BRIEFING PAPER:

TOWARD AN EQUITY PEDAGOGY FRAMEWORK:

UNDERSTANDING ACADEMIC ACCELERATION AS

A MODEL FOR SCHOOL IMPROVEMENT

MAY 2006

The Oakland Unified School District (OUSD) has set a bold goal of being the "best urban district by 2010." An important part of this endeavor is to ensure all OUSD students are proficient readers by third grade, all students meet the standard in math and algebra, all 9th grader across the district are proficient writers and speakers, and all graduating students are college ready. The challenge is that many low performing students, especially students of color, who are living in low income areas and attending low performing schools are not performing up to their full potential. District standardized test scores reflect this reality: approximately two thirds of students across the district are performing at or below basic level on the CST (as opposed to being on grade level at proficient). The goal of Oakland Unified School District's next comprehensive district-wide school improvement plan (currently referred to as MAAP – Multi-Year Academic Acceleration Plan) is to design a "break the mold" school improvement plan that supports schools in helping students meet state academic standards while making greater gains. This briefing paper aims to summarize current thinking on the anatomy of academic acceleration and articulate the instructional competencies necessary to accelerate academic achievement for low performing students.

In the opening segment, we will review the nature of the achievement gap and define accelerated learning. Using these definitions, we will draw on the current findings from research in cognition and the science of learning, the direct experience of high achieving urban schools, and the evaluation summaries of past and current school reform efforts to profile the learning competencies and skills of high achieving urban students. We contrast this profile of highly skilled students with low skilled students to do a gap analysis of the core competencies that should be the target of instruction in an academic acceleration model.

In the second segment, we look at the way in which the idea of academic acceleration is translated into specific teacher practices of an "equity pedagogy" and the instructional competencies of high skilled teachers who are able to help low skilled students develop the necessary knowledge, learning competencies, and skills to meet the standards.

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The third segment examines the role of professional development in building teachers' capacity to take up an accelerated learning model and the role of instructional leaders in creating the necessary conditions for academic acceleration to occur.

Understanding the Nature of the Achievement Gap

Before we examine instructional strategies used to close the achievement gap, it is important to make sure we are operating with a common understanding of how the achievement gap is created and perpetuated, so that the strategies promoted in a district-wide plan are consistent with what we know will impact the achievement gap. There are different theories about how the achievement gap is both created and closed. We offer a view of the achievement gap that focuses less on test score gaps and more on the learning gaps that lurk behind them.

The achievement gap has been generally characterized as a gap in standardized test scores between African-American, Hispanic, Native American, and low-income students and their white, Asian, and economically advantaged peers. The test score gap -- whether in reading, math, language arts or any other discipline -- is the most observable manifestation of the achievement gap. In reality, the test score gap is simply an outgrowth of other important learning gaps. Some of those gaps occur before a child comes to school; others are actually created by the way we deliver instruction.

Underlining these gaps is a phenomenon professor of Education and national reading expert Anne Cunningham of UC Berkeley calls "the Matthew Effect,"[1] from the biblical reference in which servants who were given money to manage failed to increase their profits and had their money taken away as punishment while another group of servants who were given the same amount of money doubled their investment and were rewarded with more; hence, the phrase, "the rich get richer and the poor get poorer."

In school, low performing students subjected to the Matthew Effect are caught in a downward spiral. A strong body of evidence shows that most students who fall behind in key academic

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skills such as reading or computation never develop full proficiency. On average, poor children enter school with far fewer vocabulary, literacy, math, and social skills than their middle-class peers. They start off a step behind and never catch up. For a variety of reasons they continue to fall further and further behind in performance and over time their gaps grow. Despite attending schools engaged in serious reform or mandated improvement efforts under *No Child Left Behind* legislation, for most students in low income areas attending low performing schools the gaps in academic proficiency persist. The data shows that eventually they become frustrated and drop out at much higher rates than their higher performing classmates. Even those that do persist and graduate do so with lower skills. According to Education Trust[2], the average African American and Latino 12th grader has the reading skills of an 8th grade White student.   For these students, by the end of their academic careers, the small gaps in knowledge present when they entered school grow to a four to five year gap in skills and knowledge by the time they graduate. The Academic Senate of the California Community College report in *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities*[3] reports that many college instructors are seeing students coming to college without the habits of minds and foundational dispositions that prepare them to be successful – lack of content knowledge, poor writing skills, an inability to extract key information from non-fiction text, to make connections between different events in different contexts, etc.

Some proponents suggest that the roots of the achievement gap lie in a student's intellectual deficits and limited cognitive capacity as a result of living in poverty[4] as exemplified in books such as *Inequality at the Starting Gate: Social Background Differences in Achievement as Children Begin School* or *The Bell Curve.* Consequently, many academic interventions focus on trying to remediate the effects of poverty by slowing down the pace of instruction, reducing the amount of information taught, and decontextualizing content rather than accelerating learning by maintaining a slightly faster pace of instruction and presenting richer and more complex content. In *Teaching Advanced Skills to Disadvantaged Students,* educational researchers Knapp and Means of SRI[5] identified instructional practices that

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contributed to the downward spiral that leads to the achievement gap, namely slowing down, breaking down and watering down the curriculum. This approach is limited, researchers tell us, for the following reasons:

- Slowing down instruction and reducing complexity results in a disjointed curriculum that is composed largely of various relatively insignificant concepts and facts. Consequently, learning becomes less interesting and students are easily distracted.
- Watering down instruction and the curriculum reduces opportunities to learn when disconnected from real life situations and application.
- Watering down both instruction and curriculum limits students' opportunities to engage in creative, analytical, or productive thinking activities
- Watering down inhibits the learnability of subject matter because it is too decontextualized and limits students' ability to see how a topic or concept connections to other topics and concepts.

