

5

Closing the “Gap” by Connecting Culture, Language, and Cognition

Yvette Jackson, Ed.D.

KEY CONCEPTS

- Pedagogy of Confidence in urban schools to develop cognitive mediation across cultures and language
- Revealing “codes of power” through using Thinking Maps® by students in underachieving schools
- Literacy results from urban school systems across the country

FINDING LEARNING SOLUTIONS FOR CHILDREN IN URBAN SCHOOLS

I had read about Reuven Feuerstein’s (1980) work while I was doing graduate work in New York City in the early 1980s. He describes how he worked with kids who were displaced Jews during the early years of the development of the State of Israel, and how he helped them by bringing a deeper assessment of their learning. Knowing that these kids who had been considered low functioning really had more potential than an IQ test was showing profoundly resonated with me.

When I read about those kids, I said, “You know something? It’s the same syndrome that my kids from urban settings are going through,” meaning they have a lot more potential than is being assessed or addressed. They don’t have mediators at home full-time because they are latchkey kids. Some of the kids are in foster care, and others are from poor homes where parents aren’t home a lot. These students, like so many students in urban schools, are school-depend

students: They depend on school to provide the mediation and enrichment needed to elicit and nurture their potential. I looked at Feuerstein's work, and that's when I said to myself, "I can capture the same idea if I know more about mediation." So often, students go through something called "remediation," but that is the basic remediation or redelivery of the content information and language skills. What we are talking about is the mediation of their thinking. The pedagogy that transmits this mediation anchored in the fearless expectation that urban students are capable of high intellectual performance is the Pedagogy of Confidence.

If you know about learning and how learning happens, you can improve the instructional technique, and if you really believe that kids have potential, you can set high expectations and have them meet those expectations with the tools that you give them.

WORKING WITH THE NATIONAL URBAN ALLIANCE FOR EFFECTIVE EDUCATION

I am now one of the leaders of the National Urban Alliance for Effective Education, and our mission is to substantiate in the public schools of urban America the irrefutable belief in the capacity of all children to reach high levels of learning and thinking demanded by our ever-changing global community. Our focus is on altering educators' perceptions and expectations of underperforming urban students, and this comes right out of my early interest in mediating learning. We recognize that when you believe in the intellectual potential of all students, you change the way you perceive the gap, and you strive to close that gap between underperforming students' potential and what they are achieving. When this gap is closed, the gap between different groups of students closes as well.

Many teachers of students labeled as underperforming have been led to believe that the students are deficient and that their underachievement is the result of limited potential. Yet when we talk about people having undeveloped muscles or physiques, we say they're "out of shape." We don't say they're deficient. In our work, we focus on the idea that the brain is like muscle; it requires specific exercises, guided personal training, and relevant and meaningful instruction to build competence and prevent dysfunction. It requires mediation. We address these misperceptions through professional development in the Pedagogy of Confidence based on research in brain-based instruction, cognitive development, and the impact of culture and language on cognition, critical thinking, and higher-order comprehension skills. We believe that when teachers are provided with the tools or strategies to strengthen intellectual development, learning, and literacy skills (or what Lisa Delpit, 1995, calls "codes of power"), urban students are able to demonstrate their potential through performance that changes the expectations of the teachers.

BRIDGING THE GAP BETWEEN TEACHERS AND STUDENTS IN URBAN SETTINGS

When teachers say there's a gap between themselves and their students, they are referring to a cultural gap regarding their frame of reference as well as their language. Many will say, "I can't communicate what I need to with these kids. I can't connect, so the students are resisting learning; they push back and don't want to learn."

The fact is that students do want to learn very badly and their teachers want to teach them. What teachers sometimes interpret as students not wanting to learn is really more what Jabari Mahari (1998) describes as the "out of sync rhythms between the students and their culturally different teachers." So a student may say, "You're not communicating, so I'm pushing back. It's not that I don't want to learn; I'm acting this way because we're not connecting." This

misunderstanding of the student's intentions inhibits many well-meaning teachers from trying instructional strategies that motivate and support the learning of their culturally different students. Instead, they continuously use methods that not only minimize learning but very often result in students resisting. It's a vicious cycle resulting in the underachievement that we see around this country.

