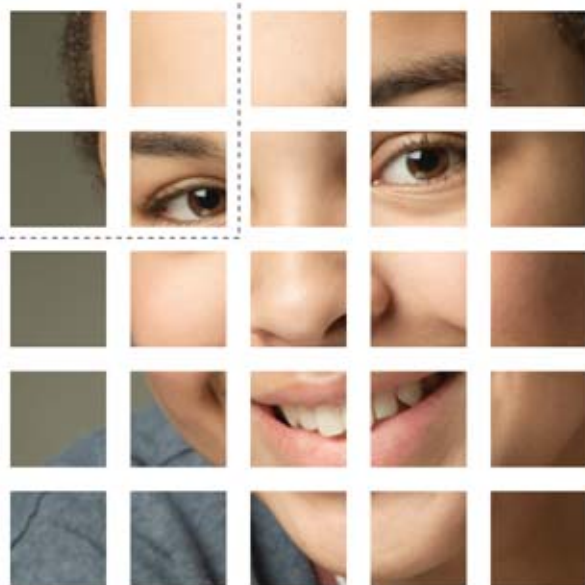


SUPPORTING THE
Whole Child

Reflections on
Best Practices in Learning,
Teaching, and Leadership



Edited by
Marge Scherer

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ASCD

Alexandria, Virginia USA



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Foreword

The 21st century demands a highly skilled, educated work force and citizenry unlike any we have seen before. The global marketplace and economy are a reality. Change and innovation have become the new status quo while too many of our schools, communities, and systems use models designed to prepare young people for life in the middle of the last century. We live in a time that requires our students to be prepared to think both critically and creatively, to evaluate massive amounts of information, solve complex problems, and communicate well, yet our education systems remain committed to time structures, coursework, instructional methods, and assessments designed more than a century ago. A strong foundation in reading, writing, math, and other core subjects is as important as ever, yet insufficient for lifelong success.

These 21st century demands require a new and better way of approaching education policy and practice—a whole child approach to learning, teaching, and community engagement. What if decisions about education policy were made by first asking, “What works best for children?” What if the education, health, housing, public safety, recreation, and business systems within our communities aligned human and capital resources to provide coordinated service to kids and families? What if policymakers at all levels worked with educators, families, and community members to ensure that we as a society meet our social compact to prepare children for their future rather than our past?

The answers push us to redefine what a successful learner is and how we measure success. It is time to put students first, align resources to students’ multiple needs, and advocate for a more balanced approach. A child who enters school in good health, feels safe, and is connected to her school is ready to learn. A student who has at least one adult in school who understands his social and emotional development

is more likely to stay in school. All students who have access to challenging academic programs are better prepared for further education, work, and civic life.

ASCD proposes a definition of achievement and accountability that promotes the development of children who are healthy, safe, engaged, supported, and challenged.

ASCD's Whole Child Tenets

- Each student enters school **healthy** and learns about and practices a healthy lifestyle.
- Each student learns in an intellectually challenging environment that is physically and emotionally **safe** for students and adults.
- Each student is actively **engaged** in learning and is connected to the school and broader community.
- Each student has access to personalized learning and is **supported** by qualified, caring adults.
- Each graduate is **challenged** academically and prepared for success in college or further study and for employment in a global environment.

ASCD is helping schools, districts, and communities move from rhetoric about educating the whole child to reality. No single person, institution, or system can work in isolation to achieve such results so we have launched a Web site for educators, families, community members, and policymakers to share their stories, access resources, assess their progress, and advocate for children. Join us at www.wholechildeducation.org. Our children deserve it. Our future demands it.

—Molly McCloskey
Host of the [Whole Child Podcast](#)

Introduction

The Fine Art of Support

Marge Scherer

We hold these truths to be self-evident. “What does that mean?” Rebekah, a social studies teacher, asked her students, who responded as students too often do. They stared back at her. The silence was so deafening that observer Robyn Jackson, who reports the incident in her book, *Never Work Harder Than Your Students*, was almost ready to raise her own hand to bail out the teacher. But, Robyn goes on, Rebekah had set the stage well.

As Rebekah smiled at her class, a few students pulled out their books. One tentatively raised her hand. Still Rebekah waited, while encouraging students to “reread the text.” After most of the students had struggled through the hard work of thinking and were interested in getting a conversation rolling, a discussion began. Throughout the rest of the period, Rebekah made sure that her students weren’t just responding for her benefit but were actually extending the thinking of their classmates. “It was one of the richest discussions of the Declaration of Independence I have ever heard,” Robyn relates.

In her new book, Robyn Jackson describes teachers who, like Rebekah, seem to effortlessly achieve success by demanding that students do the work of learning. But when Robyn explores the mind-set of teachers who know how much, what kind, and when to give support to students, she uncovers the underlying secrets of successful teaching. The preliminary steps for holding a rich discussion, for example, require deciding what you want students to think about, modeling the

process, offering strategies for how to proceed, and orchestrating students' involvement by asking good follow-up questions. In other words, as Robyn tells us, master teachers consistently act on such principles as, "Support your students along the way."

This e-book, a collection of articles from *Educational Leadership* and other ASCD publications (see inside for a chapter from *Never Work Harder Than Your Students*), explores what it means to "support the whole child." In these articles, authors ponder the various meanings of *support* in the classroom, school, and community.

We start with a section on "Shaping Instruction," in which authors describe how to deliver the academic instruction that meets students' needs. All good instruction starts by building trust through positive exchanges with individual students, lead author Carol Ann Tomlinson explains. Marilyn Burns shows how to offer elementary math students scaffolded instruction in bite-sized learning experiences. Thomas Guskey describes the technique of "reteaching in a way that engages students differently in learning." And Jennifer Carolan and Abigail Guinn show why it is necessary to "find the sweet spot between structure and choice."

Section 2, "Scaffolds and Interventions," extends the scope of the book by considering the kind of supports that catch students before they falter, not after. In "Leveling the Playing Field," authors discuss the big picture of support, looking closely at policies that aim to change the odds for students for whom support often makes the most difference.

The next section examines the kind of classroom environment that leads to positive behaviors and engagement. Here our authors particularly look at classroom discourse—teacher and student talk—as well as how to teach the key study skills that gradually turn over responsibility for learning to students.

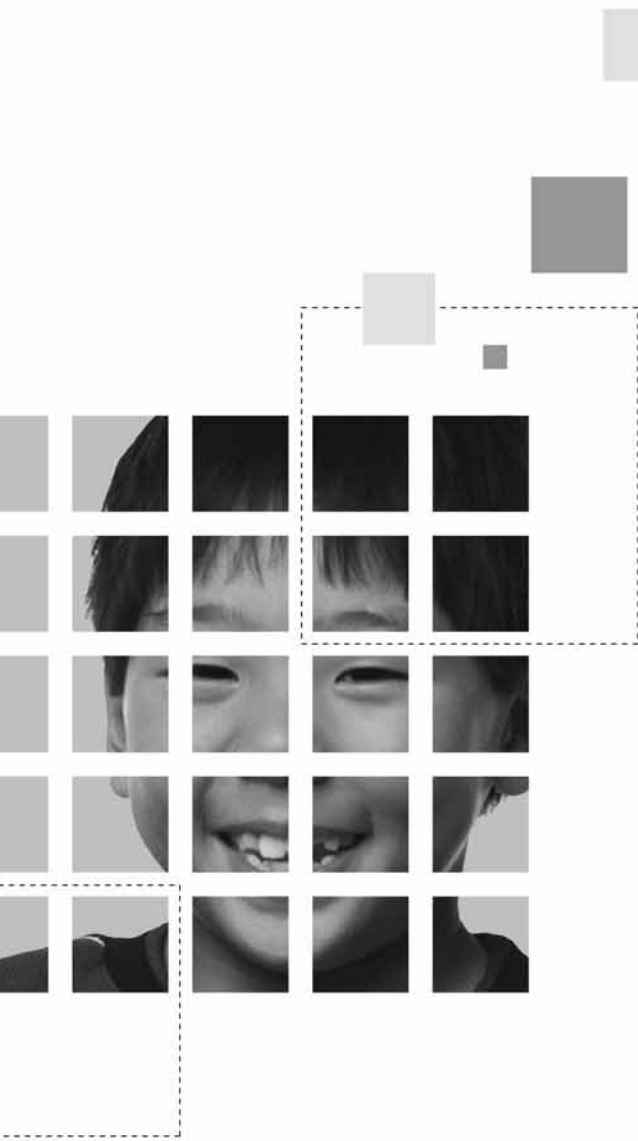
The section entitled "Responding to 21st Century Challenges" acknowledges that students today need support to confront new concerns—from multitasking to coping with economic and social stressors. In "Honoring Families and Heritage," authors note that support must

not only come from students' teachers but must also always involve the student's network of family and community.

This third in a four-book series exploring whole child education ends by emphasizing another maxim of good teaching: Hold high expectations for your students. Our authors agree: With the right supports, students are capable of doing more than even they think they can.

—Marge Scherer

Editor in Chief, *Educational Leadership*



Part 1

Shaping Instruction

The Goals of Differentiation

Carol Ann Tomlinson

Differentiated instruction helps students not only master content, but also form their own identities as learners.

After visiting a high school biology class, I asked the teacher why she thought it was worth her effort to set up that day’s lab so that students could complete it in several different ways. She looked puzzled at the question, but her answer was direct: “Why do I do this? Because it makes me a better teacher and it makes my students more successful learners.”

Knowing this teacher, I’m fairly certain that her concept of making her students “more successful learners” extended beyond covering more content knowledge. The ultimate aim of the work that went into preparing for the lab—her detailed knowledge of her students and her efforts to differentiate instruction to meet their individual needs—was to help her students become focused, motivated, and independent learners. Much more than instruction in biology was going on in that classroom.

Differentiated instruction is student-aware teaching. It is guided by the premise that schools should maximize student potential, not simply bring students to an externally established norm on a test. To grow as much and as rapidly as possible, students must not only learn essential content, but also increasingly take charge of their own lives as learners.

It's Only Logical

There's logic in differentiated instruction when we use it to ensure student mastery of content. Differentiation calls for teachers to have clear learning goals that are rooted in content standards but crafted to ensure student engagement and understanding. If teachers are uncertain about the learning destination, their students are adrift. We want students to go into the world fully possessed of the power of knowledge. Yet what we teach must engage learners, or we've lost them before we've begun.

Thus, differentiation also proposes that teachers must know their students. As one educator noted, it's virtually impossible to make content relevant for learners whom you don't know (Littky, 2004). For many students, lack of connection with the teacher spells academic failure.

Further, differentiation calls on teachers to vigilantly monitor student proximity to content goals throughout a learning cycle. The teacher needs to know what each student knows and can do at a given moment. How else could we plan instruction to increase the likelihood that students stay on course toward the destination?

Differentiation also counsels that—armed with assessment information and other knowledge about a student—the teacher should adapt teaching plans to attend to learner readiness, interest, and preferred modes of learning. Once we understand what a student knows (and doesn't know), what motivates that student to learn, and how the student learns best, differentiation is simply what comes next (Earl, 2003).

So differentiated instruction is a logical way to achieve the goal of content acquisition. But there's a parallel logic in differentiation that functions at a deeper level. Differentiation enables teachers to go beyond the question, How can I make sure a student masters a body of information? asking instead, How can I help create a real learner? As teachers address this question, they need to consider four elements that help students take charge of their own learning and thus take charge of their lives: trust, fit, voice, and awareness.

Building Trust

Trust begins when students believe that the teacher is on their side—when they realize that the teacher views them as persons of worth, believes in their capacity to succeed, and works in their best interest. Trust develops as students become aware that what goes on in the classroom supports their success individually and as a group. This kind of trust creates a partnership of striving for excellence.

In the 2004 summer Olympics, an athlete from an emerging country qualified to compete in swimming because he was the best from his country, a place where training for top-level swimming competition was simply not available. Before he arrived at the Olympic venue, he had never even seen an Olympic-size pool. In his initial heat, he flailed at the water with a stroke so awkward it was painful to watch. As the race progressed, he was clearly out of breath and gasping for air. Spectators feared he would drown. Nonetheless, he swam the entire race. Later in an interview, he confirmed that he, too, was afraid for his safety as he swam. “Why did you continue?” asked the interviewer. “Why didn’t you just stop?” Without a pause the young man answered, “Because the people in the stands were clapping so hard for me. I just didn’t want to let them down.”

That’s an apt metaphor for the classroom. When the people around us are pulling for us, when we feel buoyed by their expectations and partnership, we persevere.

Teachers build trust through an accumulation of small, positive exchanges with individual students. They build trust when they take a minute or two each day to share experiences with the class and to build memories, when they listen to student responses with respect, and when they provide ample time for practice and feedback before the judgment of grading. They build trust when they ensure that classroom routines exist to support student success and when they enlist students as partners in implementing those routines. Differentiation provides

a structure that supports trust by enabling teachers to actively and optimistically support each student's learning.

Ensuring Fit

A second element that gives students ownership of their learning is making sure that the learning fits the student. Fit suggests that we ask students to do only what they are ready to do. If work is consistently beyond a student's reach, that student becomes more occupied with escaping possible danger or humiliation than with learning. If work is consistently too easy for a student, the student develops strategies for marking time rather than for addressing challenge. In both instances, the student's willingness to persist in the face of difficulty diminishes.

Fit also requires that what we ask students to learn connects with what they care about. When knowledge, understanding, and skill help students make sense of their world, do things they want to do, or develop a sense of personal agency, students will give whatever it takes to succeed.

Further, fit implies that students have the opportunity to learn and to express learning in ways that facilitate their success. Such opportunities make learning efficient rather than cumbersome and enhance the likelihood that students' efforts will lead to success.

Sarah Kajder (2006) found that a large number of students in her high school classroom were discouraged with school and alienated from learning. They didn't read, they told her. They couldn't, and they weren't going to. Meeting them where they were in readiness, interests, and learning modes, she asked the students to find images on the Internet that reflected their feelings about reading. One student brought in a picture of a bulldozer and wrote about how reading tore him apart and destroyed his chances of success. To counteract these feelings, Kajder used graphic novels, digital word walls and flash cards, and online journals to build students' competencies, connect with their worlds, and nurture their expression. Later in the year, one of her students wrote,

I don't know what it is about this assignment but I have never taken so much time to read something before. I think maybe it's because I'm taking the time to allow the picture to unfold in my head. (p. 90)

Teachers in differentiated classrooms create fit by using small-group instruction, reading partners, text at varied reading levels, personalized rubrics, miniworkshops, learning contracts, product and task options with common learning goals, independent studies, varied homework assignments, and a host of other strategies—not for the sake of using them, but to make learning work for each student. These teachers are flexible with time, seating arrangements, working conditions, student groupings, and other classroom elements. They assiduously study their students. They use ongoing assessment to understand what a student needs next, and they adjust their teaching in response to what they discover.

When curriculum, instruction, and classroom environment fit a student, the student's sense of possibility increases. The balance of challenge and support, the sense of personal relevance, and the opportunity to learn and express learning in ways that work for the student enhance the student's willingness to risk the hard work of real learning.

Strengthening Voice

Voice, the third element, is an extension and refinement of thought that gives students power over their own destinies as learners. As Parker Palmer (1998) wrote,

Learning doesn't happen when students are unable to express their ideas, emotions, confusion, ignorance, and prejudices. In fact, only when people can speak their minds does education have a chance to happen. (p. 74)

Teachers honor student voice by inviting, encouraging, affirming, supporting, mentoring, and responding with honesty.

A pair of high school teachers asked their classes to complete a set of probing questions about the effectiveness of their class so that the teachers could become “their best selves.” The teachers shared with their classes the percentage of students who chose each answer as well as some elaborative student responses. The teachers then explained to the students how particular responses would help them adjust instruction. To observers of the class sessions in which student feedback was sought, shared, and acted on, it was clear that students understood the power of their voice (Tomlinson, Brimijoin, & Narvaez, 2008).

Because differentiated instruction enables teachers to individualize so they can better respond to student needs, it provides a nurturing environment for student voice to grow. Teachers cultivate student voice when, among other approaches, they effectively use dialogue journals; make time for student discussions; problem solve with individuals, small groups, and the whole class; ask for student input in developing classroom rules and routines; provide guided choice for tasks and ways of accomplishing them; conduct morning meetings; have students conduct parent conferences; provide opportunities for students to review one another’s work using clear criteria; and listen to students’ experiences and connect them with content.

Elementary teacher Stephen Levy (1996) explained how he listened to student voices as he crafted curriculum to engage students’ minds and spirits:

We made all our decisions by consensus. We sat in a circle on the floor, and each person had a chance to state an opinion or pass. After all opinions were heard, students were invited to defend their idea or to explain how their opinion had been modified by what they had heard. Most discussions were very civil, and consensus was clear. (pp. 56–57)

In Levy’s class, students owned their learning. Trust and fit, also evident in his classes, are intertwined with voice.

Developing Awareness

Awareness is the final element. Real learners understand how learning works. They know how to make sense of text, how to listen, and how to ask questions. They know how to gauge their work based on criteria for success. They understand how to capitalize on their learning strengths and how to compensate for their weaknesses. They know how to plan, follow through with plans, modify plans when necessary, and evaluate the effectiveness of their planning. Through those avenues, they come to believe that they are captains of their own fate as learners. Teachers who differentiate for student ownership of learning guide each student in developing these abilities.

Monica Harrold, then a 1st grade teacher, frequently led her students to analyze a piece of work they were about to begin with a partner or small group. After she described the task, she'd say, "Now tell me what skills are necessary to do this work really well." Gradually, her young students became proficient at naming the skills the assignment called for. Next, she'd ask them to think about which of the necessary skills they had and which ones they'd need to be sure someone else in the group had. In my observations of Monica's classroom, it was common to hear a student say, "I can draw and I can write, but I'm not very good at finding information so I'll need to work with someone who can do that." At age 6, these students were already becoming metacognitively aware. They were learning to position themselves as successful learners by controlling their working conditions.

Teachers build student awareness as they talk about what they observe in their students, how they plan, why they teach as they do, and how they solve problems in their own work. They use rubrics that are carefully constructed to support student thinking about the quality of their work instead of merely awarding points for completed work. They help students analyze their points of entry in the rubrics and set goals for next steps. They have students keep track of their own skill development, feedback, and grades. They give students opportunities

to reflect on their work through exit cards, journals, or plus/minus/delta charts that aid them in thinking about their strengths, their weaknesses, and the changes they will make as they approach future work.

Academic awareness builds academic success. Success inevitably sends an invitation writ large to pursue further success and to own both its processes and its products.

A Dual Goal

Differentiated instruction is a way of thinking about teaching. Certainly one of its goals is increased student mastery of essential content and skills. But few students will become dedicated learners because their standardized test scores increase. Differentiation, fully understood, is concerned with developing not only content mastery but also student efficacy and ownership of learning.

In a differentiated classroom, even as students grapple with fractions, French verbs, names of explorers, and the periodic table, their teachers strive to build trust, ensure fit, strengthen voice, and develop awareness. These elements help students build a sturdy platform to support the kind of learning that enriches life. Teachers in effectively differentiated classes help students participate in the formation of their own identity as learners. As students come to trust that process, they develop the power and agency they need to become intellectual beings and thus to own the process of learning.

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Differentiation: Lessons from Master Teachers

Jennifer Carolan and Abigail Guinn

Examining how master teachers weave differentiation into their daily practice can help reluctant teachers take the plunge.

Diversity is a gold mine. It offers all members of a diverse group multiple ideas, perspectives, and solutions to problems. Teachers can nurture this diversity early on by maximizing the potential of each student in their classrooms, including students who come to the class with defined disabilities. And practicing differentiated instruction, matching teaching to the needs of each learner, is an ideal way to help diversity thrive.

As school districts embrace differentiated instruction and strive to increase teachers' comfort level with it, a close study of the daily practice of expert teachers is a key—though under-used—resource.

Barriers to Differentiation

Many teachers hesitate to weave differentiated practices into their classroom methods because they believe that they lack time, professional development resources, and administrative support (Hootstein, 1998). Everest (2003) contends that some see differentiation as another bureaucratic mandate heaped onto their already burgeoning workloads. These barriers are real; if not addressed, they threaten to turn differentiation into the next education fad.

Many educators mistakenly think that differentiation means teaching everything in at least three different ways—that a differentiated classroom functions like a dinner buffet. This is not differentiation, nor is it practical. A classroom in which teaching is tailored to the individual needs of students does look different from a one-size-fits-all classroom, but often these differences are less dramatic than teachers believe. For example, a teacher who conjures up a metaphor matched to a student’s cognitive ability and personal interests is differentiating, as is a teacher who pushes the thinking of an advanced student during a whole-class discussion.

Many expert teachers were master differentiators long before the term was popularized. Through years of tinkering, they have learned which strategies to use and when. By turning to the classrooms of these expert teachers, we can observe how successful differentiators overcome common obstacles and seamlessly weave differentiation strategies into their practice while staying true to their personal style.

Observing the Experts

We set out to take a close look at how five outstanding teachers taught a broad range of learners in their classrooms. From fall 2005 to spring 2006, we observed the teachers’ classes in two middle schools in a high-performing district near San Francisco, California. Students with disabilities ranging from ADHD to severe hearing loss and physical disabilities were mainstreamed into regular education classrooms in these schools. Through more than 35 hours of interviews and classroom observations, we probed these teachers’ attitudes toward differentiating instruction. We focused on their overarching beliefs, their daily routines, and their subtle strategies.

At the center of all five teachers’ classrooms, we encountered strategies that addressed individual needs. Four common characteristics surfaced:

- Offering personalized scaffolding.
- Using flexible means to reach defined ends.
- Mining subject-area expertise.
- Creating a caring classroom in which differences are seen as assets.

The following examples illustrate these characteristics in action.

Offering Personalized Scaffolding

Scaffolds are temporary supports that help a learner bridge the gap between what he or she can do and what he or she needs to do to succeed at a learning task (Graves & Braaten, 1996). To guarantee that each student internalized complex concepts, these teachers consistently provided scaffolding, often inventing supports on the spot as a student faltered. They drew on a rich mental database of examples, metaphors, and enrichment ideas. Personalized supports often took the form of tailored examples; all five teachers worked hard to understand their students. They built ample one-on-one time into the class structure.

In Mrs. L's poetry unit, learning goals included an understanding of the terms *metaphor*, *alliteration*, *simile*, and *rhythm*. On a day we observed her 8th graders working individually on analyzing and writing poems, Mrs. L checked in with every student. She helped a student struggling to understand an extended metaphor by working through the Langston Hughes poem "Mother to Son." For another student struggling with rhythm, she pointed out poems across various genres with different rhythmic patterns. She asked an advanced learner, "How might a poem retain its literary integrity when translated into another language?"

Using Flexible Means to Reach Defined Ends

Regardless of their discipline, expert teachers first ensured that clear learning goals guided their curricular decision making. Then they inserted related skills and specific content knowledge through a backward design process (see McTighe & Wiggins, 1998). After they established curricular direction and content, these teachers offered multiple ways for students to demonstrate what they knew. Designing and facilitating multiple paths to reach defined learning goals is one of the hallmarks of successful differentiation.

“Multiple paths” does not mean that students are given free rein; it means that teachers must find that sweet spot between structure and choice that makes student learning possible. Designing multiple paths to a learning goal is especially important for students with learning disabilities, who are often much stronger in a few areas of intelligence than in other areas. By allowing options that accommodate different thinking patterns, teachers help all students not only achieve planned learning goals but also own these goals in a way that’s all theirs.

Mrs. D identified clear learning goals for her 6th grade unit on Egypt. One goal, drawn from state standards, was to analyze the geographic, political, economic, religious, and social structures of early Egyptian civilizations. Students had latitude to pursue their own interests in fulfilling this goal. Three students presented their understanding of Egyptian civilizations through different formats that aligned with their interests and accommodated their learning differences. One student with information processing difficulties worked within a small group to collect research on mummification; his role was to read aloud and discuss information with group members. Another student diagnosed with ADD worked on a content-relevant analytic exercise in the class library, free of distractions. And a student with Asperger’s syndrome designed a computer-based interactive graphic of King Zoser’s step pyramid that allowed the user to climb the pyramid, with text on each step highlighting the pyramid’s importance.

Mining Subject-Area Expertise

Not only did these teachers know the landscape of their subject matter, but they also showed multiple ways to navigate it. Beyond possessing content knowledge, they understood how learners come to know that subject (see Shulman, 1986), where students might stumble, what preconceptions students might have, and how to match content with instructional method in a way that connects to different learning styles and levels.

To introduce a math unit on probability, Mr. P put the following warm-up problem (using names of students in the class) on the board:

It is a tie game between the L. A. Lakers and the Miami Heat in game 7 of the NBA finals. As the buzzer sounds, Kobe, who plays for the Lakers, fouls Shaq, a Heat team member, giving Shaq two free throws. Blake, Brooke, and Tommy all know that Shaq is a 50 percent free-throw shooter. Blake says, “I know the Lakers have a 50 percent chance of going to overtime because Shaq misses his shots 50 percent of the time.” Brooke says, “I am certain the Heat will win because Shaq only needs to make 1 out of 2, and Shaq shoots 50 percent.” Tommy says, “I think you’re both wrong.” Do you agree with Blake, Brooke, or Tommy? Explain your thinking in words, diagrams, or arithmetic.

Ten minutes later, Mr. P directed students to move to the corner of the room near the student their answer agreed with—Blake, Tommy, or Brooke. A class debate followed, in which students tried to convince others to take their position.

This exercise is a far cry from the sterile math problems at the start of the textbook’s statistics chapter. Mr. P’s combination of probability knowledge and developmental understanding enabled him to tweak standardized materials, transforming a dry problem into an engaging puzzle for his 8th grade students. In addition, he tapped different learning styles by urging his students to think through the problem

in words, diagrams, or arithmetic. Mr. P encouraged his students to think in whatever way they find most natural, especially when learning a new concept.

Creating Caring Classrooms

These expert teachers created what Noddings has called a “caring classroom”—an environment that is safe, democratic, diverse, and inclusive (Noddings, 1984). Although it has received more attention recently, the affective component of differentiation has often been overlooked. Each of the teachers we studied considered the social and emotional aspects of the classroom environment essential to differentiation. Rather than seeing differences in ability, culture, language, or interests as hurdles, these teachers turned differences into assets. They modeled respect for diversity. In their classrooms, students acknowledged and valued the unique attributes of peers.

Mrs. D’s class was deeply engaged in a game of “Family Feud.” Students worked in teams to answer questions about the ancient Kush Kingdom. Although all students had listened to the opera *Aida*, only a few had done independent research digging further into the opera, which was an optional part of the class project. Students on both teams looked to Jason, who had studied *Aida* in depth. In the audience, students encouraged their classmates to “Use a lifeline! Call Jason!” Identified as having Asperger’s syndrome, Jason often worked on his own, exploring atypical topics. He rarely interacted socially. However, students in this class often eagerly sought help from Jason as an expert. In a classroom like Mrs. D’s that values a diverse range of interests, Jason’s unusual choice of study became an asset.

Tapping the Wisdom of the Experts

As more school districts support differentiation, expert teachers within our schools provide an invaluable resource for teacher learning.

Observing how real teachers practice differentiation illuminates the complexity of addressing the needs of all students. We suggest two practical ways to integrate what we can learn from expert teachers into professional development.

- *Mentoring relationships.* Pair a novice teacher with an expert teacher in the same subject area. Observations and joint lesson-planning sessions will give the novice opportunities to learn the nuanced ways in which expert teachers differentiate curriculum and instruction. In addition, we found that the expert teachers we studied struggled to articulate how differentiation plays out in their classrooms. A mentoring relationship gives expert teachers a chance to reflect on their knowledge and think about their practice with fresh insight.
- *Opportunities to view examples of differentiation.* To master a strategy as complex as differentiation, teachers need concrete examples and a common analytic vocabulary. Through observing video or digital tapes of good differentiation practice, teachers can zoom in on specific teacher actions and discuss the purposes behind those actions. Teachers should be organized into small, subject-specific groups and given targeted questions before watching the teaching clip.

Well-honed strategies for how to respond to each individual's abilities are often hidden behind the closed doors of expert teachers' classrooms. It's time to open these doors and see the dynamic and complex nature of differentiation in practice.

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Nine Ways to Catch Kids Up

Marilyn Burns

*How do we help floundering students who
lack basic math concepts?*

Paul, a 4th grader, was struggling to learn multiplication. Paul's teacher was concerned that he typically worked very slowly in math and "didn't get much done." I agreed to see whether I could figure out the nature of Paul's difficulty. Here's how our conversation began:

Marilyn: Can you tell me something you know about multiplication?

Paul: [*Thinks, then responds*] 6×8 is 48.

Marilyn: Do you know how much 6×9 is?

Paul: I don't know that one. I didn't learn it yet.

Marilyn: Can you figure it out some way?

Paul: [*Sits silently for a moment and then shakes his head.*]

Marilyn: How did you learn 6×8 ?

Paul: [*Brightens and grins*] It's easy—goin' fishing, got no bait, 6×8 is 48.

As I talked with Paul, I found out that multiplication was a mystery to him. Because of his weak foundation of understanding, he was falling behind his classmates, who were multiplying problems like 683×4 . Before he could begin to tackle such problems, Paul needed to understand the concept of multiplication and how it connects to addition.

Paul wasn't the only student in this class who was floundering. Through talking with teachers and drawing on my own teaching

experience, I've realized that in every class a handful of students are at serious risk of failure in mathematics and aren't being adequately served by the instruction offered. What should we do for such students?

Grappling with Interventions

My exchange with Paul reminded me of three issues that are essential to teaching mathematics:

- It's important to help students make connections among mathematical ideas so they do not see these ideas as disconnected facts. (Paul saw each multiplication fact as a separate piece of information to memorize.)
- It's important to build students' new understandings on the foundation of their prior learning. (Paul did not make use of what he knew about addition to figure products.)
- It's important to remember that students' correct answers, without accompanying explanations of how they reason, are not sufficient for judging mathematical understanding. (Paul's initial correct answer about the product of 6×8 masked his lack of deeper understanding.)

For many years, my professional focus has been on finding ways to more effectively teach arithmetic, the cornerstone of elementary mathematics. Along with teaching students basic numerical concepts and skills, instruction in number and operations prepares them for algebra. I've developed lessons that help students make sense of number and operations with attention to three important elements—computation, number sense, and problem solving. My intent has been to avoid the “yours is not to question why, just invert and multiply” approach and to create lessons that are accessible to all students and that teach skills in the context of deeper understanding. Of course, even well-planned lessons will require differentiated instruction, and much of the differentiation needed can happen within regular classroom instruction.

But students like Paul present a greater challenge. Many are already at least a year behind and lack the foundation of mathematical understanding on which to build new learning. They may have multiple misconceptions that hamper progress. They have experienced failure and lack confidence.

Such students not only demand more time and attention, but they also need supplemental instruction that differs from the regular program and is designed specifically for their success. I've recently shifted my professional focus to thinking about the kind of instruction we need to serve students like Paul. My colleagues and I have developed lessons that provide effective interventions for teaching number and operations to those far behind. We've grappled with how to provide instruction that is engaging, offers scaffolded instruction in bite-sized learning experiences, is paced for students' success, provides the practice students need to cement fragile understanding and skills, and bolsters students' mathematical foundations along with their confidence.

In developing intervention instruction, I have reaffirmed my long-time commitment to helping students learn facts and skills—the basics of arithmetic. But I've also reaffirmed that “the basics” of number and operations for all students, including those who struggle, must address all three aspects of numerical proficiency—computation, number sense, and problem solving. Only when the basics include understanding as well as skill proficiency will all students learn what they need for their continued success.

Essential Strategies

I have found the following nine strategies to be essential to successful intervention instruction for struggling math learners. Most of these strategies will need to be applied in a supplementary setting, but teachers can use some of them in large-group instruction.

1. Determine and Scaffold the Essential Mathematics Content

Determining the essential mathematics content is like peeling an onion—we must identify those concepts and skills we want students to learn and discard what is extraneous. Only then can teachers scaffold this content, organizing it into manageable chunks and sequencing these chunks for learning.

For Paul to multiply 683×4 , for example, he needs a collection of certain skills. He must know the basic multiplication facts. He needs an understanding of place value that allows him to think about 683 as $600 + 80 + 3$. He needs to be able to apply the distributive property to figure and then combine partial products. For this particular problem, he needs to be able to multiply 4 by 3 (one of the basic facts); 4 by 80 (or 8×10 , a multiple of 10); 4 and by 600 (or 6×100 , a multiple of a power of 10). To master multidigit multiplication, Paul must be able to combine these skills with ease. Thus, lesson planning must ensure that each skill is explicitly taught and practiced.

2. Pace Lessons Carefully

We've all seen the look in students' eyes when they get lost in math class. When it appears, ideally teachers should stop, deal with the confusion, and move on only when all students are ready. Yet curriculum demands keep teachers pressing forward, even when some students lag behind. Students who struggle typically need more time to grapple with new ideas and practice new skills in order to internalize them. Many of these students need to unlearn before they relearn.

3. Build in a Routine of Support

Students are quick to reveal when a lesson hasn't been scaffolded sufficiently or paced slowly enough: As soon as you give an assignment, hands shoot up for help. Avoid this scenario by building in a routine of

support to reinforce concepts and skills before students are expected to complete independent work. I have found a four-stage process helpful for supporting students.

In the first stage, the teacher models what students are expected to learn and records the appropriate mathematical representation on the board. For example, to simultaneously give students practice multiplying and experience applying the associative and commutative properties, we present them with problems that involve multiplying three one-digit factors. An appropriate first problem is $2 \times 3 \times 4$. The teacher thinks aloud to demonstrate three ways of working this problem. He or she might say,

I could start by multiplying 2×3 to get 6, and then multiply 6×4 to get 24. Or I could first multiply 2×4 , and then multiply 8×3 , which gives 24 again. Or I could do 3×4 , and then 12×2 . All three ways produce the same product of 24.

As the teacher describes these operations, he or she could write on the board:

$$\begin{array}{ccc} 2 \times 3 \times 4 & 2 \times 3 \times 4 & 2 \times 3 \times 4 \\ \checkmark & \checkmark & \checkmark \\ 6 \times 4 = 24 & 8 \times 3 = 24 & 2 \times 12 = 24 \end{array}$$

It's important to point out that solving a problem in more than one way is a good strategy for checking your answer.

In the second stage, the teacher models again with a similar problem—such as $2 \times 4 \times 5$ —but this time elicits responses from students. For example, the teacher might ask, “Which two factors might you multiply first? What is the product of those two factors? What should we multiply next? What is another way to start?” Asking such questions allows the teacher to reinforce correct mathematical vocabulary. As students respond, the teacher again records different ways to solve the problem on the board.

During the third stage, the teacher presents a similar problem—for example, $2 \times 3 \times 5$. After taking a moment to think on their own, students work in pairs to solve the problem in three different ways, recording their work. As students report back to the class, the teacher writes on the board and discusses their problem-solving choices with the group.

In the fourth stage, students work independently, referring to the work recorded on the board if needed. This routine both sets an expectation for student involvement and gives learners the direction and support they need to be successful.

4. Foster Student Interaction

We know something best once we've taught it. Teaching entails communicating ideas coherently, which requires the one teaching to formulate, reflect on, and clarify those ideas—all processes that support learning. Giving students opportunities to voice their ideas and explain them to others helps extend and cement their learning.

Thus, to strengthen the math understandings of students who lag behind, make student interaction an integral part of instruction. You might implement the *think-pair-share* strategy, also called *turn and talk*. Students are first asked to collect their thoughts on their own, and then talk with a partner; finally, students share their ideas with the whole group. Maximizing students' opportunities to express their math knowledge verbally is particularly valuable for students who are developing English language skills.

5. Make Connections Explicit

Students who need intervention instruction typically fail to look for relationships or make connections among mathematical ideas on their own. They need help building new learning on what they already know. For example, Paul needed explicit instruction to understand how thinking about 6×8 could give him access to the solution for 6×9 . He

needed to connect the meaning of multiplication to what he already knew about addition (that 6×8 can be thought of as combining 6 groups of 8). He needed time and practice to cement this understanding for all multiplication problems. He would benefit from investigating six groups of other numbers— 6×2 , 6×3 , and so on—and looking at the numerical pattern of these products. Teachers need to provide many experiences like these, carefully sequenced and paced, to prepare students like Paul to grasp ideas like how 6×9 connects to 6×8 .

6. Encourage Mental Calculations

Calculating mentally builds students' ability to reason and fosters their number sense. Once students have a foundational understanding of multiplication, it's key for them to learn the basic multiplication facts—but their experience with multiplying mentally should expand beyond these basics. For example, students should investigate patterns that help them mentally multiply any number by a power of 10. I am concerned when I see a student multiply 18×10 , for example, by reaching for a pencil and writing:

$$\begin{array}{r} 18 \\ \times 10 \\ \hline 00 \\ 18 \\ \hline 180 \end{array}$$

Revisiting students' prior work with multiplying three factors can help develop their skills with multiplying mentally. Helping students judge which way is most efficient to multiply three factors, depending on the numbers at hand, deepens their understanding. For example, to multiply $2 \times 9 \times 5$, students have the following options:

$$\begin{array}{ccc}
 2 \times 9 \times 5 & 2 \times 9 \times 5 & 2 \times 9 \times 5 \\
 \swarrow & \swarrow & \swarrow \\
 18 \times 5 = 90 & 10 \times 9 = 90 & 2 \times 45 = 90
 \end{array}$$

Guiding students to check for factors that produce a product of 10 helps build the tools they need to reason mathematically.

When students calculate mentally, they can estimate before they solve problems so that they can judge whether the answer they arrive at makes sense. For example, to estimate the product of 683×4 , students could figure out the answer to 700×4 . You can help students multiply 700×4 mentally by building on their prior experience changing three-factor problems to two-factor problems: Now they can change a two-factor problem— 700×4 —into a three-factor problem that includes a power of 10— $7 \times 100 \times 4$. Encourage students to multiply by the power of 10 last for easiest computing.

7. Help Students Use Written Calculations to Track Thinking

Students should be able to multiply 700×4 in their heads, but they'll need pencil and paper to multiply 683×4 . As students learn and practice procedures for calculating, their calculating with paper and pencil should be clearly rooted in an understanding of math concepts. Help students see paper and pencil as a tool for keeping track of how they think. For example, to multiply 14×6 in their heads, students can first multiply 10×6 to get 60, then 4×6 to get 24, and then combine the two partial products, 60 and 24. To keep track of the partial products, they might write:

$$\begin{array}{l}
 14 \times 6 \\
 10 \times 6 = 60 \\
 4 \times 6 = 24 \\
 60 + 24 = 84
 \end{array}$$

They can also reason and calculate this way for problems that involve multiplying by three-digit numbers, like 683×4 .

8. Provide Practice

Struggling math students typically need a great deal of practice. It's essential that practice be directly connected to students' immediate learning experiences. Choose practice problems that support the elements of your scaffolded instruction, always promoting understanding as well as skills. I recommend giving assignments through the four-stage support routine, allowing for a gradual release to independent work.

Games can be another effective way to stimulate student practice. For example, a game like *Pathways* (see Figure 1 for a sample game board and instructions) gives students practice with multiplication. Students hone multiplication skills by marking boxes on the board that share a common side and that each contain a product of two designated factors.

Figure 1. Pathways Multiplication Game

Player 1 chooses two numbers from those listed (in the game shown here, 6 and 11) and circles the product of those two numbers on the board with his or her color of marker.

Player 2 changes just one of the numbers to another from the list (for example, changing 6 to 9, so the factors are now 9 and 11) and circles the product with a second color.

Player 1 might now change the 11 to another 9 and circle 81 on the board. Play continues until one player has completed a continuous pathway from one side to the other by circling boxes that share a common side or corner. To support intervention students, have pairs play against pairs.

72	36	49	88	54	
84	77	96	132	56	
63	81	48	108	121	
66	99	144	64	42	
6	7	8	9	11	12

9. Build In Vocabulary Instruction

The meanings of words in math—for example, *even*, *odd*, *product*, and *factor*—often differ from their use in common language. Many students needing math intervention have weak mathematical vocabularies. It's key that students develop a firm understanding of mathematical concepts before learning new vocabulary, so that they can anchor terminology in their understanding. We should explicitly teach vocabulary in the context of a learning activity and then use it consistently. A math vocabulary chart can help keep both teacher and students focused on the importance of accurately using math terms.

When Should We Offer Intervention?

There is no one answer to when teachers should provide intervention instruction on a topic a particular student is struggling with. Three different timing scenarios suggest themselves, each with pluses and caveats.

While the Class Is Studying the Topic

Extra help for struggling learners must be more than additional practice on the topic the class is working on. We must also provide comprehensive instruction geared to repairing the student's shaky foundation of understanding.

- *The plus:* Intervening at this time may give students the support they need to keep up with the class.
- *The caveat:* Students may have a serious lack of background that requires reaching back to mathematical concepts taught in previous years. The focus should be on the underlying math, not on class assignments. For example, while others are learning multidigit multiplication, floundering students may need experiences to help them learn basic underlying concepts, such as that 5×9 can be interpreted as five groups of nine.

Before the Class Studies the Topic

Suppose the class is studying multiplication but will begin a unit on fractions within a month, first by cutting out individual fraction kits. It would be extremely effective for at-risk students to have the fraction kit experience before the others, and then to experience it again with the class.

- *The plus:* We prepare students so they can learn *with* their classmates.
- *The caveat:* With this approach, struggling students are studying two different and unrelated mathematics topics at the same time.

After the Class Has Studied the Topic

This approach offers learners a repeat experience, such as during summer school, with a math area that initially challenged them.

- *The plus:* Students get a fresh start in a new situation.
- *The caveat:* Waiting until after the rest of the class has studied a topic to intervene can compound a student's confusion and failure during regular class instruction.

How My Teaching Has Changed

Developing intervention lessons for at-risk students has not only been an all-consuming professional focus for me in recent years, but has also reinforced my belief that instruction—for all students and especially for at-risk students—must emphasize understanding, sense making, and skills.

Thinking about how to serve students like Paul has contributed to changing my instructional practice. I am now much more intentional about creating and teaching lessons that help intervention students catch up and keep up, particularly scaffolding the mathematical

content to introduce concepts and skills through a routine of support. Such careful scaffolding may not be necessary for students who learn mathematics easily, who know to look for connections, and who have mathematical intuition. But it is crucial for students at risk of failure who can't repair their math foundations on their own.

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The Rest of the Story

Thomas R. Guskey

*The power of formative classroom assessment
depends on how you use the results.*

Radio commentator Paul Harvey gained widespread fame by reporting factual stories with a twist at the end. What he called “the rest of the story” typically gave the report entirely new meaning, leaving listeners surprised but well informed. Were Harvey to report on the use of formative classroom assessments, he undoubtedly would describe how increasing numbers of educators today consider these regular checks on learning progress to be an integral part of the instructional process. He would point out that well-designed formative assessments can provide students with essential feedback and inform teachers about the quality of their teaching by identifying concepts that students have and haven’t mastered (Guskey, 2003; Hattie & Timperley, 2007).

The rest of the story, however, would be that formative assessments alone do little to improve student learning or teaching quality. What really counts is what happens *after* the assessments. Just as regularly checking your blood pressure does little to improve your health if you do nothing with the information gained, what matters most with formative assessments is how students and teachers use the results. Unfortunately, many educators today overlook this vital aspect of formative assessment. And by missing “the rest of the story,” they fail to produce the most valuable benefits of the formative assessment process.

An Old Idea Reborn

The importance of using classroom assessments as learning tools was identified more than 35 years ago by Benjamin Bloom and his colleagues in *Handbook on Formative and Summative Evaluation of Student Learning* (Bloom, Hastings, & Madaus, 1971). They described the benefits of offering students regular feedback on their learning progress through formative classroom assessments. As the name implies, formative assessments are designed to inform (see Scriven, 1967). They pinpoint for both students and teachers what concepts and skills have been learned well and what learning problems still exist.

Bloom and his colleagues stressed, however, that to improve student learning these regular progress checks must provide feedback (identifying students' individual learning difficulties) and be followed up with correctives (specific remediation strategies). Such procedures are precisely what make individual tutoring so effective. When a student being tutored makes a mistake, the tutor points out the error and immediately provides further explanation and clarification. Academically successful students typically initiate their own feedback and correctives: They follow up on the mistakes they make on quizzes and tests, seeking further information and greater understanding so that they do not repeat their learning errors. Most students, however, need a more structured classroom corrective process to help them use formative assessment results to improve their mastery of the concepts and skills.

Bloom and his colleagues further emphasized that correctives will be effective *only* if they are qualitatively different from the original instruction. Having students repeat a process that has already proven unsuccessful is unlikely to yield any better results the second time around. Effective corrective activities provide students with alternative pathways to learning success, adapted to meet their individual learning needs and interests (see Duffy & Kear, 2007).

Planning Corrective Activities

Effective corrective activities possess three essential characteristics (see Guskey, 1997). First, they *present the concepts differently*. For example, if a language arts unit initially taught the use of metaphors in poetry with a deductive approach (presenting the general concept and then giving specific examples), the corrective activity might use an inductive approach (presenting a variety of specific examples and building an understanding of the general concept from these examples). The best corrective activities involve a change in format, organization, or method of presentation.

Second, effective corrective activities *engage students differently in learning*. They consider different learning styles or modalities (Given, 2000; Lawrence, 1997; Sternberg, 1994) or different forms of intelligence (Armstrong, 2000; Gardner, 2006; Silver, Strong, & Perini, 2000). If science students initially learned about cell structure through a group activity, for example, a good corrective might involve an individual activity, such as reviewing an informative Web site and then using the computer to write and illustrate a report. If students originally learned the events of the American Revolutionary War in social studies by reading passages in their textbook and studying wall maps and charts (visual intelligence), a useful corrective might employ a group discussion of the events (auditory and interpersonal intelligence). To make a corrective strategy effective, students' engagement in learning must be qualitatively different from what took place during the initial instruction.

Finally, effective corrective activities *provide students with successful learning experiences*. If an activity does not help students overcome their learning difficulties and experience success, the teacher should abandon it for another option. Corrective experiences should make students better prepared, more confident, and more motivated for future learning tasks. The best ideas for effective corrective activities generally come from fellow teachers. Teaching colleagues often

can offer new ways of presenting concepts, different examples, and alternative materials. Professional development opportunities that provide teachers with time for such sharing reduce the workload of individual teachers and typically yield higher-quality activities (Guskey, 1998, 2000). Faculty meetings devoted to examining classroom assessment results and developing corrective strategies also work well. Such meetings also might involve district-level personnel or content experts from local colleges and universities.

Types of Corrective Activities

Many teachers find it useful to organize corrective activities into three groups: those to be done with the teacher, those to be done with a friend, and those to be done by oneself (see fig. 1). Although any particular activity may fall into more than one category, every activity should be designed to provide students with a different presentation and mode of engagement. Most teachers plan several types of corrective activities for each instructional unit to give students some choice and to accommodate a wider variety of learning styles and modalities. Further, if a particular activity falls flat, having several activities planned makes it possible to turn to another immediately without wasting valuable time. These are a few corrective activities that many teachers find to be effective:

Figure 1. How to Use Corrective Activities

Corrective Activity	With the Teacher	With a Friend	By Oneself
Reteaching	X		
Individual Tutoring	X	X	
Peer Tutoring		X	
Cooperative Teams		X	
Course Textbooks	X	X	X
Alternative Textbooks	X	X	X
Workbooks and Study Guides	X	X	X

Figure 1. How to Use Corrective Activities (*cont.*)

Corrective Activity	With the Teacher	With a Friend	By Oneself
Academic Games	X	X	X
Learning Kits			
Learning Centers and Laboratories			
Computer Activities			

Reteaching

The simplest and most frequently used corrective activity involves reteaching. The teacher, or another teacher in team-teaching situations, explains difficult concepts again using a different approach or different examples. Most teachers use reteaching as they review the results from formative assessments with students, reexplaining concepts that many students misunderstood or found difficult, before turning to other types of corrective activities.

