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Narrowing the Achievement Gap

Perspectives and Strategies
for Challenging Times

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CHAPTER FIVE

Accessing High-Quality Instructional Strategies

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Instructional strategies figure centrally in what happens in classrooms, are critical to educational outcomes, and are central to the narrowing of achievement gaps. However, broad improvement of schools, including the narrowing of these gaps, will depend on changes in instructional strategy and improved student access to educators using these strategies, as well as many other changes related to topics treated in the chapters in this volume.

Much of the research on instructional strategies identifies universal aspects of effective instruction that pertain across subject matter, grade level, and student characteristics. Other important findings from instructional strategy research are not as broadly applicable. Findings of this second kind are more specific to particular grade levels, topics of instruction, students' racial or ethnic affiliations, and like variables. It would be a mistake to overgeneralize the lessons from this second category, but it would also be a mistake to dismiss them.

As a final introductory point, it is crucial to remember Ladson-Billings's caution, from her 2006 presidential address to the American Education Research Association, that though much effort has been devoted in the last forty years to studying why certain groups of students struggle in school, such inquiries rarely provide large-scale relief. Ladson-Billings wants to see instruction change, but she challenges us: if much is known about what should be done to make schools more equitable and welcoming, why have the recommended strategies not already been made commonplace? She notes, "Emphasizing an 'achievement gap' can naturalize that gap, make it seem inevitable, and take attention away from the historical, economic, sociopolitical, and moral components" that have cocreated it.¹

REPORT METHODOLOGY

This chapter is the product of a review of a two overlapping literatures: the literature on the general effectiveness of instructional strategies and the literature on

effective instructional strategies for students from racial, socioeconomic, ethnic, and other groups that have historically fared less well at school. Our perspective mirrors that of the National Research Council: “Rarely does one study produce an unequivocal and durable result; multiple methods, applied over time and tied to evidentiary standards, are essential to establishing scientific knowledge.”² We have attempted to substantiate findings through triangulation: if several different strategies of inquiry point to the same conclusion, then such a conclusion is particularly robust. Triangulation can be a result not just of comparing multiple articles, but also of finding articles that report the same effects at multiple sites—for example, Anderson-Levitt’s comparison of literacy education in the United States, France, and Guinea.³

Information included in the chapter is the result of our systematic review of the last ten years of a number of leading education research journals—*American Educational Research Journal*, *Review of Educational Research*, *Educational Researcher*, *Harvard Educational Review*, and *Teachers College Record*. We also examined three meta-analyses on educational effectiveness and then selectively further reviewed studies that these sources pointed to.⁴ The points raised in these three syntheses tended to echo (or triangulate) findings that came from other sources, while adding the explanatory power of effect sizes and multisite corroboration.

Aware that journals that focused on linguistic and cultural diversity or that examined effective school practices in other countries might provide particular illumination relevant to closing achievement gaps, we also systematically reviewed *Anthropology and Education Quarterly*, *Comparative Education Review*, *Journal of Education of Students Placed at Risk (JESPAR)*, and *TESOL Quarterly*. The comparative perspective is important, because it reminds us that achievement gaps are not inevitable and instructional strategies are pursued in relational contexts laden with culturally informed expectations, hierarchies, and dispositions. For example, Korean-descent students can be consistent low achievers in Japan (compared to other groups of students) and consistent high achievers in the United States.⁵ This suggests that low (or high) achievement outcomes are not an intrinsic property of a category of learners, but rather are a product of the interface between learners and educators, as informed by social expectations and stereotypes from the larger society.

THE IMPORTANCE OF TRUST IN A SUCCESSFUL INSTRUCTIONAL EQUATION

Underlying this chapter is the viewpoint that successful instruction requires trusting relations between children and educators, conditions that may be easier to

create with some learners than others.⁶ This perspective holds that trust is built (or impeded) based on how the participants in the relationship (i.e., teachers and students) learn to make sense of each other and of the task at hand. Do they feel competent? Does the task seem worthwhile? What are the social risks? According to this view, there is no such thing as a good instructional strategy apart from the context in which it is implemented.