Instead, educators engaged in work with low performing students suggest that we should be "watering up" the curriculum and building what is called "intellective competence." [6]According to the Study Group for the Affirmative Development of Academic Ability at Columbia University's Teacher's College that coined the term in its task force report, *All Students Reading the Top: Strategies for Closing the Achievement Gap*[7], intellective competence is defined as "the integration of academic content with mental processes such as reasoning and critical thinking taught within a relevant context for the student." For the purposes of this paper, we will substitute the new term *intellective competency* with something that sounds a bit more familiar, *intellectual capacity*.

If we accept this view of the achievement gap and the way in which is it perpetuated as a growing number of researchers suggest, then we must look at the role of building *intellectual capacity* as a primary strategy for stopping the downward spiral and actually reversing it. The definition of "closing the achievement gap" is not just about teaching students the content and

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getting incremental gains on standardized tests. Researchers tell us that if we teach all students using our current methods, all students will learn, but the achievement gaps between Black and White students will remain. Closing the achievement gap by reversing the downward spiral through the build up of intellectual capacity means that low performing students will be capable of making more than a year's worth of academic growth in a year's time. Getting more than a year's academic growth in a year's time is the technical definition of accelerated learning.

The Case for Acceleration

Mounting evidence from leading practitioners and researchers point to acceleration as the necessary ingredient in interrupting the Matthew effect for low performing students. Acceleration doesn't mean simply presenting the same content and concepts with more intensity or at a faster rate. The idea of "going faster" embedded in the term "accelerate" is related to students' ability to learn at faster rates once they develop and expand their intellectual capacity. Academic acceleration is about helping low performing students build internal cognitive structures and routines to accept, process, and make sense of new information and concepts. In his article, <u>The Missing Element in Reducing the Learning Gap: Eliminating the "Blank Stare"</u>[8] educator and researcher Stan Pogrow, confirms that the real challenge to closing the achievement gap is students' inability to use internal routines or strategies to connect abstract concepts or make inferences. It was as if, he says, the low performing students he taught had *underdeveloped* learning structures in their minds and few strategies for processing questions or engaging in analytical discussions. He characterizes their typical reaction as "the blank stare."

Two things are important to point out here: acceleration isn't about teaching basic skills or getting students to acquire more and more disconnected facts. Instead, it is focused on using a student's strengths to help him build a "cognitive toolkit"[9]. Instruction within an accelerated learning model focuses on teaching for understanding, supporting meaning making, and

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improving students' proficiency with transference (the ability to apply skills learned in one content area to another content area for problem solving or meaning making).

Nor is it about teaching a stand alone "thinking skills" curriculum. Past reform efforts to teach students critical thinking and problem solving as a subject area have not resulted in any appreciable reduction in the achievement gap over the past two decades. Instead, acceleration attempts to "water up the curriculum" so that content standards are taught (that is, students retain and understand content) by helping students learn how to think about the relevance of the information, how to process the information for the greatest retention, and how to connect the information to the greatest number of other concepts, facts, events, or bodies of knowledge in order to continually deepen one's own understanding.

James Banks, known as the father of multicultural education, calls this process "equity pedagogy." He defines it as deliberate "teaching of strategies and designing of classroom environments to help students from diverse racial, ethnic, and cultural groups attain the knowledge, skills, and attitudes needed to function effectively within a democratic society." Helping students become reflective and active learners is the essence of equity pedagogy.[10] Other educators such as Dr. Ruby Payne (*Teaching Students in Poverty),* Bob Moses with the Algebra Project, the Strategic Literacy Initiative's reading apprenticeship model, and Harvard University Project Zero's Teaching for Understanding framework advocate what is essentially an equity pedagogy although they do not use that term.

Profile of the Highly Skilled Student

Again, before we look at designing instruction and constructing an equity pedagogy to help students make gains on standardized tests, we have to be clear about the skills that define active and reflective learners. In this section, we want to explicitly articulate the habits and behaviors of high skilled, high performing students. Instruction within an accelerated model is designed to facilitate students' development of these particular skills, habits of mind and learning behaviors.

So, exactly what does the highly skilled student who has developed key cognitive processes and expanded his "intellectual capacity" look like? Research on how students learn and the habits of high achieving students tell us that a major difference between low performing students and high achieving students is that high achieving students learn for understanding. They search for what is called "relational meaning"-- connections to real world contexts or personal experiences – whenever they are engaged in learning. They possess both a deep body of knowledge -- factual knowledge about the world (i.e., names, dates, concepts) as well as a way of making sense of all of these bits of information and weaving together a network of connections in their minds, relating new concepts and information to their existing schema or internal frameworks and memories.

Here are seven core learning competencies of high skilled, high performing students gleaned from research and case studies of high performing urban schools. These students are typically skilled at:

1. Extracting key information from various texts, retaining it, and recalling it from memory at will.
2. Routinizing the most basic cognitive processes to the point of automaticity (i.e., decoding, math computations, etc.). They do so unconsciously and rapidly.
3. Transferring learning from one context to another. They are able to see and articulate the connections (patterns, analogies, and metaphors) between different concepts and events.
4. Making their knowledge "usable" by understanding its relevance to various frameworks and applying it in real life situations.
5. Monitoring and directing their learning and thinking (meta-cognition) for the purpose of figuring out the best way to make sense of the information being presented.
6. Engaging in instructional conversation with others about key topics and concepts that involve making inferences and understanding why and how things happen

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Toward an Equity Pedagogy Framework: Understanding Academic Acceleration
Community Solutions Network, May 2006

7. Managing their moods and affect during the learning process. They know when they are off task and know how to get back on track.

