

POLICY BRIEF

Accessing High Quality Instructional Strategies

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Overview

The task of this report is not to further document the achievement gap in California schools, but rather to describe the literature on accessing high quality instruction with the expectation that assuring such access will reduce achievement gaps between low-income and culturally and linguistically diverse students (CLDs) on the one hand and white, Asian, and middle-class on the other. The goal of improving access to high quality instruction breaks into two constituent parts: access and high quality instruction. Although they are often mutually constitutive, high quality instruction, in turn, breaks into two sub-components: 1) relational conditions between instructor, learner, and curriculum; and 2) techniques or strategies of effective instructional delivery. Because access and appropriate relational dynamics are

preconditions to the delivery of effective instructional strategies—i.e., because “good” strategies do not matter if they are not accessible or are not found credible by the learner—access and relational dynamics are discussed first (in Sections III and IV), followed by longer segments on both general findings on good instructional technique and those that are content area specific (Section V). Instructional strategies specifically related to access (e.g., time on task) and cultivation of relationships (e.g., the social/affective) are broached in Sections III and IV. Before the sections on access and relational conditions, there is an introduction (Section I) and a review of the methodology that supported the assembly of this report (Section II). The report ends with a series of policy recommendations (Section VI).

Major Conclusions of the Research

In a recent meta-analysis of instructional strategies, Seidel and Shavelson [1] emphasize “Learning is a set of constructive processes in which the individual student (alone or socially) builds, activates, elaborates, and organizes knowledge structures. From this conception of learning, it follows that teaching should maximize the

opportunity for students to engage in activities that promote higher order learning” [1, p. 459]. According to the research:

- learning is a constructivist process; learners make sense of new information, ideas, and strategies through the filter of what they already know;
- learning is also a social process; development of higher order thinking occurs through participation in human interaction; this highlights the importance of relationships between and among teachers, students, the school community, and the larger community;
- teachers can guide learning if they have sufficient content knowledge related to the topic being presented, sufficient knowledge of what the learner knows and understands, appropriate pedagogical techniques, and a credible relationship with the learner such that the learner is willing to take on the learning task at hand;
- student learning, particularly that of CLDs, will only improve if such students have consistent access to high quality instruction, which means access to a well-trained teacher who has the autonomy to locally adapt instruction, but also the mastery of standards and expectations to assure coherence with efforts of other educators; and
- learners can learn apart from the activity of a teacher; it is thus the teacher's special task to promote higher order learning. For this, teachers must attend to learners' "zone of proximal development" (ZPD).

ZPD refers to that domain of knowledge related to a subject area that a learner has not yet mastered, but can master if supported by a credible instructor [2] in a social environment that is safe and expectant. Thus, high quality instruction refers to instruction that engages learners' ZPD, helping learners with mastery of standards-aligned content. The challenge in California

is to improve the access of learners on the lagging end of achievement gaps to instruction that engages their ZPD and thus advances their content mastery.

Access

There are multiple dimensions to assuring *access* to high quality instruction but they generally relate to just two core concerns: Are learners in classrooms being taught by highly skilled instructors? And, are those highly skilled instructors circumstantially able to deploy their well-developed skills? Given that CLDs in California are more likely to attend (or have previously attended) facilities in poor repair, to have teachers teaching outside of their certification area, to have emergency credentialed teachers, to have long-term substitutes, and to have older and less well-provisioned curricular materials, it is straightforward to identify many of the hazards that can limit CLD's access to high quality instruction. Those same obstacles reduce the likelihood of narrowing the achievement gap.

As Wong, Fillmore, and Snow [3] characterize the problem: "Too few teachers share or know about their students' cultural and linguistic backgrounds, or understand the challenges inherent in learning to speak and read Standard English" [3, p. 3]. In their study, Ruiz-de-Velasco and Fix [4] found that this lack of knowledge about English Learners (ELs) and other CLDs often leads teachers to have lower expectations for such students' performance. Ruiz-de-Velasco [5] later notes, "The long-term shortage of new teachers specially trained to work with EL students underscores the importance of training *veteran* teachers to work more effectively with new populations of EL immigrants" [5, p. 40, italics original].