The greatest challenge with reteaching, of course, is ensuring that it involves a truly different presentation and level of engagement. When reteaching a difficult concept, some teachers simply restate their original explanation louder and more slowly, perhaps believing that increased volume and a slower pace are what some students need. This approach seldom works.

Individual Tutoring

One of the most effective corrective activities is individual tutoring. In most cases, the tutor goes through the formative assessment with the student, explaining concepts that the student missed in a new way or from a different perspective, continually checking for understanding as they move along. Even teachers who employ other forms of correctives usually monitor students' understanding with some individual tutoring, especially for those students with more serious learning

difficulties. Many teachers have obtained excellent results using older students, teacher's aides, and classroom volunteers as tutors (Topping & Bryce, 2004; Wright & Cleary, 2006). Regardless of who serves as the tutor, individual tutoring consistently ranks among the most efficient and most powerful types of corrective activity.

Peer Tutoring

Students who have already mastered the important concepts and skills in the unit often make excellent tutors for their classmates. Like other tutors, peers typically explain concepts from a different perspective or in a different way (Kourea, Cartledge, & Musti-Rao, 2007). In addition, research indicates that students who serve as peer tutors generally benefit as much as the students they assist (Medcalf, Glynn, & Moore, 2004). Helping classmates understand new concepts or master new skills often deepens their own understanding. Most teachers find, however, that peer tutoring is best presented as one of several corrective options from which students can choose. Requiring two mismatched students to work together can be counterproductive.

Cooperative Teams

In cooperative teams, three to five students get together to discuss their learning gaps and to help one another. The teams are heterogeneous, assigned by the teacher, and usually stay intact for several learning units. During the corrective session, students review the formative assessment item by item. Any question or crucial element that one or more students have missed is explained by another team member who understands it. If all members of the team are having difficulty, they can work collaboratively to find a solution or call on the teacher for assistance. With modest direction and supervision, cooperative teams can be a highly effective corrective activity at any level of education (Johnson & Johnson, 1995; Slavin, 1991).

Textbooks

Another simple but highly effective corrective is to have students reread relevant sections in the textbook. Rereading is especially effective when combined with other activities, such as having students write a short paragraph explaining the concept in their own words. Teachers who use the textbook as a corrective resource typically list page-number references beside each item or problem on the formative assessment so that students can turn directly to the relevant sections or examples. Although referring students to the textbook may seem to be repetition of the same old thing, focusing students' attention on specific passages often helps them recognize or clarify important concepts and information they missed in their initial reading.

Alternative Textbooks

When available, alternative textbooks often provide a different presentation or explanation of crucial ideas or concepts. Many teachers save several copies of their old textbooks when a new one is adopted to offer students an additional source of information. Other teachers use alternative textbooks to provide additional practice exercises, examples, or problems.

Alternative Materials, Workbooks, and Study Guides

Alternative materials include videotapes, audiotapes, DVDs, hands-on materials, manipulative models, Web-based resources, and so forth. Because workbooks and study guides usually present ideas and concepts in a different way from textbooks and often include examples or practical applications, they can provide excellent corrective activities for a wide range of student learning styles. In addition, the variety of presentation formats allows the teacher to choose appropriate materials that the student can use with the teacher, with a friend, or for working alone.

Academic Games

Most academic games consist of group activities in which students work together to solve a particular problem or accomplish a task that relates to specific learning goals (Harnadek, 1992; Larson, 2002). Many academic games can be adapted or modified to fit a variety of learning situations. Like cooperative teams, academic games typically promote cooperation and collaboration among students and can be a highly effective corrective activity.

Learning Kits

Learning kits usually present ideas and concepts visually and often involve the manipulation of materials. In addition, most kits can be used with the teacher, among a small group of students, or by a student working alone. Learning kits might include puzzles, learning tools, or other instructional materials. Many involve the use of models or manipulative materials; others are based on interactive multimedia content (Learning Kit Project, 2007). Although learning kits are widely available from commercial publishers and Web-based sources, many teachers assemble their own from materials they gather.

Learning Centers and Laboratories

Directing students to learning centers or learning laboratories in the classroom or in another part of the school often serves as a highly effective corrective activity. In these centers, students get help on their specific learning problems, often under the guidance of a learning supervisor or center aide. Center activities typically engage students in more hands-on and manipulative tasks than might have been possible during the initial instruction. Centers are most effective as a corrective when students are involved in a structured activity and receive a specific assignment to complete.

Computer Activities

Many teachers use computers and other forms of technology—including videodiscs, laser discs, interactive video, various forms of hypermedia, and a variety of powerful online resources—as a primary means of corrective activities. The highly versatile, user-friendly nature of technology makes it appropriate for almost any subject area and grade level. Computer activities enable students to work alone or in collaboration with classmates. Many tutorial programs also enable students to control the kind and amount of assistance they receive; this individualized interaction makes assistance potentially less embarrassing. When students become familiar with a program's operation, and when the software closely matches the learning goals, computer activities can be highly effective as a corrective (Dillon & Gabbard, 1998; Kumar, Greer, & McCalla, 2005; Perry, Thauberger, MacAllister, & Winne, 2005).

Planning for Enrichment Activities

On any given formative assessment, some students will demonstrate their mastery of unit concepts and skills on the first try and will have no need for corrective activities. Rather than sitting around, biding their time while other students relearn the material, these students need opportunities to extend their learning through enrichment activities.

Effective enrichment must provide valuable, challenging, and rewarding learning experiences. Students who master the learning objective the first time and perform well on the formative assessment should view enrichment activities positively—not simply as harder tasks or busywork. Rather than being narrowly restricted to the content of specific instructional units, enrichment activities should be broadly construed to cover a wide range of related topics.

Students should have some degree of choice in selecting enrichments. For example, if a learner has a special interest in some aspect

of the subject, using enrichment time to prepare a report on that topic not only provides a unique learning opportunity but also enhances this student's motivation to do well in subsequent formative assessments so that he or she can return to working on the report. Other examples of enrichment activities include challenging academic games and exercises, various multimedia projects, and peer tutoring.

Some creative teachers find it easy to develop different types of enrichment activities for their students. Others struggle to create such learning experiences. Besides consulting with colleagues, many teachers turn to materials designed for gifted and talented students as their primary resource for enrichment. Certain publishers focus specifically on activities that genuinely extend students' learning by involving them in higher-order skills (for example, Critical Thinking Press and Software in Pacific Grove, California; Dale Seymour Publications in Palo Alto, California; and Thinking Works in St. Augustine, Florida). Further, the game-like nature of many of these activities motivates students to want to take part. Most teachers use class time in early instructional units to engage all students in enrichment activities, both to encourage participation and to enhance students' motivation on future formative assessments.

Managing Corrective and Enrichment Activities

Mr. Tanabe is a typical 4th grade teacher whose class has just studied a two-week unit on multiplying and dividing fractions. He administers a 20- to 25-minute formative classroom assessment that he corrects with his students in class, reviewing each item and stopping occasionally to reexplain ideas or concepts that appear troublesome to most of the students. After completing the review, he reminds students that the mastery or proficiency standard is 80 percent correct.

He then divides students into two groups: those who attained the proficiency standard and those who did not. Students who demonstrated their proficiency can choose from various enrichment

activities—including working with partners to write original word problems or doing a guided Web search to learn about a famous mathematician—or they may volunteer to serve as peer tutors. Those who did not reach proficiency begin their corrective work under the teacher's direction. The cooperative teams that Mr. Tanabe has put into place move their desks together to begin working with their teammates.

Mr. Tanabe does three important things when dividing the class into separate corrective and enrichment groups. First, he recognizes students who attained the proficiency standard for their achievement. A quick show of hands followed by congratulations helps sustain these students' persistence in future learning units. Next, he reminds students that group membership is temporary and can change with every unit and every formative assessment. As students' performance changes, so will the members of both corrective and enrichment groups. Finally, he emphasizes his confidence in the skills of those students who have not yet attained proficiency. He assures these students that with a little extra time and effort they too will reach the proficiency standard and will be well prepared to tackle upcoming units.

After starting the enrichment group on its activities, Mr. Tanabe turns his attention to the corrective group. He begins with reteaching, using some supplemental materials to present difficult ideas and concepts in a new and different way. He then moves to guided practice activities, leading students through structured problems or exercises. He includes practice time in which some students work independently to demonstrate their understanding and others work with peer tutors. As students work, he moves from student to student, asking questions and offering individualized assistance. At the same time, he checks on students engaged in enrichment activities, making sure they remain on task.

As this example shows, correctives rarely involve a single activity. In this case the teacher combined reteaching with alternative materials, guided practice, independent practice, and individual tutoring. When students work on their own or with a friend, most teachers require

completion of a written assignment that summarizes their work. Enrichment activities may be similarly diversified, and many teachers require a tangible product from these students as well. After students become accustomed to the corrective and enrichment process, however, teachers often relax or eliminate this requirement.

Finding Time

Some teachers fear that taking time for corrective and enrichment activities in each instructional unit will lessen the amount of material they will be able to cover. They believe that as a result of sacrificing coverage to allow a higher level of learning, some students may learn better but all will learn less.

Corrective and enrichment activities initially do add time to instructional units. Especially in early units, these activities must be done in class, under the teacher's direction, and typically require a class period or two. Teachers who ask students to complete correctives outside class as a homework assignment or during special study sessions held before or after school rarely experience success with this strategy. Instead, they quickly discover that those students who could benefit most from the corrective process are the least likely to take part.

After students become accustomed to the corrective process and realize its advantages, most teachers begin reducing the class time they allocate to correctives. They use more student-initiated activities and ask students to complete more of their corrective work outside class. As students remedy their learning problems in early units, they perform better on formative assessments in subsequent units. This improvement leads to more students becoming involved in enrichment activities and fewer students engaged in correctives. The amount of corrective work each student needs to reach the proficiency standard also diminishes (Whiting, Van Burgh, & Render, 1995).

Modest changes in instruction further lessen the extra time needed. Many teachers, for example, eliminate review sessions prior

to formative assessments and shift that time to the corrective and enrichment process. With the results from the formative assessment, teachers can become more efficient in their review, concentrating on those concepts and skills that pose problems for students. In addition, by allowing fast learners to demonstrate their proficiency and move on to enrichment activities, teachers can spend their time working with a smaller group of students who need their assistance most.

In general, teachers do not need to sacrifice content coverage to implement corrective and enrichment activities, but they must be flexible in pacing their instruction. The time used for correctives and enrichment in early units yields powerful benefits that will make the pace of instruction faster later on. Teachers must keep in mind what the class needs to accomplish by the end of any learning sequence, but they also must see students' pathways to that end in more flexible and accommodating terms.

Making Good Use of a Valuable Tool

Formative classroom assessment offers educators a valuable tool to improve student learning. But to realize the true benefits of such assessment, we need to focus attention on what students and teachers do with the assessment results. To close achievement gaps and help all students learn well, educators must provide students with alternative pathways to learning success. Engaging students in diverse corrective activities or exciting and challenging enrichment activities, depending on their performance on well-designed formative assessments, offers the practical means to do just that.

And now you know ... the rest of the story.

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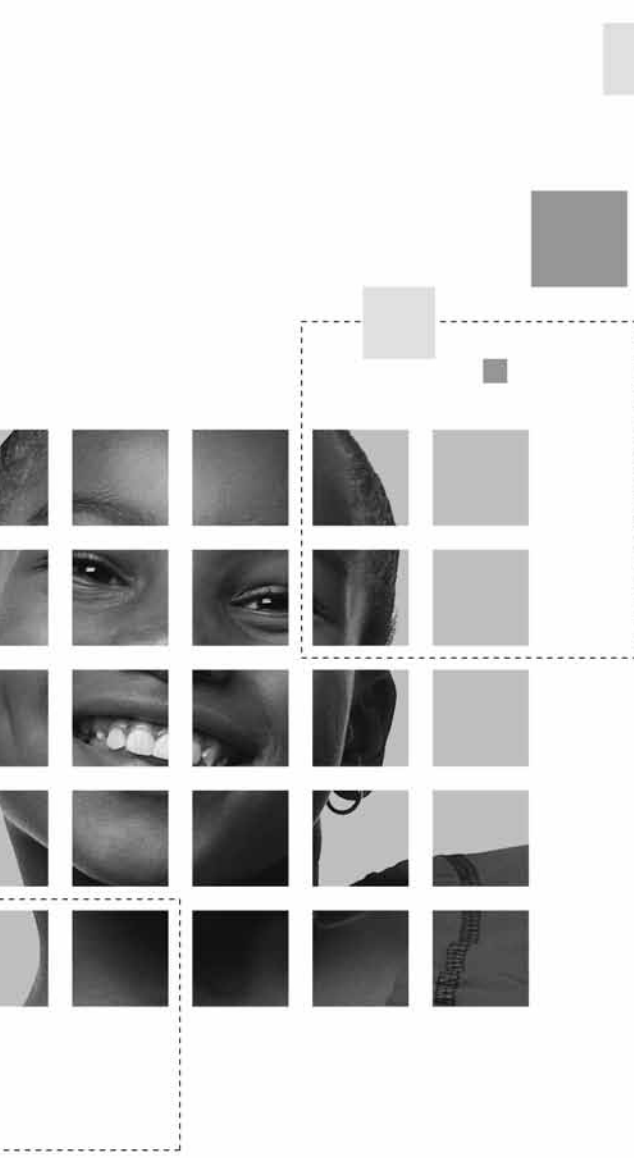
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Part 2

Providing Scaffolds
and Interventions

An Early Warning System

Ruth Curran Neild, Robert Balfanz, and Liza Herzog

By promptly reacting to student distress signals, schools can redirect potential dropouts onto the path to graduation.

The alarm has sounded. The United States has a high school graduation crisis. The crisis does not stem, however, from any precipitous drop in the percentage of students who graduate. In fact, graduation rates are about as high as they have ever been. What makes current graduation rates alarming is a reality of the new U.S. economy: It is practically impossible for individuals lacking a high school diploma to earn a living or participate meaningfully in civic life. Adding to the urgency is evidence of disproportionately low graduation rates among low-income and minority youth. Recent estimates suggest that between one-third and one-half of minorities do not earn a high school diploma (Education Week, 2007).

Policymakers and educators have tended to view dropping out of high school in two contradictory ways. On the one hand, they view it as predictable, given the high dropout rates in certain demographic categories and geographic locations. At the same time, they view the experiences that precede a specific student's dropping out as mysterious, difficult to predict, and idiosyncratic. Some students unaccountably "become bored with school"; "fall in with the wrong crowd"; or experience a jarring life event, such as a pregnancy or a parent's unemployment, that precipitates their dropping out of school.

Our research suggests that, on the contrary, many students who drop out of high school send strong distress signals for years. These students are metaphorically waving their hands and asking for help. By paying attention, schools and districts can develop interventions that can help keep potential dropouts on track to graduation.

Policymakers and educators face several challenges in devising these early intervention strategies. The first is to figure out which signals to look for and when to look for them. These signals form an early warning system that schools can use to identify students who are at risk of dropping out. The second challenge is to develop a set of structures and practices within schools that enable educators to review data and pinpoint those students who are sending signals. The third challenge is to determine the help that students need, on the basis of the signals they send and their responses to previous interventions.

Early Indicators

During the past 25 years, a great deal of research has focused on why students drop out. This research typically uses data from complex surveys or in-depth interviews with students, none of which are commonly available to schools and school districts. We wondered whether the ordinary data that school districts keep in student records could operate as a crystal ball of sorts to predict which students might drop out.

We began our research in Philadelphia, using data on several cohorts of students that became available to us when we established a number of Talent Development High Schools and Middle Grades Programs in the city. Johns Hopkins developed these school models, and the Philadelphia Education Fund was the local reform partner. Schools implementing the Talent Development model were located in areas with low graduation rates.

The school district data that we examined included test scores, report card grades, behavior marks, attendance records, special education status, English language learner status, and demographic

categories. We identified the following indicators using Philadelphia data. However, we have been able to replicate them with slight modifications in other cities, such as Boston and Indianapolis.

Signals in the Middle Grades

A high percentage of dropouts send distress signals in the middle grades, long before they actually drop out of school. We followed an entire cohort of students in Philadelphia who entered the 6th grade in September 1996—approximately 14,000 students—to determine their dropout status six years later. Then, going back to the 6th grade data, we looked for any signals—a poor course grade, a low test score—that would give students *at least* a 75 percent probability of dropping out of high school. We chose the 75 percent threshold because it enables schools and districts to focus their scarce resources on students who are at high risk of dropping out.

In Philadelphia, we found that a 6th grader with even one of the following four signals had at least a three in four chance of dropping out of high school:

- A final grade of *F* in mathematics.
- A final grade of *F* in English.
- Attendance below 80 percent for the year.
- A final “unsatisfactory” behavior mark in at least one class.

Students with more than one signal—for example, failing mathematics *and* missing a lot of school—had an even higher probability of dropping out within six years. But we also found that some students sent just one signal, indicating that various factors can culminate in dropping out. Students with failing course grades may struggle with academic skills and motivation, those with inconsistent attendance may find little support for schooling at home, and those with poor behavior marks may have social and emotional challenges that require attention. The signals that have the greatest predictive power relate to student

action or behavior in the classroom, rather than to a particular status, such as receiving special education services.

In a separate analysis, we looked at indicators for a cohort of 8th graders. For these students, too, a failing course grade in mathematics or English or an attendance rate of less than 80 percent during the year were highly predictive of dropping out. In fact, more than 50 percent of the students who ultimately dropped out sent one or more of these signals during 8th grade, meaning that more than half of the dropouts in the cohort could have been identified even before they entered high school.

Although all distress signals should be taken seriously in the middle grades, schools should pay special attention to students who send a signal in 6th grade. The earlier a student first sends a signal, the greater the risk that he or she will drop out of school.

Signals in High School

Ninth grade is a treacherous year for students, particularly those in large urban districts. Even students who were doing moderately well in the middle grades can be knocked off the path to graduation by the new academic demands and social pressures of high school. Among students who sent their first serious distress signal in 9th grade, those who earned fewer than two credits or attended school less than 70 percent of the time had at least a 75 percent chance of dropping out of school. Most of these students did not drop out immediately but attempted 9th grade courses for another one or two years before finally giving up on school altogether.

Eighty percent of the dropouts we studied in Philadelphia had sent a signal in the middle grades or during the first year of high school. The majority of U.S. high school dropouts are enrolled in such large urban districts (Balfanz & Legters, 2004). Consequently, an effective early warning system could identify—at least by 9th grade—the vast majority of future dropouts nationwide.

What Can Schools Do?

Our experience with urban middle schools and high schools suggests that several strategies can help keep students on the path to graduation.

Intervening in the Middle Grades

Philadelphia is currently piloting a middle grades program—Keeping Middle Grades Students on the Graduation Path—that seeks to develop tools and practices for responding to early indicators that signal potential dropouts. Developed through the joint efforts of the School District of Philadelphia, the Philadelphia Education Fund, and the Johns Hopkins University Center for the Social Organization of Schools, the program is based on two fundamental assumptions: (1) that students' signals are surface indicators of deeper academic problems, behavioral issues, or responses to the home or school environment that schools need to identify and address; and (2) that only a small percentage of students will need the most intensive and costly interventions. For the majority of students, lower-cost schoolwide strategies that seek to prevent the problems will suffice.

Schools can identify strategies for addressing each signal—such as course failure, poor attendance, and behavior issues—using a three-tiered school-based model for prevention and intervention. The top tier consists of effective *whole-school preventative measures*. In urban districts that struggle with high dropout rates, these whole-school measures can keep an estimated 70–80 percent of the students on track to graduation during the middle grades. For example, a school might institute a schoolwide attendance program that highlights the importance of attendance; tracks attendance daily at the classroom level; has an adult in the building respond to the first absence of each student; and provides weekly recognition and monthly social rewards (such as pizza parties or field trips) to students with perfect or near-perfect attendance.

The second tier of *targeted interventions* is aimed at the 10–20 percent of students who require additional focused supports. A student who continues to miss school despite a schoolwide attendance program might sign an attendance contract or attend a conference at school with family members; the student may then receive a brief daily check-in from a school staff member. This adult might acknowledge that the student is in school and mention that he or she looks forward to seeing the student the next day and will call home if the student does not show up.

Finally, the third tier of *intensive interventions* is reserved for the 5–10 percent of students who need small-group or one-on-one supports. A student with severe attendance problems might be assigned to a team of adults at the school (including, for example, a counselor, an assistant principal, and a teacher) who will work together to understand the source of the attendance problem and try to solve it. If the problem is too deep-rooted for the school alone to resolve, the team will arrange for the student and his or her family to receive appropriate social service supports.

Using the three-tiered model, schools in the pilot program take a hard look at what they are actually doing to address attendance, behavior, and academic performance. Our experience has shown us that schools are often doing far less in each of these areas than they think.

To help schools identify which students send signals and how they respond to interventions, we developed an on-demand, classroom-level data program. Teachers can use this program to track individual students on a day-to-day basis so they can quickly identify students who need to move to a more intensive level of intervention. Likewise, they can reevaluate students who have responded to intensive interventions. This early indicator tracking tool has proved so useful that Philadelphia plans to make it available to other schools through the districtwide integrated data management system.

Keeping an Eye on 9th Graders

The best thing a high school can do to keep students on track to graduation is to develop a comprehensive set of strategies that includes attention to climate, curriculum, and credit accumulation. At a minimum, high schools need to set the conditions for 9th grade success by making sure that the curriculum and associated supports help fill gaps in mathematics and reading comprehension. Our work with schools in low-income areas across the United States indicates that the majority of students in these schools are two to three years below grade level when they start 9th grade. They need an age-appropriate curriculum that enables them to catch up on the intermediate skills that high school courses assume that students have.

At the same time, schools need to be organized so that they can flag students who are having difficulty early on. Data from urban districts (Roderick & Camburn, 1999) indicate that struggling 9th graders typically send their signals in the first or second marking period—or even during the first few weeks of school. The Talent Development High School model (see www.csos.jhu.edu/tdhs), developed by urban educators and Johns Hopkins researchers, organizes 9th grade teachers into four-person interdisciplinary teams. Each team compares notes about its students' classroom performance and collaboratively decides on strategies for dealing with those who are having trouble.

Finally, schools need to make available to struggling or disengaged students various avenues through which they can experience short-term school success. These include such activities as debates, artistic and performance experiences, and service learning projects, with opportunities to participate linked to good attendance and course effort.

Reengaging Out-of-School Youth

Despite the best efforts of schools to keep students on the path to graduation, some students will always drop out. Some will try to return

to school, but the traditional high school format may not serve them well because of their age, lack of credits, or personal responsibilities. In Philadelphia, a group of partners—including the school district, city agencies, nonprofit groups that advocate for children and public education, workforce development organizations, and research universities—has begun to collaborate on a multiple-pathways system that will enable out-of-school youth to earn their diplomas.

This collaboration, known as Project U-Turn (www.projectturn.net) and led by the Philadelphia Youth Network, envisions a system that offers opportunities for students on the basis of their age, literacy and numeracy levels, and credits earned. By examining district data, the Project U-Turn partners learned that although the largest group of dropouts had earned fewer than eight credits despite being at least 17 years old, they had few opportunities to earn a diploma other than reenrolling in traditional high schools, which were hardly enthused about taking in older students with histories of failure. The partnership is currently working to design and fund new education options for these students. In addition, youth who have dropped out just shy of graduation need opportunities to fast-track their high school diplomas while earning credits from a community college.

The Price of Not Intervening

Data from large urban districts and our work with urban middle schools and high schools have shown us that, for the majority of students who drop out of high school, the major cause is *not* an unanticipated life event or disinterest in receiving a diploma, but rather school failure. Moreover, the vast majority of dropouts stay enrolled in school for an additional year or two after their first experience of course failure. This continuing connection with school, however tenuous, suggests a window of time during which schools can redirect potential dropouts back onto the path to high school graduation.

It also tells us that what schools do matters. Growing numbers of high schools have beaten the odds and kept their students on the path to graduation. Good research-based and practice-validated interventions can improve student attendance, behavior, and effort; academic interventions can improve course performance more directly. The U.S. graduation rate crisis is not fueled by students who lack the potential or desire to graduate, but rather by secondary schools that are not organized to prevent students from falling off the path to graduation or to intervene when they do.

Finally, we need to recognize that some middle schools and high schools are overwhelmed by the number of potential dropouts who walk through their doors. Research shows that approximately 50 percent of the dropouts in the United States are produced by 15 percent of the high schools, all of which serve populations with high poverty rates (Balfanz & Legters, 2004). Further, most of these high schools have two or more feeder middle schools. Dropout rates for an entering cohort can top 50 percent, meaning that hundreds and sometimes thousands of students at each school are in need of comprehensive and sustained supports. These schools need to have in place strong prevention and intervention systems aimed at improving student attendance, behavior, effort, and course performance.

The need for strong programs has significant implications for how we staff and fund the secondary schools that educate economically disadvantaged students. Implementing the whole-school reforms and multitiered prevention and intervention systems that these schools need requires financial and human resources equal to the task, along with high-quality technical assistance. High-poverty schools will also likely benefit from partnerships with external organizations skilled at delivering integrated student supports as well as with community organizations and national service organizations that can provide the necessary people power for mentoring and tutoring on a sufficient scale.

Without question, there are financial costs associated with intervening with students who are on the path to dropping out. But the price

of not intervening—in terms of individual lives that do not reach their potential and the broader social costs of having a class of citizens who lack a basic academic credential—is incalculably greater.

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No More “Waiting to Fail”

Rachel Brown-Chidsey

Response to Intervention enables schools to identify the kinds of support struggling students need—and provide that support when it's needed.

Nearly 35 years ago, the U.S. Congress passed the Education of All Handicapped Children Act of 1975 as part of the nation’s evolving commitment to accommodate the needs of all children in public schools. Soon after the passage of this historic legislation, policymakers became concerned about two trends. First, the number of students identified with learning disabilities grew much more quickly and reached much higher levels than expected. Second, the percentages of black and other racial minority students who were found eligible for special education services were much higher than the percentages of racial minorities in the U.S. population. Both of these trends have continued, and accumulating evidence indicates that special education services have not been as effective as possible (Kavale & Forness, 2000). Because of these concerns, many educators and policymakers have suggested that we need alternative methods for determining students’ eligibility for special education services.

One alternative approach—Response to Intervention (RTI)—has received increased attention since its inclusion in the most recent reauthorization of federal special education law. The 2004 Individuals with Disabilities Education Improvement Act states that schools will no longer be required to determine whether a student has a severe

discrepancy between achievement and intellectual ability, the traditional method of identifying learning disabilities. Instead, schools are allowed to use evidence of a student's failure to respond to instructional interventions as part of the data documenting the presence of a specific learning disability.

The Prevention Model

The history of special education leading to RTI is a story of more and more prevention-focused instructional practices. Prevention-based practices have been used in other disciplines for many years. For example, immunizations are required for almost all children before school entry because the population reaps general health benefits from the prevention of infectious diseases (Fairbanks & Wiese, 1998).

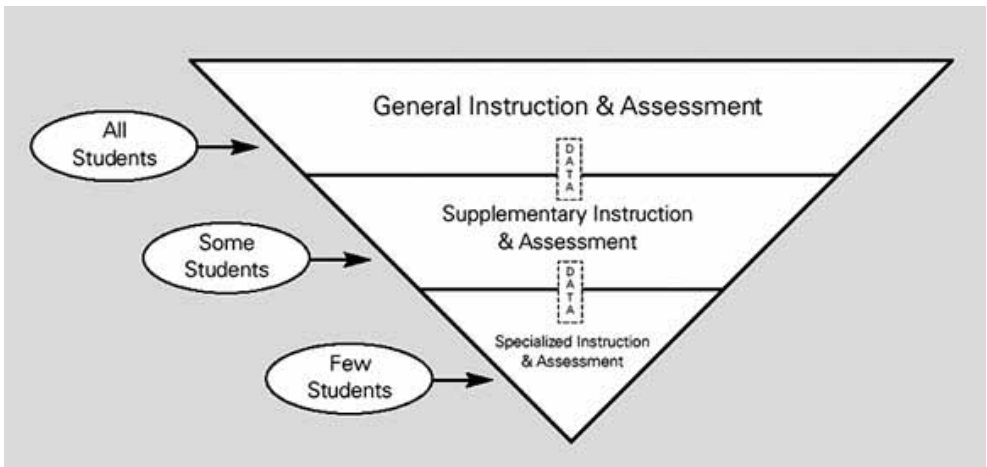
The basic prevention model includes three types of activities: primary, secondary, and tertiary. Primary prevention includes steps taken to stop a certain outcome from happening at all (for example, healthy eating and regular exercise to prevent type 2 diabetes). Secondary prevention includes steps taken to address the problem at the first sign of symptoms (for example, using dietary and exercise changes to treat type 2 diabetes). Tertiary prevention is actions taken after the problem has already surfaced. At this stage, the prevention steps include methods to reduce the effects of the problem (for example, using insulin for lifelong management of diabetes). When this prevention model is applied to education, it manifests itself as RTI. Many studies have shown that students benefit when prevention practices are used in schools (Foorman, 2003).

The Three Tiers of RTI

Response to Intervention (RTI) is a systematic method for instruction and assessment of students. Figure 1 provides a graphic representation of the three RTI levels of intervention to support students with

varying instructional needs. Tier 1 includes universal instruction and assessment of all students—in other words, the general education curriculum. Schools need to ensure that this instruction and assessment are research based and effective in helping students gain academic proficiency. Success at Tier 1 is defined as the student demonstrating at least the levels of knowledge and skill expected for his or her age and grade.

Figure 1. Levels of Response to Intervention



Tier 2 includes selected instructional activities and assessments for students who have not achieved at the expected level while participating in Tier 1. An example of Tier 2 intervention is providing 30 minutes a day of additional reading or math instruction to 1st grade students who have not met grade-level benchmarks. Students receiving Tier 2 support are monitored weekly to learn whether their skills are improving. If their assessment data indicate progress, the students gradually receive less support until they are able to succeed within the general education (Tier 1) program. If they do not make progress after a specified period of Tier 2 instruction, the school either adjusts the students' Tier 2 instruction or refers them to Tier 3.

Only at Tier 3 does the school take steps to determine whether a student has a disability that requires special education. At this stage, the school conducts a comprehensive evaluation of the student's skills, including the data obtained in Tiers 1 and 2, to determine why a student's performance is significantly different from that of other students of his or her age and grade and to decide what additional instructional supports the student needs.

Why Is RTI Important?

RTI helps ensure that all students have equal educational opportunity. RTI provides mechanisms by which students can receive supplementary instruction without the stigmatizing effects of a disability label. Under prior special education laws, students had to show a deficit (such as mental retardation or a specific learning disability) to qualify for specialized instruction. The process to become eligible for special education services under the older laws was time-consuming and often meant that a student must "wait to fail" before receiving additional instructional support. Under RTI, schools must not only ensure that they are providing scientifically based instruction in the general education program, but also provide intervention to students not succeeding in the general education program before considering them for special education placement.

Such a significant shift in policy will take time to implement and evaluate. However, outcomes from schools that have practiced RTI for a number of years have shown that it raises education attainment of students in general and reduces the number of students who need special education (Brown-Chidsey & Steege, 2005). For example, Speece, Case, and Molloy (2003) found that the earlier the intervention, the better the outcomes for students identified as being at risk for reading problems. Both Tilly (2003) and O'Connor (2003) found that RTI methods used over time reduced total special education placements and improved academic outcomes for students at risk.

RTI in Action

One way to see the benefits of RTI is through examples of students who received Tier 2 and 3 interventions. Consider the following two stories.

Helping an At-Risk Student Catch Up

Tim lived with both his parents and a younger sister in a north-eastern U.S. town. When Tim was an infant and toddler, he spent his day at home with his mom. At age 3, he was enrolled in a private preschool that focused on allowing students to explore and learn from self-directed inquiry. Tim began half-day kindergarten in the same town where he had attended preschool. His teacher reported that he made good progress but was very shy and quiet in group settings.

During the summer between kindergarten and 1st grade, Tim’s family moved to a new town in a different school district. Tim enrolled in 1st grade; most of his classmates had attended the local district’s full-day kindergarten program. The district used the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) to measure students’ literacy development (Good & Kaminski, 2002). Tim’s scores on the fall DIBELS benchmarks showed that he lagged behind other 1st graders.

Because Tim’s DIBELS scores revealed that he was at high risk of reading problems, he was immediately placed at Tier 2 of his school’s RTI program. Tim participated in the evidence-based reading program Early Reading Intervention, a small-group intervention with three or four students in a group. Tim’s progress was monitored using winter and spring DIBELS benchmarking assessments; these data showed that once he began participating in the program, he started to develop word-attack skills.

Tim made excellent progress and met the winter DIBELS goals. As a result of the strong progress he made when participating in Early Reading Intervention five days a week, his schedule was changed to include two days of Tier 2 instruction each week. Tim continued

to make good progress; he was eventually transitioned out of Tier 2 instruction and participated in Tier 1 instruction only.

Tim's story shows how early intervention can prevent later reading problems. Tim began 1st grade at risk of reading failure and in danger of being identified as learning disabled; he ended the year reading at the level expected for 1st graders. Coordinated and systematic intervention and assessment activities made a profound difference in this student's school success.

Providing Intervention for a Student with Learning Disabilities

Martha attended a half-day preschool program when she was 3 and 4 years old. When she was screened with the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) at the beginning of kindergarten, she scored lower than average in phonemic awareness and letter naming. As a result, her kindergarten teacher placed her in daily small-group lessons (Tier 2 intervention) that focused on developing these skills. Martha's language development showed progress by the end of kindergarten, but her skills were still in the low-average range compared with those of her classmates.

Martha's 1st grade teacher used the Open Court Reading program to provide Tier 1 instruction to all students. The school screened students at the start of the school year with the DIBELS, and Martha's scores indicated that she remained at risk for reading difficulties. For this reason, Martha participated in Tier 2 interventions in 1st grade. In addition to whole-class instruction, she attended daily 30-minute small-group reading sessions using the Reading Mastery program. These sessions were led by a special education teacher who worked with both general and special education students. To determine whether the extra lessons were helping, students in Martha's group completed weekly DIBELS measures of nonsense word fluency. Martha's classroom teacher and the special education teacher communicated regularly

about Martha’s lessons so that her Tier 1 and Tier 2 instruction would be complementary.

By November of 1st grade, Martha showed sufficient gains in her reading skills to allow her to discontinue smallgroup lessons. But when all students in Martha’s school participated in midyear screening assessments that January, Martha’s scores revealed that she was struggling again. Her teachers decided to resume the small-group intervention. Martha’s progress in reading during February and March was slower than in the fall, and she gained an average of less than one word per week on oral reading fluency measures. Her limited progress, despite the use of well-validated Tier 1 and Tier 2 reading interventions, led her teachers to request a Tier 3 comprehensive evaluation.

The school psychologist reviewed all Martha’s kindergarten and 1st grade reading data. These data suggested that Martha was able to learn the sound-symbol correspondence needed for reading, but that she read words much more slowly than typical 1st graders. The psychologist administered tests of memory and processing speed to test the hypothesis that Martha’s reading difficulties were related to the speed with which she decoded and understood words. Using the Comprehensive Test of Phonological Awareness (CTOPA) as well as the Children’s Memory Scale (CMS), the psychologist found that Martha’s scores on measures of rapid automatic naming were well below average.

The evaluation findings were presented at a special education team meeting to discuss whether Martha was eligible for special education services. The data collected at Tiers 1, 2, and 3 all converged to suggest that Martha’s reading difficulties were the result of a learning disability. The team, consisting of Martha’s parents, teachers, and school specialists, developed an individualized education program (IEP) for Martha that included two major components: individualized reading lessons for 60 minutes each day, replacing both the whole-class and small-group lessons she attended; and additional time for completing all standardized, timed assessments so that her slower

reading speed would not compromise her opportunity to demonstrate her learning.

Martha's story shows how RTI methods can be important for students who have disabilities. She was provided with high-quality, research-based reading interventions from the start of her schooling. Her progress was closely monitored as she received Tier 1 and 2 instruction, and by the time she was placed in Tier 3 and found eligible for special education services, her teachers had a thorough understanding of how to give her the additional support she needed to succeed in school.

Timely Support for All Students

Response to Intervention is a databased, systematic procedure that supports equitable educational access for all students. RTI provides school personnel with ways of knowing which students are at risk and whether efforts to help these students are working. RTI begins by ensuring that the general education classroom is providing effective instruction and assessment for all students. RTI then offers a way to bridge gaps between general and special education services by providing scientifically based interventions quickly and efficiently for all students who need such support, *before* going through a lengthy process to determine eligibility for special education.

RTI is a general education initiative and policy that requires the active participation of all general educators. The most effective RTI solutions include collaborative work by general and special educators to provide effective instruction for students as soon as they need it. The result? Greater success for all students and fewer students placed in special education.

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The Need for Number Sense

Nancy C. Jordan

*The roots of many students' math difficulties
are evident as early as kindergarten.*

In 1st grade, Kendra was a confident student. She had acquired reading skills easily in kindergarten. Although Kendra was able to keep up with the primary school math curriculum, she had trouble counting and learning addition and subtraction combinations, and she relied on her fingers for computation.

By 4th grade, Kendra became frustrated in math. She couldn't pass the "two-minute" facts tests in addition, subtraction, multiplication, and division. Her ability to solve written calculations was not fluent, and she got mixed up on problems that required several steps. Although her strong language skills helped her talk her way through many problems, she spent so much time computing that she sometimes forgot the goal of the problem.

In middle school, Kendra experienced difficulties factoring, computing with rational numbers, and solving algebraic equations, all skills that depend on fluency with basic calculation. Because math was so difficult for Kendra, she gradually lost enthusiasm for the subject.

Barriers to Mastering Math

Although mathematical difficulties and disabilities come in different forms, Kendra's situation highlights key issues for understanding

students who struggle in math. Students with *math disabilities*, or *dyscalculia*, usually fall at or below the 15th percentile on standardized math tests, despite having average or above average intelligence (Jordan, 2007). Math disabilities are estimated to appear in 6 to 10 percent of the population (Barberisi, Katusic, Colligan, Weaver, & Jacobsen, 2005). Dyscalculia is more common in boys (about 2 boys to every girl) and occurs with dyslexia about 60 percent of the time.

Students with *math difficulties* appear less impaired than those with math disabilities. For example, they perform better on standardized math tests—usually at or below average. Math difficulties, if not addressed, usually persist across grade levels (Geary, 1994).

Learners with math disabilities and math difficulties perform math in much the same way. A signature characteristic of students in both groups is weak computational fluency, or difficulty quickly solving combinations, such as $9 + 7$ or $16 - 9$ (Gersten, Jordan, & Flojo, 2005). Most students initially solve these problems in a variety of ways (Siegler & Jenkins, 1989). For example, they may quickly count up or down or relate a subtraction combination to a known addition combination. Kindergartners who use their fingers on simple number combinations often stop using them in 1st grade and develop fluency by 2nd grade. By 3rd grade, most students can add and subtract combinations without external supports.

Students with math difficulties, however, start using their fingers later (in 1st grade) and depend on them for longer periods of time. Their fingers are less reliable with larger combinations, and such students often fail to develop the calculation fluency necessary for higher-level math classes.

The Base of the Problem

Many educators assume that learners with math difficulties and disabilities have trouble memorizing facts. As a result, special instruction often focuses on drill. Recent research, however, suggests that deficient

number sense underlies many math difficulties (Landerl, Bevan, & Butterworth, 2004). Number sense refers to intuitive knowledge of numbers—such as the ability to grasp and compare quantities (6 versus 8); internalize counting principles (the final number in a count indicates the quantity of a set, numbers are always counted in the same order); and estimate quantities on a number line (Berch, 2005).

Mastery of number combinations is tied to knowledge of fundamental number concepts (Baroody & Rosu, 2006). Imagine how hard it would be to memorize arithmetic combinations without understanding how numbers relate to one another. It is easier for students to remember the correct answer of a combination, such as $3 + 2$, when they understand its relationship to such combinations as $2 + 3$ and $5 - 3$.

Early Identification

In today's schools, many math difficulties are not identified until 4th grade or beyond. Math interventions are much less common for young learners than are reading interventions (Jordan, Kaplan, & Hanich, 2002). Schools should routinely screen students for number-sense difficulties in kindergarten, just as most screen students early for literacy problems. Screening for number sense several times during the year can help teachers identify students with actual difficulties and reduce false positives.

The research team that I lead has developed a number-sense screening test for young students (Jordan, Kaplan, Locuniak, & Ramineni, 2007; Jordan, Kaplan, Olah, & Locuniak, 2006). The core battery covers the following:

- Counting skills and principles.
- Number knowledge (such as recognizing which number is larger or smaller).

- Nonverbal calculation. (The student is shown two chips, which are then hidden. Then three more chips are hidden, and the student indicates how many are now hidden.)
- Story problems with object references. (Jack has 2 pennies. Sue gives him 3 more pennies. How many pennies does Jack have now?)
- Number combinations with no object references. (How much is 2 plus 3?)

We used this screening test to assess about 400 students four times in kindergarten, and we followed more than 300 of these students through 1st grade. We found three distinct number-sense growth trajectories in kindergarten and 1st grade: (1) students who start kindergarten with low number sense and experience little growth, (2) students who start kindergarten with low to moderate number sense but start showing steep growth in the middle of kindergarten, and (3) students who start kindergarten at a high level and remain there. Low-income students are four times more likely to fall in the low-performing, flat-growth group than are middle-income learners.

We also found that number sense at the beginning of kindergarten is highly correlated with math achievement at the end of 1st grade. For the 300 students we followed, number-sense performance during the kindergarten year, along with number-sense growth between kindergarten and 1st grade, accounted for 66 percent of the variance in 1st grade math achievement. Background characteristics of the students did not explain differences in their achievement levels, over and above number sense.

Our findings, in addition to other evidence (Gersten et al., 2005), indicate that number-sense screening in kindergarten and early 1st grade helps identify students at risk for learning difficulties and disabilities in math. We have also found that the strong predictive value of kindergarten number sense holds into 2nd grade on a calculation fluency measure.

Providing Help

Research offers some important insights for helping learners who struggle or who may be at risk for struggling in math. In kindergarten, these students should receive explicit help representing, comparing, and ordering numbers and joining and separating sets, particularly with totals of 5 or less (Fuson, 1992; National Council of Teachers of Mathematics, 2006). Learners should first manipulate quantities with their fingers or using sets of concrete objects. They should be encouraged to imagine set transformations in their heads without physical representations. For example, the teacher can ask a student, “Imagine 4 pennies. Now take away 1 penny. How many pennies are left?”

Number lists and board games that use number lists, such as Chutes and Ladders, can also help young students develop meaningful knowledge of quantities and number magnitudes (Ramani & Siegler, 2007). Conventional number lines, on the other hand, may confuse young learners because they start with zero (Fuson, 1992).

Laying the Foundation

Although calculation fluency is not sufficient for succeeding in advanced math, such as algebra, it is a necessary foundation. Weak computational fluency, a distinguishing feature of math difficulties, reflects basic deficiencies in number sense. Helping students build number sense right from the start gives them the background they need to achieve in later years.

If Kendra had developed the number sense she needed in 1st grade, she would have been better prepared to complete the more complex problems that frustrated her in 4th grade. With that success under her belt, she might have continued on to master factoring and equations and maintained an interest in math that could carry her to calculus and beyond. Identifying students like Kendra and intervening early is one key to keeping students on track for math success.

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What's Right About Looking at What's Wrong?

Deborah Schifter

Both students and teachers gain new mathematical understanding by examining the reasoning behind a student's incorrect answer.

To teach mathematics for conceptual understanding, we need to treat it primarily as a realm of ideas to be investigated rather than a set of facts, procedures, and definitions to be used. To implement the former approach, teachers must have a deep understanding of content as well as the skill to implement concept-based pedagogy. And these greater demands on teachers, in turn, require well-thought-out forms of professional development. The following classroom lesson illustrates some of the issues involved.

Going Beyond Procedures

Liz Sweeney's 5th grade students all knew the standard procedure for multiplying multidigit numbers. On the day when a research team from the Education Development Center videotaped her class,¹ however, Ms. Sweeney wanted her students to go beyond the procedure. She asked them to find at least two ways to determine the products of several multidigit multiplication problems.

The students worked on this challenge, meeting in small groups to talk about their strategies. With just a few minutes left at the end of

the period to discuss their work as a whole group, Ms. Sweeney asked Thomas to write his strategy for solving one of the problems (36×17) on the board, even though it was incorrect. Thomas wrote

$$36 + 4 = 40$$

$$17 + 3 = 20$$

$$40$$

$$\times 20$$

$$800$$

$$- 4$$

$$796$$

$$- 3$$

$$793$$

Even Thomas knew his answer was wrong. Other strategies had already determined that the answer was 612. But he explained his reasoning to the class: To make the problem easier, he rounded up by adding 4 to 36 and 3 to 17; then he multiplied 40×20 to get 800, and subtracted the 4 and the 3 that he had added earlier, getting a final answer of 793.

Ms. Sweeney told the class what she had noticed as Thomas presented this method to his small group:

So I liked this—I was feeling comfortable with it, and it looked like a good strategy, and it was neat. And then Dima was all antsy in his seat, saying, “That’s not what I did and my answer is really different” . . .

So, tonight for your homework, I want you to copy down Thomas’s method in your homework books, and I want you to figure out, What was Thomas thinking? And using the first steps of his strategy, how would you revise his approach to come up with a different answer?

Ms. Sweeney’s behavior may puzzle readers whose images of effective teaching derive from the mathematics classrooms of their childhood. For many decades, mathematics has been taught the same way: The teacher demonstrates procedures for getting correct answers and then monitors students as they practice those procedures on a set of similar problems. Why did Ms. Sweeney ask her students, who already knew one efficient way to multiply 36×17 , to find alternative strategies to do it? Why, at the end of class, did she ask a student to present a strategy that produced an incorrect result? And why did she ask the rest of the class to examine his strategy for homework?

When we view Ms. Sweeney’s behavior from an alternative perspective, it becomes comprehensible. She acted on the belief that mathematics is much more than a set of discrete facts, definitions, and procedures to memorize and recall on demand. In her view, mathematics is an interconnected body of ideas to explore. To do mathematics is to test, debate, and revise or replace those ideas. Thus, the work of her class went beyond merely finding the answer to 36×17 ; it became an investigation of mathematical relationships.

Where Did Thomas’s Error Come From?

This was not the first time Liz Sweeney had asked her students to think about different strategies for calculation. She had been assigning similar exercises for all four of the basic operations. By considering the *action*

of the operation, students could develop such strategies independently. For example, when asked to add $18 + 24$, students might consider the action of addition as the joining of two sets and devise a variety of methods for decomposing and recombining the addends:

- Decompose 18 into 10 and 8; decompose 24 into 20 and 4; add the tens, $10 + 20 = 30$; add the ones, $8 + 4 = 12$; add the results, $30 + 12 = 42$.
- Take 2 from the 24 and add it to the 18. This becomes $20 + 22$, or 42.
- Add 2 to 18 to get 20, $20 + 24 = 44$. Then remove the 2 you have added on, $44 - 2 = 42$.

The activity of devising calculation strategies and explaining why they work helps students cultivate several important mathematical capacities. Students develop a stronger number sense and become more fluent with calculation. They gain an understanding of place value when they decompose numbers into tens and ones. And they come to expect that mathematics will make sense and that they can solve problems through reasoning.