There are three interconnected factors that are key to bridging the gap between teachers and their underachieving urban students. One is addressing the fear that teachers have in not being able to address the needs of their underachieving students so they can meet the standards. The second factor directly relates to the first component of how to address the learning needs. To address learning needs we need to shift the focus from what has to be taught (content) to how learning happens (cognition, metacognition, process) and what affects it. The third factor is to provide teachers and students with a language that enables them to communicate with each other, building the mutual respect and relationships that are so vital to students of color.

I address the first and second factors by trying to simplify the research about learning through a symbolic representation that would illustrate the critical targets to address in learning instruction:

L: (U + M) (C1 + C2)

Learning: (Understanding + Motivation) (Competence + Confidence)

We know that in order for people to gain academic knowledge they have to understand the concepts of that knowledge. Another equally significant catalyst of learning is motivation. Both understanding and motivation are affected by what Eric Jensen (1998) describes as brain realization of relevance and meaningfulness. But the critical question we have to address in order to stimulate motivation is "What makes something relevant to an individual?" Well, it is a cultural frame of reference that makes something relevant and meaningful, thereby stimulating motivation. So we can't ignore that culture affects how one understands something, the perspective one takes on something, and the experiences one brings to reading affect how one infers. It's also one's cultural orientation that plays a large part in one's thinking. Feuerstein (1980) and Vygotsky (1962) point out that the other significant factors in stimulating motivation are competence and confidence. Jensen addresses the importance of confidence in relation to the positive impact challenge has on students when they feel a sense of competence and confidence to meet the challenge. Delpit (1995) refers to the importance of building confidence through competence as "codes of power" or higher-order thinking and literacy skills.

These understandings about learning and what affects it bring us to the third factor to address when bridging the cultural gap between teachers and students, and that is language. Just as culture shapes relevance, it's important to realize how language is affected by culture and how they both affect cognition, learning, and communication. Culture molds language, and language is a way of thinking. Addressing this interrelationship is critical in bridging the gap, and this is where Thinking Maps play a role of major importance.

I believe that Thinking Maps are essential tools in bridging the cultural gap between teachers and students because they address all three related factors. First of all, each of the eight Thinking Maps facilitates the development of one of the cognitive skills that are critical to learning and are also identified in all the state standards as skills students must have. They need to be able to define and generalize concepts or themes; describe, identify, categorize, and organize details; compare and contrast; sequence; identify cause and effect; analyze parts of a whole; and understand analogies. Second, Thinking Maps provide a language about thinking that allows teachers and students to communicate with precision, bridging the cultural gap. Equally important is that they provide students with the tools for building competence in learning and communicating and learning with confidence. The maps are like tools of power for unlocking the "codes of power" Lisa Delpit (1995) discusses.

THE PEDAGOGY OF CONFIDENCE

Pedagogy is an art that is developed and refined when teachers are confident in their ability to successfully affect students. Teachers become confident when they know what to do and believe that they have the skills and abilities to do what they know they have to do. When teachers are confident, they communicate to students confidence in students' ability to learn. A confident teacher is aware of the impact of culture on language and learning and uses this understanding to guide the selection of effective learning strategies that enable students to become competent and confident learners. The interplay of these elements and the forces at work in this complex system involving teachers, strategies, culture, and research are represented through the Multi-Flow Map (see Figure 5.1). Thinking Maps provide the tools and language for a teacher to confidently address the critical needs of underachieving students.

CRITICAL LEARNING NEEDS OF STUDENTS IN UNDERACHIEVING SCHOOLS

In every district in which we work, students who are underachieving have critical needs in verbal knowledge, inference, and academic language usage. These needs are compounded by what I call "learning blockers," things that obstruct the natural learning process, specifically, cognitive, linguistic, and textual blockers.