These seven core characteristics allow students to become self-directed, independent learners. The task of any school-wide application of equity pedagogy is to move students from being dependent learners (i.e., the blank stare that Pogrow talks about) to being self-directed, independent learners. This is very consistent with the overarching goals of differentiated instruction. Tomlinson and others who advocate differentiated instruction state that the primary goal is to equip students with the tools, skills (knowing when and how to apply the tools), and content to manage their own learning. Differentiated instruction is an essential piece of an accelerated learning model because it focuses on building the low performing student's strengths and developing his intellectual capacity, as illustrated by the graphic below:
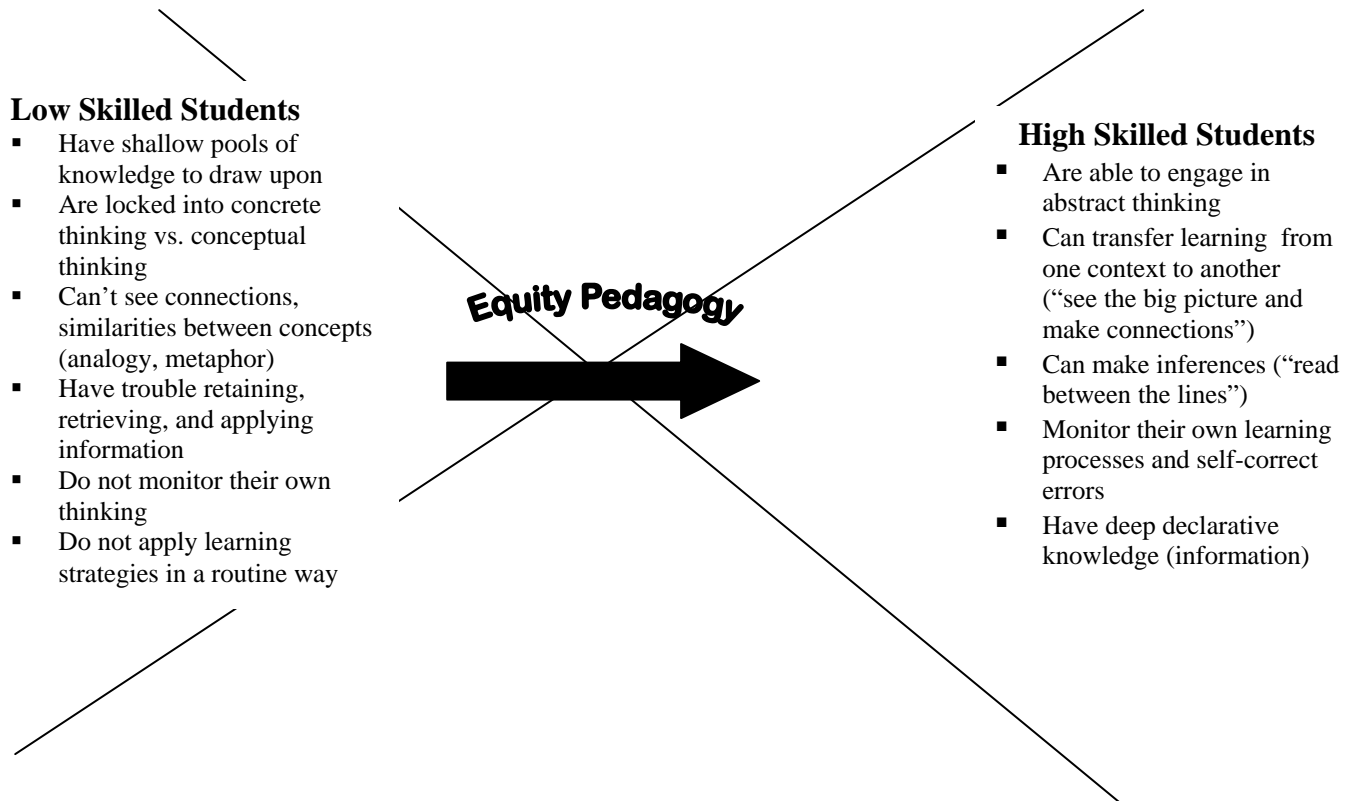
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Low Skilled Students

- Have shallow pools of knowledge to draw upon
- Are locked into concrete thinking vs. conceptual thinking
- Can't see connections, similarities between concepts (analogy, metaphor)
- Have trouble retaining, retrieving, and applying information
- Do not monitor their own thinking
- Do not apply learning strategies in a routine way

Equity Pedagogy

High Skilled Students

- Are able to engage in abstract thinking
- Can transfer learning from one context to another ("see the big picture and make connections")
- Can make inferences ("read between the lines")
- Monitor their own learning processes and self-correct errors
- Have deep declarative knowledge (information)

Dependent ⟶ **Independent**

Learning **Learning**

Figure 1: Moving toward Intellectual Competence

Equity Pedagogy: Instructional Competencies under an Academic Acceleration Model

If the primary purpose in employing an academic acceleration model is to expand students' intellectual capacity to make better use of curriculum content so that they are able to absorb, retain and use it more effectively, then the teacher's ability to facilitate this process in the classroom is key. Yet, it is just this ability to help students develop internal learning structures is underdeveloped for many teachers. Instead, the way teachers respond to student competence often sets the Matthew Effect in motion. For example, teachers respond towards children who they perceive as "smart," (that is, they have a large and varied vocabulary, have foundational skills in reading, has a deep reserve of information and knowledge), by giving them the "gifted and talented" curriculum: more opportunities to talk about what they are learning, greater access to non-fiction informational reading, higher order thinking activities.). High performing students who are perceived as smart are engaged in a type of *cognitive apprenticeship* to further develop their "smarts."