Thus, part of what is critical with regard to any instructional technique is whether it either fosters or undermines the relationship of trust among those in the classroom, depending on how it is implemented. Trust is powerfully shaped by the teacher, but as the literatures on both cooperative learning and bullying suggest, other individuals figure into the trustworthiness of the environment as well. These are individuals whom the teacher can influence but not control. Learners’ self-concept also figures centrally in their readiness and willingness to learn.⁷ Teachers do not control this learner self-concept (it is shaped by previous teachers and many, many other sources), but they can attend to it directly and strategically. Failing to adequately instruct in relation to these issues can create or exacerbate low achievement.⁸

PEDAGOGICAL TECHNIQUE AND INSTRUCTIONAL STRATEGY

The academic task pursued sincerely in a trustworthy environment still needs to be rigorous and technically sound. One starting point for this review was the general literature on effective instructional strategies, a literature that has become more abundant and concentrated, as the standards movement has highlighted the need for academic rigor across content areas. Seidel and Shavelson’s exhaustive review suggests three main domains of attention for instruction: learning processes, cognitive outcomes, and motivational-affective outcomes.⁹

A teacher’s expertise and ability to apply effective instructional strategies consists of knowledge of content, pedagogy, and context. Shulman notes the role of pedagogical content knowledge in highly effective teaching.¹⁰ Hammerness et al. observe that it is the unique combination of both teacher *innovation* and teacher *efficiency* that characterize the expert teacher.¹¹ Expert and effective instruction requires a professional who is prepared for the necessarily in situ decision making that is characteristic of teaching and who is ready with multiple tools to address the context specifics that pertain to a given learner, a given classroom, a given text, and a given curriculum at a given moment. In this section, we explore these instructional tools—these “promising strategies.” Two categories of strategies deserve attention here: (1) the instructional habits that are generally wise and effective in all classrooms regardless of the discipline under study and (2) those that are more particular to a specific content area.

Effective pedagogical techniques address a range of learning outcomes. Seidel and Shavelson's meta-analysis categorizes these into three major areas. The outcome of developing "habits of mind" references students' capacity to think metacognitively, evaluate information, and self-regulate. Cognitive outcomes refer to gaining mastery of content—particularly content organized into the classic domains of the disciplines—and the literacy and numeracy skills necessary for disciplinary learning. Motivational-affective outcomes refer to learner disposition toward academic tasks. Converting each of these categories of learning outcomes into vehicles for guiding instruction, one could ask how teachers teach learners "how to learn" (learning processes), how they teach mathematical or interpretive understandings (examples of cognitive outcomes), and what strategies they pursue—for example, cooperative learning—to attend to learners' motivation and engagement (motivational-affective outcomes).

There is overlap among these categories and thus among the ways in which they might guide instruction. For example, Seidel and Shavelson report finding that "executing domain-specific activities [which has a big effect on cognitive outcomes] was also one of the most important factors for motivational-affective outcomes (e.g., interest or self-concept of ability)."¹² Acknowledging this overlap, the sections that follow are organized according to Seidel and Shavelson's three major categories, relabeled here as strategies that develop *habits of mind*, *content-oriented learning*, and *motivation and affect*.

Strategies to Develop Students' Habits of Mind

Most good instruction, including instruction that helps narrow achievement gaps, is good because it helps learners develop skills they can deploy successfully and purposefully as they learn, communicate with others, and negotiate the world. An example of such instruction comes from Gibbons's discussion of teacher-guided reporting, in which the teacher models how to orally report findings to the whole class (as from an experiment or small-group discussion)—a strategy that simultaneously delivers content well and builds habits of mind (e.g., presentation skills learners can use in multiple settings and other disciplines).¹³

Seidel and Shavelson actually use the term *regulative* in the same vein as "habits of mind." Whether it is the kindergarten social task of learning to raise one's hand to be called on, the weekly monitoring by a fifth-grade teacher who shares a sequence of activity guides with a pair of students collaborating on a science project, or the "think-aloud" modeled when an eighth-grade English teacher converts a student's question about whether to do a biography of Willa Cather, John Steinbeck, or Chinua Achebe into a public consideration of questions (such as length of texts to review and time to review them, text availability at the library, overlap

with topics studied in social studies, etc.), all of these can include overt teaching of regulation, of what students need to consider as they pursue an academic task. The goal is for students to pick up and start enacting these self-monitoring, self-regulating habits of mind.