Educators' lack of familiarity may not be the only inhibition to CLDs' access to high quality instruction. A more subtle access

issue has to do with skilled educator's latitude to use all of their instructional skills. Curricular restrictions that reduce an instructor's discretion to respond to a given student in a particular way could limit that student's access to high quality instruction. In a similar vein, teachers who know that they could improve communication with students' parents, who know that they could give more guiding feedback on coursework, and/or who know that they could find local and familiar examples that would help learners engage with content, but who lack the time to pursue these strategies, fail to give learners in their classrooms access to the high quality instruction they know is necessary or efficacious.

Because teachers have different degrees of skill and inclination to reach different students and because the same teacher practice is differently accessible to different students, individual students in the same class can have differing amounts of access to instruction. While effective instruction includes much more than students' time on task, from the standpoint of access, it is important to ask how often students have access to high quality instruction. Those who have more access are likely to gain more than those with less access.

Relational Conditions

One reason that students in the same classroom have different access to the same instruction is that not all teacher-student or other relationships in that classroom are the same. Some students feel included and valued, others are skeptical or even defiant. High quality instruction does not exist outside of the specific context of its delivery. A technique is good or not good depending on whether it engages or fails to engage a learner in a learning task relevant to that learner's advancement. There are techniques that are more likely to be

engaging and that are more likely to be effective, but a teacher who does not seem credible to a student and a task that does not seem logical to a student are unlikely to succeed unless the credibility issue is directly addressed. As noted multicultural education leader James Banks has phrased it:

Teachers who “think pedagogically” about diversity are able to build a practice that is both academically challenging and responsive to students. Building a culturally responsive practice requires teachers to build a broad base of knowledge that grows and changes as students, contexts, and subject matters shift. Knowledge of self and of others (students, parents, community) is an essential foundation for constructing, evaluating, and altering curriculum and pedagogy so that it is responsive to students. In the classrooms of culturally responsive teachers, the methods of instruction and assessment, the curriculum, and the classroom climate work together to support the academic achievement of all students. [6, p. 245]

The relational issue—the being responsive to students while still being academically challenging—then is what makes the teacher learner relationship sufficiently credible to the learner such that the learner is willing to persevere in ZPD learning with that instructor. In turn, the relational issues at the teacher/student interface are intertwined with other relationships — student to other students, teacher to colleagues, school personnel to community, and so on. Relationships are both constitutive of and shaped by the organizational culture of the school.

In their meta-analysis, Seidel and Shavelson [1] divide their claims about research on learning into three larger categories—Social Affective, Habits of Mind, and Content-

Oriented. The purpose of section IV of the paper is to address Social/Affective issues in general and particularly those that pertain to the aggregate lower achievement of certain CLDs. Three instructional elements seem core to the social/affective or relational: 1) sees peers, parents, and the larger community as prospective resources; 2) attends to students' motivation and engagement; 3) validates students' linguistic and cultural identities.

Effective Techniques

Good instruction is purposeful and strategic. It aligns with what is happening in other successful classrooms in a school and is consistent with the academic goals of the district and state. Effective teachers have adaptive expertise [7]. That is, they know subject matter, pedagogy, and students well enough to develop a degree of automaticity and efficiency that allows them to innovate, to change course when they sense learners need more or less explicit attention to a concept, to adapt old or devise new instructional strategies that they know, through their experience and reasoning, will advance student learning. In other words, effective teachers know what they are doing, why they are doing it, and how to adapt their course if instruction and learning do not progress as planned. They know where learners currently are and where they need to be, in terms of content acquisition and skill development. Although effective teachers will pursue some strategies that do not work with some learners some of the time, they will catch such "unsuccesses" before they become frozen and permanently detrimental.