On the other hand, children teachers perceive as "not smart" (have a limited vocabulary, aren't reading yet, read poorly, can't seem to retain or recall information, exhibits impulsive behavior, etc.) are given more paper and pencil tasks (i.e., worksheets, etc.) with little or no emphasis on cognitive apprenticeship. Class time is devoted to practicing basics rather than the helping students learn new mental routines or processing strategies that we see with high performing students. Because these students don't learn the key mental processes needed to make sense of the facts, concepts, and procedures they encounter throughout school, they do not develop the necessary "intellectual capacity" to learn, retain and use knowledge as they progress through school. In a word, with each passing year, they perform worse and worse on standardize tests. Consequently, teachers will "water down" and slow down instruction even further and the downward spiral continues.

When we look at high poverty urban schools that are managing to narrow, if not close the achievement gap, we begin to see ways in which teachers have worked to interrupt the downward spiral by altering the way they viewed who is smart and who is not smart, and what are the appropriate instructional choices for different groups of students. Educational

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researchers Knapp and Means examined instructional practices in 15 high performing elementary schools and found that they had common features: academically challenging curricula, explicit connections between the curriculum and the students' world, and explicit teaching of learning process by externalizing them (making the invisible visible). Similarly, a study done on achievement in 29 urban classrooms identified 42 common strategies and school culture features that contributed to dramatic increases in student performance.[11] These schools had learned to accelerate learning for their low performing students.

What is noteworthy here is not that there is a "magic" list of instructional strategies (most teachers would look at such a list and say "yeah, I do that"), but the way in which teachers used these strategies deliberately and strategically to build students' intellectual capacity while delivering the subject matter content. They recognized that acceleration involves two simultaneous processes: the learning process for students that takes place inside their heads (what they know about managing their own learning) and the teaching process which occurs outside of the student (what teachers know about how to scaffold students' experiences so that they mastered a set of "learning to learn" strategies).[12] In order to teach for the purpose of acceleration, one must know what needs to happen inside the student's head, assess what the student's current use of cognitive structures and strategies are and then scaffold experiences and processes so that the student is able to develop a system and routine of internal learning strategies to make meaning of the content being presented. This is equity pedagogy. Haberman in his article Pedagogy of Poverty vs. Good Teaching[13] describes common practices that add up to a pedagogy of poverty and goes on to says that [14]anything less than instituting an equity-centered set of pedagogical practices will simply perpetuate the achievement gap. A half-hearted or poorly implemented model in some cases may slow the downward spiral but it will not close the learning gaps as reflected in low standardized test scores.

Instruction designed to accelerate learning or what we are calling *equity pedagogy* revolves around six core instructional processes teachers must master. The instructional strategies are:

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- Scaffolding toward independent learning
- Instructional conversation or classroom discourse
- Information Processing (memory retention and retrieval)
- Reciprocal teaching
- Meta-cognition and self regulation of learning
- Cultural Competence

These instructional strategies are not new; most teachers are using some hodge podge of them in their practice, but many have not mastered them nor have experience using them with the lowest performing students to accelerate their learning. Each component is powerful in and of itself, but it is when all six are used in concert, correctly and consistently that they are able to interrupt the downward spiral that leads to the achievement gap and instead, build students' intellectual capacity.

These six components should be seen as *instructional norms* at any school serving low performing students, meaning every teacher is expected to use them correctly; their use would be evident to anyone walking in to a classroom; teachers are held accountable for mastering the use of these instructional components; and their professional development on site revolves around helping each teacher improve her competence in using them.

The chief outcome of continuous, systematic use of these six instructional strategies is that students are more consistently able to make sense of the content in new and more effective ways that make their knowledge usable. These strategies make content "learnable" by helping students organize information into recognizable patterns, by helping them identify the connections between various pieces of information, as well as helping students develop sophisticated understanding of the how the world works. Rather than focus on memorizing facts and dates, these instructional components of equity pedagogy help students:

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- Recognize the significance and/or influence of a famous person or group
- Enable students to not only identify an event but also what happened during that event, why it happened and how it impacted other people and/or events
- Articulate how a belief or theory about how the world works in a particular discipline is form or taken up in society
- Recognize various life cycles and processes, articulate its stage or phases and articulate how they operate in the real world
- Be able to identify the composition or critical features of something

Below is a brief overview of the six core instructional components of equity pedagogy.

Scaffolding toward Independent Learning

A key component of equity pedagogy is scaffolding. Low performing students are often unable to carry out cognitively complex tasks. They need to have the task broken down into manageable steps with the help of a more expert learner. That expert learner can be a teacher or an older student who can take over one or more parts of the task temporarily. Like the physical scaffolding that permits a worker to reach higher places than would otherwise be accessible or the temporary scaffolds that allow construction crews to build tunnels underwater (a la BART's transbay tube), instructional scaffolding makes it possible for a student to accomplish complex tasks that he would not otherwise be able to accomplish. With additional support through scaffolding, students are able to build their cognitive toolkits and interrupt the downward spiral.

Instructional scaffolding involves setting up the temporary structures to reduce the cognitive load of the task and then gradually removing them as the student learns to manage more and more of the task himself. Scaffolding is operationalized through the four basic steps of the gradual release model: First, I do (*teacher models*), then you and I do (*teacher and student do it together, with teacher leading*), you all do (*students do it together*), and finally, you do

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(*student does all steps of the task alone*). Tools used to aid scaffolding can take many forms: graphic organizers, questioning, planning worksheets, to name a few.