Of course, measuring the development of these habits of mind is a complex task and not one necessarily best executed by assessments of content-area knowledge. So, while it is important that students learn to be comfortable and adept at finding resources in a library, gain the self-awareness to know how much sleep allows them to operate effectively, and know how to evaluate the quality of information found through a Web search, attributing test results to the presence or absence of any of these habits is difficult.

As we consider culturally and linguistically diverse students (CLDs), a crucial habit of mind looms. The knowledge, ways, and language for talking and acting and the social expectations of school are often different from those that CLD students are familiar with. As Delpit has pointed out, the solution here is not to have CLD students be unaccountable for learning the knowledge and habits celebrated at school.¹⁴ Rather, students whose home culture is not reflected in school culture need to learn how to "culture switch."¹⁵ As Hamann, Zúñiga, and Sánchez Garcia have described the dilemma for transnationally mobile students, the task is not just to learn how to live and thrive in *this* place (where one lives), but also any new place (where one might be about to move).¹⁶ These are habits of mind. A student who can recognize which rules, codes, ways, and so on apply will be a successful student. As Gibson (1988) eloquently described regarding the experience of Sikh immigrants at a California high school, one reason such students were academically successful is that school did not contest their preexisting identities. School honored existing habits of mind and, as needed, helped students build additional ones.¹⁷

Effective Content-Oriented Instructional Strategies

Many researchers have created lists of instructional strategies and guidance to teachers. Some come from meta-analyses, others from teacher education textbooks and professional development manuals. For example, in a practitioner-oriented book summarizing 1,400 studies on learning-related topics, the Northwest Regional Educational Laboratory (NWREL) made five recommendations related to instructional strategy:¹⁸

1. Orient students to lessons
2. Provide clear and focused instruction
3. Provide feedback and reinforcement
4. Review and reteach for mastery
5. Use probing, redirection, and reinforcement to promote metacognition

Echoing this chapter's introduction, NWREL authors emphasized that instructional improvements need concurrent reforms to be viable (e.g., teachers' content mastery, adequate formative assessment measures, and adequate time to revisit and reteach topics as necessary). The NWREL study also emphasized the cyclical nature of instruction and assessment—that effective instructional strategies are parts of an instructional cycle in which instruction is based on assessment of learners and that instruction is, in turn, assessed for its effectiveness in helping learners make academic gains. This is a cycle also utilized in the Sheltered Instruction Observation Protocol (SIOP), a popular research-supported professional development program for content-area teachers who teach ELL.¹⁹ The relationship between instruction and assessment is symbiotic; effective instructional strategies go hand-in-hand with effective assessment strategies.

In this same vein of research synthesis on effective instructional strategies, Marzano, Pickering, and Pollock conducted a meta-analysis of more than a hundred research reports.²⁰ They identified nine instructional strategies that produced effect sizes ranging from 0.59 to 1.61. The larger the effect size, the greater the effect of the strategy on student achievement. From largest to smallest effect size, these were the identified strategies:

1. *Identifying similarities and differences.* Such strategies encourage students to compare and contrast items and categories and to use metaphors and analogies in presenting and assessing new material.
2. *Summarizing and note taking.* These strategies require learners to analyze information for the main points and to synthesize large amounts of information into concise statements.
3. *Reinforcing effort and providing recognition.* These strategies address student motivation and engagement through recognition of effort in others and self.
4. *Homework and practice.* Practice with information, through application strategies and homework policies, is key to students' comprehension and retention of new learning.
5. *Nonlinguistic representation.* Such strategies provide learners with extralinguistic pathways into learning and include graphic organizers and other visual representations.
6. *Cooperative learning.* Cooperative strategies that pair or group students with their peers, utilizing strategic grouping configurations so that students learn from and depend on one another.
7. *Setting goals and providing feedback.* Meta-cognitive strategies like these invite learners to engage in and plan their own learning alongside their teachers.
8. *Generating and testing hypotheses.* Such strategies involve the application of knowledge and the prediction of outcomes based on prior knowledge and

observation. Moreover, these strategies engage learners as their own hypotheses are tested.

