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Closing the Achievement Gap With Curriculum Enrichment and Differentiation:

One School's Story

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The focus on the achievement gap has intensified since the No Child Left Behind Act (NCLB) was passed in 2001. In particular, achievement gaps among culturally, linguistically, ethnically, and economically diverse groups pose great concern to educators and policymakers. Another outgrowth of NCLB involves the adoption of high-stakes testing to measure achievement and evaluate school effectiveness (Cronin, Kingsbury, McCall, & Bowe, 2005; NCLB, 2001). The educational literature is replete with recommendations for improving student achievement and closing the achievement gap; however, research suggests that the gap remains. Since the standards and accountability movement gained momentum in the 1990s, school report cards, school

This article summarizes a unique approach to reducing the achievement gap that strategically blended differentiated curriculum with schoolwide enrichment teaching and learning. The theories of enrichment and instructional differentiation were translated into practice in an elementary school that had previously embraced a remedial paradigm. This enrichment approach resulted in improved student achievement and the reduction of the achievement gap between rich and poor and among different ethnic groups. The school improvement process began with a thorough analysis of the strengths and weaknesses of all dimensions of the school, and resulted in the creation of a school mission, strategic plan with broad instructional goals, specific learning objectives, and detailed action plans. Enrichment and differentiation were chosen as the methods to improve the learning environment based on evidence that engagement in learning is enhanced when students' interests and choices are considered, and the need to provide learning experiences that were responsive to the learning characteristics of a diverse student population. Specific components of the strategic plan were implemented simultaneously while others were introduced over a series of years. Teachers rewrote the curriculum for reading, writing, mathematics, and social studies to include enrichment experiences and differentiated instruction. This enriched learning environment extended to an afterschool program inspired by Enrichment Clusters. Staff development was essential to the success of each new initiative, and a significant amount of time was devoted to teacher training. Teachers were provided with training, modeling, coaching, and planning time to integrate the new ideas and skills into their lessons.

summary

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choice through vouchers and charter schools, and school takeovers through local and state-level oversight and reconstitution have gained popularity (Harris & Herrington, 2006). Yet, during this time, the achievement gap has increased (Harris & Herrington, 2006). Progress in reducing school segregation and increasing achievement during the 1960s–1980s has faltered. Communities have become more economically segregated, resulting in schools with larger minority and poor populations and lagging achievement (Foorman, Francis, Fletcher, Schatschneider, & Mehta, 1998; Harris & Herrington, 2006; Lara-Conisomo et al., 2004). Poverty continues to be one of the most persistent factors that negatively impacts student achievement (Barton, 2003; Barton & Coley, 2007; Harris & Herrington, 2006; Lara-Conisomo et al., 2004; Lutkus, Grigg, & Donohue, 2007; RAND Labor and Population, 2005).

Under No Child Left Behind (2001), reading and mathematics are the two subjects that are used to gauge the academic progress of U.S. students in grades 3–8. Efforts to reduce the achievement gaps in reading and math have resulted in some reductions; however, the gaps between White students and their African American and Hispanic peers, and between students from high and low socioeconomic households still exist (Chatterji, 2006; Cronin et al., 2005; Lutkus et al., 2007).

Factors that affect overall student achievement include the rigor of the curriculum; the experience, quality, and commitment of the teachers; the learning environment, including safety and expectations of students; and class size (Barton, 2003; Chatterji, 2006). The family plays an important role in school success: Reading to children at home, parent involvement in school, and regular school attendance promote student achievement (Barton & Coley, 2007; Chatterji, 2006; RAND Labor and Population, 2005).

Recommendations for school improvement frequently include standards-based instruction, curriculum alignment and coherence, data-based decision making, improving teacher skills through evaluation and professional development, family and community involvement, and other research-based initiatives.

Although these recommendations have merit, they have not necessarily resulted in significant differences in student achievement in failing schools (ACT, 2006; Education Trust, 2006a, 2000b). In this article, we summarize a unique approach to this pervasive problem and share a solution that blends a focused, rigorous curriculum with the strength-based methodology of schoolwide enrichment teaching and learning. This approach resulted in improved student achievement and the reduction of the achievement gap between students from high- and low-SES families and among students of different ethnic groups in one school. What follows is an account of how the theories of enrichment and instructional differentiation were translated into practice in an elementary school that had previously embraced a remedial paradigm.

Methods

This article is based on 8 years of work within an elementary school and the historical and working documents accumulated during that time. Information was drawn from staff meeting agendas and supporting documents distributed to the staff, from the strategic plan, from materials prepared for professional development sessions, and from documents created for specific areas of the curriculum including the Global Studies theme in social studies, mathematics, and reading. Data that refer to demographic information were taken from the annual Strategic School Profile, a document that is required by the state within which the school was located. Test score data were taken from the reported scores on the state mastery tests for students in grade 4.

The Challenge

Central Elementary School was one of 11 elementary schools in a high performing suburban district bordering a large

city. However, Central School's population mirrored its urban neighbor and was considered a failing school. Students were performing in the 30th percentile in reading, writing, and mathematics on state and district assessments. Many of the children had limited background knowledge, weak expressive language, nascent English skills, and limited experiences with books and written language. Poverty was a concern: 45% of the students received free and reduced lunch. The diverse student population included 43% culturally and linguistically diverse students. This figure increased to 75% over an 8-year period. Approximately 30% of the students spoke English as their second language.