Not all strategies identified as generally effective work effectively all the time or for all academic goals. Working collaboratively in groups, as an example, is commonly identified in study after study (e.g., Scheerens & Bosker [8]) as effective for: 1)

promoting student engagement, and 2) achieving content mastery. Collaborative group work in mathematics can be a site rich for capturing students' attention and setting up a rich ZPD [9]. It also increases the likelihood that students are on task and takes advantage of the collective intellectual resources of a classroom, not just the teacher's. At the same time, group work with peers, as a lone strategy, is not likely to lead to the development of the mathematical language register [10]. The mathematical language register refers to the language of mathematics where learners begin to talk, write, and, ideally, think like mathematicians. To do so, learners need contact with those who can use/model the mathematical register, such as teachers or mathematicians. Collaborative group work with peers, while effective in important ways, is not effective for all instructional goals or at all instructional moments. In high quality instruction, there is an alignment between the pedagogical technique deployed and the student learning task to be accomplished.

Seidel and Shavelson [1] found the largest effect size (in reviewed quasi-experimental and experimental studies) for "Domain-specific processing" [1, p. 481] or the "Content-oriented." The section of Effective Strategies considers five additional core elements of high quality instruction. Two pertain to habits of mind: 1) promotes the meta-cognitive (including regulation/self-monitoring), and 2) models use of the knowledge and skills that students are to learn. Three are content-oriented: 1) emphasizes the literacy and numeracy skills necessary to acquire knowledge and show mastery; 2) provides learners accessible, formative feedback; and 3) builds on what students already know.

Although there are generalizable truisms that characterize effective instruction

overall, usually effective instruction is pursued through content area instruction. Thus, after a review of each of the above characteristics of high quality instruction, Section V includes short syntheses of research on effective content area instructional strategies for CLDs in mathematics, social sciences, science, and language arts. Effective content-specific instruction for CLDs varies in significant ways from discipline to discipline. In general such instruction is responsive not only to the nature, breadth and scope of the discipline under study, it is also linguistically and culturally responsive to learners. Responsive pedagogy in the content areas acknowledges and validates the lived experiences of learners, builds learners' capacity in content-specific language uses, and invites learners into disciplinary ways of knowing.

Section V also includes a section on linguistically appropriate instructional strategies for ELs. As LaCelle-Peterson and Rivera [11] and many others have noted, what works for monolingual native speakers of English may or may not be effective with ELs. The segment on instructional strategies for ELs is consciously not in Section IV, although that section does include brief

segments on instructional strategies that have had success with African American and Latino students. The reason for separating ELs from this earlier discussion is that it reminds us that EL is an externally imposed category, a policy artifact, stemming from the 1974 *Lau v. Nichols* Supreme Court decision [12]. Low English attainment is a highly salient instructional variable, but it is not a social identity. To the extent that ELs find instruction credible (the relational question of Section IV) they do so as Latinos, Filipinos, African Americans, etc. English attainment relates to whether they find instruction intelligible.

Effective instructional strategies do two things: 1) build ELs' English proficiency and 2) provide ELs access to content knowledge. English-only approaches to EL language and content instruction, such as sheltered instruction programs, hold promise for achieving both. Yet, English-only instruction of ELs' denies learners the use of what is, perhaps, their greatest learning tool: their first language. Effective instruction of ELs, must simultaneously attend to ELs' English and content area learning, and one avenue for this dual goal is through strategic use of languages other than English.

Obstacles to Policy Implementation

As we consider improving access to high quality instruction, it is worthwhile, first, to remember Ladson-Billings' [13] recent caution, from her presidential address to American Education Research Association (AERA), that though much effort has been devoted in the last 40 years to studying why certain groups of students struggle in school, such inquiries rarely provide large-scale relief. Emphasizing an "achievement gap" can naturalize that gap, make it seem inevitable, and take attention away from the "historical, economic, sociopolitical, and

moral components" [13,p. 3] that have co-created it. Ladson-Billings wants to see instruction change, but she raises an important challenge to reports like this: Listing the strategies and conditions that *should be* does little to illustrate why those recommended strategies have not already been made commonplace. For this report (or any like it) to be consequential, it will need to displace the understandings that have made current instructional practices seem viable or inevitable.