9. *Activating prior knowledge.* Techniques such as advance organizers, cues, and questions are strategies that invite learners to locate new knowledge in relation to what they already know.

Important as these strategies are, a challenge to practitioners who wish to apply the findings from both the NWREL study and the strategies identified by Marzano et al. is that they can read like a shopping list without regard to proportions, intertwining, or differences in implementation in one school environment versus another. The Center for Research on Education, Diversity and Excellence's (CREDE's) *Five Standards for Effective Pedagogy and Learning* offers an arguably more cohesive framework of effective instruction with its five "standards."²¹ Each standard is a compilation of like strategies, and the standard itself is a synthesis of instructional strategies found to be effective in one or more of CREDE's extensive research projects in U.S.-based K-12 education between 1996 and 2003. The five standards are:

1. Joint Productive Activity: Teachers and Students Producing Together
2. Language Development: Developing Language and Literacy Across the Curriculum
3. Contextualization: Connecting Meaning to Students' Lives
4. Challenging Activities: Teaching Complex Thinking
5. Instructional Conversations: Teaching Through Conversation

Cutting across content areas, the CREDE standards attempt to address not only individual strategies but also the conditions in which learning is encouraged and facilitated (e.g., imploring educators to contextualize learning because this helps learners comprehend and engage with new knowledge). Each CREDE standard could be accomplished by any number of individual strategies, and teachers are called on to strategically use their knowledge of content, context, and learners to meet the standards.

Language, in oral and written forms, is the medium of school, and students' facility in comprehending, producing, and managing the language of schooling is crucial if they are to learn content knowledge well and develop the habits of mind needed for engaged participation in school. In their study of the instruction of reading, Mosenthal et al. compared the reading instruction practices of fifty-two elementary school teachers at six high-achieving elementary schools with the practices of twenty-five teachers at three demographically matched but less successful elementary schools. Strategies at the schools that were deemed effective at teaching reading included grouping and guided reading, student self-selected reading, reading aloud, writing story summaries, enabling students to solicit peers'

perspectives, interpretive questions, use of phonemic-awareness computer games, keeping reading journal entries and working one-on-one with adult tutors (America Reads volunteers), and schoolwide use of the DEAR method (i.e., Drop Everything And Read). The authors also note:

*The factors that the study singles out as imperative for "success" exist to some degree in every classroom: vision and commitment to literacy learning, coherence of approach, well-managed and paced instruction, and communication among faculty and administration. It is the combination and interplay of these factors that control the ultimate outcome.*²²

Perhaps the key issues, then, are frequency and credible access to these factors. Through this research and a wealth of other studies on literacy, we know that how students comprehend texts is connected to who they are: their interests, their relationship with the teacher, the value they assign to the effort, and their self-concepts as readers.²³ In turn, both teachers' knowledge of who students are—their strengths, areas of challenge, and sociocultural backgrounds—and teachers' understandings about literacy affect the quality of their instruction.²⁴

Learning strategy instruction may also play an integral role in developing students' literacy skills. We know that good readers might use up to thirty different strategies in working with a particular text and that weak readers can be taught the strategies used by stronger readers to favorable effect on reading comprehension.²⁵ We also know that good early reading instruction pursues a balanced approach, including instruction in phonemic awareness, but only as part of an integrated package that also teaches reading for meaning.²⁶

According to Zolkower and Shreyar, the Vygotskian idea of verbal thinking, in which "the interconnection of thought and speech makes possible the planning function of the latter," draws a clear connection between the development of cognition and verbal language use.²⁷ In a sixth-grade class of culturally and linguistically heterogeneous students, they observed the use of think-aloud strategies as a successful strategy for advancing student understanding of algebraic functions. Gibbons, likewise, observed content-area instruction through oral skill building, in this case, the teacher-guided scaffolding of the academic register for reporting findings from experiments.²⁸ These studies are relatively small (with twenty-six and sixty students, respectively), yet their findings, taken in conjunction with the findings of similar studies, collectively point toward the effectiveness of instructional strategies that utilize and build learners' oral production skills to comprehend and demonstrate disciplinary knowledge.²⁹