When Ms. Sweeney asked the class to multiply 36 and 17, Thomas decided to try out a strategy that he had used successfully to *add* two multidigit numbers: round up, perform the operation, and then subtract what had been added when rounding up. Thomas was reasoning by analogy, which is often a fruitful way to approach a problem. In this case, the analogy would not hold. But Thomas *was* reasoning; he was not merely careless.

Thomas's mistake—applying an addition strategy to a multiplication problem—is quite common. When faced with multidigit multiplication, such as 12×18 , both children and adults frequently try $(10 \times 10) + (2 \times 8)$. After all, to add 12 and 18, one could operate on the tens, operate on the ones, and then add the total. But multiplication involves a different kind of action, and thus requires a different set of adjustments after the factors have been changed or decomposed.

A Context for Multiplication

To think about the action of multiplication, it is helpful to envision a context in which the calculation might be used. For example, Thomas's classmate James thought of 36×17 as 36 bowls, each holding 17 cotton balls. With this context in mind, he could imagine an arrangement of bowls of cotton balls that would lend themselves to calculation.

James explained that first he arranged the bowls into groups of 10. Each group of 10 had 170 cotton balls (10×17), and there were three groups of ten ($170 + 170 + 170$). Besides the groups of 10 bowls, there were another 6 bowls with 17 cotton balls in each (6×17). To simplify that calculation, James thought of each bowl as having 10 white and 7 gray cotton balls, which yielded 60 white balls (6×10) plus 42 gray balls (6×7), for a total of 102 cotton balls in those 6 bowls. Then he added $170 + 170 + 170 + 102$, which came out to 612.

A basic mathematical principle underlying James's method is the distributive property of multiplication over addition, which says that $(10 + 10 + 10 + 6) \times 17 = (10 \times 17) + (10 \times 17) + (10 \times 17) + (6 \times 17)$. The distributive property also says that $6 \times (10 + 7) = (6 \times 10) + (6 \times 7)$. James knew how to apply the distributive property, but when he worked with an image of cotton balls arranged in bowls, he was not merely manipulating numbers based on a set of rules he had memorized. He was able to perform the calculation as it made sense to him—that is, as it followed from his image of the context.

As Thomas, James, and their classmates developed their strategies in small groups, Ms. Sweeney went from group to group, sometimes asking questions or making suggestions and sometimes just listening. Having observed Thomas's mistaken strategy, she decided that it provided a learning opportunity for the class. When she gave the homework assignment, she was asking her students to go beyond evaluating whether the strategy was correct or not; she was challenging them to determine where it went wrong and how to make it right. To answer that question, students needed to examine closely the difference

between addition and multiplication, highlighting the importance of thinking in terms of images like James's. This task also gave them an opportunity to state the distributive property explicitly. This one homework assignment yielded two further days of deep mathematical discussion in Ms. Sweeney's 5th grade class.

Teachers Consider Thomas's Strategy

In a professional development seminar,² my colleagues and I explored Ms. Sweeney's approach with a group of teachers. After viewing the video clip, many of the teachers were initially shocked by Ms. Sweeney's behavior. They didn't understand why she would "embarrass a student" by asking him to share his incorrect work. Some were dismayed that she would "punish the class" by assigning homework because one student made an error.

Rather than discuss these issues immediately, the facilitator asked the teachers to examine Thomas's strategy for themselves. After Thomas added 4 to 36 and 3 to 17, what would he need to subtract in order to get the correct result?

The teachers went to work in pairs and threes to examine different ways to approach the problem. The facilitator moved from group to group, listening to teachers, asking them to explain in more detail, and sometimes suggesting an approach. When each group had developed at least one way to think about the problem, the facilitator brought them all together to present their ideas.

Annie volunteered to share her initial thinking, which she realized was not completely correct. She said, "I did something that seems like it should be right, even though I know it's not." She explained that when Thomas added 4 to 36 and 3 to 17 and then multiplied 40×20 , he wasn't adding 4 units and 3 units, but 4 groups of units and 3 groups of units. She continued,

So I first thought you need to subtract 4 groups of 17 and 3 groups of 36. But when I did the calculation, $800 - (4 \times 17) - (3 \times 36)$, I got 624—not 612, which we already know is the answer.

I didn't take away enough, so I thought maybe I multiplied by the wrong size group. Maybe I need to take away 4 groups of 20 and 3 groups of 40. But when I did this calculation, $800 - (4 \times 20) - (3 \times 40) = 600$, I ended up with an answer that was too small!

I thought that was really strange. Then the facilitator came and suggested that we think of a story context.

A story context would allow the teachers to picture the steps of the problem, as James had done. Ming suggested the following context:

There are 40 children in a class, and they each paid \$20 for a field trip. The teacher collected 40×20 , or \$800. But on the day of the field trip, 4 students were absent. That means she needed to give back \$20 to each of those children, $800 - (4 \times 20)$. Then the teacher went to the museum with 36 children, but when they got there they realized that the entrance fee was \$17 instead of \$20. That meant that each of the remaining 36 children got \$3 back. So now we have $800 - (4 \times 20) - (36 \times 3)$, which the teacher paid to the museum. And that's \$612—\$17 for each of 36 children, or 36×17 .

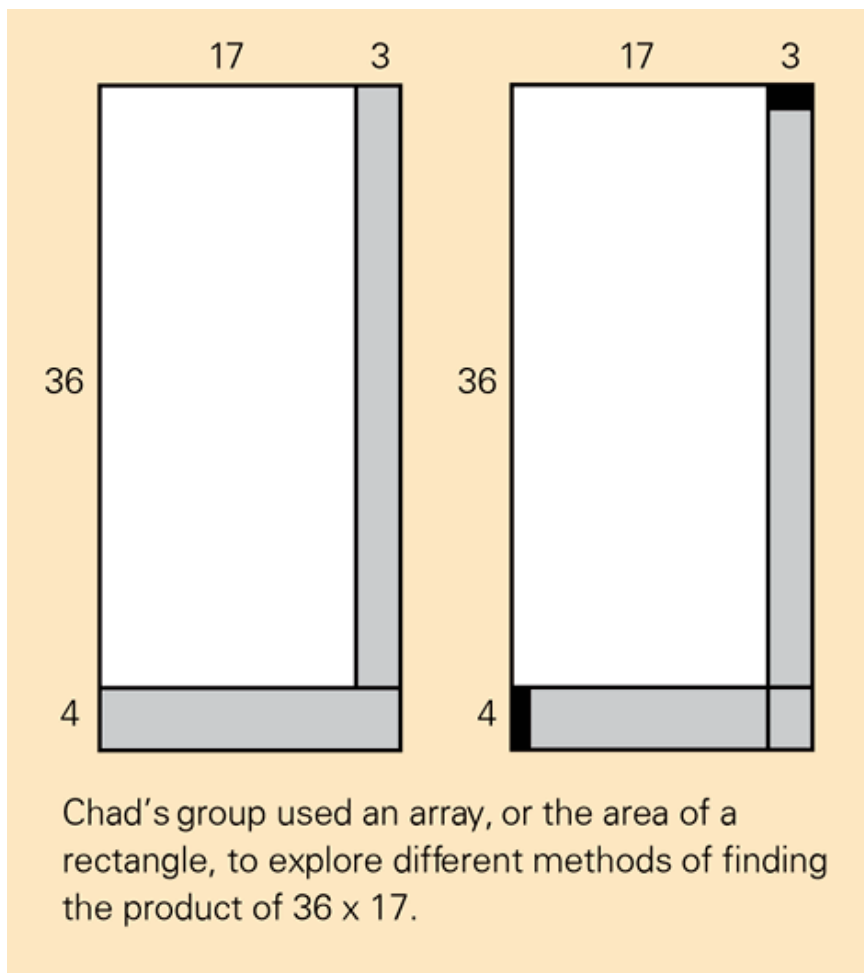
Ming added, "If you think about what Thomas did, it's like he gave each of the 4 absent students only \$1, and he gave only 1 other student \$3."

Chad offered his group's use of an array, or the area of a rectangle, to think through the problem (see fig. 1). He explained,

The white part of the figures shows 36×17 , and the gray regions show what gets added on when you change the problem to 40×20 . In the picture on the right, you can see where Thomas went wrong. Instead of subtracting everything that got added on, he just took away what's shown in black.

You can see Ming's story in the diagram on the left. The gray region at the bottom stands for the money that was returned to the 4 children who were absent. The gray region on the right is the money that was returned to the 36 children who went on the field trip. The white region is the money that was paid to the museum.

Figure 1. Chad's Diagram



Annie pointed out that, when looking at Chad's diagram on the right, she can see more clearly why each of her initial answers was 12 off: "The first way I looked at it, I failed to subtract that little piece in the corner. The second way I looked at it, I subtracted that little piece twice."

Aisha offered a fourth way of viewing the problem:

I wrote out the arithmetic and applied the distributive property: $(36 + 4) \times (17 + 3) = (36 \times 17) + (36 \times 3) + (4 \times 17) + (4 \times 3)$. So when Thomas multiplied 40×20 , he needed to subtract those last three terms to get back to 36×17 . When I was in high school, we called that procedure FOIL—you multiply the First terms, Outer terms, Inner terms, and Last terms. The thing is, I always did that because I was told that's the way to do it. But now that I can see it in the diagram, it really makes sense.

In this professional development session, participants offered four approaches to examine Thomas's strategy and figure out how to correct it. Note that, like Thomas, Annie chose to share her unresolved thinking. Looking together at what seems like it should be right, even though we know it's not, the teachers used several approaches to figure out where Annie's thinking went wrong. By sharing their different approaches, the teachers could compare approaches to see how one representation appeared in another.

The Professional Development Teachers Need

If teachers themselves were taught mathematics as discrete procedures and definitions to be memorized, how can schools prepare them to implement a more challenging, concept-based mathematics pedagogy? As a starting point, professional development needs to challenge teachers' conceptions of mathematics teaching and learning, opening them up to a process of reflection so that new insights can emerge.

Liz Sweeney's homework assignment provided just such an opportunity to the participants in the professional development seminar. Once the teachers had explored the mathematics in Thomas's error, they returned to their own questions about Sweeney's pedagogical approach. Among their comments were,

Of course all students know that addition and multiplication are different, but they don't always think about that. Our exploration of Thomas's error really highlights how you have to think about multiplication differently.

With these images, the distributive property isn't just a rule to memorize. You can see why it has to work.

I bet Thomas felt proud to have presented something that got his classmates thinking so hard.

Such insights cannot be induced by a series of lectures or workshops on instructional strategies. Instead, professional development programs need to dig deeper, giving their participants opportunities to construct more powerful understandings of learning, teaching, and disciplinary substance.

A first step in helping teachers change their pedagogy is to place them in seminars where they can explore disciplinary content, develop new conceptions of mathematics, and gain a heightened sense of their own mathematical powers. As learners of mathematics, they experience a new kind of classroom. In these seminars, teachers reflect on their own learning processes and consider those features of the classroom that support or hinder them. Through such professional development, we can inspire teachers to envision and implement a new kind of mathematics pedagogy—one in which student understanding and collaborative thinking take center stage.

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Endnotes

¹ This classroom episode can be seen in the video component of Schifter, D., Bastable, V., & Russell, S. J. (1999). *Building a system of tens*. Parsippany, NJ: Pearson.

² The session described here is a composite of several seminar groups that were part of the Developing Mathematical Ideas professional development program.

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The Linchpin Year

Billie Donegan

To truly improve the freshman year, we must turn the conventional wisdom about staffing and culture on its head.

When it comes to where I focus my energy in education, I call myself a reformed elitist. After 20 years at South Grand Prairie High School, I was teaching Academic Decathlon (the nine smartest students in the building), Advanced Broadcast Journalism (the 12 most popular students in the building), and honors courses for seniors. Then my principal insisted that I teach what she had the nerve to call “regular freshmen,” which everyone knows is an oxymoron. I tried logic, pleading, and tap dancing to get out of it. She persisted.

Switching my focus to freshmen changed my teaching life, and I’ve never looked back. Not only do 9th graders’ skills and attitudes grow before your eyes, but their bodies also morph so quickly that you barely even recognize your students by the end of the year. For my last seven years of teaching and my subsequent seven years as a school reform consultant, 9th grade has been my passion. I have realized a key truth: If you want to reshape high school, start by changing 9th grade.

Tinkering Around the Edges

When it comes to changing 9th grade, words abound but actions are few. Everywhere you turn in the “high school conversation,” people are writing and talking about 9th grade as the foundation for high school

redesign. Collectively, researchers agree that the first year of high school is pivotal in terms of adjustment and achievement. Everyone nods when presented with data telling us that more students fail 9th grade than any other year, that discipline referrals and absentee rates increase in 9th grade, or that the dropout rate peaks between 9th and 10th grade. We chorus in unison that the quality of instruction in the first year of high school is the determining factor in subsequent academic accomplishment.

Knowledge, however, is not action. Successful transition to high school is an ongoing process. It cannot be accomplished in a day, in a week, or through a single program. It requires a fundamental reshaping of the culture in secondary schools and classrooms—and you can't do that kind of reshaping without stepping on a few toes. To truly change the 9th grade experience, schools must value ensuring the success of students above maintaining harmony among all the adults in the building.

Unfortunately, as I've observed while working on 9th grade reform initiatives through such groups as High Schools That Work, the Education Alliance, and the Center for Secondary School Redesign, schools rarely take this risk. What many schools proudly call their emphasis on 9th grade mostly involves tinkering around the edges, focusing on isolated activities or programs. In the sincere belief that they are doing something, such schools design their freshman transition programs as a series of events rather than a process that they must maintain before, during, and even after the 9th grade year.

Schools engage in time-consuming, glitzy programs that often yield little result. For example, some invest in a freshman orientation package complete with ropes courses and videos yet fail to ask themselves which students most needed orienting to begin with, which students didn't attend and why, and whether this elaborate orientation made a difference.

Other schools create an advisory program that resembles a content-crammed course, with Cornell note-taking introduced one week

and character education the next. Even with no evidence that freshmen's note-taking skills or character have improved, the show must go on. I've heard administrators state that a 30-student 9th grade advisory period, which meets once every other week for 30 minutes, "ensures that every student develops a caring relationship with an adult advocate." Or that every 9th grader in the school has a personal plan that includes a career goal and an "academic program of study for the 21st-century workplace." A walkthrough of classrooms, however, reveals low-level assignments, outdated instruction, and students with paltry understanding of or commitment to their plan.

Why Are the Newbies Teaching 9th Grade?

High school leaders may say, with all sincerity, that they value 9th grade as the linchpin of secondary school redesign. But if you want to know what and whom a school *really* values, examine its master schedule. Staffing and scheduling decisions are clear evidence of where priorities—and status—lie.

When working with individual high school principals, I frequently walk them through two activities using the master schedule. First, I have them calculate a quick average of the student-to-teacher ratio in classes at each grade level. This analysis frequently reveals that the lowest student-to-teacher ratio exists at the senior year and the highest ratio at the freshman year. This alone rings an alarm bell. That alarm usually sounds louder when the principal and I examine teacher quality and experience.

The second activity typically takes place behind closed doors and with a shredder handy. I ask principals to identify the top 10 teachers in their building and tell me what and whom those teachers teach. More often than not, this list predominantly involves honors courses or upperclassmen. We then look at where first-year teachers are assigned. You guessed it: They are predominantly teaching 9th grade. In schools where tracking exists, many are teaching lower-level 9th grade courses.

We have wonderfully talented teachers coming into the profession, but everyone will tell you that a learning curve exists. Administrators don't seem to grasp that it's unwise to put teachers who are still feeling their way into the job with the students in greatest need. The most disturbing comment I heard in this regard came from a math department chair. She had assigned a first-year teacher with poor classroom-management skills and a sorely inadequate repertoire of teaching strategies to teach remedial algebra to freshmen. When I asked her about the wisdom of such a staffing decision, the department chair stated, "I put him where he would do the least damage."

In the medical field, the mark of a top professional is the ability to problem solve the hard cases. So why do so many top teachers wind up working with only top students, avoiding the hard cases altogether? Because many high schools have developed an unacknowledged seniority system that says, "The longer you're in the building, the better the students you get"—and by *better*, we mean older students or honors students. Most faculty members admit that teaching 9th grade does not carry the prestige of teaching honors seniors. Rarely, however, do we reflect on what this admission says about which students we value most. To do so would make us uncomfortable and force us to rethink our use of teacher assignments. It might force us to act on our pronouncements about the high priority of 9th grade—by making staffing decisions that reflect that priority.

Breaking Through "School as Usual"

In school redesign, we are constantly battling the gravitational pull of school as usual. Even more pernicious than the structural status quo is the instructional status quo. Freshman transition is no exception. Administrators may earnestly want to make instruction more challenging, personalized, and aligned with 21st-century realities, yet most 9th grade courses retain the shape of former decades. Schools' ability to creatively reform instruction, in turn, depends on wise staffing and

scheduling decisions, on getting the right people into the places that most need quality.

So how can administrators overcome the pull of school as usual to recast the freshman year? Here are a few beginning steps I've seen schools use successfully to foster productive changes in scheduling and staffing.

Change Staffing

First, conduct a staff analysis to determine who's teaching which kids and how placements should change. Analyze data to see whether a relationship exists between class size and student failure. Armed with the results, shift assignments where they matter most. Ninia Aldrich, principal at Kamehameha School in Hawaii, which has achieved great results through reshaping its freshman year, notes, "I hand-pick who gets to teach 9th grade."

In getting buy-in for necessary shifts in staffing, take one of two approaches. Either talk with the teachers you want to tap for 9th grade one-on-one, letting teachers know it's because of their skill that you want them with the freshmen. Call it missionary work, strike deals if you have to, but don't take no for an answer. Or, talk with the school as a whole and gradually build up the idea that the best and brightest should be teaching 9th grade. When you announce staffing changes, those who shift to 9th will know it's a compliment.

Change Scheduling

A key change is to design and offer math and English electives—taught by your top in-house educators—that help lower-skilled 9th graders catch up. North Lawndale High School in Chicago, for instance, schedules double blocks of English 9 and a remedial reading program called Read 180 for their many freshmen who read far below grade level.

You might also allow freshmen to defer a required course (such as physical education) so that they can take an elective that taps into a

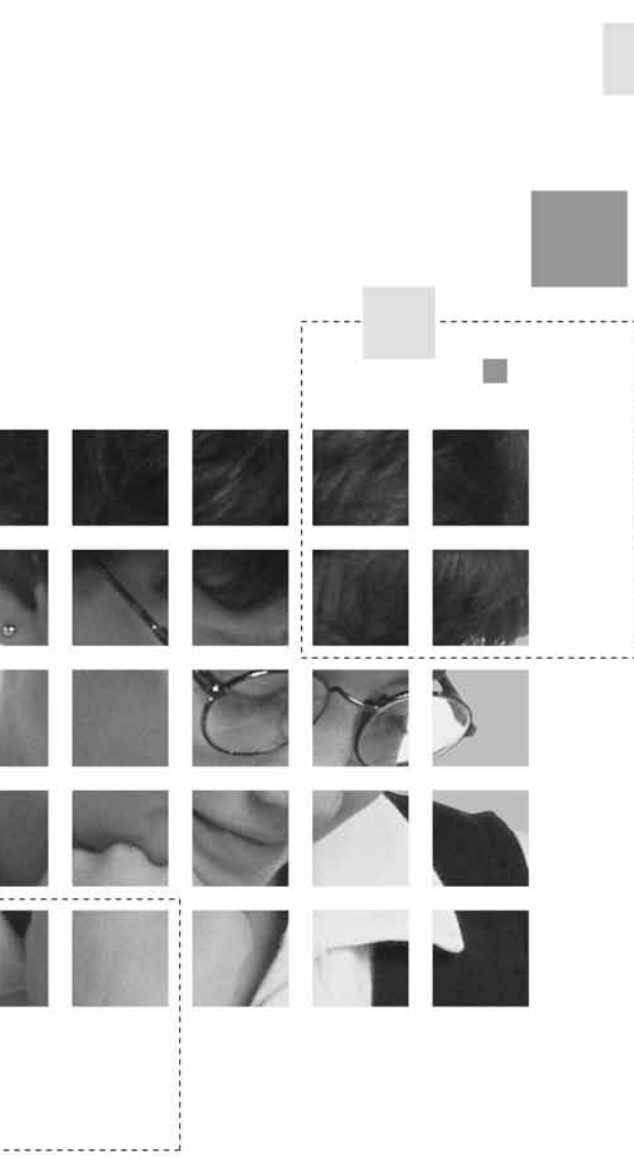
personal interest or talent. A chance to enjoy and excel in at least one class should decrease frustration and boost enthusiasm for school.

Arrange for interdisciplinary teams to teach the same small group of 9th graders. Each team should have *most* of their students in common: The more students a teacher team has in common, the more invested teachers become. Help each team develop a plan for providing personalized support and innovative instruction to their 9th graders. One caution: don't leap to collaboration on cross-disciplinary *instruction* until you are sure that all teachers involved are solid in their own discipline and all practitioners in the same content area are in synch. Teams can collaborate on relationship building with common students, but hold off on cross-content lesson planning until content-area teams are solid.

Changes like these can yield great results—and high schools can adopt many of them simply by reallocating resources and reassigning teachers. We must stop avoiding the challenge of reshaping 9th grade at a foundational level out of fear that shifting that foundation will smash a few toes. If we truly believe that freshman year is the linchpin of high school reform, let's move beyond words to actions.

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Part 3

Leveling the Playing Field

Changing the Odds

Susan B. Neuman

Research-based principles of early intervention explode the myth that nothing works for economically disadvantaged children.

For a nation that claims to place a priority on leaving no child behind, the United States has allowed a tragic paradox to evolve over the last several decades. On one hand, the neurobiological, behavioral, and social sciences have seen an explosion of research on children's development (Shonkoff & Phillips, 2000). These scientific advances have dramatically increased our capacity to intervene and support highly vulnerable children.

On the other hand, it is astonishing how little this growing body of research has improved the prospects for children growing up most at risk. With social and economic circumstances placing more and more families at high risk (Wertheimer & Croan, 2003), no one would question the urgency of finding new ways to break the cycle of disadvantage. Yet despite nearly half a century of considerable research, we have rarely used the findings of these studies constructively to improve policy and practice for disadvantaged children and their families.

The gap between knowledge and action may spring from the multidisciplinary nature of intervention. Research on the developmental trajectory of children has typically cut across many traditional academic boundaries in both the physical and social sciences. Fortunately, recent research syntheses have helped generate a new, integrated science of child development (Farran, 2000; Shonkoff & Meisels, 2000). The

findings from these syntheses are robust: Scientific studies now show that, under the right conditions, early intervention can dramatically improve the odds for children at risk.

What Do We Know?

Intervention refers to systematic and intentional efforts to provide supplemental health, education, and social services to at-risk children and their families. The at-risk designation is usually associated with poverty, although it may include many other factors, such as lack of maternal education, limited English proficiency, low birth weight, and medical impairments (Neuman, 2003).

Whatever formula we use to identify those at risk, we find the same implications: For disadvantaged children, the prospects are bleak (Rothstein, 2004). These children are likely to progress poorly in school, with concomitant risks associated with low grades, retention, special education placement, school dropout, and later, adult unemployment. Some researchers have expressed profound skepticism that any form of education intervention can alter the cumulative negative toll that poverty and other disadvantages take on the development of young children (Herrnstein & Murray, 1996).

The recent research syntheses, however, reveal that early interventions *can* produce meaningful, sustainable gains in cognitive, social, and emotional development for high-risk children. In fact, a cross-sectional analysis of these studies (Neuman, 2003) found remarkable consistencies in major findings about education interventions. The story that the research reveals is striking: When children receive responsive, consistent caregiving in safe, stimulating settings, they can make a remarkable recovery from the devastations of poverty. They can learn how to form healthy relationships with others, become eager to learn, and develop the skills and knowledge necessary to finish school and build a productive life. But the subplot in this story is equally important: Interventions are only effective under certain circumstances.

Principles of Effective Intervention

Programs and policies that produce moderate to large effects on children's cognitive and social development are consistently characterized by seven major research-based principles. Together, these principles provide a road map for policymakers in funding what works and for educators and caregivers in ensuring that we implement programs that lead to sustainable benefits for children.

Targeting

Research indicates that the children most likely to benefit from interventions are those at greatest risk. For both biologically and environmentally vulnerable populations, program effects are greatest for more disadvantaged children and families.

For example, an analysis of findings from the Perry Preschool Project, a preschool intervention program, reveals that the children who showed the greatest relative gains were those who had receptive language skills more than two standard deviations below average (Schweinhart, 2004). Similarly, children of higher-risk participants in the Nurse-Family Partnership program—a home-visiting program in Memphis, Tennessee, providing health care and parent education to first-time mothers—benefited more than those in the lower-risk groups (Olds et al., 2004). These gains translated into important cost benefits: The public saved \$6.92 for every dollar invested in the program for those at higher risk, but only \$1.43 for every dollar invested for those at lower risk (Bruner, 2004).

Why is targeting so important? By focusing on the children with the greatest needs, targeted programs can establish smaller adult-child ratios and individualize service delivery. For example, Early Head Start (www.ehsnrc.org), a program emphasizing parent education in the very earliest years, works on the basis of parents' and children's individual needs. Weekly visits focus on helping families reach overall

benchmarks specially tailored to the family's most crucial needs (Raikes et al., 2006).

Programs thwarted by inadequate resources and the resulting professional inertia have often worsened the situation for poor children. Targeted programs enable us to serve these children without diluting the quality of the intervention by spreading resources too thin.

Developmental Timing

Developmental timing refers to the actual onset of the intervention. In many cases, the earlier children receive help, the better. For example, it is far more efficient to prevent reading difficulties early than to wait until more serious problems occur and costly remediation becomes necessary (Snow, Burns, & Griffin, 1998). We must also be cautious, however, about intervening too early—for example, by falsely identifying students as learning disabled when they merely need more time. Such overidentification can lead schools to engage students in developmentally inappropriate activities. Drilling young children in alphabet skills when they are only beginning to explore these symbol systems can be counterproductive, smothering their interest and motivation to read later on (Lyon & Fletcher, 2001).

In dealing with some conditions, such as chronic health issues, early identification and intervention are crucial. The Brookline Early Education Project (BEEP), a school-based prekindergarten program operating in two Massachusetts communities (Brookline and Boston), conducted early and periodic assessments of children from shortly after birth until entry into kindergarten to monitor their development and to head off health problems. These early diagnostic screenings were effective in reducing communication and cognitive problems caused by hearing loss related to chronic ear infections (Hauser-Cram, Pierson, Walker, & Tivnan, 1991).

Similarly, research found that Avance (www.avance.org)—a multifaceted intervention operating in about 10 Texas communities

and providing health care, education, and support for Latina mothers with children from birth to age 3—was effective in preventing early developmental concerns from becoming more serious problems later on (Rodriquez, 1999). Avance’s nine-month core program educates mothers about their children’s emotional, physical, social, and cognitive development, as well as providing literacy, English-language, and GED preparation classes.

Policymakers should consider several important guidelines when deciding on the timing of early intervention:

- Programs that provide direct services to parents should begin as early as the prenatal period, or within a few weeks of birth.
- Programs that provide periodic screening, health care, good nutrition, and tactile/kinesthetic stimulation to children should also begin as early as possible. These programs can significantly reduce health care costs.
- Programs that provide direct services to children in child care and preschool settings should begin in the late toddler/early preschool years.

Intensity

Another consideration is the intensity of the intervention. The equation here is simple: More intensive programs produce larger positive effects. Similarly, children and parents who participate most actively and regularly show the greatest overall progress.

What matters in intensity is not only the amount of time devoted to the program but also how the program uses that time. Intensive programs are highly focused; they treat their time with children and parents as a limited and valuable resource. For example, Bright Beginnings (www.cms.k12.nc.us/programs/PrekServices/index.asp), a full-day prekindergarten program currently serving approximately 3,000 children in the Charlotte-Mecklenburg School District, North Carolina, zeros in on children’s cognitive, language, gross-motor, fine-motor, and

visual-motor skills—all strongly related to school readiness. Teachers meet regularly with diagnostic specialists and work individually with children who need additional attention. School district evaluations have found that Bright Beginnings students show significant gains in literacy and math at the end of 1st grade (Smith, Pellin, & Agruso, 2003).

We can examine intensity by asking, What specific interventions does the program add to the child's regular early childhood activities—how often, for how long, with how many other children, and administered by whom? Children are likely to make good progress if they receive help for a substantial length of time each day, one-to-one or in a small group, with a highly trained professional. But if services are intermittent or infrequent—such as a home visit once a month or a three-hour class one day a week—the program is likely to be inadequate. Changing the outlook for highly vulnerable families is a gradual, fragile, and often reversible process; our most needy children and their families typically need extensive and specific support.

Professional Training

High-quality programs are defined not only by the services delivered, but also by the staff that delivers them. A substantial body of research attests to the importance of highly trained staff (Bowman, Donovan, & Burns, 2000). Programs that demonstrate significant, long-term, life-changing effects for our most disadvantaged children all use professionals, not just paraprofessionals or volunteers.

There is no substitute for a well-trained staff's knowledge, commitment, and ability to interact with the target population. These factors are fundamental to the success of any intervention. Best-evidence syntheses, for example, have repeatedly shown the benefits of highly qualified teachers in early childhood programs (Barnett, 1995).

Quick-fix training programs will not work. We must recognize that successful intervention for our most at-risk children requires our

best teachers and service providers—caring, competent, flexible, highly trained individuals. Nothing less will do.

Coordinated Services

More often than not, families and children who are in greatest need of early intervention struggle with persistent health problems, poor nutrition, and a high degree of stress in their lives. We cannot undo the damage caused by these combined conditions with isolated fragments of help that focus on one particular area.

Successful programs that change the odds for children reach beyond traditional boundaries, helping to coordinate health, social services, and education for families who must often deal with tremendous obstacles. These programs recognize that children learn best when they are healthy, safe, and in close and enduring relationships with family, caregivers, and teachers. The essential features of coordinated services include (1) providing children with health and developmental screening and monitoring, (2) supporting families through direct and indirect services, and (3) connecting strong education interventions for children with family support through information and parent education.

Head Start, a clear leader in establishing comprehensive services, has from its inception provided much-needed health and nutrition support to families with a variety of concrete problems (Zigler & Valentine, 1979). One of its most important contributions has been an emphasis on the whole child. A number of programs have followed Head Start's lead, demonstrating powerful long-term effects on children's development. For example, the Child-Parent Center Program, now running for more than 30 years in the most impoverished areas of Chicago, provides a skills-based early childhood program along with comprehensive family supports that include health and social services. Community-based programs and health and nutrition specialists are located on-site, offering a wide array of programs to support family life (Reynolds, 2000). A follow-up study examining 1,529 20-year-olds found that more than

two-thirds of the students who attended the program achieved a higher rate of high school completion (50 percent compared with 39 percent for students who did not attend) and a lower rate of juvenile arrests (17 percent compared with 25 percent). The program provided an economic return of \$7.10 for every dollar invested (Reynolds, Temple, Robertson, & Mann, 2001).

Programs that treat families with dignity and respect—and are sensitive to their cultural and socioeconomic circumstances—encourage greater use of services and are therefore more effective.

Compensatory Instruction

In the early years, children rapidly develop the foundational capacities on which they build their subsequent development. In addition to their rapid growth in the linguistic and cognitive domains, they establish crucial dispositions for learning, such as motivation, curiosity, and problem-solving skills.

Social and economic disadvantages can seriously compromise these important dimensions of development. Children who come from disadvantaged circumstances often lack rich opportunities to learn. Striking disparities in their knowledge and skills mean that they need to catch up quickly. Therefore, early interventions should provide compensatory instruction to bridge the gap. Effective compensatory programs include these essential features:

- They recognize that children’s progress must be accelerated, and therefore provide higher-quality and faster-paced instruction than more advantaged children would need.
- They achieve accelerated progress by focusing on specific learning goals, such as helping children use language more flexibly and confidently to express ideas and to understand logical relationships.

In compensatory programs, depth matters more than breadth. The Abecedarian early intervention program, for example, placed special emphasis on language development. The program provided economically disadvantaged 4-year-olds with individual sessions that focused on prephonics skills twice weekly for 45 weeks. Caregivers and teachers received intensive training in how to foster sociolinguistic competence in the children. The language curriculum, which was implemented throughout the day, focused on pragmatic features rather than syntax and emphasized the contingent and interactive features of adult-child language (Campbell & Ramey, 1995).

The Abecedarian project was a controlled scientific study that randomly assigned four cohorts of children, born between 1972 and 1977, to either the early educational intervention group or the control group. Follow-up studies conducted at ages 12, 15, and 21 found that participants received long-lasting benefits from the program (FPG Child Development Institute, n.d.).

If we spend funds on programs that ignore disadvantaged children's significant difficulties and attempt to mimic the kinds of environments that average preschoolers typically experience, we may merely intensify the differences among children of different social classes. Compensatory programs, through their intensity, focus, and accountability, have produced powerful and lasting effects on achievement.

Accountability

Determining whether programs are accomplishing their goals demands greater accountability, the final principle of effective early intervention. Programs that monitor progress, provide careful oversight, create clear expectations, and evaluate effects have shown dramatic results.

Good accountability looks at how faithful the intervention is to its original design. It asks, for example, Do the anticipated visits to parents in an Even Start Program actually take place? Do they follow

a specified format? Do the visitors spend the expected amount of time in each home? Together, these details describe whether and to what degree families and children actually receive high-quality services.

Good accountability also uses valid, reliable, and accessible tools to measure not just the program's effects on cognition, but also its effects on other characteristics essential for school readiness, including social-emotional skills, dispositions for learning, and self-regulatory skills. In this respect, the National Reporting System requiring the testing of all Head Start children in language, prereading, and math skills has come under a firestorm of criticism for ignoring other important program goals. Poor accountability mechanisms can unfairly penalize programs and undervalue factors that have made those programs successful.

To some, accountability may appear as uncomfortable as a tax audit. However, good accountability is actually in the interest of the program designer. Accountability measures provide helpful information on the quality and intensity of the services and whether adjustments are needed to enhance the program's effectiveness. Rather than continue to repeat the mistakes of the past, providers can look to accountability to provide a much-needed record of what works under what conditions, building a powerful knowledge base of effective intervention strategies for high-risk children and families.

Accountability helps make the process of teaching and learning a dynamic one, engaging everyone as a community in continuous improvement. It should not be used as a crude evaluation tool to judge teachers or children. Instead, accountability is designed to improve programs by using data to make better decisions in pursuit of better results, knowing that children's earliest years are precious and cannot be replayed or simply revised.

Can We Improve Children's Lives?

Recent syntheses of research on economically disadvantaged children, early learning environments, and basic instructional strategies provide us with a rich set of clues about interventions that improve children's development. Early interventions can profoundly affect the developmental outcomes for disadvantaged children and their families—but only if the interventions are of high quality and follow the principles supported by the robust evidence now available.

These practical principles for enhancing children's daily environments help us turn predictable failure and despair into life-changing success and achievement. Together, they combine the lessons of research and practice to explode the myth that nothing works. They show what we need to do and what we can do to fundamentally change the odds for economically disadvantaged children.

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When Mobility Disrupts Learning

Jean Louise M. Smith, Hank Fien, and Stan C. Paine

Using proactive strategies, schools can reduce the adverse academic effects of student mobility.

As schools struggle to improve the reading achievement of *all* students, one factor that often impedes their success is student mobility. Unfortunately, mobility is a common phenomenon that disproportionately affects students in high-poverty schools.

A U.S. General Accounting Office (1994) study found that 40 percent of 3rd grade students in the United States had moved at least once between 1st and 3rd grade; 17 percent of those students had changed schools at least twice during that time. More recently, Rumberger (2003) analyzed 1998 data and found that 34 percent of 4th graders, 21 percent of 8th graders, and 10 percent of 12th graders had changed schools at least once in the previous two years. Fourth grade students in poor families were much more likely to have changed schools in the last two years (43 percent) than were students in nonpoor families (26 percent).

The Effects of Student Mobility

Student mobility has “potentially deep and pervasive consequences” for individual students and the schools they attend (Kerbow, 1996, p. 1). Mobility can harm students’ nutrition and health, increase grade retention, and lower academic achievement (U.S. General Accounting

Office, 1994; Wood, Halfon, Scarlata, Newacheck, & Nessim, 1993). High student-mobility rates can also disrupt the learning environment in the classroom and throughout the school (Lash & Kirkpatrick, 1990).

Research is especially clear about the effects of mobility on academic skills, such as reading. When students move repeatedly, their reading skills often fall further and further behind those of their peers (Alexander, Entwisle, & Dauber, 1996; Kerbow, 1996; Nelson, Simoni, & Adelman, 1996). Without intervention, highly mobile students are likely to experience reading difficulty throughout their school careers and, indeed, throughout their lives (Juel, 1988; Vellutino, Scanlon, & Spearing, 1995).

To illustrate the effects of student mobility on reading achievement, Table 1 shows the spring reading performance of 2,289 2nd grade students who attended 34 schools across Oregon during the 2005–06 school year. The selected schools served high-poverty populations, had a history of poor student-reading outcomes, and were engaged in a multiyear school reform effort. Students in Group A attended the same school across three years, from kindergarten through 2nd grade; those in Group B attended 2nd grade in the same school across one year; and those in Group C moved into a school in the middle of 2nd grade. As measured by the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) Oral Reading Fluency Assessment and the Stanford Achievement Test, reading performance increased the longer a student stayed in a particular school. The differences in scores among the three groups were statistically significant.

Table 1. Reading Performance of Stable and Mobile 2nd Grade Students

Spring Measure	Level of Stability					
	More ←————→ Less					
	Group A (<i>n</i> = 1077)		Group B (<i>n</i> = 945)		Group C (<i>n</i> = 267)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
DIBELS Oral Reading Fluency	93.5	33.1	84.0	39.8	75.4	40.6
Stanford Achievement Test	594.2	39.3	585.0	42.8	577.3	40.8

Note: Group A: Students who attended the same school from kindergarten through 2nd grade. Group B: Students who attended the same school during 2nd grade. Group C: Students who moved into a school in the middle of 2nd grade. *M* - Mean *SD* - Standard deviation

Strategies for Success

For many schools—especially those serving high-poverty communities—the discontinuity caused by student mobility is a constant phenomenon. The most successful schools acknowledge the problem and implement schoolwide reading systems to provide instructional support for all students, including students who move into the school midyear (Simmons et al., 2002). An example is the Bethel School District in Eugene, Oregon, whose seven elementary schools have student-mobility rates ranging from 8 percent to 21 percent. The proportion of students eligible for free and reduced-price lunch in these schools ranges from 30 percent to 76 percent.

The Bethel School District began implementing schoolwide and districtwide reading systems more than a decade ago, after analyzing reading data and noticing a discrepancy between the reading achievement of mobile students and that of their peers. Knowing that the causes of student mobility were largely beyond their control, district staff members implemented strategies to reduce the harmful effects of mobility on students' reading achievement. The following strategies

have been particularly effective in the Bethel School District and others like it.

Implement an Enrollment Plan

Student records often do not transfer to the new school until days or weeks after the student arrives. In the meantime, teachers have difficulty matching the student with appropriate instruction. Schools can use two strategies to smooth the transition for students and their teachers.

First, assign a staff member to call the previous school as soon as a new student enrolls to gather information about the student's academic experiences. To put this strategy in place, a school team can develop a brief interview form that includes the following questions to ask the previous school:

- What are the student's academic strengths?
- Was the student in any special program at your school (for example, speech/language services, before/after school programs, gifted services, English language development, or academic support services)?
- What was the student's reading and math instruction like at your school (specific programs, amount of time, instructional approach, and so on)?
- Did the student have any attendance problems while at your school?
- Do you have any academic concerns regarding the student?

Second, use screening measures to quickly get an indication of the student's current reading skills and instructional needs. If the student's initial screening and interview information suggests that he or she is significantly behind grade-level expectations, a school team may convene to discuss the types of support the student will need to be successful.

The key to the effectiveness of both of these strategies is pre-planning. The involved staff members should know their roles and be familiar with the process so that the transition happens smoothly and quickly. When developing an enrollment plan, a school should consider who will make the phone call to the previous school (for example, the student's new classroom teacher, the principal, or the school counselor) and who will be responsible for assessing the student's reading skills (for example, the school psychologist, speech pathologist, reading specialist, teacher, or someone else who has received appropriate training in the screening measures).

Implement a Schoolwide Instructional Support Plan

Schools with highly mobile student populations should have a schoolwide, multitiered instructional support plan in place. That way, the school can place students who come into the school midyear in the instructional group, reading program, and tier of support that initial screening has determined will best fit their needs. The plan should allow school teams to systematically differentiate instruction for students who are successfully meeting reading goals, students who are at *some* risk for not meeting goals, and students who are at *high* risk for not meeting goals.

To address the instructional needs of mobile students who are at risk, schools can increase the amount of instructional time, decrease group size, and use instructional programs that are specifically designed to catch students up to grade-level expectations. It is essential that instruction for these students incorporate proven strategies. A recent synthesis commissioned by the Institute of Education Sciences found moderate to strong evidence for the effectiveness of the following methods: spacing learning over time, combining graphic and verbal descriptions, connecting abstract and concrete representations of concepts, using formative assessment, and using prequestions to introduce a topic (Pashler et al., 2007).

Even with strong schoolwide instructional support plans in place, schools sometimes run into the problem of students enrolling midyear who are too far behind to fit into existing reading groups. A Bethel administrator explains the strategy for such students:

Rather than refer them for special education services, these students have been placed in an intensive reading program based on scientifically based reading research; they receive two to three lessons per day, and they have made phenomenal gains.

It is essential that instructional groupings be flexible to respond to students' different learning rates. At monthly (or more frequent) grade-level team meetings, teachers should regroup students on the basis of their progress. Grouping should also recognize the specific skills students need to develop proficiency—for example, phonemic awareness, decoding, or comprehension.

Implement a Coordinated Assessment Plan

Flexible grouping depends on having a coordinated assessment plan in place that not only screens students initially but also regularly identifies current skills, monitors progress, and periodically reviews important outcomes. The assessment plan and schoolwide instructional support plan must be integrated.

When creating a coordinated assessment plan, the school team should consider several questions for each grade level:

- What reliable and valid assessment tools are already in place?
- Do the types of assessment now in place meet the multiple purposes of assessment (screening, progress monitoring, identifying current skills, and tracking important outcomes)?
- Where do we need to implement new assessment tools?
- Who needs training on the different assessment tools?
- When will initial and ongoing professional development occur?

- What is the most effective and efficient way to manage assessment data and create useful reports?
- How will the data be disseminated and used?

To support the schoolwide assessment plan, teachers should prepare extra assessment materials ahead of time to smooth the transition as students move into instructional groups. They should use assessment results to make data-based decisions about student grouping. It is helpful if each teacher maintains a notebook containing assessment materials and individual student performance data that is readily available for grade-level team meetings.

Additional Supports

In addition to schoolwide instructional plans, school districts can ease transitions for highly mobile students by developing consistent curriculum and instruction and by building ties with families.

In some communities, students frequently move between schools within the same district. Having similar instructional programs, assessment systems, and expectations at all schools provides a consistent program for students, makes program placement easier for teachers, and enables schools to align screening and progress-monitoring activities as well as professional development.

Establishing ongoing, effective communication with families of students who frequently move between schools can be challenging. Such homeschool linkages, however, can give the school valuable information about the student and involve parents as active agents in the transition process. Schools can use the following strategies to reach out to all families, including those who are new to the school or district:

- Organize a family resource center in the school. Include educational materials in multiple languages.

- Identify parent liaisons (including some who speak families' home languages) who can effectively explain the school's reading program to parents.
- Identify a staff member who can check in with each new student (and family) frequently during the student's first weeks in the school. This person can help establish a bond among the student, family, and school and may also be able to recommend attendance and behavior programs when appropriate.
- Establish an attendance incentive program. Families who move a great deal may not enroll their children in their new school right away and may not see school attendance as a high priority.
- Schedule a parent conference within a few weeks of the student's enrollment. If needed, have a translator available who can describe the student's progress and instructional plan.

Focus on Problem Solving

It is easy for educators to blame a student's frequent moves on the instability of the family and to conclude that the cycle of moving and falling behind academically are inevitable. When educators give in to this temptation, team meetings can quickly deteriorate from problem-solving sessions to long discussions of the complicated circumstances surrounding an individual student's lack of academic success. Instead of "admiring the problem" in this way (Ysseldyke & Christenson, 1988), school teams should focus on identifying and modifying the factors that are within their control.

A commitment to screening students immediately on enrollment, thoughtfully placing them into flexible instructional groups, monitoring their progress, and adjusting instruction as needed can accelerate learning and thereby provide students with a new opportunity to succeed in school. Developing consistent districtwide curriculums and building strong ties between school and home can provide additional

support for mobile students. Believing that we can make a difference in all students' academic development, regardless of how long they might be with us, brings out the best in educators.

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Delivering What Urban Readers Need

Shobana Musti-Rao and Gwendolyn Cartledge

How should teachers meaningfully respond to students who start school lacking foundational skills? With early, explicit, and culturally sensitive teaching of reading basics.

Akeem, a 6-year-old African American student, sat in a time-out in his kindergarten classroom while the rest of his classmates listened to the teacher read a book aloud. Moments before, as the class engaged in its daily ritual to reinforce basic literacy skills, Akeem had balked. He refused to say the names and sounds of letters and, instead, started a fight with the student sitting next to him.

Time-out during reading group was nothing new to Akeem or several of his classmates—and is a scenario familiar to many other urban students who read below grade level. Frustrated with their repeated failure, they act out. Yet, sadly, the kind of classroom management used in Akeem’s classroom—all too common in urban schools—separates low-performing students from the literacy instruction they need. What kind of instruction and classroom strategies do students like Akeem need to avoid the vicious cycle of repeated failure?

An Acute Problem

Reading difficulty is particularly acute in schools serving students from minority and economically disadvantaged households. Learners from low-income families or minority backgrounds are less likely to speak

standard English (Talbert-Johnson, 2004), and many enter kindergarten without the preliteracy experiences and oral language skills needed for early classroom learning (National Center for Education Statistics, 2001). More than 50 percent of urban learners are substantially deficient in reading; for urban African American and Hispanic learners, the rates approach 70 percent (Bursuck & Damer, 2007).

The importance of identifying urban learners who are at risk for reading problems early cannot be overstated. Reading is a survival skill, and the failure to read during the elementary school years reduces a person's chances of success in school and life.

Educators often emphasize creating "literacy-rich" environments in which children learn to read as a result of being exposed to and enjoying the written word. The problem for underperforming readers is that these indirect approaches are predicated on a set of readiness skills that most of these students lack.

We agree with Bursuck and Damer (2007) that specialized interventions should begin early and should include direct instruction in prereading skills. To prevent long-term reading failure among students who come to school already behind in basic skills and experiences, teachers should include these three characteristics in their classroom design: (1) early identification of children at risk of reading failure; (2) explicit, intensive, and systematic instruction on core prereading and reading skills; and (3) continued support beyond initial instruction. In our research, we have seen that teachers who center their literacy teaching on these three elements bring about successful reading experiences for struggling urban children.

Strategies for Urban Readers

We have found that the following strategies enable teachers to intervene early in ways that reach urban students with reading problems: balanced reading instruction; early identification of at-risk learners; supplemental instruction through 2nd grade; active student responding;

small-group instruction; regular monitoring of reading achievement; peer-mediated activities; positive, nonexclusionary classroom management practices; and parental involvement. All these strategies can, and should, be applied in culturally responsive ways. Some would argue that these are simply examples of good teaching. We contend that culturally responsive instruction *is* good teaching, but these strategies are too often absent from the classrooms of culturally and linguistically diverse urban learners who need them most.