There are three common challenges in employing scaffolding effectively and consistently in the classroom:

- Most teachers are not very skilled at knowing what to scaffold, how to build a scaffold and/or when to remove the scaffold. Too often they do not realize how explicit they have to be in walking students through the task, modeling how it's done, giving them constant feedback so that students can self-correct where necessary.
- Teachers lack a deep understanding of the role of errors in determining where to set up a scaffold. A student's errors are actually natural steps toward understanding. Teachers must learn to see students' learning behavior, mistakes and all, as an attempt at reasoning and making sense. Incorrect responses make visible a student's current state of understanding. Teachers must learn to read the logic of students' errors to identify where the breakdown in performance or comprehension is.
- Teachers are not well versed in how to manage differentiated instruction in the classroom and believe it is involves creating individualized lesson plans for 30 plus students. The trick is for teachers to see patterns and trends in where students need help. That way they only have to prepare three or four different types scaffolds of a given unit or lesson.

Information Processing (memory retention and retrieval)

School success depends heavily on having a good memory. According to Dr. Mel Levine, author of *A Mind at a Time* and *The Myth of Laziness*, "doing school" right puts a tremendous strain on students' memory system, both retaining information and knowing how to go back and recall it at will. He points out in his essay, Learning to Remember, Remembering to Learn[15] that so much of schoolwork is memory work, not just memorizing facts, but also remembering the steps in a process or formula in math or science. Students are expected to remember the connections between events and concepts. They are expected to remember the significance of images or verbal cues.

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Because we remember and retrieve information through association – connecting it to something we already know and understand it's harder to remember things you don't understand. We rely on memories of the past to help us imagine and make sense of the present. Cognitive psychologists Roger Schank and Robert Abelson[16] theorized that we develop scripts of certain kinds of common experiences to improve the speed and efficiency with which we recognize and know how to act in future such situations. For example, we can all imagine what will happen when we go to a restaurant, even if we've never patronized that particular one. We believe someone will greet us and show us to a table, that a server will take our order, and that when we're done (or the restaurant wants us to be done), we'll get the check. This restaurant "script" reduces the cognitive load so that we are not trying to constantly figure out what to do when we go into a place to buy food; instead, we are free to think about other things because we automatically know the steps and process. In school, high skilled students use similar "learning scripts." These learning scripts for different procedures, ways to understand or solve a problem are ways that we make knowledge useable.

It is essential to identify students who are having trouble building effective memory systems. For example, many students struggle with the memory load imposed by mathematics, which is one of the most cumulative subjects students face. New concepts and computation procedures build on what has been learned in the past and how fast students can recall these facts and procedures. This adds up to a tremendous strain on one's memory. Without explicit help, students are at risk for failing cumulative grade level tests or performing poorly on annual standardized tests. The greatest risk is that students would believe they are dumb rather than simply lacking a developed memory system.

A challenge to helping students build effective memory systems is teachers' lack of familiarity with the significant role of memory in the learning process. In addition, most do not have a process for instructing low performing students in information retention and retrieval. Teachers often do not understand that students need to be systematic and deliberate in deciding how best to retain what they are trying to learn. Teachers need to know the key rules about how we remember (i.e., chunking, the number of exposures before a piece of

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information is retained – 21 times, what the brain pays attention to, how it stores information, and the best ways to recall information from long term memory, etc.). From this information, they can create a well-developed repertoire of sophisticated memory techniques to teach to low performing students.

Instructional Conversation/ Classroom Discourse

It is through instructional conversation that babies learn to speak, children to read, teachers to teach, researchers to discover, and all to become literate. All intellectual growth relies heavily on conversation as a way of understanding. Yet, in today's schools, assisted learning through instructional conversation is rare. As far back as the 1970s we understood the importance of instructional conversation as a learning device; yet, it is so infrequently used within low performing schools and with low performing students particularly. In <u>Talk and Task Structures in the Classroom</u>[17], teacher researchers observed that teachers did most of the talking in classrooms, talking more than twice as much as students. This phenomenon has been well documented and corroborated by several educators over the past decade.

Educator and researcher, Courtney Cazden in her seminal work about instructional conversation, *Classroom Discourse*,[18] defines instructional conversation as "talk in which ideas are explored rather than answers to teachers' test questions provided and evaluated." Instructional conversation is less about the correct answers and more about helping students build internal mental models or schema (the network of concepts, beliefs, processes, scripts, and expectations from past experience organized in our heads to make sense of our world): talk revolves around the patterns, connections, reasons behind historical and contemporary events, key concepts, etc. For low performing students, this process helps to build intellectual capacity. Yet, low performing students who might be struggling with basic skills are often denied the opportunity to engage in this type of talk, nor are they instructed in how to have a generative conversation – the rules, norms, sentence stems to help structure responses, etc. Kate Kinsella, adolescent literacy and ELL expert outlines a variety of strategies for teaching students how to engage in this type of discussion.

There are many forms of instructional conversation, (i.e., Socratic seminars). All have five recognizable features:

- The topic is provocative, interesting, and engaging to students
- The conversation's theme has meaning and relevance for students.
- There is a structure and process for engaging in the conversation that students are familiar with.
- The thread of the topic is always apparent even as the conversation shifts and evolves. Students learn to stay "on topic."
- There is a high level of participation, without undue domination by any one individual, particularly the teacher.