The staff was committed to helping each student and had spent years searching for ways to improve student achievement. The parent community loved the school and thought that their children were happy and receiving a good education. However, the Board of Education and district administrators were alarmed at the high percentage of students who scored poorly on achievement measures. They expected the new school principal to lead the faculty and staff in reversing the culture of failure that had plagued the school for years.

The process of changing a school culture is multifaceted. It involves effort by many individuals, extends over time, and requires attention to every component of the school day and curriculum. This article highlights initiatives undertaken at Central Elementary School that relate specifically to the use of enrichment and differentiated instruction. Reducing the achievement gap involved changing the teaching and learning paradigm from one of remediation to a strength-based, child-centered methodology of enrichment teaching and learning. This process included the creation of a strategic plan, which guided all efforts undertaken at the school, including academic, social, emotional and behavioral needs; a visible commitment to enrichment in the form of an Enrichment Team; enriched and differentiated curriculum; the extension of learning beyond the school day; and carefully planned staff development.

A Strategic Plan for School Improvement

Effective school improvement requires a comprehensive plan of action that is responsive to the unique needs of the school population. The first step in this process involved a thorough analysis of all dimensions of the school. This resulted in the determination that the beliefs about students and teaching and learning were radically different among stakeholders. Thus, the school needed to develop a shared vision. For students of color and low economic status, factors that influence achievement include the school setting and vision for students' academic progress; teachers' understanding of the needs of the student population; the curriculum, instruction, and assessments used; and the role of the teacher (Tomlinson, Gould, Schroth, & Jarvis, 2006). The year-long review of all aspects of the school resulted in a clear understanding of its strengths and weaknesses and helped establish four essential questions:

1. What must the school community collectively believe about children and what motivates children to learn and grow?
2. How does a struggling school become a successful learning community where children are actively engaged and invested in their own learning?
3. What are the essential elements of curriculum and instruction that make this transformation from failure to success possible?
4. How can educators change the remedial instruction paradigm and stress students' strengths as a means to improving student learning and closing the achievement gap?

Once these questions were formulated, a group of teachers, school staff, parents, and members of the community worked together to create a multiyear plan for school improvement. A team effort was necessarily based on the belief that when there is an

> . . . unambiguous and shared mission to reverse underachievement in low economic students of color, there

> is greater opportunity for more of these students to experience success and to do so consistently than when teachers function as "soloists," with a lesser school wide commitment, or with a mission that is more rhetorical than enacted. (Tomlinson et al., 2006, p. x)

This School Improvement Planning Team reviewed the school data, studied materials about enrichment learning and differentiated instruction (Renzulli, 1995), and used these four questions to guide their work. The vision of the school leaders played a pivotal role in this process. Their knowledge and background in the field of gifted and talented education and experience using the pedagogy of gifted education, specifically enrichment and differentiation strategies with all students in the regular classroom (Beecher, 1995), helped persuade the team members that enrichment and differentiation must be integrated with the academic curriculum. They developed a school mission that included the integration of gifted and talented strategies into the curriculum, broad instructional goals, specific learning objectives, and detailed plans of action.

Two broad school goals emerged from the mission and the work of the team. The first was the use of gifted and talented strategies throughout the curriculum with all students. The second was the immersion of students in other cultures through a social studies-based Global Studies curriculum. Both practices addressed the need for a different approach to curriculum planning and innovative instructional practices. Specific, multiyear, measurable objectives were used to define action plans and timelines. These plans covered all aspects of the academic curriculum, as well as social and behavior concerns. A selection of the objectives that utilized enrichment and differentiation strategies appear below.

- To create a Schoolwide Enrichment Team that includes both parents and teachers to provide experiences that enrich and enhance student learning.

- To train all staff members in the differentiation of daily lessons using the Differentiated Lesson Planning Matrix.
- To develop differentiated, interdisciplinary units of study for the Global Studies curriculum.
- To write process lessons linked to standards, district objectives, and the specific learning needs of students.

A Rationale for Schoolwide Enrichment

The school's mission reflected the school community's desire to provide all students with access to an engaging, stimulating, and enriched learning environment where they could thrive and grow. Enrichment is often regarded as something extra, a nonessential frill that is not considered during serious discussions about student achievement. Yet, ignoring this critical component of instruction belies the importance of student engagement and motivation to learn and the dynamic quality that occurs when this energy exists in the learning environment. When students' interests and choices related to their own learning are considered, engagement in learning is enhanced (Reis & Fogarty, 2006; Siegle & McCoach, 2005). Many children at Central Elementary lacked a desire to learn; they could not make connections to the curriculum, and they felt isolated from the learning environment. The field of gifted education has embraced the concept of designing curriculum that considers students' talents and interests and uses those strengths to extend, expand, and accelerate learning. Both the curriculum and program delivery services can be enriched, with the intention of designing learning experiences that are responsive to the learning characteristics of specific students (Schiever & Maker, 1997). Enriched curriculum may be broader or more in depth than the regular curriculum, and may extend beyond the traditional school day (Schiever & Maker, 1997).

The concept of enrichment teaching and learning with an emphasis on curriculum differentiation became a focus of teachers' efforts to create rigorous, engaging units of study. Enrichment

teaching and learning are cornerstones of the Schoolwide Enrichment Model (SEM; Renzulli & Reis, 1985) and its precursor, the Enrichment Triad Model (Renzulli, 1977), which is subsumed within SEM. SEM was chosen for use at Central Elementary School in part because it is "the best known and most widely used enrichment model" (Davis & Rimm, 2004, p. 165) in gifted education.