First of all, there is the cognitive blocker that occurs if students are not guided to identify the understanding, or concept, that should be the focus of the learning. Without this focus, students are unable to differentiate between relevant and irrelevant information, so critical details can't be identified, prioritized, analyzed, hypothesized, evaluated, or compared to personal experiences.

There are also language blockers that are manifested because the language of textbooks is so distinctly different from the language students use at home. Even though students are expected to read these texts with comprehension, very little discussion takes place in the classroom that engages students in using the vocabulary used in textbooks. The result is that the language necessary for comprehending texts is not developed. In high school, this lack of facility or understanding of the language of texts in different subject areas is extremely debilitating. The other language blocker is a lack of knowledge and understanding of patterns of language, from the most obvious one of decoding skills to syntax and understanding parts of speech and grammatical rules.

Last, there are textual blockers. There are two types of textual blocker: semantic and structural. Semantic blockers are words such as pronouns or idioms that are often not identified by teachers as problematic and don't necessarily require a deep understanding of language codes or patterns, yet they can severely inhibit comprehension of text. Structural blockers are the patterns that authors use to communicate information. These include descriptive, cause and effect, problem/solution, compare/contrast, and enumerative (main idea with supporting details). Each structure requires a different set of cognitive skills to analyze and construct meaning from the text.

The Thinking Maps become essential tools to address these learning blockers because they help students and teachers do what Reuven Feuerstein (1980) describes as "mediating learning" through these blockers. If teachers explicitly instruct students in the use of Thinking Maps, they are addressing language and cognitive blockers. All eight maps elicit the use of cognitive terminology and then provide vehicles for capturing the language so that students can go back and refer to that cognitive language, building their verbal repertoire of cognitive skills. If students can name the thinking they are doing, they will notice and seek that language in questions, assignments, and texts, thus owning the language the tool reflects.

While developing a level of fluency with this concrete visual language that represents cognition, Thinking Maps become the mediating tools for students' and teachers' learning and thinking. Thinking Maps mediate learning at many points, as represented by Figure 5.2.