In some ways academic literacy is discipline-specific, and the literacy skills learners develop and use are distinct. In mathematics one learns that the last sentence in a word problem contains the pertinent question, while for social studies it

is the first sentences in a newspaper article that provide the most important information. Such knowledge of the mathematical *register*, as well as the language registers used in all content areas, is critical for students' access to content-area instruction. A rich line of research into the language of content areas and how teachers might incorporate language instruction into content-area teaching is emerging.³⁰ These studies, typically using a systemic functional linguistic (SFL) approach to analyze disciplinary language, highlight the need for teachers to see disciplinary language use from the perspective of a newcomer or novice. With this new understanding, teachers can assist learners in gaining comprehension and eventual mastery of (or the ability to manipulate) these new registers. According to McDermott, part of what shapes the viability of educator/learner interaction and promotes trust in this relationship is the educator's demonstrated adeptness with the pedagogy and content of a discipline.³¹

Strategies That Stress Motivational and Affective Outcomes

Part of the craft of teaching is to figure out how to motivate and engage multiple learners, each with different interests, energy levels, and realized levels of attainment. Successfully doing this is often accomplished through what the literature refers to as student-centered or learner-centered instruction.³² A learner-centered classroom is deliberately designed to maximize all students' chances for academic development. In such classrooms, teachers expect all students to actively use speaking, listening, and thinking skills across contexts. Interactive discussions and experiential learning regularly occur. A learner-centered classroom builds upon students' background, interests, and experiences. Research suggests that this emphasis supports reading comprehension, student engagement and motivation, and the development of positive academic identities. In such environments, the teacher is more typically facilitator, or coach, than lecturer.³³

A key component of a learner-centered classroom is the effective use of collaborative learning experiences.³⁴ Two other aspects of an effective learner-centered classroom referenced throughout the literature are flexible grouping and a focus on inquiry-based learning, with or without computer support.³⁵ Used together, these three structures for learning enable teachers to be maximally responsive to students' literacy and learning needs. Based on her review of the literature, Curtis summarized that "the types of classroom environments shown to promote literacy development include ones that use a variety of approaches to skills instruction, integrate test preparation into instruction, make overt connections among in-school and out-of-school applications, enable strategy use, engage students in uses of their knowledge and skills, and incorporate collaborative work."³⁶ Curtis's summary seems to apply more generally to a classroom environment where a broad range of learners all have access to high-quality instruction.

Research reviews, such as two by Marzano and colleagues, indicate that cooperative learning techniques produce gains in student achievement.³⁷ It is worth querying why that is so. Likely, both time on task and the relevance and accountability to peers (i.e., relational factors) pertain. Peer review, peer tutoring, and response groups were also found to produce gains in ELLs' English language development.³⁸ In their study of peer tutoring, Xu et al. paired native English speakers and ELLs, increasing interaction across linguistic and cultural identities. Not only did ELLs benefit from peer tutoring by making gains in English development, but also an open, trusting community was created for all learners in the linguistically heterogeneous classrooms.³⁹

SUCCESSFUL STRATEGIES FOR INSTRUCTION OF CULTURALLY AND LINGUISTICALLY DIVERSE STUDENTS

The observation that particular cultural groups are more likely to fall into an academic achievement gap than others suggests that instruction that has been identified as effective for all students may, in fact, not be so universal. Some groups of students have not been served well despite, as Ladson-Billings points out, years of research into effective instructional strategies.⁴⁰