The Enrichment Triad Model (Renzulli, 1977; Renzulli & Reis, 1985) provided the structure for infusing enrichment into different parts of the school day and curriculum. This model is composed of three types of enrichment, each designed to accomplish a different objective. Type I experiences and activities are designed to expose students to a wide variety of disciplines, topics, or issues not ordinarily covered in the regular classroom. Type II enrichment includes instructional methods and materials that promote the development of thinking and feeling processes, such as creative thinking, problem solving, critical thinking, affective training, and learning how to learn (e.g., interviewing and classifying). Type III enrichment includes investigative activities and artistic productions in which the learner assumes the role of a firsthand inquirer, with the student thinking and acting like a practicing professional (Renzulli, 1977; Renzulli & Reis, 1985).

The specific initiatives related to enrichment teaching and learning and differentiation included the following:

- a Schoolwide Enrichment Team;
- interdisciplinary, differentiated units of study;
- differentiated lesson plans across the curriculum;
- extended day enrichment program;
- comprehensive staff development plan; and
- accountability and assessment measures.

A detailed description of each of these initiatives follows.

The Schoolwide Enrichment Team

A Schoolwide Enrichment Team composed of parents and teachers worked with teachers to determine the types of enrich-

ment needed and located Type I enrichment experiences for different groups and purposes. The student audience for Type I enrichment included the whole school, one grade level, a class, a small group of students, or one child. The purpose was always the same: to enrich the lives of students by expanding their world and creating a sense of curiosity and wonder. Many Type I experiences were linked to the curriculum in order to build background knowledge for at-risk students. These experiences created an energy and excitement for learning. The dancer from India, the Japanese drummer, the children's author, the parent from Cuba who shared pictures and memorabilia from her home country, an Internet simulation of weightlessness on the moon, and many others brought the outside world into the classroom. The work of the team resulted in a multiyear connection to a local theater that brought the arts into all classrooms and evening family programs to the school.

The results of this effort were noticeable: Children's expressive language improved when they talked to the teacher and their peers about their shared experiences. Children whose reading ability was below grade level began to seek out and read books related to the topics being discussed. The English Language Learners' (ELLs) receptive vocabulary allowed them to gain knowledge and become more active participants in the classroom. The students engaged guest speakers with numerous questions and frequently searched for more information on the topics presented.

The Global Studies Curriculum

The second enrichment initiative, development of the Global Studies curriculum, was more challenging. The school district provided stipends for teachers from all grade levels to work for one week in the summer and to write units for the Global Studies curriculum. Using a template based on an adaptation of the Enrichment Triad Model (Beecher, 1995, see Figure 1), teachers wrote differentiated, enriched units of study that originated with the regular curriculum but featured more in-depth

learning opportunities and broader exposure to related topics. Teachers received training in differentiation techniques, using the following description as their guide:

> Differentiating instruction means "shaking up" what goes on in the classroom so that students have multiple options for taking in information, making sense of ideas, and expressing what they learn. In other words, a differentiated classroom provides different avenues to acquiring content, to processing or making sense of ideas, and to developing products so that each student can learn effectively. (Tomlinson, 2001, p. 1)

To develop the Global Studies units, each grade level selected a country, region, or culture to study. The West Indies unit of study (see Figure 1) demonstrates how the matrix guided teachers through the planning phase and provided a structure for integrating enrichment and differentiated instruction in the curriculum. Essential questions provided guidance for inclusion of higher level thinking skills in the curricular objectives that covered content, learning processes, and assessment. The content of each study was delivered through Type I experiences such as guest speakers/experts, trade books at varying levels of difficulty, interest centers, Internet sites, and field studies. These experiences included in-school events such as a simulation of the caste system in India, inclusion of memorabilia from Mexico brought in by students to add to the interest development center in their classroom, and an excursion to a Japanese restaurant in the community. These experiences piqued children's interest, enthusiasm, and curiosity, and expanded their knowledge of the culture or topic through experiential learning.

Type II experiences or skills were imbedded in the units of study and included writing skills from the regular curriculum and process skills from the social studies curriculum. Students in third grade wrote narrative accounts of life in the West Indies, while fourth-grade students wrote expository pieces about a topic of their choice related to India, and fifth-grade students wrote

West Indies: A Differentiated, Interdisciplinary Unit

Third Grade — **Duration: 6 to 8 Weeks**

Standards	Essential Questions	Objectives	Resources
What is the relationship of the United States to other nations and to world affairs? How are regions defined and interpreted?	What influences did the Arawaks and Caribs have on the West Indies culture? What made the West Indies economy change and grow?	Describe the following components of the West Indies culture: • geography and climate, • form of government, and • history of the native religions and cultural celebrations. Explain how life in the West Indies is the same or different from life in our town.	• Culture Grams (http://online.culturegrams.com) • *How Many Days to America*?, E. Bunting • Pan Carib Steel Drum Band • *Hurricanes*, L. J. Hopping • *Pirates*, G. Gibbons • *My Little Island*, Book and Reading Rainbow Video • *The West Indies*, A. Hodge • *Eastern Caribbean in Focus*, J. Ferguson • Scientific American Frontiers: *Science in Paradise* video