Provide Balanced Reading Instruction

In observing teachers and urban learners, we have formed some opinions about what makes good reading instruction for most urban students. The debate over the right way to teach reading has been the source of intense battles: Proponents of phonics-centered programs emphasize the importance of explicit, systematic instruction in learning to read, whereas whole-language proponents believe that reading is a context-driven process. We agree with findings from the National Reading Panel (National Institute of Child Health and Human Development, 2000) that teachers should adopt a “balanced” reading approach, with instruction in phonemic awareness, alphabetic understanding, and automaticity with the code forming the framework of beginning reading instruction.

Good reading instruction is explicit, intensive, and systematic. Such instruction is beneficial for all learners, but it is nonnegotiable for students at risk for reading failure. By *explicit instruction* we mean teaching specific reading skills that help students acquire the knowledge to decode print—skills that low-income urban learners don’t always acquire through incidental learning. *Intensive instruction* gives students more learning opportunities through increased repetition of previously learned skills. Good intensive instruction techniques, such as active student responding (Heward, 2006), are not meaningless drills that “kill” learning, but carefully planned activities that elicit responding

until a student masters the skill. By *systematic instruction* we mean the sequencing of instruction so that each skill builds on the one previously taught. Students need to become skilled in decoding, word knowledge, oral reading, and comprehension to become proficient readers, and these skills should be taught logically and systematically.

Identify Those At Risk

To be culturally responsive—to respond compassionately—urban educators need to be keenly aware of the fact that many low-income children enter school already behind their more affluent peers. Teachers must embrace their responsibility to help students acquire a solid foundation for school success, recognizing that there is a relatively brief window of opportunity to do so. Ideally, students with risk markers for reading deficiency would be identified and provided quality interventions in preschool. Many large school systems are beginning to recognize this fact and are offering preschool programs. All teachers, however, especially primary grade teachers, should provide intensive interventions to students who clearly need them, at least through 2nd grade.

Teachers in urban elementary schools should conduct skill-specific assessments to gauge students' skill levels in phonemic awareness and letter knowledge, variables considered important in identifying the risk of reading failure. Assessment measures such as the Dynamic Indicators of Basic Literacy Skills (Good & Kaminski, 2002) and the Comprehensive Test of Phonological Processing (Wagner, Torgesen, & Rashotte, 1999) can screen for students who need more intensive instruction in basic literacy skills.¹

In our studies (Musti-Rao & Cartledge, 2007), we assessed students in an urban early elementary classroom for reading risk markers. We found that a sizable part of the class had risk markers. We provided supplemental instruction over three years to students who showed reading risks in kindergarten, using the Early Reading Intervention

program, a scripted curriculum that gives intensive, systematic instruction in phonemic awareness (Simmons & Kame'enui, 2003). When we assessed students at the end of the second year of the study, 40 percent of students who had been identified as at-risk readers (and received supplemental help) were now reading at an age-appropriate level; students who received this intervention in other years of our study showed similar gains. Whereas 28 percent of readers who did not receive supplemental help had regressed in reading skills by the end of the school year, only 7 percent of the early-identified at-risk readers had regressed.

Provide Supplemental Instruction

Clearly, early identification must be accompanied by supplemental instruction if students at risk for reading failure are to succeed. Evidence-based, supplementary reading programs that emphasize phonemic awareness and alphabetic principles must be part of every urban school reading curriculum from kindergarten through 2nd grade. School systems would be wise to invest in research-validated commercial curriculums. An emphasis on supplemental basic instruction should not rule out teaching with good literature and teaching for comprehension and higher-order thinking skills. Rather, through intensive basic instruction, struggling readers will develop the underlying skills that enable them to perform at these higher levels.

Supporting urban learners also requires that teachers adopt culturally responsive curriculums that go beyond describing superficial differences among cultures (Garcia & Ortiz, 2006). Teachers need to connect instruction as much as possible with each student's culture, ethnicity, and personal experience. One highly recommended way to do so in reading programs is through multicultural literature. Students should read many books that reflect their own culture as well as others' cultures. Urban learners who are immersed in literature that explicitly

connects to the experiences of urban and ethnic communities display greater interest in reading and higher achievement.

Encourage Active Student Responding

Research shows a positive relationship between students' active engagement with learning tasks and their academic achievement. Active student response refers to any observable response students make during a lesson. A wide variety of instructional practices—for example, having students orally produce letter sounds after a teacher has modeled those sounds—can qualify as rich in active student responding. If designed well, active student responding can also be culturally responsive. A. Wade Boykin asserts that activities that incorporate movement and what he calls *verve* (the tendency to engage in more than one action simultaneously) create particularly effective learning environments for African American students (Boykin, Tyler, Watkins-Lewis, & Kizzie, 2006). Lambert, Cartledge, Lo, and Heward (2006) found high levels of academic responding and lower levels of disruptive behavior in urban learners when students held up response cards to display their answers. Peer tutoring is another focused teaching activity that is high in student response. Choral responding activities can be especially effective in learning letters, sounds, words, and reading connected text.

Teach Within Small Groups

Even with a strong core curriculum, some urban readers will not respond to whole-group instruction and will need additional reading instruction. By teaching students within small groups, educators can provide instruction differentiated according to students' abilities. Teachers should group urban students in their classes by their level of skill in reading or prereading tasks. Instruction in small groups—in addition to regular classroom instruction—provides opportunities for increased academic responding and student engagement. Teachers can vary the intensity of support depending on which reading skills—if any—need

strengthening. Such specialized instruction should be reserved for students with reading deficits.

We recommend that schools prepare teacher assistants to help students in small groups strengthen their reading skills. Using assistants in this capacity frees up the classroom teacher to work with other students. In our three-year study of urban elementary students (Musti-Rao & Cartledge, 2007), we had instructional assistants and graduate students teach phonemic and phonological skills to kindergarten and 1st grade students. Students received small-group instruction three to five times each week for 20 to 30 minutes for four and one-half months (or seven months in the study's third year, in which only students still reading below grade level received the instruction).

Instructional assistants participated in formal training sessions lasting between two and six hours and using training materials provided by the Early Reading Intervention program. In the sessions, we modeled lessons and coached assistants through practice lessons. The assistants delivered high-quality instruction, and students who received this small-group instruction performed significantly higher on reading assessments than students in the control group.

Monitor Student Learning

To teach effectively, we must continually monitor student learning and skill maintenance. Teachers should not only require students to respond frequently during instruction, but also make regular probes to determine how well each reader is progressing. We recommend that teachers develop schedules to assess students regularly. Low-performing students should be assessed weekly, and high-performing readers, monthly. If the teacher observes little or no progress after several weeks, he or she should change the instructional strategy.

Create Peer-Mediated Learning Environments

With one-half of urban students reading below grade level, providing individual tutoring for such students is a logistical challenge. Through peer-mediated instruction, schools can meet this challenge and also provide communal learning arrangements, which some research indicates benefit learners from culturally diverse backgrounds (Boykin, Tyler, Watkins-Lewis, Kizzie, 2006). Peer tutoring is a research-based strategy in which students are trained to deliver instruction to one another. Students can facilitate classmates' development of reading skills through practicing key activities in dyads or small groups. In such environments, students learn to be responsible not only for their own learning, but also for the learning of their peers. Peer-mediated learning activities give students more opportunities to engage with the target reading skills or materials, opportunities they may not often have at home. Moreover, peer tutoring is an enjoyable activity that helps students be more on task and less disruptive in class.

For example, a teacher might pair students to practice letter names and letter sounds for 25 minutes, three days a week. When struggling readers are provided with three layers of instruction—whole-group reading instruction, supplementary small-group reading instruction, and peer tutoring—they more quickly master the basics and move on to blending sounds and reading simple consonant-vowel-consonant words. Al-Hassan (2006) provides a step-by-step guide for implementing peer tutoring in the classroom.

Practice Nonexclusionary Classroom Management

Classroom management practices common in urban schools unintentionally separate failing urban readers from instruction they desperately need. Low-income and culturally diverse learners, especially males, disproportionately experience suspensions and expulsions from the classroom (Skiba, Michael, Nardo, & Peterson, 2002). Thus, students who need explicit reading help often end up with fewer

learning opportunities; their learning and behavior problems often worsen in tandem.

Teachers need to identify motivators that will make students want to stay in the classroom and learn rather than disrupt class to avoid engaging in learning activities. Instructional activities should be active and should reflect the learner's skill level, interests, and background. For example, a low-performing student might be assigned to work with a peer or the teacher assistant using a computer program on letter-sound correspondence. As students progress and become more confident, they will participate in class more and act out less.

Help Parents Reinforce Learning

Parents are key to reinforcing children's learning. But some low-income parents or parents of English language learners do not know how to help their children learn specific academic skills. We suggest that teachers evaluate how the parents of each student are involved in their child's education. This will help teachers set realistic goals to increase parent involvement.

We should be prepared to provide parents with explicit directions on how to reinforce their children's reading development. For example, when a student is identified as needing intensive instruction, the teacher might meet with that student's parents to explain the exact skills the instructor plans to teach, how he or she will teach them, and what materials will come home for review. Teachers can show parents how to use home-based practice materials with their child and provide a log book to document the work done at home. Such collaboration sends a message to each student that parents and teachers are working together to foster learning.

Offering Learners Their Best Chance

Students like Akeem are plentiful in urban schools. Teachers can often clearly detail the reading deficiencies of these students, but they remain at a loss to identify appropriate interventions. To be culturally responsive to urban students at risk for reading failure means to provide intervention services as early as possible, target key skills that will lead students to solidly master reading basics, and provide instruction that is intense enough for learners to make genuine gains and take pride in those gains.

The classroom should be a positive place for students—and with the right reading interventions, it can be. Many students will continue to need specialized instruction beyond our best efforts in the early grades. But when resourceful teachers respond early with the kinds of strategies outlined here, we offer struggling urban readers their best chance.

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Endnote

¹ See <http://dibels.uoregon.edu> for more information on the Dynamic Indicators of Basic Literacy Skills.

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Learning in an Inclusive Community

Mara Sapon-Shevin

Inclusive classrooms create students who are comfortable with differences, skilled at confronting challenging issues, and aware of their interconnectedness.

Schools are increasingly acknowledging the heterogeneity of their student populations and the need to respond thoughtfully and responsibly to differences in the classroom. It's understandable that educators often feel overwhelmed by growing demands for inclusion, multicultural education, multiple intelligences, and differentiated instruction to deal with the growing diversity.

But what if including all students and attending thoughtfully to diversity were part of the solution rather than part of the task overload? What if we put community building and the emotional climate of the classroom back at the center of our organizing values? What if we realized that only inclusive classrooms can fully support the goal of creating thoughtful, engaged citizens for our democratic society?

Redefining the Inclusive Classroom

After years of struggle about the politics and practice of inclusion and multicultural education, it's time we understand that inclusive, diverse classrooms are here to stay. But inclusion is not about disability, and it's not only about schools. Inclusion is about creating a society in which all children and their families feel welcomed and valued.

In truly inclusive classrooms, teachers acknowledge the myriad ways in which students differ from one another (class, gender, ethnicity, family background, sexual orientation, language, abilities, size, religion, and so on); value this diversity; and design and implement productive, sensitive responses. Defining inclusion in this way requires us to redefine other classroom practices. For example, *access* can mean, Is there a ramp? But it can also mean, Will letters home to parents be written in a language they can understand?

Differentiated instruction can mean allowing a nonreader to listen to a book on tape. But it can also mean organizing the language arts curriculum using principles of universal design, assuming and planning for diversity from the beginning rather than retrofitting accommodations after the initial design.

Positive behavior management can be a system of providing support to students with diagnosed emotional problems. But it can also mean ongoing community building, classroom meetings, cooperative games, and a culture of appreciation and celebration for all students.

What does it mean to think inclusively, and how can this framework enhance the learning of all children? There are many lessons that inclusive education settings can teach us. Here are just a few.

Comfort with Diversity

In our increasingly diverse world, all people need to be comfortable with diversity. Inclusion benefits all students by helping them understand and appreciate that the world is big, that people are different, and that we can work together to find solutions that work for everyone.

Inclusion teaches us to think about *we* rather than *I*—not to ask, Will there be anything for me to eat? but rather to wonder, How can we make sure there's a snack for everyone? Not, Will I have friends? but rather, How can I be aware of the children here who don't have anyone to play with? When we are surrounded by people who are different from us, we are forced to ask questions that go beyond the

individual and address the community. When we have friends who use wheelchairs, we notice that there are steep stairs and no ramps. When we have friends who wear hearing aids, we listen differently to comments like “What are you, deaf or something?” When we have friends with different skin colors, we become more alert to racist and exclusionary comments. When we have friends from different religious backgrounds, we are more aware that the decorations in the mall are about only one religion.

In the absence of diversity, it’s hard to learn to be comfortable with difference. The white college-age students I teach are often confounded about how to talk about people of color: “Is the right term *African American* or *black*? What if the person is from Jamaica or Haiti? How do I describe people?” Similarly, many adults are nervous about interacting with people with disabilities, unsure whether they should offer help or refrain, mention the person’s disability or not.

The only way to gain fluency, comfort, and ease is through genuine relationships in which we learn how to talk to and about people whom we perceive as different, often learning that many of our initial assumptions or judgments were, in fact, erroneous. The goal is not to make differences invisible (“I don’t see color”; “It’s such a good inclusive classroom, you can’t tell who the kids with disabilities are”) but to develop the language and skill to negotiate diversity. Classrooms cannot feel safe to anyone if discussions of difference are avoided, discouraged, or considered inappropriate.

I am always delighted, and a bit stunned, when I see young people easily negotiating conversations about difference that would have been impossible a decade ago and that are still out of reach for many of us. I recently witnessed a discussion of different kinds of families during which children from ages 5 to 8 spoke of adoption, same-sex parents, known and unknown donors, and the many ways they had come to be members of their family. These students, growing up in an inclusive, diverse community, will not need a book that says, “There are many

kinds of families.” That understanding is already part of their lived experience.

As a teacher, you can successfully facilitate discussions like this by doing the following:

- Familiarize yourself with the current terminology and debates about what people are called: Do Puerto Ricans call themselves *Latino*? Why is the term *hearing impaired* preferred by some but not all “deaf” people? If there are disagreements about terms—for example, some people prefer the term *Native American* and some *Indian*—find out what that conversation is about. Model appropriate language when discussing differences in the classroom.
- Provide multiple opportunities for talking about diversity. When a news story is about a hurricane in Haiti, pull down the map: Where is that country? What languages do the people there speak? Do we have anyone at our school from Haiti?
- If you hear teasing or inappropriate language being used to discuss differences, don’t respond punitively (“I don’t ever want to hear that word again!”), but don’t let it go. As soon as possible, engage students in a discussion of the power of their language and their assumptions. Teach students the words *stereotype*, *prejudice*, and *discrimination* and encourage them to identify examples when they see them: “On the commercial on TV last night, I noticed that all the people they identified as ‘beautiful’ were white.”

Inclusion is not a favor we do for students with disabilities, any more than a commitment to multicultural education benefits only students of color. Inclusion is a gift we give ourselves: the gift of understanding, the gift of knowing that we are all members of the human race and that joy comes in building genuine relationships with a wide range of other people.

Honesty About Hard Topics

Inclusion not only makes students better educated about individual differences, but also provides a place to learn about challenging topics. In inclusive classrooms, teachers and students learn to talk about the uncomfortable and the painful.

Often, as adults, we don't know what to do when we are confronted by people and situations that frighten, surprise, or confound us. Children, through their eagerness to engage with the world and seek answers to their questions, can learn important repertoires of communication and interaction in inclusive settings: How can I find out why Michelle wears that scarf on her head without hurting her feelings? How can I play with Jasper if he doesn't talk? Learning how to ask questions respectfully and how to listen well to the answers are skills that will provide a smoother entry into the complexities of adulthood.

In one school, a young boy who required tube feeding provided the opportunity for all the students to learn not only about the digestive system but also about ways to help people while preserving their dignity and autonomy. In another school, a child whose religion kept him from celebrating birthdays and holidays gave other students the opportunity to not only learn about different religions but also brainstorm ways of keeping Jonah a valued and supported member of the classroom. And when a young Muslim child was harassed on the way home from school in the months after the attack on the World Trade Center, the whole class was able to engage in an important discussion of racism and being allies to those experiencing prejudice and oppression.

A student in one classroom was dying of cancer. The teachers, rather than excluding the student and avoiding the subsequent questions, helped all the other students stay informed and involved in his life (and eventually, in his death). With close communication with parents, the teachers talked to students about what was happening to Trevor and how they could support him: "Of course we would miss you if you died." "Yes, it's very, very sad." "No, it's not fair for a 6-year-old to die;

it doesn't happen very often." On days when Trevor was in school and feeling weak, the students took turns reading to him. On days when he was not able to come to school, they wrote him notes and made cards. When he died, many of them went to the funeral. Tears were welcomed and tissues were widely used; the teachers were able to show their sadness as well. Teachers had to be thoughtful about discussions of religious beliefs in order to be inclusive: "Yes, some people believe in heaven, and they think that's where Trevor is going."

Although no parents would want their children to have to deal with the death of a classmate, the sensitivity and tenderness of the experience helped bond the class and enabled students to connect to both the fragility and the sacredness of life. When they experience death again later in their lives, they will have some understanding of what it means to offer and receive support and will be able to seek the information and caring they need for their own journeys.

In inclusive classrooms, I have seen students learn to support a classmate with cerebral palsy, become allies in the face of homophobic bullying, and help a peer struggling with academic work. All of these were possible because the teachers were willing and able to talk to the students honestly about what was going on, creating a caring, supportive community for all students rather than marginalizing those who were experiencing difficulty.

Mutual Support

Sadly, teasing and exclusion are a typical part of many students' school experience. Bullying is so common that it can become virtually invisible. But inclusive classrooms foster a climate in which individual students know they will not be abandoned when they experience injustice. Inclusion means that we pay careful attention to issues of social justice and inequity, whether they appear at the individual, classroom, or school level or extend into the larger community.

I have used Peggy Moss's wonderful children's book *Say Something* (Tilbury House, 2004) to engage students and teachers in discussions about what we do when we see someone being picked on. In the book, a young girl goes from witnessing and lamenting the mistreatment of her classmates to taking action to change the patterns she observes. This book and similar materials encourage students to talk about the concept of courage, about opportunities to be brave in both small and large ways, and about how they can make a difference.

Inclusive classrooms give us many opportunities to be our best selves, reaching across our personal borders to ask, Do you want to play? or Can I help you with that? Our lessons about how we treat one another extend beyond the specificity of rules (Don't tease children with disabilities) to broader, more inclusive discussions: How would you like to be treated? What do you think others feel when they're left out? How could we change this activity so more kids could play? How do you want others to deal with your challenges and triumphs, and what would that look like in our classroom?

Teachers in inclusive classrooms consider helping essential. The classroom becomes a more positive place for everyone when multiple forms of peer support—such as peer mentoring and collaborative learning—are ongoing, consistent, and valued. Rather than saying, "I want to know what you can do, not what your neighbor can do," inclusive teachers say, "Molly, why don't you ask Luis to show you how to do that," or "Make sure everyone at your table understands how to color the map code."

Inclusive settings provide multiple opportunities to explore what it means to help one another. By challenging the notion that there are two kinds of people in the world—those who need help and those who give help—we teach all students to see themselves as both givers and receivers. We recognize and honor multiple forms of intelligence and many gifts.

Courage to Change the World

When students develop fluency in addressing differences, are exposed to challenging issues, and view themselves as interconnected, teachers can more easily engage them in discussions about how to improve things.

Having a personal connection profoundly shifts one's perception about who has the problem and who should do something about it. When students have a classmate who comes from Mexico and is undocumented, discussions of immigration rights, border patrols, and fair employment practices become much more real. When students have learned to communicate with a classmate with autism, they understand at a deep level that being unable to talk is not the same as having nothing to say. When a classmate comes from a family with two mothers, reports of gay bashing or debates about marriage rights become more tangible.

A powerful way to combat political apathy is by helping young people make connections between their lives and those of others and giving them opportunities to make a difference in whatever ways they can. Although it's certainly possible to teach a social-justice curriculum in a fairly homogeneous school, inclusive classrooms give us the opportunity to put social-justice principles into action. In inclusive classrooms, students can *live* a social-justice curriculum rather than just study it.

Inclusive classrooms that pay careful attention to issues of fairness and justice bring to the surface questions that have the potential to shift students' consciousness now and in the future: Who gets into the gifted program, and how are they chosen? How can we find a part in the school play for a classmate who doesn't talk? Why do people make fun of Brian because he likes art and doesn't like sports? How can we make sure everyone gets to go on the field trip that costs \$20?

Inclusive classrooms put a premium on how people treat one another. Learning to live together in a democratic society is one of the

most important goals and outcomes of inclusive classrooms. How could we want anything less for our children?

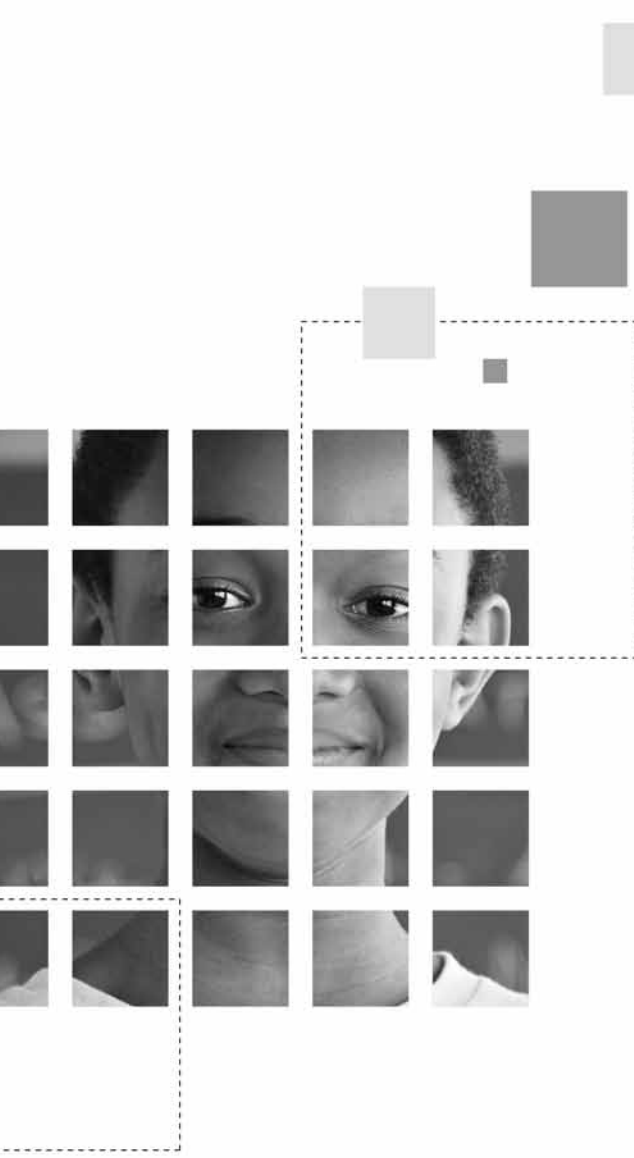
Ten Strategies for Creating a Positive, Inclusive Classroom

1. Make time for community building throughout the year. Time spent building community is never wasted.
2. Proactively teach positive social skills: how to make friends, how to give compliments, what to do if someone teases you or hurts your feelings. Don't wait for negative things to happen.
3. Be explicit in explaining to your students why treating one another well and building a community is important. Use key terms: *community, inclusion, friends, support, caring, kindness*. Don't let those words become empty slogans; give lots of examples of positive behaviors.
4. Adopt a zero-indifference policy. Don't ignore bullying in the hope that it will go away. Don't punish the participants, but be clear about what is acceptable. Say, "I don't want that word used in my classroom. It hurts people's feelings and it's not kind."
5. Share your own learning around issues of diversity and inclusion. When students see that you are also learning (and struggling), they can share their own journeys more easily. Tell them, "You know, when I was growing up, there were some words I heard and used that I don't use anymore, and here's why." "You know, sometimes I'm still a little uncomfortable when I see people with significant physical differences, but here's what I've been learning."

6. Think about what messages you're communicating about community and differences in everything you do, including the books you read to your students, the songs you sing, what you put on the walls, and how you talk about different families and world events.
7. Seize teachable moments for social justice. When students say, "That's so gay," talk about the power of words to hurt people and where such oppressive language can lead. When a student makes fun of another student, talk about different cultures, norms, and experiences.
8. Provide lots of opportunities for students to work together, and teach them how to help one another. End activities with appreciation circles: "What's something you did well today?" "How did Carlos help you today?"
9. Don't set students up to compete with one another. Create an atmosphere in which each student knows that he or she is valued for something.
10. Keep in mind that your students will remember only some of what you taught them but everything about how they felt in your classroom.

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Part 4

Cultivating Positive
Classrooms

Assuming the Best

Rick Smith and Mary Lambert

*Students want to learn both content and appropriate behavior.
And they can only do it in a safe, structured classroom.*

When Paul Kilkenny, a mentor teacher in East San Jose, California, works with teachers, he occasionally finds himself in the role of cheerleader. He notes,

My teachers work with kids who are often in tough situations, and the kids can bring that same toughness into the classroom. When the teachers find themselves focusing extensively on student misbehavior, sometimes my job is simply to remind them to continually assume the best about their students.

Assuming the best is essential for long-term learning and positive connections to take place in our classrooms. When it comes to classroom-management, there are no exotic new consequences that teachers can use to get students on task. The most effective classroom management comes in the form of strategies that prevent acting out before it occurs. And those strategies arise primarily from assuming that our students want to be here, want to participate, and, specifically, want to learn good behavior. When we internalize and act from this assumption, our students behave better and learn more.

The Invisible Contract

Whenever students walk into the classroom, assume they hold an invisible contract in their hands, which states, “Please teach me appropriate behavior in a safe and structured environment.” The teacher also has a contract, which states, “I will do my best to teach you appropriate behavior in a safe and structured environment.”

This approach can radically change our perspective on student misbehavior. To illustrate, in the beginning of the school year, Mark decides to test his teacher, whom we will call Mrs. Allgood. Mark looks at his invisible contract and thinks, “This contract is important. Let’s see whether Mrs. Allgood is going to uphold her end of it.” So Mark breaks a small rule to see what will happen. If Mrs. Allgood is harsh or punitive to Mark for breaking the rule, he says to himself, “This class isn’t *safe*; she isn’t honoring the contract.” However, if Mrs. Allgood ignores Mark and he gets away with breaking the rule or if she enforces it inconsistently, Mark says to himself, “This class isn’t *structured*; she isn’t honoring the contract.”

Either way, Mark is not satisfied. So he thinks to himself, “To communicate the importance of this contract and give the teacher another chance, I’ll break a slightly larger rule.” He will continue to break larger and larger rules until Mrs. Allgood comes through consistently with both safety and structure. When she’s consistent over time, Mark says to himself, “Oh good, she’s honoring the contract. Now I can relax and focus on learning.”

The bottom line is that when students test us, they want us to pass the test. They are on our side rooting for us to come through with safety and structure. When students act out, they are really saying, “We don’t have the impulse control that you have. We are acting out so that you will provide us with safety and structure—be soft yet firm—so that we can learn the behavior we need to learn to be happy and successful.”

However, few students approach their teachers and directly ask to be taught behavior in a safe and structured environment. What, then, is the justification for this assumption?

Our Internal Radios

Imagine that students have radio tuners in their heads and are continually tuning in to a myriad of radio stations that deal with what it means to be a youth. These stations differ for students of different ages and cultural settings, but they all focus on fitting in, being cool, achieving short-term gratification, and enjoying consequence-free behavior. Often, many of our students will narrate these radio noises out loud, as though these signals express the truth of who the students are. They will entertain such ideas as “I don’t care about learning,” “My friends’ opinions of me matter more than my own or my teachers’ opinions,” “Fitting in and looking good matter more than being good,” or “Why bother to try?”

Now imagine that students have radio beacons in their hearts. These beacons pour out the same basic message over and over again:

We want to learn and participate. We want to be positive. Please teach us appropriate behavior as well as content. Please know that we often want to narrate the noises in our heads, but we need you to honor our hearts at the same time. Please be compassionate, allowing us our wants as you honor our needs.

When we internalize the assumption that students want to learn and participate, we begin to see that beneath their complaints about the lesson, homework, or seating chart, students are saying one thing: “Please care for us today.” As we honor this message, without belittling or marginalizing the noises that students narrate, we can get our message through the noise of their heads into the receptive place in their hearts. Our communication becomes clear and kind, and our enthusiasm becomes contagious.

We teachers have the same radio tuners and beacons as our students do. Regardless of what our experience is when we come to school—whether we are feeling ready, regretting lack of sleep, or mulling over tensions at home—we can reach through our own mental noise and our students’ noise and touch them heart to heart.

This will affect all our communications with students, especially those that address inappropriate behavior. This softening of our communication enables us to be firm when necessary, but in a way that invites cooperation rather than arguments and protests. Our students’ behavior will begin to reflect these positive assumptions. What shifts is the *how*—the manner in which we communicate. Our students begin to feel that we are on their side, even as we address the *what*—their behavior. By holding our ground with our own radio noises (“These kids don’t care.” “They’re just lazy.” “Why bother?”), we can hold our ground with student misbehavior in a way that is both firm and soft, corrective and inviting. In addition, as we exercise this “muscle of positivity,” we avoid the burnout so often associated with teaching tough kids. We create a self-fulfilling prophecy of appropriate and engaging student participation.

Positive Strategies, Positive Results

The strategies that follow can improve our interactions with students, create classrooms that honor students’ need for safety and structure, and promote student learning.

Strategy 1: Use Volume, Tone, and Posture

When we assume that students want to learn behavior, we can readily see that we are here to *teach* behavior. This changes our interactions with students. For example, Mrs. Allgood is teaching a lesson; in the back of the classroom, Mark is disturbing his neighbors by showing them his new *Sports Illustrated*. He needs to stop. If Mrs. Allgood

assumes that she's only here to teach content—to stay on task—she will go so quickly through the discipline piece that Mark will probably not understand, and so he will continue to act out. Some teachers jokingly refer to this as “drive-thru discipline.”

On the other hand, if Mrs. Allgood assumes that she is here to teach behavior, she will pause in her lesson and address Mark's behavior. Her first option is to walk up to him and quietly state her request: “Please put that away and have a seat.” If that's not possible because of time or furniture constraints, she will shift from “content mode” to “behavior mode,” facing Mark squarely as she softens her voice and lowers her tone. Knowing that Mark is committed to both learning appropriate behavior and wanting to look good in front of his friends, she won't publicly humiliate him. Her shift in volume, tone, and posture will firmly but softly communicate what she expects of him, deescalating possible tension.

By taking these extra moments to address Mark's behavior, Mrs. Allgood will have more time to focus on teaching content because Mark will most likely get it the first time around. And if he says something under his breath, she knows that she can let him have the last word. It's his way of saving face as he refocuses on learning content.

Strategy 2: Implement the Two-by-Ten Strategy

Raymond Wlodkowski¹ did extensive observations of student behavior, cataloguing student time in and out of seat as well as the types, instances, and severity of student disruptions. In particular, he researched a strategy called “Two-by-Ten.” Here, teachers focus on their most difficult student. For two minutes each day, 10 days in a row, teachers have a personal conversation with the student about anything the student is interested in, as long as the conversation is G-rated. Wlodkowski found an 85-percent improvement in that one student's behavior. In addition, he found that the behavior of all the other students in the class improved.

Martha Allen, an adjunct professor at Dominican University's Teacher Credential Program in San Rafael, California, asked her student teachers to use the Two-by-Ten Strategy with their toughest student. The results? Almost everyone reported a marked improvement in the behavior and attitude of their one targeted student, and often of the whole class. Many teachers using the Two-by-Ten Strategy for the first time have had a similar corroborating experience: Their worst student became an ally in the class when they forged a strong personal connection with that student.

This can be counterintuitive. But the students who seemingly deserve the most punitive consequences we can muster are actually the ones who most need a positive personal connection with their teacher. When they act out, they are letting us know that they are seeking a positive connection with an adult authority figure and that they need that connection first, before they can focus on learning content.

The teachers whom Paul Kilkenny mentors in East San Jose regularly use the Two-by-Ten Strategy with their challenging students. "Not only does it help with the toughest students," says Paul, "but also it helps the teachers remember their humanity as they attempt to survive and thrive in the classroom."

Strategy 3: Break Things into Steps

Just as students often need complex math problems broken down into small, digestible lessons, so they need small, manageable steps when it comes to learning behavior and classroom procedures.

For example, if Mark has a hard time putting his art supplies away on time, instead of punishing him Mrs. Allgood can meet with him, and together they can practice putting the supplies away. Instead of one step—"Put your things away"—the teacher can guide the student through several steps: "Pick up the scissors and place it in the scissors tray; return the colored paper to the stack in the back of the room; put your project in your folder." By practicing each of the steps, Mark has

a better sense of what to do and is more likely to succeed when Mrs. Allgood announces clean-up time to the class.

Instead of throwing up our hands and saying, “These kids don’t care” or “These kids can’t succeed,” we should assume they are committed to success in both content and behavior. We can then put our energy into breaking down the behaviors we want to see into simple steps so that students clearly understand what we expect of them.

Strategy 4: Use Behavior Rubrics

Rubrics work great for content—and equally great for procedures and behavior. For example, if a particular student is inappropriately loud, Mrs. Allgood can provide the student with a 1–5 *volume rubric*. A 1 would indicate a whisper, a 3 would indicate a normal conversational tone, and a 5 would indicate a yell. The student can practice all five numbers, and the teacher can then assign different numbers to different school and social situations: A 1 would be appropriate if the student asked a classmate to borrow a pencil while the rest of the class was engrossed in a writing task; a 3 would be appropriate for students conversing during group work; a 5 would be appropriate on the playground. Rubrics work well for many classroom behaviors, such as lining up, settling down to learn, and getting ready for dismissal.

Strategy 5: Use Visuals

Visuals also serve as great road maps for student success. If, for example, students have difficulty getting their textbooks and homework on their desks when the bell rings at the beginning of class, Mrs. Allgood can use visuals like the ones on pages 18–19 to clarify exactly what she expects. She can use a diagram, drawing, or photograph of the surface of the desk, with the textbook open to the proper page and the homework on the upper left-hand corner of the desk. At the start of class, using PowerPoint or an overhead, she can flash the picture on the board or screen in front of the room, giving the students “17 seconds

to be ready to start.” Visuals work well for such activities as setting up labs, putting supplies away, and clarifying the school dress code.

More Than a Smile

For many teachers, being positive means putting on a smile, pretending to like a particular student, or going through the motions of using strategies purportedly designed to enhance the classroom environment. In contradistinction, by assuming the best about our students—particularly in situations in which that assumption seems most implausible—we exercise a muscle that is real and lasting.

Assuming the best is an underlying orientation that enables us to treat both our students and ourselves with respect and dignity. It helps us understand that when students act out, they are sending us a message that they want a positive connection. Then we can start to see “discipline moments” as opportunities for teaching an essential piece that students want to learn.

Endnote

¹ Wlodkowski, R. J. (1983). *Motivational opportunities for successful teaching* [Leader’s Guide]. Phoenix, AZ: Universal Dimensions.

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The Power of Our Words

Paula Denton

*Teacher language influences students' identities as learners.
Five principles keep that influence positive.*

Think back to your childhood and recall the voices of your teachers. What kinds of words did they use? What tone of voice? Recall how you felt around those teachers. Safe and motivated to learn? Or self-doubting, insecure, even angry?

Teacher language—what we say to students and how we say it—is one of our most powerful teaching tools. It permeates every aspect of teaching. We cannot teach a lesson, welcome a student into the room, or handle a classroom conflict without using words. Our language can lift students to their highest potential or tear them down. It can help them build positive relationships or encourage discord and distrust. It shapes how students think and act and, ultimately, how they learn.

How Language Shapes Learners

From my 25 years of teaching and my research on language use, I've learned that language actually *shapes* thoughts, feelings, and experiences. (Vygotsky, 1978). Our words shape students as learners by

- *Affecting students' sense of identity.* Five-year-old Don loves to sing but isn't good at it—yet. His music teacher says, "Let's have you move to the back row and try just mouthing the words." Such language can lead Don to believe not only that

he is a bad singer, but also that he will always be a bad singer. But suppose the teacher says, “Don, you really love to sing, don’t you? Would you like to learn more about it? I have some ideas.” Such words support Don’s budding identity as one who loves to sing and is learning singing skills.

- *Helping students understand how they work and play.* For example, an educator might comment on a student’s writing by saying, “These juicy adjectives here give me a wonderful sense of how your character looks and feels.” Naming a specific attribute—the use of adjectives—alerts the writer to an important strength in her writing and encourages her to build on that strength.
- *Influencing our relationships with students.* To a student who—once again—argued with classmates at recess, we might say either “Emory, if you don’t stop it, no more recess!” or “Emory, I saw you arguing with Douglas and Stephen. Can you help me understand what happened from your point of view?” The former would reinforce a teacher-student relationship based on teacher threats and student defensiveness, whereas the latter would begin to build a teacher-student relationship based on trust.

Five Guiding Principles for Positive Language

How can we ensure that our language supports students’ learning and helps create a positive, respectful community? During the 20 years I’ve been involved with the Responsive Classroom, I have found this approach to be a good base for using language powerfully. The Responsive Classroom approach, developed by Northeast Foundation for Children, offers language strategies that enable elementary teachers to help students succeed academically and socially. Strategies range from asking open-ended questions that stretch students’ thinking to

redirecting students when behavior goes off-track. These strategies are based on the following five general principles.

1. Be Direct

When we say what we mean and use a kind, straightforward tone, students learn that they can trust us. They feel respected and safe, a necessary condition for developing self-discipline and taking the risks required for learning.

It's easy to slip into using indirect language as a way to win compliance. For example, as a new teacher, I tried to get students to do what I wanted by pointing out what I liked about other students' behavior. "I like the way May and Justine are paying attention," I would cheerfully announce while impatiently eyeing Dave and Marta fooling around in the corner.

When this strategy worked, it was because students mimicked the desired behavior so that they, too, would win praise from me, not because I had helped them develop self-control or internal motivation. And often, when I pointed out how I liked certain learners' behavior, the rest of the class ignored me. If I liked the way May and Justine were paying attention, that was nice for the three of us, but it had nothing to do with the rest of the class, who had more compelling things to do at the moment.

Moreover, comparative language can damage students' relationships. By holding May and Justine up as exemplars, I implied that the other class members were less commendable. This can drive a wedge between students.

Later in my career, I learned to speak directly. To call the students to a meeting, for example, I rang a chime to gain their attention (a signal we practiced regularly), then said firmly, "Come to the meeting rug and take a seat now." To Dave and Marta in the previous example, I'd say, "It's time to listen now." The difference in students' response was remarkable.

Sarcasm, another form of indirect language, is also common—and damaging—in the classroom. Sometimes teachers use sarcasm because we think it will provide comic relief; other times we’re just tired, and it slips in without our even knowing it. If a teacher says, “John, what part of ‘Put your phone away’ don’t you understand?” students will likely laugh, and the teacher may think she has shown that she’s hip and has a sense of humor. But John will feel embarrassed, and his trust in this teacher will diminish. The position of this teacher may shift in the other students’ eyes as well: They no longer see her as an authority who protects their emotional safety but as someone who freely uses the currency of insult. Much better to simply say, “John, put your phone away.” If he doesn’t, try another strategy, such as a logical consequence.

2. Convey Faith in Students’ Abilities and Intentions

When our words and tone convey faith in students’ desire and ability to do well, students are more likely to live up to our expectations of them.

“When everyone is ready, I’ll show you how to plant the seeds.”
“You can look at the chart to remind yourself of our ideas for good story writing.” “Show me how you will follow the rules in the hall.” These teacher words, spoken in a calm voice, communicate a belief that students want to—and know how to—listen, cooperate, and do good work. This increases the chance that students will see themselves as respectful listeners, cooperative people, and competent workers, and behave accordingly.

Take the time to notice and comment on positive behavior, being quite specific: “You’re trying lots of different ideas for solving that problem. That takes persistence.” Such observations give students hard evidence for why they should believe in themselves.

3. Focus on Actions, Not Abstractions

Because elementary-age children tend to be concrete thinkers, teachers can communicate most successfully with them by detailing specific actions that will lead to a positive environment. For example, rather than saying, “Be respectful,” it’s more helpful to state, “When someone is speaking during a discussion, the rest of us will listen carefully and wait until the speaker is finished before raising our hands to add a comment.”

Sometimes it’s effective to prompt students to name concrete positive behaviors themselves. To a student who has trouble focusing during writing time, a teacher might say matter-of-factly, “What will help you think of good ideas for your story and concentrate on writing them down?” The student might then respond, “I can find a quiet place to write, away from my friends.”

There is a place, of course, for such abstract terms as *respectful* and *responsible*, but we must give students plenty of opportunities to associate those words with concrete actions. Classroom expectations such as “treat one another with kindness” will be more meaningful to students if we help them picture and practice what those expectations look like in different situations.

Focusing on action also means pointing to the desired *behavior* rather than labeling the learner’s character or attitude. I had a student who chronically did poor work when he could do better. In a moment of frustration, I said to him, “I don’t think you even care!” This allowed me to vent, but it did nothing to help the student change. His energy went toward defending himself against my negative judgment, not toward examining and changing his behavior. Worse, such language can lead students to accept our judgment and believe that they indeed don’t care.

It’s more helpful in such situations to issue a positive challenge that names the behavior we want: “Your job today is to record five observations of our crickets. Think about what you’ll need to do before you start.” This moves the focus to what the student can do.

4. Keep It Brief

It's hard for many young children to follow long strings of words like this:

When you go out to recess today, be sure to remember what we said about including everyone in games, because yesterday some kids had an issue with not being included in kickball and four square, and we've talked about this. You were doing really well for a while there, but lately it seems like you're getting kind of careless, and that's got to change or ...

By the end of this spiel, many students would be thinking about other things. Few could follow the entire explanation. Students understand more when we speak less. Simply asking, "Who can tell us one way to include everyone at recess?" gives them an opportunity to remind themselves of positive behaviors. If you have taught and led students in practicing the class's expectations for recess, students will make good use of such a reminder.

5. Know When to Be Silent

The skillful use of silence can be just as powerful as the skillful use of words. When teachers use silence, we open a space for students to think, rehearse what to say, and sometimes gather the courage to speak at all.

We can see the benefit of silence if, after asking a question, we pause before taking responses from students. Researchers have found that when teachers wait three to five seconds, more students respond, and those responses show higher-level thinking (Swift & Gooding, 1983; Tobin, 1980).

Three to five seconds can feel uncomfortably long at first. But if we stick to it—and model thoughtful pausing by waiting a few seconds ourselves to respond to students' comments—we'll set a pace

for the entire classroom that will soon feel natural. Our reward will be classroom conversations of higher quality.

Remaining silent allows us to listen to students and requires us to resist the impulse to jump in and correct students' words or finish their thoughts. A true listener tries to understand a speaker's message before formulating a response. When we allow students to speak uninterrupted and unhurried, we help them learn because speaking is an important means of consolidating knowledge.

In my current role teaching educators Responsive Classroom strategies, I watch teachers incorporate these five principles of language into their daily communications with students, and I see them build classrooms where students feel safe, respected, and engaged. By paying attention to our language, we can use it to open the doors of possibility for students.

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Author's note: A 2006 study by Sara Rimm-Kaufman and colleagues at the University of Virginia showed that Responsive Classroom practices were associated with students having higher reading and math test scores, better social skills, and more positive feelings about school. The U.S. Department of Education's Institute of Education Sciences has awarded Rimm-Kaufman a \$2.9 million grant to further investigate how Responsive Classroom practices contribute to gains in students' math achievement.

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Releasing Responsibility

Douglas Fisher and Nancy Frey

We must transfer responsibility for learning to our students gradually—and offer support at every step.

There is no shortage of teachers assigning students responsibility for their own learning. Who isn't familiar with the following scenarios?

- In a 1st grade class, students independently complete practice pages from a workbook.
- A teacher gives her 4th graders a writing prompt and allows them 30 minutes to respond.
- Students in 8th grade are told to read Chapter 12 and answer the questions at the end.

Yes, students in these situations are responsible for their own work, but are they really learning? Students who do well in these kinds of activities are usually those who already understand the content. It's not hard to fill out a worksheet (or "shut-up sheet" as one of our colleagues calls it) when you have already mastered the information. Nor is it hard to answer end-of-chapter questions when you read well and are familiar with the genre of questions asked in textbooks.

But these "busywork" examples are not exemplars of true independent learning, which is a major goal of education. If students are to reach the high expectations we set for them, they need to be able to marshal previously learned concepts and apply them to achieve new understandings after they leave our schools.

How can we set students on a path to true independent learning? One way is to purposefully yet gradually release responsibility for learning from teacher to student (Fisher & Frey, 2008). To make this transfer of responsibility, we must give students supports that they can hold on to as they take the lead—not just push them onto the path and hope they find their way. These supports include models of the kind of thinking they will need to do, access to academic language, peer collaboration, and guided instruction. We’ve found the following instructional routines work well for teachers who seek to promote lasting ownership of learning.

Establishing Learning Objectives

Teachers must clearly establish the purpose behind any activity, including what exactly students are supposed to do to successfully perform learning tasks. A coherent objective or purpose makes it easier for learners to gain access to background knowledge that they can use to build a schema for new learning. When the objective is clear and instructional tasks align with it, students can share responsibility for learning and will be motivated to do so. When the purpose for learning is muddy or students don’t buy into it or perceive its relevance, they may complete many tasks but will have zero motivation and assume no responsibility. Students practically beg for an established purpose to their learning when they ask, “What do we gotta know?” and “What are we supposed to do with the information?”

The learning purposes that you provide students when they ask these guidance-seeking questions should include both content and language goals, especially for English language learners (Dong, 2004/2005; Hill & Flynn, 2006). Generally, teachers post on the wall and discuss with students exactly what is to be learned and how students should demonstrate that learning through oral or written language. Content goals should come directly from the standards. For example, in a unit

focused on oceans, waves, and tides, a content goal for a given lesson might be to identify the phases of the moon.

The focus of the language goal should reflect students' needs. For example, a goal might focus on vocabulary. Students of all ages need to understand both specialized words (those that change meaning in different contexts, such as *expression*) and technical words (words rarely used outside of a specific discipline, such as *rhombus*). A vocabulary-related language goal for the study of the moon might be to use the terms *full*, *half*, *quarter*, and *new moon* to explain the phases of the moon.

Alternatively, the goal might focus on language structure, such as grammar, syntax, or sentence frames. Returning to the study of the moon, a structure-related goal might be to appropriately use sequence words (*first*, *next*, *then*, *last*) to explain the phases of the moon. Or the goal might be based on mastering certain functions of language, such as questioning, summarizing, explaining, or persuading. A function-related language goal might be to explain how the moon, earth, and sun move through their phases.

Teacher Modeling

Modeling is another crucial component of releasing responsibility. Humans are hardwired to imitate other humans (Winerman, 2005). Students deserve to see an example of the kind of thinking and language a new task will require before they engage in that task independently, and teachers can provide that example. Through modeling—either by thinking aloud or by showing students their written notes—teachers reveal what goes on in their minds as they solve problems, read, write, or generate ideas. Modeling does not mean providing explanations or questioning students; it means demonstrating the way experts think as they approach problems.

Expert teachers prepare students for independent reading by focusing their modeling on comprehension, word solving, text structures, and text features (Fisher, Frey, & Lapp, 2008).

Choosing Strategies for Comprehension

Good readers deploy a number of cognitive strategies as they read, such as questioning, inferring, making connections, summarizing, and predicting. The key is to know when to use each strategy and to be able to use it automatically.