Fostering Connections Between Home and School Experience

Historically and currently, Latinos and African Americans fare less well in America's schools. It follows that instructional strategies need to change if these groups are to fare better. Studies of Latino student schooling and achievement in U.S. public schools suggest that their teachers play a significant role in Latino students' connection (or disconnection) to school.⁴¹ Teachers' relations and interactions with Latino youth, for example, signal acceptance or rejection of a Latino identity. In *Improving Schools for Latinos*, Valverde notes that Latinos are advantaged when instruction and learning outside of the school are attended to, not as an extracurricular activity, but as a necessary and integrated part of a student's school learning (consistent with a holistic approach).⁴² Ladson-Billings starts her profile of seven teachers who have been particularly successful with African American youth by first locating African American education historically and then noting that each of the successful educators she studied affirmed the histories and racial identity that African American youth bring to the classroom.⁴³ The use of Black English (or African American Vernacular English) within the academy is often discouraged or tolerated only as a lesser (or less legitimate) English than so-called standard English, and, as McCrary argues, the dismissal of Black English is read by black youth as a school's nonacceptance of black identities.⁴⁴

Utilizing Learners' Background Knowledge

Activating learners' prior knowledge and utilizing their lived experiences in the instruction of new material can be highly effective, not just because of how it introduces content, but also because of the relational affirmation it offers. To value and support learners' background knowledge helps teachers engage learners during instruction. Too often the background knowledge of learners from nondominant linguistic and cultural backgrounds has not been received with the same legitimacy as that of non-CLD learners. Quite often educators know the historic, cultural, and linguistic experiences of nonwhite groups less well and thus have fewer starting points for engagement.⁴⁵ It follows that, absent active learning about these groups, these educators would know less well how to shape instructional environments that would seem familiar and trustworthy. There is a rich literature about the instructional strategies some educators have used successfully with Latino students, African American students, and/or students of other backgrounds. There is much, much more on these topics than is shared here. However, three core points are that learners' group identities were respected, teachers learned a lot about such students' backgrounds, and students were subject to high expectations.

Culturally Relevant Teaching Practices

Osborne's ethnology (i.e., a comparative examination of multiple ethnographies) of research on teaching practices that have proven effective with indigenous, minority, second-language, and other historically disadvantaged student populations in the United States, Australia, Canada, and elsewhere highlights the centrality of relationship cultivation in the production of successful learners (and the narrowing of achievement gaps). Based on his analysis, Osborne made nine assertions about culturally relevant teaching. Each has implications for increasing the likelihood of high-quality instruction:⁴⁶

1. Culturally relevant teachers need not come from the same ethnic minority group as the students they teach.
2. Socio-historico-political realities beyond the school constrain much of what happens in classrooms and must be understood well by the culturally relevant teacher.
3. It is desirable to teach content that is culturally relevant to students' previous experiences, that fosters their natal cultural identity, and that empowers them with knowledge and practices to operate successfully in mainstream society.
4. It is desirable to involve the parents and families of children from marginalized and normalized groups.

5. It is desirable to include students' first languages in the school program and in classroom interactions.
6. Culturally relevant teachers are personally warm toward and respectful of, as well as academically demanding of, all students.
7. Teachers who teach in culturally relevant ways spell out the cultural assumptions on which the classroom (and schooling) operates.
8. There are five components of culturally relevant classroom management: using group work, controlling indirectly rather than confrontationally, avoiding "spotlighting," using an unhurried pace, and using the home participation structures of the children.
9. Racism is prevalent in schools and needs to be addressed.

Osborne's first assertion is welcome news given that the nation's teaching force and those entering the profession do not match the demographics of the student enrollment. Current U.S. teachers and those entering the profession are much more likely to be white and middle class than the students they teach. This means most education for CLDs will occur across a cultural boundary. As Erickson points out, cultural difference creates an additional, but not inevitable, chance for misunderstanding and the breakdown of a credible, learning-supporting relationship. In some senses, the remaining eight assertions Osborne identified in the literature then clarify how a cross-cultural teacher/learner relationship can be made viable.⁴⁷

We offer as a caveat that Cazden and Mehan, among others, have warned that checklists about how to work with particular populations can reiterate stereotypes without offering much in terms of more efficacious instructional strategies.⁴⁸ That caution applies here, but it is also true that part of what makes classroom interaction and completion of tasks trustworthy are the racial and ethnic background of the learner, the history of their group's experience with school, and educators' understandings and expectations about learners related to their backgrounds.⁴⁹ As Pollock has memorably noted, educationally race matters when we talk about it *and* when we do not.⁵⁰