Discipline	Type I Content and Introductory Activities	Type II Process Training Lessons	Type III Interest-Based Projects	Assessment
Social Studies	• Obtain artifacts from local museum. • Use maps and globes to study geography. • Explore informational texts on West Indies Islands.	• Teach nonfiction text structure: main idea, fact versus opinion, compare and contrast. • Compare and contrast the geographical features of your town and a Caribbean island.	• Create a PowerPoint presentation comparing life in the West Indies and in your town. • Conduct a debate: Should Puerto Rico be independent, a state, or a commonwealth?	Venn diagram for compare and contrast. Concept map of West Indies cultural influences. West Indies Unit Test. Rubric for project assessment. Rubric for oral presentation.
Language Arts	• Introduce students to Reader's Theater. • West Indies Storyteller.	• Participate in Reader's Theater using *Rainbow Colored Horse*. • Compare Island folk tales with traditional U.S. folk tales.	• Write a Reader's Theater based on the West Indies culture. • Write a teaching poem or rap that incorporates Island facts.	
Science	• Watch *Science in Paradise* video	• Note-taking skills instruction. • Graphing data.	• Compare our weather with that of the islands. • Track and graph volcanic activity.	

Figure 1. **Abridged planner for differentiated Global Studies unit.**

persuasive essays about a topic from a European country they were studying. Process skills such as comparison and contrast, identifying the main idea and supporting details, analyzing data, and looking for relationships were some of the skills included in the units of study. All children were expected to respond to creative and critical thinking questions either in oral discussions or in their written work. Fifth graders explored the causes and effects of the Spanish American War, kindergartners compared and contrasted United States culture with that of Mexico, and first-grade students analyzed migration patterns in Kenya.

Type III training activities required the most significant changes in pedagogy for the teachers. These activities allowed students to select a topic and project based on their unique interests, learning style, and talents. The teacher provided instruction or support for students' decision making, planning, organization, location of resources, problem solving, and product execution as needed. The teacher guided students in the creation of a content web and in brainstorming a list of possible product or project ideas. Students generated their own project and product ideas, discussed them with the teacher, and pursued the work product once parameters were jointly agreed upon. This represented a departure from previous practices where the teacher defined projects or work products for the students.

By utilizing the Enrichment Triad Model (Renzulli & Reis, 1985) to guide curriculum planning, opportunities that were previously reserved for gifted students were available to all students in the regular classroom through the Global Studies units. Examples of students' independent work included the first grader who developed an illustrated ABC book about the animals in Kenya; a third-grade student who learned French and created an illustrated dictionary and audio tape identifying items in the classroom in English, French, and Serbo-Croatian (her first language); and a fifth-grade student who built a model of an arena in Spain with a description of bullfighting and moderated a debate on ethical issues about bullfighting.

Through the development of these differentiated interdisciplinary studies, enrichment was infused into the regular curricu-

lum. Learning was differentiated according to the needs of the students through the use of texts of different reading levels or about different topics, identification of the skills and processes that students needed to achieve success for different learning tasks, and the use of flexible grouping, where students were instructed in small groups of varying size, according to an identified need or interest. Classrooms became active learning environments, and the role of the children and the teachers changed dramatically. The teacher became the facilitator of students' learning and the students became more independent learners.

Differentiated Lesson Plans

Once the Global Studies units were complete, teachers wrote specific lessons to include in the units. The concept of differentiation was prominent throughout these lessons because it encouraged teachers to move away from planning whole-class, generic lessons and to consider the learning needs of small groups of students or individuals.

The instructional needs of the students were diverse because reading levels of students in the third grade ranged from first to fifth grades. Teachers and students had to overcome a variety of challenges. The school's clientele included fifth-grade students who had attended multiple schools during their elementary years and had only rudimentary math skills, children who spoke no English enrolled throughout the school year, youngsters with chronic illnesses who missed school for weeks at a time, and children whose parents had lost a job and who had become homeless.

Teachers' understanding of differentiation strategies was developed using a conceptual model for differentiation (Beecher & Simpson, 1997; see Figure 2). This model begins with the core curriculum required by the school district, drawn from state and national standards at the base, and incorporates instructional strategies for differentiation and specific means for accessing content and skills in all disciplines. Once students have acquired a content knowledge base, differentiation opportunities help