Figure 5.1 NUA Organization Strategy Integration Multi-Flow Map

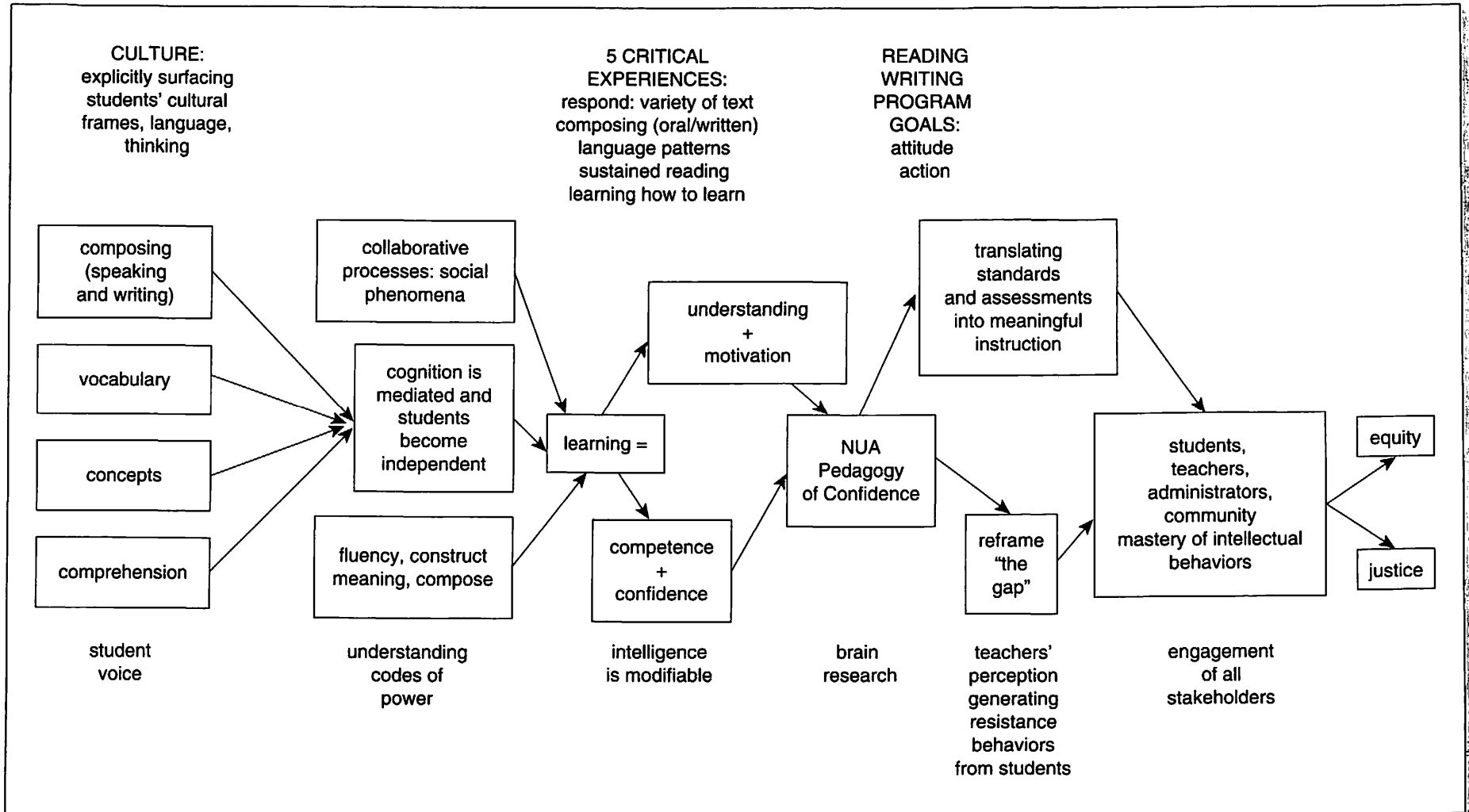
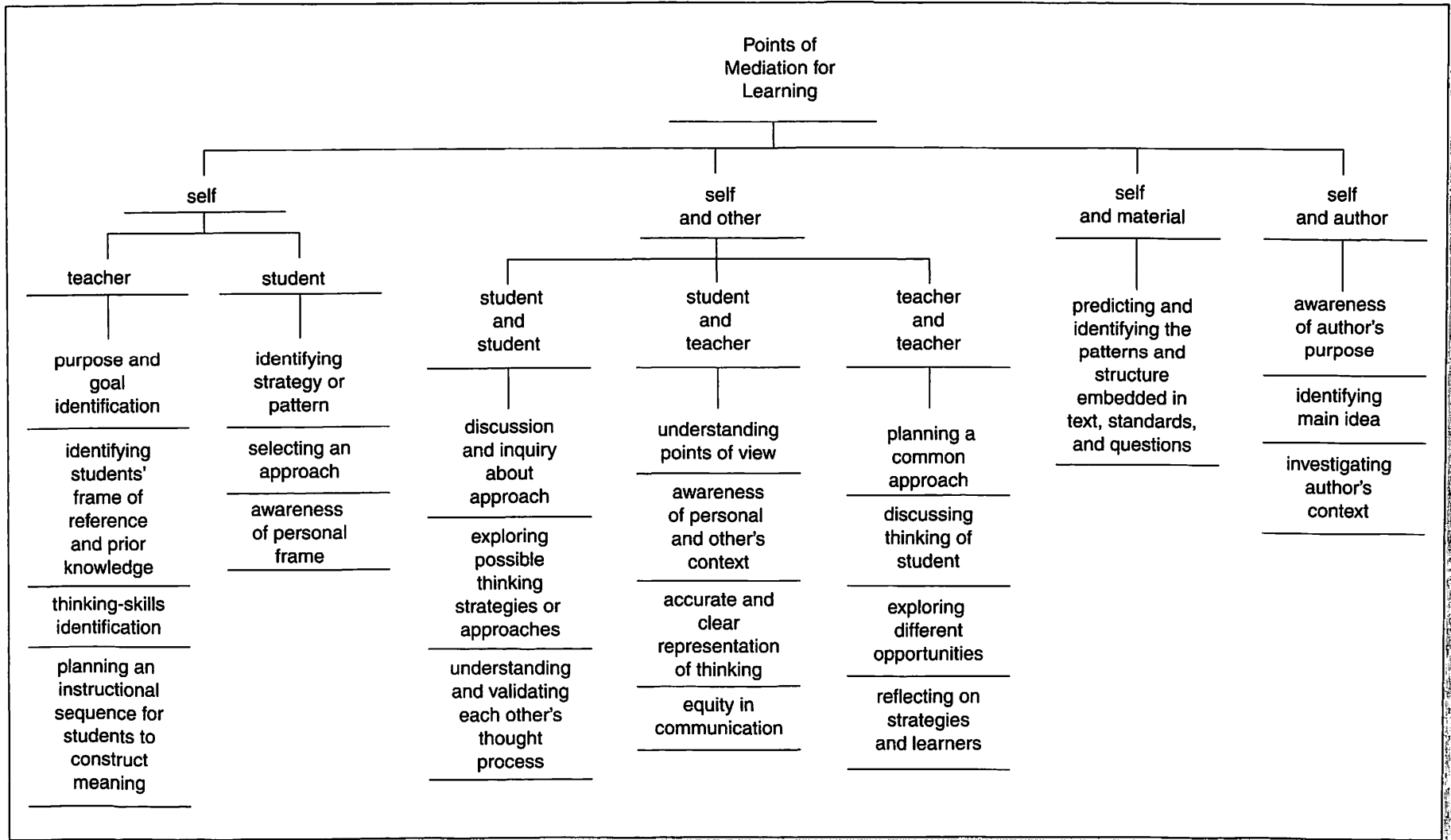