In particular, there seem to be three major obstacles to improving CLDs' access to high quality instruction: 1) the prerogative of teachers to move among schools and the greater attractiveness of some niches where the needs are not quite as acute; 2) the inadequate attention to assuring that instructors have the tools and means to cultivate credible relationships, characterized by high expectations, with all learners and the related issue of peer, community, and facility issues that also interfere with the viability of instruction and high expectations; and 3) restrictions, by

habit or law, to seeing students' existing knowledge base, linguistic and cultural as a starting point for ZPD instruction. For example, research on ELs with developed skills in their first language is clear that allowing those learners to use that first language knowledge in their attempt to master content helps them master that content and helps them produce more sophisticated ambitious answers in English. We know that, but we actively inhibit incorporating it.

Courses of Action

Achievement gaps with CLDs are unlikely to be closed as long as it remains more likely that such learners are less likely to have access to well-trained, veteran, content-area certified instructors than the Anglo and Asian-descent students who are categorically faring better in California. Issues of teacher pre-service training capacity, teacher recruitment, teacher induction and retention all come to bear here, as do discrepancies in wage and working conditions between districts and schools. California needs to increase the likelihood that its most qualified, capable teachers are in its highest need classrooms. It also needs to assure that when such teachers are in such classrooms that they have the professional autonomy and collegial coordination that allow them to deploy the best strategies—i.e., those that 1) see peers, parents, and the larger community as prospective resources; 2) attend to students' motivation and engagement; 3) validate students' linguistic and cultural identities; 4) promote the meta-cognitive (including regulation/self-monitoring); 5) model use of the knowledge and skills that students are to learn; 6) emphasize the

literacy and numeracy skills necessary to acquire knowledge and show mastery; 7) provide learners accessible, formative feedback; and 8) build on what students already know.

It is not the role of this report to appraise the existing structures of California schools, nor the nature and quality of pre-service teacher preparation, nor the quality and coherence of existing in-service strategies. It is, however, worth noting a few questions about each of these that any new achievement-gap-responding policies would need to consider. For example, does the existing structure of California schools—whether referring to a particular school or the whole system—make it equally likely that teachers and students of all backgrounds will be equally able and disposed to create the relationships that make academic tasks credible, intelligible, and viable, that permit learning in students' ZPDs? If the answer is “no,” then we should anticipate that in instructional relationships that lack this characteristic, students and teachers will make less forward progress. In turn, if there are patterns in the kinds of students who are less likely to be engaged in ZPD learning

(some or all of the time), then there will also be patterns with regard to who achieves more and who achieves less. It is worth remembering here that “trusting” is not a proxy for “friendly” and that “trusting” also references not just the relationship between teacher and learner, but also that relationship in reference to the learning task, to the ostensible goal of the teacher and the school that the student master a given concept, gain a given skill, etc. A teacher who lacks mathematical content knowledge may well not be able to co-create a ZPD relationship with a learner in relation to the task of teaching math, just as a teacher who lacks respect for a student’s cultural, racial, and/or linguistic background, would also be less likely to be able to create the relationship necessary to teach math.

Do pre-service teacher education programs [14] position teachers to 1) know the nature of the vocabulary, text structure, and discourse demands of a discipline (e.g., to think and talk like a scientist or historian); and 2) encourage them to make these features explicit in accord with Osborne’s [15, p. 298] injunction for teachers to “spell out the cultural [and linguistic] assumptions on which the classroom (and schooling) operate?” This may seem like a complicated

question. But, per the instructional strategies reviewed here, if teachers are neither ready nor disposed to help students make sense of the learning task they are to engage in, then it follows that the students’ likely success at that task is jeopardized. From the standpoint of reviewing pre-service teacher education (including alternative certification pathways), another policy implication raised by this report is whether existing programs successfully cultivate the knowledge and dispositional qualities necessary for their graduates to succeed in classrooms with all kinds of learners. Here again, if the answer is “no,” if there are patterns regarding whom teachers are ready for and what areas they are ready to help with, then there will be patterns in which students get supported and in what and vice versa. California needs to assure that its current and future teachers know the personal affirmation and classroom management strategies necessary for the formation of ZPD teacher/student/curriculum relationships. Teachers need to actively cultivate students’ development of academic identities. This identity work is not separate from other identity work that students are concurrently involved in related to their sense of racial, ethnic, gendered, religious, and other selves.

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