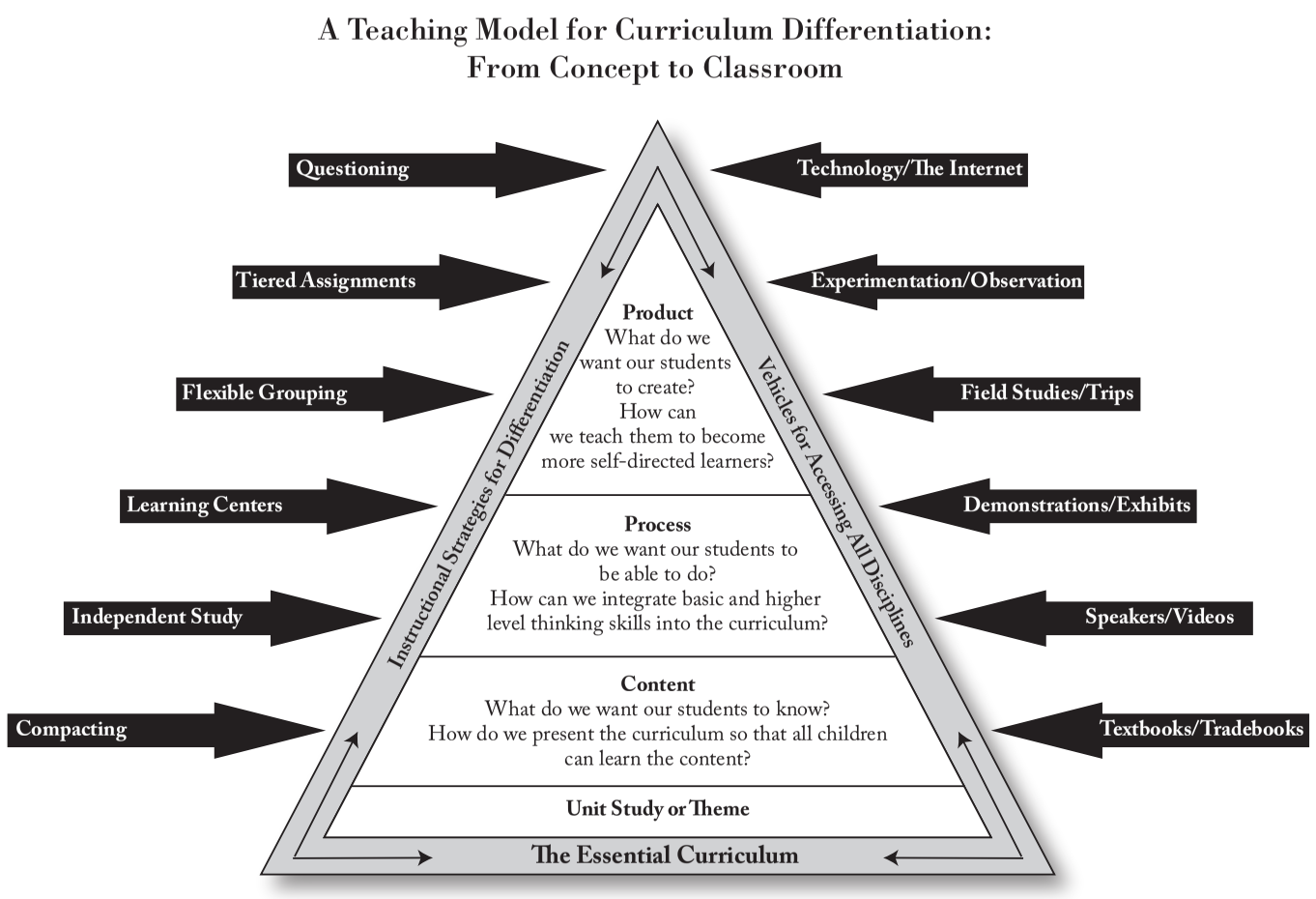

Figure 2. Conceptual model for differentiating curriculum.

them process the information, develop products, and assess their own work. The six teaching strategies for differentiation provided teachers with options for instruction that accommodated students' varied needs and learning styles.

To facilitate the planning process, teachers used a companion matrix (Simpson, 1997; see Figure 3) to organize individual lessons. This matrix allowed teachers to plan concurrent differentiated learning experiences for students based on a single instructional objective or a set of related objectives in a subject area. The process training component of the lesson required teachers to assess the skills that were most essential for every student in the classroom. The final student product and the assessment of this product might be similar or completely different among the flexible learning groups. Using the differentiation model with the accompanying matrix served as an effective way to train teachers in this complex process.

Enrichment and Differentiation Across the Curriculum

The Global Studies units represented the first round of differentiated lesson planning and instruction. Over the course of 8 years, each discipline in the regular curriculum was examined and revised to include enrichment and differentiation. Existing reading instruction in grades 3–5 did not meet the students' needs for skill development, nor did it reflect an enriched approach to reading. The staff decided to forgo the use of old, uninspiring basal readers and chose instead to adopt the Reader's Workshop Model (Fountas & Pinnell, 2001) for reading instruction.

Using grant money that supported the development of differentiated instruction, the intermediate grade teachers worked during the summer to develop differentiated reading units of study. The units were structured around a theme such as an author study or genre and organized across the 10 months of the school year. Teachers selected a range of books to use for read alouds, reading strategy minilessons, and flexible guided reading groups. They developed differentiated lessons for the guided reading based on elements of the genre, cognitive thinking strat-

Differentiating Matrix

Grade: 4 **Curriculum Area:** Social Studies/Reading **Unit of Study:** India
Objective/Activity: Use information in the book *The Children of India* to draw conclusions about the culture and children of India.

Strategy: ☑Questioning ☑Tiered Assignment ❑ Flexible Grouping ❑ Learning Center ❑ Independent Study ❑ Compacting ❑ Other

Vehicles: ❑ Technology ❑ Experimentation ❑ Field Study ❑ Demonstration/Exhibit ❑ Speaker/Video ☑Textbook/Trade Books

Level	(I) Individual (P) Pair (G) Group	Content/Focus	Process/Sense-Making Activity	Product/Assessment
1 (students for whom the reading level of the book is too high)	P	What do the children look like? How do they act? What do they do?	Review pictures and captions in the book using the SQR strategy (survey-question-read); use text information and pictures to identify: 1. what the children's roles are, 2. how the children might be feeling, 3. how children of India are similar to each other and to us, and 4. how children of India are different from each other and us. Listen to a portion of the book on tape.	Collect data using a feature analysis chart; complete a Venn diagram to compare self to one of the children in the book; use information collected to write one paragraph explaining the similarities and differences.