Figure 5.2 Points of Mediation Tree Map



Thinking Maps mediate students' and teachers' individual metacognition as they reflect on their own thinking about thinking. For the teacher, the Thinking Maps encourage the identification of the purpose and goals of the lesson before instruction in order to determine what kind of thinking is involved. Teachers' reflective conversations help them establish the prerequisites that students need to be able to construct meaning. Similarly, before students begin a task, they can ask themselves, by using the cognitive language embedded in the Thinking Maps, "How can I approach this task?" or "What do I notice about this assignment?" In both situations Thinking Maps foster metacognition, the first step in mediating one's own learning.

Besides supporting internal dialogue, Thinking Maps mediate thinking between individuals in the classroom. With the Thinking Maps, a teacher mediates learning by addressing specific learning needs in a way that engages students and activates those cognitive skills involved in the process of constructing meaning. The Circle and Frame Map, used for defining in context, is excellent for guiding students in analyzing and defining the focus of understanding or concept learning critical to guiding underachieving students in constructing meaning. The Thinking Maps encourage discussion between the teacher and the students about the kind of thinking required from the text by analyzing which Thinking Map is best for reflecting that kind of thinking. These explicit conversations about language, process, and cognition develop the focus on thinking, which can be transferred across disciplines. With shared visual representations, teacher and student can understand and communicate in the same language, shifting the power in the classroom.

In addition to understanding and communicating with oneself or with someone else, Thinking Maps mediate learning between student and teacher with text or content. Thinking Maps create a clearer pattern for a teacher to teach with and for students to analyze text and to demonstrate understanding of the text in the pattern required. Thinking Maps guide students in identifying and analyzing the understandings, skills, and text structures or patterns needed to construct meaning from a reading or unit of study in any discipline. Thinking Maps help teachers identify and analyze the kind of thinking that's going to be required to read a particular text as demanded by the text structure used by the author. The process fosters the great link between reading and writing. So Thinking Maps help students analyze text structure and really internalize the pattern, and then use that pattern to write their thoughts and demonstrate their thinking. This process of transferring between reading and writing is a complementary response to Ernest Boyer's (1983) definition of reading and writing. He said, "Reading is unlocking frozen thoughts and writing is freezing thoughts." Thinking Maps help students unlock the frozen patterns of thoughts and instead take their thoughts and freeze them in a pattern of thinking.