For example, predicting can help a reader create meaning when the author provides specific kinds of information, but it isn't a good strategy for understanding all texts. To model using this strategy well, a teacher might share his or her prediction when reading a certain text and then ask students to make predictions. A 9th grade English teacher we observed paused while reading the short story "Kipling and I" by Jesús Colón out loud and speculated on why the author would describe a gilt-framed poem so early in the story. "This must be an important object to the narrator," she mused. "I'll need to keep reading to find out." Later in the same story, she reflected on the protagonist's decision to burn the poem to keep warm:

I wonder if this means that the inspirational message of the poem is being destroyed, too? I could understand this in two ways: that he feels the poem is inside of him and he doesn't need the object anymore, or that a dream has died. I'm going to reread that earlier section where the character describes the poem's importance to see if I missed anything that would help me understand the deeper meaning.

With enough modeling and practice, students will imitate behaviors like this and reach for appropriate strategies automatically as they read complex texts on their own.

Teaching Word Solving

Given the demands of academic vocabulary and the effect that word knowledge has on comprehension, teachers need to show students how they can figure out the meaning of unfamiliar words on their own. Students must practice this skill enough so that it becomes automatic. There are two main word-solving strategies:

- Using context clues. We call this an “outside the word” strategy. A teacher might pause on an unfamiliar word and model using an illustration and familiar words in the same sentence to make inferences about the mystery word’s meaning. The teacher’s modeling should get across the fact that context clues don’t always help and may be misleading. For example, a teacher might draw students’ attention to a diagram of the solar system as she notes that an elliptical orbit is shaped like an oval: “I wasn’t sure at first what *elliptical* meant, but the picture helped me understand that an elliptical shape is not a perfect circle.”
- Looking “inside the word.” This strategy involves looking at prefixes, suffixes, bases, roots, or cognates of the target word for clues to meaning. For example, while reading a science text out loud, Mr. Bonine stopped at the word *carnivore* and modeled his realization that *carnivore* was related to the Spanish word *carne* (meat). He noted that this probably means *carnivore* has something to do with meat and went on to use context clues—the fact that the word was describing an animal’s habits—to conclude that the word meant meat eating.

Teachers should also model using dictionaries, Internet resources, or even reliable peers to understand a word, for those times when neither context clues nor looking inside the word helps.

Highlighting Text Structures

One way readers extract meaning from texts is through recognizing common text structures. Almost all narrative texts, for example, use a “story grammar” that includes character, setting, plot, conflict, resolution, dialogue, and various literary devices. Teachers should model using these structures as a tool for understanding stories. For example, Mr. Goodwin paused in his reading of *The Outsiders* by S. E. Hinton to point out how a character’s recitation of Robert Frost’s poem “Nothing Gold Can Stay” at a key point in the story helps reveal the themes of loss and redemption that are central to the novel—and that using a recurring phrase or image to highlight an underlying theme is a common text structure.

Nonfiction texts also have internal structures, such as problem-solution, cause-effect, compare-contrast, and description. Noticing which text structure a particular informational text uses helps readers predict what kind of content the author might present next. It also helps people remember what they read and organize their thinking about a text.

For example, while reading a passage about the construction of the transcontinental railroad, Ms. Allen paused at the point where the author introduced the problem of pay differences between Chinese and white workers and told the class

Now here’s a problem. I can predict that the solution to the problem will come next. That’s how many authors write, by introducing a problem followed by a solution. I might even help myself remember this information by taking notes using a problem and solution chart. In many cases, the solution to one problem creates new problems. I wonder if that will be the case here.

When Ms. Allen came to the part in the text describing the Chinese workers' strike for higher wages, she pointed out that the author was following up a problem with its solution.

Explaining Text Features

Students often need help understanding the text features included with many academic readings, such as tables, charts, figures, bold and italicized words, and headings. Many students aren't even sure when they should read text features—before, during, or after the text. But a lot of essential information can be presented in these features.

Teachers should model how to thoughtfully analyze text features. For example, while looking at a table in a math textbook on the use of distance as a function of time, Ms. Burrow pointed out the column and row headings and showed students how to use them to find information. Ms. Johnson modeled how to interpret a legend on a map in the geography textbook to find the latitude and longitude of a city.

Collaborative Work

Armed with a clear learning objective and examples of the kind of thinking and actions they should engage in, students will be ready to work—but not to work independently yet. First, they need time to try out their fledgling understandings in collaborative work with their peers. Collaborative learning transfers more responsibility to students, yet provides them with peer support.

In any content area, students learn more and retain information longer when they work in productive groups (Totten, Sills, Digby, & Russ, 1991). Students who work in collaborative groups tend to be more satisfied with their classes, complete more assignments, and generally like school better (Summers, 2006). To be productive, groups need sufficient time to interact, time lines, clear roles for everyone in the group, and tasks that truly call for interdependence. Ideal collaborative

learning tasks are those that cannot be accomplished just as well by one individual; they require interaction and the natural give and take of learning.

But the real key to collaborative groups lies in accountability. Each student must be held accountable for some aspect of the work. Unfortunately, that's not always the case: We can all remember group work in which one student did all the work and everyone else got the credit. This situation not only prevents some students from learning but also thwarts teachers' attempts to check for each student's understanding and link instruction with formative assessment. In addition to holding students individually accountable, teachers should hold the entire group accountable for completing tasks. Tasks can vary from something as simple as straightening up the science area after a complicated experiment to something as complex as writing a group summary of a lesson.

In her geometry class, Ms. Chen has students complete a collaborative poster for each proof they solve. Each student contributes to the poster using an individually assigned marker color. In addition, the group must ensure that each of its members can explain the proof independently. This requires a significant amount of reteaching, negotiation, support, and trust. Students assume responsibility for their learning and the learning of their peers.

Guided Instruction

While modeling and collaborative work provide a great start, some learners will require guided instruction to successfully assume responsibility for their own learning. Guided instruction is the strategic use of cues, prompts, or questions to facilitate student thinking. Teachers should base guided instruction on what formative assessments reveal that students need. Such instruction is most effective with small groups.

In working with a group of students who misunderstood photosynthesis, Ms. Grant used a series of questions and prompts to increase understanding.

Ms. Grant: Some of you thought that plants ate soil to grow. Do you remember the video we saw about photosynthesis? What role did soil play in that video?

Destiny: Well, it wasn't about the dirt. It was about the sun and carbon dioxide.

Andrew: And how the plants make oxygen for humans.

Ms. Grant: Plants make oxygen for humans?

Andrew: Well, I guess that they'd make oxygen even if there were no humans.

Michael: It's called a byproduct. They don't make oxygen for humans. They just make oxygen.

Ms. Grant: And what is left, once they've made this oxygen?

Destiny: Carbon. They take in carbon dioxide and then give off oxygen, so carbon is left.

Ms. Grant: And what do you know about carbon?

Guided instruction gives teachers an opportunity to engage students' thinking without telling them what to think—and a chance to scaffold students' understanding before they complete tasks independently.

From Competent Novice to Expert

Newly (or barely) learned tasks do not make for good independent learning activities. Unfortunately, educators often ask students to assume full responsibility for their learning prematurely in the instructional cycle. In the MetLife survey about homework (Markow, Kim, & Liebman, 2007), 26 percent of secondary teachers confessed that they

“very often or often” assign homework because they run out of time in class to cover material. The likelihood of a student successfully completing newly introduced tasks alone, away from fellow learners or the teacher, is slim.

Teachers should reserve independent work for review and reinforcement of concepts that have been previously taught. This phase of the instructional framework is ideal for the spiral review that most educators know their students need. In addition, it helps build connections between previously learned concepts and new ones. For example, if an independent learning task to review the (previously taught) phases of the moon coincides with new instruction on the movement of planets around the sun, the task will not only reinforce students’ knowledge of the moon’s phases but also deepen their understanding of patterns of movement in the sky and how planets influence one another.

Well-structured independent learning tasks are the ultimate way to build self-esteem through competence. By the time a student has reached this phase, he or she should be working at the level of competent novice; the purpose of additional work is to refine skills and become expert. Isn’t this how many of us learned to be good teachers?

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Solving Behavior Problems Together

Caltha Crowe

*How can teachers stop student misbehavior?
Try asking the student.*

Whenever he was asked to write, Andrew, a verbally articulate 3rd grader with learning difficulties, fell apart. During our daily writing workshop, he would lie on the floor, kick his feet, and refuse to write. I would sit beside him and offer support in getting started, but the tantrums would only continue.

At a time when he was calm, I asked Andrew to talk privately with me to see if we might figure out a way to make writing go better for him. Andrew accepted my invitation, and in the course of our conversation, we together realized that he was always too tired to think at writing time. Andrew then chose a solution: We'd create a special time for him to write first thing in the morning, when his energy was high. This didn't solve all of Andrew's problems, but he finally began to do some productive writing.

The Strategy

The 15-minute conversation I had with Andrew is an example of a problem-solving conference, a Responsive Classroom strategy that can help individual students take ownership in overcoming a persistent problem they're having at school.

In elementary schools across the United States, teachers use problem-solving conferences to address a range of academic and social

issues when the usual reminders and redirections have not helped. Consistently ignoring assignments, defying teachers, and cheating in games are just a few problems that we can deal with using problem-solving conferences. This strategy is built on the belief that all students want to learn and participate as positive members of a community, but they need to be taught *how*. When students know how to recognize, take responsibility for, and solve problems that interfere with learning, they're much more likely to reach their full potential.

Building an Alliance

The most important quality of problem-solving conferences is the teacher's alliance with the student. When children feel accepted and trust that their teacher cares about them, they're generally eager to work with the teacher.

The spirit of collaboration is built on a foundation of positive teacher-student rapport. In Andrew's case, I began to build a relationship with him on the first day of school. As I welcomed him to the classroom each morning, asked about his family and his love of skateboarding, or shared a joke with him, Andrew came to know that I liked him and enjoyed being with him.

With that foundational rapport in place, teachers must then maintain an open-hearted willingness to work with the student, no matter how exasperating the behavior. A problem-solving conference will not be effective if we feel blame or anger toward the student.

To get myself into a compassionate and collaborative frame of mind for my conference with Andrew, I spent some time beforehand thinking about reasons he might be reacting to writing workshop so violently. I knew that writing is especially challenging for students with learning disabilities because they need to use so many skills simultaneously. Also, I had taught Andrew's older sister, a high-achieving child for whom everything in school seemed easy. Sarah was a tough act to follow. This reflection helped me feel empathetic toward Andrew.

The Conference

On the day of the conference, I invited Andrew to join me for lunch to figure out how we might make writing go better for him. We sat at the classroom reading table, each with our sandwich.

A problem-solving conference consists of specific steps that help ensure respectful collaboration. Here's how these steps looked in my meeting with Andrew.

Step 1. Establish rapport.

The goal here is to help the student relax and become thoughtful and to make it clear that the purpose of the meeting is to work together to solve a problem, not to scold.

I began by asking Andrew how he thought things were going in writing. "I dunno," he said, "I just don't like writing. It's hard for me."

"Yes, I can see that, and I want to talk about that with you today," I said. "I also want to share some things that I've noticed you doing well in school." I wanted to both acknowledge his feelings and encourage him.

"You have so much to say in class discussions," I told Andrew. "Yesterday when we were discussing Monarch butterflies' life cycle, you taught the other kids lots of new words, like *metamorphosis*." I was careful to comment on a positive behavior that Andrew truly did exhibit. It's important to be truthful and specific, or the conversation won't feel genuine.

Andrew smiled and giggled. "I like science," he commented.

"I've noticed that. You have good ideas in science. You seem to be having a hard time getting those ideas down on paper though," I said in a matter-of-fact tone. "Let's see if we can find a way to make that easier."

Step 2. Talk about the problem.

Before a student and I can solve a behavior problem together, we need to agree on exactly which behaviors are problematic. We do this by comparing specific behaviors we've noticed.

I got out Andrew's writing notebook and leafed through the empty pages. "I've noticed that sometimes you don't open your notebook when it's writing time. I've also noticed that when you write at the computer, you spend most of the time switching the fonts. What have you noticed about yourself at writing time?"

"Well, I don't have any ideas at writing time. I don't know what to say or how to say it," Andrew responded.

"That must be frustrating," I acknowledged. Continuing calmly, I said, "Sometimes I offer to help you, and you fall off your chair, lie on the floor, and kick your feet." As I brought up the painful facts, I was careful to keep my tone and body language respectful.

"I feel so frustrated. I don't want to write." The rapport that we had established made Andrew comfortable telling me exactly how he was feeling.

Because Andrew and I agreed that he exhibited these behaviors and that they were troublesome, we could go on with the conference. If the student and teacher don't agree, it's best to stop the conference. Perhaps the two can make a pact to observe the problem area extra closely the next few days and then come back to compare notes. If the student simply becomes defiant, it's best to abandon the conversation and try other strategies.

Step 3. Identify the problem and invite the student to solve it.

It's important to explain why we need to solve a problem. "Learning to be a good writer is an important part of school," I said firmly to Andrew. "To learn to be a good writer, you need to practice writing."

Then I invited him to try to solve the problem with me. "I'd like to explore how to help you practice writing. Would you like to try to figure this out with me?" This was a genuine invitation. If Andrew had said no, I would have ended the conversation there and continued to pursue other strategies.

Andrew looked at me, perhaps a bit skeptically, and said, “OK.” He was stuck in his misery and couldn’t quite believe that there would be a solution, but he trusted me and was willing to try.

Step 4. Explore possible causes.

Part of working together on a problem is coming to a shared understanding of its cause. But simply asking students why they’re doing something often elicits a shrug or an “I don’t know,” so suggesting possible explanations is helpful.

“Sometimes kids think they aren’t very good writers, so they don’t want to try. Might that be what’s happening?” I asked Andrew.

“I don’t think so. When I try I just can’t get anything on paper.”

I thought about Andrew’s difficulty with small motor tasks such as handwriting and wondered if he felt discouraged by the physical challenge of writing. “I wonder if forming your letters takes you so long that you forget your idea by the time you’ve written the first word. Is that what’s going on?”

He shrugged and looked skeptical.

Then I remembered Andrew’s parents telling me that he struggled to fall asleep at night. “Do you feel tired when it’s time to write?” I asked.

Suddenly he perked up a little. “I think so. I’m so tired at writing time.”

This was a significant breakthrough, not so much because the cause was identified, but because Andrew helped identify and confirm it.

Step 5. Articulate a clear, specific goal.

Andrew and I needed to agree on a precise goal—not just the general aim of “getting better at writing,” so I asked him, “How many sentences do you think you could write if you weren’t tired?”

Andrew seemed relieved to have identified a possible cause of his problem and was excited that we might find a solution. “I bet I could

write two sentences,” he said. I would have been happy with even one sentence, since he had yet to write a sentence in 3rd grade.

Step 6. Choose a solution.

When generating possible solutions, input from the student is crucial. “So,” I said, “when do you feel energetic?”

“I feel pretty good right after breakfast. I like to go outside and practice my skateboard then.”

“Maybe morning would be a better time for you to write. I have a couple of ideas,” I replied. “You could do a little writing at home after breakfast. Or you could write first thing in the morning while the other kids have silent reading. Do you have any ideas?”

Andrew looked thoughtful. “How about if I ask my dad if he’d bring me to school early, and I could write at school before the other kids get here?”

I wrote the three ideas down and asked Andrew which one he’d like to try. He pointed to his idea. I suspect Andrew was relishing the prospect of a car ride to school with his dad and some private time in the classroom with me.

I called Andrew’s dad, who was happy to try our plan. The next Wednesday, Andrew arrived at school early and successfully wrote two sentences while I prepared for the day.

Opening the Way to Further Action

Sometimes these conferences quickly solve the problem—teacher and student accurately identify the cause of the difficulty, they find a solution together, and the student’s behavior changes.

In other cases, conferences lead to strategies that are effective for only a while. Andrew wrote productively for a couple of months after we instituted the early-morning writing time. But when I began to expect more writing, he dug in his heels and refused to write anything.

I met with him again and introduced a different strategy, an individual written agreement.

Sometimes a student's problem is complex enough to require the involvement of colleagues, special educators, or mental health professionals. The problem-solving conference may then be the beginning of a conversation between teacher and student, providing helpful information to the teacher and any other adults who are helping to resolve the situation.

Far-Reaching Benefits

Problem-solving conferences give teachers a tool for working with students who are having trouble socially or academically. They give students ownership in solving their problem, which not only addresses the immediate obstacle but also enhances their feelings of significance and belonging.

In guiding students to think about possible causes of their problems and what they can do to solve them, we teach them to be self-reflective and to take responsibility for their behavior. These habits will help them be more successful now and in their adult lives.

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Analyzing Classroom Discourse to Advance Teaching and Learning

Rick Allen

Research has shown that proper use of classroom discourse can strengthen teacher-student rapport, create an open and supportive learning environment, and provide students with new ways of exploring information that can lead to deeper understanding of new concepts.

In the typical classroom of yesteryear, classroom talk was a controlled, mostly one-way exercise. Teachers gave directions, conveyed information, and elicited correct answers from neat rows of students. Those who could read the teacher's mind had a definite advantage.

Decades of research on classroom discourse—the range and variety of dialogue that can happen in a classroom—have yielded rich information about how talk can be used to benefit student learning, build teacher-student rapport, cultivate fair treatment and high expectations for all students, and determine students' level of understanding. Yet the predominant mode of classroom talk is still the teacher-centered initiate-respond-evaluate (IRE) model, which often falls short as an effective way of teaching, experts say.

“Schools and classrooms have hardly changed at all in the last century. Students sit in rows or tables facing the front of the room. Administrators and families expect teachers to be ‘teaching,’ and that’s usually defined as standing in front of the classroom addressing students,” says Nancy Frey, associate professor of literacy at San Diego

State University. “This sets up an unequal communication dynamic of teacher-dominated discourse” that tends to serve curricula emphasizing knowledge acquisition over knowledge generation, she explains.

Paying Attention to Talk

In the groundbreaking book *Classroom Discourse: The Language of Teaching and Learning* (Portsmouth, NH: Heinemann, 2001), Harvard researcher Courtney Cazden stresses that teachers need to study the variety of talk that goes on in their classrooms to help make teaching and learning work better for all students. The juxtaposition of more diverse classrooms with the wider world’s demand for 21st century skills such as problem solving, effective speaking and writing, and collaborating with persons of diverse backgrounds makes understanding the role of classroom talk, or discourse, even more urgent than in the past, Cazden notes.

In her book, Cazden, an international specialist in child language and education, points out that studying oral language in the classroom can yield insights on how language patterns

- Affect what counts as knowledge.
- Impact students’ educational opportunities.
- May foster certain levels of communication.

In classroom discourse situations where teachers ask questions with certain answers in mind, the teacher maintains control over what counts as knowledge. In such scenarios, the teacher may ignore a student’s uncertainty about content or counterquestions that appear tangential.

Cazden also emphasizes that, to go beyond the traditional teacher-question–student-response format, teachers need to have a strong grasp of the content beyond the current lesson. Having that knowledge allows a teacher to anticipate or negotiate the different directions students might take as they grapple with a new concept.

For example, Cazden cites the case of a 5th grade math student who insisted in one class exercise that to get from 8 to 4, she only had to “minus one-half” from 8. Even though other students correctly disagreed and the topic was outside the planned lesson, the teacher used the student’s response as an opening to discuss with students fractions as functions. When teachers allow for student discourse, lessons can take unexpected turns, but students will develop a deeper understanding of content within a much richer context.

Taking Action to Improve Discourse

Teachers who want to delve into the underlying dynamics of classroom discourse need to find ways to reflect on what happens in class daily. Setting up a video camera offers one way to gather information to analyze.

When elementary teacher Violet Dickson saw video of her classroom discourse with her 4th grade students, she was surprised to find that she sometimes answered her own questions instead of giving students time to process them. “I couldn’t believe it. I’m a seasoned teacher, and I know I’m not supposed to do that,” recalls Dickson, a K–5 teacher of gifted students at W. S. Ryan Elementary School in Denton, Tex.

Allowing a video camera to roll and inviting outside observers to take notes as part of an action-research project on classroom discourse was worthwhile for Dickson. She gained insight into her questioning techniques and confirmed that students in her noisy classrooms actually were staying on task.

The project also helped eight other elementary school teachers learn more about discourse in their classrooms. In one 2nd grade class, a teacher worried about a small group of students who were chattering about the new *King Kong* movie while they should have been discussing insect habitats. Holding off a reprimand, she discovered that they were making connections between the fictional jungle behemoth and

the strength of an ant that they were observing moving an outsized leaf. The teacher was able to use the moment to help students probe into the ways that organisms adapt to their environment over time by gaining traits that aid in their survival.

To encourage deeper discussion and investigation in the classroom, Dickson suggests that teachers

- Ask more open-ended questions.
- Encourage students to ask their own questions.
- Give students more time to research and explore problems.
- Give students opportunities for making choices about lines of inquiry in a topic. (For example, in a unit on Japanese culture, one student may want to do a tea ceremony, another calligraphy, and a third Zen gardens. Students build knowledge when they share information and make connections between topics.)

When teachers model inquiry in the classroom by asking questions such as “I wonder why that happened?” or “Why did that occur?” students learn to pose their own questions.

“Kids are so programmed to just answer questions, but part of the thinking process is how to ask questions, make a hypothesis, and then find an answer. All of this is part of the problem-solving process,” says Dickson. “When teachers model inquiry, they’re talking through their own thinking process out loud. It helps students.” Teachers can also establish ground rules for different types of classroom discourse, she adds. For example,

- Students should talk quietly in small groups when the teacher is directly instructing one group.
- During brainstorming, students should take turns and not talk over one another.

- Teachers should review rules of debate when discussing topics (e.g., working to support opinions, sharing by turns, using specific amounts of time for delivery).

Giving students more opportunities to talk and discuss knowledge extends what Cazden calls “speaking rights,” which traditionally have been closely held by teachers. Allowing students to voice their opinions, personal connections to content, and insights makes them part of a group that helps to define knowledge, Dickson says.

Talking for Formative Assessment

In their ASCD book *Checking for Understanding: Formative Assessment Techniques for Your Classroom* (2006), San Diego State University professors Douglas Fisher and Nancy Frey devote an entire chapter to using oral language to check for student understanding. By paying attention to their talk with students or listening to talk among students, teachers can gauge students’ learning and tailor lessons at the moment or as a follow-up.

One of the most useful discourse strategies, says Frey, is “accountable talk,” a strategy developed by Lauren Resnick at the University of Pittsburgh’s Institute for Learning. Typically, accountable talk involves a commitment from students to work with a partner to stay on topic, use information that is accurate and appropriate for the topic, and think deeply about what the partner says.

In their book, Fisher and Frey describe five indicators of accountable talk students should use to deepen their conversation about and understanding of the topic at hand:

- Press for clarification and explanation.
- Require justification of proposals and challenges.
- Recognize and challenge misconceptions.
- Demand evidence for claims and arguments.
- Interpret and use each other’s statements.

In their own college classroom discussions, both Fisher and Frey say that they resist the urge to respond to each student comment because that's where evaluation often "creeps in." Instead, they invite other students to use accountable talk strategies to respond. "We know we are doing a good job when we can get a string of students to talk without us interjecting," Fisher says. He recommends that teachers prepare some rich questions in advance by brainstorming with Bloom's taxonomy for inspiration and then select a few questions for classroom discussion.

"The truly great teachers know how to ask questions that elicit unexpected answers. They then analyze that student discourse to figure out what learning needs to occur next," explains Fisher.

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Part 5

Responding to 21st
Century Challenges

Mastering Multitasking

Urs Gasser and John Palfrey

*It's part of every digital native's life.
Can we help students do it right?*

In 2007 alone, 161 billion gigabytes of digital content were created, stored, and shared around the world. This is equivalent to 12 stacks of books reaching from the Earth to the sun, or six tons of books for every living person (Gantz, 2008).

It's not only the exponential growth of digital information that is staggering. The number of communication channels is also growing rapidly. A business research firm recently calculated that a typical worker in the knowledge economy deals with 200 e-mails, dozens of instant messages, multiple phone calls, and several text messages a day (Spira & Goldes, 2007).

Looking at these numbers, one wonders how people who live digital lives can manage all the information that demands their attention. Our brains have an estimated maximum processing capacity of just 126 bits per second, and our short-term memory can hold only about seven items at once (Miller, 1956). Clearly, there's an enormous gap between the endless sea of information and the limited capacity of the human brain to take in and process that information.

During the first few decades of the information age, we've developed a number of approaches to cope with information overload. For example,

- An analysis of postings to Usenet newsgroups revealed that users were more likely to respond to simpler messages in overload situations. The users in this study tended to end active participation if they received too much information (Jones, Ravid, & Rafaeli, 2004).
- Studies involving online learning have shown that certain users ended up printing out online materials to eliminate the distractions of the technology and to avoid overload (Chang & Ley, 2006).
- Another study found that many young Internet users tended to avoid information overload by limiting the number of Web sites they visited (Hartmann, 2003). We have seen the same coping strategy among young people in our own focus groups and interviews.

But among *digital natives* (young people born after 1980 who have access to digital technology and the skills to use it), one coping strategy is clearly the most popular: multitasking. Digital natives typically say that when they multitask, they feel more “up-to-speed,” more “productive,” and “less stressed” (Aratani, 2007, p. A1).

The Most Popular Coping Strategy

Whether a digital native is checking some facts on Wikipedia, playing a game on her PlayStation, reading a blog post, browsing the Web, watching a YouTube video, or working on a math homework assignment, there is a good chance that she is doing more than one thing at a time. A look over her shoulder would typically reveal that she has an instant messaging (IM) application open to chat with her friends, while the window of her preferred social networking site—like MySpace or Facebook—also appears on the screen. At the same time, the latest tunes downloaded from her favorite P2P (peer to peer) network are probably playing in the background.

A growing body of research from various disciplines has begun to explore the phenomenon of multitasking. From the perspective of parents and teachers, many findings of these studies are worrisome. At best, multitasking slows our kids down as they work on their homework. At worst, multitasking leads to a level of distraction that has far more serious consequences than a lower grade in school. For instance, according to a recent study, 46 percent of teenagers send text messages with their cell phones while driving (Parker, 2007). One teen noted, “I ran into my garage door three or four times because I was text-messaging. I had to pay for them all, too, and it was expensive” (de Vise & Otto, 2007, p. B1).

Against this backdrop, the conclusion of many parents and teachers we’ve worked with is simple: We should prevent digital natives from multitasking.

Easier said than done. In some instances, it might be possible to motivate young people to focus on only one activity at a time. From time to time, we ask our own students to close their laptops, put their iPhones away, and engage only in the classroom discussion. Some classrooms might even have a switch to shut down the WiFi connection (although these simple technological solutions rarely work well).

Most of the time, however, it’s impossible to prevent kids from multitasking. A comprehensive study of the multitasking habits of digital natives, conducted by the Henry J. Kaiser Family Foundation (Foehr, 2006) found that four-fifths of young people age 8–18 multitasked while using media. Outside the classroom, in their dorms, at home, when they hang out with their friends—in almost any imaginable context—digital natives constantly engage in multitasking, whether we like it or not.

What can parents and educators do about the multitasking habits of our digital natives? Put another way, what *should* we do about multitasking? Our answer is straightforward: We have to embrace and master it, while providing limits from time to time to create contemplative space for young people. This approach requires that we understand multitasking.

Understanding Multitasking

Reading a book while listening to music, eating a sandwich while watching TV, sending a text message while attending a meeting, instant messaging while doing homework, answering phone calls while writing an essay—all these activities are usually referred to as multitasking. When attempting to understand what multitasking actually is, however, we should distinguish between two forms of behavior. Multitasking in the narrow sense, also known as *parallel processing*, happens when we do more than one thing at exactly the same time—for instance, reading while listening to music. *Task-switching*, in contrast, occurs when we rapidly change from one task to another. An example of task-switching is reading a book and responding to incoming instant messages as they appear.

Although there is often only a fine line between the two types of behavior, they have different implications. Parallel processing, for instance, may indeed increase efficiency, especially when one of the tasks involves motor activities like walking, or other actions that have become routine (Tugend, 2008). In contrast, the rapid switching between different mental tasks can decrease efficiency, especially if those tasks demand more challenging cognitive processes. Studies show that each shift of attention from one task to another requires the activation of different neural circuits, probably coordinated by the frontal lobe (Rubinstein, Meyer, & Evans, 2001). These switches cost time, especially when the mental task is new or unfamiliar.

What Are the Costs?

“Instant Messaging Found to Slow Students’ Reading” (Viadero, 2008).
“Multitasking Teens May Be Muddling Their Brains” (Hamilton, 2008).
A glance at such news headlines would certainly lead us to conclude that the effects of multitasking are potentially devastating. However, only a relatively small number of studies have actually looked into this

question, and we need to interpret the results cautiously. Let's look at some of the findings.

In a study that investigated the effects of media multitasking in the classroom, one group of college students was allowed to use laptops during a lecture, and another group was not. The students using laptops scored lower on a traditional test of memory on the lecture's contents. The researchers also noted, however, that the students' overall performance in the course was not adversely affected by the fact that they were encouraged to use laptops in class and had been actively multitasking throughout the semester; this outcome may have occurred because the course was nontraditional, highly dynamic, and interactive (Hembrooke & Gay, 2003).

In a survey, the amount of time students reported they spent instant messaging was significantly related to their self-reports of distractibility from academic reading. The study concluded that instant messaging is likely to create a cognitive style "based on quick, superficial multitasking rather than in-depth focus on one task" (Levine, Waite, & Bowman, 2007, p. 565).

A more recent study revealed that students who fielded instant messages while completing an academic reading assignment needed roughly 50 percent more time to complete the assignment than students in two other groups: one that read the academic assignment with no interruptions and one that answered the instant messages first and then read the assignment. Although students in all the groups apparently still managed to understand what they had read, one of the researchers pointed out,

students who are managing their busy lives may think they are accomplishing more by multitasking, but they will actually need more time to achieve the same level of performance on an academic task. (Viadero, 2008)

A field study found that computer users spent, on average, nearly 10 minutes switching from one task to another when they got an alert of

an incoming e-mail or instant message. Depending on the interruption, they spent another 10 to 15 minutes before returning to the disrupted task. In almost 30 percent of the cases, it took more than two hours to resume the task, because users often visited several other applications after checking the incoming messages (Iqbal & Horvitz, 2007).

Other researchers have found that interruptions can actually facilitate decision-making performance if the interrupted tasks are simple and the interruption is dissimilar to the original task (see Speier, Valacich, & Vessey, 2007).

And finally, one study used functional magnetic resonance imaging to examine brain activity while participants learned to predict weather outcomes for two different cities (Foerde, Knowlton, & Poldrack, 2006). During the learning, the researchers added a second task that required participants to listen to high and low beeps and keep a mental count of the high tones. The distraction of the beeps did not reduce the accuracy of weather predictions, thus demonstrating that people can learn while multitasking. However, the distraction did decrease the degree to which the participants used declarative memory (which relies on a medial temporal lobe system), as opposed to habit learning (which relies on the striatum) to complete the task. Although both types of memory system can support learning, declarative memory allows more flexible use of the knowledge learned. Thus, according to researcher Russell A. Poldrack, “Even if you can learn while distracted, it changes how you learn, making the learning less efficient and useful” (“Study: Multitasking Hinders Learning,” 2006).

What can we learn from such studies? Although we must be careful in generalizing these findings, three things are noteworthy from an educator’s perspective:

- Multitasking does not render learning impossible. It does not even necessarily make it more difficult to accomplish tasks. However, we can safely conclude that task-switching in particular increases the amount of time needed to finish a task.

- Multitasking is likely to change learning qualitatively by making the learner rely on different memory systems that vary in flexibility when it comes to the use of knowledge.
- The loss of attention and the time spent switching from task to task is likely to have an adverse effect on digital natives' ability to learn complex new facts and concepts.

Giving Students the Facts

Where does all this leave us as educators? Should we expend all our effort in trying to prevent digital natives from multitasking? The answer is no. As one of our student researchers said in a blog post, “I believe the solution is emphatically not to limit access—at least not for older teens. Rather, I think the key lies in laying out the facts and discussing strategies” (Kimball, 2008).

What we suggest, therefore, is engaging in a structured conversation with digital natives about multitasking as one strategy that can help them cope with the sea of information. An understanding of the way multitasking challenges learning can even help students practice intentional learning and thus improve the performance of their working memory. Ideally, such a conversation about the uses and limitations of multitasking would be part of school information and media literacy programs.

A sample curriculum on multitasking could consist of four sessions. In the first session, students would discuss their experiences with multitasking and information overload. In a series of experiments, students would then experience the limits of their working memories—for example, by trying to remember items on a grocery list (they will be able to remember roughly seven items), or by trying to remember three random letters while continuously subtracting 4 from the number 91 for 20 (and then 30 and 40) seconds. This introductory session demonstrates that our working memory is a bottleneck and that splitting our attention between two cognitive tasks impairs memory performance.

The second session would familiarize students with current research findings on multitasking. Discussion topics would include a brief overview of the different types of multitasking and what the research says about their various effects on life (including driving!) and especially on learning. This session, which may also include experiments, would address the guiding question, In what types of situations does multitasking work (or not)?

The third session would build on insights from session 2, giving students the opportunity to experiment with media multitasking and to share their experiences with peers and teachers. This session would also include practical advice to help focus attention (Lavie, 2005) and to improve multitasking. Certain tactics—like taking power naps, alternate tasks, or taking a break before moving on—have been proven to counteract what has been called *techno-brain burnout* (Small & Vorgan, 2008).

In the fourth and final session, students would share alternate strategies they use to cope with information overload, such as *chunking* (grouping bits of information to reduce the number of “chunks” you need to remember). The session would also present technologies that can help, ranging from syndication technologies to recommendation systems. The final session might also give students the opportunity to experience a contemplative environment without distraction, thus demonstrating the advantage of sometimes closing laptops and turning off cell phones.

Giving Students Control

Given its widespread use by digital natives, multitasking is not going away. Nor is multitasking necessarily a bad thing. It seems quite desirable, for instance, for an airline pilot to be able to communicate with air traffic control while activating the thrust-reverser when landing. And it is useful to know that some surgeons perform stressful tasks more quickly and accurately when listening to self-selected music (Baker, 1994).

At times, though, multitasking can be inefficient—even flat-out dangerous. Educators can help students gain control of their learning in a digital age not by trying to prevent them from multitasking, but rather by engaging them in intentional conversations about its promises and limits—and by structuring environments in which young people can see the costs and benefits for themselves.

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Becoming Network-Wise

Will Richardson

Schools can do a far better job of preparing students for their connected futures online.

Let me tell you how our kids learn about Facebook and MySpace,” the high school principal said with a wry grin. I’d just finished up a presentation on the potentials and pitfalls of online social networks, and I could tell he was looking to offer a helpful if somewhat sarcastic dose of reality. “They get a great lesson,” he said, “when I pull them into my office and give them a good tongue-lashing about the stuff they’re putting up on their sites.” I chuckled, and so did most in the audience.

“So if that’s your ‘curriculum’ on the topic of responsible online conduct,” I asked, smiling, “then whose fault is all that not-so-great-stuff the kids are putting up there?”

He thought for a second, then smiled broadly. “The parents!” he exclaimed, and we all laughed at his deft deflection of the question.

But should we be laughing? The explosion of connective online technologies—such as blogs, wikis, and the social networking sites so many students love to use (and, in some cases, abuse)—have given many educators pause as we try to understand and navigate a fast-changing, much more public, collaborative landscape on the Web. The challenges of keeping up with students as they create and publish in ever-increasing numbers are daunting, especially when most educators have little context for those activities in their own lives. But the fact is that students continue to explore networking online, few of them are

being taught how to leverage its potential and benefit from the deep learning that can ensue.

Their Networked Futures

Leverage these connections they must, for the growing consensus is that much of our students' learning lives will be spent interacting in online, virtual networks, forming groups with others on the basis of their passions and their need to learn, all the while making complex decisions about whom to connect to, how much information to share, and how best to achieve both collective and individual goals. In the process, students will need to build their own curriculums, create their own projects, and assess their own products and their contribution in creating them. In short, they must be self-directed, self-motivated, lifelong learners who are network-literate in their creation and participation in these spaces.

This is no small shift, to be sure, from traditional classroom spaces where the curriculum is fixed before the fact and parceled out as the year progresses in neat, linear pieces; where standardized tests require little if any self-reflection or interaction with others; and where work is seldom shared publicly or created for the public good.

It's a shift that challenges the relevance of the traditional classroom in some fundamental ways. Learning is no longer primarily fixed in time and space; it can happen anytime and anywhere that we are connected—in a virtual, asynchronous classroom, for example, with self-motivated and self-directed people who want to learn with us. In that context, it forces us to rethink our physical teaching and learning spaces and our roles in students' lives.

Regardless of the level of discomfort that these “epochal” changes (Shirky, 2008, p. 17) create for teachers, administrators, and parents alike, *not* addressing these shifts by attempting to simply filter them away or ignore their reality is no longer an option. Students will be—and to some extent already are—living in a world of online interactions

for which they currently have few learning contexts or models. Like it or not, we must begin to prepare them for their connected futures online. To do that, we must be willing to embrace these new technologies in our own practice and add an important expectation for learning to our curriculums and classrooms—namely, that by graduation, students will be able to create, navigate, and grow their own personal learning networks in safe, effective, and ethical ways.

Stanford professor Howard Rheingold, a blogger and author of *Smart Mobs* (Perseus, 2002), put it this way:

Learning to use online forums, be they social network services like MySpace and Facebook, blogs, or wikis, is not a sexily contemporary add-on to the curriculum—it's an essential part of the literacy today's youth require for the world they inhabit. ... The way today's students will do science, politics, journalism, and business next year and a decade from now will be shaped by the skills they acquire in using social media and by the knowledge they gain of the important issues of privacy, identity, community, and the role of citizen media in democracy. (2008)

The Future Is Here

Considering they barely existed just five years ago, online networks have quickly changed the landscape in terms of how we connect with others around the world. The current numbers of people participating in social networks are staggering: 250 million on MySpace, 125 million on Facebook, and hundreds of millions more on such sites as LinkedIn, LiveJournal, and LibraryThing (“List of Social Networking Websites,” n.d.). As we add on to the already 1.5 billion people online, those numbers continue to explode. More significant for educators is students’ intensive participation in these social networks. According to a National School Boards Association study (2007), more than 75 percent of U.S. students with online access have either a MySpace or

a Facebook account. These spaces are an important part of students' lives, and their attraction is not going away anytime soon.

But missing from the usual conversation about social networking are the many millions of those who connect, collaborate, and learn with one another outside the structure of the "typical" social Web site through their interaction on blogs, Twitter, Flickr, Delicious, and many other sites. To be successful in these interactions, which are more representative of the self-directed learning opportunities we now have, we must exhibit an increasingly complex set of skills that apply not only to how we engage with information but also to how we engage with people online.

The Skills Students Need

In these self-made, online, networked classrooms, traditional reading and writing literacies are no less important. In fact, we must be willing to expand the scope of literacy in a world where much of what we read is unedited in the conventional sense and where a precursor to building networks is a willingness to write and publish online using a variety of media. Even the National Council of Teachers of English (NCTE) recognizes the changing shape of traditional literacy, calling it "malleable" and suggesting that 21st-century readers and writers should be able to not only use technologies effectively but also "build relationships with others to pose and solve problems collaboratively and cross-culturally" and "design and share information for global communities to meet a variety of purposes" (NCTE, n.d.).

So how do we do that?

Handling Hypertext

From a reading standpoint, we need to acclimate students to hypertext environments early on and foster an ability to synthesize relevant bits of information from many diverse sources. We must help

them become comfortable reading electronically distributed texts and conversations that look and feel little like the linear, page-by-page reading that we do in the paper world.

An important way to begin that work is by teaching students (and ourselves) to use RSS (Really Simple Syndication) feeds to subscribe to content creators who consistently publish relevant and interesting information. In addition to using traditional texts to do research, students could use RSS feeds to create a consistent stream of news stories, blog posts, videos, and photos related to a given topic coming to their desktops or cell phones, which they can access at a moment's notice. Their task then becomes to filter this stream for the most relevant and accurate items, using critical-reading skills to follow links and dive more deeply into the information.

For instance, students studying the effects of global warming could use RSS feeds to subscribe to stories about the topic from the *New York Times* and compare those stories with ones they get in similar feeds from the *Times of India* and *China Daily*. In addition, they could use RSS feeds to scour the blogosphere to identify expert voices.

Critically Reading Information

Although having effective skills for finding and collecting information is imperative, we also need to make sure that students can read as highly trained editors read, looking for truth in both the text and the author. If the well-chronicled example of the Pacific Northwest Tree Octopus site is any example (see <http://zapatopi.net/treeoctopus>), we have some work to do in this area.

University of Connecticut professor Donald Leu showed this fictitious site to a group of 25 middle school students, none of whom could discern that the site was a hoax, despite the ludicrous premise of this endangered species struggling through life climbing pine trees to avoid capture and being sold as women's headwear. Twenty-four of the students, in fact, labeled it "very credible."

Students must be able to find out who owns a particular Web site; they can do this by using a research service such as Whois.net to access the registration information. They must be able to assess its authority by examining the incoming and outgoing links from and to other sites on the Web to ensure it references—and is referenced by—credible sites. And they must be able to analyze the level of writing, the tenor of the comments, and the authors' motives, commercial or otherwise, to gauge the veracity and relevance of the information.

Critically Reading People

Reading people is equally if not more challenging because in the practice of network building, students must critically evaluate potential nodes in their networks. It's not enough simply to find someone who shares their passion. To find good teachers, students must make a habit of asking such questions as, Who is this person? What are her traditional and nontraditional credentials? What communities or networks is he a part of? What is the level of her contribution? and What is his professional reputation? Students must be able to answer these questions satisfactorily by knowing how to search deeply online, not just in Google, but in databases and content repositories, such as ProQuest or EBSCO Host.

So, for instance, if a student who is researching global warming happens on the blog Environmental Economics (www.env-econ.net), he or she must be able to not only consider the information provided about the authors, but also search beyond the blog for more information, reading into the archives, checking the frequency of postings and the tone of the comments left by readers, all the while attempting to measure the author's veracity and contribution. The student must be able to make sound editorial decisions in terms of whether the blog and its authors are trustworthy sources of knowledge and learning.

Writing for an Audience

We must guide students in sharing their real-work efforts with worldwide audiences, helping them understand the efficiencies and ethics of publishing in meaningful ways. Sharing that work is the first step to becoming “findable” online by others who share our passions. (For more on becoming “findable,” see my article “Footprints in the Digital Age” in the November 2008 issue of *Educational Leadership*.) But although this is a positive consequence of the changing online landscape, most schools currently don’t want their students to be found at all, an attitude that potentially does more harm than good.

Teaching students to contribute and collaborate online in ways that are both safe and appropriate requires instruction and modeling, not simply crossing our fingers and hoping for the best when they go home and do it on their own. With younger students, we can create opportunities to share with classmates or with vetted classrooms from outside the school walls. In the context of those connections, we can teach students about privacy, safety, copyright, plagiarism, and the ethics of online communities. As they get older, we can help them foster their own connections around the topics that they are passionate about, writing and publishing under their own names when they are ready. All the while, we should attempt to model these behaviors in our own learning, sparking conversations about writing online in every grade and discipline.

Writing in Multiple Modes

Students should be writing in digital environments in different modes. To provide instant content, online users can add links—not just to words but to photos, digital stories, and videos. Tools like VoiceThread (<http://voicethread.com>) enable audio and video interactions; people can comment on an image, document, or video through speech, text, audio files, or video. Flickr (www.flickr.com), the online photo-sharing site, enables users to add annotations and links directly to

pictures, creating connected stories and conversations. In fact, as the word implies, the *link* makes connections happen and networks grow. If we continue to simply pass paper back and forth in our classrooms, we are not preparing students for the world they are entering.

Organized Sharing

The work of building personal learning networks is more than just reading, writing, and editing, however. It requires being able to capture, organize, and potentially remix and redistribute the best, most relevant information that we find—and that means rethinking parts of our online practice. For instance, the days of saving great Web sites to our browser as bookmarks or favorites have passed. Today, we share those great online finds using social bookmarking sites like Delicious.com or Diigo.com, where others can find them and, subsequently, find us. In fact, by using RSS feeds, others can “subscribe” to our bookmarks, finding out what we are reading and, with any luck, enriching their own learning in the process.

Case in point: As a friend of mine began to collect bookmarks about an upcoming trip to New Zealand, someone from New Zealand who tracked those bookmarks saw them coming through her RSS reader and ended up having a long conversation with my friend on Skype regarding the best places to stay and visit. (Now that’s connection!)

And, as with just about everything else we read or write, we assign our own organizational schemes or *folksonomies* by using keywords or tags that help us (and others) track the most interesting, relevant content out there. So, for instance, if you’re interested in the articles and artifacts that contribute to this discussion, you can follow all the bookmarks I’ve tagged with “network_literacy” at http://delicious.com/willrich/network_literacy. (As of the writing of this article, I’m at 116 and counting.)

Engaging Diverse Voices

Creating effective networks is more complex than simply organizing a group of like-minded learners with heightened traditional literacies, however. According to Stephen Downes (2007), a senior research officer with the Institute for Information Technology at Canada's National Research Council, personal learning networks must be diverse, open, autonomous, and connected. Diversity in a learning network is crucial because without it we become stuck in an "echo chamber" of like-minded voices.

We must teach students to seek out "critical friends" and voices of dissent who will respectfully challenge their thinking. We do that by seeking out the best, most vibrant communities and conversations; by being willing to engage and push one another's thinking in civil ways; and by modeling for students how we handle the back and forth in our own learning conversations. Most important, this should happen for students in the context of their passions, where the debate and the engagement have real meaning and consequences for their learning.

Thin Walls

How can we best deliver these literacies in our classrooms? The reality is that we shouldn't be teaching them as a unit tucked somewhere in the curriculum under the guise of "information literacy" at a time that we think students might be "ready" to acquire these skills. Instead, if we sincerely want to prepare students to read, write, and edit their way through complex online networks, we need to make these literacies part of the way we do business as educator/learners.

According to Clarence Fisher, a teacher in Snow Lake, Manitoba, who regularly connects his students with other teachers and learners around the world, we have to begin thinking of our classrooms as having "thin walls" (<http://thinwalls.edublogs.org/about>). We need to regularly break through the bricks, starting at the earliest ages.

In elementary school, for instance, we can have young readers interview authors using Skype or have them create or edit posts at Wikipedia, making sure to follow along with the conversations and the other edits that ensue. As the students get older, we can use our own networks to connect our classrooms to other classrooms to co-create and collaborate on projects and content, and we can give those works real, global audiences by publishing them online. And before the students leave us, we can let them design and deliver their own curriculums built around the passions that they want to pursue, showing us their network-building prowess in the process.

We should help them aspire to the work that 18-year-old Ethan Bodnar, for instance, has shared over the past two years around his passion for art and social media (<http://ethanbodnar.com>). Ethan's blog is part portfolio, part notebook, part idea archive—and a testament to what's possible when we let kids create and publish to worldwide audiences.

In the end, if we fail to get our collective educator brains around these shifts, if we continue to think that punishing students' uses of these networks is the best way of teaching them what they need to know to survive in a globally connected, transparent world, then we are not doing everything we can to prepare them for their learning futures. And that's no laughing matter.

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Financial Literacy: An Imperative in Economic Hard Times

Rick Allen

To prepare young people for life outside the school walls, some states and school districts are mandating that graduates understand budgeting and personal finance.

Lawmakers in Ohio, propelled by the state's dubious distinction as the leader in home foreclosures in the nation in 2006, made financial literacy a high school graduation requirement. Other states and school districts are considering similar measures. Tennessee, Missouri, and Utah mandate a semester-long personal finance course for graduation, and 17 other states integrate personal financial education into required subjects, such as economics.