Instructional conversation requires a deliberate and controlled agenda in the mind of the teacher, who has specific curricular, cognitive, and conceptual goals. This requires highly developed professional competencies: positive and efficient classroom management, execution of varied activities to help students support their observations and opinions with evidence, and the ability to constantly monitor the flow and quality of the conversation as a facilitator. Instructional conversation as a strategy is not easy but very necessary to interrupting the downward spiral for low performing students.

Reciprocal Teaching

Since the early 1990s, reciprocal teaching has become a fairly mainstream strategy in remedial education and special education. Reciprocal teaching is designed to work with all types of students, across subject areas, and across grade levels. The focus of reciprocal teaching is on helping students construct meaning from text as well as a way to monitor their reading. It ensures that they in fact understand what they read. Reciprocal teaching, or RT as it is called, can be used with students as early as grades 1 and 2 and is particularly effective with upper elementary and middle school students.

According to Alverman and Phelps in their book, *Content Reading and Literacy: Succeeding in Today's Diverse Classroom*[19], reciprocal teaching is a special kind of group cognitive

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apprenticeship activity where students deepen their own learning by "teaching" specified pieces of text to their peers. The power of the strategy is in using the distributed expertise of the group to enhance each child's understanding. Each student in a reciprocal teaching group takes on one of four roles in charge of a specific comprehension strategy. The four comprehension strategies are predicting, question generating, clarifying, and summarizing. Below is a more in-depth explanation of each role/comprehension strategy.

- **Summarizing** provides the opportunity to identify and integrate the most important information in the text.
- **Question generating** reinforces the summarizing strategy and carries the learner one more step along in the comprehension activity. Question generating is a flexible strategy to the extent that students can be taught and encouraged to generate questions at many levels.
- **Clarifying** is an activity that is particularly important when working with students who have a history of comprehension difficulty. When the students are asked to clarify, their *attention* is called to the fact that there may be many reasons why text is difficult to understand (e.g., new vocabulary, unclear reference words, and unfamiliar and perhaps difficult concepts
- **Predicting** occurs when students hypothesize what the author will discuss next in the text based on cue, clues, inference. In order to do this successfully, students must activate the relevant background knowledge that they already possess regarding the topic. The students have a purpose for reading: to confirm or disprove their hypotheses.

The power of reciprocal teaching to interrupt the achievement gap lies in its ability to explicitly teach students a way of approaching a text (or picture, performance, or other medium) as they try to make sense of what they are reading (or seeing). It combines elements of scaffolding and instructional conversation. Low performing students usually struggle with summarizing and clarifying what they read. Most students have not internalized (i.e., can use without prompting from the teacher) a set of strategies for questioning and predicting. By

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making this a group strategy, the conditions are ripe for giving struggling students peer support, access to instructional conversations that pushes their thinking as well as provides opportunities to be strengthen their meta-cognitive ability to monitor how they are processing what they hear and read.

Meta-Cognition and Self- Regulation[20]

"Metacognition" is often simply defined as "thinking about thinking." Metacognitive strategies are sequential processes that one uses to control cognitive activities, and to ensure that a cognitive goal (e.g., understanding a text) has been met. These processes help to regulate and oversee learning, and consist of planning and monitoring cognitive activities, as well as checking the outcomes of those activities. For example, after reading a paragraph in a text, a learner may question herself about the concepts discussed in the paragraph. Her cognitive goal is to understand the text. Self-questioning is a common metacognitive comprehension monitoring strategy. If she finds that she cannot answer her own questions, or that she does not understand the material discussed, she must then determine what needs to be done to ensure that she meets the cognitive goal of understanding the text. She may decide to go back and re-read the paragraph with the goal of being able to answer the questions she had generated. If, after re-reading through the text she can now answer the questions, she may determine that she understands the material. Thus, the metacognitive strategy of self-questioning is used to ensure that the cognitive goal of comprehension is met.

Metacognitive experiences usually precede or follow a cognitive activity. They often occur when cognitions fail, such as the recognition that one did not understand what one just read. In high performing students this recognition that they are "off track" activates their metacognitive processes as the learner attempts to rectify the situation. Low performing students are not triggered in the same way. They do not recognize when they are off track and have not developed the self-talk routines to monitor and regulate their own learning processes. In equity pedagogy, the teacher provides temporary external cues to help low performing students know when to check their thinking or monitor their cognitive processes more closely. It is important to note that metacognition is not a stand alone strategy in equity pedagogy.

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Instead, it is more of a "booster" strategy that augments the other more foundational strategies such as scaffolding or information processing.

Cultural Competence

In recent years there has been a great deal written about "culturally responsive pedagogy" when working with low performing students of color in urban schools. The idea of cultural competence within equity pedagogy is less about learning generic Afro-centric or Latino oriented curricular content or instructional strategies to motivate and engage these students. Instead, within an accelerated learning model, cultural competence also refers to the teacher's understanding of how the student makes meaning in his world in order to better prepare appropriate scaffolds and to help students make connections between new concepts and what they already know. We define "cultural" as the set of internalized beliefs about how the world works communal norms, social behaviors, attitudes, and values that come together to make up a group's agreed upon operating beliefs and world view.

The goal here is to have teachers use this information as part of their diagnostic process in instructional design for a given unit or lesson. The word *competence* is used because it implies that teachers should have the capacity to understand and navigate comfortably in a cultural context that is different than their own. Teachers who are not culturally competent can dismiss students' view points based on their cultural orientation as "outside the norm" or they may mistake cultural differences as intellectual deficiencies. They would be missing an opportunity to help students make critical cognitive connections. Teacher researchers Jennifer Obidah and Karen Teel shared their findings on the issue of developing cultural competence in the classroom in their book, *Because of the Kids: Facing Racial and Cultural Differences in Schools*[21]. They offer important information about how White teachers can build the capacity to understand the cognitive as well as affective orientation of their students of color in a similar way that a teacher of color might because he already has the same cultural orientation as his students.