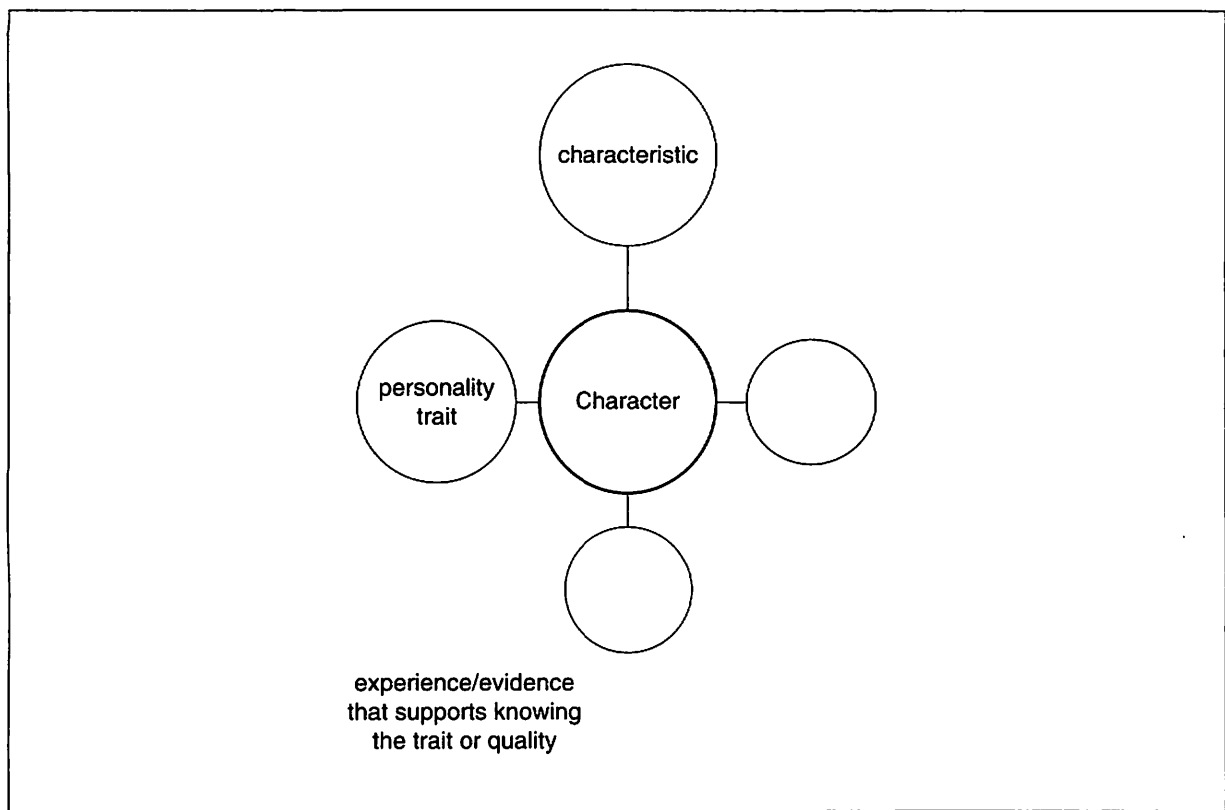
TEACHING INFERENCEAL THINKING

In regard to inferential thinking, the Thinking Maps are the most useful tools I have found. Teaching inference can be extremely difficult because inference is contingent upon connecting one's prior experience—and culture—with that of the author. Consider that individuals who are asked to author texts have years of expertise in their discipline or area of focus on which to base the ideas they want to convey and the meaning they want to imply. These books are given to students who often don't have any experience that connects to that of the author, and yet the expectation is that students should be able to infer, or read between the lines, to connect their experience with that of the author to speculate about ideas that are not literally presented. That's what you do when you're inferring. You've got to go from your personal reference to what the author is saying, which is why it's easier to infer with narrative or fiction than expository text.