ISSUES OF ACCESS TO HIGH-QUALITY INSTRUCTION

High-quality instruction is clearly partly a technical task, in that the research shows certain instructional techniques are more effective than others. Too often, however, wages and working conditions cannot attract and keep the well-qualified teachers who can employ these strategies—particularly in urban environments that have the largest share of CLD students. Thus, high-quality instruction is often a problem of access rather than, or in addition to, one of practice. Research

indicates that novice teachers (those in their first or second year) tend to be less effective than their longer-serving peers.⁵¹ Thus, the presence or absence of experienced, well-trained teachers needs to be on the table in any consideration of access to high-quality instruction.

Two examples from California illustrate this issue of lack of access to experienced, well-trained teachers for the students who need them most. The class action case of *Eliezer Williams et al. vs. State of California et al.* documented how CLDs were more likely to attend (or have previously attended) facilities in poor repair, to have instructors 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.⁵²

Another example is a California policy that should have helped close achievement gaps but may actually have exacerbated problems of access—the statewide effort to reduce class size in early grades.⁵³ As Gallagher notes, mandated class size reduction in California created a demand for a 43 percent increase in California's K–3 teaching force. The huge new demand enabled the movement of teachers with the greatest experience to more desirable positions (e.g., better paying, less stress related to student performance, lower student mobility). Most veteran teachers who relocated migrated to schools with fewer ELLs, minorities, and free-lunch-eligible students.⁵⁴ This meant less desirable schools had to staff classrooms with disproportionate numbers of teachers with emergency credentials, those teaching out of field, and novice teachers—all of whom are indicated in the research as less effective.

From the standpoint of access, it is also important to ask how much time students spend in classrooms where they have access to such high-quality instruction. There is a long-established instructional strategy literature that notes that the time students spend engaged in academic tasks relates to how much they gain academically.⁵⁵ In her classic study on tracking, Oakes famously noted that students in lower-track classes spent less time academically engaged.⁵⁶ Many dynamics (e.g., more time in those classes spent disciplining, less experienced teachers leading lower-track classes) contributed to this inequality, but her core point remains: those students who got less high-quality instruction made less progress. Given the preponderance of CLDs in lower-track classes, this often means CLDs get less chance to spend time on task and suffer academically in consequence.

Finally, there is research on teaching that indicates that teachers interact differently with successful and unsuccessful students and that low achievers have less access to high-quality instruction within the very same classrooms as more successful peers.⁵⁷ Good noted in his meta-analysis thirty years ago:

- Teachers tended to communicate less with low achievers and call on them less often.

- Teachers made less eye contact with low achievers when they did call on them and offered low achievers less time to respond.
- Teachers praised low achievers less than high achievers in instances when students were unsure of the answer.
- Teachers criticized low achievers more than high achievers for making inaccurate responses to questions.
- Teachers tended to provide fewer details and less precise feedback to low achievers.
- Teachers demanded less homework and less effort from low achievers.

In summary, high-quality instruction is accomplished by teachers with knowledge and skill to implement a range of instructional strategies that are known to be successful and adapt them to the needs of their students. However, CLD students often do not have access to such high-quality instruction for a range of reasons independent from teacher knowledge of effective strategies.

POLICY IMPLICATIONS

All the instructional strategies reviewed here point to a key and crucial governance question: What ways and means will give all students access to high-quality instruction? In this chapter we have endeavored to review what the research says. We have done so by distinguishing between universal or broadly applicable traits of high-quality instruction and those that are more particular to specific content areas and/or particular kinds of learners. We have located the whole review within McDermott's insight that high-quality instruction transpires only when the relationship between teacher, learner, and task at hand is trustworthy—that is, perceived by teacher and learner as credible and viable.⁵⁸

Despite what we know about instruction, Ladson-Billings's question haunts: If we know so well the effective instructional strategies that could counter historic "educational debts," why have we not assured that such strategies are broadly implemented?⁵⁹ Teachers' lack of knowledge (*vis-à-vis* either content-area knowledge or instructional strategy) would be one explanation. Not understanding the centrality of cultivating a trusting relationship of patience and high expectations that makes both the learning task and the learning environment seem trustworthy to students would be another. It is also possible that teacher knowledge *per se* is not the main constraint. As Sizer noted in his classic volume *Horace's Compromise*, it is plausible that skilled veteran teachers know what they should do, but feel a disconnect between what they *should* do and what they *can* do.⁶⁰

