it should be wholly subsidized either by the state or the district, or the two in collaboration. The content of this certification would be established by a group of experts in the field with input from teachers and administrators statewide through an online

survey. Several other states to which we could look for guidance offer English Language Development (ELD) single subject credentials for high school teachers.

Assess State Capacity and Resources

We recommend that the state do a detailed assessment of the existing infrastructure in the state—groups and individuals with deep expertise in various areas of professional development for diverse learners—and attempt to map the availability of such expertise so that it can be harnessed to deepen the teacher preparation infrastructure for California.

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Notes

^a Such as Scholastic Aptitude Test (SAT) and similar exams.

^b Based on *Barron's Profiles of American Colleges* selectivity ranking.

^c The teacher preparation section has a further discussion of the role of teacher certification.

^d Either the California Basic Educational Skills Test (CBEST) or the California Subject Exams for Teachers (CSET).

^e CCTC induction standards at <http://www.ctc.ca.gov/educator-prep/standards/Induction-Program-Standards.pdf>

^f SB 2042 also requires induction to programs address content for delivery of EL instruction.

^g Examples include: the 14 bilingual teacher-training projects (BTTPs) run by County Offices of Education, EL Achieve, PIQE Parent Institute for Quality Education, Project GLAD, and SIOP.

^h Analyses [87] show that the cost of educating African American and Latino students to the same levels as their Asian and white counterparts would far outweigh the benefits in tax dollars collected.

ⁱ This effort would be separate from the CCTC's efforts at validating KSA's as it would draw on empirical evidence and would suggest how to measure these competencies in an empirically valid manner.