Fiction is written about themes that everyone has experiences with or can relate to (such as love, fear, longing), but in discipline-based textbooks that are nonfiction or expository, concepts are more technical, more remote, and frequently harder for underachieving, school-dependent students to relate to. Guiding students without exposure to experiences that reflect

what the author is writing about requires tools to engage the teacher and students in the kind of conceptual discussion that creates bridges for the students so that they can make a connection between the author's experience and their own. Perhaps Thinking Maps can mediate learning at yet another level—between the author of the text and the learner. A tool that engages students in this type of discussion is the Frame of Reference that can be drawn around any of the maps. An example of this would be using a frame around a Bubble Map to develop characterization. In the Bubble Map shown in Figure 5.3, you identify adjectives that describe a character; the frame elicits exploration or inferences of why the adjectives were selected to describe the character. Why is the character the way he or she is? If "angry" is identified as one of the descriptions, in the frame a student would infer why the character was angry. If the character is described as discontented, the frame would elicit why he or she is discontented. What happened in the characters' lives to cause them to be this way? The Frame of Reference enables students to infer ideas, speculations, or theories about who this character really is. It's not just about description; it's the inference behind the description that is the core of characterization.

Figure 5.3 Supporting Inferential Thinking With Bubble and Frame Map



DEVELOPING MEMORY AS PART OF THE MEDIATION OF A STUDENT'S LEARNING

Unfortunately, memory has been associated with rote learning, and that's not what we're talking about here. Eric Jensen (1998), Mel Levine (1993), and others have written extensively on memory and its impact on learning. The shame is that teachers too often ignore the use of powerful memory devices such as mnemonics to strengthen student learning, because they believe that any memory focus is associated with rote learning. The key here is that rote

learning is not about patterning but memory is. Students' achievement has a lot to do with their memory of things. The Thinking Maps strengthen learning by becoming external memory patterns for students when they use them to freeze their thinking. The maps provide a place where students can refer to all the interrelated ideas and from these ideas make the extractions. If students tried to hold the quantity of ideas their brains explore, they would be expending a lot of their mental energy focusing on just trying to remember all the details instead of generalizing and elaborating on these ideas. Thinking Maps elucidate patterns and function as external memory, so the maps can fortify and expand students' learning that relies on memory. In a sense, first students refer to the pattern of information, and then they can infer from that pattern. This is the shift from frozen information to the construction of knowledge.

REVERSING UNDERACHIEVEMENT IN LITERACY AMONG URBAN LEARNERS

We work to reverse underachievement, predominantly underachievement in reading and writing, the major deficit being identified in inferential thinking, vocabulary, and language usage. We focus our professional development around the acceleration of intellectual performance, specifically in literacy. We know that literacy is the catalyst to empowering students, so we go beyond the standard definition of literacy and embrace the definition described by Elliot Eisner (1994) as the ability of an individual to construct, create, and communicate meaning across disciplines in many forms of representation (such as written text, drawing, mathematical symbols, and dance). We resonate with this definition because it expands pedagogical focus to include the cognitive functions that are the prerequisites to accelerating learning and achievement throughout life.