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From an instructional stand point, cultural competence is critical in moving students from being dependent learners to independent learners; it means that the teacher is able to craft lesson plans and learning experiences for her students that have high resonance because students already have some internal schema around a concept or topic. The teacher is able to utilize these existing cognitive frameworks to flesh out new concepts (using the principle that all new learning must be coupled with old learning and existing knowledge). The teacher is also able to understand how can use culturally congruent strategies to build a scaffold, to build memory systems, or to build metacognitive triggers.

Building Teacher Capacity for Accelerated Learning

Usually when we think about the use of instructional strategies such as those six listed in the previous section, we focus on students using strategies. Equity pedagogy's six core instructional strategies are designed to be tools for teachers rather than tools for students, Within each instructional strategy there are tools that teachers need to share with students so that they move from being dependent learners who rely on the teacher to be the mediator toward being independent learners where they are able to monitor and direct their own learning process. Real emphasis in equity pedagogy is on building teachers' pedagogical content knowledge – specific knowledge about how to engage student in a cognitive apprenticeship within a specific subject area. The cognitive processes necessary to be successful in algebra are different than the cognitive processes necessary to be successful in Social Studies. The focus is on is building teachers' repertoire of high leverage instructional strategies that facilitate students' ability to construct their own internal learning systems.

Consequently, the emphasis of district level and school level professional development should be on helping teachers use this repertoire to "water up" their unit curricula and lesson plans. In 1993, a team of researchers found that less than 10% of teachers from kindergarten to university level consistently used more than one of 20 instructional strategies that had been identified to historically improve student achievement.[22] Thirteen years later, according to Project Zero at Harvard University, little has changed. We know teachers should be routinely providing instruction that focuses on facilitating deep understanding of core ideas as well as deepening students' background knowledge on a given subject. The challenge is that most teachers do not get basic training in applied learning theory as part of their credentialing program or continuing professional education beyond their credentialing program. The majority of prospective teachers are required to take only one semester of Educational Psychology which is most often a survey course on the major educational philosophies of Piaget, Dewey, and others despite recent efforts by educational researchers and psychologists to summarize and synthesize what we know about how people -- and children in particular -- learn. Few teachers are well versed in the science of learning and the knowledge of how to

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apply this information to everyday contexts in the classroom to support all students, but especially the lowest performing students.

The content of professional development within an accelerated learning model must focus on integrating deepening teachers' knowledge of key content with applied learning theory as exemplified in the six instructional strategies of the equity pedagogy. All content must be presented through this lens to encourage the deliberate development of students' academic ability.

In order to build teachers' capacity, we need to:

1. Help them develop common understanding of what teaching behaviors perpetuate or interrupt the achievement gap. For example, OUSD Instructional Services can expand its professional development offerings to include seminars around this topic, develop written materials explaining key terms, visual diagrams to illustrate the downward spiral, etc. There has to be a campaign to build understanding.

2. Develop a common language based on our common understanding of the achievement gap (i.e., we all must be working with the same definition of *intellectual capacity* and know what it is and what it isn't, how to develop it in children)

3. Support teachers' action research or inquiry around their own use of high leverage instructional strategies, especially the foundational ones like scaffolding, differentiated instruction. Make "going public" with action research/inquiry findings a part of the school culture that values adult learning in schools.

4. Train content coaches in equity pedagogy or other select collection of high leverage instructional strategies so that they are giving intense support around these strategies in the schools they serve.

5. Hold teachers accountable for mastering the use of these techniques (i.e., establishing rubrics, observation processes, incorporating language into performance evaluation criteria)

Instructional Leadership to Support an Equity Pedagogy

It is important to remember that an accelerated learning model or equity pedagogy approach to improving instruction is more than the random use of one or two instructional strategies. High leverage strategies work together as a system of support for students and must be delivered in a coherent, routine way by teachers; therefore, to be effective this approach must be part of a cohesive, systemic plan. Such a plan calls for strong instructional leadership. In OUSD there are two key roles that can provide this type of leadership: the school site principal and the executive officers. Principals as instructional leaders are the linchpin in this effort to reduce the gap and accelerate learning. Together with the executive officers, they are the link between district level goals and strategies and the successful translation of those goals into teacher-friendly routines and practices. In the case of the principal, he is expected to be more than a site manager; instead, he is expected to lead the design of curricula that meets the learning needs of all students. It is the principal who helps teachers stay focused on the technical core of schooling: the teaching and learning relationship in the classroom. The executive officers are in a unique position to support the efforts of the principal to be an effective instructional leader.

What is it that instructional leaders do to support the implementation and take up of equity pedagogy? They:

- Know what high-quality, high leverage instruction that builds intellectual capacity is and how to establish it as the norm at OUSD school sites.
- Establish a common instructional framework that guides curriculum, teaching, learning environment, and assessment to ensure curricular coherence.
- Integrate accelerated learning instructional norms and expectations into the current teacher performance assessment system – as the old axiom says "what gets measured gets done".

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- Maintain a focus on effective, systematic implementation of high leverage instructional strategies through classroom observations, professional learning community, etc.

Both principals and executive officers need on-going support and professional development to help build their capacity to be effective instructional leaders in these specific ways. In addition to deepening their knowledge of the instructional practices associated with accelerated learning, principals and executive officers must also be adept at change management.