2 (average students)	I/P	What is it like to be a child in India?	Skim the book to get an introduction to the children presented. Select 8 children to read about in detail. Use a feature analysis chart with information from the book to list details about their lives. Think of at least 3 adjectives to describe each child based on the details collected. Give reasons for the choices.	Select one of the children you read about. Write a collection of at least 4 journal entries from the point of view of the child selected that share aspects of the Indian way of life.
3 (high readers and gifted/ talented students)	I/P	How do the children of India reflect India's culture?	Read the book, *The Children of India* by Jules Hermes. Record information about each child's life using a feature analysis chart. Write one sentence describing each child's life based on the experiences shared in the book. Draw at least 6 inferences about Indian culture based on the information collected about the children of India.	Design a cube that descries 6 aspects of Indian culture represented by the children in the book. Show a different aspect of the culture on each side of the cube using writing and pictures.

***Figure 3*. Matrix for planning differentiated lessons.**

egies (Harvey & Goudvis, 2000; Keene & Zimmermann, 1997), or word recognition skills. Reading instruction was differentiated by the use of flexible groups, texts on different reading levels, student-selected texts during independent reading, and guided reading groups according to the identified need for individual students. To enrich reading instruction, the school expanded classroom libraries to include books representing a range of genres, topics, and reading levels; brought in guest readers from the local community; found reading mentors for struggling readers; and invited children's authors to the school to share their work with students. Students' reading achievement improved and their greater interest in books became apparent by increased circulation of books from the school library and the creation of lunchtime book clubs, organized by students themselves.

Writing instruction became more differentiated with the introduction of the Writer's Workshop Model (Calkins, 1994) for writing instruction. The workshop model allowed teachers to move away from a formulaic process of writing instruction, to one where students were encouraged to develop their own voice through writing. Writing instruction was differentiated by the creation of skills groups as needed in a classroom, during one-on-one teacher/student conferences. The collaboration of support staff, including the ELL teacher, the speech and language therapist, and special education teachers in an inclusion model supported the differentiated writing curriculum. Specifically, the inclusion model utilized special education teachers and staff to provide small-group or individualized instruction that was coordinated with the regular classroom teacher. Writing instruction was enriched by bringing in experts in the writing process who worked with students while simultaneously training teachers. Storytellers shared oral storytelling traditions and helped students translate their oral stories into writing.

For most of the 8 years referred to in this article, there was no official math text; however, math instruction was based on objectives and the state mastery test. Following an analysis of current practices, outside math experts were brought in to train teachers to provide instruction that stressed math concepts. Teachers

created a scope and sequence of skills and developed units and lessons that resulted in a more conceptual approach to math instruction. Teachers differentiated instruction through the use of flexible groups formed through formative and summative assessments and the use of open-ended problem solving during lessons and small-group instruction. Math instruction was enriched by the formation of interest-based math groups taught by the math specialist before school and during the school day.

Extending Learning Beyond the School Day

The enriched learning environment extended beyond the school day through afterschool classes. Inspired by Enrichment Clusters in the Schoolwide Enrichment Model (Renzulli & Reis, 1985; Reis, Gentry, & Park, 1995), these classes were based on students' interests and academic need and offered during three 8-week sessions. They were designed to actively engage students in unique and enriched learning experiences and to provide children with opportunities to apply the skills they had learned during the school day in new settings. Students from kindergarten to fifth grade chose from 12 to 14 classes geared specifically to literacy, numeracy, social sciences, science, and the visual and performing arts. A sampling of class offerings included Ancient Egyptian Murals: A Visual Tour of the Culture; Buon Giorno: Introduction to Conversational Italian; Chess Club; Reading Between the Lines; Children's Theater Company; A Mystery for Young Detectives; Bits & Bytes: Computers for Second Graders; Fifty, Nifty United States; and Dancing Queen: A Student Dance Troupe. Some of the products that emerged from these sessions included a school play, an Egyptian mural, children's books, and a chess championship.

Students' intense interest in the afterschool classes was evident in the number of children, 200 on average, who participated in each session. Classes were of high interest to the students and offered at no cost. Teacher stipends and materials were funded by different sources including school district funds, an Early Reading Success Grant, the federal and state funded Family

Resource Center that was housed in the school, and a local performing arts center.

Planning a Multiyear Staff Development Program

Staff development was essential to the process of closing the achievement gap and began with the development of the multiyear School Improvement Plan. At that time, the concept of gifted and talented education for all students was introduced to the Planning Team members. It became one of the school's themes and was embedded in the mission, goals, and action plans. The development of a Global Studies curriculum, the second school theme, also occurred during the first year and demonstrated how the concepts of gifted education could be integrated into the curriculum for all students (Beecher, 1995). The teachers learned about the Schoolwide Enrichment Model (Renzulli & Reis, 1985) and began to plan enrichment experiences for their students. They learned how to differentiate the content that the students learned, the processes used for instruction and learning, and the products (Renzulli & Reis, 1985; Tomlinson, 1995) students created. The development, refinement, and implementation of the Global Studies curriculum continued into the second year and provided the foundation for training related to enrichment teaching and learning and curriculum differentiation.

Given the increasing diversity of learners in the school, differentiation became the primary focus of all instruction. Teachers spent approximately 4 hours each month learning more about differentiation and making plans to implement differentiated instruction in their classrooms. The professional development focused on identifying students' strengths and weaknesses; systems to make the process of small, flexible group instruction manageable; and the development of leveled classroom libraries. More enrichment was also integrated into the curriculum with the resources located by the Schoolwide Enrichment Team that was formed during the second year.