We believe that literacy for urban learners is best developed when the teacher mediates the learning process by providing lessons that foster social interaction for language development and guide the application of cognitive skills that assist students in constructing and communicating meaning. The Thinking Maps are a core component of the cognitive strategies we provide because they are tools that have a direct impact on how students construct, communicate, and create meaning. In each district in which we work, we have witnessed how teachers immediately employ Thinking Maps as one of the most-used tools of their pedagogical repertoire. The result has been what administrators and parents associate with the most impressive and valued impact our literacy initiatives have on learning—significant growth in the achievement of students who have previously been labeled "low achievers." In Indianapolis, schools experienced a 12- to 20-point jump in scores, which is significant. While across the state of Indiana scores had fallen since 1998 by 1.2%, the "vanguard schools" in Indianapolis participating in the literacy initiative experienced an average increase of 10.4%, with seven of the elementary schools showing double-digit gains. In Seattle, a study showed that African American students who failed the reading section of the Washington Assessment of Student Learning (WASL) in 1999 and then spent at least two years with teachers who participated in the initiative passed the 2002 test at twice the rate of those students who spent a year or less with participating teachers. In just three years of implementation by the City School District of Albany and the National Urban Alliance, students in Grades 3–8 who met or exceeded proficiency standards on the New York State exams increased by 14% in English language arts (ELA) and 21% in mathematics. In 2009, the entire district's elementary and middle schools exceeded New York State Education Department ELA benchmarks for students in Grades 3–8. Overall, 61% of the district's students in Grades 3–8 achieved proficiency this year, attaining Level 3 or Level 4. That's a 24% gain over 2008, when 49% of the district's students achieved the top two levels in ELA. Aside from the quantitative data, we are seeing improved student performance with tasks requiring higher-order thinking such as reasoning, problem solving, and theme-based classroom projects.

This evidence has been significant in demonstrating the learning potential of under-achieving students, which has in turn altered the expectations of thousands of educators, but to me there is additional evidence that has great implications regarding the impact of the Thinking Maps. Insights about the benefits of district-wide institutionalization of the use of the Thinking Maps as critical instructional tools have been felt from the classroom to the boardroom.

After our third year in the Indianapolis project, the board of education summoned the assistant superintendent to explain why it should continue to fund the literacy initiative. We decided that the most convincing way to respond would be for teachers from kindergarten through high school to share with the board the effects of the strategies and practices they had been implementing in their classrooms. Every one of the teachers talked about the impact the Thinking Maps had on the achievement of their students: A kindergarten teacher presented samples of her students' studies in science through each of the eight Thinking Maps; middle school literacy teachers shared examples of student expository and narrative writings; a chemistry teacher demonstrated how he applied the maps in chemistry. Beyond the strong impression these presentations made on the board, the real epiphany was experienced by the high school teacher who exclaimed, "Wait! The kindergarten teachers are using the same maps we are. If every teacher is working on this kind of thinking with his or her students, think how strong they'll be by the time they get to high school." A similarly impressive revelation was the focus of a story told by a teacher about two brothers doing homework. A kindergartner said to his middle school brother, "Oh, you're doing a Bubble Map. That's for describing." The older brother asked how he knew that. The younger brother informed him that he learned about that at school, surprising the older brother completely. The very same presentation took place last spring by teachers and administrators in the Albany Public Schools for their school board, with identically passionate responses.

Thinking processes are universal, and Thinking Maps help students transfer these cognitive skills across content areas and grade levels. Children are born understanding cause and effect. They know how to think sequentially. In urban settings where there may be historic underachievement, providing tools that enable teachers to build on the capacity of the students to think critically through instruction that provides them with the means to fortify their understanding, competence, and confidence results in students who are motivated to excel and do excel. It becomes part of the common culture of the classroom, of the school, and, as we have seen, of whole systems.

REFERENCES

- Boyer, E. (1983). *High school: A report on secondary education in America*. New York: Harper and Row.
- Delpit, L. (1995). *Other people's children: Cultural conflict in the classroom*. New York: New Press.
- Eisner, E. (1994). *Cognition and curriculum*. New York: Teacher's College Press.
- Feuerstein, R. (1980). *Instrumental enrichment*. Baltimore, MD: University Park Press.
- Jensen, E. (1998). *Teaching with the brain in mind*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Levine, M. (1993). *All kinds of minds*. Cambridge, MA: Educators Publishing Service.
- Mahari, J. (1998). *Shooting for excellence*. New York: Teacher's College Press.
- Vygotsky, L. (1962). *Thought and language*. Cambridge, MA: MIT Press.