Based on experience from the latest round of education reform, there are two big challenges we face in creating new approaches to improving instruction such as equity pedagogy: The Diffusion Curve[23] and Fullan's Implementation Dip. Based on Everett Roger's seminal work, *Diffusion of Innovation*, The diffusion curve tells us that people take up new practices in very predictable patterns:

Types of Innovators	Description	Numbers in the Population
Innovators	This group is first in taking up a new practice; they are seen as risk takers and mavericks. They are considered to be "ahead of the curve". They often work alone, and therefore, are not the best people to spread or encourage the use of a new practice.	3%
Early Adopters	This group is open to taking up new practices. They are seen as opinion leaders who others listen to and model their behavior after.	13%
Early Majority	This group is very deliberate in deciding when to take up a new practice. They base their decisions on research and effectiveness issues. They interact with their peers a great deal and are most helpful in spreading the use of a new practice.	34%

Late Majority	This group takes up a new practice not because it is a good idea but because of pressure from peers to conform. They are skeptical and cautious, but not outright resistant.	34%
Resistant Minority	This group resists taking up a new practice and thinks of the new practices only in relationship to what was done in the past. Will not take up the new practice; instead romanticizes the past.	16%

An effective change management strategy would involve identifying key teacher leaders in each category and creating ways to bring them aboard or "enrolling" them in MAAP and for neutralizing (and learning from) those that fall into the "resistant minority" category since it is determined that individuals in this category rarely change.

Roger's diffusion theory reminds us that the degree to which an innovation or new a practice is or is not aligned with one's own core beliefs about a particular thing (in this case with the causes of the achievement gap and the ability of high leverage instructional approaches to build intellectual capacity) determines the degree of buy-in one will give when introduced to the new way of doing things. Understanding why and how teachers will take up a new practice is related to knowing what they currently believe about the capacity of certain children to develop a set of internalized learning strategies or a "cognitive toolkit." In adult learning theory, this phenomenon is called "assimilation": if a practice is not well understood or does not "fit" with a person's current beliefs, it is highly likely that the individual will reject it. Note that innovators are more willing to accept new ideas or practices even if not well understood. On the other hand, late adopters are less tolerant of an idea or practice that seems incongruent with their current beliefs. Instructional leaders must concern themselves with this type of information in order to best plan for successful implementation.

There are other change management issues to consider as well when supporting teacher take up of a new school improvement plan like MAAP that integrates principles of acceleration. Michael Fullan, educational change strategist, talks at great lengthen about people's inability to get comfortable with the natural cycle of learning new things. He labeled this phenomenon Fullan's implementation dip. In *The New Leading for Educational Change[24],* Fullan says "leaders who understand the implementation dip know that people are experiencing two kinds of problems when they are in the dip – the social-psychological fear of change and the lack of technical know-how or skills to make the change work." The implementation dip says things will get worse as an individual develops a new skill before they get better as he moves toward being proficient or as a group makes changes across a system. Individuals predictably move through the stage of unconscious competence to conscious incompetence to conscious competence (proficient) on their way to mastery (unconscious competence). At the stage of conscious incompetence one is aware that he is not good at performing the new skill or practice. This is where many teachers give up when trying new instructional practices. Conscious incompetence feels bad and scary. At the school level, it feels chaotic. Rather than pressing through this stage, this is where they fall back on what is comfortable and what they perceive themselves to be good at. At the school level, everyone goes back to business as usual and ignores the systematic use of new practices.

Effective instructional leaders who are capable of addressing both the cognitive and affective aspects of adopting a new innovation such as accelerated learning will have greater success in helping teachers move through these challenging stages. Fullan goes on to say that in managing the implementation dip, the savvy instructional leader "pays attention to people, focuses on building emotional bonds and creating safety, builds relationships and heals rifts" in order to create the right social-emotional context for taking up new practices. In helping develop technical or cognitive expertise among teachers, the effective instructional leaders "helps people develop and invest in their capacity building" through coaching and embedded professional development. Establishing a high functioning professional learning community provides a safe, structured space to deal with both the affective elements and the cognitive

elements of teachers' professional growth and skill development. This should be the joint goal of executive officers and principals across the district, regardless of grade level.

Executive directors can help with creating the right conditions for implementation by dealing head on with what Fullan calls "the politics of implementation." All degrees of resistance must be managed, according to Fullan: "In all organizations, respecting resistance is essential because if you ignore it, it is only a matter of time before it takes its toll. Even when things appear to be working, the supposed success may be a function of merely superficial compliance."

Conclusion

The Oakland Unified School District has set a high goal for itself of being "the best urban district by 2010." That date is just over three years away. In order to get to these radical results, teachers, administrators, and parents will need to make a paradigm shift in understanding how to interrupt the downward spiral of low academic achievement. Piecemeal efforts at the school level and in classrooms will not get the school district to this lofty goal. Instead, a concerted effort to build teachers' capacity to execute an equity pedagogy within an academic acceleration model is key. Of course, the ultimate goal is helping our students become highly skilled, independent learners that have the intellectual capacity to take on any challenge regardless of race, national origin, language, or socio-economic status.

ENDNOTES

[1] The Matthew Effect is not only about the progressive decline of slow starters, but also about the widening gap between slow starters and fast starters. Most research documenting the Matthew Effect has been done in the area of reading. There is ample evidence that students who do not make good initial progress in learning to read find it increasingly difficult to ever master the process. Children with a good understanding of how words are composed of sounds (phonemic awareness) are well placed to make sense of our alphabetic system. Their rapid development of spelling-to-sound correspondences allows the development of independent reading, high levels of practice, and the subsequent fluency which is critical for comprehension and enjoyment of reading

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