As the economic downturn has spread throughout the United States and many nations around the world, some schools have been looking for strategies to help students deal with the real economic world so that it doesn't overwhelm them after they graduate.

High school seniors "continue to struggle with financial literacy basics," says Lewis Mandell, a senior fellow at the Aspen Institute's Initiative on Financial Security and Kermit O. Hanson Visiting Professor of Finance and Business Economics at the University of Washington.

A 2008 survey of the personal financial literacy of high school seniors showed that students scored an average of 47.5 percent—a

slight decline from 2006—according to the Jump\$tart Coalition for Personal Financial Literacy, which sponsors the biennial survey.

“The 2008 Jump\$tart score for high school seniors is the lowest on record. I would say they are pretty financially illiterate,” says Mandell, who administered the survey.

Financial literacy education for older students should include “a high degree of interaction accompanied by a strong and consistent message of motivation” about why this is important to learn and remember, Mandell says.

Ohio’s Investment in Financial Literacy

In Ohio, where school districts now require graduates to be financially literate, administrators are seeing uneven results.

“The problem is that districts can implement [the financial literacy requirement] in so many different ways,” says Michelle Pearson, director of community education for the Ohio treasurer’s office. “Some districts have expressed their desire to have a semester-long, stand-alone course, which is what we would absolutely recommend. Others may just incorporate it into an existing program. Some may do it in a meaningful way; others may not. That’s why we’re trying to recognize schools doing financial literacy the right way.”

One inner-city Cleveland school’s efforts have put many of its students ahead of the financial literacy curve. For six years Cleveland Central Catholic High School, which is located in a neighborhood dubbed by national media as the epicenter of the foreclosure disaster, has been offering a variety of personal financial classes to its 560 students and their families, half of whom can contribute less than \$200 toward a \$6,500 tuition bill. The school’s matrix of programs recently won recognition from Ohio’s treasurer and its Department of Education as an exemplar for schools seeking to fulfill the state’s financial literacy mandate by 2010.

Initially, Cleveland Central Catholic only offered financial literacy courses to students who received tuition grants from a local bank, which stipulated such training for grants awardees. In 9th grade, awardees and their families attend a workshop in which they learn banking and finance basics. In 10th grade, the same students take two semesters of personal finance. In 11th grade, they enroll in accounting through the school's business department, and as seniors the students take a course called "Banking Systems and Investing in the Future."

"The kids are beginning to realize that it's important to know this kind of information," says Sister Allison Marie Gusdanovic, who notes that general enrollment in the personal finance and accounting courses has increased as students understand the importance of such knowledge. All seniors also study economics as a component of their government class.

This year all 9th graders also used the 4-H's Real World, Real Money curriculum, which prepares them to take part in a half day of simulations. During that time, they devise family budgets that include spending on housing, clothing, food, and entertainment based on a designated salary level, family size, and tax bracket.

"It was very eye-opening to them. We had students who didn't know where the money comes from in ATMs or what the IRS is," Gusdanovic says. "They started to realize what money means to a family. Many of them said, 'I'm not going to ask my mother for money all the time,' because they now realize all the things she has to take care of."

Cleveland Central's personal finance teacher, Carol Troxell, has students create podcasts, brochures, or posters to help reinforce concepts they feel are most important to them. For example, students have created podcasts about setting goals, investing and compounding, determining needs versus wants when shopping, and understanding credit ratings.

"Even if students only take away one aspect of the yearlong class, they'll benefit greatly once they get out there in the real world," Troxell says.

Monitoring the Cash Flow in Wyoming

All juniors and seniors at Triumph High School in Cheyenne, Wyo., take a 9-week financial literacy course as part of an 18-week life skills class. Many students at the alternative school have jobs, and others live on their own; therefore, the skills they gain in the course have an immediate value, says Michelle Aldrich, a family and consumer science teacher who teaches the course.

“I want students to have the tools they need in order to be financially successful,” Aldrich says. She uses the National Endowment for Financial Education’s free *High School Financial Planning Program* as her financial literacy curriculum, and learning objectives for her students include understanding the difference between needs and wants, managing money, and using a budget as a tool that adjusts to meet a person’s or a family’s changing circumstances.

Its checkbook simulation exercise, for example, in which students balance the credits and debits over a six-month period, drives home to students the importance of keeping track of cash flow—in and out.

“This generation is very debit card-oriented. They pay for things online. Even very few of the Gen Yers or Gen Xers use checking accounts,” Aldrich points out. “But you still need to record your debit card usage and balance your bank statement,” and that includes hanging on to those receipts from ATM and debit card transactions.

Because a majority of her students are also working to help their families, pay rent, or finance car ownership, Aldrich teaches them to understand the role of insurance and the value of investing, financial activities with which most high school students are unfamiliar.

“We stress the importance of saving [through] ‘paying yourself’ 10 percent of each paycheck,” Aldrich says. Skipping Starbucks on a daily basis or forgoing cigarette smoking are other recommendations she offers students that personalize and instill in them a habit of saving.

Her students also analyze financial operations like payday lenders and pawn shops, which tend to take advantage of families who are cash poor. Payday lenders give cash at exorbitant interest rates in advance of a paycheck, which gets applied to the debt. “It becomes a vicious cycle because you’re short every paycheck,” Aldrich tells students.

Hands-On Financial Decision Making

To ensure that students make sound financial decisions as adults, financial education experts contend that schools and families should start fostering financial literacy before the teen years. Fairfax County Public Schools, in Virginia, has worked with private and nonprofit organizations to run a pilot course on personal finance for 8th graders.

As part of their civics and economics class, students study concepts such as net monthly income, banking, budgeting, and investing. They then participate in financial simulations at the Mobile Finance Park, which is staffed by Junior Achievement and global financial services provider Capital One. After being assigned a random demographic, which includes family size, salary, and tax bracket, students conduct mock financial transactions. In two 53-foot converted semis, they make their way through 12 stations where they meet with mortgage lenders, real estate agents, stores, and credit card companies. Their goal is to have both savings and money left over at the end of a month.

The Mobile Finance Park experiment, funded by Capital One, serves four to five schools annually, and 8 of 10 students in Fairfax County said they learned new information that they can use in daily life.

“We have heard very positive comments from teachers, students, and parents,” says Alice Reilly, K–12 social studies coordinator for the district.

“Parents have frequently said, ‘I wish all my kids could have had this; I wish I had this when I was in school.’”

As a result of such positive feedback, the district plans to partner with Junior Achievement to build a brick and mortar facility for

financial education this year. Junior Achievement has six permanent finance parks across the country.

Fairfax County will require all 8th graders, about 12,000 students, to take the semester-long course that culminates in hands-on learning at the facility. The program will help Fairfax County schools meet Virginia's requirement that all students be taught economics and financial literacy in middle school or high school.

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Understanding Students' Strengths and Struggles

Donna Marie San Antonio

To know our students, we must know their communities and acknowledge their challenges.

Good relationships in school matter. And they matter a great deal to students from low-income families, whose struggles and strengths may be unknown to teachers. A student's ability to stay engaged in school can be affected by that student's home responsibilities, lack of family resources, and peer-group tensions related to social class hierarchies. Low-income students in particular benefit from having a meaningful relationship with at least one school staff member who knows their interests, skills, and struggles.

The urgency of making meaningful connections with students becomes clear when we consider the dire consequences that may result if students disengage from school. Nearly one in three high school students in the United States fails to graduate from high school, and nearly half of students from historically disadvantaged groups fail to graduate (Swanson, 2003). Students of all races and classes graduate more often when they attend schools in which high school graduation is the norm, yet only 50 percent of black students and 40 percent of Latino students attend such high schools (Balfanz & Letgers, 2004). High school graduation and college completion have profound life implications. The gap in income between college graduates and people without a high school diploma has grown larger in the last 30 years (Mishel, Bernstein, &

Allegretto, 2005). Those holding a four-year college degree now earn, on average, two-and-one-half times as much as those without a high school diploma.

Society needs to make policy and structural changes to respond to persistent social and education inequities, but research shows that educators can mitigate the effects of poverty on education outcomes by creating classrooms and schools in which students at risk of becoming disengaged are valued as part of the school community (Garbarino, 1995). As educators, we have a daily opportunity to build relationships that can foster educational aspiration and performance. As a 2005 report for the Annie E. Casey Foundation asserts,

Some young people do well and stay in school despite tough circumstances. Researchers studying their resilience have found that children need personal anchors—stable, positive, emotional relationships with at least one parent or key person. ... Teachers and other adults can play an important role in fostering resilience. They may mentor students ... or they may play a role by offering emotional support during hard times, acting as the student's advocate when conflict arises in school or at home, or by providing an opportunity to pursue a special talent or interest. (p. 12)

School Relationships and Hope

Our readiness to be recruited as personal anchors, mentors, and advocates for low-income students depends on our ability to acknowledge students' skills, interests, aspirations, and worries—and our willingness to learn more about the barriers to success they face. Teachers need accurate information about our students' communities so that we can understand the unique resources and knowledge that our students bring with them.

Despite citizens' frustration with inadequate and inequitable school resources, public schools are still locations of tremendous hope.

The promise of education continues to inspire creative philanthropists, dedicated teachers, committed students, and hard-working parents. The value of good education prompted black parents to put their children on buses to integrate schools in hostile and dangerous circumstances, and the value of education continues to inspire community-based efforts to fight for equity and access for poor children.

Relationships are a key element of that persistent hope, as I discovered when I studied low-income students' adjustment to middle school. In an ethnographic study that focused on the transition from 6th to 7th grade, I explored how 30 students from economically diverse backgrounds adjusted to their new school socially and academically (San Antonio, 2004). These students were transitioning to a six-town regional middle school from their single-town elementary schools. The adolescents I studied came from either the community of Hillside, where many families struggle to make ends meet, or the more-affluent community of Lakeview.¹

I used interviews, focus groups, and observations to explore the extent to which students built connections with their peers and teachers and how these relationships affected their adjustment and success in school. The students consistently commented on their desire to have good relationships with peers and adults in their new school.

Knowing Our Students, Knowing Their Communities

The students I interviewed from Hillside frequently expressed concern that their ability to build positive relationships would be hampered by stereotypes or lack of knowledge about their community. A 7th grade boy told me,

People think if you live in a trailer home you are nothing but trailer trash. And people from outside Hillside think that that is how everyone in Hillside lives.

As they journey from their own neighborhoods into schools serving students from a variety of backgrounds, low-income students and their parents are aware of the assumptions that precede them, and they are justifiably concerned that these distortions might hamper their sense of belonging. To help all students feel welcome and valued, teachers must put themselves in contact with students' home environments.

We can find ample occasions to become more familiar with our students' lives outside school—attending church suppers, participating in community events, or eating or shopping in the neighborhood. We can use school field trips to explore the historical, artistic, and social significance of students' neighborhoods. We can invite people from our students' communities to speak to our classes. Bringing into the classroom stories of courage, resilience, ingenuity, and accomplishment from the home cultures of our students sends a powerful message of respect.

Students are keenly aware of the distribution of the most precious resource of all: their teachers' time and attention. The students I interviewed wanted teachers to help them feel connected to the school and valued by their peers. Hillside students perceived that for some of their peers, these connections were ready-made. One student pointed out that the teachers tend to know the families of more affluent students—they shop in the same places, go to the same gym, and play on the same golf course. He surmised,

Some of the teachers probably pay more attention to the Lakeview kids. They're from the same town. ... They know the kid, the kid's family. They know lots about them so they can talk to them more.

Another student spoke about her hope that teachers would make an effort to know who she really is: "They just see me as someone who is really quiet and doesn't really talk a lot." Students were clear that peer relationships across class lines partially hinged on their teachers' ability to show equal interest and respect for all their students.

Acknowledging Inequities

Social class lines often become more visible in middle school as a result of ability grouping, selective sports teams, and elected positions, such as student council. As placement decisions play out, low-income students face serious barriers. In economically and racially diverse schools that use ability grouping, students from low-income backgrounds and students of color are disproportionately left out of advanced classes (Brantlinger, 2003; Oakes, Adam, & Page, 1992). In my study, for example, none of the four Hillside boys with standardized math test scores at about the 85th percentile—and only two Hillside girls—were taking algebra in 8th grade, whereas all of the nine Lakeview students in this category were.

A similar situation exists in selective sports teams and after-school activities. In my study, only one-third of the students from low-income families participated in after-school activities compared with two-thirds of the students from more-affluent families. And low-income students fared no better when it came to elected roles within the school. In the year I conducted my study, none of the Hillside students was elected to student council. When asked how this imbalance might be explained, a Lakeview student responded:

I don't think [Lakeview students] really want to claim the school for themselves ... but I think Lakeview might be a little bit more successful because maybe the teachers know them better because they're from the same town.

When educators understand these disparities and know how to engage students in respectful conversations about unequal privilege, opportunity, and access, students are ready and willing to explore these issues.

Respecting Home-Based Values

Students from low-income families have to work strenuously to accomplish a positive sense of identity in school when they find that the skills, values, and ways of interacting found in school do not resemble those of their home communities. These differences were evident in my study in three areas in particular: parental beliefs about intervening in their child's education, ethics around how to prepare and support children when they face disappointment, and attitudes toward cooperation and competition.

Parents with economic and social advantages were not reticent about “manipulating their child's environment” (as one parent put it). Many of them contacted coaches, teachers, and administrators to weigh in on decisions regarding their child's education. When I asked low-income parents about contacting the school regarding athletic team decisions and classroom placements, what I heard was not indifference or ambivalence but a thoughtful, clear value system. Parents told me that they would not advocate for their child above someone else's, that they believed their child would need to speak up for himself or herself in the face of injustice, and that—disappointments being part of life—their child would need to learn to deal with them. They believed that the day-to-day decisions of the school did not belong in their hands.

The low-income students in my study took these lessons to heart and responded to disappointment with resilience. If they did not make the school team, they would play intramurals. “Maybe it's for the best,” they might say. “I'm busy enough as it is.” Often a similar disappointment in the lives of affluent students was treated as intolerable, and parents quickly responded by calling the school.

We can imagine how these different value systems and styles of communicating might result in different expectations, experiences, and opportunities for students of different income levels. Yet rather than accepting one set of values over the other, we should make these differences visible and consider both value systems positively. Our role

as educators is to understand the value systems and circumstances of all our students so that we can support them appropriately. Perhaps we can help students who accept disappointment too easily strive harder to achieve their desires—and help more economically fortunate students adjust to disappointment more resiliently.

Parents and students from different socioeconomic backgrounds also held different values around cooperation and competition. When asked to comment on the benefits of playing sports, students from Lakeview frequently pointed out how good it feels to win, whereas students from Hillside almost unanimously described the gratification that comes from teamwork. These are very different orientations to the world. I have observed low-income children becoming reticent and uncertain in competitive classroom environments, and I have observed them becoming more active and comfortable in cooperative classroom environments (such as unified arts classes) that emphasized a collective product. By thoughtfully structuring classroom environments to balance independence and interdependence, individual effort and teamwork, we can create both a comfort zone and a challenge for all. Competitive students can learn to cooperate, and cooperative students can learn to compete.

Improving Understanding Across Class Lines

To foster relationships in the classroom and between school staff and parents, educators must find ways to improve understanding across social class lines. We can initiate discussions that help students understand class realities and strengthen empathy within reading programs, social studies classes, or advisory activities. See “Resources for Teaching About Equity” (p. 77) for places to start.

The following activity, which I often use with graduate education students, is ideal for generating this kind of discussion; it is also appropriate for middle and high school students.²

I break students into small groups, give each group a bag of materials, and ask them to construct the most spectacular mobile they can in 20 minutes. I let students know I will be doing some role-playing during the activity and that their peers and I will evaluate their final product. They empty the bag of materials and get to work with earnestness and energy.

The students are unaware that the bags contain vastly different amounts of materials. One group gets scissors, a full set of color markers, tape, glue, string, glitter pens, wooden coffee stirrers, several clothes hangers, and lots of colorful construction paper. Another group gets two or three dull-colored markers, two coffee stirrers, a sheet of beige paper, some string, and one hanger. The remaining groups get varying amounts of supplies ranging from meager to abundant.

As students work, I circulate around the room. I smile at the group with a lot of resources and comment on how creative and colorful their work is (“Look at those neatly cut pieces and the colorful arrangement! You are doing such a good job!”). I tell the group with the least amount of material that their mobile probably isn’t going to be as nice as the others but “I just want you to do your best.”

When the time is up, students return to the bag all the materials that they did not use. Then each group shows its creation, and we debrief the exercise. The experience often evokes surprising emotion. The students with fewer resources are often self-conscious as we compare and evaluate the results. After we display the mobiles and discuss their merits, I take the bags of leftover materials from the group with the most and the group with the least resources and empty them onto the floor. Looking at the two piles on the floor—one with an ample supply of leftover paper and other materials, and the other with nothing but a couple of markers—the students with more than enough resources suddenly realize that the other groups had less. They are often incredulous: “How could that group make such a nice mobile with so little?” The resource-poor groups typically are aware that they had less, but they remain quiet, rarely expressing resentment or indignation.

Talking about this activity as a metaphor for conditions in society leads to a lively discussion about the inequitable distribution of resources and the lack of consciousness about such inequalities. It's important to acknowledge to students that the activity can never construct the lived experience of inequality, but that we can learn from it nonetheless.

Each group of students will understand this activity in a different way, but the follow-up conversations yield interesting observations and interpretations. We discuss society's tendency to judge people's performance on the basis of their personal qualities rather than on context and resources. We also discuss the experience of knowing and not knowing that the resources were unevenly distributed. I ask questions like,

- Can you give examples of situations in which people with abundant resources were unaware that others did not have as much? Why are people unaware?
- How might people respond when they know that their life circumstances are invisible to others?
- How does this lack of awareness affect policies and practices?

Another set of questions focuses on how each group worked. Because I tell students that their mobiles will be displayed and evaluated, there is often a sense of competition. The groups with ample resources often distribute materials to each person in the group and members work independently, drawing on their individual interests and skills. Those in the underresourced group realize that they have to plan, share, discuss, and cooperate with one another. When asked how they created such a good product, students often say that they realized they had to work together. This leads to exploration of how poverty and affluence might lead to different worldviews regarding relational versus material assets, community and individual goals, and interdependence and independence.

Finally, we talk about what resources students need in order to experience academic and social success at school—things like nice

clothing, a place to study, high-speed Internet connection, and summer sports camps. If I've done my job well, by the time this exercise is over, students have a different level of awareness about attitudes, values, and the mind-boggling inequalities around us that often remain unexamined.

Beginning the Dialogue Locally

Communities treasure schools that hold all students and parents in high regard, and they cherish teachers who find ways to know about their students' interests, skills, family values, and cultural traditions. In the absence of accurate knowledge about home and school domains, people tend to create myths, and these myths (such as the myth that low-income parents do not value education) can have devastating results. Structural school reform and more resources for poor schools are certainly needed—but let's not forget the profound importance of giving students equal access to relationships. Teachers build strong relationships when they honor what they learn from parents and value the ethics of care, community, and interdependence.

The will to engage in robust discussion about inequality—with teachers, students, and parents as key stakeholders—has been missing from our educational and political institutions. Local administrators and teachers can promote this dialogue and explore the conditions that foster or hinder strong school affiliation for students and parents across the economic spectrum. This will require a rigorous effort to see what is often unseen, seek information from sources we rarely consider, and engage in collective action on the basis of what we learn.

Resources for Teaching About Equity

Class Action (www.classism.org) and **Class Matters** (www.class-matters.org) both offer training, resources, and suggestions for actions students can take to explore the effects of inequities in society.

Teaching Tolerance (www.tolerance.org) provides educators with free materials that promote respect for difference and appreciation of diversity, including a biannual magazine and curriculum kits.

Children's Defense Fund's Web site (www.childrensdefense.org) gives a range of suggestions for education and advocacy education and advocacy concerning children living in poverty.

Rethinking Schools (www.rethinkingschools.org) publishes a monthly journal full of suggestions for bringing social justice questions into the classroom. Its Web site features links to other sites and resources. Rethinking Schools publishes many relevant books, such as *Rethinking Our Classrooms: Teaching for Equity and Justice, Volume 1 and 2* by Bill Bigelow. This book provides examples of how teachers can promote the values of community, justice, and equality while building academic skills.

People Like Us (www.pbs.org/peoplelikeus). This documentary on class issues provides good discussion starters. The Web site includes games, personal stories, a teaching guide, and other resources.

Why Segregation Matters: Poverty and Educational Inequality (www.civilrightsproject.ucla.edu/research/deseg/Why_Segreg_Matters.pdf). This report analyzes the effects of poverty and racial segregation on education.

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Endnotes

¹ Place names are pseudonyms.

² This activity is adapted from *Open Minds to Equality: A Sourcebook of Learning Activities to Affirm Diversity and Promote Equity* by N. Schniedewind and E. Davidson (Boston: Allyn and Bacon, 1998).

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What Students Want from Teachers

We asked students to describe a time when they felt in charge of their learning in school—when they were working not just for a grade but because they were excited and interested.

Here's what a few of them said.

Take Me Seriously

As I knelt on all fours, groping through my closet for a shoe, I knew I was embarking on a completely novel learning experience. The shoe had to be brown, close-toed, and professional. It had to say, “Take me seriously.” This was the message I hoped to convey to the Port Jefferson Board of Education at my first board meeting as student representative.

Later, as I walked down the hallway to the meeting room, my heels clicked like a teacher's. I took my place behind my nameplate at the table where the board sat. As the meeting began, I waited nervously for my turn to speak. When it came, I spoke honestly and watched as the adults in the room considered what I said.

That newfound respect enabled me to be productive and in charge in a new way for the rest of the year, as I slowly became comfortable in my business-casual heels.

—Kyleen Burke, grade 12, Port Jefferson, New York

Challenge Me to Think

My regular U.S. history teacher taught strictly to guidelines, spoon-feeding us the information required to ace tests. But when she left due to a pregnancy, my class was privileged to have a refreshing substitute who taught differently.

He focused on the big picture of topics and the lessons we could derive from them. For instance, we talked about the causes of the Vietnam War and its results—an unhappy America, the formation of a whole new cluster of people known as “hippies,” and a president frightened to run for reelection. We discussed the insight that people often rise up against wars that seem to have no clear purpose.

He printed out primary documents to illustrate every new era or issue we tackled. For example, we read two letters—one written by Booker T. Washington and the other written by W. E. B DuBois—that showed how their ways of thinking differed tremendously and sometimes split African Americans apart.

He made room for debate in class. We debated such topics as the different plans to revise the Articles of Confederation and Barack Obama’s speech on Reverend Wright.

He showed us movies and clips that helped us vicariously live what we learned, such as the opening war zone scene in *The Patriot*, which shows what the Revolutionary War was like, or the closing scene from *Golden Gate*, revealing the harsh immigrant examination lines.

He always portrayed several sides of every argument and opened up our minds to information that many textbooks fail to mention. For example, we discussed how the aftermath of the World Wars led to an unsettled situation in the Middle East, which continues even to this day. In these ways, he evoked deeper thinking in all of us.

—*Sima Dajani, grade 11, Vienna, Virginia*

Nurture My Self-Respect

I felt in charge of my learning at school when I joined the Junior ROTC male drill team as an extracurricular activity. As a result of joining this program, my self-respect and discipline level increased tremendously. I learned to assist others without expecting something in return, and I learned to view challenges as just obstacles trying to get in my way. Challenges will occur in life; the key is how you deal with them. This experience is the start of my many accomplishments.

—*De'Twone Lomax, grade 11, Oxen Hill, Maryland*

Show Me I Can Make a Difference

My favorite project this year was when we adopted a family during the holiday season, and we gave them a lot of stuff like food, clothing, toys, and household items. Our teacher, Mrs. Lockhart, took a van full of stuff to the Salvation Army. The lady said, “How many families is this for?” Mrs. Lockhart told her it was all for one family. The lady started crying.

—*Jack Thode, grade 4, Cedar Falls, Iowa*

Let Me Do It My Way

The first time I felt in charge of my own learning was when I made my first film for Communications Technology class in grade 10. I got to help develop a script and direct, film, and produce my own movie on my own terms. I love telling stories, and I learned how to bring them to life on film. The teachers provided the needed equipment and instructions, gave us some encouraging words, and sent us on our way. Sure, I had times when I needed help, but other than that I was in charge of learning how to become a better video producer.

The satisfaction I got from viewing my first film exceeded that of passing a test or writing a good essay, because, as Frank Sinatra sings, “I did it my way.” My teachers stepped back and let me learn for

myself instead of holding my hand all the time. Because I was given the chance to learn how to be independent in my learning, the remaining three years of my high school career went smoothly. I made movies for courses outside of Com Tech, such as science, civics, English, Spanish, drama, and art. In the future I will not be afraid to be in charge of my own learning.

—*Olivia Vidal, grade 12, Oakville, Ontario*

Point Me Toward My Goals

I understand about learning for passion rather than just for grades. I often experience this phenomenon when I see an article as I'm surfing the Web. I'll read it and look up additional information if I'm interested, even if it has nothing to do with any of my other obligations.

It's harder to think of a time that I really enjoyed learning in the classroom. Let's face it, high school is just a means to an end; it's a stepping stone to something bigger. Every student is always in charge of his or her learning. How hard we work in school, how much we take charge of our learning experience, depends on our goals in life. Those students who want to be doctors and lawyers have to work very hard; those who have no dreams tend to slack off. We never learn in school purely for the enjoyment of learning but for the promise of enjoyment that will come later when we attend a university and enter a fulfilling occupation. We inspire ourselves, and we make our learning experience into whatever it is, be it positive or negative.

—*Andrea Vander Heyden, grade 12, Oakville, Ontario*

Make Me Feel Important

Helping out with the younger kids and teaching them to read made me feel good because I could tell that us bigger kids were making them more comfortable than when they went with the adults. I remembered how stressful it can get to not know how to pronounce words or letters.

After we had been working for a couple of days, they were getting the hang of it. They finally whizzed through a whole little five-page book, and we all got so excited. I would never have thought in a million years that I would help someone do something as special as that. I will never forget that moment.

—*Brittany Noye, grade 5, Grand Blanc, Michigan*

Build on My Interests

Mrs. Gaies, my teacher, is awesome. One time I told her that Monticello was on the back of the nickel and that it was Thomas Jefferson's house. She made a real book for me. It had all sorts of pictures of other cool buildings. I was able to write sentences about all of them. That was a lot of fun because I like to learn about new things. There were some buildings that I didn't know, but I was able to read about them and write new sentences of information. She makes me interested in learning so much more.

—*Samuel Lockhart (as told to mom), kindergarten, Denver, Iowa*

Tap My Creativity

When a homework assignment involves art, is open-ended, and depends more on my creativity than on what I learn in class, it's easy for me to get lost in it, as I would in a good book. For instance, designing a poster based on lab safety didn't teach me every single guideline, but it did help me grasp the basic idea. When I have to write a poem or draw a picture, there are fewer rules and more room for creativity, and I feel a great sense of satisfaction when I'm done.

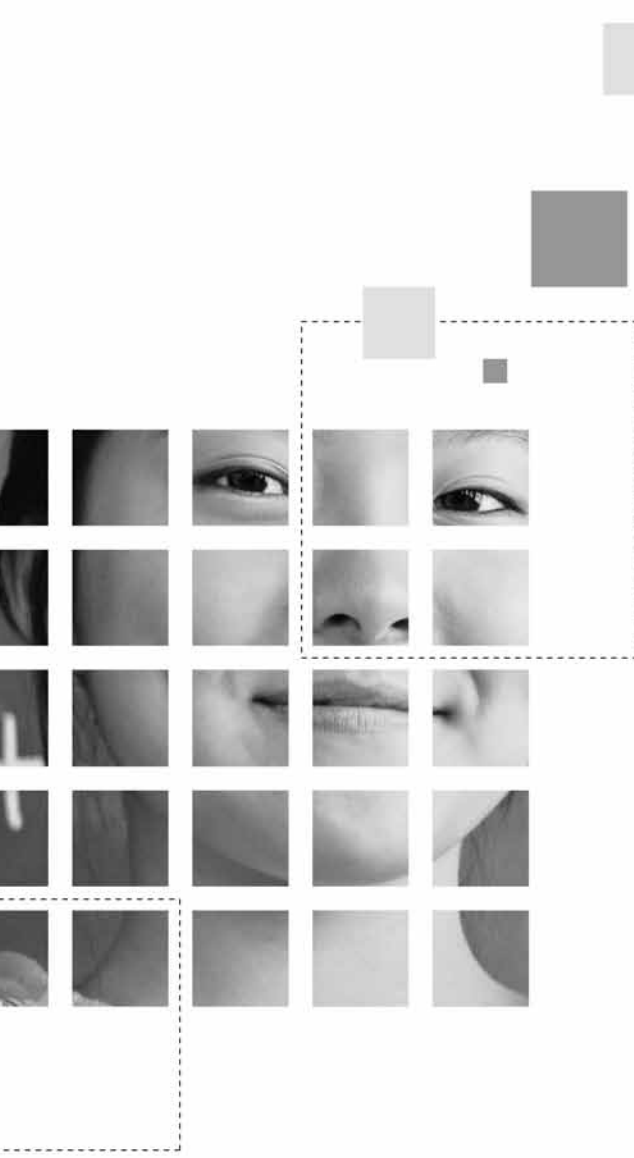
—*Susie Lui, grade 9, Arlington, Virginia*

Bring Out My Best Self

In our Buddy Circles project, we learned about students with mental and physical disabilities. I felt in charge because I could have chosen to be mean to my disabled buddy, but I chose not to do that. It was a wonderful experience. I learned to not judge disabled people.

—*Olivia Fabos-Martin, grade 4, Cedar Falls, Iowa*

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Part 6

Honoring Families
and Heritage

The Schools We Mean to Be

Richard Weissbourd

Parents and teachers together are powerful vehicles for driving the moral growth of adults and students.

It is the spring of my son's sophomore year in high school, and my wife and I find ourselves hustling from classroom to classroom for our parent-teacher conferences, trying to protect our allotted 15 minutes with each of his five teachers. With three children, we are veterans of this dance, but this evening I find myself battling desolation. It's not that my son is struggling in school or suffering a serious problem; it's that the two teachers we have met thus far have taken us through the same dreary ritual. The teacher begins the session by pulling out a sheet of paper. She recites my son's test scores or grades and then makes a comment about his being distracted at times and not listening. That "not listening" hangs in the air. I find myself bristling. Is it a euphemism of some kind? Does she find my child difficult? She then tells us that he is "a good kid."

I don't sense that either of these teachers truly knows my son or wonders about what my wife and I are hoping for and fretting about or what we think will help him learn. I know that he doesn't like one of these teachers and that, in his opinion, one of these classes is "hell." Yet neither teacher seems to be aware of how he experiences her class.

Then we meet with a third teacher. She starts off the session by telling us how much she enjoys having our son in her class. She describes his willingness to risk being "dumb" by asking questions for

the whole class. She tells us when and how he is confident and when and how he is tentative. She describes his easy relationships with a wide range of classmates and his desire to be helpful. She also talks about his being distracted at times. Yet one of her explanations for this behavior—that any kind of repetitive task is hard for him—helps me understand something about my son that has been opaque to me. She tells us that he never interrupts her or is rude.

She asks us how we think he is doing and if we have any concerns, and she listens carefully to our thoughts. I feel that we are in a common project together, one that is academic but also moral—the project of raising a whole person and a good person. I have to resist the temptation to envelop her in a bear hug.

Cultivating Character

U.S. public schools were originally conceived not solely as an engine of academic success. They were intended chiefly to cultivate in students a certain ideal of character (Hunter, 2000; Katz, 1995). Public schools were charged with the responsibility of taking rising waves of poor urban and immigrant children and molding them into responsible, upright citizens.

Today, the expectation that schools will cultivate character and social responsibility is again widespread. Legions of U.S. schools have invested in packaged character-education programs of one kind or another that tout such values as discipline, self-control, responsibility for others, and fairness. Numerous programs focus specifically on generating in students a sense of social responsibility.

Students should clearly know values, and these programs can sometimes curb troubling behaviors or broaden students' sense of social responsibility. But there is another stark truth: Schools have been trying variations of these programs for decades, and rarely do these programs fundamentally change students' moral capacities.

That's because these programs typically have no effect on what matters most. What's at the heart of children's moral development is not the capacity of teachers or other adults to teach values or social responsibility; rather, it's *the nature of the relationships* that schools establish. Yet these relationships get short shrift in character-education programs.

Parents and Teachers Together

Character-education programs also rarely give any significant attention to the school relationship that can be the most important in determining students' moral prospects—the relationship between parents and teachers. Although many factors affect students' moral development—peers, genetic influences, television, and other media—there's no question that parents play the primary role in either nurturing—or undermining—children's capacities for kindness, honesty, courage, and moral reasoning as well as their notions of justice and their sense of responsibility for others. Effective efforts to instill ethical abilities and social responsibility in students must be deeply interwoven with the work of engaging parents meaningfully.

Yet it's still the exceptional school that enables parents to feel integral to the school community and that nurtures close teacher-parent ties. Further, many schools, especially in middle- and upper-class communities, are dealing with micromanaging, aggressive parents who sometimes act selfishly and disrespectfully themselves in their interactions with school staff. Daunted by the task of influencing parents, many schools have opted instead to simply keep them at bay.

In an era when schools are under the gun to improve student performance, administrators are understandably looking for quick fixes and shortcuts. Yet there are no straightforward or easy ways for schools to develop powerful moral capacities in students, and students tend to sniff out exactly how half-baked most character-education programs are.

If we are serious about promoting students' moral development in schools, it's crucial to focus both on adult development—on the mentoring and moral capacities of teachers and parents—and on how teachers and parents can work together more constructively. Why do these relationships so commonly go awry? How can schools constructively work with aggressive and demanding parents? We need to make schools places where we adults—both teachers and parents—are not simply, as educators Harvard Knowles and David Weber (1981) put it, more adept than students “at manipulating the rhetoric of morality” (p. 87). Instead, schools should encourage adults to examine their own values, moral abilities, and attitudes; reflect on the school as a moral environment; and strive together to ensure that students grow up to be good people in the world.

Moral Mentors

Parents and teachers can clearly be more effective if they agree on what values are important to promote and on how to promote them. Yet the best parent-teacher relationships are not just about promoting generic values. In the strongest relationships, parents and teachers mentor each other and achieve something wonderful—a kind of pure focus, uncluttered by their own issues and agendas, on the interests of a child, as the third teacher did at our son's parent-teacher conference.

In the best relationships, both parents and teachers can be vulnerable and self-aware, thinking together about how they might better handle a child's trouble, and pooling their knowledge to understand the many interacting factors that may undermine a child's capacity for caring or responsibility.

Seven-year-old Anna, for example, can act arrogant and entitled with other students, partly because from an early age her parents, as they recognize, have catered to her every need. It's vital for her parents and teacher, putting together their different perspectives, to think

through how they might help Anna become more attuned and attentive to other people both inside and outside of school.

Fifteen-year-old Fred acts surly and superior with his teacher: He is reeling from his parents' divorce and is ashamed of and enraged at his father, who has just left his mother for a much younger woman. According to his mother, two of his teachers, who don't know about the divorce, have simply stamped him as a "child with an attitude" and are far too quick to punish him. Fred also feels that his mother now relies on him to be a kind of partner to her, a role he resents. Whether Fred emerges from this experience more or less able to control destructive feelings and more or less respectful of adults will depend on his teachers' and parents' ability to think through the roots of his defiance, including their own roles, and develop strategies for constructively engaging him.

It's not just teacher-parent contacts that can affect students' moral growth. As I will take up later, schools can engage parents in a *moral community* that pushes parents to look beyond their own children and that bolsters parents' moral and mentoring capacities.

What Gets in the Way?

Many factors can undermine parent-teacher relationships. Many teachers fail to form real alliances with parents because they fear that getting below the surface will stir up conflict. The great educator John Dewey was a fierce enemy of the politeness and formalism (Lawrence-Lightfoot, 2003) that can stifle the parent-teacher relationship. Some teachers, especially high school teachers, don't see it as their job to work closely with parents to understand a student, and many teachers are so stressed and overextended that they fall back on reciting test scores, as did the first two teachers at my son's parent-teacher conferences.

Other teachers worry a great deal about disappointing parents. "Parent-teacher conferences are by far the most stressful times of the year for me," a warm, intelligent teacher, who is also a parent, told me.

“Parents are handing over responsibility for their child’s learning to me. And it’s terrifying to think that I might fail or even be perceived as failing.”

Further, the reasons that parent-teacher contacts do not go well can starkly differ between poor and middle- and upper-class communities. Low-income parents are often suspicious of schools—they frequently have bad memories of their own time as students—and they commonly have little experience advocating for their children in school. The challenge in low-income communities is often to help parents overcome these suspicions and barriers, whereas the challenge in well-off communities is often to keep overbearing parents from disrupting school functioning.

High-End, High-Maintenance

I first became attuned to the pervasiveness of this problem in better-off communities talking to David, a tall, slightly mischievous man who had been a beloved teacher in a junior high school in a middle-class Boston suburb for more than 20 years. He recently decided to leave the profession because he couldn’t deal with parents anymore. He told me that one parent who was upset about his daughter’s grades wanted to read every student’s paper in the class to see whether the teacher had fairly graded his daughter. Another parent, whose son was outright rude, encouraged his son to ignore David’s attempts to discipline him. A third parent asked him to overlook her daughter’s plagiarism. The worst, though, were parents who “were always seeking an advantage for their child”—parents who wanted him to give their child “extra attention” or who pushed the school to provide more enrichment classes for their intelligent child. “A lot of parents are just advocating for their kid,” he said, “and they don’t care about how they might be hurting other kids.”

Other teachers have expressed their concern about parents who want to have their fingers in every aspect of the classroom experience. One suburban teacher told me that she will never forgive a parent who

got on her knees and sniffed the classroom rug to see if it was producing odors that might bother her child. Psychologist and school consultant Michael Thompson says that sometimes what teachers want is for children to have a “parentectomy” (1996).

However, it’s not just the difficult, micromanaging parents who create unreasonable burdens on teachers. Many other parents cause difficulties in subtle, unintended ways. I know I have experienced a kind of tunnel vision when it comes to my children and have lost sight of teachers’ perspectives. I recently heard a teacher complain about parents who try to talk to her when they drop off their child in the morning, a crucial period for her in preparing for class. I felt the sting of recognition—I had done this more than once. Some parents try to befriend teachers as a way of currying favor for their child or hang around the classroom, scrutinizing teachers and peppering them with suggestions.

In affluent communities especially, teachers can feel that they are under the parents’ microscope. Teachers frequently believe that these adults who are judging them not only are biased toward their own child and but also are unaware of the demands and purposes of a teacher’s work. It’s no wonder that many schools try to keep parents at arm’s length.

A Common Moral Project

Hard as it is for any teacher or administrator to deal with difficult parents, no school serious about moral development can simply keep them at bay—because the children of these parents are likely to be at greatest moral risk. Schools do not have to set out to fundamentally change these parents. But they can provide teachers with ongoing support and guidance in working with them, including helping teachers to avoid easy finger pointing and scape-goating and to manage class biases. For example, it can be helpful for teachers to see that some parents who come across as arrogant and entitled may be fearful, isolated human

beings who are terrified of handing over their child to a stranger or of losing control over their child.

Schools, whether rich or poor, can engage parents in a moral community that creates moral expectations for parents and pushes them to look beyond their own children. That means, in part, finding multiple ways to engage parents—as classroom volunteers, on parent councils, as members of teams devoted to particular projects. And it means that schools need to clearly articulate their moral goals and expectations for both parents and students through moral charters—clear, visible statements of a school’s values. More important, these charters cannot just collect dust or become part of the scenery, their typical fate. They need to live and breathe not only in classrooms, but also in every aspect of school life.

My children attended a public elementary school that brought both parents and students into a kind of moral community. Our interactions with teachers, school events, posters on walls, and communications from our principal all expressed a set of moral commitments:

- That both parents and students are members of a community and have responsibility for all members of that community.
- That every student has intellectual and personal contributions to make to the learning of the whole community.
- That the school has the responsibility to recognize and support those contributions.
- That school is preparation not only for a career, but also for many facets of citizenship.
- That diversity is of high value and that the community will engage and test diverse opinions.
- That students must learn to identify and address social inequities and injustice.

Our parent-teacher conferences often did not focus solely on our own child, but on how our child might be helpful to other children in the classroom, as well as on schoolwide concerns and the possible roles

parents could play in helping deal with those concerns. Homework was often about issues of equity and fairness, and sometimes students were asked to engage their parents as part of this homework. Teachers regularly expressed their commitment to all students in the building—not just to the students in their classroom—and went out of their way both to work with students who were marginalized and struggling and to engage those students' parents.

Recently this school had to merge with another school that has large numbers of students who are academically struggling, a challenge most schools would be skittish about. This school staff openly embraced the challenge and encouraged parents to embrace it as well.

What Schools Can Do

Schools and parents can do specific, concrete things to create the conditions that make strong relationships possible. In parent-teacher conferences, for instance, parents might start the session by reporting something positive that their child has said about the teacher—something parents rarely do. When teachers, for their part, start a parent-teacher conference by identifying a distinct strength of a child—and explain how that strength expresses itself in a classroom, as that third teacher did with my wife and me—they can set a parent-teacher conference on a wholly different path than if they recite test scores or immediately zero in on problems. It also helps if teachers use “we” with parents (Lawrence-Lightfoot, 2003). In moving a child forward or responding to a child's difficulty, rather than asking “What are you going to do?” or “What am I going to do?” why not ask “What are *we* going to do?” so that you can establish a constructive alliance.

Schools also need to have students read about and interact with moral exemplars, men and women of strong conviction who are working to improve the world. Schools should not only provide community-service opportunities that enable students to work with moral leaders but also routinely invite such leaders into school to address students.

In addition, students should have opportunities to reflect on values and mull over moral dilemmas and questions, especially those that emerge from their daily experiences. At Cambridge Rindge and Latin High School in Massachusetts, for example, a group of students creates dramatic presentations annually that explore community-wide social and ethical concerns, such as whether a student should snitch on a good friend who is stealing from the store where he works.

The Child Development Project, based in Oakland, California, and Open Circle, based outside of Boston, Massachusetts, also guide teachers in creating a democratic community. Students do structured exercises that help them take the perspectives of other students—in Open Circle, for example, students take others' points of view in deciding when teasing is and is not harmful—and they have opportunities to create rules for the community, solve classroom problems, and determine sanctions. Students are far more likely to embrace a rule or value when, instead of having an adult dictate that rule or value, they come to it through their most prized capacity—their ability to think. Well-structured community-service programs and opportunities for older students to mentor younger students can also bolster key moral qualities.

It's also crucial that teachers regularly reflect and get feedback from one another about their relationships with students. Students don't absorb the values and moral commitments of teachers they don't respect, and large numbers of students don't trust and respect their teachers. Teachers need to be able to talk with other teachers and administrators about why certain students don't respect or trust them and about what they might do to repair these relationships.

At the same time, teachers, like other adults, need to work on developing their own moral and mentoring capacities. It never dawns on most teachers—or on most adults—to work on these qualities. There's a widespread belief in our culture that our moral qualities are fixed as adults. Yet research shows that some adults morally regress whereas other adults develop much stronger moral capacities. It's

vital for teachers to see appreciating and caring for others, acting with fairness and integrity, and formulating mature and resilient ideals as evolving and subtle moral capacities.

Much of this work will be difficult, especially in the many schools where preparing students for high-stakes tests is gobbling up teachers' energy and time. But we know too well the dismal outcomes of the usual character-education bromides. What's more, the things that are most crucial to supporting students' moral development—developing strong connections between teachers and parents and strengthening teacher-student ties—are also crucial to students' academic development. And unlike so many other character-education efforts, this work gives students a real shot at developing the capacities they need to become kind and responsible adults.

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Honoring Student Stories

Gerald Campano

One of the most powerful interventions that teachers can make for immigrant students is to celebrate the human and academic value of their stories.

My first lesson about exclusion, and its transcendence, came from family experience shaped through memory and narrative. When my Italian American grandmother and Filipino grandfather moved into their first apartment in a tenement in Queens, New York, a majority of the residents signed a petition to keep them out because they were a “mixed” couple and “foreign.” Against the protests of their future neighbors, they declined to leave.

I recalled this story when I took my first teaching position in an urban elementary school in Houston, Texas. The students came from mostly immigrant and migrant backgrounds. My own identity as the child and grandchild of immigrants began to inform how I understood my students’ education experiences. I became sensitized to their vulnerability to exclusionary practices in school.

There exists in schools a subtle yet pervasive image of the ideal student. There is also its corollary, the less-than-ideal student, whose education is framed as a series of problems: of language, cultural integration, parental participation, school readiness, background knowledge, literacy, and classroom decorum, to name a few. To varying degrees, individual students in that school in which I first taught conformed or did not conform to the ideal. And those who did not conform

to this misguided ideal—often poorer students from immigrant, migrant, and refugee backgrounds—received a different set of instructional and social interventions, such as tracking and remediation. These practices often barred these students from the kinds of rich curricular experiences necessary for success in higher education and beyond.

Students as Global Citizens

A fundamentally different precept governs my own research into the lives and learning of urban and immigrant students: The increasingly rich diversity of our student populations is not a problem, but rather an opportunity that benefits all learners in a classroom community. The intermingling of identities in 21st-century classrooms is a generative condition for intellectual and ethical investigation.

Consider the following: Although schools tout the importance in their mission statements of preparing students for global citizenship, our youth are already global citizens. Many of our students are able to analyze issues, such as prejudice or child labor, through a comparative cultural, and often transnational, framework. They have crisscrossed political borders and negotiated boundaries of race, class, generation, and gender. They have lived the consequences—both positive and negative—of globalization. Many have an intuitive grasp of injustice because they have experienced it firsthand. They are heirs to rich literary and activist legacies. In contexts outside of schools, such as community-based activist organizations, many young people are looking at how U.S. policies affect other countries and regions, such as Mexico, the Philippines, the Caribbean, and the Middle East.

In short, the deepest intellectual resources in classrooms are the students themselves. And one of the most powerful ways students can share their knowledge, partake in their own education, and intervene on their own behalf is by telling their stories.

The Power of Narrative

One of the purposes of inviting students to share their stories is to better understand how the students can use their background knowledge to gain access to curricular content. Stories also have an obvious interpersonal value because they enable students to weave their unique histories into the fabric of the classroom community. Nevertheless, for the most part, teachers still think of stories as a lower-grade cognitive phenomenon not necessarily conducive to higher-level thinking and, at best, as a starting place for more serious academic work.

Student narratives are far more significant than that. They are vehicles for linking subjective experience to more complete knowledge about our shared world, especially for individuals who speak and write from buried or misrepresented histories or don't hear the echo of their own experiences in the traditional school curriculum.

Take one of my former 5th grade students, Ma-Lee (see Campano, 2005). As a result of testing, Ma-Lee had been labeled "low achieving," "at risk," and "limited English proficient." She was often pulled out of class for intervention programs. Although she struggled to fulfill directives, her written responses to mandated writing prompts, such as "Describe your favorite snack," were often stilted and fell far short, not only of district standards and benchmarks, but also of the high standards she held for herself. Ma-Lee made progress in a piecemeal sort of way on discrete skills, but she was beginning to slide into a bureaucratically sanctioned remedial academic identity.