The focus for Year 3 was the development of differentiated lessons plans (Beecher & Simpson, 1997) in all curricular areas.

The escalation of enrichment opportunities included a partnership with a performing arts center, the development of differentiated interest and ability centers, and the expansion of leveled classroom libraries.

In Year 4, an afterschool enrichment program was developed and tailored to the needs of the students. Teachers were taught how to develop enrichment classes related to their areas of interest and expertise. Due to the increasingly diverse student body, professional development during Year 4 also focused on multicultural awareness and sensitivity. Speakers, videos, and books guided staff conversations and influenced their lesson development. Differentiated lesson planning continued to be supported during staff development sessions.

Teachers received extensive training in Readers' Workshop (Fountas & Pinnell, 2001) and the Four Blocks (Cunningham, Hall, & Sigmon, 2000) models for reading instruction during the revision of the reading curriculum in Year 5. The entire school participated in professional development about reading and literacy to develop differentiated reading plans at each grade level. All staff members participated in a discussion of *Mosaic of Thought* (Keene & Zimmermann, 1997) so that a common language and shared commitment to literacy were present throughout the school. Literacy instruction was further improved and enriched during Year 6 when the Writer's Workshop model (Calkins, 1994) was adopted for writing instruction. During the final 2 years of this schoolwide change effort, teachers reviewed, refined, and updated all enrichment and differentiation initiatives. Curriculum and instruction also was aligned with the latest math and language arts standards.

This comprehensive staff development program was closely monitored and adjusted as needed. Teachers were given the tools and the support to be able to successfully implement the concepts presented. Following the tenets of effective professional development (Joyce & Showers, 2002), each new concept was introduced and training, modeling, and coaching were provided. Staff development occurred during biweekly grade-level seminars, monthly staff meetings, and weekly school or district staff

development sessions. The school principal and teaching specialists conducted the initial training. Ultimately the teachers became curriculum developers and trainers, and content area experts were called upon to support the staff development efforts when necessary.

Through this multiyear effort, a cadre of highly skilled teachers, who embraced new ideas and strategies, emerged as staff development leaders as they collectively searched for ways to improve student achievement. The teachers, not unlike their students, developed their unique gifts and talents and gained confidence as teachers of other teachers. Their passion for the success of their students led to the development of the school as a professional learning community.

Assessing Academic Progress

Ongoing assessment, both formal and informal, and formative and summative, informed instruction; student progress was measured on a daily, weekly, monthly, and yearly basis. District tests and state mastery tests, informal assessments, and an analysis of student work helped guide instruction, improve curricular units, and assist teachers' differentiation efforts. Student accountability was a key ingredient in improving learning and was manifested in students' participation in assessment of their work. Teachers developed rubrics to assess open-ended student products, and student portfolios enabled teachers to monitor students' growth and track their learning needs.

Formal meetings between each teacher and the principal were conducted throughout the school year to review individual student progress and formulate plans to improve student achievement. Teachers and support staff met monthly with grade-level teams to discuss student progress and determine support options such as in-class enrichment; participation in small groups to provide interest or academic based enrichment; work with the social worker or school psychologist for help with social, personal, or organizational skills; or movement between flexible groups during in-class instruction.

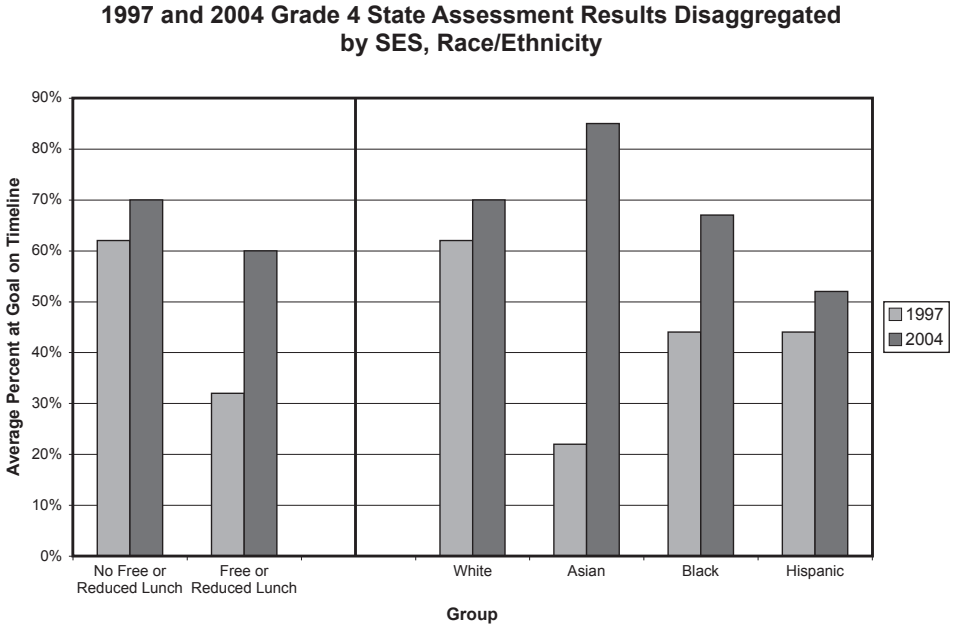

Figure 4. **Improved achievement based on average percentage of students at goal on reading, writing, and mathematics on the state assessments.**

Closing the Achievement Gap

The success of the school improvement efforts was demonstrated in students' positive attitudes about school, increased engagement in learning, and improved achievement on district and state assessments. Analyses of student achievement on state tests from 1997 to 2004 showed improvement in all subject areas and in all levels of proficiency. Test results were categorized into three achievement levels or bands that included remedial, proficient, and goal. The average percentage of students at or above goal on state reading, writing, and math assessments demonstrated improvement in all segments of the population (see Figure 4). The gaps in achievement between students with differing socioeconomic status narrowed from 62% to 10%. All ethnic groups showed improvement in their achievement, with Asian students making the largest gains at 60% and White and Hispanic students gaining 5%.