We should ask whether existing teacher education 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 which students teachers are ready for and what areas they are ready to help with, then there will be patterns regarding which students get supported and in what areas. There were also patterns to who and what does not get supported. America's classrooms have changed enough in the last thirty years in terms of who is enrolling and what levels of mastery these students are supposed to attain that any expectation that preservice education alone could resolve all limitations related to teachers' knowledge of credible instructional strategies would be misplaced. In-service professional development likely matters in terms of teachers' content mastery (including in fields like technology and biology that are fast changing) and their capacity to well serve students from populations that teachers have never served before (or have been less successful working with).⁶¹

There is a body of research regarding instructional strategies that point to how to improve learning outcomes for some or all students—the policy task is to figure out the professional development strategy that will convince faculty of both the imperative of pursuing new learning and the viability of that learning for improving practice. But it is the learners themselves (in this case, teachers) who will have to concur that new ways are indeed viable. The promotion of self-regulation that Seidel and Shavelson note, and the habits of mind that Dewey alludes to, both remind us that many adults acquire the tools of lifelong learning and that, given tools and means (including time), they often have the capacity to self-guide much of their professional improvement.⁶² Emphases on lesson studies, action research, and self-study all can be tools for developing the professional acumen needed to improve instruction and outcomes with a broad range of students.⁶³

Much of the critique of the achievement gap is couched in terms of social justice. Osborne is particularly blunt when he asserts that "[r]acism is prevalent in schools and needs to be addressed."⁶⁴ Yet the guidance regarding what instructional strategies work best seems frequently to be based on a treatment-outcome logic where the instruction strategy is the treatment and grades, or more typically, standardized tests (the outcomes), are the measure of success (or lack thereof). In other words, the assertion of injustice, an assertion we agree with, is measured with standardized academic achievement outcomes. Clearly these outcomes matter, but they ignore any query about how credible or compelling the tested information is to the tested learner. Abedi writes, for example, about the inappropriateness of testing ELLs in English or their native language (if the native language was not the language of instruction).⁶⁵

None of the instructional strategies reported here directly reviewed the capacity to help learners better advocate for justice, to gain a disposition for and

skill at democratic participation. There may be one more policy domain for this report, then. Cohen recently argued that the goals of education need to be re-framed to include social, emotional, and ethical competencies—in addition to academics.⁶⁶ It seems worth asking what instructional strategies might overcome any current gaps in teaching for participation in democracy and well-being.

CHAPTER SIX

Organizational Strategies for Addressing the Educational Achievement Gap

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Closing the gap must be more than a one-front operation. Educators must hold themselves responsible and accountable for improving schools when and where we can . . . we must recognize that the achievement gap has deep roots.¹

This chapter presents a comprehensive review of organizational strategies, resources, and opportunities that promise substantial impact on improving student learning and closing achievement gaps. We do not address in any detail questions regarding instructional alternatives—our focus is on the organizational and operational characteristics of schools and classrooms. We begin with the obvious but often overlooked fact that many factors—children’s social and cultural backgrounds, physical well-being, socioeconomic status, natural abilities, and so forth—influence achievement as much or more than school experiences. Environmental factors like hunger, television watching, parent availability, and student mobility combine with school factors like curriculum rigor, class size, and school safety to shape student achievement.² As Tough summarizes, poor children will require not the same education as middle-class children, but one that is considerably better.³ They will need more class time, better-trained teachers, and a curriculum that emphasizes psychological and emotional as well as intellectual preparation.

Adjusting school policies and practices alone cannot hope to fully close the deep and persistent achievement gaps separating rich and poor, white and non-white, English learners and English speakers in the public schools. As noted by Ream, Ryan, and Espinoza in chapter 2, long before children enter the public school system, substantial differences in academic readiness and ability are easily recognized. Thus, although our focus is on school policies and practices, we