But things suddenly changed. Inspired by a series of conversations with her peers about culture and identity, Ma-Lee decided to recount her family's migrations. Her essay, "Autobiography of a Hmong Girl," begins by describing a traumatic memory—her early childhood in a refugee camp. Ma-Lee then elaborates on the challenges of adapting to her new home in California, her feelings of invisibility, the pain of being shunned, the value of her friendships, and her desire to find a

nurturing school. She concludes with an exhortation for others to learn about her culture and from her experiences:

Now I will tell you about my people. In our Hmong Culture, we have to wake up early and go to the garden. Even a little girl like me has to go. You have to sew your own clothes. You can put red, blue, yellow, or any color you like. You can go to the store to buy it, but it costs a pack of money for just one dress, so we prefer to sew our Hmong clothes. We sewed clothes for ourselves, but we didn't even have shoes to wear.

In our Hmong culture, they put babies that are born in blankets. They have intricate designs. The blankets may have a bird on a tree or a tiger sitting in the grass. They want the babies to be in blankets so they won't get sick in the winter. When babies are born, they sometimes don't eat anything because often there is not much food. In Thailand, they didn't have any milk to drink. My mom told me that when I was born, I didn't eat anything, not even rice. My mom didn't know if I would survive. But I did survive. My family didn't have blankets, so my mom took her scarf off and used it as a blanket for my little brothers.

I want everyone to know about my life and know how to respect my culture to make our Hmong people full of freedom. I know someday if no one wants [to] go out there and talk [about] what they believe, I will. I know everyone wants to live in freedom. If someday my dreams come true, the world that I live [in] will always be radiant and never be dim with prejudice.

This is what I believe in my heart.

Ma-Lee's lyric narrative is anything but provincial. It is at once profoundly personal and profoundly global. Her geographical and intellectual odyssey served as a point of departure for other students to learn about the world. We learned some particulars about the history of the Hmong and their forms of artistic expression. We discussed the role that larger geopolitical dynamics, such as war, play in dislocating people.

Perhaps most important, because of her intimacy with loss, hunger, and survival, Ma-Lee's voice began to acquire tremendous ethical and intellectual stature.

Ma-Lee knew something of the contingency and frailty of human security. From her personal experiences, she called up her own truth about the requirements for human well-being and the need for everyone to "live in freedom" and in a world where there are blankets, food, medicine, and education opportunities. As a class, we began an inquiry into the relationship between nationhood and justice. The students discussed how all human beings, irrespective of citizenship status, should have access to high-quality schools, hospitals, and employment. Ma-Lee's narrative gave some students in the class the ambition to articulate a universal set of human rights. Some of the 5th graders even joined an interfaith community organization that advocated for comprehensive health care for migrant workers and their families.

Ma-Lee did not spontaneously produce such poignant, sound writing simply because she had the opportunity to tell her story. There was a curricular backdrop to this work that she helped design. As a teacher researcher, I adopted in my work what Marilyn Cochran-Smith and Susan L. Lytle (2001) call an inquiry stance. This entailed developing literacy curriculums around the students' own rich experiences, cultural resources, and interests. Accordingly, the students in Ma-Lee's class were coinvestigators into such questions as, What is culture? and What is immigration? They became experts and intellectuals.

Ma-Lee gained confidence in school. The following year, in 6th grade, she earned a medal in a highly competitive academic pentathlon. She eventually became an honors student in her middle school.

Conventional skills-based academic interventions can certainly play a role in students' academic development, but interventions conducive to the flourishing of all students in 21st-century classrooms must involve a more challenging, but ultimately more rewarding, project than merely honing instructional strategies or best practices. Interventions must also encompass the complexities and promises of students'

identities. Allowing the diverse voices of a classroom community to surface and claim their truths entails a fundamental shift: Teachers move away from anxiety over difference and authority for control toward a sense of humility about the wisdom of the young people we teach. In the process of teaching them, we become part of their migration stories, and they, in turn, become part of our own intellectual and professional odysseys.

Building on Student Stories

How, then, can we honor students' stories and experiences? Because teaching is about the creative alchemy and open-ended potential of a particular community of learners, there is no easy blueprint to follow. Instead, I suggest several approaches that can help educators develop a stance which supports and builds on immigrant students' narratives.

- *Familiarize yourself with books about the experiences of immigrant children and families.* Books about immigration validate students' experiences and provide teachers with models and a springboard from which to solicit students' own narratives. There are a number of wonderful examples, including Francisco Jimenez's autobiographical novella, *The Circuit*, and the picture book *My Diary from Here to There/Mi diario de aqui hasta alla*, written by Amada Irma Perez and illustrated by Maya Christina Gonzalez. Even for younger students, teachers may carefully select passages from adult novels, such as Carlos Bulosan's *America Is in the Heart* or Esmeralda Santiago's *When I Was Puerto Rican*, both of which address experiences and histories excluded from the standardized curriculum. (See "Stories About Immigration" later in this article for more examples.)
- *Allow students to make canonical literature their own.* Nobel Laureate and St. Lucian poet Derek Walcott stated,

“The English language is nobody’s special property. It is the property of the imagination.” Students should be exposed to multicultural literature, but they should also have meaningful interactions with the Western canon. For example, William Butler Yeats’s “The Stolen Child” inspired many of my students to describe the nostalgia they felt for their homelands while living in the “fairyland” of the United States. I have also worked with secondary students who rewrote *Hamlet* as a bilingual script and set it in the context of the U.S. colonization of Puerto Rico.

- *Learn from and provide space for students’ own rich storytelling traditions.* For some students, refugee quilts are a part of their family’s history. Stitched by hand, the quilts illustrate the flight from poverty and war and are found in such regions as the Andes, Afghanistan, and Southeast Asia. Some students may have talk-story as a tradition, the Hawaiian practice of sharing anecdotes through informal conversation. Some may be familiar with testimonial, a form of bearing witness to and documenting persecution and violence through firsthand accounts. Some may hail from West African griot, or oral storytelling, traditions. In my classroom, students performed stories about social issues relevant to their everyday lives, such as overcrowded schools and tracking, using drama inspired by El Teatro Campesino, a form of political theater founded by migrant farm workers, and Chicana Political Theatre (Medina & Campano, 2006). In conjunction with the Philadelphia Mural Arts Program, muralist and educator Eliseo Art Silva has developed innovative ways for children to reconstruct memory and tell visual stories through public art. For example, students dramatize scenes from their lives and bring in cultural artifacts from home that are visually incorporated into murals.

- *Incorporate aspects of popular culture into the classroom.* Many youth are using alternative forms of creative expression, art, and music—such as underground hip-hop—to innovatively convey their knowledge and engage in trenchant social commentary. The hip-hop duo the Blue Scholars has tracks such as “The Distance,” which speaks to the challenges, contradictions, and disillusionments of immigration. The lyrics and beat offer a counter story to the conventional, triumphant immigrant narrative of upward mobility through hard work and sacrifice. Literacy researchers (Duncan-Andrade & Morrell, 2005) have recently done some groundbreaking research on the value of incorporating popular culture into the classroom. They point out the intellectual merit and sophistication found in many forms of youth cultural expression as well as the ways in which teachers can translate knowledge of popular culture into conventional academic standards and success.
- *Share one’s own stories.* Toni Morrison’s 1993 Nobel Prize acceptance speech (1994) poignantly conveys the importance for elders—and this includes teachers—to make themselves vulnerable by passing along wisdom through narrative. Morrison retells a tale of a blind woman who initially responds to the provocations of two young visitors with silence. The young people, in turn, respond by asking, “Is there no context for our lives? No song, no literature, no poem full of vitamins, no history connected to experience that you can pass along to help us start strong?” Teachers might, from time to time, step out of their institutional roles and share with students their own stories of struggle and change. I have shared with my students how my family members have had to overcome deeply rooted inequality, such as anti-miscegenation and Jim Crow laws, to provide for future generations. The students were able to see their personal struggles as part of larger, ongoing legacies of dissent

and social change. Sharing stories like this signals to students both the human and academic value of personal experience.

- *Acknowledge student narratives as intellectual resources.* Some of my students' most powerful writing began as oral stories they told me during "unstructured" academic time. I invited them to compose these stories more formally. This work often took place outside the confines of the mandated curriculum in what I call "the second classroom" (Campano, 2007), pedagogical spaces on the margins of the school day—before school, after school, during lunch, and at community events. Students need to know that their storied knowledge counts in school, is part of the intellectual dialogue of the classroom, and can serve as a departure point for further inquiry. Teachers can promote these understandings by continually communicating to students that their experiences matter.
- *Be mindful that stories are told within social and political contexts.* Not all stories may be appropriate for all audiences. Some expose students to risk. For example, why would a student share her family's migrant narrative if she is worried that her parents might subsequently be deported? Or why would a student use his native language if it is frowned on in school?

Stories are a form of rhetoric. An important aspect of storytelling involves knowing what to say, how to say it, whom to say it to, and in what situations and for what purposes. Teachers need to create safe spaces where students know that their stories won't be used against them and where students feel empowered to cultivate their own critical perspectives. As Stephanie P. Carter (2001) has discussed, our students' silences tell us as much as their words do about how schools may exclude their points of view.

Robust Diversity

Literary critic Satya Mohanty (1997) argues that a “robust multiculturalism” is a requisite for “inquiry into human good” (p. 241). Urban—and, increasingly, suburban and rural—classrooms are one of the few public spaces where individuals from a range of backgrounds coexist and, ideally, have as their goal not merely the acquisition of information but the production of knowledge and the cultivation of wisdom. This opportunity is squandered if schools continue to perceive the robust diversity of our classrooms as a problem and if a single voice determines and standardizes instruction. One of the most powerful interventions we can make on behalf of our immigrant, migrant, and refugee students is to view them for what they rightfully are: cosmopolitan intellectuals whose perspectives and experiences edify all members of the classroom.

It has been more than 60 years since my grandparents moved into the building where they would eventually raise seven children. The demographic makeup of the complex has shifted dramatically over the years. My grandmother, approaching 90, still lives in the same apartment, and her neighbors are of Tibetan, Columbian, Irish, Mexican, and Hungarian heritages, to name a few. There has even been a recent influx of pioneer yuppies.

When new people move to the neighborhood, they are warmly welcomed. In addition, the neighbors have developed a social arrangement that fosters cooperation and care for the neediest. It’s not a perfect place; the building is old, and poverty and inequality still exist. But there has been social progress. There is now, truly, a plurality of “voices from the village” and many new stories to tell to one another, from the elders as well as the younger generations, who file to school each morning to mix and mingle with perhaps the most diverse student population on the planet.

Stories About Immigration

- *America Is Her Name*
By Luis J. Rodriguez
(Curbstone Press, 1998)
Nine-year-old America Soliz, an undocumented immigrant of Mexican Indian heritage living in a barrio of Chicago, discovers how to express herself in poetry.
- *A Step from Heaven*
By An Na (Hand Print, 2001)
A young Korean girl and her family find it difficult to learn English and adapt to life in the United States.
- *Brothers in Hope: The Story of the Lost Boys of Sudan*
By Mary Williams and Gregory Christie
(Lee and Low Books, 2005)
A band of 30,000 Sudanese boys between the ages of 8 and 15 walk nearly 1,000 miles in search of safety.
- *Dia's Story Cloth: The Hmong People's Journey of Freedom*
By Dia Cha (Lee and Low Books, 1996)
Through the story cloth stitched by her aunt and uncle, the author recounts her family's flight from Laos to a refugee camp in Thailand and their subsequent immigration to the United States.
- *Esperanza Rising*
By Pam Munoz Ryan (Blue Sky Press, 2002)
A family tragedy forces a wealthy Mexican girl to immigrate to California, where she must adapt to a new country and a lower social class.

- *Friends from the Other Side/Amigos del otro lado*
By Gloria Anzaldua and Consuelo Mendez
(Children's Book Press, 1997)
A Mexican American girl befriends a boy who has crossed the Mexican border with his mother in search of a new life.
- *Growing Up Filipino: Stories for Young Adults*
By Cecilia Manguerra Brainard
(PAHL, 2003)
Twenty-nine Filipino American writers explore the challenges of adolescence in the Philippines and the United States.
- *How the Garcia Girls Lost Their Accents*
By Julia Alvarez
(Plume, 2005)
Four sisters adjust to life in the United States after fleeing from the Dominican Republic.
- *La Mariposa*
By Francisco Jimenez and Simon Silva(Houghton Mifflin, 2000)
Francisco, the son of migrant workers, has difficulty adjusting to a new school because he doesn't speak or understand English.
- *My Name Is Jorge: On Both Sides of the River*
By Jane Medina and Fabricio Vandembroeck
(Boyd's Mills Press, 2004)
A collection of poems from the point of view of a grade school child from Mexico describes the challenges of adjusting to a new language and culture.

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Author's note: I borrow the phrase “voices from the village” from Sharon K. Miller, codirector of the Southern Arizona Writing Project, who coined it for the first annual Arizona Teacher Research Conference. This article is inspired by Sharon's tireless work on behalf of teachers and students. I would also like to thank Maria Paula Ghiso from the University of Pennsylvania's Graduate School of Education for her thoughtful suggestions.

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Celebrating Students’ Diverse Strengths

Willona M. Sloan

As classrooms become more diverse, teachers can celebrate students’ cultural strengths by integrating multicultural lessons into the curriculum.

We all have biases, however subtle they may be. Sometimes we may not even be aware of them. Because we are grounded in our own cultural knowledge, it is very natural to perceive our own customs and cultural practices as normal and those of other groups as different or foreign.

As classrooms become increasingly more diverse, it is important for educators to acknowledge and address diversity issues and to integrate multicultural information into the classroom curriculum. By doing so, educators can instill students with respect for their peers while teaching exciting, new content.

Making the Cultural Connection

Addressing diversity in the classroom is not about being politically correct. “Our educational system is supposed to be for all students; therefore, we must provide differentiated instruction so that they feel they are included,” says Judie Haynes, an English as a second language (ESL) teacher from New Jersey and author of the ASCD book *Getting Started with English Language Learners: How Educators Can Meet the Challenge* (2007).

“It’s not about being tolerant; being tolerant means just tolerating something,” says Haynes, who explains that, for students, there is an important link between feeling included in the classroom and achieving academically. “When a teacher makes an effort to include students in the classroom, it makes a difference because if they are more relaxed, they are going to learn more quickly.”

Research supports the importance of integrating information from various cultures into classroom instruction. In a March 2002 article in the *Journal of Teacher Education*, Geneva Gay argues for “culturally responsive teaching,” which she defines as teaching that uses the “cultural characteristics, experiences, and perspectives of ethnically diverse students as conduits for teaching them more effectively.” Gay explains that when students are able to use their own cultural information and experiences to connect to academic lessons, they develop a deeper understanding of the content.

Building students’ cultural knowledge involves more than just planning a one-off cultural day, although those types of activities can be extremely useful and fun. It is important to integrate lessons and activities that convey a range of multicultural perspectives. While some may cringe at the thought of adding new material to the already dense curriculum, culturally focused lessons can really have an important educational impact without detracting from efforts to meet standards or prepare students for assessments.

To move beyond the surface level and really work to both understand and teach cultural information, teachers have to engage in important developmental exercises. Teachers must, first, examine their own cultural values to uncover any biases that could hamper teaching and learning. Second, they should become familiar with the types of cultural values students are learning at home so that they can better understand how these values might affect students’ academic achievement.

Family Values and the Classroom

Students have two lives: a home life and a school life. Outside of school, young people are often instilled with values that reflect their own cultures, and they bring this cultural information with them into the classroom. Cultural differences regarding things such as appropriate interaction between a child and an adult, prescribed gender roles, and differing styles of discourse are also important issues that can shape students' interactions with their teachers. Becoming aware of some of these cultural differences will greatly aid teachers in respecting the diversity of their students.

“If our goal is to reach all students and have as many students as possible achieve at high levels, then we need to understand where they're coming from, how their families are rearing them, and the kinds of values and approaches to learning and using language that families are using so that at least we understand what kids are coming to school with,” says Elise Trumbull, coauthor of the new ASCD book *Managing Diverse Classrooms: How to Build on Students' Cultural Strengths* (2008).

For students raised in cultures that value the accomplishments of the family or the community over those of the individual, American schools, which tend to reward students for their individual achievements, may seem confusing and even frustrating. “Many students of color grew up in cultural environments where the welfare of the group takes precedence over the individual and where individuals are taught to pool their resources to solve problems,” Gay explains.

To help students excel as both members of a group and as individuals, teachers may provide more opportunities for students to work in groups to fulfill tasks, give presentations, and organize activities. This way, a teacher can restructure lessons to emphasize the types of practices students may be more comfortable with and teach them to value both ways of learning.

Addressing issues of diversity in the classroom requires teachers to analyze the ways in which students truly are different. Teachers should not necessarily throw traditional practices out the window, but they should realize that awareness of important cultural differences can actually make teaching easier.

Integrating Cultural Lessons

Integrating cultural knowledge into the curriculum will certainly take some thought, but it should not be seen as an add-on to “regular” class lessons. Try some of the following activities:

- In language arts classes, integrate new readings by authors from different countries.
- Develop math problems using examples that represent diverse names and situations. (e.g., A train in a word problem could leave from Mumbai instead of New York.)
- Teach lessons about scientists from different nations to enlighten students about scientific discoveries and innovations around the world.
- Plan cultural demonstrations that build meaningfully on lessons in social studies, language arts, music, and geography.
- Label classroom items in a variety of languages. Also, hang artwork that represents diversity.

These activities can help students connect to the lessons as they build on their own background knowledge. “[Lessons do not] mean too much until you make them relevant in [a student’s] own world. You have to build their background knowledge,” says Haynes. “Making a link is a great way to help students with comprehensive understanding.”

Teaching the Teacher

Restructuring teaching practices requires a great deal of talking, thinking, and learning. No one person can know everything about all cultures, but by conducting research, using Web sites and blogs, and engaging in professional development, teachers can develop new ways of building on students' cultural strengths.

Parents are also great sources of cultural information, and teachers should engage them to make them feel welcome as volunteers and speakers in the classroom. "They will help. The value of helping is so huge in so many cultures," says Trumbull. Investing in learning about and teaching diversity can provide enriching experiences for educators, as well as for students and their families.

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Making Refugee Students Welcome

Kathleen Budge and William Parrett

When 58 refugee students speaking little English were transferred to this urban elementary school, the principal set up a team-building summer camp.

“Within five minutes of the bell ringing, classrooms were running smoothly. The kids knew exactly what the expectations were. They came into the classrooms ready to learn.”

Loren Cross, a 3rd grade teacher at William Howard Taft Elementary School in Boise, Idaho, marveled at how well the 58 students who’d recently immigrated from many different countries and who spoke 14 different languages successfully transitioned into the “Taft family” last fall. Taft made that transition possible through initiatives tailored to address the challenges refugee students and their families faced as they entered an unfamiliar school. Taft also mastered its own challenges; between spring and fall of 2008, the school, which serves 355 students, went from serving only one English language learner to serving more than 60.

The summer before school opened, these 58 new students had attended Tiger Pride Summer Camp, a two-week nonacademic team-building experience designed to develop a sense of belonging and introduce students to the traditions of their new school. The camp made a tremendous difference in easing students into their new environment. But its success depended on the relationships of mutual trust that teachers had built through summer home visits with families.

A Sudden Transformation

Newly arrived immigrant students have brought dramatic changes to schools like Taft in many urban areas, but Taft's transformation was sudden. When the city of Boise was designated by the federal government as a site for refugee resettlement, Boise School District experienced unprecedented growth in its English language learner (ELL) population, which grew by 123 percent in the past six years. Families arrived from Sudan, Iraq, Uzbekistan, Liberia, and many other nations. The district now serves 3,352 ELLs who speak 88 languages.

Taft principal Susan Williamson learned in April 2008 that the school district had designated her school as an ELL site. Forty refugee students were slated to be administratively transferred to Taft from other schools in the district by June (and an additional 18 enrolled in September).

These students came from 16 different countries and spoke 14 languages. Their family backgrounds and experiences varied. Some were well-educated in their countries of origin and literate in their languages; others, as the second generation born and raised in a refugee camp, had never consistently attended school.

The teachers, staff, and neighborhood community of Taft are no strangers to challenges. Taft's student body is 73 percent low-income, and when Williamson arrived at the school 10 years ago test scores were low, morale was dismal, and student behavior was out of control. Under her leadership, student achievement increased significantly and Taft became recognized as a National Blue Ribbon School.

Nonetheless, ensuring that a group of newcomers, half of whom had minimal English language proficiency, would achieve at high levels posed a formidable expectation. Some teachers felt apprehensive about sliding back from the school's hard-earned gains and were anxious about their ability to work with English language learners. The district assigned Taft a certified ELL teacher and a paraprofessional and offered the services of an ELL consultant and the director of the district's ELL

program. These services helped, but the school knew it would have to put forth effort to forge trusting relationships.

An Antidote to Displacement

With fewer than 45 days remaining in the 2007–08 school year, a small team began taking action to welcome the refugee students. The team learned as much as possible about these youth and their families. It gathered information from the students' former schools and the many agencies that serve the refugee population in Boise.

Using hours typically set aside for faculty meetings and two half-day professional development opportunities, teachers and staff devoured information about the needs of English language learners—and refugees in particular. Teachers continued previously initiated training in sheltered instruction using a model called the Sheltered Instruction Observation Protocol.¹

The district's ELL program coordinator stepped in to provide additional targeted support, including professional development related to legal issues and terminology, curriculum guidance and supplemental ELL materials, and leads for finding interpreters. Second grade teacher Tracy Zarate was reassigned as Taft's ELL teacher, teaching small groups formed around students' needs and often preteaching vocabulary and important concepts.

To help Taft's current students learn about their new classmates, Fidel Nshombo, a Congolese refugee and a resident of Boise, spoke at a schoolwide assembly in the spring about his experiences. Fidel explained that refugees are different from immigrants in key ways. An immigrant voluntarily leaves his or her country of origin, whereas a refugee is compelled to leave, often fleeing a desperate situation.

Refugees are by definition displaced. For these students and their families, the move to Taft represented another displacement—an uprooting from the school they had initially come to know in Boise,

even for a short time. The Taft team understood the importance of fostering a new sense of place and belonging in students.

Taft's 5th graders conducted research on the various countries that the soon-to-arrive students had left. They produced a newsletter called *Cultural Connection* that they distributed to Taft students and their families. Bulletin boards depicting the countries and cultures of the incoming students lined the hallways, and teachers made frequent links between classroom instruction and these cultures.

Establishing Trust

The team worked diligently to foster communication and relationships with refugee students' families. After only a handful of parents—many of whom were resistant, fearful, or angry about the transfer to Taft—attended an initial meeting, the team knew it had to actively reach out to build trust. So team members set—and met—a goal to visit each student's home before the refugees were invited to summer camp.

To facilitate these home visits, Robert and Debbie Weisel, founders of CATCH, a local organization that seeks to bridge the gap between schools and refugees, were enlisted. Many refugee families already knew and trusted Robert and Debbie; their involvement paved the way for families to accept overtures from Taft staff. Robert, himself the son of a refugee, is well connected with Boise agencies and networks serving this population. He provided Principal Williamson with what she called "Refugee 101" informal training that greatly advanced her understanding of complex issues related to educating refugees.

During a second round of home visits, Taft staff members gave families a packet of information translated into their native languages and containing a letter of welcome, photographs and names of every Taft staff member, and a collage depicting activities, traditions, and services available at Taft. "The big turnaround in trust came after the home visits," Loren Cross explained.

Many in the Taft family made extraordinary efforts to cement that trust. For example, one refugee parent didn't want his children to walk to school because he feared they would be kidnapped. So Cross and other faculty members walked his children to school and back every day the first week of school; Cross continues to walk with them at least once a week.

Happy Campers!

To help students feel part of a community from day one, the team created an intensive introductory summer experience. A summer camp would help students meet new friends, put families at ease, and give Taft's teachers an opportunity to become acquainted with the new students and teach them about schoolwide practices and expectations that were the foundation of Taft's continued success. Williamson recruited Cross to coordinate the half-day camp, and several other teachers and staff members joined the effort.

Planning a two-week summer camp on such a short time line required fiscal ingenuity and partnerships with the local YMCA and parks and recreation programs. Because the school's remaining Title I funds were not enough to operate the camp, The school successfully turned to community partners for funding and volunteers.

The refugee students came to Taft for lunch and a tour of the school in preparation for the camp. Camp staff paired each new student with a chosen student from Taft. Many of these "buddy" students were selected because they had leadership ability and would be good role models; others were included because they too could benefit from new friendships. Photos of each "buddy pair" were made into buttons and delivered to each new student's home with a reminder about the upcoming camp.

The Tiger Pride camp concentrated on team-building activities, including creative arts, hip-hop dance, African drumming and other

music making, physical education, and many team sports. As students rotated through activities, staying in their buddy pairs, the kids bonded.

Speaking different languages presented few barriers to students' burgeoning friendships. They used both hand signals and spoken words to communicate. By the second week, students were joking and laughing with one another.

During the first few weeks of the school year, the camp's success became patently clear. The families seemed much more at ease with their children's impending changes. Tracy Zarate, Taft's ELL teacher, knew the camp was a success when she witnessed new students reminding others of things they had learned in camp. "I have never seen a group of children so enthusiastic and eager about learning," she remarked.

Ongoing Efforts: Whatever It Takes

Taft's "whatever it takes" attitude made what could have been a difficult transition for its new students into a smooth success. By doing a quick study on refugee realities and plunging in wholeheartedly to create a welcoming environment, teachers and staff learned many lessons about successfully welcoming a wave of diverse non-English-speaking students. These lessons included small, practical things like the fact that, in written communications for parents, it's better to use pictures and symbols or spell out details in simple language (because abbreviations or acronyms lead to confusion), or the importance of knowing siblings or others in the family who can help translate.

The Taft faculty continues outreach to Taft's newest families through ongoing home visits. With the input of a parent—once one of the most resistant to the transfer of her child—the Taft team launched the Tiger Pride Family Learning Academy for the newcomer parents and their children. This parent academy is still going strong, using all volunteers.

Thanks to creative efforts to foster a sense of belonging in vulnerable students, the 2008–09 school year is unfolding better than anyone expected.

Endnote

¹ Echevarria, J., Vogt, M., Short, D. J., & Short, D. (2004). *Making content comprehensible for English-language Learners: The SIOP model*. Boston: Allyn and Bacon.

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All Languages Welcomed Here

Orhan Agirdag

In classrooms across the world, multilingual learning environments help students feel at home and accelerate language learning.

Have you ever received an unexpected phone call from a teacher who was deeply worried about the achievement of his language learners? Did you ever meet a principal who was desperately exploring ways to improve the relationship between her school and the parents of her language learners?

Indeed, not only in the United States, but also in various places around the world, educators are challenged by the difficulties of schooling language learners. One proposed solution has been bilingual instruction. Although a substantial body of research suggests that bilingual instruction is beneficial for language learners (Baker, 1996), other studies dispute these positive effects (Rossell, 2004). Even if we were certain about the purported benefits of this approach, schools often have difficulty implementing it.

For instance, it would not be feasible to provide bilingual instruction at a highly heterogeneous school in which students come from a great many linguistic backgrounds. With growing immigrant populations, this picture of linguistic diversity is becoming increasingly familiar to many educators. Schools can more easily implement bilingual instruction in relatively homogenous areas, such as the southwest region of the United States where large numbers of Spanish speakers

live and where instruction in English and Spanish is feasible. It is less clear, however, how to provide bilingual instruction in places where students speak dozens of languages.

Legal constraints can also hinder the implementation of bilingual education. In some countries (such as Turkey), the law only permits instruction in the official language. Other countries (such as Belgium) only allow bilingual instruction for language learners as an educational experiment. In addition, more and more countries are reducing the amount of existing bilingual instruction (Skutnabb-Kangas, 2000). For example, in 2004, the Netherlands stopped subsidizing almost all forms of bilingual instruction, which reduced the existing bilingual education to a few, mostly privately funded, programs.

Language Learning in Flanders

I conducted my study on the schooling of language learners in Flanders, which is located in the northern part of Belgium and has Dutch as its official language. After World War II, Flanders rapidly developed into a multicultural society, with a high number of immigrants coming from southern Europe, Turkey, and Morocco. Immigrant pupils, therefore, are often speakers of Turkish and Arabic, although their linguistic competence in Dutch is usually high. Nevertheless, one rarely uses the term *bilingual* in Dutch to refer to immigrants' linguistic backgrounds. Instead, the common expression is *linguistically different* (*anderstaligen*) or *linguistically deficient* (*taalachterstand*).

To date, the educational achievements of second- and third-generation immigrants remain far behind those of their Dutch peers (Sierens, 2006). In fact, the educational inequality between immigrants and natives in Flanders is one of the highest among all countries in the Organization for Economic Cooperation and Development (OECD, 2006). Although such factors as differences in socioeconomic status and tracking in school can explain this inequality, immigrants' linguistic

backgrounds are still perceived to be the main source of their learning difficulties.

There is no bilingual instruction in Belgium, even in the two official languages—Dutch and French (Manco & Crutzen, 1999). The overwhelming social pressure for Dutch monolingualism has also hindered the few experiments in bilingual Dutch/Turkish education. This focus on linguistic assimilation may be related to a far-right-wing presence in Flemish politics. The linguistic assimilation of immigrant children has become, according to the Flemish minister for education, the top priority of the equal opportunities policy in education (Blommaert & Van Avermaet, 2008).

Language and Identity

Even in the absence of bilingual instruction, language learners should have the right to feel at home in school. Cultural discontinuity between students' home-based and school-based experiences can have a negative effect on their academic performance, well-being, and sense of belonging at school. The larger the gap between these two experiences, the greater the disadvantage of cultural discontinuity (Gay, 2000).

When students have to leave their primary language at the school gates, they also leave a part of their cultural identity behind. As Cummins (2001) noted, "To reject a child's language in the school is to reject the child" (p. 19). Therefore, educators must try to close the gap between language learners' identities, which are intricately tied to language, and the school culture.

Teachers and administrators often express willingness to create a supportive learning environment for all students. However, they do not always command the tools necessary to realize such an environment. The literature about multilingual school settings is often of little help because the subject is highly complex and the arguments are more politicized than practical (Gersten, 1999). For many educators, the question of what they can realistically do remains unanswered.

To move toward a supportive school setting for all students, educators can create a linguistically plural learning environment, even without bilingual instruction. Plurilingualism in school—that is, making all students’ languages visible and valuable—is advantageous for various reasons. The presence of students’ home languages in school not only affirms language learners’ identities, but also reduces linguistic barriers, opening doors for educators to build improved relationships with the learners’ families and communities.

The recommendations that follow are based on my research in Belgium, but they are meaningful for educators in other countries as well. For this reason, I use the term *language learners* instead of *English language learners*.

Three Practices to Avoid

Insisting on a Monolingual Classroom

First, educators should strive to avoid *ethnocentric monolingualism*, that is, expressions of the superiority of one group’s language over another (see Sue & Sue, 2008). Ethnocentric monolingualism is harmful, not only because it stigmatizes language learners, but also because it fails to recognize the value of various linguistic backgrounds.

One obvious expression of ethnocentric monolingualism is forbidding students to use their native language in school. In many schools, teachers may even formally punish students when they “catch them” speaking their home language with peers. School staff members and teachers may tend to use punitive practices because they often believe that speaking the home language slows the process of language learning, assuming it is in *competition* with the language that students are supposed to learn.

However, sociolinguistic research has found quite the reverse. Repeatedly, studies have shown that proficiency in the first language is positively related to proficiency in the second language (Cummins,

2000), suggesting that students' proficiency in their native language accelerates language learning. By extension, excluding students' home languages from the classroom does not assist them; rather, it may actually hinder their learning process.

Banning Home Languages Outside School

Another form of monolingual ethnocentrism is advising language learners to speak only in the majority school language outside school, such as at home with their parents and siblings. Educators may be unaware of the advantages that come with maintaining one's primary language. For example, speaking the native language provides students with better access to family and community networks, which function as social capital. Various studies have shown that family and community resources assist the educational progress of language learners (Portes & Rumbaut, 2001).

Restricting Praise to Second-Language Proficiency

Although it is crucial that language learners receive feedback as they make progress, educators should avoid praising only the students' new linguistic skills. Language learners might also be excellent musicians, outstanding athletes, or accomplished speakers of their home languages. If we want to promote their schooling, we should avoid reducing students to the sole status of language learners.

Five Practices to Adopt

The key element to promoting plurilingualism is to acknowledge and value language learners' linguistic backgrounds in close cooperation with both students and their parents.

Welcome Languages in the Classroom

Teachers should create an instructional climate that makes room for all students' languages. They can do this in different ways, such as by hanging posters on the wall that list significant words (such as *welcome*) in different languages.

Teachers can also reinforce plurilingualism in managing students' classroom behavior. For example, during my research I met a teacher who complained about the disruptive behavior of a Turkish-Belgian student in her class. Neither discipline nor praise seemed to improve his conduct. One day when I was observing in the classroom, I asked the boy, in Turkish, to be less noisy and to settle down and pay attention. This worked. Teachers can promote plurilingualism—and benefit, perhaps, from higher levels of student engagement—by learning a couple of key phrases, such as “Please quiet down” and “Nice job!” in languages that are commonly found in their classrooms.

Teachers can also strengthen plurilingualism through comparisons with countries familiar to many of their immigrant students. For example, in geography, the teacher might compare the rather complicated linguistic situation of Belgium with that of Morocco, where Arabic and Berber are widely spoken.

Ask Students to Share Their Languages

Teachers should encourage students to bring their home languages into the classroom. For example, every day the teacher could ask a different student to share a significant word or sentence in his or her native language with the entire class. Both classmates and teacher could discuss this word or sentence: How does the student pronounce the word and what does he or she think about it? Afterwards, educators will notice that words like *friend* will have an effect on students' interactions beyond the classroom.

For example, at one of the schools in which I was doing research, I overheard Turkish-Belgian, Moroccan-Belgian, and Dutch pupils

calling one another *kardas* on the school playground. *Kardas* is Turkish for *brother* or *friend*; it is often used to refer to friendly relationships with non-Turks. Now it has become a significant marker of interethnic friendship among pupils.

Have Students Help Their Peers

Teachers should encourage language learners from the same linguistic backgrounds to cooperate with one another to improve their progress. For instance, when a concept is unclear for a language learner, the teacher might call on another student from the same linguistic background to explain it. This is especially helpful when it comes to abstract concepts in math, such as *multiplication* or *mean*. After all, students often learn better from their peers than they do from their teacher.

Expand the School's Cultural Repertoire

School administrations should make the cultural repertoire of the school more plurilingual. Schools can easily do this by exposing students to subtitled movies, expanding the school's library of bilingual books and books written in different languages, providing materials in students' languages through the Internet, and helping students learn various songs in different languages.

One school in Antwerp reaches out to immigrant families by providing a welcoming message on the school Web site in 12 different languages. The message explains the school's system of communicating with parents using pictograms, which signal upcoming field trips, whether payment is required, and what their child should bring. The pictograms also indicate to parents when they are expected at school and for what reason.

Involve Parents

To realize an effective plurilingual learning environment, schools must involve students' parents. For example, teachers can call on parents to teach some aspects of their language to the whole class, including the teacher. In a French primary school, parents from more than eight different linguistic backgrounds taught students how to introduce themselves, count to 10, greet people, and say thank you in their languages (Helot & Young, 2002).

School-parent cooperation is crucial. Parental involvement in language learners' education often lags because of linguistic barriers. But when schools consider home languages not as obstacles but as assets, the "language wall" around the school breaks down.

A Word of Advice for Supporters

Supporters of plurilingualism tend to focus solely on policymakers and school administrators as they make arguments for plurilingual schools. The underlying assumption is that if they can convince policymakers and administrators to create a linguistically plural environment, language learners and their parents will welcome it with open arms. My research suggests that this may not be entirely true.

Language learners, their parents, and their teachers are not always passionate supporters of plurilingualism. The benefits of this approach are not always obvious to them, given that the broader society is often oriented toward monolingualism. Students may question why they should learn how to say *friend* in Arabic, for example, when they want to learn English instead. And parents may wonder why schools are presenting their children with languages other than the majority language.

Therefore, supporters of linguistic pluralism should clearly communicate why a linguistically diversified environment is preferable, because when language learners and parents are not convinced of the

benefits of linguistic pluralism, their support for such projects will be weak. As a result, excellent projects on paper may fail dramatically in practice.

Learners and their parents should be aware of the benefits of plurilingualism—that it can close the gap between pupils' cultural identities and the school culture, reduce linguistic barriers, improve the school's relationship with parents and community members, and affirm rather than stigmatize language learners. Parent-teacher conferences and organizations, open houses, school newsletters, and Web sites are excellent channels for communicating this information.

Teachers should also understand these benefits because they often have to implement a heavy curriculum and, rightly, do not wish to devote time to something that may be of little help. Advocates of plurilingualism should clarify that a linguistically plural learning environment is not just based on a need for political correctness, but is rather a practice that actually facilitates language learning.

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A Place for All Families

A. Y. “Fred” Ramirez and Ivannia Soto-Hinman

*Building bridges and abandoning misconceptions
is key to raising family involvement in schools.*

Are we as educators aware of the community that surrounds our schools? How well do we know the families of the students in our classes? When those families come from cultures that are different from our own, what assumptions do we make about their willingness and ability to get involved in their children’s schooling? Because of the many studies that show increases in student achievement when parents and other caregivers actively participate in their children’s education, schools are making a concerted effort to encourage greater family involvement (Delors, 1996; Ramirez, 1999; Wentworth, 2006). How might our attitudes and practices encourage—or discourage—such involvement?

To effectively enhance parent participation, educators must get to know the families of their students. Unfortunately, some educators assume that every immigrant family has the same background and deals with the same issues. But the circumstances of a family that has been in the United States for two or three years are different from those of a newly arrived family. Olsen (2006) identifies five different kinds of English language learners (ELLs), each with specific and unique language needs. The individual families of these students might be equally diverse, and if we want them to become active members of our school community, we must get to know them personally.

The strategies presented here come from teachers, administrators, and researchers who have worked with English language learners and their families throughout the United States. By adapting these strategies to meet the needs of families in your community, you can create stronger bridges between the school and home and can better support the ELLs in your student body.

Explore the Community

What do students pass each day as they go to and from school? What type of homes do your students live in? What businesses and landscapes are part of their world? What community events take place around your school? Are there festivals you can attend? Is there a place of worship you can visit?

Teacher candidates and master teacher candidates studying at California State University–Fullerton and Biola University answered these questions by writing a community travel paper. Starting at a school, each participant traveled two to three miles on three different occasions, taking different routes each time. They then reported back on what they saw.

One master teacher candidate in the program lives in a sought-after Southern California ocean community roughly 40 miles from where he works. Yet he goes shopping in the neighborhood where he teaches, invites the students at his school to work on his car, and is a regular presence in the neighborhood. His love and respect for the community have led him to venture out and become more familiar with his students and their parents.

Another teacher in the program was wary of shopping in stores near her school. She described her classroom as the place where she was in charge, and she worried that if she encountered students outside her classroom she would lose this position of power. Her negative attitude toward ELLs and the neighborhood where they lived was based more on stereotypes than on actual experience. When this teacher finished

her community travel paper, her attitude was transformed. By following the lead of these educators and finding out what assets are present in the community, you can become a more effective advocate for families.

Learn from Families

Families and students enjoy seeing their teachers show an interest in their lives, and learning about students' lives outside the classroom can help teachers tailor instruction to meet their needs. Many teachers of ELLs learn about their students by memorizing phrases in these students' native languages, purchasing a notebook calendar with multiethnic holidays, and inviting parents to come in and speak about specific holidays and cultural practices.

One teacher invited the mother of a Salvadoran student to come into the history classroom and share something from her culture. The mother brought in tamales, and the students talked about how different Latino cultures prepare tamales in different ways. (Some cultures use corn husks as wrappers, others use paper, and still others use banana leaves.) The teacher used the opportunity to ask her students about other similarities and differences among cultures, making the presentation a learning opportunity for both her and her students.

Often, we can avoid misinformation and cultivate openness simply by asking questions. Not all parents are open to sharing, and they could perceive your questions as prying, so it's important to be sensitive. You might ask parents to tell you about the positive qualities they see in their children and encourage them to share stories that show off these positive traits. When you ask questions, try prefacing them with a positive statement such as, "I am enjoying your child's ..." or "I like having your child in class." Such reinforcements tell the parent that you care.

It may also help to share things about your own life with parents through such simple statements as, "I remember I had the same troubles as a youth" or "I struggle with learning a second language; can you help

me pronounce these words?” This helps the parents and the students relate to you as a human being.

Open the Schoolhouse Doors

As society changes, teachers can no longer rely on their own cultural heritage to inform their understanding of the families in their school community. This does not mean that any teachers’ culture lacks value; it simply means that teachers must be aware of other viewpoints and allow others to maintain their own culture. When we understand this, we will be better able to make our schools places that welcome students and families from a variety of backgrounds.

Unfortunately, in some K–12 schools, family interactions are limited to infrequent back-to-school nights and open houses. At many of these events, families are shepherded from one class to another with only 5–8 minutes in each classroom. At the end, the teachers report to the faculty lounge for a meeting, and the parents leave the school. Many families have questions that require more than a short back-to-school night presentation, and these families may not feel comfortable contacting teachers on their own.

Culturally aware teachers never assume that families understand the education system in a new country. Many families of ELLs do not believe they should be part of the schooling process (Ramirez, 2008). Recent Latino and Asian immigrant parents, for example, may avoid involvement in their child’s education out of respect for the teacher. Be prepared to explain to parents how they can positively influence their child’s education, and mentor these families with information about the school and about how they can partner with teachers to help their children succeed.

To find out more about what parents need, use surveys (either written or online) or interviews to ask parents what they think of the school and how the school can help them get more involved. Survey questions can cover general demographic information, but they can

also delve into how parents are already supporting their children's education. Parents might be asked to indicate how strongly they agree or disagree with statements like these:

- I can make a difference in helping my child do his or her best in school.
- I help my child every day with schoolwork.
- I keep in regular contact with all of my child's teachers.
- I schedule a period in the evening as homework time.
- I display my child's schoolwork in the home.

Seek Solutions

Some families are unable to participate in school activities for logistical reasons, such as the inability to get off work for school functions, difficulties finding child care, and transportation problems. They also may not know when functions were scheduled or may not recognize the value of participating in school activities.

To overcome some of these obstacles, contact parents early in the school year, preferably during the first two weeks of school. Although it may seem daunting, this first phone call, which should always be positive, is a great opportunity to demonstrate your interest and learn what you can do to help parents get involved. Find out the best way to contact parents by distributing index cards at the beginning of the year and asking students to provide current phone numbers, e-mail addresses, and information on the best times and ways to make contact.

Inform parents of open house events by sending home an addressed, personalized card well in advance. A personal card from you tells parents you wish to see them. Also, more parents may be able to attend an open house on a weekend. Find out what days and times are best for most parents, and schedule events accordingly.

Technology can be a valuable way to stay in touch with families, but not all families have access to the Internet at home. Do not assume

that parents will be able to get online regularly. Open the school computer lab for parents or help them find places where they may use a computer, such as at a local library. If you use the Web for assignments and information, tell the parents what kind of information you will share online and offer opportunities for training on how to use a computer. Remember that your students could be your biggest asset in training parents. Use them!

For many parents, language is a significant barrier to participation. Establishing bilingual hotlines that families can call with questions and concerns might help. Some schools in the Los Angeles Unified School District use multilingual staff to assist teachers in speaking with parents who call in with questions about homework, tests, or other concerns. Together, teachers and staff can help parents become better informed.

Parent involvement practices do not require teachers to do everything. Recruit, recruit, and recruit parents to work with you. Parents who speak languages commonly used in your community can help with phone trees that the school can use to share announcements of concerts and sporting events or to remind parents of important deadlines, such events as yearbook sales, and schoolwide standardized tests.

If certain languages are especially common in your area, make sure some of the pages on your Web site are also available in these languages. Create a newsletter on school and classroom activities for your families. The trick is to have the students create these, making the newsletters an educational opportunity for students as well as helpful communication vehicles to reach parents. Secondary teachers in an urban school in Los Angeles have had much success with student-created newsletters for families. Their newsletters, some of which are available in Spanish and English, have included information on topics being covered in class, classroom procedures and objectives, test-prep tips, and announcements of upcoming events.

The Right Attitude

Our beliefs affect how we teach and interact with others, so we must be aware of our own thinking and assumptions.

Take some time and write out what you like and dislike about teaching ELLs and examine how you came to hold your beliefs. Ask yourself whether your attitude comes from experience, from assumptions you've made about these students and their families, or from depictions of parents in education literature (Ramirez, 2002). As an educator, your mission is to help all students achieve, so it's important to be aware of how your attitude affects your teaching.

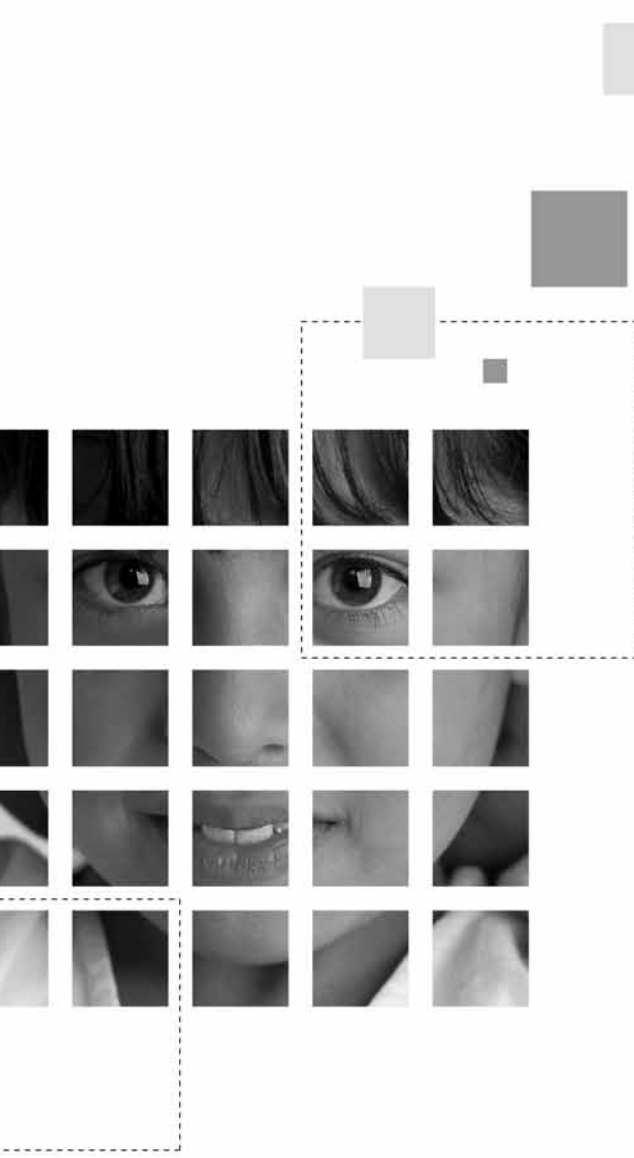
Our flexibility and willingness to learn and change tell families and students that we do not believe that our own culture is superior to theirs and that we want all students to succeed. When working with ELLs within your school, you need to devise ways to interact positively with their families. Developing strategies can be tough at first, but students realize a great benefit when parental participation increases.

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Part 7

Support Your Students

Support Your Students

Robyn R. Jackson

True learning is figuring out how to use what you already know in order to go beyond what you already think.

Jerome Bruner

When I first started teaching, I never ate lunch. At least, not during my lunch time. I was too busy working with students (individually and in small groups) reteaching material, tutoring, and otherwise remediating their understanding of something I wished they had understood the first time. Sometimes, I even had a backlog of students waiting for my help and attention. It seemed like a never-ending cycle.

I thought that if I just did a better job explaining things in class, I could cut down on the number of students waiting for me during lunch and after school. So I adjusted how I delivered my lectures, I refined my handouts and worksheets, I even used more wait time when asking questions. But nothing stopped the endless line of students needing my extra help.