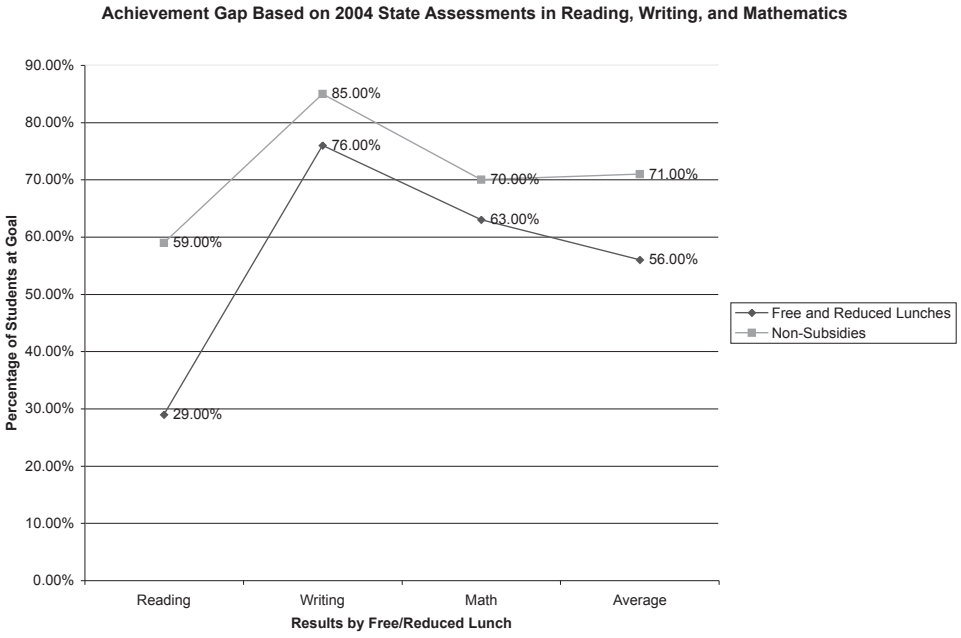

***Figure 5*. State assessment results show the achievement gap narrowing in writing and math.**

Additional data demonstrated dramatic improvement by students who were in the lowest or remedial band on state assessments. Results for children from the lowest socioeconomic levels who scored in the remedial band were reduced by 28%, resulting in only 4% of students remaining in the remedial band. Students from higher socioeconomic homes moved out of the remedial band, resulting in only 3% of those students remaining at the remedial level.

The analysis of data by ethnic groups found that there were no longer any Asian or African American students in the remedial band. This is in stark contrast to the 1997 test results where 23% of the Asian students and 21% of the African American students performed at the remedial level. During this same time period, the percentage of Hispanic students in the remedial band dropped from 22% to 7% and the percentage of White students at this same band decreased from 13% to 4%.

When the data were reviewed by subject area and socioeconomic status (see Figure 5), the percentage of students at goal

demonstrated that the achievement gap was reduced in writing to 9%, in mathematics to 7%, and in reading to 30%. Although the total achievement gap was 15% among this group of students, it was far better than the district gap, which remained much higher at 40%.

These data illustrated how a large percentage of students from all ethnic and socioeconomic groups moved from the remedial band, thereby indicating improved achievement. This provided evidence that the belief in building upon students' strengths with a differentiated approach to instruction and enriched learning experiences could help close the achievement gap between the rich and poor and among different ethnic groups.

The Sights and Sounds of Success

The school improvement process at Central Elementary School was guided by questions about parents' and teachers' beliefs about learning, students' motivation to learn, ways to actively engage children in their own learning, the essential elements of curriculum and instruction, and how to build upon student strengths in order to improve learning and close the achievement gap. As the school implemented curriculum based on enrichment teaching and learning and differentiation strategies, the answers to these questions emerged. The expansiveness of the enrichment initiatives extended students' knowledge, thinking, and view of the world. The varied differentiation strategies that were employed required teachers to know each of their students as individuals with different interests, learning styles, strengths, and academic needs. Teachers received extensive training in all new concepts and, ultimately, embraced the ideas, generated their own strategies and programs, and became the trainers of their colleagues.

The success of this improvement effort was evident in the increase in student achievement and the reduction in the achievement gap. This resulted from children's active engagement and investment in their own learning, parents' involvement in their

children's school lives, and teachers' commitment to their students. These sights and sounds of student success demonstrated that courage to challenge the existing paradigm and explore new dimensions in learning yielded effective results.

This article describes the experiences of one school and is a report of one school's journey, rather than an empirical research article. However, we hope that the findings that we have shared will inspire more rigorous empirical research on the effects of enrichment teaching and learning on academic achievement and, most importantly, the potential for enrichment practices to close achievement gaps.

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