I couldn't work any harder than I was already working and there didn't seem to be enough hours in the day to plan my lessons, teach my lessons, grade student work, and individually tutor students on what they didn't get the first time. I was so frustrated that I began to resent my students and begrudged the very help I knew they needed. Especially when, test after test, they did not seem to be improving or improving fast enough. I even began to blame them. They weren't studying hard

enough, I reasoned, or they were too far behind and would never catch up.

Eventually I learned a better way. But not until I had spent years working harder and harder trying to remediate my students and becoming more and more frustrated and disillusioned. If only I had understood then how to uncover confusion and be more proactive in my support. If only I had known how to combat the “Curse of Knowledge.”

Common Practice

Typically, in schools, we give an assignment, test students on their mastery of the assignment, give a grade, and then, when students show that they haven’t mastered our carefully crafted assignment, teach. It’s a pattern that is based in what Chip and Dan Heath (2007) call the “Curse of Knowledge.” In their book *Made to Stick*, they relate an experiment conducted by Elizabeth Newton that illustrates perfectly the classroom dance we do each day because of the Curse of Knowledge.

Dr. Newton designed a game where she took a group of people and separated them into two groups. One group was assigned to be the “tappers” and the other group was assigned to be the “listeners.” The tappers’ job was to pick a song from a list of well known songs such as “Happy Birthday” and “Twinkle, Twinkle Little Star,” and tap out the song for the listeners. The listeners’ job was to guess the song being tapped.

Dr. Newton asked the tappers to predict how many times their listeners would guess correctly. The tappers predicted that the listeners would guess correctly at least half of the time. The task seemed easy enough. How could you not get “Happy Birthday” or “The Star Spangled Banner?” Everyone knows those songs.

It seemed like an easy task, guessing the song being tapped, but it was not. In fact, out of the 120 songs that were tapped out, the listeners only guessed right 3 times.

Why could the listeners identify the song correctly only 3 times out of 120?

The problem was what the Heath brothers call the Curse of Knowledge. You see, the listeners did not know ahead of time what song was being tapped. So, when the tappers began, the listeners heard what seemed like a disconnected set of taps on the table. The tappers, on the other hand, knew what song they were tapping and were actually singing the song in their heads as they tapped it out on the table. When they were tapping, they could not imagine what it was like for the listeners because while the listeners were hearing isolated taps on the table, the tappers were hearing a song.

That's the curse in the Curse of Knowledge. Once we know something, it is hard to understand what it is like to not know it. Our knowledge makes it almost impossible for us to imagine what it is like to lack that knowledge.

The Curse of Knowledge plays out every day in the classroom. We teachers are diligently tapping out the Pythagorean theorem or the principles of the Magna Carta and, if we are not careful, all our students may hear are a set of disconnected taps on the board.

It gets even worse. Once we realize that students don't understand our taps, we tap harder. We tap at lunch and before and after school. We keep tapping instead of going over to the students and humming the song in their ears.

Although you cannot unlearn what you already know, there is something you can do about the Curse of Knowledge. You can be proactive about supporting students so that you catch them before they fail.

The Principle

If we truly want our students to be successful, then we cannot afford to leave to chance what we will do when a student does not learn. We need to be proactive about developing interventions before students fail.

That is not, when you think about it, a radical notion, but what they typically teach you in school to do is this: Plan a lesson. Teach the lesson. When students do not understand the lesson or fail the test, remediate students.

But waiting for students to fail before you intervene is one of the most passive stances you can take as a teacher. It says that once students fail, you can do things to help them improve—hold remediation sessions, reteach the material, offer alternative assignments or extra credit—but there is very little you can do to prevent them from failing in the first place. This stance focuses our attention on remediation rather than on prevention. So, instead of proactively supporting students before they falter, we prepare extra worksheets, plan to stay after school, hire extra staff to tutor students, set up extra study halls. We plan our lessons and once we find students unsuccessful, *then* we intervene.

In essence then, we plan for students to fail.

But what if we planned differently? What if we put measures in place in our lesson to catch students before they failed? What if we carefully monitored students throughout the lesson so that we could intervene when they first start to flounder?

Once we realize that there is something we can do to prevent students from failing in the first place, our strategies change. We plan differently. We teach differently.

Master teachers know that once a student fails, it is almost too late to begin implementing a solution. The solution, if it is going to work, needs to be in place before students begin to fail.

Proactive support is merely a matter of matching our teaching style to students' learning styles. It is both about providing challenge and meeting the students where they are, and it is rooted in the belief that all of our students can achieve at high levels given the right conditions.

Practicing the Principle

The master teacher mindset sees teaching as a matter of specifying what students must know, subtracting what it is that they already know, and teaching them the rest. It's the "teaching them the rest" part that requires the most planning and skill. Master teachers are proactive in their interventions even to the point of setting up a clear intervention plan before they ever teach the lesson. They think about potential problems students may have before they begin a unit and put supports in place for students to help mitigate these problems and make it more likely that students will be successful. Throughout the unit, they are vigilant about looking for areas of confusion and clearing these up as quickly as possible. They analyze each learning task in order to identify the prerequisite skills or knowledge students need and then break down complex tasks and processes in manageable chunks. Once students have developed some proficiency, master teachers gradually remove these supports so that students eventually master the learning goals on their own. And for those students who have already mastered the learning goals, master teachers provide additional support so that these students remain challenged and can deepen and enrich their learning.

Set Up an Intervention Plan Before Students Need It

One of the best ways to be proactive in supporting students before they begin to fail is to develop an intervention plan that is concrete and specific. It's one thing to say that when students start to slip, they will be required to meet with the teacher, but it is not effective if you do not have a clear understanding of why you are meeting and what you hope to accomplish during the meeting. It is another thing altogether to say that when a student's GPA falls to 76 percent, the student will sit down with the teacher to review his grade tracking sheet and discuss his difficulties. The teacher and the student will then develop a plan with shared accountability for how the student will raise his GPA within the next two weeks as well as consequences if the student does

not fulfill his side of the bargain. This type of intervention plan has four components that will ultimately make it more successful.

First, the plan is developed before students begin to fail. It is outlined in the course syllabus, shared with parents during back-to-school night, sent home in the class newsletter the first week of school, or posted on the course Web site. It can even be developed into a contract. Students and their parents know from the beginning the purpose of the intervention plan, which students will receive intervention, when the intervention will take place, what interventions will be put into place, and what responsibilities will be shared by the teacher, the parent, and the student.

Second, the plan has a red flag mechanism that triggers action. A red flag mechanism is when you take information about students' progress and turn it into something that cannot be ignored. In the case of the example above, falling below 76 percent is the red flag. Notice that the red flag is concrete and objective. You don't wait until you think the student is struggling or until the student comes to you with a problem. The moment the student's GPA falls below 76 percent, the intervention plan goes into action. This removes the guesswork and prevents students from slipping through the cracks. Notice too that the red flag is focused on academic concerns rather than behavior. It is designed to signal that a student is not mastering the objectives of your course rather than address behavior problems. (For strategies to address behavior concerns, see Chapter 7)¹.

The third element of an effective intervention plan is that once the red flag is triggered, there is already a concrete procedure for what comes next. Again, it removes the guesswork for both the student and the teacher. You have thought through what types of interventions will be most effective with students ahead of time and automatically begin applying these interventions the moment a student triggers a red flag. Of course, as you work with students you can customize the interventions to better meet their needs, but you have some basic interventions in place so that students can immediately start to get the help and support

they need. These interventions are not punitive or busy work; they are designed to get students back on track as early as possible.

The fourth element of an effective intervention plan is shared accountability. The teacher plays a specific role, but the student also has responsibility for making this plan work. These roles are clearly outlined and students are held accountable for doing their part. Notice too that the intervention is not voluntary. You do not wait for students to ask for help nor do you give them a choice about whether they receive help. Students are required to engage in the intervention and their role is clearly outlined for them.

An effective intervention plan is really a systematic way of supporting students as soon as they begin to falter. It signals to students and parents that you are invested in your students' success and that they have some recourse when they struggle. By putting the plan in place early, you make it less likely that students will fail later on.

Yes, but... I don't have time to meet one-on-one with every student who is failing.

Intervening with students does not require that you meet one-on-one with each student. That is the beauty of an intervention cycle. If you set up structures ahead of time, you can often automate many of the initial interventions and get students back on track before they require more intensive one-on-one intervention.

Think about how can you automate your interventions. Is there some computer program or online tutorial or simulation you can use? Perhaps there is a workbook or an extra handout. Maybe your school offers tutoring services through a club or through outside volunteers. Look for interventions that will help your students but that do not always require one-on-one sessions with you so that you can intervene with more than one student at a time.

To develop an effective intervention plan, ask yourself five questions:

1. What does mastery look like in your course? Is it a specific GPA? A certain score on a test or series of tests? Successful performance of some learning task? What evidence of mastery have you identified for each unit of study?
2. What would signal that students are not moving successfully toward mastery? In other words, what will be your red flags? How will you systematically look for these red flags? Will you calculate grades once every two weeks, for instance, or identify red flags after each unit test?
3. What interventions will help students get back on the right track?
4. How will you know when students are back on track and no longer need the intervention?
5. How will you communicate this intervention plan to students and parents?

Once you have answered these questions, use Tool 9 in the Appendix to develop your own intervention plan.

Anticipate Confusion

Anticipating confusion means taking steps to clear up confusion before students encounter it. It also means helping students uncover what is not obvious about what we are trying to teach them. This is difficult for us as experts because we have already done the work of making connections and giving meaning to our subject. But for our students, these connections and meaning may not be obvious to them.

A lot of times, we already know where students will be confused. But, rather than clear up this confusion, we play “guess what’s on the teacher’s mind” with our students. We don’t make our expectations

clear and we expect them to perform sophisticated academic processes without giving them a model or the proper instruction.

I stopped by Melody's classroom for a few minutes one morning to informally observe her class. When I walked in, she was collecting students' homework assignment from the night before. After she had collected the papers, she said, "Now, here is the right way to do the assignment. I know that many of you last night probably forgot to underline these key words here. And, most of you probably didn't circle these nouns here. And, if experience is correct, you probably didn't see that these two words here were synonyms." The students looked at the board and groaned. Melody smiled triumphantly and asked, "Am I right?"

Yes, but... I haven't taught this lesson before so I don't know where they will be confused.

Even if you have never taught the lesson before, you can still anticipate where students might be confused. Think about how you first learned that content or that skill and what was initially confusing or difficult for you. Talk to other teachers who have already taught the lesson and ask what parts were difficult or confusing to their students. And think about the common misconceptions or difficulties with your topic. What are some common mistakes almost everyone makes when learning the new skill? What are some common misconceptions many people have about your topic? Finally, give students a pre-assessment to determine what they already know about your topic and what they still need to learn. You can use a traditional paper-and-pencil test or an informal assessment such as a KWL chart or a word splash. Use this information to predict what parts of the lesson or unit will be confusing to students.

She was right alright, but she was also horribly wrong. If she knew what the students were going to get wrong on their homework assignments, why didn't she anticipate their confusion and clear it up before they attempted the assignment? How much more valuable would the assignment have been if she had shown them where they might have tripped up before they attempted the work? Instead, she did the equivalent of a carnival side show where she predicted where students would fail after they had done so. Entertaining? Sure. Useful? Hardly.

How often do we do the same thing? After years of teaching, we know what math problems students are going to miss on the test or which countries on the map they will confuse. We know what mistakes they will make on the essay or during the lab. We know, and yet we don't take measures to help clear up their confusion ahead of time. What if, instead, we anticipated where students would be confused and made sure that we clarified the point before the students made their mistakes? How much more productive might our teaching be?

Anticipating confusion means that we examine each lesson and each learning task to see what parts might give students trouble. Then we take steps to clear up the confusion before students encounter it. That does not mean that we completely sanitize the lesson ahead of time. We want students to grapple with difficult material because doing so will increase and deepen their learning. But we want to make sure that when students do struggle, their struggle is productive. In order to do that, we have to clear up any unnecessary confusion so that students' attention and energy can be focused on their learning.

Try This

- Think about your next assignment. Where might students be confused? If you have taught the assignment before, what mistakes did most of your students make? What trouble spots might exist that will break students' momentum? What material will be hard for students to learn? What common

misconceptions might students have that will get in the way? How can you clear up this confusion ahead of time? Will you need to rewrite the directions so that they are less ambiguous? Will you need to teach students a skill before you introduce the assignment? Will you need to break the assignment down into smaller parts so that students can complete one process before moving on to the next? How can you structure the assignment so that students are more successful?

- Provide students with models of what you expect them to do.
- When helping students learn a process, point out the pitfalls and mistakes that are common to the process and show students how to avoid them.

Pinpoint Confusion and Uncover Misconceptions

Although you have anticipated confusion prior to delivering a lesson, there will be times when, in spite of your best efforts, students will still be confused. When this happens, it is not enough to know that students don't understand the material. Before you can effectively intervene, it is also important to know what part of the material they do not understand.

For instance, I was helping out in a math class where the teacher, Paul, was trying to help the students understand how to organize and interpret raw data using mean, median, and mode. He had students enter raw data into an Excel spreadsheet and then use the various functions in Excel to compute the mean, median, and mode. The students struggled with the assignment.

At first we thought that the students were having trouble understanding the concepts, but after taking a closer look, we found out that the students struggled with the assignment not because they did not understand mean, median, and mode, but because they did not understand how to use Microsoft Excel. They could compute mean,

median, and mode manually, but struggled with the intricacies of the computer program.

When our students struggle, it may not be for the reasons we think, which is why it is so important to clarify the source of students' confusion. Once you pinpoint exactly where students are confused, you can clarify their confusion and get them back on track by asking probing questions that help you uncover exactly where the student is confused. From there, reexplain only that material which they do not understand and persevere with students until they get it.

There are also times when our students are confused because they come to the learning task with misconceptions that prevent them from understanding the material.

This type of confusion is not as easy to uncover because sometimes students can get the right answer without really understanding the material.

A few years ago, I had some friends over one Saturday night for a game party. About midway through the evening, someone pulled out a collection of brain teasers and suggested we try them. We each took a sheet and got to work. You could feel the tension in the room as everyone attacked the problems. What had been a rowdy group of young adults noisily competing and ribbing each other became a studious group of young scholars earnestly marking their papers. The room was absolutely silent for the entire 10 minutes. When the time was up, we anxiously came together to go over the answers.

This was a highly competitive group so everyone was invested in getting the answers right. The winner of the game would get the bragging rights of being the undisputed smartest person in the room. We all coveted the title.

The competition was close. As we went over each answer, the score shifted only slightly. In fact, we all remained neck and neck and in the end it all came down to the last question. "A hunter left his cabin and hiked two miles south, then turned and hiked two miles west, shot

a bear, and then hiked two miles north back to his cabin. What color was the bear?"

What color was the bear? You've got to be kidding me right? Most of us took a guess and said either black or brown. But Justin said, "No, the bear was white."

David, who was functioning as our informal MC, pointed at Justin and said, "You're right! The bear was white."

A collective groan erupted in the room. How on earth, we all wanted to know, did Justin know the bear was white?

"Well," Justin began shyly, "I noticed that all of the numbers in the problem were the number two."

"Go on," we prodded.

And, on a job application, when they ask you about your race, white is usually the second option. So, I figured the bear must be white."

Of course that wasn't the explanation the brain teaser game provided. The real explanation had something to do with the fact that the only place on earth where you could walk in that pattern and end up back where you started was on the north pole and the only bears on the north pole were polar bears. But, Justin hadn't used any of that reasoning. He got the answer right, but he didn't really understand the problem.

What's so bad about that? After all, he may not have used the so-called "correct" reasoning but he did get the answer right, and in the end, isn't that all that mattered?

Not necessarily. You see, Justin's right answer made it appear that he understood the concept, but his reasoning was not transferable. What if the problem had said the hunter walked four miles in each direction instead of two? The correct answer would have been the same but Justin's reasoning would have led him to an entirely different conclusion. Although he got the answer right in that instance, given a similar problem or situation, there is no guarantee he would have performed the same way.

Students can take guesses and get the answer right sometime or they can arrive at the right answer using the wrong route. While that might help them on that particular test, in a different situation they would not be as successful. If, however, they truly understand, then no matter what the details of the question, they will still be able to arrive at the right answer. That's why it is important to do more than just check to see whether students got the answer right or wrong. Uncovering confusion will help you find out if they truly understood.

Yes, but... once I figure out where they are confused, I have a hard time finding a way to clear up their confusion.

Knowing how to clear up students' confusion so that they understand the concept you are trying to teach requires two things. First, you must have a range of explanatory devices available so that you are more likely to find one that will help your students understand when they become confused. Second, and most importantly, you need a thorough understanding of your subject. Even if you don't have a huge repertoire of explanatory devices at your disposal, if you understand your subject, you can find alternate explanations, examples, demonstrations, and other ways to help students understand it. So, if you are having trouble clearing up your students' confusion, make sure that you understand the subject yourself and work on refining your subject area knowledge. Doing so will reveal other ways you can use to explain the material and help students understand.

Try This

- When students are unsuccessful on an assignment, ask the following error analysis questions to figure out exactly why they were unsuccessful:

- What is the key error?
 - What is the probable reason the student made the error?
 - How can I help the student avoid this error in the future?
- When planning an assignment, think about the implied skills or competencies students will need in order to complete the assignment successfully (i.e., using a microscope, understanding how to use a word processing program, basic keyboarding skills, knowing how to read a particular type of graph, etc.). Check to see that students have these skills prior to giving them the assignment, and for students who do not have these skills, provide a tutorial or mini-lesson to bring them up to speed or provide other supports to help students access the assignment without having these skills (such as word recognition software for students with poor keyboarding skills).
 - In order to uncover students' misconceptions, have students describe their thinking about a concept. Ask questions such as "How did you get that answer? What steps did you use to solve this problem? Why did you choose this approach? What does this word mean to you? As you listen, look for clues to students' assumptions and logic and use these clues to uncover what misconceptions students may have about the subject. Then work to explicitly clear up these misconceptions by re-explaining the material using the students' misconceptions as a starting point.
 - Use what Jay McTighe calls the "three-minute pause." Stop every 10 or 15 minutes and ask students to summarize what they have learned so far (For a great list of summarizing activities, check out the book *Summarizers* by Jonathan Saphier). Listen to their summaries and identify where students are still confused. Clear up any confusion before moving on.

- Don't just ask students for the answers; have them explain their thinking, show their work, or otherwise demonstrate how they arrived at their answer. During class discussions, ask follow up questions such as "How did you get that answer?" or "What steps did you use to solve that problem?"
- True-false quizzes are great pre-assessments to check for misunderstanding. List common misunderstandings of your subject and ask students to rate them true or false.

Demystify the Process

Another way to reduce the amount of confusion students experience during the learning process is to make the learning process more transparent.

We are not only obligated to teach our discipline; we are also obligated to teach students strategies that will make them more successful in our discipline.

Often, we don't realize that the things we take for granted after years of being in school are a mystery for our students. We admonish students to study but we don't teach them how to study. We tell them to read a chapter, but we don't teach them how to identify the important information. We give them tests without ever explaining to them the logic of test taking and test design. We tell them to write a lab report and give them a format but we don't tell them why we write lab reports or how to use a lab report to enhance their understanding of a particular topic. Although our students have become very adept at performing academic tasks, do they really understand why they are doing what they are doing or how to use what they are doing to exponentially increase their learning?

The key to demystifying the academic process is to make the process as explicit as possible. This can be accomplished by explaining all of the steps in the process in a clear way that leaves no doubt as to your meaning. First, clearly explain to students the purpose of each

assignment or activity. How will this new activity help students reach the objectives of the course? It is also important to show students how each new activity or assignment fits with what they have done in the past so that they can make connections between what they are learning and what they have learned already. Additionally, explain to students how the skills they are learning can be used in other contexts. Finally, provide all of the necessary steps in written directions so that students know exactly how you want an assignment completed. In this way, you avoid making assumptions about what the students know already and you make explicit the necessary steps in the process so that students can then internalize them.

Every year, every student in my grade level was required to write a 10-page research paper, and every year my colleagues and I struggled to drag our students through the process. After one particularly brutal year, I decided that there had to be another way. I was also in graduate school at the time and regularly wrote 20- or 30-page papers. The next time I had a paper due, I paid attention to the process I used. Then I used that process to break down the research paper my students had to write.

The next year, I handed my students a research paper packet. In that packet, I explained, was everything they needed to write their research papers. On the cover of the packet was a breakdown of each part of the research process, a date when it was due, and a line for their grade. That way, students could track their own process toward a final paper with many checkpoints along the way. The packet also contained an explanation and a model of how to create and organize bibliography cards and note cards, a skeleton outline, a model of a first draft and works cited page, and explanations of how to move from one part of the process to the next. I also explained to them that rather than write 10 pages at once, we were going to write five smaller papers that would average about two pages each. The first paper would be the introduction and thesis (one page). The next paper would become our background section (two pages). The third paper would become our

body (four pages), the fourth paper would become our refutation (two pages) and the fifth paper would become our conclusion (one page). I developed a system for each part of the process.

Yes, but . . . isn't this just dumbing down?

Many worries about “dumbing down” are rooted in the belief that students must start acting like experts as soon as they are introduced to the material. This is an unrealistic expectation and flies in the face of what we know about how human beings learn.

When students are first exposed to a new idea or concept, the best way to help them understand it is to make it as concrete as possible. Over time, the ultimate goal is to help them abstract more and more, because experts deal with abstraction. But before a person can move to abstraction, they must first experience the idea or concept as concretely as possible. Concreteness helps us understand. We use a concrete idea and build an abstract concept on top of it. Concreteness is the foundation for abstraction.

When you are introducing students to new concepts or processes, demystifying them by breaking them down into concrete ideas or steps builds better understanding and helps students integrate the concepts or process into their thinking. Once they are integrated, the students can begin to think about them at an even higher level.

Concreteness does not dumb down what you are trying to teach. Instead, it provides a foundation on which you can build more abstract ideas later on.

That spring, not only did all of my students write a 10-page research paper but their papers were very good. Years later, I still have students contact me and tell me how they continue to use that

process in college and graduate school. By demystifying the process for students, I was able to help them tackle something they thought was impossible and develop systems not just for the work in my class, but for the work they faced in other courses and other contexts.

In the movie *The Wizard of Oz*, Dorothy and her friends were terrified of the wizard until Toto pulled back the cloth and revealed that the wizard was nothing more than a machine operated by a tiny little man. Suddenly, the wizard didn't seem so scary. In the same way, many students are intimidated by high standards because they haven't a clue how they will ever reach them. It is our job to pull back the veil and show them the steps to reaching the standard. When we do, our high standards suddenly seem achievable.

Try This

- Share with students the learning strategies you use yourself. What steps do you take to solve a problem, or study, or learn a new concept? What strategies do you use to practice? What kinds of tools do you use to help you learn (note-taking methods, graphic organizers, mental imagery, etc.).
- Teach students how to use various organizational, rehearsal, and mnemonic devices to learn and memorize important material. Explain to students why each device works or the type of thinking it supports. Then discuss with students why they might choose a particular strategy. Finally, let each student choose a strategy that works best for them.
- Show students how to take effective notes by a) providing them with an objective for each reading assignment or lecture (to memorize material, to recognize important characteristics, to organize or classify material, to paraphrase important points, etc.); b) showing them an effective way to structure or organize the information (outline form, Cornell notes, main

idea, summary, etc.); and c) showing them how to use their notes to study.

- Break complex tasks down into manageable chunks and a logical sequence. Use a flowchart, checklist, or a decision-making heuristic to help students see how all the parts work together.
- It isn't enough to simply model a process or behavior to students. Explain to students beforehand what they will be seeing and to what they should pay attention. As you are demonstrating, explain what you are doing. And, when students try the process or behavior themselves, cue them along the way.
- One of the best ways to make a concept more concrete is to have students create some sort of visual representation of the concept. You can have students make physical models or pictorial representations of the concept, or act out the concept. For instance, once I was trying to teach students the logical fallacies. For years, I had students memorize the definitions of the various fallacies to no avail. One year, I asked students to draw a picture that represented a logical fallacy. After drawing their pictures and sharing them with the class, students understood and could recognize the fallacies.
- Another way to make ideas more concrete is to create, or have students create analogies between the abstract idea and something more concrete. For instance, you can create an "Analogy Box" filled with random objects such as a bar of soap, a spool of thread, a toy train, etc. When you are trying to help students move from concreteness to more abstraction, have students reach into the box and pull out a random object. Then ask students to work in pairs or triads to come up with an analogy between the item and the idea they are trying to understand (e.g., democracy is like a spool of thread because ____).
- Have students organize information using graphic organizers that visually represent how ideas or concepts are connected.

You can provide them with the organizers or have them create their own.

- To help students move from concrete thinking to more abstract thinking, begin lessons by making an idea as concrete as possible. Once students understand the idea, gradually shift to more abstract concepts by asking students “what if” questions, having students apply what they have learned to unfamiliar situations, or introducing ambiguity into the lesson.

Gradually Remove Supports as Students Improve

One of the hardest jobs we have as teachers is managing students’ frustration. It’s like playing a game of Jenga. Pull out the wrong piece and the whole structure comes crashing down. The way to manage frustration is to *gradually* remove supports. That means that when you introduce the support, tell students that it is only a temporary tool and that at some point, they will be expected to do the work without it. In that way, you set realistic expectations and help the students not get too attached to the support. Then, as you are removing the support, help students understand that they no longer need it because they have developed the internal resources to be able to complete the task without support. Coach students through their frustration by pointing out what they can now do on their own.

This is the step that many of us neglect. We may provide students with support but we don’t include in our plans a strategy for gradually removing that support once students become more proficient. Removing the support is a crucial step. Otherwise, we make students dependent on our supports and never help them learn to do things on their own.

Many of us also err by changing the learning task, making it easier at the beginning and more difficult as students acquire skills. A better approach is to keep the learning task the same but manage the student’s role in the learning task so that at the beginning the students

are receiving more help and support, but as the students develop proficiency, their role increases and they become more independent, until the students are working completely on their own. Don't change the task, change the students' role in relationship to the task. Support should only be given for those parts of the tasks that are beyond the learner's current capacity.

The key to gradually removing supports is to provide students with a manageable challenge where the task is just beyond a student's current capacity but not so challenging that a student cannot complete the task with minimal support. This sounds a lot easier than it really is, of course, but there are a few steps you can take to determine when you should begin to remove support. First, identify what each support you have in place is intended to do so that once students demonstrate that they can do it on their own, you know that you no longer need that support. For instance, if you have given students a graphic organizer to help them read their textbooks and take effective notes, after students have used the organizer a few times and learned to think about their text in a particular way, give them a less detailed organizer for the next chapter, and then for the next chapter ask them to create their own. Finally, you can get to the point where you assign the chapter with no organizer at all.

Next, look for ways to gradually wean students off of the supports you have put in place rather than removing them all at once. For example, if you have allowed students to use their notes on their quizzes, announce that for the next quiz, students will not be allowed to use their notes but that you will give them an extra five minutes at the start of the quiz to create a note sheet from memory that they can then use on the quiz. Then, a few quizzes later, you can just give students the quiz without any notes or time to write their notes down.

Finally, allow some room for struggle. When you first remove supports, some students may protest or seem to struggle. Resist the temptation to rush right back in with the support. Instead, allow the student a chance to grapple with the new challenge a bit and coach the

student on ways to meet the challenge. Learning to be comfortable with a little struggle will help students learn to effectively manage challenges.

Try This

- To help students to eventually be able to perform on their own under testing conditions, match practice conditions to those students will eventually face on the test.
- Once students come close to mastering a task, provide them with challenging practice that pushes them beyond the original demands of the task.
- Vary practice activities so that students can learn to apply what they are learning to unfamiliar and new situations.

Support the Learning of Students Who Have Already Mastered the Learning Goals

Support goes both ways. Although much of this chapter has been devoted to helping students who struggle, students who are not struggling with the material also need support structures to help them stay engaged, to offer them appropriate additional challenges, and to enrich and deepen their learning. In the same way that you need to proactively develop an intervention plan for students who fall behind, you need an intervention plan for students who are ahead of the rest of the class.

The same steps apply. You still need to decide what is mastery, but your red flags will signal that a student has *exceeded* mastery. You will also need to decide what interventions you will put into place once a student triggers a red flag. This does not necessarily mean more work for the student, but it may mean different work or adding more ambiguity or complexity to existing assignments. For instance, if a student demonstrates that she has mastered the skill of writing an effective hypothesis, you could make the task more complex for her by requiring her to create a hypothesis with two or more independent variables.

In the same way that you have to work to uncover misconceptions and pinpoint confusion for struggling students, you need to look for opportunities for ambiguity and complexity in the material for students who have already mastered the learning goals. Ambiguity can typically be found as you work to anticipate confusion. Those areas that are potentially confusing are typically ambiguous in nature. Thus, while you will work to mitigate some of this ambiguity for students who are struggling with it, you will intentionally allow other students to grapple with multiple meanings and sort them into significant patterns on their own. The goal is to help all students learn to deal with ambiguity but students become ready to handle ambiguity at different rates. The key is to determine whether unraveling ambiguous content will help advance students' learning or be an impediment to their learning. If it will impede student's progress, clarify any confusion that the ambiguity may create. If it will advance students' progress, support their efforts to deal with ambiguity on their own.

Complexity refers to ideas that are interacting and overlapping. Often we deal with complexity when we are working to pinpoint confusion. Those ideas that are most complex are also the ideas that are most confusing. But while we need to unpack these ideas for some students, other students may benefit from having to unpack these ideas themselves. If students have already mastered the learning goals of your content, you can resist the urge to simplify some of the more complex ideas of the unit and provide supports to help them grapple with the complexity of the ideas themselves.

What do these supports look like? They look a lot like the supports that we put in place for struggling students. We are not talking about additional work for the teacher here. In the same way that you have to demystify the academic process for students who are struggling, you must also demystify the academic process for students who are excelling and in need of more challenge. Show students how to untangle complex or ambiguous ideas. Show students how to organize their notes so that they can notice patterns, elaborate on what they

are learning, and marshal evidence to support their own hypotheses or theories. As students get better, gradually withdraw these supports so that they learn to learn on their own. There is really no difference between supporting struggling students and supporting students who have met or exceeded the learning goals. Both groups of students need the same proactive support mechanisms in order to maximize their learning potential.

Try This

- Provide students with opportunities to represent complex or ambiguous concepts or problems visually without using words. This will help them think about the material in a different way and help them work through the complexity or ambiguity.
- Develop an intervention plan for students who master the material early. Decide on your red flags (100 percent on three consecutive quizzes, a 95-100 percent overall class average, etc.) and specify what you will do once a red flag is triggered (for example, introduce more complex material such as primary documents or more ambiguous math problems with multiple ways of arriving at the answer). Publish this intervention plan in the same way that you publish your plan for students who struggle.
- Sometimes student interest will propel them to master one aspect of a subject or unit. Therefore, do not base your assessment of mastery only on students' overall performance. If you notice that a student is particularly motivated to master some aspect of your curriculum, capitalize on this interest by putting supports in place to further the student's study of that topic.
- Continue to demystify the academic process showing students how experts in your particular discipline or field think and

behave. Or, ask students to conduct an interview with an expert or research experts to see how they behave and think in a particular field in order to further demystify the process.

Applying the Principle

When I first started teaching, my process looked something like this:

1. Teach the skill.
2. Give students an assignment or test to measure their mastery of the skill.
3. Students complete the assignment or test.
4. Grade the assignment or test.
5. Return papers.
6. Move on.

It was the process I had undergone as a student and it was the process I was taught in my teacher preparation classes. On the surface, it seemed to work. But, as I gained more experience, I began to dread grading those papers. I already knew what mistakes the students would make and what I was going to have to do to undo the damage.

Every year, I especially dreaded the first essays of the semester. I knew that they would be pretty awful. And, every year, I would grit my teeth as I graded them, lamenting over how much work I would have to do to get my students ready for the end of the year assessments.

One year, I decided to do things differently. I assigned the same paper I always did, but this time, I wrote the paper first and in it, I made all the mistakes I knew my students were going to make. About a week before the assignment was due, I passed out copies of that paper to my students and told them that I had written the paper and that it was an example of what their final drafts should look like.

As we read the paper aloud in class, I could tell that my students were a little confused. After we finished the paper, I asked them, "So, what do you think?" Politely, they said that they thought it was pretty

well-written. Some students even sincerely complimented the paper and said that they only wished they could write so well.

“Let’s take another look,” I coaxed, and we began with the first paragraph. “Is that a compelling opening sentence?”

“Not really,” one brave soul offered.

“Well what would you do to fix it?” I asked, and we were off. I took out my laptop and projected the draft onto a screen. I turned on the track changes feature in the word processing program and students were able to see what we struck out and what we changed. As we made changes in the draft, I inserted comments explaining why we were making the changes.

We spent the entire class period revising that draft. After we were done, I posted my first draft, the messy revised draft with the strike outs and the comments, and the clean final draft onto our class website. Then, together we used the rubric and graded the final draft. I posted the graded draft online too. Now students had not only a final draft posted, they had an example of how we got to the final draft.

When I collected their papers the next week, my students were so excited. They told me how their first drafts had looked a lot like mine but that they had used the messy revised draft to compare to their own drafts and had caught a lot of mistakes.

I was excited to grade their papers too. And, when I graded them they were far superior to what I was used to seeing in students’ first papers. I was thrilled. Because I had anticipated where they would be confused, and demystified the writing process by explicitly showing them how to revise their papers, my students had written papers far beyond what they might have written otherwise. Because I intervened before they failed, my students were able to successfully master the learning task.

Getting Started

1. To be more proactive about supporting students prior to the lesson, anticipate confusion, set up an intervention plan that includes red flag mechanisms, and look for ways to demystify the academic process.
2. During instruction, help prevent confusion by moving from the concrete to the more abstract and by providing models. When students do become confused, work to unpack their confusion through targeted questioning and error analysis.
3. The moment students trigger a red flag, begin implementing the measures you outlined in your intervention plan.
4. As students become more proficient, gradually remove supports.
5. Look for ways to support students who have already mastered the learning goals in order to deepen and extend their learning.

Endnote

¹ Mentions of “this book” and the chapters and strategies in it refer to the original publication, *Never Work Harder Than Your Students and Other Principles of Great Teaching*.

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Study Guide

Supporting the Whole Child

Study Guide for Supporting the Whole Child

Naomi Thiers and Teresa Preston

Part 1. Shaping Instruction

The Goals of Differentiation, *Educational Leadership*, November 2008

Differentiation: Lessons from Master Teachers, *Educational Leadership*, February 2007

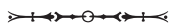
Nine Ways to Catch Kids Up, *Educational Leadership*, November 2007

The Rest of the Story, *Educational Leadership*, December 2007/January 2008

In “Differentiation: Lessons from Master Teachers,” Jennifer Carolan and Abigail Guinn examine how teachers support students by weaving differentiation into their daily practice. Carolan and Guinn state that many teachers hesitate to implement differentiation because of a perceived lack of time, training, and support from administrators. They suggest that differentiation does not actually require teachers to make dramatic changes.

- How do you differentiate instruction in your classroom? If you don’t currently differentiate, what barriers have prevented you? What are some things your school can do to make it easier for you to implement differentiation?
- One strategy that Carolan and Guinn suggest is offering students multiple ways to achieve a learning goal. Consider one

of the learning goals you have for your students. Generate a list of ways your students can demonstrate mastery of that goal. How might you offer your students these choices while maintaining “that sweet spot between structure and choice that makes learning possible”?



In “The Rest of the Story,” Thomas R. Guskey says that “formative assessments alone do little to improve student learning or teaching quality. What really counts is what happens after the assessments.”

- What formative assessment practices are in place at your school? What happens after these assessments? How might this process be improved?
- Read Guskey’s list of “Types of Corrective Activities.” Which of these activities have you used with students who need remediation? Which, in your experience, have been most effective? Which new strategies would you like to try?
- Guskey describes how one teacher, Mr. Tanabe, organizes his classroom for corrective and enrichment activities. How might you adapt this approach to your classroom? What other strategies for organizing such activities have worked for you?

Part 2. Providing Scaffolds and Interventions

An Early Warning System, *Educational Leadership*, October 2007

No More “Waiting to Fail,” *Educational Leadership*, October 2007

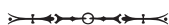
The Need for Number Sense, *Educational Leadership*, October 2007

What’s Right About Looking at What’s Wrong? *Educational Leadership*, November 2007

Ninth Grade: The Linchpin Year, *Educational Leadership*, May 2008

Math disabilities (dyscalculia) occur in 6 to 10 percent of the population and make mastering standard math a steep climb, asserts Nancy C. Jordan in “The Need for Number Sense” (October 2008 *Educational Leadership*). That means if you’re a classroom teacher, you probably teach a few kids with dyscalculia—and if you teach in early grades, you might be able to spot them.

- Read the “Barriers to Mastering Math” section in Jordan’s article that describes how students with dyscalculia tend to perform simple math operations ineffectively. Think of students in your class who struggle in math. For a few weeks watch their work carefully; see whether you notice the tendencies Jordan describes.
- Pair one of these learners with a student who tends to use more efficient methods of operating in math (and who is good with peers). Ask the student who’s more natural at math to model for the struggler practices like “counting up” in their head as they work. Report back to the group how this experiment went.



In “The Linchpin Year,” Billie Donegan asserts that “when it comes to changing 9th grade, words abound, but actions are few.” She encourages schools to go beyond offering “time-consuming, glitzy programs that often yield little result.” Instead, she asks school leaders to change their staffing and scheduling patterns to better support 9th graders.

- What programs does your high school have in place to help 9th graders transition into high school? How effective have they been? What might make them more effective?
- Follow Donegan’s suggestion to calculate the student-to-teacher ratio in classes at each grade level. What does this calculation reveal?

- If you're an administrator, look at which teachers are teaching 9th grade. What classes have you assigned to your most experienced and talented teachers? What about beginning teachers? What, if anything, needs to change, and what steps can you take to bring about those changes?
- If you're a teacher, describe your own experiences, if any, teaching 9th grade. What are the rewards and challenges of teaching this grade level? How would you react if, like Donegan, you were asked to teach "regular freshmen" after accumulating 20 years of experience that included teaching honors seniors? What would make you willing to commit to teaching 9th graders?

Part 3. Leveling the Playing Field

Changing the Odds, *Educational Leadership*, October 2007

Changing the Odds, *Educational Leadership*, October 2007

When Mobility Disrupts Learning, *Educational Leadership*, April 2008

Delivering What Urban Readers Need, *Educational Leadership*, October 2007

Learning in an Inclusive Community, *Educational Leadership*, September 2008

Susan B. Neuman, in "Changing the Odds," emphasizes the many academic and health benefits of early childhood education. These benefits are particularly evident in children from low-income backgrounds.

- Why should K–12 educators be concerned about preschool education? What effects of preschool education have you seen in your students? Do the students who have been to preschool seem more prepared for school?
- Neuman advocates targeting programs to serve the children at greatest risk because "targeted programs enable us to

serve these [poor] children without diluting the quality of the intervention by spreading resources too thin.” Others, such as Edward Zigler in the October 2007 *Educational Leadership* (www.ascd.org/publications/educational_leadership/oct07/vol65/num02/Giving_Intervention_a_Head_Start.aspx), strongly support providing universal preschool because “in a targeted program, you’re never going to get funding to serve all the children who need it.” Which argument makes the most sense to you?

- What kind of preschool program does your state offer? Is it a universal program or targeted toward specific children? If your state does not have a preschool program in place, what efforts, if any, are underway to provide state-funded preschool?



In “Delivering What Urban Readers Need,” Shobana Musti-Rao and Gwendolyn Cartledge state that “students should read many books that reflect their own culture as well as others’ cultures.” What cultures are represented among your students? What books have you found that connect to their cultures?



According to Mara Sapon-Shevin’s article in the September 2008 *Educational Leadership* (“Learning in an Inclusive Community”), teachers can’t provide a supportive environment for all students unless the class talks openly about the ways students differ from one another—racially, socioeconomically, in terms of physical abilities, and so on. Sapon-Shevin maintains, “Classrooms cannot feel safe to anyone if discussions of difference are avoided, discouraged, or considered inappropriate.”

- Do you openly address in your classroom the fact that students come from different religions, racial groups, genders,

and so on—and that differences in how individuals learn or interact may sometimes flow from those differences?

- Do you agree with Sapon-Shevin that for students to feel safe they need to talk about differences frankly? What risks might be involved—for students and teachers—in acknowledging and talking over diversity among students? How might teachers acknowledge those risks openly and get students’ ideas for positively exploring differences?
- Reflect on your early schooling experiences. Was your classroom homogeneous or heterogeneous? Did your teacher deal with the reality of differences among learners?

Part 4. Cultivating Positive Classrooms

Assuming the Best, *Educational Leadership*, September 2008

The Power of Our Words, *Educational Leadership*, September 2008

Releasing Responsibility, *Educational Leadership*, November 2008

Solving Behavior Problems Together, *Educational Leadership*, November 2008

Analyzing Classroom Discourse to Advance Teaching and Learning, *Education Update*, February 2008

For joy to flourish in classrooms, students must first feel emotionally supported within those rooms. Both “Assuming the Best” (Rick Smith and Mary Lambert) and “The Power of Our Words” (Paula Denton) emphasize teachers’ responsibility to maintain an emotionally safe environment. Denton stresses the importance of positive teacher language; Smith and Lambert stress approaching all students with positive thoughts and assuming that even those who seem most recalcitrant truly want to learn the content and behaviors you want to teach.

Smith and Lambert discuss the “internal radios” that both teenagers and adults often hear in their heads, sending out distracting messages. Such messages can block teachers’ ability to assume the

best about difficult students. Teachers must “hold our ground” against internal messages (like “this kid just doesn’t care”) so that we can react firmly and caringly to all learners.

- Identify one student whose disruptive behavior or resistance to learning activities concerns you. Tune in to any “internal radio” messages that may be interfering with your ability to assume the best about that student (such as “Everything’s a joke to her”). Try replacing them with positive messages (“She may joke because she’s insecure, but she really wants to do well”). Reflect on how this affects your attitude toward that learner.
- Try out the “Two-by-Ten” strategy described in Smith and Lambert’s article. For 10 days in a row, chat with the student who concerns you for at least two minutes about something the student is interested in. Do you notice improvement in that student’s behavior? In your relationship with that student?
- Read the five principles of teacher language outlined in Denton’s article. Reflect on your communication with any students who have trouble following classroom expectations. In a journal, jot down specific things you say to such “problem” students or ask a fellow teacher to observe you to help you examine how you communicate.
- Reflect on your classroom communication, looking at Principles 2 and 3 of Denton’s list (“Convey Faith in Students’ Abilities and Intentions” and “Focus on Actions, not Abstractions”). Think about how you give classroom directions or requests to stop problem behaviors, especially to students who “act up.” Do your words show faith that such students have good intentions and the ability to carry them out? Do you spell out with concrete actions what “good behavior” looks like?

Part 5. Responding to 21st Century Challenges

Mastering Multitasking, *Educational Leadership*, March 2009

Becoming Network-Wise, *Educational Leadership*, March 2009

Financial Literacy, *Education Update*, March 2009

Understanding Students' Strengths and Struggles, *Educational Leadership*, April 2008

What Students Want from Teachers, *Educational Leadership*, November 2008

In “Becoming Network-Wise,” Will Richardson argues that students need support from their teachers to learn to use social networking techniques responsibly and in the service of learning. He claims:

The reality is that we shouldn't be teaching them [skills in building digital networks] as a unit tucked somewhere in the curriculum under the guise of “information literacy.” . . . Instead, if we sincerely want to prepare students to read, write, and edit their way through complex online networks, we need to make these literacies part of the way we do business as educator/learners.

- Do you agree that teaching such skills is every teacher's responsibility? Is this kind of literacy as essential as decoding print, so that it should be taught across content areas?

Richardson quotes the National Council of Teachers of English as saying that 21st century readers use digital technologies effectively to “build relationships with others to pose and solve problems collaboratively and cross culturally.” Considering that teachers have used cooperative and project-based learning in classrooms for decades, do you think social networking requires new skills? How does learning through digital networks vary from traditional project-based learn-

ing? What are the benefits of each in terms of sharing information and building relationships?



After reading Rick Allen’s article on financial literacy in *Education Update*, do a little research into financial literacy in your school. Is your state required to teach financial literacy in public schools? How are principles of finance and personal financial issues taught in your school system, if they are taught? How are such classes supporting students?

For middle and high school teachers

Get hold of the 30 questions used in the JumpStart Coalition for Personal Financial Literacy’s survey of high school seniors’ and college students’ financial understandings (available in the 2008 survey report at www.jumpstart.org/upload/2009_FinLit_Mandell.pdf). Choose 15 of these questions and see how your students do with them individually or in groups. Discuss the correct answers and underlying principles with students, relating the discussion to content you’re studying in a unit or project.

Part 6. Honoring Families and Heritage

The Schools We Mean to Be, *Educational Leadership*, May 2009

Honoring Students’ Stories, *Educational Leadership*, October 2007

Celebrating Students’ Diverse Strengths, *Education Update*, February 2008

Making Refugee Students Welcome, *Educational Leadership*, April 2009, Online

All Languages Welcomed Here, *Educational Leadership*, April 2009

A Place for All Families, *Educational Leadership*, April 2009

How can parents and teachers work together to support students' growth? That's the question that Richard Weissbourd attempts to answer in "The Schools We Mean to Be."

- Weissbourd opens his article with an account of an evening of parent-teacher conferences. His meetings with two of his son's teachers convinced him that the teachers did not truly know his son. A third teacher, however, shared some interesting insights and listened carefully to Weissbourd's concerns. Think about how you interact with parents of your students. What are you doing to show parents that you care? How can you improve?
- What are some of the factors that undermine parent-teacher relationships? How might your school better engage parents in the school community? Think particularly about how you can transform some of the more negative relationships into the "common moral project" that Weissbourd describes.



In "Celebrating Students' Diverse Strengths," Willona M. Sloan urges teachers to support students' cultures by integrating multicultural lessons into the curriculum.

- What are you already doing to celebrate the diverse cultures represented in your school? If most of your efforts are confined to a what Sloan refers to as a "one-off cultural day," think about ways to further integrate different cultural perspectives into your lessons.
- What cultures are represented in your classroom? How do they differ from your own culture, or from the majority culture in your school? What can you do to ensure that students from other cultures feel welcomed and respected?

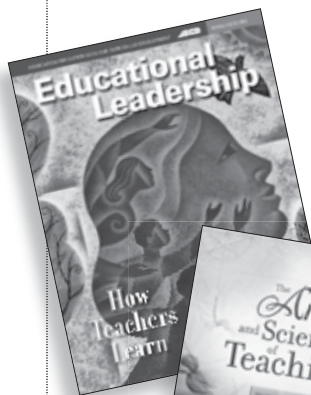
Part 7. Supporting All Students

“Support Your Students,” chapter 4 from *Never Work Harder Than Your Students and Other Principles of Great Teaching*, ASCD 2009

1. What is the “curse of knowledge” and how does it play out in the typical classroom?
2. In what way do we plan for students to fail and how can we plan for their success instead?
3. What are the four essential elements of a proactive intervention plan and which do you believe is the most critical to the success of a plan?
4. Why is getting the right answer sometimes not an indication of a student’s understanding?
5. Why is demystifying the academic process so important and what is the key to making the process as explicit as possible?
6. What is the key to gradually removing support?
7. What important error should we avoid in helping students to grapple with challenging materials?
8. How are the supports we should put in place for advanced students similar to the supports we have in place for struggling students?
9. What is your current process for supporting struggling students and how do you need to adjust it to be more proactive?
10. How can you begin to apply the principle if you are a novice, apprentice, practitioner, or master teacher?

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